PLAYING WITH EASE

A HEALTHY APPROACH TO GUITAR TECHNIQUE

DAVID LEISNER

PLAYING WITH EASE

A Healthy Approach to Guitar Technique

David Leisner

OXFORD
UNIVERSITY PRESS

OXFORD
UNIVERSITY PRESS

Oxford University Press is a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide. Oxford is a registered trade mark of Oxford University Press in the UK and certain other countries.

Published in the United States of America by Oxford University Press
198 Madison Avenue, New York, NY 10016, United States of America.

Library of Congress Cataloging-in-Publication Data
Names: Leisner, David, author.
Title: Playing with ease: a healthy approach to guitar technique / David Leisner.
Description: New York, NY: Oxford University Press, [2018] |
Includes bibliographical references and index.
Identifiers: LCCN 2017047703 | ISBN 9780190693305 (hardcover) |
ISBN 9780190693312 (pbk.) | ISBN 9780190693343 (oxford scholarly online)
Subjects: LCSH: Guitar—Performance—Physiological aspects.
Classification: LCC MT580.L35 2018 | DDC 787.87/193—dc23
LC record available at https://lccn.loc.gov/2017047703

9 8 7 6 5 4 3

Paperback printed by Webcom Inc., Canada
Hardback printed by Bridgeport National Bindery, Inc., United States of America

To my students, past, present and future, whose probing questions
and open minds teach me more than they can ever know

CONTENTS

PHOTO AND ILLUSTRATION CREDITS

Photos by Simon Powis, simonpowisphotography.com

Illustrations by Jay Kauffman, jaykauffman.com

ACKNOWLEDGMENTS

No undertaking like this book can be accomplished alone. It is only possible with the help of family, friends, colleagues, professionals, and sometimes even an angel or two. I have been extraordinarily fortunate to have had the support and assistance of many remarkable people in the production of this book.

Once I finished the first draft of the manuscript, four people contributed their criticisms, suggestions, and observations. Heartfelt thanks to my colleague at the Manhattan School of Music, Mark Delpriora, and current student Andrew Mines for their thoughtful contributions; former student, colleague, and friend Bradley Colten for his incredibly meticulous and refined editing; and dear friend the writer-scholar Robert Oxnam for invaluable advice that helped broaden the scope of my writing.

From the time I first approached chief music editor Suzanne Ryan at Oxford University Press until completion of the process, her delightful enthusiasm for this project never flagged. Suzanne and her editorial assistant, Jamie Kim, have both been always at the ready with help and advice on every issue, from little details like file conversion to the big-picture issues of content. I am forever thankful for their solid support and expertise. I am also extremely grateful to Rajesh Kathamuthu, a most accommodating project manager, to copy editor Jane Zanichkowsky for her eagle-eye editing that helped to refine my writing and to indexing assistant, Dave Belcher.

A word of special thanks goes to author-guitarist and former student Glenn Kurtz for excellent professional advice which also led me to The Authors Guild, which offered me yet more professional advice in even greater detail.

From the initial conception of the book, my plan was to include photos, illustrations, and videos. In order to accomplish this, I had three splendid collaborators. A mountain of gratitude goes to guitarist, teacher, and photographer Simon Powis for his pristine photos, to guitarist, composer,

teacher, and illustrator Jay Kauffman for his sensitive illustrations, and to clarinetist, composer, and videographer Alexey Gorokholinskiy for the clarity and calm of his video sessions. And special thanks go to Nina D'Abbracci, my current Alexander Technique teacher, for specific help with an important photo of exemplary spine and pelvis alignment.

I also happen to have had one of those rare angels appear in the form of Brian Hays, guitarist and software developer, who so generously offered the financial support for the creation of all these photos, illustrations, and videos. Brian's assistance had everything to do with the high quality of each of these endeavors, and I am deeply indebted to him.

For his graceful, colorful artwork, I must say thank you to artist Michael Adam Webster for the cover image, which provides the gateway to this book.

There are many references in this book to Alexander Technique, the Feldenkrais Method, and yoga. My own original ideas are thoroughly infused with knowledge and understanding gleaned from the study of these three disciplines. I owe my first-rate teachers an ever-flowing fountain of thanks for my brief study with Feldenkrais practitioner Clifford Shulman, a year of private study with yoga teacher Richard Jonas, and seven years of study with Alexander teacher Brian Kloppenberg. I'm quite sure that the rewards of their teaching went far beyond what they imagined.

Although I am mostly self-taught, I had the great good luck to have studied briefly with teachers who were and continue to be masterful mentors, all of whom had either direct or indirect influence on the contents of this book. I am forever grateful to Mildred Brown, my first guitar teacher, John Duarte, David Starobin, violist Karen Tuttle, pianist John Kirkpatrick, and pianist Seymour Bernstein, who was also an inspiring model, on every level, for the writing of this book.

Some of my best teachers have always been and will always be my students. They are my sounding board, my playground for ideas, my challengers, and my inspiration to always do better. They have my lifelong gratitude.

Finally, this list would be woefully incomplete without including my husband, Ralph Jackson, partner of thirty-seven years as of this writing. For this project he was a reader, prodder, advisor, photographer, and my Rock of Gibraltar through every storm, both large and small. Thank you, dearest.

ABOUT THE COMPANION WEBSITE

www.oup.com/us/playingwithease

Oxford University Press has created a website to accompany *Playing with Ease*. When movements and concepts described in the book cannot be demonstrated by either photos or illustrations, videos are provided on the website. The reader is strongly encouraged to use these additional resources for Chapters 1–5. The videos were filmed by Alexey Gorokholinskiy. They are available online and indicated in the text with the symbol ▶.

Playing with Ease

Introduction

EASE

Every musical instrument is hard to play. To juggle, balance, and remember all that is necessary to play any instrument is a staggering feat of acrobatics. It can only elicit admiration and awe from the knowing observer. While the guitar is one of the easiest instruments at the beginner's level, it is one of the most difficult instruments at the more advanced stages. Think about it: To begin with, the two hands do completely different things, and to complicate matters, they face in opposite directions. The neck of the instrument is usually placed at an odd angle to the side, tilted up and away from the body, which makes for a rather dizzying spatial orientation. Contrast this with the piano, for instance, whose keys are clearly laid out horizontally in front of you. The guitar can also make you, the player, feel very exposed and vulnerable, as the volume is rather quiet and there are only six strings at your disposal. Missed notes can be quite obvious to a listener. Also, there are times when you need to play two- or three-voice counterpoint on these six strings, with only four fingers on the right hand to pluck the notes. Playing the guitar is anything but easy.

Is it possible to make it easier? Of course. But it requires careful thought and consideration, supported by knowledge and awareness, with the reinforcement of focused practice. My intention with this book is to offer you some new ideas, as well as some familiar ones that are perhaps described in novel ways, of how to play your instrument with greater ease. At the very least, the book provides a systematic summary of the point of view of one person, who has an abiding interest in the sensible management of anatomy and of good physical health.

First, we might ask: what is ease? Playing with ease means playing with a minimum of effort. There are two kinds of ease, physical and mental/psychological. The two are interrelated. By working on one, you can affect the other. You can train your mind or your emotions to think or feel something that makes playing physically easier. Conversely, you can train your body to work in ways that involve less physical effort, which also puts your mind or emotions at ease. Both methods are effective. This book mostly offers advice about working with the physical approach. At the same time, there is always an awareness here of the positive consequences for the mind and the psyche as well, not to mention for the music itself.

With so much intense concentration on physical ease, you might be concerned about the risk of losing some musical energy. I once taught a master class in Austria for the students of the splendid guitarist and teacher Leo Witoszinski. As I worked intently with a physically convoluted student to overcome his tension, Leo interrupted. He protested, "But this is like the method of some facile actors whose primary goal is to be as relaxed as they can be, and meanwhile all the emotion and intensity is lost." It was a very intelligent and well-taken comment, one that is often brought up by other people. I replied by saying, "What actors like this are missing is the final stage of bringing the depth and soul of their interpretation back after they have relaxed their tense, underlying physical habits. The ideal is to find a way of being that is just as expressive without the unnecessary tension." What we must strive for is a balance between physical ease and musical engagement.

INJURY

In general, the level of physical tension of instrumentalists has run rampant. A dean of a major North American music school told me about a recent orientation meeting for new students. The large group of students was asked how many of them currently had injuries. What percentage of them do you think raised their hands?

Half of them!

In a frequently cited study from 2009 by music medicine specialist Dr. Alice Brandfonbrener, 330 incoming freshman students at a Midwestern music school were asked how many of them had a history of playing-related pain.

Seventy-nine percent did![1]

1. Alice Brandfonbrener, "History of Playing-related Pain in 330 Freshman Music Students," *Medical Problems of Performing Artists* 24, no. 1 (March 2009): 30–36.

These findings are astonishing indications of the extraordinary proliferation of injuries among musicians in recent times. The figures may not even be fully representative because sometimes, musicians do not realize that the numbness, awkwardness, or pain they are experiencing is, in fact, an injury. And sometimes, even when they are aware of an injury, they do not wish to report it. While musician injuries have been documented for a long time, it seems that, since the second half of the twentieth century, they have become something of an epidemic. Why is this happening?

The answer probably lies in the fact that there has been an accumulation of increasing demands on musicians in recent decades—to play louder and faster, with more difficult repertoire, in larger concert halls, and with a technical perfection like that of recordings. This has piled an ever-greater amount of pressure on musicians, their bodies, and their psyches. The need for a sturdier, more ergonomic approach to the playing of instruments has never been more urgent. This includes a greater need for the support of larger muscles because the smaller muscles are not capable of sustaining this increased workload. Chapter 5 teaches you how to play with the larger muscle groups, and the rest of this book offers plenty of advice on how to otherwise maintain good physical health while playing your instrument. With all the increased demands mentioned above, we must learn better ways of curing injury and, more important, how to prevent it.

FOCAL DYSTONIA

Some of my more recent ideas on playing with ease emerged from my twelve years of suffering with focal dystonia, from 1984 to 1996. Focal dystonia is a mysterious condition in which fingers of either hand flex uncontrollably into the palm, without pain. (With some people, the fingers can also extend outward.) This aspect of painlessness distinguishes it from all other types of musician injuries. The fingers are able to move slowly and awkwardly back to normal position, but then they flex in again immediately upon use. Hundreds, maybe thousands of musicians of all instruments suffer from this debilitating condition, which often signals the end of playing their instrument. In my case, the right-hand ring finger was the primary one affected, with the pinky and sometimes the middle finger flexing in as well. It completely stopped my performing career for most of those twelve years. While totally devastated on every level by this sinister condition, I pursued one specialist after another, seeking a cure. I consulted practitioners of

Eastern medicine as well as Western. Unfortunately, no one was successful. Curiously, they all noted that my technique seemed to be perfect from an anatomical point of view.

To me, that was one of the mysterious aspects of my condition. I was someone who had always thought carefully and accurately about the anatomical considerations of playing. It would seem that I was an unlikely candidate for injury. How could this be happening to me? Perhaps, I thought, it was because I was mostly self-taught. The longest period that I ever studied with anyone was nine months (with composer-guitarist John Duarte). In retrospect, I believe that being self-taught may have actually helped me cure myself.

Certainly, there are pros and cons to teaching yourself. The cons include not having someone more experienced and knowledgeable to guide you and give you a method or some systematic approach, having to always rely on yourself for inspiration and fresh ideas, and the lack of a teaching tradition that gives you a sense of belonging. The pros are the development of independent and creative thinking, self-reliance, and the possibility of originality. Because my physical instincts were generally reliable, my technique was well-founded, and I never had an injury of any sort before 1984. In fact, I am proud to report that, in my forty years of professional teaching to date, not one of my students has ever been injured for long while studying with me. If they ever did experience some minor injury, I was always able to help resolve the issue within days or, at most, a couple of weeks. While I certainly experienced both the benefits and obstacles of being self-taught, the pros fortunately outweighed the cons, with respect to my playing, teaching, and focal dystonia experience. That said, I would not generally recommend self-teaching to anyone else, except the rare person who appears driven to do this, as I was.

After failing to get myself cured by any of the various practitioners I consulted, I turned inward to search for answers. Soon, in an unexpected moment, I received initial inspiration from someone else. He was my teaching colleague, Neil Anderson, at the New England Conservatory in 1992. I credit him with sparking the idea of using the large muscles to play the guitar. He had just begun to experiment with this concept, and, during a performance class, he showed a student a simple, basic way of engaging the large muscles by swinging the arm to pluck a string. It struck me immediately that this might have some relevance for me. It was just a kernel of an idea, but I proceeded to take that golden kernel and develop, enlarge, and refine it over the course of four years. My work paid off with steady progress, and by 1996, I was completely cured. Ever since then, I have been playing totally free of focal dystonia. I am also one of the few people in the

world who has been able to help and cure many others with focal dystonia (not just guitarists, but players of all instruments, except brass). Bear in mind that this condition is otherwise regarded by the medical establishment as incurable!

OTHER LESSONS

As a matter of fact, even before my experience with dystonia I have had the privilege of helping many people cure different kinds of playing injuries. This is because of my lifelong interest in studying the relationship of the body to playing the guitar, as well as other instruments, and because I've been able to develop a good instinct for pinpointing the source of physical injury. I have always been fascinated by the broader anatomical and technical viewpoint, as well as the nuanced details, and have continually searched for a system of understanding of how it all fits together.

All this led me to consider the ease of virtuosity, which I then began to observe in the master players of all instruments. The most virtuosic players always made it look easy, as if there were no obstacles at all. I sensed that this must be a combination of natural gifts and focused technical consideration and work. My investigation led me to understand that this ease could be attained with a thorough study of how the body functions when playing an instrument and by taking advantage of its most natural inclinations.

Most of the exercises and ideas presented in this book came from this lifelong exploration, while my ideas about playing with the large muscles arose from years of living with and ultimately curing focal dystonia. During those years I continued to teach but could no longer demonstrate on the guitar as much as I could before. This forced me to develop a more verbally articulate way of expressing what I wanted to communicate, since I was unable to demonstrate by playing. Even after curing myself, this refined ability to describe and explain my ideas has stayed with me and has improved my teaching.

A few years after the dystonia was cured, I developed some severe lower back problems, which were helped immensely by the study of Alexander Technique, Iyengar yoga, and a little bit of the Feldenkrais Method. As it turned out, these three disciplines also deeply enriched my ideas about playing the guitar and other instruments. Their influence can be observed throughout this book. I am deeply grateful to these three great traditions and their wise teachers.

LETTING GO

One underlying theme of this book is the importance of letting go. The widely accepted work ethic—"no pain, no gain"—is at the root of the problem of musicians' expending too much effort too much of the time. The belief that hard work can solve most problems contributes to the judgment that taking the easy route is lazy. A corollary of this is the belief that when you work hard, you gain control, but when you let go, you lose control. This is simply not true. When you let go, you may lose control at first, but the more you get used to it, the more control you gain. Everything is easier once you let go, and that greater freedom allows you the ability to control without feeling pressured. As long as you feel pressured, your command of control is vulnerable at best.

Letting go means trusting nature—the nature of your body, mind, and spirit. When nature is trusted, its wonders become self-evident. The description of how to breathe naturally in Chapter 2 is one instance of this. When you know how to let the diaphragm work on its own, without any artificial help or extra work, then breathing becomes a strong, natural foundation for all that you do. The discussion of dead weight and its significance, in Chapters 2 and 5, is another example. Less is more. If you do too much work with the small muscles of the right forearm or the biceps and triceps of the left mid-arm, you will make playing more difficult than it needs to be. Yet another example in this book of the wisdom of letting go is knowing when to put a piece aside in the process of practicing, as mentioned in Chapter 6. If you work too hard on a piece for too long, the law of diminishing returns becomes evident. But when you learn to let go of the piece for a while, your progress can be much greater, partly due to the fact that your mind and body naturally continue to assimilate the work you have done, with no effort expended at all.

The theme of letting go, in fact, permeates this entire book. Knowing how your body works and how it functions most effectively gives you the information you need to let go. This serves the dual purpose of creating a more secure technique that requires less effort and making you a more expressive player with greater musical flexibility. The eminent violist and teacher Karen Tuttle once told me, as she surely told all her students, "Don't make the music happen; let it happen." Then she proceeded to show me physical ways in which to accomplish this. In fact, I have always believed that most goals can be achieved equally by working from the inside out and by working from the outside in. For example, in order to be able to let go while playing an instrument, you can either learn to develop a greater inner awareness, respect, and understanding of letting go, in all its levels

of meaning, or you can learn about the various physical ways you can use and move your body that will allow you to let go. There is no reason why you cannot work on both approaches simultaneously.

HOW THIS BOOK IS ORGANIZED

Very often, students tell me, "I've never thought about that before." It is my intention in this book to bring these very issues to light, illuminating many big ideas and small details that you may or may not have thought about in the past, and synthesize them into a coherent, unified, and memorable whole. This book will take you on a journey from basic principles of movement and alignment to nuanced advice about specific parts of the body as you play your instrument, to a method of right- and left-hand guitar technique, to some innovative ideas about engaging the large muscle groups, and finally to suggestions for both practicing and preparing for a concert performance. My overall aim is to demonstrate how to accomplish all this with ease or how to find the path of least resistance, so that the goal of making music can be as effortless and free as possible. The basic premise is that this can be achieved with basic knowledge and understanding of the functions of the body and its movement, as well as some careful thinking about the application of this information to all aspects of playing, practicing, and performing.

The first two chapters contain the basic information you need. They are concerned with these essentials: movement of the body at the joints, alignment, release of unnecessary tension in the muscles, and flexibility. The rationale of these early chapters is that if you think in these tangible, physical terms, and if you apply your knowledge of them with awareness and logical intelligence, then the difficulties of playing your instrument are no longer shrouded in mystery. Certainly, thinking this way must always be accompanied by the question: How does it feel? At the same time, in making technical decisions, we might allow ourselves to be governed too much by feeling, which can be informed by misguided instinct. It is best when feeling and instinct are balanced with scientific knowledge and logic.

I suggest that you read this book slowly. There is a lot to absorb here, maybe the equivalent of twenty private lessons or more. You will surely want to space out those "lessons" and give each one time to sink in, so that it has its maximum impact. On the other hand, you might wish to first read through the book relatively quickly for an overview and then go back to immerse yourself in a slower and closer study of the details. Whichever method you choose, there is a tremendous density of information here,

and some of it may be radically different from what you know or believe, so give it time and space. Also, be sure to try things out as you proceed. There is no substitute for experiencing the results directly.

Much of the technical advice offered here, especially in Chapter 5, is first demonstrated in an exaggerated manner. Never be afraid to exaggerate, both in the abstract exercise and in its practical application to a piece of music. This is when the true learning takes place. Once the exaggeration is mastered, then you must return to a normal amount of motion, and with the new technique assimilated. This is the hard part—making sure that the new technical approach remains, without the exaggeration.

Because of the abundance of information in this book, I have chosen to highlight in italics the statements I wish to particularly emphasize, so that the most important statements do not get lost in the web of details. Comments from personal experience are in text boxes, in order to separate them from the teaching material. The accompanying photos and illustrations will help clarify details that are difficult to describe completely in words. There are also short supporting videos, available online at http://global.oup.com/us/companion.websites/9780190693312/. Be sure to spend time with the supporting materials.

Another consequence of the abundance of information offered is that I often try to keep explanations as simple as they can be. Sometimes I intentionally avoid going into too much background or descriptive detail. For instance, when describing various aspects of the anatomy, I give only the information I think you will need to understand how it applies to playing your instrument—no more, no less. Otherwise, you might get bogged down in excessive detail and lose sight of the intended goal. Another example is the Alexander Technique idea of "body mapping," which is used often throughout the book, but is only superficially described as a concept here. It is a very broad subject. Entire books have been written about it. Again, my aim is to give you just enough information to be useful in this context. Yet another example is my brief description of the Tadasana (Mountain) yoga pose, which should properly be described in much greater detail than I do here. I choose to give just the minimum amount of information needed in order to do a simple stretch in between practice sessions. Human anatomy, Alexander Technique, and yoga are deep areas of study, with many books devoted to each. If my touching these subjects catches your interest, I hope that you will explore these well-documented areas more deeply on your own.[2]

2. Three books that I have found especially helpful are: Wynn Kapit and Lawrence M. Elson, *The Anatomy Coloring Book* (London: Pearson, 2014; originally published as

Finally, this book is essentially intended primarily for guitarists. However, except for Chapters 3 and 4 on right- and left-hand guitar technique, all of the chapters are applicable to other instrumentalists as well. I sincerely hope that any instrumentalist might find this book useful.

DANGERS

Writing a book like this is somewhat dangerous. First of all, by discussing technical matters in a rather definitive way, I am throwing myself into the hornet's nest of diverging opinions about technique. There are many different schools of technique in the guitar world, just as there are in the instrumental world in general, and each school has its staunch defenders and critics. The stronger the opinion, the more closely held it is, and the less receptive its owner might be to any idea that represents a different or opposing point of view. The guitar world's perspective, in particular, can sometimes be narrow, compared to that of the piano world, for example, where differing points of view are taken for granted, if only because there are so many pianists. Indeed, contrary opinions are to be expected. As you read this book, I hope that you will keep your mind as open as possible, even if the ideas may be quite unlike, or even fundamentally different from, what you have thought or experienced until now.

There are, indeed, some fairly radical ideas here, like the large muscle approach, the concept of dead weight, the importance of the thumb pad, the relaxation of facial muscles, and the notion of giving rest to pieces for a long time. Because they might be different from what you may have practiced or believed until now, these ideas may be far outside your comfort zone. But sometimes those are the very things that can help you the most, so please give each concept enough time to prove itself.

There will also surely be a lot of concepts in this book with which you are already familiar. However, sometimes people fall into the trap of recognizing only that which they know already, thereby losing an opportunity to learn something new. In addition to staying open to the new ideas, when you come across something that is familiar, you might notice that the way it is described may be different from how you have described it or heard it described before, and perhaps that difference of detail sheds some new light on the subject.

New York: Harper & Row, 1977); Barbara Conable, *How to Learn the Alexander Technique* (Columbus, OH: Andover Press, 1991); and Silva, Mira and Shyam Mehta, *Yoga, the Iyengar Way* (New York: Alfred A. Knopf, 2010).

Communicating technical and physical concepts mostly in written words, as opposed to demonstrating them in-person during a class or private lesson, is also a risky proposition. I trust that the supporting photos, illustrations, and website videos will clarify any questions you might have. Naturally, weekly private lessons are the best way to convey these ideas, but a carefully considered book in the hands of a thoughtful, attentive reader—one who is open to deep investigation of new concepts—should be a reasonable substitute.

ALL ROADS LEAD TO THE MUSIC

While the central issues of this book are physical and technical matters, there is almost always an inextricable connection to the music itself. After all, technique exists only to serve music. Throughout my many years of teaching both private lessons and public master classes, I have witnessed again and again that miraculous moment when a student conquers a technical problem or a physical bad habit, and, lo and behold, without any deliberate intention, the music suddenly blooms. For example, when you sit with better alignment, you have a more direct relationship to the music you play, and the sound gets bigger. When you move with greater flexibility, your phrasing becomes more fluid. Allowing your shoulders and upper back to release tension brings more expressive freedom to the music and allows it to sound less forced. The more naturally you learn to breathe while playing, the more the music itself breathes. The less tension you have in your right- and left-hand technique, the more the music flows effortlessly and with energy. When large muscles are engaged properly, there is a broader sense of musical architecture and overall freedom of expression. And when both practicing and concert preparation are accomplished with an underlying attitude of ease, your musical interpretation organically grows to its greatest potential. These are the kind of results that are best harvested without intention but, rather, observed as a beautiful surprise, like when the seeds you have planted have suddenly come to full flower.

CHAPTER 1

Your Body and Your Instrument: Principles

Details are essential. It is not enough to be told to "relax" or to "sit up straight." This is the same as being told to play a phrase "more musically." What does that really mean? You need to have more specific information before you can benefit from the advice. Likewise, in order to use your body effectively and with a sense of well-being, it would be wise to learn more about the human anatomy in general, and specific parts of the body as well. This knowledge will teach you how to prevent injury and how to accomplish your technical and musical goals with the best possible results. What follows is a good deal of detailed information about your body as it relates to playing your instrument—general principles in this chapter and specific information and advice in the next. You may use this information to understand how to partner intelligently with your body in order to play your instrument with the greatest amount of ease.

MOVEMENT, JOINTS, AND THE MID-RANGE

Just as you need to speak the language of music in order to discuss its interpretation, you need to speak the language of movement in order to consider the effective use of the body. It is quite simple. There are only a few words and concepts you should know to be able to speak this language.

Movement of the body occurs at the joints. The joints are the places where the bones meet. Some of the important joints involved in playing an instrument are the three joints of each finger, the wrist, the elbow, the shoulder, the head and neck, the hip, the knee, and the ankle. Each joint

allows several different kinds of motion. For playing an instrument, the most essential of these are

flexion—moving toward the next segment of the body; for example, when the finger flexes, it moves toward the palm (photo 1.1) and

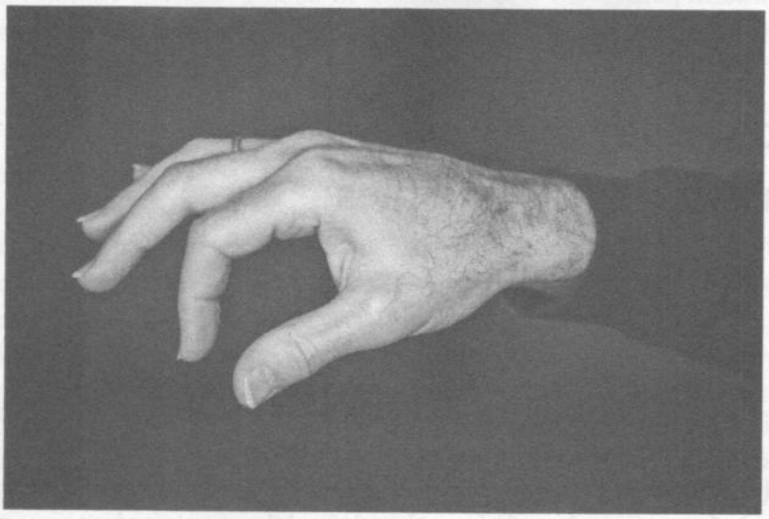


Photo 1.1. Index finger flexing

extension—moving away from the next segment of the body; for example, when the finger extends, it moves away from the palm (photo 1.2).

Photo 1.2. Index finger extending

There are also other kinds of motion:

abduction—moving away, in a side-to-side direction, for example, when the index finger moves away from the middle finger (photo 1.3)

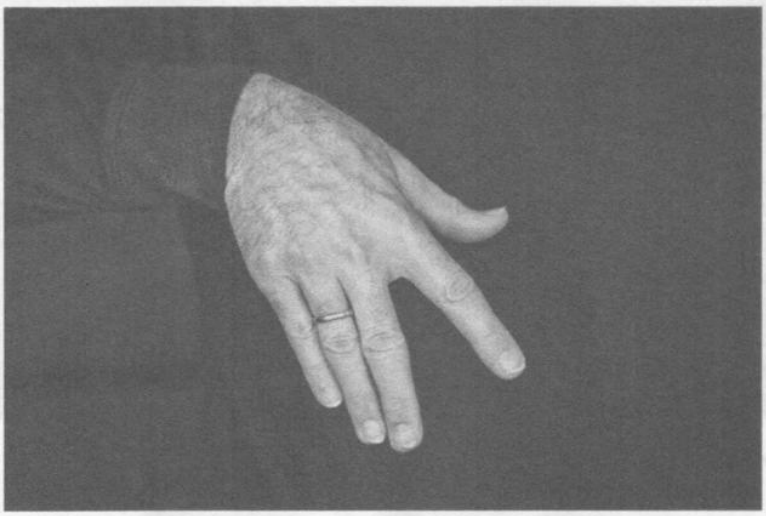


Photo 1.3. Index finger abducting

adduction—moving toward, in a side-to-side direction, for example, when the index finger moves toward the middle finger (photo 1.4)

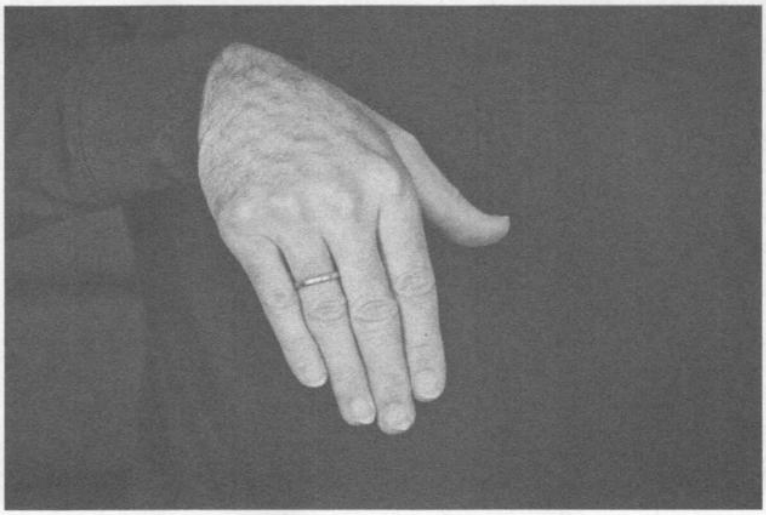


Photo 1.4. Index finger adducting

elevation—lifting up, like shrugging your shoulders up (photo 1.5)

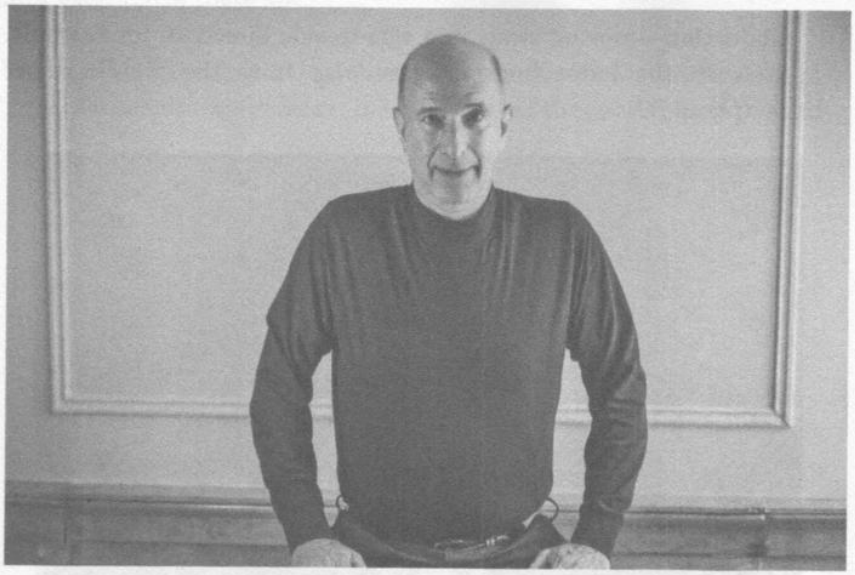


Photo 1.5

depression—lowering, like shrugging your shoulders straight down (photo 1.6)

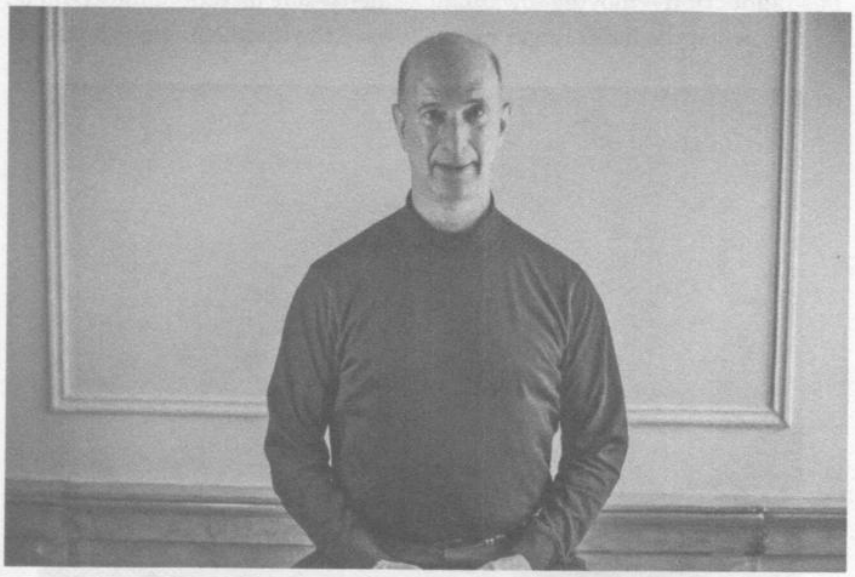


Photo 1.6

pronation—rotating your arm, for example, inward toward your torso, from the elbow or shoulder joint (photo 1.7)

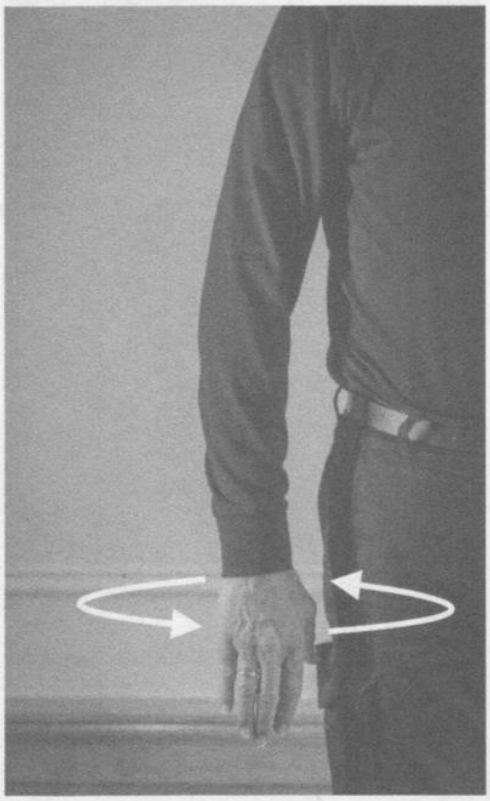


Photo 1.7

supination—rotating your arm, for example, outward away from your torso, from the elbow or shoulder joint (photo 1.8)

rotation—moving your arm from the shoulder in a circle, for example (photo 1.9).

For the moment, let's only concern ourselves with flexion and extension. In-between the extremes of flexing and extending there is the neutral state, or mid-range of motion. *The mid-range of motion for all joints is always optimal.* Flexing creates a kind of tension, even if it is a very small amount. With a lot of repetition, flexing can create a large amount of tension. Extending can be a kind of release, but in some cases it creates tension as well. With a lot of repetition, extension can also create a large amount of tension. The mid-range of motion creates a state of stability

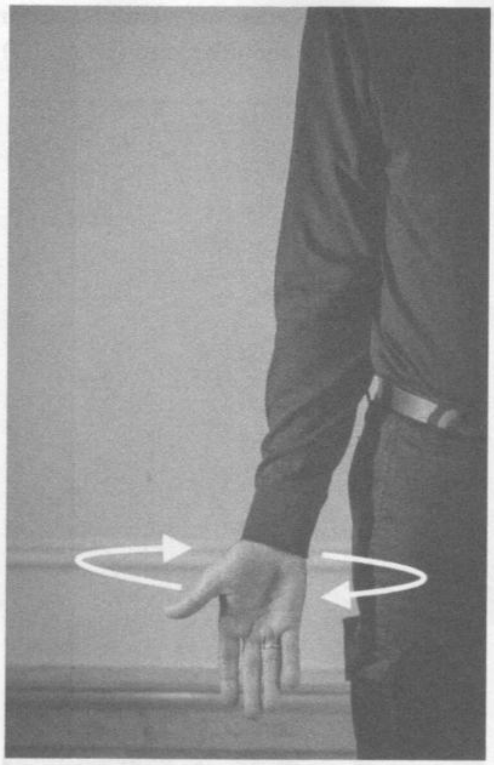


Photo 1.8

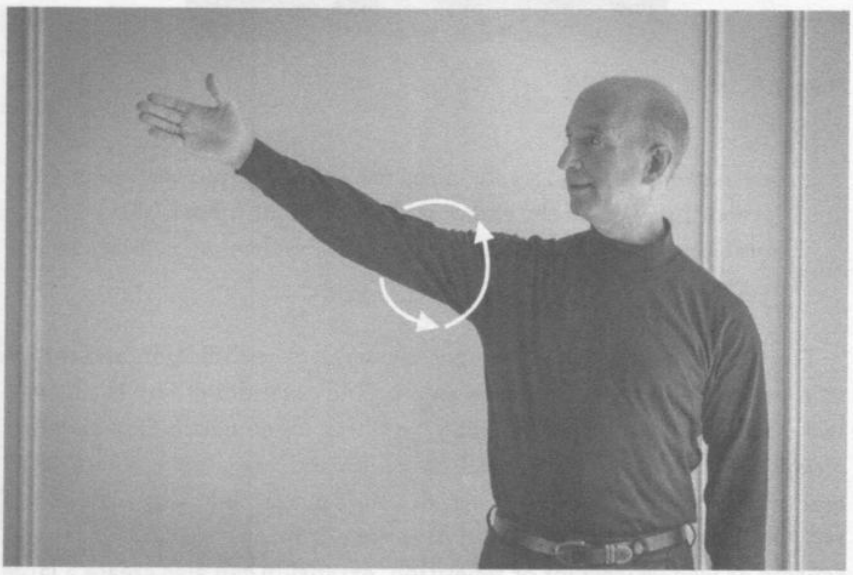


Photo 1.9

and rest. Therefore, *the mid-range is where we want the joints to be most of the time, when possible.*

Fingers

Consider the fingers, for example. Your right-hand fingers are curled into playing position, ready to strike a string.[1] In order to pluck the string, you need to flex your finger in toward your palm. Then, the finger extends away from the palm so that it can get ready to pluck the next note. However, *the finger is the least tense and most rested when it is in between flexion and extension,* which is called its "mid-range" or "neutral" position (photo 1.10).

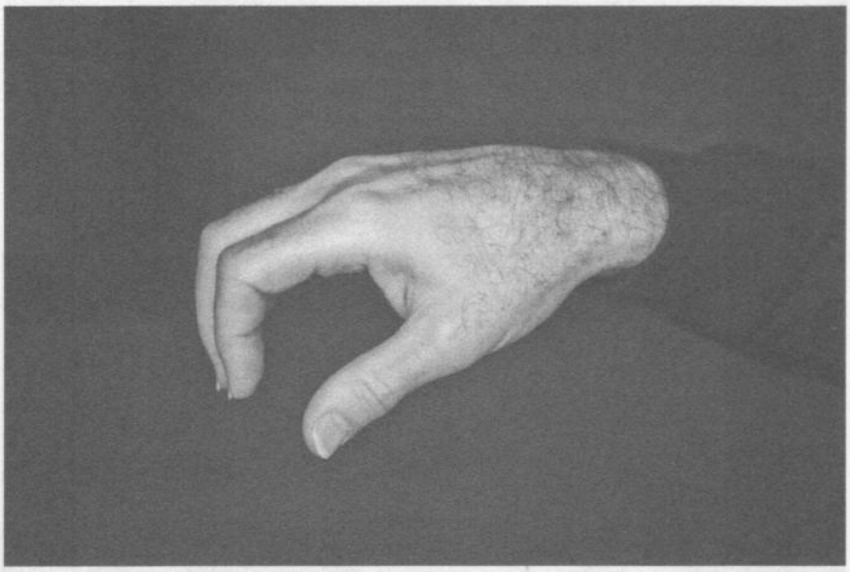


Photo 1.10

Take this idea a bit further, and you will understand that, in order to avoid flexion or extension too much of the time, you want to keep your fingers in their mid-range or neutral position most of the time. *For the right hand, this means a quick release of the fingers back to the neutral position as much as possible. For the left hand, this means that it is always best to keep the fingers*

1. Throughout this book, a left-handed player will need to translate to the opposite hand.

off the fingerboard whenever possible because when they are down on the fingerboard, they are flexed and somewhat tensed. This small amount of tension, when multiplied by the hundreds or thousands of finger strokes in both hands that one does in the playing of a piece, adds up to a good deal of unnecessary tension.

Wrist

The wrist is flexed when it is bent toward the underside of the forearm. This stretches tendons and ligaments beyond the optimal comfort zone and taxes the flexor muscles, which are located on the underside of the forearm. The wrist is extended when it is bent toward the upper side of the forearm. This also overstretches the tendons and ligaments and overuses the extensor muscles on the forearm's upper side. The wrist is happiest by far in the mid-range area. It is just as disadvantageous, if not downright dangerous, for the left hand to overflex or overextend the wrist as it is for the right hand. This is essential knowledge for the prevention of injury. *The wrist of both hands should be flat (straight) or as close to flat as can be in any given situation* (photo 1.11a and b).

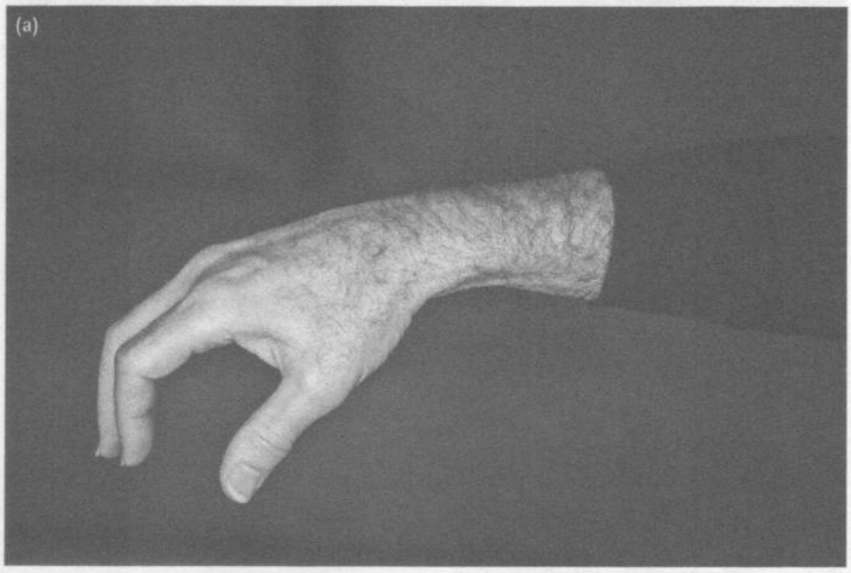


Photo 1.11a. Flat right wrist

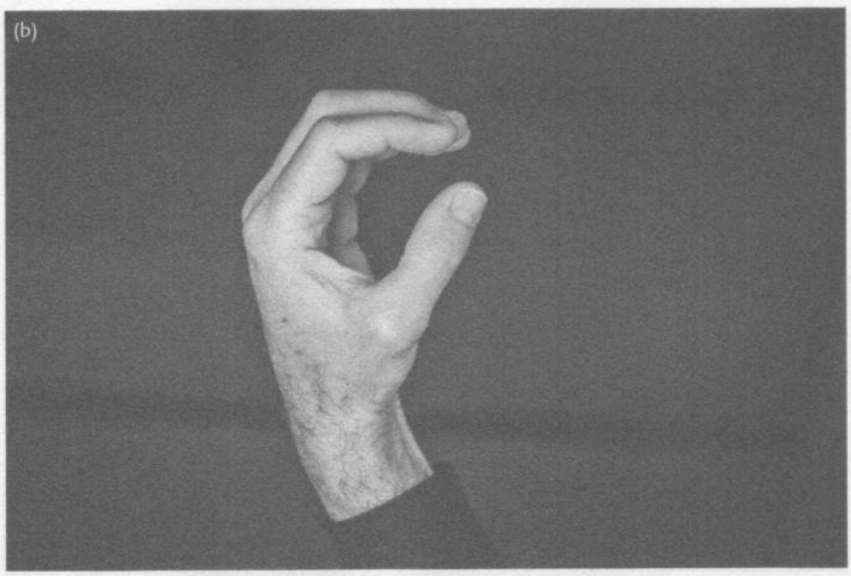


Photo 1.11b. Flat left wrist

Elbow

The elbow's mid-range position occurs when the forearm and the mid-arm (the next segment of the arm, between the elbow and the shoulder joints) are at a right angle to each other. When the elbow is flexed (bent toward the torso), it makes the arm work with excessive tension, especially in the flexor muscles on the arm's underside. When it is extended (bent away from the torso), it is mostly released, but with a small amount of tension when the fingers are moving. The optimum balance, as always, is at the mid-range. Think about the application of this idea in your right arm, and check to see that the positioning of your guitar and your hand allows for *an approximate right angle between your forearm and mid-arm* (photo 1.12).

Then check your left arm to see if your positioning of the guitar and your arm allow for *the same right angle between forearm and mid-arm* (photo 1.13).

In fact, most guitar players that I have witnessed have both elbows, especially the left, overly flexed. Over time, this excess tension adds up and can cause injury.

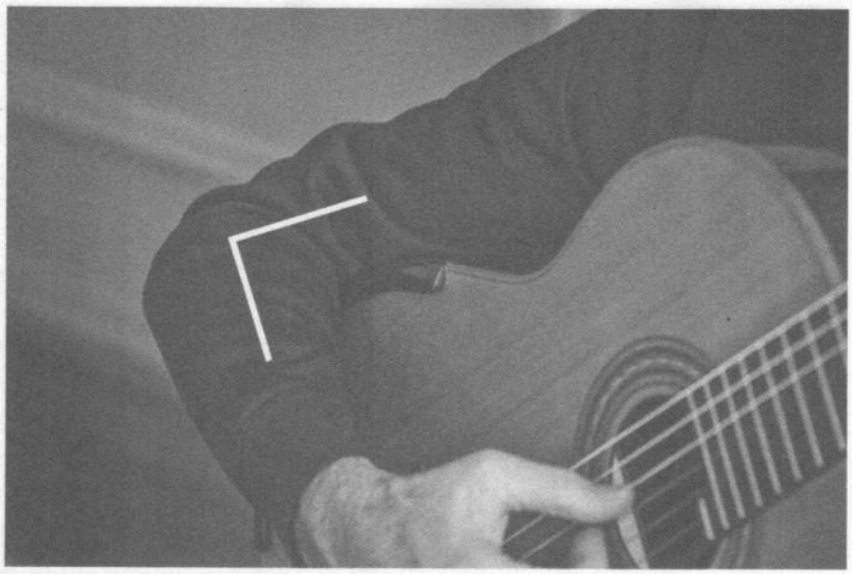


Photo 1.12

Photo 1.13

Hip

The hip joint functions best at its mid-range as well (surprise!), when torso and leg are at right angles to each other (photo 1.14).

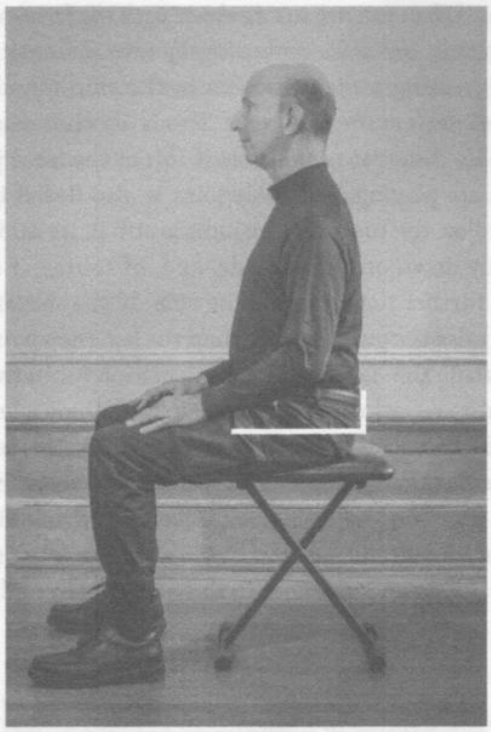


Photo 1.14

(When both feet are on the floor, this works best; when a footstool is used, this advantageous position is compromised because the hip joint is forced to flex.) When you are leaning forward, past the mid-range point, you are flexing the hip joint and causing it to work harder. Leaning back, beyond the mid-range point, might be a release, but you are then no longer sitting on your sitting bones, and this is disadvantageous (a more detailed discussion of this may be found in section "Sitting Bones" section, p. 24). Most guitarists tend to overflex at the hip joint, especially under the duress of performance. The combination of nervousness, excitement, and musical intensity makes many players lean quite far forward from the hip joint. This creates a tremendous amount of unnecessary tension.

Knee and Ankle

The knee and ankle joints function together. *When you are sitting down and the knee is flexed (leg bent toward the torso), the ankle automatically flexes.* This creates tension in both joints, as well as excessive tension in the shin

and calf muscles. *When you are sitting down with the knee extended (leg bent away from the torso), the ankle automatically extends,* creating a release in both joints but creating a slight tension in the shin muscles. Once again, *the healthiest position is at the mid-range.* This is another reason why playing with a footstool is disadvantageous, as it forces the knee joint to flex the entire time you are playing. The ankle joint is also flexed if your footstool is angled upward on the toe side. The joint is still in its mid-range if angled only very slightly down on the toe side, and, of course, it is extended if it is angled much further down on the toe side. If you use any of the recent inventions that raise the guitar rather than the leg, then your feet are flat on the ground, creating the happy mid-range position for both knee and ankle joints for the entire duration of your playing. Ergonomically considered, *any of the guitar supports that allow both of your feet to be flat on the ground are preferable to the footstool.* Using the footstool causes your lower back to torque or twist the entire time you are playing, and that is a frequent instigator of low back pain. At the same time, *be wary of supports that bring the guitar too far over to the left,* causing an imbalance in the workings of both arms.

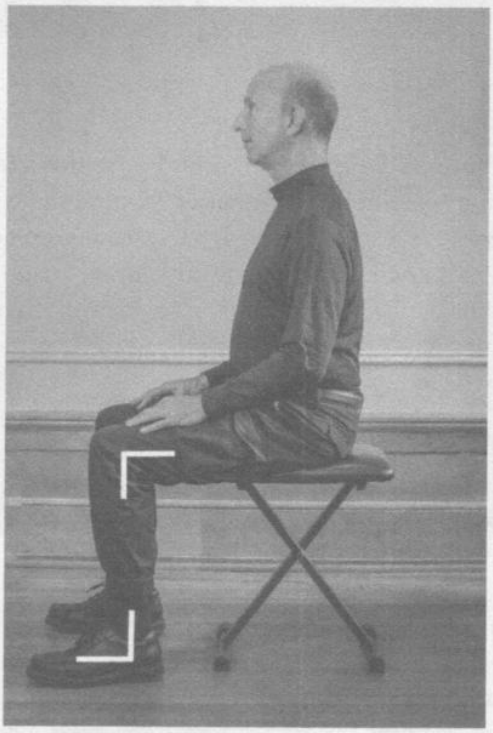
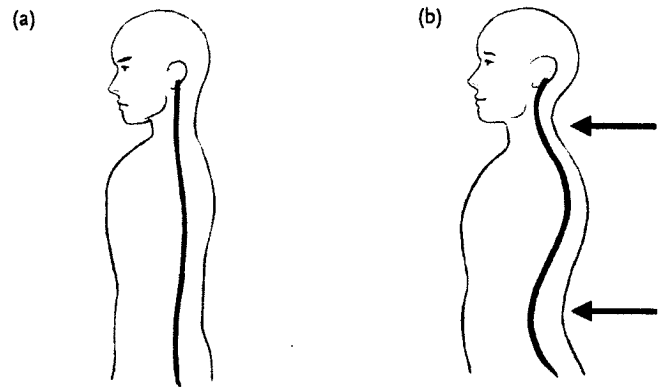


Photo 1.15

Considering the right leg, if you have it in a flexed position underneath your chair, you are not only undesirably flexing the knee joint but the ankle joint as well. If you extend the leg out in front of you, that's not bad, but, as usual, the mid-range, or right-angle, position is always best. *The knee and ankle joints should ideally be more-or-less in right-angle position* (photo 1.15).

ALIGNMENT AND FLEXIBILITY

First, it is important to know that *curves, not straight lines, indicate proper alignment of the spine.* When the spine is in correct alignment, there are slight natural curves at the neck (cervical spine), the middle of the back (thoracic spine), and the lower back (lumbar spine). At the neck, the natural curve is inward. A straight line here would indicate tension in the back of the neck and compression in the front, with a lowered chin (ill. 1.1).



Misaligned spine with straight lines Aligned spine with curves

Ill. 1.1

At the mid-back, the natural curve is outward. A straight line here indicates excessive curvature and tension in the low back, while the head and neck are thrown backward. Finally, at the low back, the natural curve is inward again. If this region were straightened, there would be a forward slump in the shoulders, head, and neck. Try out these different positions, both curved and straight, and you will clearly feel the difference. *The three natural curves help balance, de-stress, and protect the spine, and help support natural breathing* (as discussed in Chapter 2, section "Diaphragm and Breathing", p. 51).

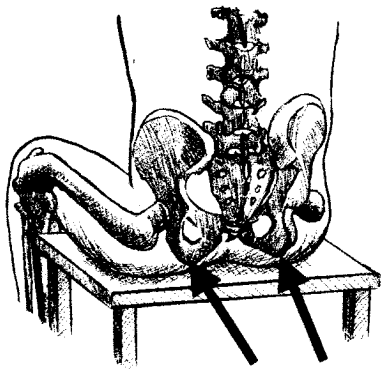
Now, let's look at the overall alignment of the body, starting from the feet and working our way up to the head.

Feet and Legs

The feet and legs should feel their weight falling into the floor (or footstool, if you use one). The concept of falling is very important. *When any part of your body is falling, it is not exerting any effort.* When the legs or feet, for example, have the sensation of falling, they are not actively using any muscles. They are at rest and feel gently rooted in the ground. Most guitarists have the bad habit of lifting their legs at the heel, often rocking back and forth as they lift one heel and then the other. The excessive tension that this creates in the calf muscles becomes quite an extreme exertion, and that tension extends all the way up the torso and into the arms and hands.

Sitting Bones

When you are sitting, the base of support for your entire upper body is in your sitting bones. These bones are the bony protuberances at the bottom of your pelvis (ill. 1.2).



Sitting Bones

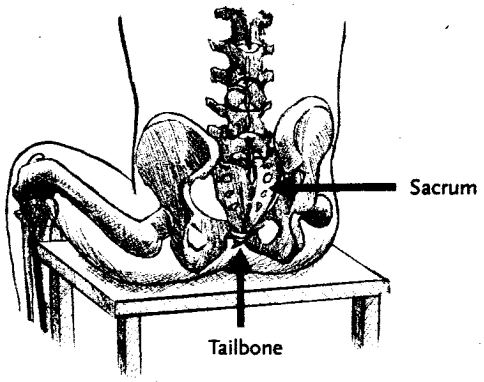
Ill. 1.2

They are curved and allow you to rock back and forth on them. If you sit and slowly lean forward with your whole torso, you'll feel the moment when you move off of your sitting bones. Likewise, if you slowly lean backward with your whole torso, you can feel the place in the back of those bones where you have moved off them. Another way to identify your sitting bones is to sit on your hands and move the torso forward and back. *When you feel the bones protruding the most into your hands, you are sitting exactly on top of your sitting bones.* You have just discovered the correct balance, forward-to-back, on your sitting bones.

You can now find the correct side-to-side balance. This is easy. Simply rock from left to right and vice-versa, feeling the changing distribution of weight on the two sitting bones. Then find the place where the weight is evenly distributed on both sitting bones. *When you find the balance of both forward-to-back and side-to-side at the same time, you are sitting correctly on your sitting bones.*

Sacrum and Sternum

Moving up a bit further, we arrive at the sacrum. The sacrum is the rather large, triangular-shaped bone at the base of your spine, with the tip of the triangle at the bottom (ill. 1.3).



Ill. 1.3

Just below it is the tailbone. Put your fingers or thumb on the sacrum and push it gently down. Keeping your sacrum in place, move your attention up to the sternum (breastbone). The sternum is the flat bone that runs from your clavicle (collar bone) to the bottom of your ribcage in the front center of your torso. *While keeping the sacrum down, lift the sternum up* (photo 1.16).

This creates a desirable traction of the spine, making the spine as long as it can be. Once you find this traction, *release any excess tension you might feel in your shoulders, chest, and lower back.* At the same time, *make sure that your head is not tilted back and your chin is parallel to the ground* and not pointing up. With the sternum up, your chest is facing slightly upward, not straight ahead. I call it "worshipping the sun."

Most people sit with their sacrum up and sternum down, which compresses the spine, collapses the chest, drops the head forward and down, and makes breathing rather labored. This is the classic slouch! On the other hand, with your sacrum down and sternum up, your spine has

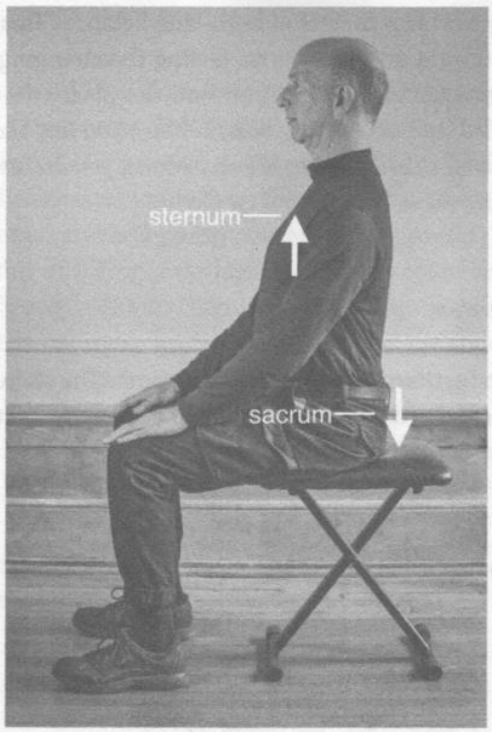


Photo 1.16

a healthy length, and the entire torso has proper support for breathing, balance, and stability. You may notice that this alters how much of the fingerboard you can see. When you're sitting correctly, you can only see one or two bass strings when looking at the fingerboard. You may choose to modify this by slightly angling the upper bout of the instrument in toward you. But be aware that the more you angle it toward you, the more you put your left hand at a disadvantage, so be as conservative with the angling as possible.

I cannot emphasize enough how important is the practice of sitting sacrum-down and sternum-up. For most of my playing life, I have struggled with the issue of aligning the back. I had an approximate sense of what felt right, but my lower back continued to bother me after a fair amount of practicing. Even after seven years of studying Alexander Technique, which was beneficial and revelatory in every other way, this problem never quite went away. The Alexander directive was to bring the head up and forward so that the back could lengthen and widen. No

doubt, it was a misunderstanding of mine, but somehow I still never felt completely secure in the correct alignment of my back. Later, when I took private yoga lessons, I learned about a different approach to lengthening the spine, which was to bring the sacrum down while directing the sternum upward. Immediately, I understood how to align my back the moment I sat down in a chair and played the guitar. My confusion and misunderstanding were finally resolved into clarity.

Shoulders

Now consider the shoulders. *They should have the sensation of floating on top of the ribcage.* Don't pull them up (elevate) or push them down (depress), but rather just rest them freely in their mid-range of motion. Many instrumentalists elevate their shoulders, producing a great deal of tension, not only in the shoulders themselves but in the entire upper and middle back, as well as the arms. Often, in conjunction with this, the head is hunched down. The combination of the raised shoulders and hunched head looks like a scared turtle. This creates a disaster zone of your whole upper torso, making you a certain candidate for injury. So, rather than promoting that scenario, let your shoulders float.

Head

Speaking of the head, let us turn our attention to this important part of your body, crucial to its overall alignment. To allow your head to be free and unencumbered, start by thinking of a string attached to the top of your head, pulling you up toward the ceiling. *Think of it as attached not at the back of the top of your head, which would raise the back of your head and lower your chin, but rather at the middle of the top of your head, which keeps the chin parallel to the ground.* Don't pull the imaginary string taut, but instead, *pull it up gently, so that the neck muscles stay loose. Then let your head hang comfortably, aware of its weight, suspended by the imaginary string.* This is a simple and effective way to keep your head from crunching down or leaning forward, both of which are common, major deterrents to playing with ease.

Most heads weigh around ten to twelve pounds, which is quite heavy. With only a slightly forward tilt of 15 degrees, the neck muscles have to work with a force of more than double the weight. Leaning the head forward 30 degrees causes the neck muscles to work with a force of about forty pounds. And at a 60-degree lean, the stress equivalent is sixty pounds! So,

it really is essential to keep your head directly over your shoulders, up and free.

Posture

You may notice that I rarely use the word "posture" in this book. That is because this word often has an unhealthy association—the image of so-called military posture—a kind of tense, rigid holding of the body. "Alignment" is a healthier alternative. However, when it comes to describing the general concept of body positioning or stance, of which alignment is one important facet, the word "posture" becomes uniquely useful. So when I do write "posture," I want you to have the image in your mind of an unstressed body, one that is at ease.

Flexibility

That stated, we can now say: *Good posture = alignment + flexibility.* Alignment alone is not sufficient for healthy posture. Once you understand the nature of correct alignment as discussed above, it is also important to know that holding on to your aligned position can create another kind of tension. This is because holding any position can easily turn into rigidity. *There needs to be fluidity in your body's movement such that you know where true alignment is but can move easily around it, using it as a center.* For example, when you consider alignment in the up-down axis, your torso might be allowed to collapse and straighten a bit, starting from your pelvis, in an undulating movement, while your neck is kept free. In side-to-side movement, you can allow your upper back to go in one direction while the pelvis moves in the other, creating a similar slight undulation, again while keeping your neck free. Whichever way you move, *your pelvis originates the movement, straight lines vanish, and there is flexibility in all parts of your torso, neck and head* (see video 1.1 on the OUP website ▶).

Experiment with this kind of fluid movement, first away from your instrument, and then with it. In the beginning, it will surely be disorienting and distract you from accurate playing, but *the more you get used to moving this way, exaggerated at first and then more subtly, the more confident you will be.* It might seem counterintuitive, but ultimately, with this looseness and flexibility of movement in your torso, your technical accuracy will improve and be even better than it was before. This is because you are no

longer holding on to any position with the built-in insecurity that holding engenders, but rather embracing flexibility, which ultimately allows for greater security and accuracy. Put this together with a knowledge and understanding of alignment, and you have a solid grasp of the ingredients of good posture.

When I was at the start of my performing career, I was a much more rigid player than I am now. Looking at old videos of my playing, I can't believe how inflexible I looked and sounded. My lessons with violist Karen Tuttle around 1980 began to loosen me up, and I've been working on this ever since. It's a never-ending quest, but I do feel that I've come a long way since then and am continuing to improve, even as I age. The more flexible I get, the more I can play with abandon and still maintain control—a worthy goal, I believe.

THE CHAIR

All of your careful work on alignment can be completely negated by a bad choice of chair. In fact, many chairs are remarkably poorly designed for healthy sitting. *The ideal chair is one with a seat that is parallel to the ground.* You do not want a chair that slants downward from front to back. It will take you off your sitting bones and disorient the alignment of your entire torso, neck, and head. A chair that slants upward from front to back, the kind of chair that is sometimes used for cello, is acceptable, although you have to make slight adjustments in your alignment and reorient your neck and head. Some may actually prefer this kind of chair, but for most, the perfectly flat seat is best. There are also many chairs with flat edges that have a contoured dip in the middle, supposedly to accommodate the buttocks. This is disaster for the guitarist, since it cuts off blood supply to the legs, causing numbness, and completely throws off one's sense of the sitting bones and alignment. Another disaster would be a chair with wheels, like a rolling desk chair. It is impossible to feel stable and perfectly centered in such a chair.

The height of the chair is very important as well and is, ultimately, an individual matter. Generally, the chair's height should be such that *the right thigh should be approximately parallel to the ground* (or both thighs, if no footstool is used and both feet are on the ground). If the thigh slopes sharply downward, the chair is too high, and if it slopes upward, the chair is too low.

For optimum alignment, *it is best to sit toward the front edge of the chair.* However, if you prefer to sit toward the back and touch the back of the chair, flatten your sacrum against the chair's back, not the lumbar part of your spine. The lumbar area should be slightly curved away from the chair's back. So *it is fine for the sacrum, but not the lumbar spine, to be touching the chair's back.*

TWO IMPORTANT BASIC CONCEPTS

Your Aligned Body and Your Instrument

Because physical alignment is essential to your health and longevity as a player, the logical conclusion is that you need to *bring your instrument to your aligned body.* Bringing your body to the instrument makes no anatomical sense, and yet this is what most players do. How many times have you seen players hunched over their instrument or with shoulders wildly uneven or twisted into positions that look cramped and uncomfortable? These playing positions are very unhealthy indeed, not to mention counterproductive to secure technique, beautiful tone, and musical interpretation. However, they can be transformed into a state of good health with the simple understanding that the body's alignment is top priority. Your instrument serves your body, not the other way around, so find the most technically effective and physically comfortable position for your instrument that conforms to your aligned body.

Freedom of Motion versus Economy of Motion

The second important concept is one of the most radical ideas to be presented in this book. Most instrumentalists are taught that economy of motion is essential. We are often told that if you want to play faster and more accurately, you must reduce your motion to the smallest movements possible. This concept applies equally to the workings of the right hand and the left. Unfortunately, while this approach makes perfectly logical sense, it is often at the root of most tension problems and injuries. The restriction of motion in either hand often makes all but a very few players tighten their hand and forearm muscles. In the long run, this tension overwhelms any short-term benefits and often causes injury. However, when the motion of the fingers and hand is loose and free, there is little or no tension. In this case, the amount of movement actually matters very little because the lack of tension allows for quicker reflex response. In fact, some of the fastest

players in the world have what might appear to be sloppy technique because the motion of their fingers is so large that it seems to be out of control. But they are able to achieve what they do because their movement is loose.

This brings us to the conclusion that *freedom of motion is much more important than economy of motion*. Economical motion has some significance and may be worked on at the most refined stage of development, but freedom of motion ought to be given first priority and considered the focus of most of your work. Once freedom of motion becomes second nature, economy may be considered as the last refinement.

CHAPTER 2

Your Body and Your Instrument: Specifics

Throughout my years of teaching, I have taught these basic principles of movement and the anatomy. However, the more I teach, the more I see how much detail students require in order to put these principles to work. And the more specific I get, the more I see that even greater details and nuance are necessary for a true understanding of how to play with ease. Because of the questions and problems that inevitably arise during lessons, students prod me forward in my ability to convey my ideas successfully. My students are some of my best teachers.

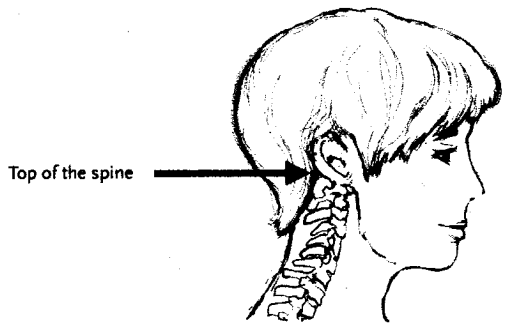
Usually, this is how it progresses: I observe tension problems in myself first, work on them, notice that my students have the same issues, and then refine the work with them, probing into ever greater detail. For example, all the ideas in this chapter about tension in the head, face, and neck were developed and refined by working with students, both in private lessons and in master classes. In master classes, the results are magnified because of the presence of an audience. Every time I teach these ideas, I learn something new about how to best put them into action, because each individual brings with her or him some new aspect that I had not considered before, and each master class audience brings with it new questions and concerns. But it begins with me. If it were not for the fact that I first experienced these tensions in my own playing, I would not notice them as clearly in others. The finer details of tension prevention begin in self-awareness.

Since the general principles were discussed in Chapter 1, we can move on to the finer details. In Chapter 1 we started with the feet and moved up to the head. Here, we begin with the head and work our way down.

HEAD

Moving the Head on Top of the Spine

In order to move the head freely and easily, it needs to be balanced on the top of the spine. How do you do this? First, let's see where the top of the spine is located. When asked, almost everyone indicates the top of their spine by pointing to a place in the back of their head, usually in the lower half of their head. This is absolutely incorrect! The top of the spine is *near the middle of your head*—just below the middle, going from top to bottom, and a little behind the middle, going from front to back. In other words, it is right between the bottoms of your ears (ill. 2.1).



Ill. 2.1

It is very important to have this correct inner "map" in mind because it will lead you to easy, unencumbered movement.

With an accurate understanding of the location of the top of the spine, we can now investigate how to move the head freely on top of the spine. Here is a simple exercise that will show you how to do this: Imagine a very short pencil attached to the end of your nose. *With your nose guiding that imaginary pencil, repeatedly draw small vertical figure eights.* When you move your head in this manner, you are naturally and correctly accessing the top of your spine. *Next, draw a number of small horizontal figure eights.* This expands your repertoire of correct movement to the horizontal plane and allows your head to move on the top of your spine with complete freedom. Once you are comfortable with the smaller movements, try larger figure eights, with the same freedom of movement.

Looking at the Fingerboard

Let's apply this abstract understanding to something more practical, like looking at the fingerboard. From a neutral position, with your head facing straight forward, move your head in a downward diagonal line to the left in order to look at the fingerboard. To make this really easy, let's first divide that movement into two separate segments. The first one is to look straight down. *From the neutral position, move your head straight down, leading with your chin and moving from the top of your spine.* This is like half of nodding yes. The incorrect way to do this movement would be to lean your head forward as you move it downward. *Then move your head straight up from the top of your spine* (the other half of nodding yes). Do this a few times until it feels natural. Now, *starting from neutral position, move your head from the top of your spine straight to the left*, again leading with your chin. This is like half of shaking your head to say no. Once again, the incorrect way to do this would involve your head leaning forward. Next, *move your head straight back to neutral* (the other half of shaking your head to say no), and repeat until it feels natural.

Now, *starting from neutral again, move your head straight down, and then move it straight to the left, return straight to the right, and then back up to neutral.* All movements should continue to be from the top of the spine. Repeat until it feels natural. When the combination of these two movements feels natural, you are ready to do a single diagonal movement downward to the left. With the newly found freedom and balance that you feel at the top of the spine, *move in the exact same fashion downward to the left and look at your fingerboard.* Return to neutral. Repeat until it feels natural. You have just learned how to look at your fingerboard with greater ease by moving your head from the top of your spine (see video 2.1 ▶).

FACE

An enormous amount of tension can reside in the face. Many if not most instrumentalists experience this. Often, facial tension is a direct result of an intense musicality. These players are generally very expressive, but unfortunately, most of their expression gets transmitted through the face. Of course, one should never inhibit this expressiveness, but when it turns into unnecessary tension, it needs to be rechanneled to the place where it really counts, which is to the hands and into the sound. In order to accomplish this, you must relax the facial muscles while playing.

In my many years of teaching, one of the most fascinating observations I've made is this: When I notice certain tics or abnormal tension in players' faces, no matter how many times I ask them to repeat the passage, they will have the exact same tension in the exact same place in the music. Chances are that it began like this: They played the passage and made a mistake on, say, the note G. They made a grimace, perhaps tightening their mouth or furrowing their eyebrow or clenching their teeth, because they felt annoyed with themselves for making the mistake. After that, they played the passage again, and maybe they made the same mistake with that G. Or perhaps they actually played the note correctly this time. But the grimace remained. Probably every time they play that passage from now on, they will make the same grimace. It is a habit that they have unconsciously reinforced in their practice. There are many such habits that we learn and reinforce unwittingly, but this is one of the more insidious examples, as it involves tension that is patently debilitating because this tension robs the player of the ease of playing in that moment. You can be sure that there are many more moments just like it in everyday practice. This prompts the questions: Where are the specific places in the face where tension most often occurs, and what can we do to get rid of that tension?

Open Mouth

Let's begin with the mouth, which is where most of a guitarist's facial tension resides. It is possible for a closed mouth to be perfectly relaxed; however, if there is any inclination whatsoever to tense the mouth, the tension will increase greatly if the mouth is closed. Therefore, *it is best to keep your mouth open. You only need to keep it slightly open, just enough for you to breathe through your mouth.* It is best not to breathe through your nose. If you breathe through your nose, your breathing will tend to be noisy. *If you breathe through your mouth correctly (see section "Diaphragm and Breathing", p. 51), it will be inaudible.* Should your mouth get very dry when breathing this way, it is because your breathing is labored and tense. When you breathe correctly through your mouth, you will feel very relaxed. Try playing a passage of music to see if you can keep your mouth slightly open for the entire passage. Notice any moments when your mouth closes and tightens. Try correcting every spot where this happens. Don't let a single instance of tension pass without noting and fixing it, because *every time you close your mouth, you introduce needless tension into your playing.* Moreover, one tense moment generates another, and this tension compounds and accumulates.

You may require several attempts at the passage to master this, so do as many repetitions as you need and take as much time as you need.

Flat Tongue

Next, while playing, pay attention to where your tongue lies. When you are tense, part of the tongue may cling to the roof of your mouth. Try to resist this habit and instead *keep your tongue flat, with the tip of the tongue gently touching the back and bottom of your teeth.* When your tongue is flat, your breathing is unobstructed and unlabored, and your throat is relaxed. As a result, an easy feeling in the upper torso will follow, since unobstructed and unlabored breathing invites general ease. Conversely, when your tongue clings to the roof of your mouth, you will subtly tend to tighten your chest and shoulders. Play through the same music passage again, and keep your mouth open and your tongue flat at the same time. Repeat this exercise as needed, until you are able to master the combination of open mouth and flat tongue.

Hanging Jaw

A surprising amount of tension can reside in the jaw. Most people are unaware of this tension. When a passage of music is particularly difficult, we tend to clench the jaw, unconsciously believing that girding in this way or muscling through it will help us conquer the technical obstacles. In fact, the added tension only serves to increase the passage's difficulty. To counteract this, relax your jaw by letting it hang loose. *Relax the connection between your jaw and your ear, relax any clenching of the teeth, and relax the muscles in the neck that are next to the jaw.* Let it all go slack. This does not require your mouth to be any more open than it was—it can remain just slightly open. Now play through the same passage of music, combining your open mouth with flat tongue and hanging jaw. Repeat as needed until you master this combination.

Loose Upper Lip

Another part of the face that is affected by playing technically difficult music is the upper lip. When under technical duress, a player will often tighten her or his upper lip. Again, the player erroneously and unconsciously braces herself or himself in an attempt to overcome the difficulty. Since this tension only diminishes the player's capacity to solve the technical problem while causing sympathetic tension in other parts of the face, it is completely

counterproductive. In order to prevent this from happening, *loosen the upper lip.* One way to do this is to brush a finger upward against the lip a few times, letting the lip be floppy. This increases awareness of its looseness.

Another way to loosen the upper lip is to *push a lot of air out of your mouth through your lips for a few seconds while making a strong "p" sound* and allowing your lips to vibrate. It sounds like a horse snorting! (See video 2.2 ▶). Vibrate your lips in this manner while playing through your music passage again. Repeat the snorting lip vibrations throughout the passage as much as you possibly can. Try to vibrate especially through the most difficult parts, so as to prevent tightening up the lip while playing them. It's a weird and hilarious exercise, but well worth trying because it automatically disarms the tension. Once you feel comfortable with this, combine it with the open mouth, flat tongue, and hanging jaw. Then eliminate the snorting exercise and just maintain awareness of your loose upper lip.

Loose Ends of the Mouth

When we get upset with ourselves about technical mistakes, we are prone to tightening both ends of our mouth, as if to scold ourselves for these horrible, unpardonable offenses (of course I'm being facetious). Once tightened, the ends of the mouth may retain that tension or even bring it back every time an error is made. This is entirely unhelpful, as you probably understand by now. Everyone makes mistakes, and they do not mean that you are a terrible player, or a terrible person, or that your career is over. A mistake just means that you made a wrong move. All you need to do now is calmly figure out what it was, so that you can correct it the next time. So, *instead of tensing up, loosen both ends of your mouth as you play the problem passage.* This serves to both relax you during stressful passages and help you prevent errors. Play through your chosen music passage again, staying mindful of all five tension relievers discussed so far: open mouth, flat tongue, hanging jaw, loose upper lip, and loose ends of the mouth. Repeat until mastered.

Loose Cheeks

A subtle corollary to the tight ends of the mouth is tight cheeks. The difficulties of playing can induce us to tighten the cheeks, as if we were trying to create dimples there. The simple fix is to *loosen your cheek muscles. Let them soften and drop,* and keep them this way while playing the entire passage of music. Then play through the passage again, adding awareness

of loose cheeks to an open mouth, flat tongue, hanging jaw, loose upper lip, and loose ends of the mouth, and repeat until mastered.

Relaxed Forehead, Eyebrows, and Gaze

Now take into consideration the combination of your forehead and eyebrows, as well as the gaze of your eyes. The forehead and eyebrows usually tense together. This often happens in the service of musical expression. The more intensely and passionately you feel the music, the more your forehead tends to wrinkle, and the eyebrows draw together tensely. While you would never wish to eliminate the loveliness of your sense of expression, it would surely be advantageous to eliminate any excessive and unnecessary tension. If you put all your expressive energy into your forehead and eyebrows, it might seem preferable to transfer some or most of that energy out of the face and into the sound, where it counts. To accomplish this, *relax your forehead and eyebrow muscles, softening them and thinking of bringing them not forward, but rather back into the head.*

Meanwhile, there is an interconnection between the movement of your forehead and eyebrows and the gaze of your eyes. This very significant aspect of facial tension is easy to overlook. When we try to concentrate with great effort or when we are fearful of making mistakes, the gaze of our eyes can become hard and rigid. On the other hand, when we loosen the gaze, our ability to concentrate actually increases, and our fear dissipates, allowing us to make fewer mistakes. Not surprisingly, this also makes room for a feeling of love. Effort, fear, worry, and duty vanish, and what emerges in their place is a love for the music and love as a part of the music's expression. So, rather than rigidifying your eyes, *relax the muscles around your eyes and soften your gaze.* Notice how this affects the tone, musical expression, and technical ease of your playing. Play through your chosen passage one more time, combining the relaxed forehead, eyebrows, and gaze with an open mouth, flat tongue, hanging jaw, loose upper lip, loose ends of the mouth, and loose cheeks. Repeat until mastered.

Putting It All Together

Once you have practiced all of the above, you will be ready to move on to other passages of music. In a new context, see if you can maintain all seven aspects of a relaxed face. At some point, you might notice that the expression in your playing may now be a bit bland. This is to be expected because you have been focusing all of your attention on getting rid of the tension

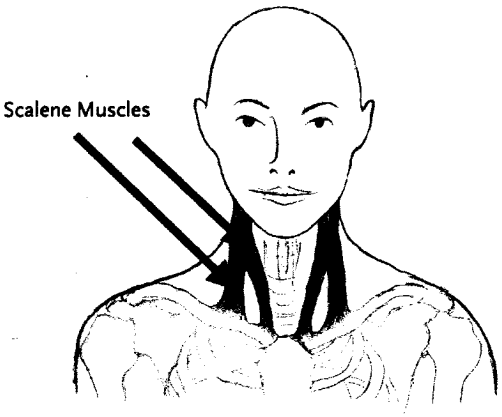
habits in your face. It does, indeed, require immense concentration just to be able to physically coordinate all of these directives. In the beginning, you have to focus exclusively on the softening and loosening of all these aspects of your face. However, once you are very comfortable playing this way—and not a moment before!—*bring back your focus to dynamics and musical expression, while keeping all parts of your face just as relaxed as when it was your exclusive focus.* You might have to return sometimes to the more mechanical, physical work as described above, but then you can always return to playing more musically. Old habits take some time to unlearn, but with awareness and good focus, you will be able to do so and eventually make this sort of ease a natural, automatic part of your playing.

THE SEVEN ASPECTS OF A RELAXED FACE

Open mouth
Flat tongue
Hanging jaw
Loose upper lip
Loose ends of the mouth
Loose cheeks
Relaxed forehead, eyebrows, and gaze

NECK

There is a group of muscles called "scalene muscles" that are located deep in the side of the neck and toward the front (ill. 2.2).



Ill. 2.2

Because of their proximity to and connection with large muscles and nerve networks that ultimately extend to the arms and hands, the scalene muscles are directly related to the functions of the hands. When these muscles are tight, as they are in many of us, the tension travels all the way down to the hands. Most guitarists tend to tighten their scalene muscles when playing. If you watch a guitarist's neck closely while he or she is playing, you will often see the scalene muscles tightening when the player plucks a note or chord loudly, and sometimes even when he or she is plucking softly. It's as if the guitarist is plucking the strings with his or her neck!

Another common habit of guitarists is to unconsciously make vibrato with the neck. Watch closely and you may see that, instead of vibrating the note on the string, the guitarist vibrates his or her neck from side to side! As silly and nonsensical as these habits are, they do occur in many guitarists. In both of these cases, the guitarists are tightening their scalene muscles. To prevent this from happening, notice any tension you may be feeling in your scalene muscles while playing (especially in loud or intense passages), *let those muscles soften instead, and keep them soft throughout your playing.*

All of your neck muscles are connected in some way to the large muscles in the thoracic outlet area of your chest and to the big trapezius muscle in your upper back. *These large muscles of your neck and upper torso are the most important muscles that are related to your hands.* They are far more important and crucial to the healthy functioning of your hands than any of the muscles in your mid-arm, forearm, and hand. Never underestimate their role when analyzing an injury or thinking about an ergonomic approach to technique. All the functions of your hands begin in your neck, so *keep all your neck muscles loose and free.*

Three Neck Exercises

To loosen and free up these muscles, try these three simple neck exercises:

1. Starting from neutral position, with your head facing straight forward, and moving from the top of the spine, turn your head slowly and evenly to the right, so that you are looking over your right shoulder (or as far as your mobility will comfortably allow). Maintaining the same even and slow pace without stopping, turn your head all the way to the left, so that you are looking over your left shoulder (or as far

as your mobility will comfortably allow). Without stopping, continue this rotation several times from the right over to the left and back again, always at the same slow and even pace. The more you do this exercise, the more you may increase your mobility, even if only slightly. Now take your guitar in hand and play a passage of music while doing the exact same neck exercise. *Your slow, even pace should be exactly the same as it was without the guitar, regardless of the tempo of the music.* In other words, the tempo of your playing and the tempo of your neck rotation should be entirely unrelated to each other. This is hard to do at first. It will probably distract the flow of your playing. However, with practice it will become comfortable if you are persistent, especially if you are attentive to the pace of your neck movement. The more practiced and perfect this exercise becomes while playing, the looser your neck will be and the more relaxed and accurate your technique will become.

2. Starting from neutral position, bring your chin straight down to your chest (or as far as mobility will comfortably allow). Again, be sure to make this movement slow and even, and take care that the movement is initiated from the top of your spine. *If both your head and neck are dropping forward, then you are not moving correctly from the top of your spine.* When you reach the end of that motion, don't stop. Raise your chin slowly and evenly, still initiating movement from the top of your spine. Bring it all the way up to the place where your head is tilted back just a bit. Don't go too far back at first. Without pausing, continue this up-and-down exercise, always leading with the chin, moving from the top of the spine and at a slow and even pace. As you continue, you might extend your range backward a little further at the top of the motion, but *don't push it beyond its comfort zone,* as it is easy to injure yourself this way. Now take the guitar in hand and play the same musical passage while doing this exercise. Again, keep the same slow and even pace, and keep it disconnected from the tempo of the music.
3. Starting from neutral position, bring your ear toward your shoulder, taking care to move only from the top of your spine. *If your opposite shoulder is rising or your neck is moving over to the side, then you are not moving correctly from the top of your spine.* Move slowly and evenly as before, and only go as far as your mobility will comfortably allow. When you reach the limit of your range, reverse direction, bringing your other ear to your other shoulder. Maintain your slow, even pace and your movement from the top of your spine. Continue at the same pace, without stopping. When you are comfortable with this exercise,

pick up your guitar and play the same passage as before, continuing to move at the same pace, unrelated to the music's tempo (see video 2.3 ▶).

Taking It Further

Once you have completed all three of these exercises, you will have a pleasantly loose neck. Play the same music again, experimenting with your newly discovered freedom of movement, and then try other pieces or passages. Experiment with gently moving your neck around in different directions and using different modes of movement while playing. Be imaginative and try new kinds of movement, always keeping your neck as loose as it can be. When you get really good at this, try staying relatively still while playing, but continuing to feel the freedom that will allow movement in any direction at any time. Every once in a while, give your neck a little jiggle, just to remind you of that freedom.

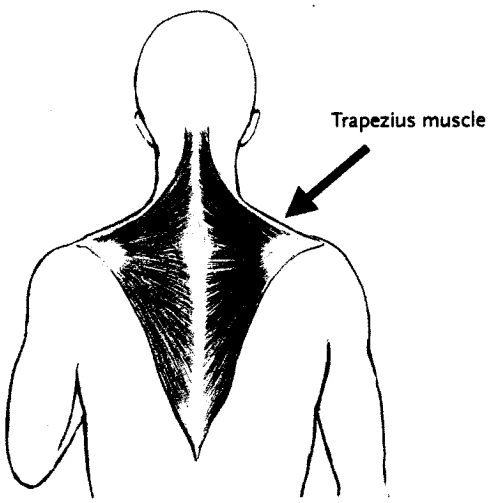
Finally, you can use your new, lovely neck flexibility to experiment with looking at different parts of the room while playing. Start, perhaps, by looking straight ahead, and then at some point turn your head to the right. After a while, lift your head and send your gaze to the top right corner of the room, then up to the ceiling, over to the top left corner and all the way to the left, and maybe back to the fingerboard, and so on. Be sure to keep moving your head freely on the top of your spine. Don't stop playing whenever you change direction. *Looking in all these different directions might disorient you at first, and you may lose your place in the music, but keep going and keep experimenting* because the more you do this, the more you will get used to it. As you work with this, you will quickly learn to become more flexible, both physically and in regard to the communication between your brain and your fingers. You may even discover that your phrasing and overall musical expression have also become more flexible.

UPPER TORSO

The Trapezius Muscle

Descending from the head and neck, we find a significant set of muscles and joints in the upper torso that are intimately associated with the arms and hands. Let's begin with the huge trapezius muscle. It attaches to the top of the neck in back, flares out to the ends of your shoulders in back, and goes

all the way down to the middle of your back in a large, curved diamond shape (ill. 2.3).



Ill. 2.3

Virtually every move you make while playing the guitar involves the trapezius. Probably every guitarist on the planet has experienced soreness in the trapezius at one time or another, from excessive tension, from playing loud and fast music, or from leaning the head and neck too far forward.

> In my own experience, I have experienced a tight trapezius muscle with some regularity. To prevent the tension from building up, I need to constantly remind myself to release that tension.

It is very important to know how to rest this very large muscle. Problems usually set in when players hunch their trapezius upward toward the neck. It's as if these players subconsciously believe that the trapezius belongs primarily to the neck. But the trapezius actually resides mostly in the upper back. Here is a simple exercise that corrects this problem: Begin with your shoulders in neutral position (floating above the ribcage). Lift your shoulders straight up. (Don't drop your head down.) Bring them straight back. Then ease your shoulders down, letting your trapezius muscle slide down your back easily, all the way down—not pushed down unnaturally, but comfortably hanging down. Repeat the exercise. *Where your trapezius ends up at the end of the exercise is basically where it should always be—descended*

down the back and relaxed. If you maintain a relaxed trapezius muscle while playing, you will experience much greater ease.

Opening the Shoulder Joint

The shoulder joint is the most flexible joint in the body, though you might not know it, looking at the shoulder tension in most instrumentalists. The problem is usually that players restrict their shoulder joints so that they are not free to move. Opening the shoulder joint is really quite simple, but keeping it open takes awareness and vigilance.

> I had often been aware of tension in my shoulder joint and observed the same problem in students, but I had no idea how to fix it. My private yoga instructor taught me how. As simple as it is, it was a major revelation.

Here is how to open up the shoulder joints: Sitting with your guitar on your lap, *let your right arm dangle by your side. Rotate your palm to face behind you.* This closes the shoulder joint. *Now rotate your palm so that it faces forward.* You have just opened your shoulder joint. Here is how to keep it open while playing: *With your right palm facing forward, flex your forearm upward from the elbow only. Your palm is now facing behind you. Rotate the forearm only, from the elbow, so that the palm faces the guitar, but the shoulder joint remains open. Keeping it open, bring your arm gently into playing position.* You are now ready to play with an open shoulder joint! All you have to do then is maintain this open position while playing. As you continue to play with an open shoulder joint, you will feel more freedom in your hands and arm. As a refresher, you can stop playing at anytime and redo this exercise, starting with the dangling arm.

With the left arm, it is even simpler because the shoulder joint stays open almost automatically, as the palm is already correctly rotated. *Once you have rotated your dangling palm so that it faces forward, just bring your forearm up to playing position.* Your shoulder joint is open, and you're ready to play (see video 2.4 ▶).

The Pectoralis Muscles

In general, the big pectoralis major muscles (sometimes called the "pecs"), which cross the chest, tend to be tight when we play an instrument. We

probably try to subconsciously "help" the arms by girding the pecs, instead of letting them be a calm support. Here are some ways to relax your pectoral muscles: First, remind yourself that your sacrum should be down while your sternum is up. *While in this sitting position, imagine the distance between your shoulders in the front as being wide—not tensely pulled away from each other, but comfortably widening.* This creates a slightly concave curvature towards the back. Meanwhile, notice that there is a slight narrowing in the back. *The scapula bones (shoulder blades) come together a bit more closely. Now soften the pectoral muscles all across the top of the chest.* You can lightly palpate (repeatedly tap) these muscles with your fingertips to increase awareness of their softness. Try to maintain this softness while playing.

On both the right and left side of the chest, the pectoralis major muscle extends to the underside of the arm, just next to the armpit. It might be helpful to visualize this thin intersection of arm and torso as a small upside-down U (photo 2.1).

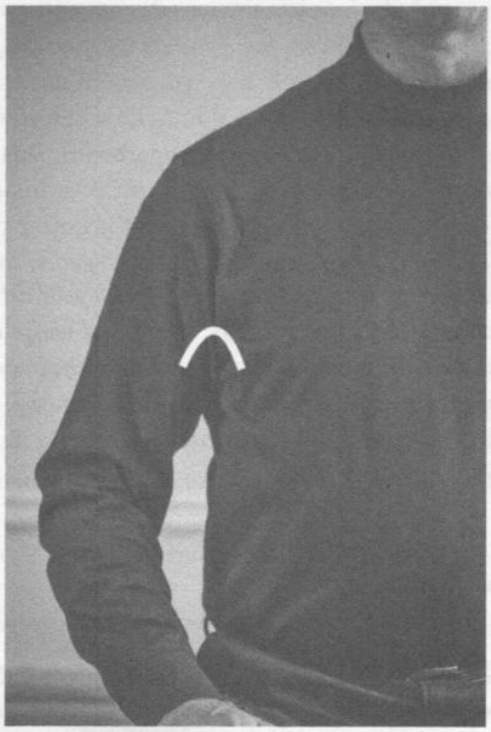


Photo 2.1

Guitarists tend to create a lot of tension in this area, in both arms. *Relax and soften the upside-down U muscles in both arms.* Practice playing your instrument while keeping these muscles soft. When you are able to do this, you will probably notice how much less effort is needed to play.

ARMS

The way we move our arms is something so automatic that it might be helpful to think about this movement more objectively, perhaps even in abstract terms. You might find the following general image helpful to think about how your arms work: *Your arms move laterally toward and away from your neutral torso as if you were playing an accordion.* Try out this abstract motion with both hands, moving them toward and away from each other, independent of the torso. This is the essence of what it should feel like to play the guitar.

Now consider each arm separately. For example, when you move your right arm from *ponticello* (the bridge) to *tasto* (the fingerboard), you should not hunch up your shoulder or compress the pectoral muscles in the chest. Rather, *move your arm in both directions as a cellist moves her or his arm to draw the bow across the strings, with your hand and shoulder working in tandem.* The exact same thing is true for the left arm. You would not want to hunch up your shoulder or compress your pectoral muscles when you move your arm toward your torso to travel higher up the fingerboard. This would feel very tense every time you move into the upper positions. Instead of directing the movement of your arm from your elbow, it is better to *have your arm move as a result of your shoulder and hand working together as a unit.*

Likewise, *it is not helpful to lift your left arm with your deltoid muscles (the muscles you would use to flap your wings, if you had wings instead of arms) when you move it away from your torso to travel into the lower positions.* This is the unnecessary equivalent of lifting weights. Instead, move your arm again like a cellist drawing the bow across the strings, in both directions (see video 2.5 ▶).

Where Does Your Arm Begin?

When my Alexander Technique teacher told me the information I'm about to share with you, it was a Eureka moment. Everything I had ever thought about the movement of the arms had to be reconsidered in light of a radically different understanding of where the arm actually begins.

Previously, I called the segment of the arm between the shoulder and elbow joints the "mid-arm," and you may have wondered why. Here is the answer: Your arm does not begin at the shoulder joint, as you probably imagined. *In the front of your body, your arm begins at the sternoclavicular joint.* This is the joint at which the sternum (breastbone) meets the clavicle (collarbone). To better understand the relation between the arm and the sternoclavicular (SC) joint, place a finger at the spot on your clavicle where it meets the sternum. With your finger nestled in this indentation, your two SC joints are on either side of your finger (photo 2.2).

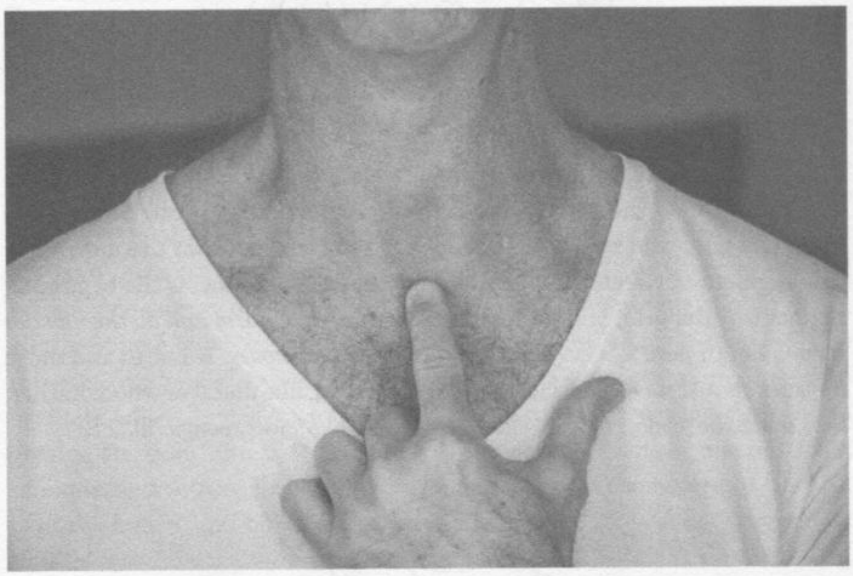
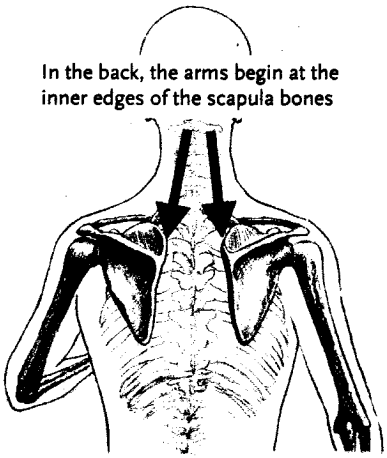


Photo 2.2

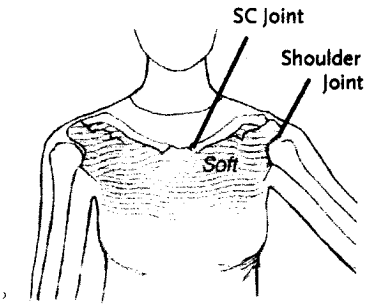
While touching that spot with your finger, move your other arm up and down, forward and back, and rotate it. You will see that when you do any of these movements, the spot under your finger moves with you. Try it the other way around. Place a finger from your other hand on the SC joint while moving your opposite arm around and about. Of course, it has the same effect.

In the back, your arm begins at the end of your scapula bone (shoulder blade). If you're able to, reach around to the back and touch the edge of the scapula bone nearest your spine on the opposite side of your back. (If you lack the mobility to do this, have a friend touch the edge of your shoulder blade for you). Then move your arm around on that side in all directions as before. You will feel your scapula bone moving with your arm (ill. 2.4).



Ill. 2.4

Knowing where your arm actually begins is essential to your understanding of how the arm works, as well as how tension can occur while using the arms and hands. Once you grasp the concept that the upper arm (the segment between the shoulder joint and the SC joint) is the beginning segment of the arm, you understand that *the upper arm and all the muscles surrounding it need to move when the rest of the arm moves.* This area and those muscles should never feel locked or rigid or hard, like metal or wood. Rather, *they should be flexible or fluid like water or soft like a wet sponge* (ill. 2.5).



Ill. 2.5

With this in mind, play a piece, and pay attention to your left upper arm and all the muscles surrounding it on the left side. See if you can keep this area completely flexible, loose, and free. When you can do this well, play the same music and focus on the right side. See how soft and flexible you can be in the muscles surrounding your upper arm. You may be surprised—I was!—at how much tension you used to hold in this area without being aware of it, and how much freer your hands and arms now feel.

The Feeling of Dead Weight in the Arms

The concept of dead weight was something that I identified during the process of curing myself of focal dystonia. It was a crucial part of that process. This concept is nothing new in the history of music. Pianists had written about the "arm weight method" nearly a hundred years before me. However, I had never considered applying it to guitar playing. After I developed this technique on my own and cured my focal dystonia, I studied the Alexander Technique, which further refined my concept of dead weight, and even applied it to other parts of the body.

Most instrumentalists create much unnecessary tension in their arms by unconsciously lifting them more than is required. This lifting exerts needless muscular energy and, more often than not, turns into excessive tension. *The ideal is to be conscious of the weight of both arms, or to feel them as dead weight* (or, if you prefer, floating weight). I like to think of the weight as "dead" because when something has no life in it, it becomes heavy and expends no energy or effort. When you feel the dead weight of your arms, all the unnecessary tension in your forearm and mid-arm is released. The forearm flexors and extensors, biceps, triceps, and so on, all become subordinate to the larger muscles. When this happens, the arms move with greater freedom and ease. It is also interesting to know that muscles, tendons, and skin do not weigh much at all. Most of the weight of the arm is in the bones, and bones weigh very little. *When you move your arm, just think of it as moving your bones.*

The following is one way to access the dead-weight feeling: Have a friend stand next to you on your left side, while you are seated with the guitar, with left hand in playing position. Ask your friend to cup her or his hands under your hanging elbow and support it. Drop the weight of your left arm into your friend's hands, without forcing the weight down. Just give the weight of your arm to your friend and trust her or him to support it. Now ask your friend to take you on a slow ride up and down the fingerboard, while your fingers stay close to the fingerboard and ready to play. *No matter whether you are being moved up or down the fingerboard, keep dropping the weight of your arm into your friend's hands.* Tell your friend to not help you in any way, but rather to simply receive the weight that you are dropping. You may notice that your tendency is to lift your arm, especially when your friend moves you down the fingerboard toward first position, away from gravity's pull. Ask your friend to tell you when she or he feels you

lifting, instead of dropping, the weight of your arm, and then correct it. Do this until you feel confident that you are dropping the weight the entire time, regardless of the direction in which your friend is taking you. Then take yourself for the same ride up and down the fingerboard, without the support of your friend, and see if you can maintain the dead-weight feeling for the duration of the ride. Another way to visualize this might be to imagine a rope hanging from your elbow down to the floor. Feel the weight of the rope connecting you to the floor no matter where your left hand moves (see video 2.6 ▶).

Now play a note or chord in a low position. Lift the fingers and move with dead weight to a high position, re-placing the note or chord. Shift back down again, then up, and back again. Experiment with different notes and different chords, maintaining the dead-weight feeling no matter where you are on the fingerboard. Apply this to everything you play.

You can do the same exercise with your right arm. While you are seated in playing position, with your right arm poised to play the strings, ask your friend to cup her or his hands underneath your forearm, while you drop the weight of the arm into her or his hands. Remember, do not force the weight down. Rather, gently settle your arm's weight into your friend's hands. Ask your friend to take you for a slow ride, flexing and extending from the elbow, up beyond the sixth string, away from gravity's pull, and back down toward gravity's pull, beyond the first string. As before, whether you are being moved up or down, *continue to drop the weight of your arm into your friend's hands.* You may notice a pronounced tendency to lift the arm when she or he is taking you up, away from gravity. Your friend can help you once again by telling you when you are lifting, instead of dropping, the weight of your arm (see video 2.7 ▶).

Once you master dropping the weight with your friend's assistance, you will be ready to try it solo. Now take yourself for a slow ride up and down, and maintain the dead-weight feeling for the whole time. Then play some music, preserving the same dead-weight feeling in your right arm at every moment.

After you have worked on each arm individually, practice playing a piece with the dead-weight feeling in both arms at the same time. You will surely observe how much easier guitar playing can be now. Playing with dead weight releases all unnecessary tension in the arms, creates a better and bigger sound with the right hand, and allows for much greater freedom in general.

DIAPHRAGM AND BREATHING

I was a singer in my teenage years and learned something about the correct way to breathe in my voice lessons at the time. Some years later, I happened to notice that my breathing and my guitar playing were not integrated. When I reminded myself of proper breathing technique, not only did my playing become more natural in expression, but it also relaxed my whole body considerably. In recent years, when I studied Alexander Technique, I learned a simple basic exercise for how to breathe properly.

Correct breathing is a crucial component of the easy movement of the bones and muscles that affect your arms and hands. When you breathe, you are moving the bones of the ribcage, the collarbone, the abdominal muscles, the pectoral muscles, and much more, including many nerves and arteries, as well as affecting oxygen flow to the brain. In addition, healthy breathing habits support your musical intentions. Uneasy or labored breathing can actually work against the music. If someone asks you to consciously breathe in and breathe out, it is very likely that you will breathe incorrectly. When you inhale, if you are lifting your chest and shoulders and sucking in your gut, then you are breathing incorrectly. We tend to breathe better when we are not consciously thinking about it, like when we are sleeping. There are many useful approaches to healthy breathing. Here is a simple one.

Breathing Exercise

The most basic key to healthy breathing is understanding that *the diaphragm works naturally all by itself.* The diaphragm is a large, downward-facing dome-shaped muscle that begins at the bottom of the ribcage. It contracts and falls as we breathe in, allowing for less pressure in the thoracic cavity and making way for air to enter the lungs. As we breathe out, it relaxes and rises. As long as we are alive, there is nothing we need to do in order to make this happen. It works all by itself, so all we need to do is to get out of the way and let it do its job.

While sitting or lying down, exhale all your breath. Then wait. If there is yet more breath to exhale than you thought, let it out. Otherwise, just wait . . . until the diaphragm automatically allows the air to come in. In other words, *don't take a breath, but rather let the breath in.* Don't grab the breath

tensely, but just allow it to enter naturally, while the diaphragm does the work it is meant to do. As you let the breath in, you will notice that your stomach expands outward. Repeat this exhalation and inhalation. The more you inhale correctly, the more you will notice that *your whole torso expands like a balloon, all around its circumference.* (This may be more readily apparent if you lie down.) Also, as you continue to inhale correctly, you will be able to fill your lungs more fully with air, especially the area of your lungs at the top of your torso, under your collarbone. As you continue to let the breath in, allow the "balloon" to expand first, and then toward the end of the inhalation, let the breath move upward, so as to fill this upper part of the lungs with your breath. Meanwhile, when exhaling, you may be able to wait longer and longer until the diaphragm begins to let the breath in. You might also notice that sometimes the pace of the breathing is uneven—the breath is sometimes shorter, sometimes longer. Allow it to be whatever the diaphragm requires. *Let the diaphragm completely control and guide your breathing.* Keep breathing consciously in this way until you are very comfortable with it. You might also find this useful as a relaxation or meditation exercise, particularly if you are able to focus your attention only on your breath and nothing else.

Applying Natural Breathing to Playing

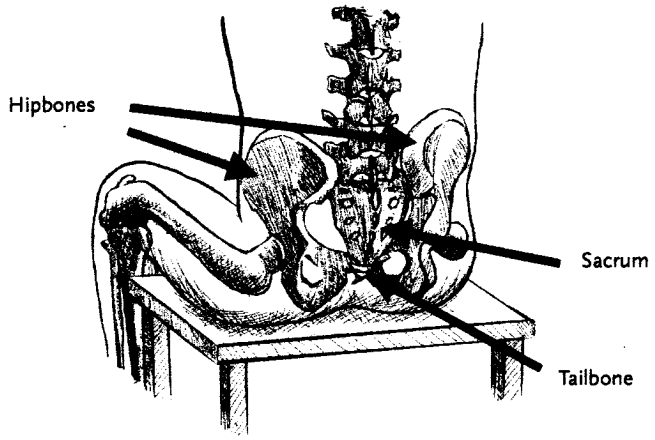
You can apply this deeper knowledge of breathing to your playing in two ways. First, try continuing to breathe in the exact same way as you have been doing, and play a piece at the same time. *Let the pace of your breathing be completely unrelated to the rhythms and phrasing of the music.* Focus most of your consciousness on breathing correctly, while letting your fingers and musicality operate more on "automatic pilot." Practice this until it feels comfortable. Here, your priority is to focus on the correct way of breathing, with your playing and the music subordinate to it. It will relax your entire body.

Next, *practice breathing as if you were singing the lines of music, inhaling at the beginnings of phrases and exhaling through the phrase.* This, of course, is not only breathing with more intentional control but, by necessity, breathing more quickly than before, in order to take little catch-breaths before the beginnings of phrases. Those catch-breaths can easily regress to incorrect breathing if you are not vigilant, so be sure to inhale correctly, expanding around the "balloon" as you gently let the breath in. If you need to take a little more time with the catch-breaths in order to breathe correctly, do so. With this exercise, the priority is the music, with breathing as a means of support.

In the course of normal playing, you might find yourself using one or the other approach at different times, depending on the moment—either breathing independent of the music or coordinating breathing with phrasing. Ideally, you should be able to do either kind of breathing equally well while playing, so that you have a broad repertoire of available possibilities.

PELVIS AND BUTTOCKS

You might not think it is relevant to discuss the pelvis and buttocks when talking about playing an instrument, but, in fact, these parts of your body play crucial roles as well. The pelvis is the large bone structure that is at the bottom of the spine. It includes the sacrum, the relatively tiny tailbone, and the two large hip bones, which also include the sitting bones (ill. 2.6).



Ill. 2.6

We have already discussed the sacrum and the sitting bones in Chapter 1. Let us briefly consider the tailbone.

Tailbone

If you tuck your tailbone in under you and round your spine backwards, your pelvis is thrust forward and you are in a slumped sitting position (photo 2.3).

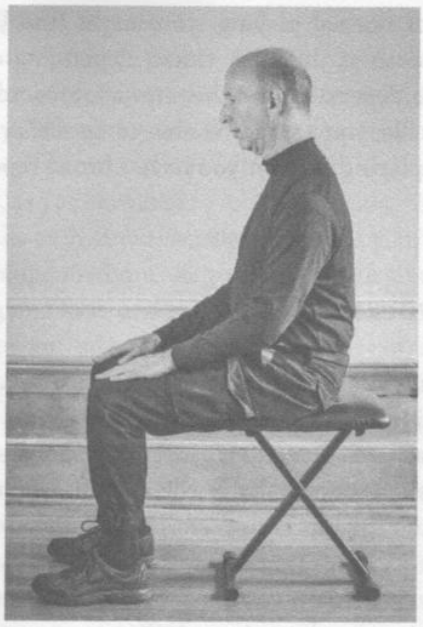


Photo 2.3

If you do the opposite and stick the tailbone out, bringing your lumbar curve into a deep concave curve, your pelvis and buttocks are pushed back, and you are in an overarched sitting position (photo 2.4).

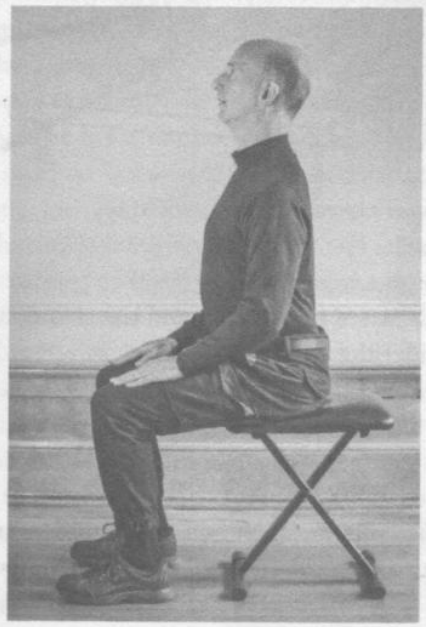


Photo 2.4

But *if you bring the tailbone to neutral position, then your spine is aligned, your pelvis is in a neutral position, and your torso is balanced on top of your sitting bones* (photo 2.5).

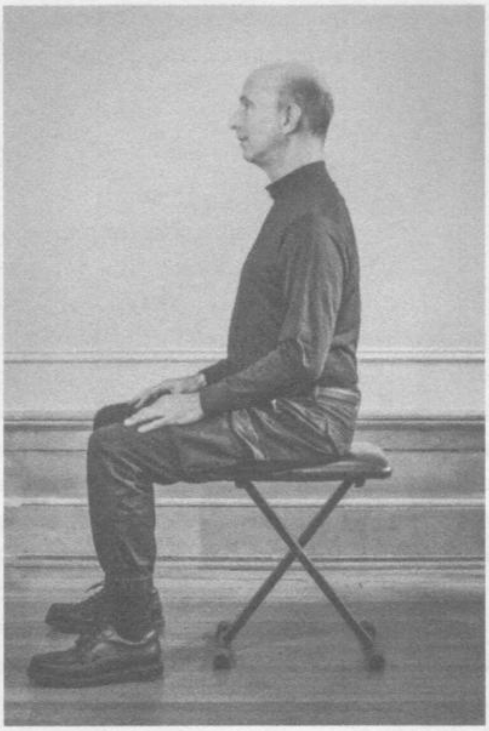


Photo 2.5

When in neutral position, the seemingly minor tailbone has a major positive effect on the alignment of your entire torso.

Hip Bones

Now let's consider the hip bones (see ill. 2.6). You can align your hip bones by thinking about your knees while sitting. If your torso is rotated to the left and your right knee is pushed further forward than your left knee, then your right hip bone is further forward than your left hip bone. This is a common problem for guitarists, who tend to favor their left side because they often watch their left hand while playing and twist their torso to the left to do so. Try rotating your torso to the right as well, with the left knee pushed further forward than the right. This, of course, is equally unbalanced. But

when the knees are even with each other and the torso is facing straight forward, the hip bones are perfectly aligned. Become familiar with this feeling in your hip bones, so that you can readily adjust your knees if they are out of alignment. *In order to turn to look at your left hand, you need only to turn your head and neck, and not your torso.* This independence of head/neck and torso is of central importance to the healthy functioning of your upper body.

Gluteal Muscles

When we sit, we should not take our buttocks for granted. They do a lot of work for us, and we must treat them kindly. The buttocks are comprised of a mass of gluteal muscles (sometimes affectionately called the "glutes"). When you grip these muscles tightly, your sitting bones and pelvis rise up. Try this. Then let go of them, releasing all that tension completely. This is what it means to relax the glutes. Tense them again, and you'll notice that not only are your hip bones rising up, but the distance between them is also narrowing. This is very tense. Now relax the glutes completely, and notice how far away from each other the hip bones are. *Be conscious of releasing your glutes and widening the distance between your hip bones at all times when you are sitting, especially in the moments of greatest technical difficulty and greatest performance pressure.* Once you are aware of this, you might be amazed at how often you tense your glutes and how much releasing this tension will relax you and allow for greater control of technique, especially under the duress of performance.

HANDS

The Concave Shape of the Hand

Just as curves, not straight lines, indicate proper alignment of the spine, curves are the most natural and relaxed positions for the hand and fingers as well. *Find a tennis ball or a medium-sized orange and wrap your hand around it* (photo 2.6).

Take the ball or orange away and leave your hand in the same orientation (photo 2.7).

This is the ideal positioning of both the right and the left hand for playing the guitar (or any instrument). Notice that the three joints of the fingers are equally curved into their mid-range position and not overflexed or overextended. Notice also that the palm of the hand is in a dome or concave shape, not flattened out (overextended) or excessively curved (overflexed).

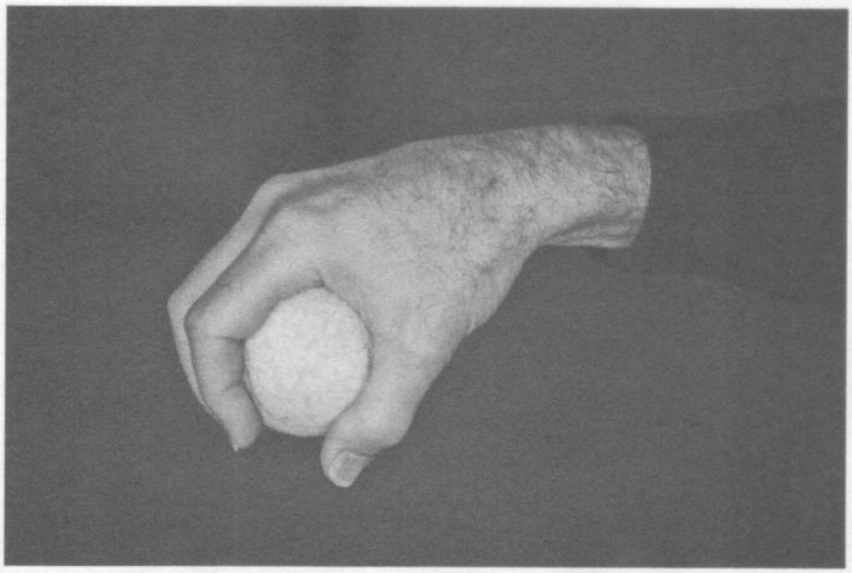


Photo 2.6

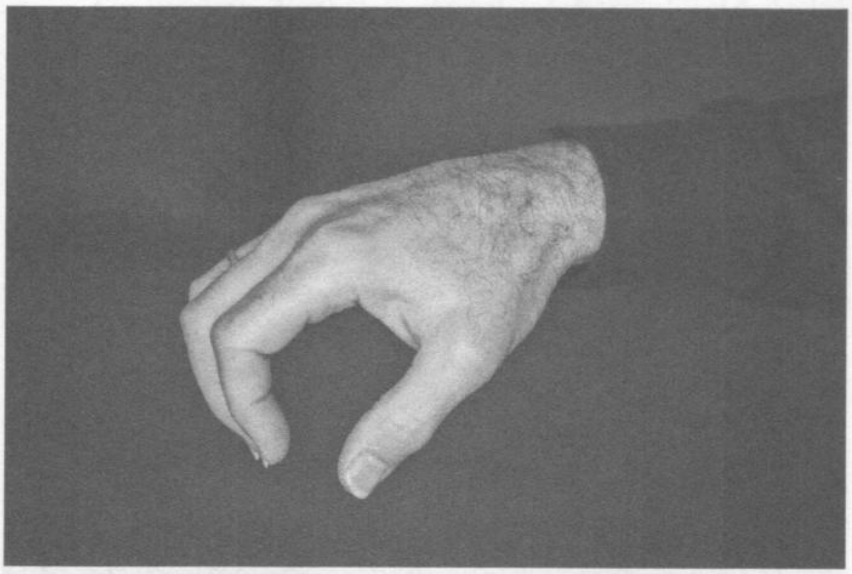


Photo 2.7

It is also in the mid-range of its curve. Observe how this affects the workings of each hand. Many guitarists keep the palm of their right hand too flat; doing so straightens the top segment (proximal phalanx) of the fingers and introduces unnecessary tension in the hand (photo 2.8).

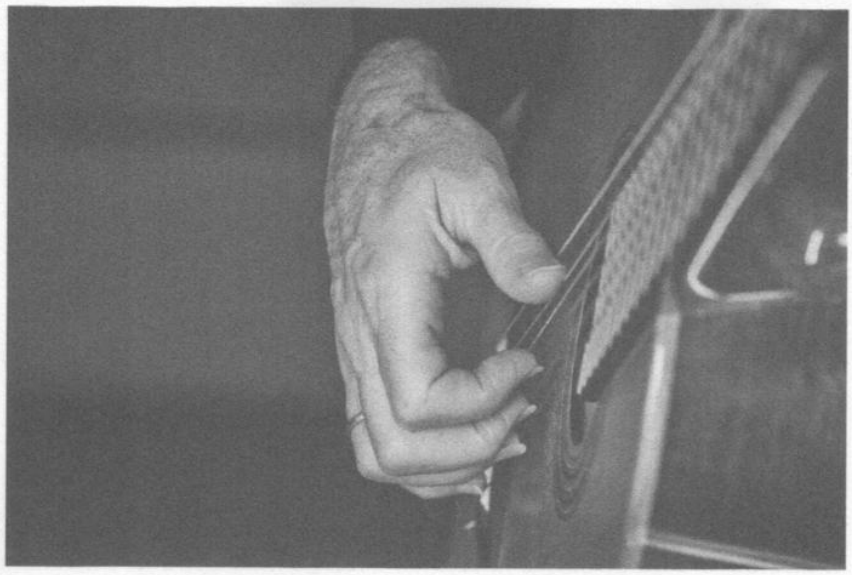


Photo 2.8

Keeping the palm too flat also emphasizes use of the middle and fingertip joints, while making it virtually impossible to work from the top (metacarpophalangeal, or MCP) joint. Similarly, most guitarists tend to overextend the palm of their left hand into a convex position (photo 2.9).

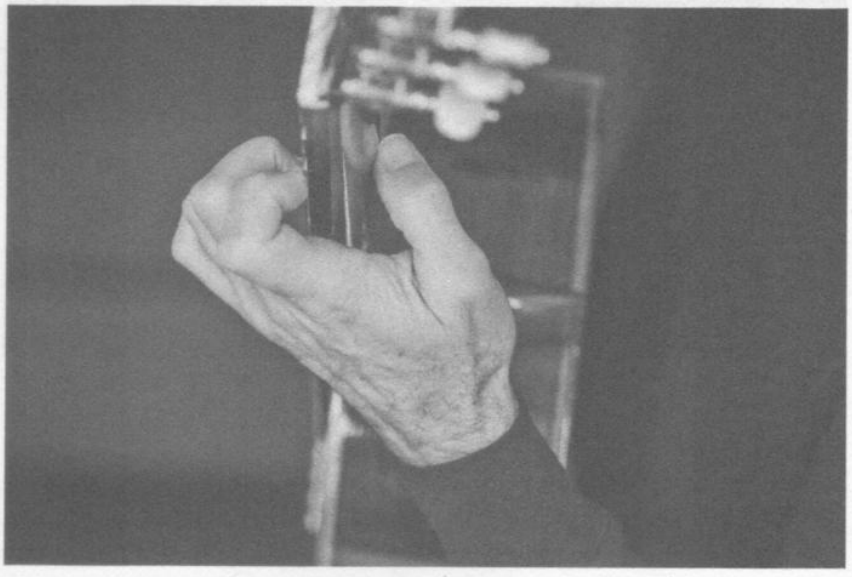


Photo 2.9

This induces a good deal of unnecessary tension in the fingers and hand and virtually eliminates the possibility of engaging the finger's top joint. Therefore, the tennis ball curve is the ideal mid-range position for either hand because it is the most natural and relaxed. It is home. Return to it as often as possible.

The Thumb Pad

In recent years, I began to notice certain inconsistencies in the right thumb in myself and in my students. Why, I wondered, was the tip joint of my thumb sometimes flexed (bent toward the other fingers) and sometimes extended (bent away from them)? When I watched some of my students play with an extended thumb tip, I noticed a certain overall tension in the hand. I wondered why this was so. As soon as I analyzed it, I realized that it all stems from the thumb pad.

The thumb pad is an important part of the hand that is usually overlooked. The "thenar eminence," as it is delightfully called in anatomical terms, is the group of muscles located at the base of the thumb. It is thick and fleshy, like a belly. *When you contract your thumb pad by bringing the thumb straight in (adducting) toward the index finger, the muscles of the thumb pad become tense.* Try it. *At the same time, you may notice that the top (MCP) joints of the other fingers, and the spaces between them, tighten as well* (photo 2.10).

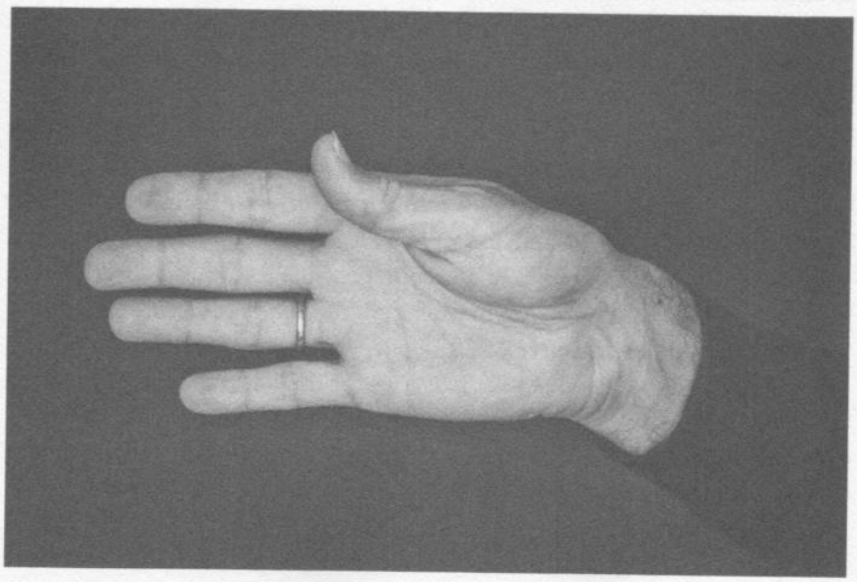


Photo 2.10

If you don't feel this tightening, touch a finger of the opposite hand to one of the spaces between the top joints, adduct the thumb toward the index finger, and then release it. You will feel some tension in the space you are touching when you adduct your thumb toward your index finger, and then feel it release when you abduct (return) your thumb to its original position. Change hands, placing your opposite finger on the top joint of the other hand, and do the same thing. You will, of course, experience the same result.

Then try this: Starting with the tip joint of your thumb in a neutral or straight position, extend your thumb tip—in other words, bend the tip joint back, away from your index finger. Notice that you have created the exact same tensions in your thumb pad, as well as in the top joints and the spaces between them. Now slightly flex the tip joint of your thumb, bending the joint toward your index finger. You will see that this releases all the tension in your thumb pad, top joints, and the spaces between those joints. This demonstration makes it clear that *when you extend your thumb tip, you are tensing much of your hand. When you flex the thumb tip just slightly, you are releasing tension in your hand.*

Apply this knowledge to the way you use your thumb in each hand. With the right hand, if you extend your thumb tip most of the time to do a thumb stroke, then you are causing unnecessary tension in the whole hand. However, *if you flex it very slightly, you are at once releasing tension and making it easier to play.* Some players have more of a natural extension in their thumb tip than others. This is just the way their hand is built. If you are one of these people, let the thumb tip extend naturally as it wants to do, but minimize the amount of unnecessary extension.

In the left hand, the more your thumb tip is extended against the back of the guitar neck, the more tension you produce in your hand. The tip joint of your thumb, while only a minor part of your hand, can actually cause a major amount of tension in your left hand. Awareness alone can improve this greatly. While it may not be possible to completely eliminate the extension of the thumb tip in the left hand, *the more you are able to stay in a neutral position or, better yet, a slightly flexed position in the thumb tip, the more relaxed your hand can be.* So, strive for the neutral or slightly flexed position of the thumb tip whenever possible, and when it's not possible, let the thumb tip do what it needs to do naturally, but without excessive extension.

Vibrato in All the Wrong Places

A brief mention must be given to vibrato and the tension it can potentially cause if energy is misdirected. We have seen that guitarists often do vibrato with their neck and head. In the same unconscious way, they often do vibrato with their right hand. Ludicrous as it seems, you may observe sometimes that other guitarists, and perhaps you yourself, often shake or tense the right hand when intending to vibrate with the left. This makes no logical sense, of course, but it is a common habit. Sometimes, the player does not even produce any vibrato in the left hand, since he or she unconsciously feels that it is already accomplished through the right hand. This demonstrates, yet again, that the energy to do something on the instrument can easily be misdirected, diminishing the effectiveness of the original intention. *Vibrato is in the domain of the left hand only.*

Common Sense Is Not Always Obvious

This leads us to a couple of common sense but nonetheless crucial observations about the two hands: *First, the right hand is only responsible for plucking the string. Once its work is done, it can relax until the next pluck.* You do not need to keep your fingers flexed into the palm to sustain a note. This is unnecessary tension. *You only need to flex the finger when striking the note and then release it back to its mid-range immediately afterward,* allowing the left hand to take care of the note's duration. *The quicker the release, the more time your finger has to relax.*

Second, *the left hand alone is responsible for the duration of the plucked notes.* To sustain a note, you do not tense or vibrate your right hand, as you may be unconsciously inclined to do. Rather, you leave your left finger or fingers down on the fingerboard or vibrate your left hand. *The less time fingers spend down on the fingerboard, the more time they have to relax in their mid-range positions in the air.* Therefore, the moment a finger is no longer needed on the fingerboard, it is generally advisable to lift it up. This gives the finger a rest and provides clarity for the other fingers. Too many fingers down on the fingerboard can create confusion. Imagine, for example, that you have a bar finger down and two other fingers executing a slur. If a fourth finger remains down on the fingerboard unnecessarily, the slur is much harder to execute. When the extraneous finger is removed, the slur is

easier to accomplish. For both hands, the ideal is to work the fingers only when necessary and to give them a break at every possible moment.

LEGS AND FEET

Which Way Should You Point the Feet?

I frequently notice some misalignment of the feet and legs in students. This certainly occurs in private lessons, but it appears with even greater prevalence in master classes, where I have the opportunity to observe students with more objectivity. The correction is only a minor adjustment, but it has the potential to have some rather far-reaching results, since your legs and feet are the foundation of your sitting position.

The placement of your legs and feet directly affects your lower back and is, therefore, more important than you might think. *The feet should point in the same direction as the legs.* They should not be angled to the right or left, but pointing straight ahead (photo 2.11).

Photo 2.11

You can feel the direct effect this has by placing a few fingers right on the tailbone, at the very bottom of your spine, next to your buttocks. With one foot pointing straight ahead, rotate it all the way to the right (keeping your heel in place), back again to neutral, and then all the way to the left. When you deviate to the right or left, you will feel a corresponding movement of the tailbone in the same direction, which takes it out of alignment and causes tension. If you bring your fingers further up onto the sacrum and do the same thing, you can feel it move as well. And moving them a bit further up, you can feel the lower back shift and tense slightly. All these little misalignments can add up to a fairly significant amount of tension. Keeping the feet pointed in the same direction as the legs, which constitutes a neutral position, is therefore advantageous as it induces no tension in the pelvis and lower back.

How Far Apart Are the Legs?

You will notice even greater tensions occurring when you move the legs outside of their neutral position. Start with the feet hip-width apart. This is neutral position. If you use a footstool for the left leg, spread the right leg as far apart from it as you can (abducting), while touching your tailbone with a few fingers. Notice how tense that feels. Then bring the right leg a few inches closer to the left (adducting), and observe that it still feels tense, but less so. Bring it a bit closer, and then closer still, and you will see that this lessens the tension as you approach neutral position. Now bring the right leg very close to the left, adducting beyond the neutral position, and you will feel that this is also tense. Explore these different positions again, this time with your fingers touching the sacrum. Finally, try these positions once more, this time with your fingers on the lower back. All but the neutral position creates some tension, with a surprising amount of tension felt in the lower back.

If you don't use a footstool and both feet are on the ground, try the same movements with both legs at the same time—starting at neutral, moving them all the way apart (abducting), and gradually bringing them closer (adducting) and beyond neutral to where they are almost touching. Do this while touching the tailbone, then the sacrum, and finally the lower back. You will observe the same tensions in the same places. However, with both legs out of alignment, the tension is even greater.

We can now conclude that *abducting the legs too far apart or adducting them too close to each other causes excessive tension.* Many players feel more comfortable with the placement of the guitar when they abduct one or both

of the legs. This is not a problem as long as the abduction is not excessive. If, for any reason, you need to abduct one or both of the legs in order to feel comfortable, then the less abduction, the better.

Now that we have an overall understanding of the body as it relates to playing our instrument, we are ready to focus on the mechanics of the hands.

CHAPTER 3

Basic Right-Hand Mechanics

Because I was mostly self-taught, my technique was built on trial and error. A half-year of study with my first guitar teacher, Mildred Brown (a jazz-folk guitarist who had an interest in classical guitar as well), and nine months of study many years later with British composer-guitarist John Duarte provided the only technical training I was to receive. Both of these wonderful teachers inspired in me a sense of system and rigor. Beyond that, I based my approach at first on ways to produce the best sound with the right hand, with the least amount of effort in the left hand. My instinct told me to follow the simplest laws of physics. As the years went by, with my increasing professional success and the pressures that go along with that, I became more susceptible to tension problems. In these years I found myself gravitating less toward physics and more toward anatomy in order to understand better how to use the body most effectively and healthily. While I was developing an approach to guitar technique for myself, I was teaching students the same method. They would prove to me, by the way they incorporated my ideas, whether the way I presented those ideas was sturdy. This experience, combined with my previous training and tendency to search for a coherent and cohesive approach to technique, led me to develop the method that I have practiced and taught for many years. What follows in this chapter and the next is a summary of the results of that life-long exploration.

The basic abstract principles of the usage of hands and fingers to play the guitar are referred to here as "mechanics." These principles, as I understand them, are based mostly on knowledge of anatomy, with an emphasis on ergonomics, and the simple physics of motion. "Technique" is the combination of mechanics with musical intention—using those basic

principles to achieve specific musical goals. In other words, technique is best discussed in relation to specific passages of music, while mechanics may be examined in a general, abstract manner. The focus of this chapter is the mechanics of the right hand.

In considering how to pluck a string, there are two major overall concerns: articulation and tone production. Articulation, in regard to striking a string, is about the clarity of sound. It is the core of the sound. The ideal is a tone with focus, not diffuse in any way, much like the sound made when one strikes a bell or a gong. The way one strikes the gong or bell determines the clarity and projection of its ringing. Articulation is the most important basic aspect of plucking a string, and the mechanics of achieving it are quite complex. Most of this chapter is focused on how to produce an articulate sound.

Tone production is about making the sound beautiful, according to the individual player's concept of beauty. Once good articulation is managed, tone production is basically achieved by way of the ear and by the shaping of the fingernails (if one uses fingernails), which is a matter of individual taste. There are many different ways of thinking about shaping the fingernails, and it is not within the scope of this book to discuss in detail this controversial and very personal subject. The shape of the guitarist's fingertip, fingernail curvature and consistency, the distance between flesh and nail, and style of playing all contribute to making fingernail shape a very individual matter. It is best for each player to experiment extensively with all the possibilities and find what solution works best for her or him. For now, we will focus on the nuanced details of achieving a good articulation.

Finally, most of what follows concerns the free stroke (*tirando*). In fact, most of guitar playing is, by necessity, free stroke. Chords and arpeggios, which make up most of guitar music, cannot even be executed with rest stroke (*apoyando*). When a good-sounding, powerful free stroke is accomplished, it is hardly necessary for the rest stroke to bring out the melody or to produce a more beautiful tone, the common practice of previous generations of guitarists. Rest stroke is often very useful for achieving a certain tone or for powerful, fluent scale passages and so on. However, a guitarist should first work hard to achieve the most articulate, best-sounding free stroke possible, because it is the most frequent stroke that will be encountered.

THE THREE JOINTS OF THE FINGER

Fingers have no muscles in them. The muscles that control the action of the fingers are in the palm and the forearm, while the movements of each finger occur at the joints. The finger has three joints—the top (metacarpophalangeal,

or MCP), middle (proximal interphalangeal, or PIP), and tip (distal interphalangeal, or DIP) joints (photo 3.1)

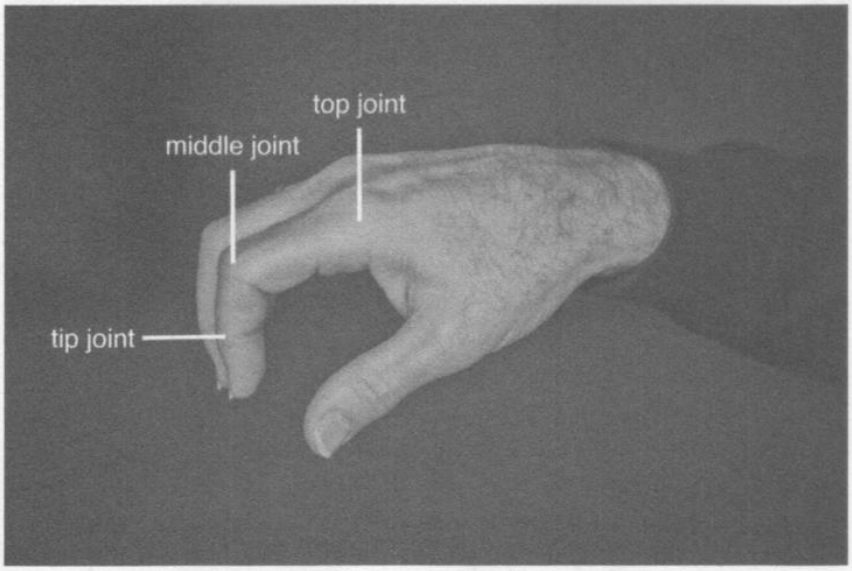


Photo 3.1

Let us consider the particulars of each one.

Top Joint

There are three things to remember about the top joint. First, for optimal sound and for the healthy support of larger muscles, *the top joint generally originates the movement of each finger*. The top joint is the prime mover, the "boss." The following is an exercise you can do to isolate the function of the top joint and to understand how to make it the initiator of each stroke: Lightly rest your right forearm on a table or on your right leg, on its ulnar (pinky) side. Curl your fingers into playing position, and notice the position of each segment of your curved fingers. Starting with the index finger, slowly and evenly flex it inward towards your palm, taking care to make the movement only from your top joint. Then extend the finger out beyond the mid-range position, again making sure that the movement occurs only from your top joint. Flex back in and extend out several times. If you are moving the finger from either the middle or the tip joint, which is very likely to happen at first, the curvature of those joints will change,

flexing more as you go further into the palm and straightening more when you extend away from it. Instead, *keep the curvature of those joints exactly the same as you flex the finger into the palm and extend away from it.* In order to assure that the movement originates from the top joint, you might support it by placing the left index finger just below the top knuckle (on the segment between the top and middle joints) of the right index finger, on the top side, and push inward to flex. Then put your left thumb underneath the finger, opposite the same spot, and push outward to extend. This helps to clarify the movement from the top joint. Try it this way a few times, and then return to making the movement without the supporting finger. Move the index finger slowly and evenly, and keep the curvature of the middle and tip joints the same throughout each stroke. *If the curvature of those joints changes in either direction, then you are not moving from the top joint.* Keeping the curvature consistent throughout both flexion and extension strokes assures that you are really moving from the top joint. Once you have mastered the index finger, move on to the middle finger, then the ring finger and, finally, the pinky. Try each of them with and without the supporting finger of the other hand. It is useful to include the pinky because, even though you rarely use it, it is desirable for the optimum functioning of the whole hand to develop its independence and its ability to work correctly from the top joint. Do this exercise frequently in order to master the control of each stroke from the top joint (see video 3.1 ▶).

Second, *the top joint should generally be placed directly over the string you are playing.* It is impossible to do this all the time, but this principle can be used as a general guide to positioning the hand over the strings. This is why it is important: In order to have a clear, full-bodied sound, displace the string approximately parallel to the soundboard or, actually, just slightly higher. The swing of the finger from extension to flexion is like the swing of a pendulum. It is desirable to have the string located exactly at the bottom of the pendulum swing, so that the finger moves the string basically parallel to the soundboard or slightly above that. If the top joint were placed behind the over-the-string position (for example, over the D or G string while playing the B string), the finger would have to go downward toward the sound hole to reach the bottom of the pendulum swing and then go back up again to clear the adjacent string, creating two movements when only one is required (see photo 3.2). This placement of the top joint also produces a sound that has less clarity than moving the string approximately parallel to the soundboard. If the top joint were placed forward of the over-the-string position (for example, over the G or B string while playing the D string), the finger would have to go upward, away from the sound hole, making the thinnest possible sound (see photo 3.3).

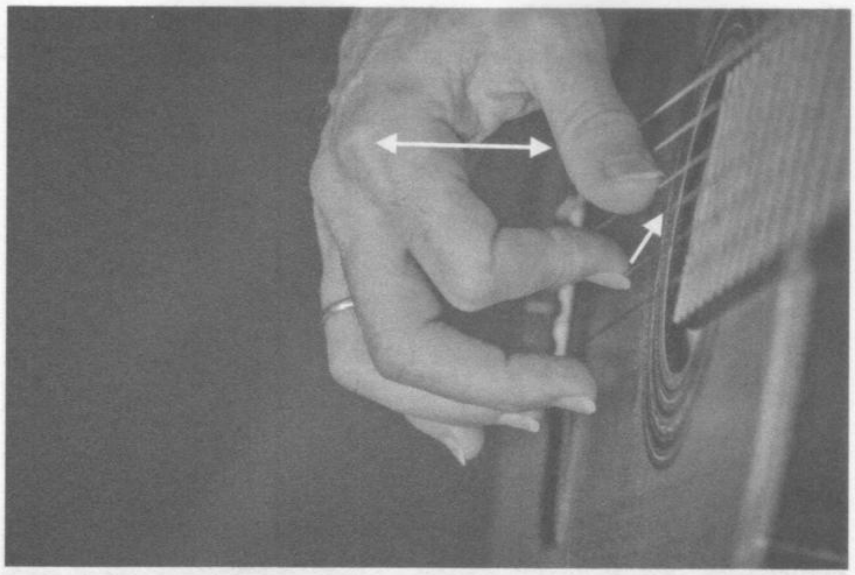


Photo 3.2. The arrow pointing toward the index finger top joint shows the misalignment *behind* the plucked string, while the arrow pointing away from the index finger tip joint shows the downward direction the finger would go, starting from this position

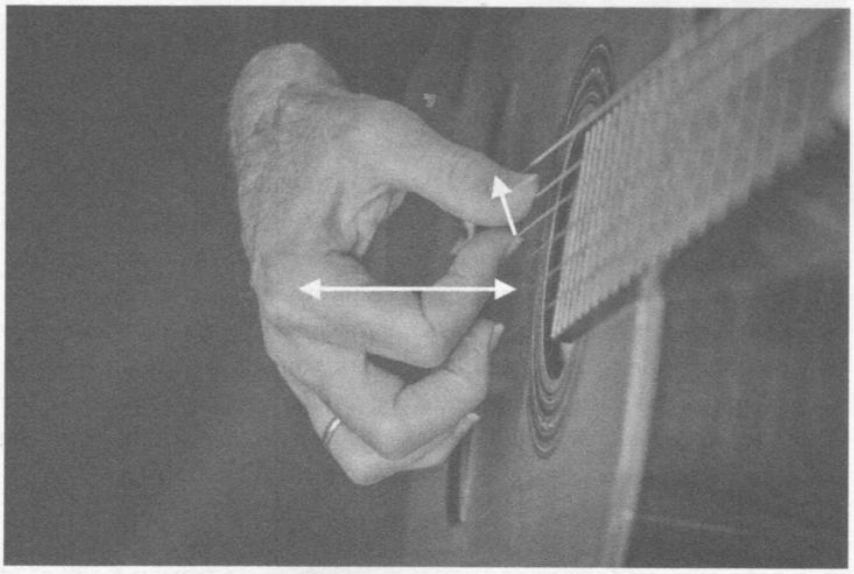


Photo 3.3. The arrow pointing toward the index finger top joint shows the misalignment *forward* of the plucked string, while the arrow pointing away from the index finger tip joint shows the upward direction the finger would go, starting from this position

Placing the top joint directly over the string you play produces the best sound and also stabilizes the hand (photo 3.4).

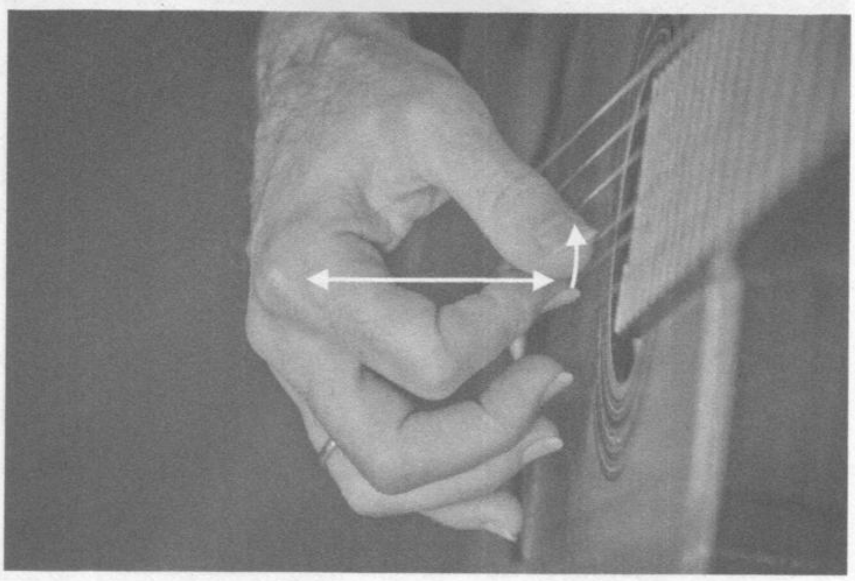


Photo 3.4. The arrow pointing toward the index finger top joint shows the correct alignment with the plucked string, while the arrow pointing away from the index finger tip joint shows the direction the finger would go, starting from this position, just barely missing the top of the adjacent string.

The third thing to remember is to *feel the tension of the string in the top joint*. The string has its own tension, which varies along its length. For instance, a string has greater tension near the bridge and less tension as you move away from the bridge. In order to make a sound, the finger must produce a certain amount of tension to overcome the tension of the string and pluck it. The goal is to produce just enough tension to do this. More than "just enough" is unnecessary tension. The greater the tension of the string, the less tension the finger must produce in order to make a sound, and vice-versa. As your finger moves through the string, if you feel the string's tension in only the tip and the middle joints, you will be using only those joints to pluck the string. However, *if you feel the string's tension in the top joint, you will actually be engaging that joint to overcome the tension of the string*, and this produces a larger, richer, and more robust sound.

Tip Joint

Skipping the middle joint for the moment, let's move on to the more complex tip joint. Once again, there are three things to remember: First, *for a*

free stroke, pluck the string as parallel to the soundboard as possible, so that the tip joint just barely misses the top of the adjacent string. The more you pluck a string upward, away from the sound hole, the thinner the sound will be. The more you pluck it downward, toward the sound hole, the thicker it will be. When you pluck the string parallel to the soundboard (really just slightly above parallel), so that the fingertip just barely misses the top of the adjacent string, you get a clear, well-balanced, full-bodied sound (see photo 3.4). Try plucking in these three different directions to hear for yourself the different results they produce.

Second, *strike the string at the exact spot where the flesh of the tip joint and the fingernail meet the string at the same moment.* This spot is all the way to the left side of the nail (photo 3.5).[1]

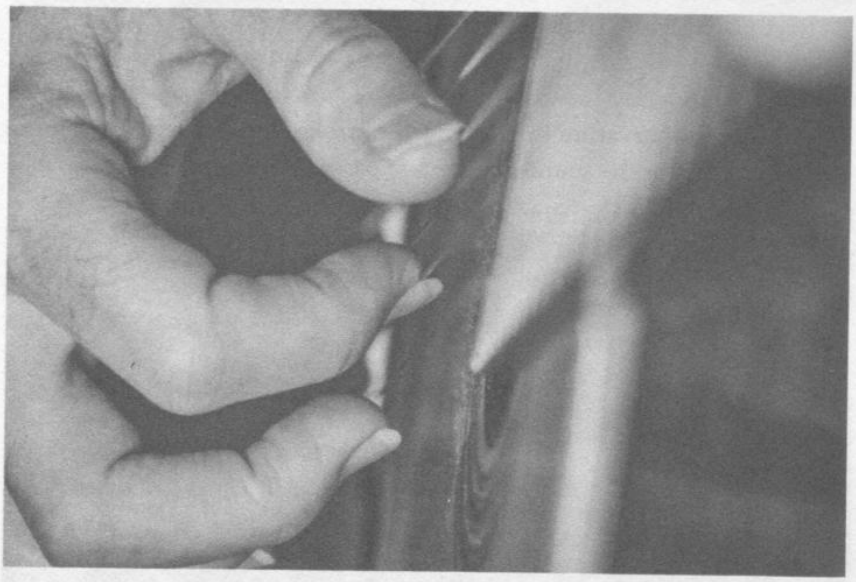


Photo 3.5

This yields a more focused, articulate sound. If you can manage to find that precise spot for every stroke, you will see a great improvement in accuracy and consistency as well. *I cannot overemphasize how significant this single mechanical aspect is.* It can solve a remarkably large percentage of problems of the right hand.

1. Playing off the right side of the nail is a poor idea, anatomically speaking. In order to do this, a guitarist has to produce an extreme deviation at the wrist, which then has a cascade of domino-like ill effects on the rest of the torso, such as compensating tensions and misalignment in the forearm, elbow, shoulder, and upper back. While this approach worked beautifully for Ida Presti, one of the greatest guitarists in history, as well as a few others, it should not be emulated, as it is not anatomically wise.

A momentary digression is warranted here about the ring finger with regard to the flesh/nail placement: When you curve your *i* (index), *m* (middle), and *a* (ring) fingers into playing position, you can see that your *i* and *a* fingers naturally come into the palm at an angle, abducting away from the middle finger. In order for the *i* and *m* fingers to find the flesh/nail spot, this is no problem and even puts the *i* finger at a slight advantage for this. But the *a* finger is at a slight disadvantage, because this angle biases it toward the middle or right side of the nail, not the left. *In order to bias it toward the left, you can swivel the* a *finger over or adduct it toward the* m *finger, so that you may find the flesh/nail spot more easily.* This swivel motion is only the tiniest movement, and yet it makes quite a big difference. Since the *a* finger is often the one responsible for striking melody notes on the first string, this can be an important aspect of good tone production.

Third, *familiarize yourself with the different uses of the firm, relaxed, and collapsed tip joint.* In normal playing position, the tip joint, like the other two joints, is slightly curved. If you firm up (or stabilize) this joint, it will keep that same curvature throughout the stroke. This is useful for a more brilliant quality in the sound and for fast passages (photo 3.6).

Photo 3.6. Index finger, firm tip joint, slightly flexed

When you relax the tip joint as you push through the string, from that natural curve to the place where the tip segment is straight, in line with the next segment of the finger, your sound becomes rounder and more mellow. This is appropriate for slower, more lyrical playing (photo 3.7).

Photo 3.7. Index finger, relaxed tip joint, straight

A collapsed (extended) tip joint is what you get when you let the tip extend as far as it will go. This produces a thicker sound because it sends the string in a downward direction toward the sound hole, but it can be useful with certain rest stroke passages where you want that sound (photo 3.8).

Photo 3.8. Index finger, collapsed tip joint, extended

The collapsed tip joint should be the least often used of the three options. Some guitarists believe that you should only use a firm tip or only a relaxed tip all the time, but in my opinion, it is advantageous to be well-acquainted with all three options, using the one that is appropriate for each musical situation.

Middle Joint

The final joint to be considered is the middle joint. The middle joint is responsible for the follow-through motion. Very simply, *there is nothing you need to do but let it follow through naturally at the end of the stroke.* This means that it does nothing at the beginning of the stroke, which is initiated by the top joint. *If the middle joint flexes at the beginning of the stroke, the top joint will not have its full control.*

THE THUMB

The joints of the thumb work almost the same way as those of the *i, m,* and *a* fingers. The tip joint moves almost parallel to the soundboard, just missing the top of the adjacent string, strikes the string at the spot where flesh and nail meet the string at the same moment, and makes use of the firm, relaxed, and collapsed options. The top joint originates the stroke, is generally directly over the string it plays, and feels the tension of the string. However, something you may not have realized is that *the top joint of the thumb is located at the wrist.* Many guitarists are not aware of this fact and unconsciously initiate movement of their thumb from the middle or even the tip joint. This produces a weaker, less articulate sound. Also, *the follow-through joint is the tip joint, not the middle.* The ideal working of the tip joint can be seen clearly if you move it in exaggerated slow motion. The thumb strikes the string with the tip joint in neutral or very slightly flexed position. It maintains this position as it moves down and across the strings (not straight toward the index finger), and then, just before its middle segment touches the index, the tip joint flexes and wraps around the index. Once you have done this in slow motion, you can immediately do it at normal speed, noticing that the initial part of the stroke functions essentially from the top joint, while the tip joint doesn't begin to flex until the end of the follow-through. This ensures a more robust tone with the thumb (see video 3.2 ▶).

Another aspect of the thumb to consider is its angle relative to the strings. *When the thumb forms an approximately 30-degree angle with the string, the sound is rich, and the wrist is at a height that is healthy for your hand.* (This automatically places the wrist in its mid-range.) To get your wrist at a

30-degree angle to the string, place it first at 90 degrees, then halve that for a 45-degree angle, halve it again for a 22.5-degree angle, and finally raise it up from there to approximately 30 degrees. This gives the best advantage for plucking the string more or less parallel to the soundboard (photo 3.9).

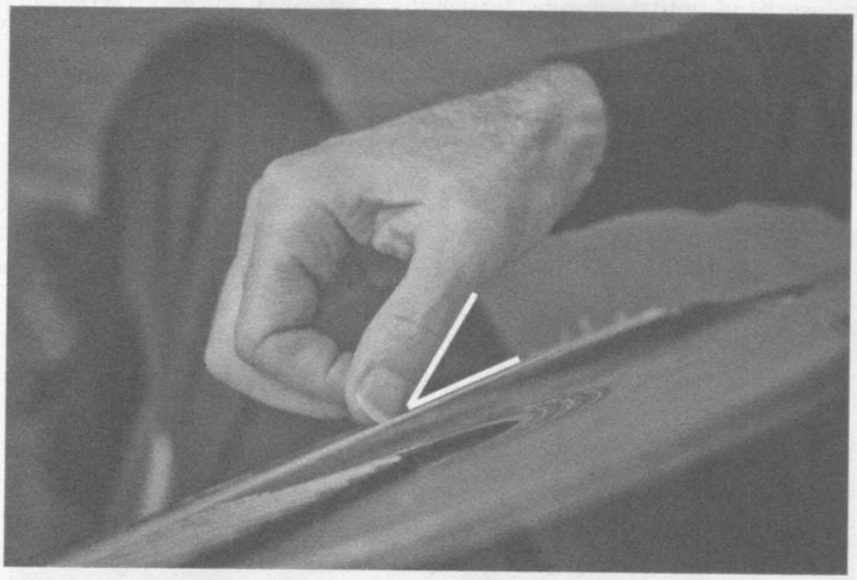


Photo 3.9

Also, remember that the thumb's top joint should be directly over the string. You can use variants of this to affect the strength of the bass notes. For example, if you want to emphasize the bass line, lean your hand a little more forward so that the top joint is in front of the string (if your thumb is playing the A string, for instance, bring the top joint toward the D). If you want to weaken the bass and exaggerate the treble, lean your hand back so that the top joint is behind the string (again, if your thumb is playing the A string, bring the top joint toward the low E). The latter option should rarely be used because the sound of the bass is considerably thinner when the top joint is behind the string.

THE LITTLE FINGER

Tension in the little finger is one of the most common and most debilitating problems I have observed in the right hands of guitarists. When you see or feel tension in the little finger (for example, rigidity in the

fingertip, excessive curling of the finger, or stiff extension of the finger straight out), you can be sure that there is a good deal of tension elsewhere in the hand as well. It is a problem that must not be ignored, as that tension will only increase and spread over time. This was a problem that I observed and fixed only in the hands of my students, never in my own hand, until the dreaded focal dystonia appeared, causing an extreme amount of tension in my little finger. That condition was fully resolved, thanks to the application of my ideas about engaging the large muscles, which is the subject of Chapter 5. However, in the course of curing myself, I also gained some new general insight into the fine-tuning of the little finger.

The little finger, or pinky (its shorter and more fun synonym), may be used as an active finger, as the innovative work of Charles Postlewate has shown.[2] However, for those who remain four-finger players, the pinky is just a passenger in the back seat, a finger that usually just goes along for the ride. Yet there is much tension that can accumulate in the little finger, and every guitarist needs to be aware of its dangers and know how to prevent this tension from spreading to the rest of the hand.

First, it is important to know that the thumb and the pinky are directly connected in their practical use. The primitive pincer grip of these fingers is probably the origin of this interrelationship. When the thumb is tight, the pinky takes on that tension as well, and vice-versa. Therefore, *if you have tension in your little finger, check first to see if there is tension in the thumb* and, if so, resolve it. Find where the thumb tension is located, and see if you can release it simply by focusing on it.

There are some schools of guitar technique that teach that the pinky should move with the ring finger, at the same time. In my opinion, this is an unnatural and potentially dangerous training habit. I have seen many injuries, including focal dystonia, which appear to be caused by this. The little finger does, indeed, share a tendon with the ring finger that makes it virtually impossible for most people to operate these fingers with complete independence. However, when the ring finger flexes in order to pluck a string, the pinky has the ability to stay more or less still at first and then flex after the ring finger has begun its movement. In other words, *when the ring finger flexes in toward the palm, the pinky can and should be trained to*

2. Charles Postlewate, *Right Hand Studies for Five Fingers* (Pacific, MO: Mel Bay, 2001); and *Homage to Villa-Lobos and Other Compositions* (Fenton, MO: Mel Bay, 2001).

follow it—never to precede or to go with it. This includes the flexing of both the tip and the middle joints of the little finger. They should not be allowed to flex at the same time the ring finger flexes. When they do this, they are trying to "help" the *a* finger do its work, but the *a* finger works much more efficiently when it is independent. You can train the tip and middle joints of the pinky to not flex simply by focusing your awareness on them. For more extreme cases of pinky tension, you can also help change this habit by placing one of the left-hand tip joints underneath the tip joint of the right pinky and gently reminding it not to flex when the *a* finger plucks an open string (photo 3.10).

Photo 3.10

You don't want the tip joints to resist each other with strength but, rather, to just have the left pinky fingertip gently coax the right pinky fingertip into inaction. It may take some time, a lot of repetition, and a good deal of patience to overcome this habit, but it is well worth the effort.

Sometimes tension in the pinky also expresses itself on the fleshy ulnar (pinky) side of the hand, between the top joint and the wrist, on the right side. This muscle can get very tight. *If it feels tight when plucking with the ring finger or any of the others, lightly palpate it (tap repeatedly) with the fingertips of the other hand while plucking open strings, and try to get this muscle to soften and relax.*

THE WRIST

Mid-range

The wrist is a vulnerable part of the arm and can often be the cause of injury in either hand. It is essential to keep it healthily aligned. Remember that the wrist joint is happiest in its mid-range of motion. There are two modes of motion to consider: flexing (down) or extending (up), and deviating to the right or left. When you position the wrist so that it looks perfectly flat, it is actually very slightly extended. *Very slightly flex the wrist and you will arrive at the perfect middle (or neutral point) of its range of motion.* But "mid-range" allows for some leeway, so drop or extend your wrist about one-quarter of an inch (or a little less than one centimeter), and you have an approximate limit of extension within the wrist's mid-range. From neutral position, raise or flex your wrist about one-quarter of an inch, and you have an approximate limit of flexion within its mid-range (see video 3.3 ▶). Another way to gauge this is to start again at neutral, place the fingers of your left hand underneath your forearm in the middle, in order to feel your flexor muscles, then flex the wrist downward slowly and feel the difference in the amount of tension as you increase the flexion. After it has flexed around one-quarter of an inch, the tension begins to feel slightly excessive. Do the same thing, starting at neutral and extending the wrist upward slowly, while feeling with the fingers of your left hand the changing tension in your extensor muscles on the topside middle of your forearm. This can help you find the limits of the mid-range of your wrist's motion. *Beyond those limits, your wrist is unhealthily misaligned and can cause injury.*

Relax the Wrist?

The old Tárrega-Segovia school of right-hand playing promoted the practice of flexing the wrist and letting it hang limp. Many guitarists consider this relaxed. In actuality, this is far from relaxed because when you do this, you are stretching the forearm muscles and the wrist's tendons beyond their comfort zone, as well as mistreating ligaments and taking the wrist well out of its mid-range. So then, what does "relaxed" mean? If relaxing the muscles of the hand (and remember that fingers have no muscles!) means hanging or flexing it down so far that the wrist and related muscles, tendons, and ligaments are stressed, then the amount of tension gained is much greater than the amount of tension lost. On the other hand, *keeping the wrist in its mid-range of motion requires only a very small amount*

of tension to keep it stabilized and prevents a large amount of tension by not overstretching the muscles and tendons. The word "relax" can sometimes be a misleading one. In the case of the wrist, the words "alignment" and "mid-range" are more helpful. *Like many aspects of playing an instrument, the ideal is a compromise.*

To Deviate or Not to Deviate?

The other mid-range mode to consider for the wrist is that of deviation, or turning the wrist joint from left to right and back. The mid-range, as you know by now, is the healthiest position. *When the wrist is straight (that is, a straight line from the middle finger through the middle of the forearm), it is perfectly aligned.* Again, it is not necessary for it to be perfectly straight, but rather somewhere in its mid-range. *It is fine to deviate a little to the right, but probably no further than halfway to being perpendicular to the strings.* Deviation to the left should never be an option for the right hand. You can gauge how much tension the deviation produces in your forearm by starting with a straight wrist, placing the fingers of your left hand on the middle of the ulnar (pinky-side) bone of your forearm, and then deviating all the way to the right with your wrist to the point where your fingers are perpendicular to the strings. Then bring the wrist slowly back to feel the lessening of tension as you go. You will notice that about halfway through this motion and beyond, the tension decreases to a point where you can feel comfortable keeping it at this angle for extended periods of time.

As it turns out, the wrist in its mid-range nicely supports the needs of the right hand for plucking the strings. *When the wrist is in its mid-range, and the fingers are curved and ready to play, the fingers are naturally lined up on adjacent strings, automatically setting them up to play a chord or arpeggio.* This is fortunate, since most guitar playing consists of chords and arpeggios. However, *for extended scale passages and tremolo, which involve repeated notes on the same string, it is more desirable to have the fingers lined up on the same string.* For these specific situations only, you might deviate your wrist to the point where the fingers are nearly perpendicular to the strings, and then return it to the mid-range position when done with that passage. If you were to deviate to a perfectly perpendicular position, your fingernails would be set to play at the middle of the nail, where you produce the most unattractive tone. Angling the hand a bit to the left of perpendicular gives you a better sound but still sets your fingers up for playing on the same string.

THE TOP OF THE PALM

Next to be considered is the top of the palm (the back of the hand). If you begin with the top of the palm flat, or parallel to the soundboard, like a flat roof on a house, and then slightly supinate it, your "roof" is now tilted to the right. ("Supinate" means to rotate your arm to the right from the elbow, like turning a doorknob, so that the hand would ultimately end up on its back, or supine). When you pronate it, going in the other direction, it is tilted to the left. Tilting the palm to the right brings the pinky and ring fingers closer to the string, while the index and thumb are farther from it. Tilting it to the left does the exact opposite. But *when the "roof" is flat, all the fingers have equal access to the strings. Therefore, this is the most desirable position for the top of the palm.*

QUICK RELEASE AND ITS EXCEPTIONS

Like many guitarists, I used to think that a precisely timed alternation of the right-hand fingers was the best way to play a scale. Once I discovered for myself the concept of the quick release, a whole new world opened up, not just for scales but for chords and contrapuntal playing as well.

As briefly mentioned in Chapter 1, it is usually advantageous for the fingers of the right hand to release the tension that results when a finger flexes in toward the palm by immediately extending it back to its mid-range position. *This release movement should be lightning-fast, as quick as a knee-jerk response.* This is just as true for chords as it is for single notes. Obvious as it may seem, it is essential to recognize the fact that the right hand is not responsible for the duration of a note; the left hand is. As soon as the right hand has plucked the string, its job is done. *The faster the release, the more time the finger has to rest between strokes.* One way to practice this is in the context of a scale. Play the scale very slowly, releasing each right-hand finger as quickly as possible, so that there is a long period of rest in the right hand between each note. Then, increase the speed to a moderate tempo. The speed of release should be exactly the same, but the rest period between strokes is now shorter. Finally, increase the speed to a moderately fast tempo. The speed of release again remains the same, and the time between strokes is now extremely short, but you can still experience this time as a period of rest. You might even be able to feel this rest between strokes at the fastest speeds. More likely, you will experience this as one finger

flexing while the other extends, but with a more relaxed feeling between the strokes.

The exceptions to the quick-release timing are tremolo and arpeggios. *With these techniques, it is preferable to move the fingers in "waves," keeping a group of fingers flexed and then releasing them at moments that are carefully choreographed, especially for the fastest tempos.*

With *p–a–m–i* tremolo, for instance, at the exact moment when *p* flexes, *i, m,* and *a* are released into extension. Then *a* and *m* flex, and stay flexed, and when *i* flexes, it releases *p* into extension, while remaining flexed with *a* and *m*. And the cycle repeats, like a series of waves.

With a *p–i–m–a* arpeggio, the exact same principle prevails. When *p* flexes, *i, m,* and *a* are released, while *i* and *m* flex and stay flexed. When *a* flexes, *i* and *m* stay flexed while *p* is released, and so on.

For a *p–i–m–a–m–i* arpeggio, *p* releases *i, m,* and *a,* while *i* and *m* flex and stay flexed. Next, *a* releases *m* and *i*, while *m* flexes and stays flexed with *a*, and then *i* releases *p*, and so on.

Each arpeggio pattern needs to be worked out so that one finger releases the next finger or fingers to be used while the remaining fingers remain flexed. While the amount of time that fingers stay flexed is more than with the quick-release method, the increased ease and speed of these waves of arpeggios and tremolo more than makes up for it.

REST STROKE

Rest stroke was used frequently by guitarists of the old Tárrega-Segovia school, perhaps excessively. Most of the time, for example, when a melody was accompanied by an arpeggio figure, the melody note would be played with rest stroke, in order to make it more prominent in the texture. This would result in the musically undesirable effects of placing undue emphasis on every note of the phrase and of arpeggiating every two-note chord that resulted with each melody note and its accompanying note. Since that era many guitarists have rejected this approach, but they have sometimes undervalued the rest stroke. When you develop a free stroke that is well-articulated and produces a rich tone, as described earlier in this chapter, the need for rest stroke indeed becomes less frequent. However, it is often very useful for single-note melodies or some scale passages or notes that need special emphasis or color.

In general, the rest stroke position does not have to be as far back as guitarists might think. We have seen that when playing free stroke it is best to place the top joint of the finger directly over the string you are playing.

For most rest strokes, you only need to bring the top joint back about two strings. For example, when you play free stroke on the first string, your top joint is over that string, but when playing rest stroke, you only need to bring your top joint back so that it is approximately over the third string. Sometimes you might want an especially dark or thick sound, and for these particular situations you may wish to bring your top joint way back over the fifth or sixth string.

A problem frequently encountered with rest stroke is a kind of floppiness or lack of stability in the finger. *This problem is easily fixed by firming, or stabilizing, the middle joint of the finger.* You might also think of feeling the tension of the string in the middle joint, as well as the top. With a stabilized middle joint, the rest stroke is more secure.

CHAPTER 4

Basic Left-Hand Mechanics

Guitarists often come to me for a lesson or two when they have a painful injury. Typically, they have seen a doctor who has run some tests, which usually come out negative, and the doctor is at a loss for what to prescribe other than rest, or maybe ice or heat. The guitarists then come to me, wondering if their injury was caused by some technical problem, which, in fact, is usually the case. For some reason, most of these injuries are in the left hand. In my experience, virtually all these injuries arise not from "overuse," as some doctors are quick to call it, but from misuse. A lesson on a few particular aspects of left-hand mechanics is usually all that is needed to correct the misuse and fix the injury. This chapter offers virtually all the information I know about the mechanics of the left hand.

The left hand works on essentially the same principles as the right hand. However, the application of these principles is often different, if only because the left hand faces in the opposite direction of the right hand, and also because its goal is not to pluck the string (except with pull-offs) but, rather, to stop the string. Left-hand injuries are frequent because many players exert too much effort and use muscles incorrectly. A bit of anatomical knowledge and some careful, orderly thinking can prevent these injuries and make left-hand technique easier than you might expect.

THE TOP JOINT

Initiating the finger stroke from the top (MCP) joint is just as important in the left hand as it is in the right. It ensures that the finger can work with greater support of the larger muscles than if the stroke were initiated by either the

middle (PIP) or the tip (DIP) joint. There are three conditions that enable the left-hand fingers to work from the top joint.

First, *the palm and the top joint should be concave, not convex.* This is the equivalent of the dome shape in the palm of the right hand, discussed in Chapter 2, that was produced by wrapping your hand around a tennis ball or an orange. Or you might think of it as a C shape. Or you can think of it as the shape produced by a child waving goodbye by flexing and extending his or her fingers. (Kids are generally good models for naturally good habits of body use, since they still move more by intuition than by self-conscious thought.) The child does not usually wave goodbye by flattening his/her palm (convex) and flexing at the middle and tip joints but, rather, by keeping a concave palm, flexing from the top joint, and waving with straighter fingers. When the guitarist flexes or extends a finger from a convex palm and top joint, that joint is cocked back in a somewhat locked position, and it is difficult to move freely (photo 4.1).

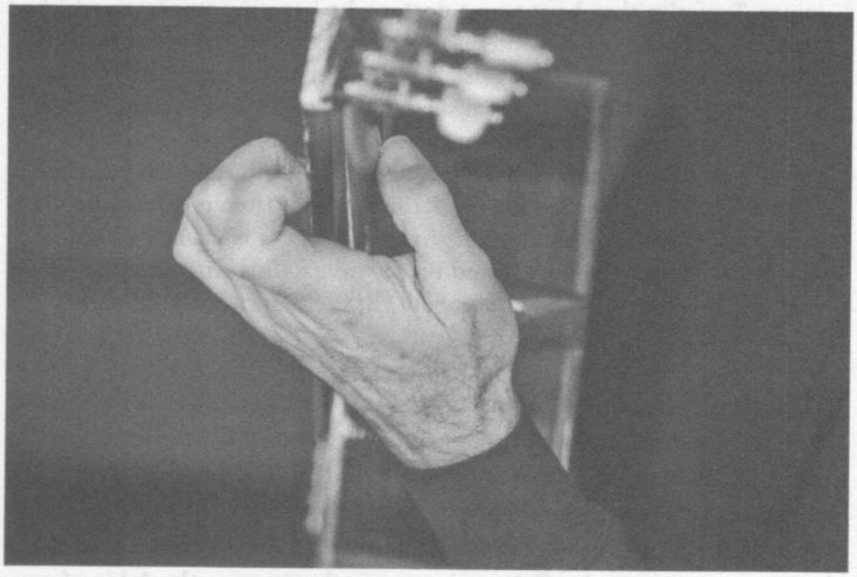


Photo 4.1

However, when the movement begins with the palm and top joint in a concave relation, the finger can initiate the movement from the top joint, which allows that movement to be free, effortless, and unencumbered (photo 4.2). There are times when the concave position is simply not possible or is compromised in some way. This is unavoidable. The goal is to have your palm and top joint in concave position as much as possible.

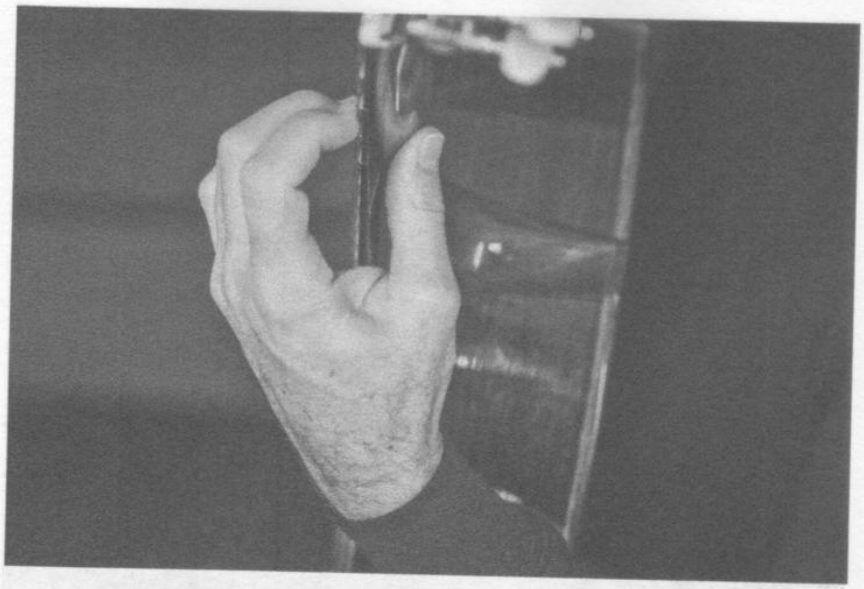


Photo 4.2

Second, *the fingers should generally be approximately at right angles to the fingerboard* (photo 4.3).

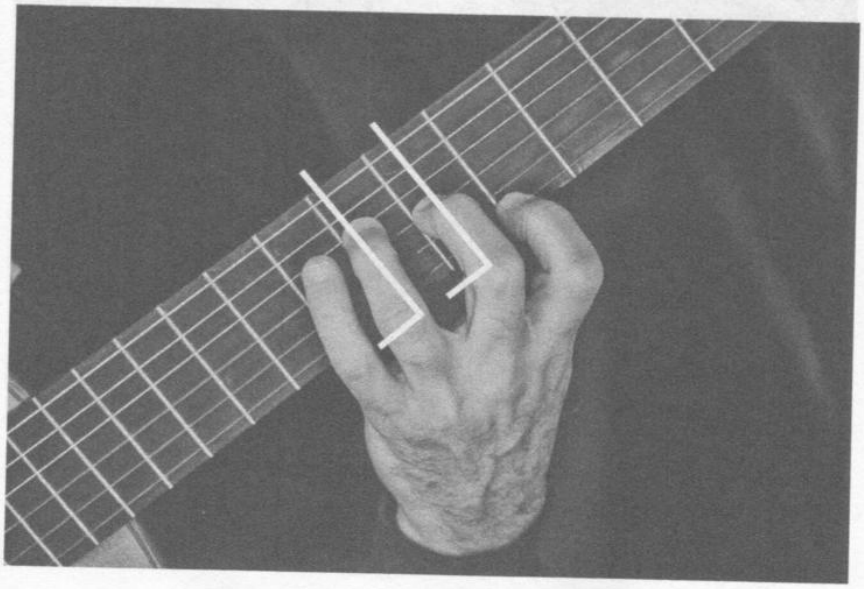


Photo 4.3

If you stretch your fingers out straight across the fingerboard, parallel with the frets, you will observe that they are at a right angle to it. Then simply curl the fingers from there into playing position. This is the right-angle relationship that is usually advantageous for the left hand. There are, however, two frequent exceptions to this general rule: *In the first and second fingerboard positions, the hand naturally wants to angle toward the left (from the point of view of the player)*, just a little for the second position, and a little more for the first. *Let it do this* (photo 4.4).

Photo 4.4. From the camera's view, the angle is to the right, but from the player's view, the angle is to the left.

It would be unnatural to force the right-angle placement in these two lower positions.

The other exception is when what I call a "swivel position" is required. The most common example of this is a chord that requires two or more notes to be placed in the same fret at the same time, such as a diminished chord. *In order to keep the note on the higher string comfortably within the fret and not move into a higher fret, you have to swivel or angle your arm to the left (again, from the player's perspective) to accommodate this* (photo 4.5a and b).

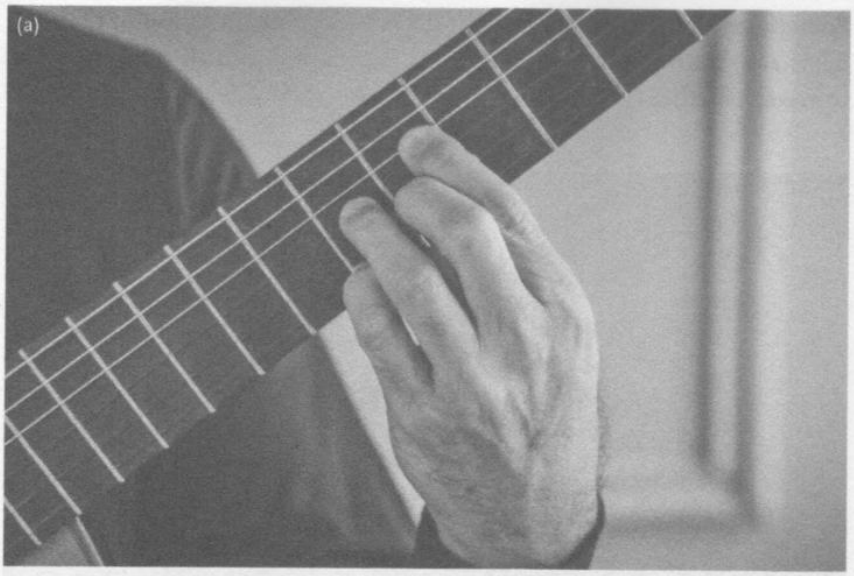


Photo 4.5a. Incorrect placement, with no swivel—the 2nd and 4th fingers are touching the fret

Photo 4.5b. Correct placement, with swivel—the 2nd and 4th fingers are between the frets

Sometimes, you might have a situation in which a slight swivel to the right helps ease the left hand—for example, in a chord in which your pinky has to stretch further than normal up the fingerboard (photo 4.6).

Photo 4.6

Most of the time, it is a swivel to the left that is required, and this situation comes up with surprising frequency. Carefully analyze each passage you play with regard to the moments when two or more fingers are required to be in the same fret at the same time. *Play the passage slowly enough to be sure to catch every moment when you need to switch to the swivel position and every moment when you need to switch back to the right-angle position.* These deviations in left-hand position occur more frequently than you might expect. Whenever a return to the right-angle position is required, swivel back to that position as you place your fingers on those notes. *Become conversant with the ease of moving back and forth between the right-angle and swivel positions.* When you choreograph every passage you play with this in mind, you may be surprised at how much easier and more accurate your playing will be.

Third, *the leverage of the hand should be high enough so that the top joints are level with the fingerboard or perhaps slightly higher than the fingerboard.* What do I mean by "leverage"? Drop your first finger to the fingerboard as a bar (or barre) across the strings, thinking of the finger as a lever. Chances are that when you did this, you dropped your top joint below the level of the fingerboard (photo 4.7).

Photo 4.7

If so, wherever the top joint is, lift it up, keeping the finger straight, so that your lever is a little higher than the fingerboard (photo 4.8).

Photo 4.8

You have just gained a little more power, a little more advantage on the string by using the lever to push up. That range of position from disadvantaged to advantaged is what I call leverage.

What do I mean by "level with the fingerboard"? With the fingers of your left hand down on the fingerboard in playing position, slip a piece of paper underneath your fingers straight across the fingerboard, so that it touches your left hand. If it touches the fingers, your leverage is too low. If it touches the top joint, around the crease where the finger meets the palm, then your leverage is level with the fingerboard. And if it touches a little lower than that, on the palm itself, your leverage is slightly higher than the fingerboard.

When your leverage is level with or slightly higher than the fingerboard, the fingers are enabled to work most efficiently from the top joint. *This allows the finger to initiate the movement from the top joint and to simply drop to the string* (see photo 4.2). When bringing their fingers to the strings, most guitarists, whether consciously or unconsciously, drop the weight of their arm to the fingerboard. This might appear to be a good idea because it is using larger muscles for support. The problem with this approach, in my opinion, is that it introduces a greater disadvantage. It encourages the left hand to squeeze the neck of the guitar between the thumb and the fingers. This habit induces much tension in the hand. Many guitarists feel soreness between their left thumb and index finger, and many injuries of various sorts can be caused by this misuse of the hand. Rather than squeezing the fingerboard between the thumb and fingers, *the fingers should be dropped to the fingerboard from above, with a light but firm touch. This allows the fingers to function like little pistons.*

Working in this way, the fingers have a larger amount of motion than you might think advisable. If this troubles you, please consider this: If your goal is economy of motion in the left hand, that is, with the smallest movement possible, then your tendency will be to subtly initiate the movement from your tip joint and to move somewhat stealthily toward the string. This inhibited movement can cause tension because of its restrictive nature and because only the smaller muscles are being engaged. However, with the piston-like approach, the fingers snap quickly and lightly to the strings and automatically do so with larger motion. While this is clearly not economy of motion, it is loose and free motion, which is much more important (see video 4.1 ▶). Once the piston-like motion becomes second nature, you can refine it to smaller motion for faster passages.

THE TIP JOINT

The fingertip should land as perpendicular to the fingerboard as possible, with the tip joint as flexed as it can be in any given situation. The flatter your fingertip when it lands (that is, the straighter the tip joint), the less control you have over the correct placement of the finger, as well as your sound quality. Multiplied by many fingertip landings, this leads to much less accuracy and control overall. Conversely, when your fingertip lands with the tip joint flexed so that it can land as perpendicular to the fingerboard as possible, you not only increase your overall control, but your sound quality also improves. In fact, beautiful tone is determined not only by your right hand, but, to some extent, by your left hand as well. When fingertips land flat, the sound is dull. When they land perpendicular to the fingerboard, the sound has greater focus and clarity.

The fingertip should also land close to the fingernail, but not so close that you are in danger of landing in the space between nail and flesh, and not so far that you lose control (photo 4.9).

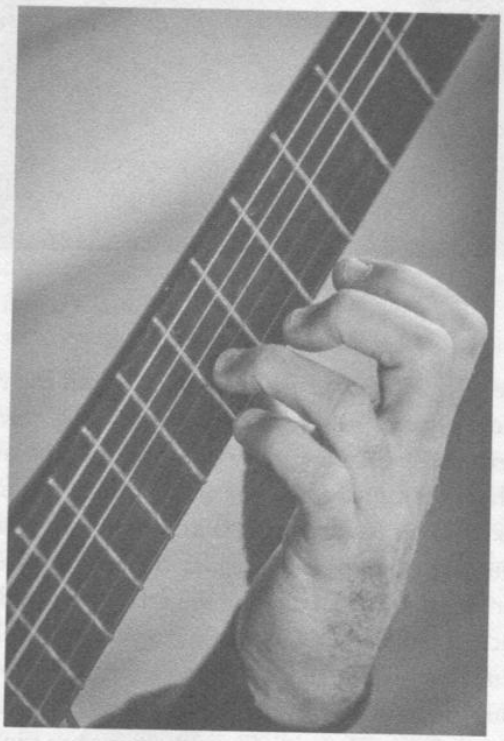


Photo 4.9

This might seem somewhat obvious, but it needs to be mentioned, as I have seen many a poorly placed fingertip throughout my years of teaching.

THE WRIST

The wrist should be as straight as it can be (that is, in its mid-range) in any given situation (photo 4.10).

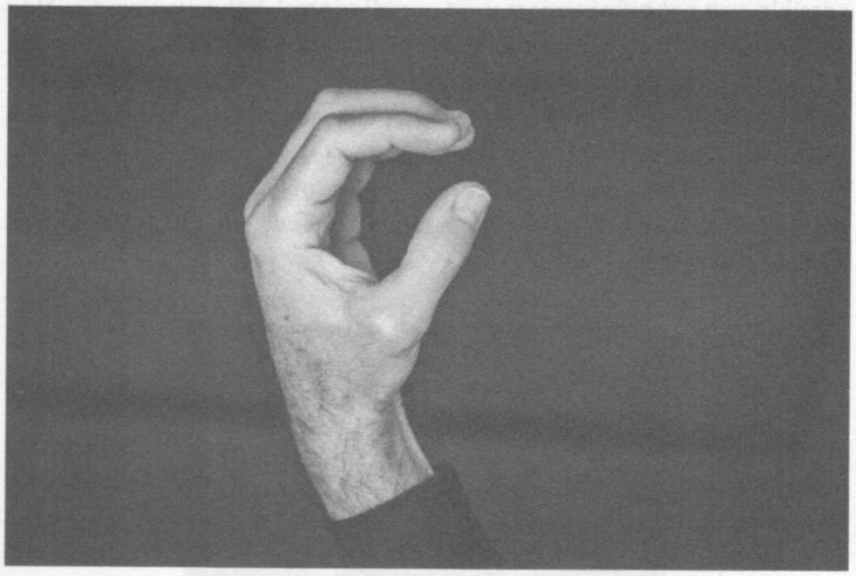


Photo 4.10

The importance of this cannot be overstated! As with the right hand, left-hand wrist injuries from either overflexing (bending toward the fingerboard) or overextending (bending away from the fingerboard) are rampant. Nonetheless, there are times when the wrist cannot be perfectly straight. One example is the common six-string G major chord in first position, with three open strings. It is not possible to play this chord without keeping the wrist from overflexing while placing the fingertips perpendicular to the fingerboard. In fact, in general, this combination needs special attention: *keep your wrist in its mid-range while getting the fingertips to land perpendicular to the fingerboard.* It may seem all but impossible at first, but with a little perseverance, you can master this. The straight wrist always has top priority, but try your best to preserve the perpendicular landing of the fingertips at the same time, whenever possible.

THE THUMB

The most important statement to be made about the left thumb is that it is unimportant. If the other four fingers are dropping to the string from the top joint, with little or no squeeze necessary between them and the thumb, then the thumb is almost unnecessary, except, perhaps, as an anchor. The goal then becomes using the thumb in such a way that it never assumes more importance than is necessary.

Moving Across the Strings

That said, one relatively significant aspect of the left thumb is that *it should move with the other fingers across all the strings*, going from the sixth to the first and back. The reason for this is to preserve the healthy concave curvature of the palm and the flexion of the top joint, as well as the mid-range form of the fingers, across all six strings. If, for example, you begin a scale on the sixth string, starting with good concave and mid-range form, and you leave your thumb in its place while traveling up to the first string, your fingers will increase their flexion from the middle joint as you move across the strings, and you will end up with a convex palm and overflexed top joint by the time you arrive at the first string. The increased tension that results in the hand should by now be self-evident. There is also increased tension in the thumb itself from not having the freedom to move. Conversely, when you allow the thumb to move each time you move to a new string, the healthy mid-range and concave forms are preserved, no matter where you are on the fingerboard.

The subject of leverage, discussed above, is pertinent here as well. *As you move across the strings, it is advantageous to keep the leverage the same throughout.* When most guitarists move from the bass strings to the second and the first strings, in particular, they lower their leverage, putting themselves at a disadvantage for those strings. It makes more ergonomic sense to keep the leverage the same for every string. Combined with the concave palm and flexed top joint, this will bring the thumb closer to the first string and the palm further away from the neck than you might perhaps be comfortable with, at first. This requires a short period of acclimatization. It is an aspect of technique that is well worth your detailed attention because it will greatly increase your ease of playing. Meanwhile, *the wrist must continue to be as straight as it can be in any given situation, while the wrist and thumb move in tandem to allow the fingers to traverse the strings* (see video 4.2 ▶).

Thumb Placement

Take a moment to grasp something like a sheet of paper or this book between the thumb and fingers of your left hand, and then take the sheet or book away, while leaving the thumb where it is. You will see that, *when grasping something, the natural placement of the thumb is somewhere between the index and middle fingers.* This is about where the thumb should be when grasping the neck of the guitar. This is only an approximation, of course, and the thumb position may well change in different situations, but it gives you a general idea. At the very least, remember that keeping the thumb outside of your hand, or to the left of your index finger, does not offer the optimum support for grasping the neck, minimal as that support needs to be.

Finally, in this discussion of the left thumb, it is helpful to be reminded that *when the tip joint of the thumb is in neutral position (straight) or very slightly flexed, it causes the least amount of stress.* While it is virtually impossible to avoid an extended tip joint in the left thumb at least some of the time, the more you can keep it neutral or slightly flexed, the less stressed your hand will be. Also, if your thumb is flat against the back of the neck, with the fleshy part of your thumb tip facing and touching the neck, you are contracting your thumb pad and swiveling your fingers to the left, creating a good deal of tension in your hand. *When you rotate the thumb, even a little, toward the bony left side, the thumb pad decompresses and the fingers return to their normal right-angle relationship to the fingerboard* (photo 4.11a and b).

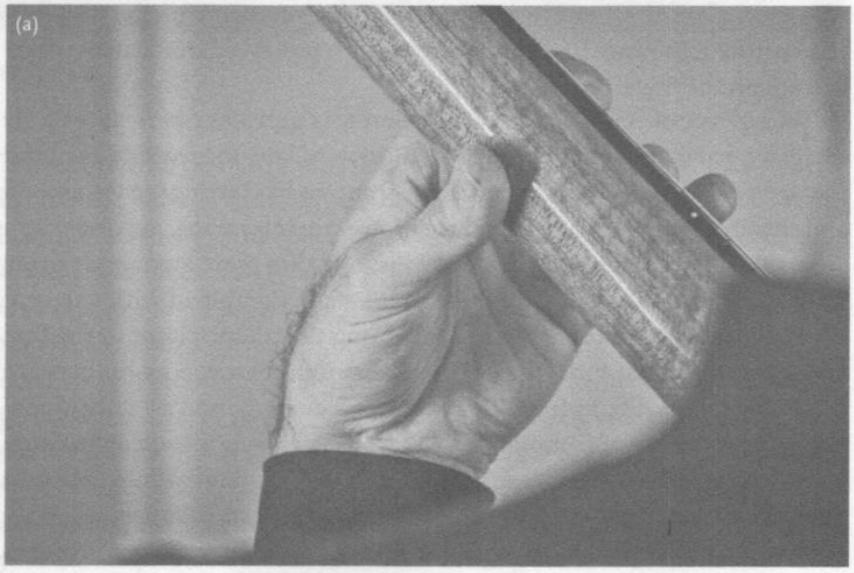


Photo 4.11a. Left hand thumb flat against the fingerboard, with thumb pad contracted

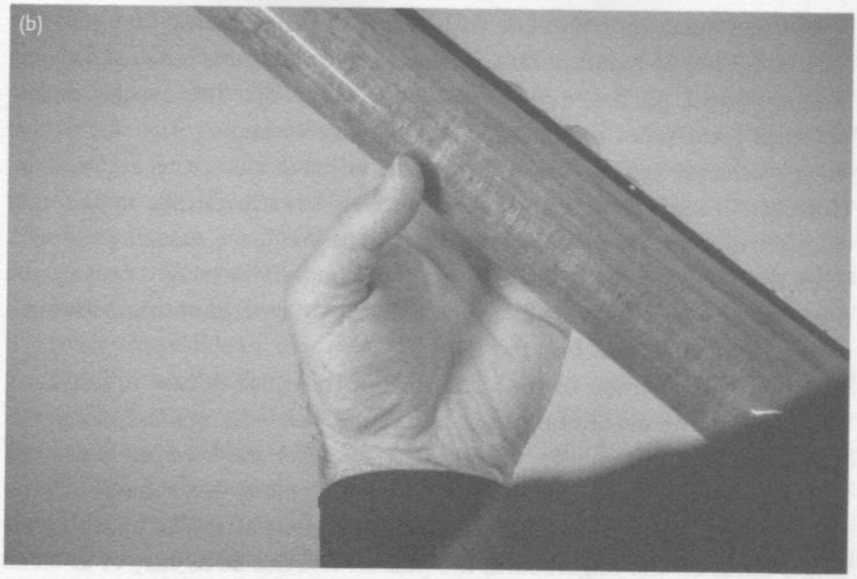


Photo 4.11b. Left hand thumb rotated toward the left, with decompressed thumb pad

In the lowest two or three positions, the thumb might naturally rotate a bit more toward the flat-faced position. In the higher positions, it will probably rotate more toward the bony left-side position.

QUICK RELEASE AND ITS EXCEPTIONS

Just as a quick release of the fingers is generally desirable for the right hand, so it is for the left. When your fingers are down on the fingerboard, they are flexed and therefore slightly tensed. This amount of tension is exponentially increased with all the time the fingers are required to flex in the course of playing a piece, let alone a whole program or a whole day's practice. Consequently, *it is beneficial to release fingers from their duty at the fingerboard whenever possible.* For example, if you play four notes in an ascending chromatic scale and leave all the fingers down as you go up the scale, you create unnecessary tension in your hand. *It is more advantageous to lift each finger at the moment a new finger comes down.* This eases the whole hand, as the fingers are in their mid-range most of the time, instead of flexing. Conversely, when you want notes to continue to sound, as in an arpeggiated chord, you would naturally leave the fingers down on the fingerboard. But anytime a finger is no longer necessary, it is expedient to lift it and return it to rest somewhere in its mid-range.

Another common technique that benefits from releasing fingers is the ascending slur, or hammer-on. *The moment the upper note is placed down on the fingerboard, the finger on the lower note should lift.* This precise timing provides great relief to the left hand because extending one of the two fingers releases tension before the tension has a chance to accumulate. However, in a situation where you might need to return to the same finger one or two notes later, it may make sense to just leave that finger down. Even then, a moment's relief away from the fingerboard might prove to be more worthwhile. In cases like this, it is worth experimenting with both ways to see which feels best to you.

A notable exception to the advantage of the quick release in left-hand technique is the descending slur, or pull-off. *The most effective manner of executing a pull-off is to place the fingers of the upper and lower notes down at the same moment. The exact timing of this double placement is crucial.* If the finger of the lower note is placed even a moment after the upper note's finger lands on the fingerboard, the pull-off will not be as easy or as clean as when the lower note's finger is placed at the exact same time. In fact, *just before you do the pull-off, it is best to think of placing down the finger of the lower note, not the upper.* Then there is no hesitation, and your timing is perfect. These seemingly minor details will make a major difference in the accuracy and clarity of your pull-off technique.

> It was only recently that I realized just how precise the timing of release must be in the fingers of the left hand. I have come to understand that this precision is absolutely essential for accuracy and speed. The more rigorous I can be with this timing in my own playing, the more improvement I observe.

POSITION SHIFTS

When shifting positions, it is advisable to lift the fingers off the strings, for the sake of releasing tension and eliminating unnecessary squeak sounds. My former teacher, John Duarte, always told me to *"shift like a helicopter, not like an airplane."* By this, he meant that *when changing positions, you should clear the string first, then move over to the new position, and then down*—like the lift-off, flight, and landing of a helicopter. The less-desirable airplane alternative would be to go down the "runway" (stay on the string while shifting, thus producing the dreaded squeak), gradually lift off, and then land in the new position. This is akin to the guide finger approach to shifting. With the helicopter method, you conquer two problems at once: eliminating the

squeak and releasing tension in the hand. If you are not convinced of this technique, your objection might be that the connection from note to note is less legato. However, this need not be so if you move efficiently. *Stay on the note in the old position for as long as possible. Then, as you initiate the "helicopter" shift, just barely clear the string, almost but not quite touching it, and move as quickly and as effortlessly as possible to the note in the new position.* When executed with speed, efficiency, and little tension, this can actually give the illusion of even greater legato. Remaining on the string while moving to the new position causes greater tension, which is magnified by frequency and adds up to less legato overall.

Try the two methods to see for yourself, and compare both the sound and the physical feeling. But first, take time to practice the helicopter method so you can get a fair comparison. You might start with something simple like a whole-step shift, say, from F to G, on the D string. Play F, lift up quickly so that you are barely off the string, and then, only when you have cleared the string, move fairly quickly to hover above G and descend to the fingerboard. All this, of course, is accomplished with correctly flexing and extending from the top joint. *At first, do not try for a legato connection—rather, just focus on the clarity of the movements.* Then go from G to F in the same manner, shuttling back and forth between the two notes. As you gain confidence, stay longer on the old note and move ever more quickly to the new one. While doing this, *avoid creating any unnecessary tension in the forearm especially in the biceps, and maintain a feeling of being loose and free with the movement.* Soon you will notice how legato the two notes sound. Now practice the same thing with two notes that are further apart on the same string, and then on different strings. Then you are truly ready to compare the helicopter method with the airplane method. It may take some time, but I believe you will see that the helicopter approach is superior for releasing tension in the hands, eliminating squeaks as much as possible, and, surprisingly, even for creating a better overall sense of legato (see video 4.3 ▶).

VIBRATO

The sonic nature of the guitar is such that after you pluck a string, the volume immediately diminishes and decays. Vibrato can come to the rescue by adding sustain as well as warmth and, sometimes, intensity. Developing an easy and effective vibrato is a vital part of a guitarist's technique. The easier it is, the more often it can be used, and its frequent use helps make guitar playing much more vibrant. (Interesting that the words "vibrant"

and "vibrato" are so similar to each other—vibrato gives life to the music!) Here is my approach to executing vibrato with ease.

While we know that the arm originates at the sternoclavicular joint, imagine just for a moment that control of the vibrato begins instead at the elbow. In order for the elbow to control vibrato, *everything from the elbow to the fingertip should be loose*—the wrist, top joint, middle joint, tip joint, and all the muscles located in your forearm and hand. (Everything from the elbow to the SC joint should also be free.) Away from the guitar, loosen your wrist by wiggling your hand from side to side, originating the wiggle from your wrist, and letting your hand go limp. The ideal is to *always maintain this looseness in your wrist during vibrato.* Many guitarists try to control vibrato at the wrist, which tightens the wrist and weakens control of the vibrato, so releasing tension at the wrist is paramount. Now try out this loose-wristed wiggling at the guitar.

The two main purposes of vibrato are warmth and sustain. In order to achieve both, two components of vibrato must be considered—amplitude and speed. Amplitude is the distance covered from one end of the vibrato's oscillation to the other, with no circular component—only a strictly lateral motion, from side to side. For the purposes of warmth and sustain, the amplitude required is tiny. Just the smallest amount of movement, a tiny wiggle, warms up the sound and sustains it. Any more than this is unnecessary. When greater intensity is desired, a wider amplitude is required, but this is relatively rare. The tiny wiggle is all that you need most of the time for a successful vibrato. To accomplish it takes very little effort. If you are doing it correctly, with a tiny amplitude and completely loose forearm from elbow to fingertip, then it will feel like you could easily do it all day long.

The other component of vibrato is speed. For the average, all-purpose vibrato, one that adds warmth and sustain, the speed of the oscillation should be moderately fast. A very fast speed is required for creating a greater intensity. Slowness might be appropriate for a dreamy lyricism. Vibrato that is too slow, such that you hear a clear oscillation of the pitch, sounds seasick. *An effective, beautiful-sounding, all-purpose vibrato combines a tiny amplitude and moderately fast speed with total muscular release from elbow to fingertip.*

Try applying this approach to vibrato while playing four notes of a chromatic scale. First, play them very slowly without vibrato and listen to the sound and the sustain. Then play them again with your easy, tiny vibrato and listen to how much warmer and more sustained the notes are. Notice that this effective vibrato is accomplished with only a minimum of effort (see video 4.4 ▶).

BAR CHORDS

Another common and necessary guitar technique that often causes tension, if not injury, is the bar (barre) chord. The problem occurs when there is an overreliance on squeezing the neck between the thumb and the bar finger. Usually, when a guitarist places the index finger down on the fingerboard for a bar chord, he or she subtly starts by touching the top joint to the neck and then dropping the rest of the finger down, while increasing the pressure of the thumb against the back of the neck. This induces a lot of stress in the hand. Multiply this by the number of times you need to use a bar chord, and you have a very tense hand indeed.

In order to avoid this tension, consider the following: Like the fingers of the left hand in general, *the bar finger's motion should originate from the top joint, which brings the finger down to the fingerboard in a snapping motion with a light but powerful tap.* Try this without the thumb on the neck, so that there is no involvement of the thumb whatsoever. You will see that the index finger's pressure can be very strong, independent of any opposition of the thumb, and yet very loose. In fact, you might also notice that *the natural weight of the right arm resting on the guitar's lower bout acts as the opposing balance for the index finger,* just as the thumb did before. There is no pressure or effort whatsoever applied by the right arm to provide this opposing balance. The natural weight of the arm is more than enough to counterbalance the force of the bar finger on the fingerboard (see video 4.5 ▶).

In order to incorporate this into your playing, practice a passage of music with a few bar chords in it; take whatever time is necessary to lightly snap down the bar finger first for each chord in the manner described; then add the other fingers only when you have the correct feeling of ease in the hand. Take extra time to accomplish this for each bar chord. In other words, don't worry at all about maintaining the tempo. Just take the time you need to accomplish each bar chord with correctly induced pressure. After a bit of practice, you will be able to put down the full bar chords without pausing and without undue tension.

PRESSURE

Have you ever experienced some nerve pain in the fingertips of your left hand? I do, from time to time. It is an obvious sign that I have been exerting too much pressure on the fingerboard. When I experience this, I need to remind myself how important it is to apply only just the right

amount of pressure, as described below. Once I put this back into practice consistently, the pain usually disappears in a day or two, and my hand feels a lot looser overall.

Applying excessive pressure on the fingerboard is yet another major contributor to unnecessary tension. It is surprising how little pressure is actually required to make a good sound. Try this exercise to increase your awareness of the possible gradations of pressure in the left hand: Start by barely touching a string with one finger, on any note in the middle of the fingerboard, with the tip joint in its normal perpendicular playing position. With your right hand, pluck evenly repeated rest strokes at a moderate tempo (try a metronome marking of around 175 beats per minute, but play without the metronome), at a *mf* dynamic. While plucking, increase the left-hand pressure very, very gradually. Keep the same *mf* dynamic (that is, keep the same pressure in the right hand) throughout this exercise, no matter how much pressure you are exerting in the left hand. At first, you will have an unpitched, muffled sound. As you increase the pressure, you will soon be buzzing the note. *If you increase the pressure gradually enough, this buzz will last a relatively long time.* Continue to increase the pressure as the sound turns from a buzz into a proper note with no buzz. Notice the exact amount of pressure you're using when this changeover occurs, and then keep increasing the pressure until you are putting as much pressure as you like into the fingerboard (don't hurt yourself!). Then, just as gradually, decrease the pressure, while keeping the dynamic consistent throughout. Pass through the buzz into the muffled sound and then stop. Now return immediately and directly (not gradually) to the amount of pressure with which the buzz just began to turn into an acceptable sound. *This is all the pressure you need to make a good sound.*

Does it take less pressure than you thought? It is probably a lot less. Yet *any more pressure than this is entirely wasted,* as you noticed when you continued to increase the pressure beyond this point. You might try the same exercise for the second or third fret of the G string, where, remarkably, even less pressure is needed to make a good sound.

You are now ready to apply this sensitivity to a scale or a passage of music. Play the scale or passage and *intentionally buzz every fingered note. If you play a note and it doesn't buzz, consider it unacceptable and repeat it until you can hear the buzz.* Play through the passage a couple of times so that you get really good at buzzing every single note. Then play the passage again and add just enough pressure to make a good sound, but no more. At first,

experiment with some occasional buzzing, just to make sure you are close to the buzz threshold. Now play through the passage normally, with your newly discovered awareness of how little pressure you need to make a good sound. You only need enough pressure to make a sound with no buzz, and no more than that.

When you add dynamics, you will observe that *a large increase in volume in the right hand may only require a slight increase of pressure in the left.* You might think of it as playing *forte* with the right hand but *piano* with the left. Just as with the unrelated timing of the release in each hand, the right and left hands often operate independently of each other with respect to the amount of pressure they need to put into the string. *The left hand should always try to get away with as little pressure as possible, while the right hand must employ pressure that is directly proportional to the desired dynamic.* When you apply all this to everything you play, you will experience much less tension in your left hand.

Next we move to the important subject of engaging the larger muscles.

CHAPTER 5

How to Play with the Large Muscles

In the course of curing my focal dystonia in the 1990s, I learned of the significance of engaging the large muscle groups for the right-hand technique of any guitar player. My overall technical approach, surprisingly deemed anatomically perfect by all the medical practitioners I saw during those years, was missing just one piece of the puzzle—support of the large muscles. This was the one aspect about which none of those practitioners seemed to have any knowledge, and the one that ultimately led to my self-cure. Combining intuition with my previous knowledge, I proceeded to develop a system of understanding how to incorporate the large muscles in the playing of the right hand at first, and then the left hand as well. These ideas proved essential not only to my own cure and helping others cure their focal dystonia but also to the study of technique for all players of all instruments, injured or not. I discovered that *playing the guitar with the large muscles of the right arm creates a bigger and more beautiful sound produced with less effort and prevents injuries.* In fact, since my conquest of focal dystonia and the solidification of my ideas, I have become confident in my belief that *if you are properly engaging the large muscles of both arms while playing any instrument, it is virtually impossible to injure yourself.*

The small muscles are the muscles in your hand and forearm. Because they are small, or relatively small, they are vulnerable. If your technique relies mostly on these muscles, the possibility of injury is much greater than it is if you engage the support of the large muscles. This possibility increases as we age. Depending on the individual body, technique, and personality, turning twenty-five, thirty, forty, or older can be a time of change in the

body. These periods of change may make you more vulnerable to injury if you are not supporting your playing with the large muscles. The increased challenges in the music world to play more difficult repertoire with ever greater virtuosity and in larger concert halls have made heavy demands on the smaller muscles, which often are not capable of withstanding this pressure.

The musician's body needs to enlist the help of the large muscle groups in order to maintain a sturdy support system and good health for the arms and hands. What follows is a description of how to do this. It is difficult to clarify these ideas in writing and pictures only, without the aid of in-person demonstration. It may take a whole page to describe what can be communicated in a single touch. However, I trust that the supporting photos and videos will be helpful. Perhaps the information contained here will also prove useful to you as a starting point for your own exploration.

In the descriptions that follow, you will notice that I often encourage large movement, especially at first. That is because *large motion is crucial to incorporating the somewhat subtle engagement of the large muscles.* In the beginning, as you learn how to access the large muscles, the larger your motions are, the more confidently you can assimilate this technique. *Do not be wary of exaggerated motion. Trust it.* You will refine the work later to use smaller motion. In fact, the smallest motion is really only necessary for the fastest speeds. Even at a moderately fast tempo, your hand and arm can move with larger motion than you might expect. This will always result in freedom and the feeling of certainty that you are engaging the large muscles. Remember that freedom of motion takes precedence over economy of motion!

THE RIGHT HAND—SINGLE NOTES AND ARPEGGIOS

Dead Weight and Stabilization

Think of your hand and forearm as two dead weights. When you move them, it is as if they have no life in them and are being transported by something else. (If you need a refresher on the dead-weight feeling in the right arm, see video 2.7 ▶.) *These two dead weights are connected at the wrist, which is stabilized.* By "stabilized," I mean that the wrist maintains its stability while being countered by the tension of the string. It does not deviate to the right or left, and it does not extend or flex. Rather, it remains in its mid-range and produces just enough tension to overcome the inherent tension of the string (just as the individual finger overcomes the string's tension, as discussed in Chapter 3).

The Big Lever

Think of your forearm, from elbow to fingertip, as one big unit or lever. While in playing position, start at some distance from the string and *move this lever, with its two dead weights and stabilized wrist, all the way to and then through the string, diagonally up toward your face.* In order to move the lever, flex only from the elbow and do not pull back from the shoulder joint. *The goal here is to pluck the string, free stroke, with your forearm, not with your finger.* In other words, instead of displacing the string by flexing the finger at the middle or top joint, displace it by flexing your elbow, with the wrist and all the finger joints stabilized. When you begin this motion your fingertip should be slightly flexed, as it would be when you begin a normal free stroke. Once you reach the string, the top joint of the finger you are using should be directly over the string you are playing. Try this a few times with *i*, *m*, or *a*, maintaining the dead-weight feeling in the hand and forearm. Your tendency will probably be to activate the finger at the last moment before striking the string. Do not do this. *Keep the finger stabilized and think, rather, of moving the string with your forearm* (see video 5.1 ▶).

At the same time, it cannot be overstated how crucial it is for you to *maintain the dead-weight feeling in your forearm and hand.* It should always feel like falling, never like lifting or pushing, whether you are moving down with gravity toward the floor or up, away from the floor. When you have the true dead-weight, falling sensation, your forearm muscles are totally relaxed. If you lift or push, and thereby lose the dead-weight feeling, they tense and become an obstacle to accessing the large muscles.

The Armpit Muscles

The large muscles that you need to deliberately engage while playing are deep in your armpit. Since this area is a complex web of muscles, it is hard to pinpoint which muscles they are exactly, but medical professionals have told me that they seem to be the intersection of the teres minor and the latissimus dorsi muscles. You can feel them move by doing the following: Sitting with the guitar in playing position, start with the fingertip slightly flexed and the top joint of your index finger directly over a string. With your whole arm, pull your *i* finger up into the string (for example, if you are pulling the G string, pull it toward the D), hold it for a brief moment, and then release it back down. With your right arm resting on the lower bout of the guitar, poke the index finger or thumb of your left hand into the approximate center of your

armpit, just above the intersection of the arm and torso, while you pull your *i* finger up through the string and release it back down, as described above. When you do this, you should feel the muscles in that area move. If you do not feel them move, experiment with the placement of your left finger, as well as with pushing into the armpit a bit further. For some people, this muscle movement is very subtle. You may be one of those who finds it hard to feel these muscles move. For most people it is quite obvious. The group of muscles that moves is the large muscle group (or LMG, for short) that we want to engage when playing.[1] If you cannot feel them actually move, it is not a problem. Even knowing only approximately where these muscles are located is helpful, if only as a visualization aid (see video 5.2 ▶).

Analysis of a Single Stroke

Now you are ready to do a stroke with *i*, *m*, or *a*, but first let's divide the stroke into two segments. Again, begin with the fingertip slightly flexed and the top joint directly over the string you are playing. Pull the string diagonally up toward your face, with your whole arm, moving from the elbow. Move your forearm as a single unit, from your elbow to your fingers. (Do not engage the string with any joints of the finger!) While feeling the LMG engage in the armpit, hold the string in this pulled position for a couple of seconds, like an archer pulling a bow while aiming. Then follow through with the whole arm, making sure that the string's tension does not push your finger back but, rather, that the LMG continues to support the stroke all the way through the string.

Once you have repeated this enough so that you feel secure, you can put the two segments together in one slow, continuous stroke. Remember to start with your fingertip slightly flexed and the top joint directly over the string. *Be sure to feel the LMG engaging as you spend a long time in the string before following through with full LMG support.* Try some strokes with a relaxed tip joint and some with a firm tip joint. The exaggerated stroke might make a harsh sound. If it does, this is simply because you are pulling with more force than is necessary. Lessen the amount of force, so that you are making a pleasant sound, making sure that the LMG support is still there. You should now be making a beautiful, loud, round sound with a minimum of muscular effort. *Practice this with i, m, and a, very slowly and with a generous amount of motion.* The better you get at doing this correctly,

1. Throughout, I use the abbreviation LMG and the phrase "large muscles" interchangeably.

the less difference you will hear between the sounds of the three fingers. This is because all three now have equal support from the large muscles (see video 5.3 ▶).

Thumb Stroke

The thumb stroke works on the same basic principle, except that the motion is downward toward the floor, falling with gravity. Rest your thumb on a string, with its full weight resting on and falling into the string. Then *let it fall with this full weight through the string and down toward the floor, parallel to the soundboard and just missing the top of the adjacent strings.* You might think of it, as one of my students imaginatively suggested, as a raindrop on the edge of a rooftop, *falling with increasing weight into the string until the string can no longer bear the weight.* At that moment, the thumb has no choice but to fall through the string and down toward the floor. Remember to keep the wrist stabilized and to move the whole arm from the elbow, as one big lever.

Notice that as your thumb falls with increasing weight into the string, you have a choice of allowing the tip joint to flex (bend forward) or to extend (bend backward). As we know from previous discussion, extension of the thumb's tip joint is not advantageous, and, in this context, it also prevents the full use of your large muscles. Therefore, start with the thumb tip in neutral position or very slightly flexed. *As you gradually increase the weight falling into the string, rather than extending the thumb tip, let it flex more and more until the "raindrop" finally falls to the ground.* The more the thumb tip flexes, the greater the distance between the thumb and the index finger. The "raindrop" fall becomes a release from this accumulated weight. The release so naturally relinquishes effort that it almost feels as if the string is playing the thumb, instead of the other way around. Again, practice this slowly and with a generous amount of movement. You can refine the amount of movement later, when you are completely comfortable with this approach (see video 5.4 ▶).

Falling Up

Let us now reconsider the other fingers. Just as the thumb falls downward into the string with increasing weight, like the raindrop, until the thumb has become so heavy that it has no choice but to fall downward, the other

fingers can have the same falling sensation. However, think of them as *falling* upward *into the string with increasing weight, continuing to fall until the finger has no choice but to fall upward.* When you "fall" in this manner, whether down or up, with a stabilized wrist and dead-weight arm and hand, you allow the LMG to engage in the stroke. Stated a bit differently, you *transfer the weight of the arm into the string.* Again, if done well, the finger will feel as though it is hardly doing anything at all, almost as if the string is playing the finger. By doing this, you essentially bypass the small muscles of the forearm, which until now have probably been overworked.

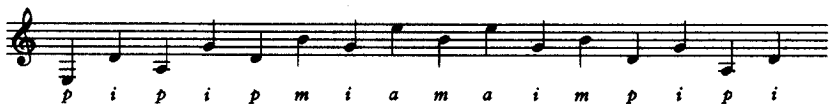
The speed and effort with which you go through the string are telling. If you move quickly and tensely, even spasmodically, through the string, you are pushing through it. But when you fall, you move more slowly and in a more relaxed manner through the string, spending a long time in contact with the string before clearing it. So remember, *don't push through the string, but rather, fall through it.* Once you gain confidence with the large-muscle support, you can experiment with using a smaller amount of motion and at different speeds through the string, while still engaging the large muscles (see video 5.5 ▶).

Falling Down and Falling Up Combined

Once you have mastered the falling down of *p* and the falling up of *i*, *m*, and *a*, you can practice alternating them. For example, with *p* playing the D string, *i* playing G, *m* playing B, and *a* playing the first string E, play D–G–D–B–D–E. *Play this extremely slowly, only as fast as you can execute each stroke with the correct use of the LMG, transferring the weight of the whole arm into the string for each and every note.* The weight falls down with the thumb stroke and up with the strokes of the other fingers. Allow the movement to be exaggerated, so that the distance covered with each stroke is much greater than for a normal stroke. *The larger the motion, the more confident you will be of supporting each stroke with the LMG.*

Of course, your ultimate goal is to play with even rhythm, but in the beginning this is entirely unimportant. So, allow for an irregular rhythm that is determined solely by the presence of the correct feeling before and during each stroke. The finger should not clear the string until it finds this feeling. When you are comfortable with this string pattern, move your thumb one string lower and keep the other fingers where they are, playing A–G–A–B–A–E. Then the thumb can move to the sixth string, so that you play E–G–E–B–E–E.

A more complex right-hand pattern you might then try is the open-string pattern for the Villa-Lobos *Etude No. 1* (mus. ex. 5.1):



Again, *remember to play slowly at first, with exaggerated, large motion, even in the middle of the pattern, when the notes are played with i, m, or a, and the fingers are falling upward consecutively.* Then experiment with a variety of arpeggio patterns, always with the exaggerated motion in the beginning and then smaller motion as the LMG support becomes well ingrained (see video 5.6 ▶).

THE RIGHT HAND—CHORDS AND SCALES

Chords

Now that you are capable of playing single notes and arpeggios with the LMG, we can move on to chords. Playing a two- or three-note chord with *i*, *m*, or *a* is relatively easy. You simply do with two or three fingers the very same thing you did with one, with all fingers falling upward through the strings at the same time. Each time you play a chord, focus on one finger at a time, making sure that you're engaging the large muscles in the armpit for that finger. Then focus on another finger for the next chord, and so on. Try this on open strings and master it.

It is a little more difficult to engage the LMG to play a chord that requires the thumb and the other fingers. Let's take a four-note chord consisting of the open strings D, G, B, and E. First, decide whether you wish to emphasize the top note of the chord or the bottom. *To bring out the treble note, fall upward with large muscle support through the G, B, and E strings with i, m, and a, while flexing the thumb from its top joint (the wrist joint).* If you have mastered the exaggerated thumb stroke with proper usage of the LMG, then you will still be able to engage the LMG, at least to some extent, even when you are flexing only from the wrist joint. So now you can pluck the four-note chord with an exaggerated upward motion of *i*, *m*, and *a* from the elbow and a more subtle opposing motion of *p* (thumb) from its top joint. Play around with your new ability to control these opposing motions, and master it.

In order to emphasize the bass note of your chord, simply reverse this procedure. *Let p fall downward through the string with large muscle support and with exaggerated motion that originates at the elbow, while i, m, and a*

flex from their top joints, still engaging the LMG but without the exaggerated motion. Then see if you can play chords, with either treble or bass emphasis, in the same way with less motion. Once you get familiar with the large muscle support, the dead-weight feeling, and the lack of tension in the forearm, your chords will have a better sound, clearer voicing, and more power, all with less effort (see video 5.7 ▶).

Scales

For scale playing, continue to exaggerate the arm motion for each finger, always returning to a place near the string to begin the next stroke. *Remember to spend a long time in the string before clearing it (fall, don't push).* Play a scale pattern first with right hand alone on open strings, at a tempo that is slow enough that you are confident that every single stroke is engaging the large muscles. (This may be surprisingly slow!) When you add your left hand, slow the tempo some more, maybe even to half the tempo, so that you continue to engage the large muscles for every stroke, perfectly. *When you add the left hand, a slower tempo is necessary because the brain has to think of what both hands are doing at the same time, and therefore it requires more time to get everything in order for each stroke.* Once you acquire the feeling of engaging the LMG for every stroke, you can speed up the scale and decrease the amount of motion.

Planting

"Planting" (placing or preparing the finger on the string before a stroke) is not a good idea, particularly at this early stage of learning to engage the LMG. *Planting tends to encourage the engagement of your smaller muscles and should therefore generally be avoided, at least until a time when the large muscles are engaged automatically.* Even then, planting should rarely be used, in my opinion. A player at the beginning stages might find planting helpful for creating a feeling of secure orientation in the strings, but later should be weaned away from this. *Beginning a stroke extremely close to the string, but without actually touching it, creates a feeling that is as secure as planting.* This tiny bit of distance from the string affords a greater likelihood of engaging the large muscles. Meanwhile, as you learn how to transfer the weight of the arm into the string, exaggerated motion is always best, so when in doubt, exaggerate.

THE REFINEMENT PROCESS

Once you feel completely confident of engaging the LMG, then and only then are you ready to increase the speed and decrease the motion. This procedure, which I call the refinement process, is very straightforward. Start by playing the pattern or musical passage you wish to refine (for example, the right-hand pattern of the Villa-Lobos *Etude No. 1*). Begin at the slowest tempo, one at which each stroke perfectly and securely engages the LMG, with the largest amount of motion. Simply observe how much motion this is—in other words, how much distance is covered. Then, while maintaining the exact same slow tempo, play the pattern again and reduce the amount of motion to half the amount. *Each time you change a variable of motion or tempo in this process, make sure that you are especially conscious of engaging the LMG and maintaining the dead-weight feeling and stabilized wrist.* Once this reduced motion feels secure, maintain it while increasing your speed—not just a notch up on the metronome but perhaps several, so that you make a comfortable leap in tempo.[2] When this is secure, keep the same tempo and cut the motion in half again. Once this is mastered, keep the same amount of motion and increase the speed a few more notches on the metronome. Continue to alternate between cutting the motion in half (always first!) and then increasing the speed. Do not forget, with every change of variable, to be hyperconscious of the transfer of the arm's weight into the string, the dead-weight feeling, and the stabilized wrist. You will be surprised at how many times you can cut the motion in half.

At some point, you will reach a comfortable limit as to how fast you can move your arm, and you will then want to find a way of playing more normally, which is to say, very close to the string. After going through the refinement process this far, you will be able to simply *lean the weight of your arm into the string in the appropriate direction, down or up, and transfer the arm's weight into the string with little or no exaggeration.* You can now play in the normal fashion but with a newly discovered engagement of the whole arm in each stroke. Beginning very close to the string, almost but not quite planting, you *transfer the weight of the arm into the string for every note, changing the direction of the weight as needed.* If you do not find this final transition easy, then perhaps it is a bit too early for you to try it. But this is, in fact, your ultimate goal. You should be able to engage the large

2. The metronome is just a reference. Do not work on the refinement process with a metronome. It will focus your attention on maintaining tempo, which is the lowest priority at this stage, and will take your attention away from the LMG support, which is really the only priority in this context.

muscles up to fairly high speeds. At the very highest speeds, however, you would naturally rely more on smaller muscles. Once you are comfortable engaging the LMG in many different musical and technical contexts, it will become second nature, and you can apply it to anything and everything that you play.

THE LEFT HAND

My focal dystonia was in the right hand. Once I cured the dystonia, I began to consider the large-muscle principles as they might apply to the left hand. The more I explored the subject, the more I understood that my ideas about LMG would need to be applied to the left hand with greater subtlety. My previous approach to left-hand mechanics held up well under this scrutiny, but more nuance and some new ideas were added. Looking at the left hand through the lens of a large-muscle perspective filled in the gaps in my overall understanding, as it did with the right hand. Once again, I knew that these ideas would apply not only to a player with focal dystonia but to all players, whether or not they were injured.

While the basic principle is essentially the same, the application of large muscle use to the left hand is very different than it is for the right hand. Unlike the right hand, the left hand is not always best supported by the largest muscles. It depends on what is required at each moment along the way.

There are three basic actions required of the guitarist's left hand: getting to the fingerboard, putting pressure into the fingerboard, and moving from finger to finger. Use the large muscles that are the most advantageous for each of these actions.[3] Let's examine each one individually.

Getting to the Fingerboard

For the action of getting the fingers to the fingerboard, one might expect the largest muscles to be the most beneficial. However, to reiterate what was covered in Chapter 4, when most guitarists move the whole arm to the fingerboard and then apply pressure, they tend to squeeze the fingerboard

3. This approach to the guitarist's left hand is very similar to what I would recommend for both hands of pianists and wind players, as well as the left hand of bowed string players.

between the thumb and the other fingers, with the result that they use the smallest muscles and cause a good deal of strain. In contrast, *when you simply drop the finger to the fingerboard from the top joint, you may reach the fingerboard with a light, effortless, yet powerful touch.* This is using the large muscles that are the most advantageous—larger than the small forearm muscles that support the middle and tip joints but smaller than the muscles of the armpit area.[4]

Applying Pressure

When applying pressure to the fingerboard—the second action required of the left hand—most guitarists engage the tip or middle joint. Once again, it is better to work from the top joint and, ultimately, from the LMG in the armpit. This is an elusive concept to grasp. The clearest way to demonstrate it is by exaggeration. *With your thumb just slightly off the neck, press a finger lightly down into the fingerboard, and at the same time, push away from the fingerboard.* As you do this, your finger will straighten, your wrist will flex slightly, and your hand will move away from the fingerboard, while the finger stays on the fingerboard. *This exaggerated movement is just like a push-up exercise, in which you push your body away from the ground while pushing down into the ground with your hands.* These two opposing actions can only occur with a very light amount of pressure that feels like it begins at the top joint. By doing this, you are subtly accessing the LMG in the armpit.[5] Once you learn to apply pressure in this exaggerated manner, it is quite easy to transfer this to normal playing. Just begin to apply pressure with the exaggerated push-up movement in mind, and you will already be accessing the large muscles without needing to actually push away from the fingerboard (see video 5.8 ▶).

As an interesting side note, focal dystonia sufferers will often notice a tremor and confusion in the fingers as they apply pressure in this way. This is the moment in which the dystonic response begins to engage. If the pressure is applied properly, as just described, the dystonic response will disappear. This positive result for the injured hand is, in my opinion, an indication of the significance of this particular aspect of left-hand technique to a non-injured player. When pressure can be applied with the proper

4. The same is appropriate for bowed strings and wind players as an approach to the fingerboard and keys, respectively. Pianists, however, should use their largest muscles to drop the weight of the entire arm into the key bed.

5. The same exact concept can be applied to the playing of bowed strings, winds, and piano.

support of the large muscles, you gain confidence and stability with considerably less effort, whether the hand is injured or healthy.

Moving from Finger to Finger

The third basic action of the left hand is the movement from finger to finger. This requires use of the largest muscles. First, feel the dead weight of the arm while a finger is pressing into the fingerboard, maintaining the leverage that is level with or higher than the fingerboard. (You may wish to refer back to video 2.6 for a reminder of dead weight in the left arm.) Now *swing or throw that weight to another finger so that the weight carries it not just to the fingerboard but all the way into it. When the second finger lands, the first finger should lift up.* Note that when you are throwing the weight of the arm freely, the elbow moves in the same, not the opposite, direction. *If your elbow is moving in the opposite direction of the swing, then you are not feeling the full weight of the arm.*

This finger-to-finger action can only be understood at first with exaggerated motion. Throw the weight rapidly and with a gentle forcefulness, but with the dead-weight feeling, so that there is no exertion in the forearm, biceps, or triceps. You might want to begin the weight-throwing a little further away from your destination so as to get a clearer, freer feeling of the weight being thrown. For example, if you move from the first finger to the third finger, start with the first finger a little to the left of where you would normally begin the motion—a sort of wind-up, like what you might do before throwing a ball. *Always practice the transfer of weight in both directions*—in other words, from the first finger to the third, as well as from the third finger to the first. When you put this concept to work in the context of a whole musical passage or piece, you will see and feel a directed fluidity in the motions of the left hand that will clarify your finger placement and give you added security, accuracy, and ease (see video 5.9 ▶).

Putting It Together

Now you can combine two of these actions at the same time. *Practice putting the first and second actions together*: Drop your finger to the fingerboard from the top joint, and then, once you have landed and as the pressure increases into the fingerboard, push the finger away from the fingerboard, as previously described, with the thumb off the neck. Try merging these

two actions into a single quick motion.[6] Once you are able to do this, leave out the exaggerated push away, and simply drop the finger to the fingerboard with just enough push-up pressure to make a good sound.

Next, *practice putting the third and second actions together.* Start by throwing the weight from one finger to the other, and then, when the finger lands, apply pressure from the top joint with the exaggerated motion. Again, be sure to keep the dead-weight feeling in the arm, allow the elbow to move in the same direction as the finger being thrown, lift the previous finger when the new one meets the fingerboard, and apply a light pressure with the exaggerated opposing actions, with the thumb slightly off the neck. This will look like a little dance, especially when you practice it in both directions.[7] Finally, *perform this combination without the exaggeration of pushing away,* that is, throw the weight and land with properly applied pressure, feeling the pressure as just the beginning of the push-up movement (see video 5.10 ▶).

Once you have acquired the ability to combine moving from finger to finger while applying pressure with the larger muscles, and you can do it with faster motions, then all that remains is to decrease the swinging motion, when it is necessary to do so. There is nothing wrong with larger swing motions at slow and moderate tempos. So try to accomplish the exact same goals with smaller motions. *Do not make these motions as small as possible but, rather, as large as you can get away with, given the tempo, so that the engagement of the large muscles feels easy and clear.*

The action of getting the finger to the string also needs to be large enough to clearly feel the initiation from the top joint. *Do not try to restrict this motion.* Again, let it be as large as you can get away with, given the tempo. Remember that it is more important for this action to be free than to be economical.

Once these principles have been mastered abstractly in each hand, you can apply them to music. Just remember that when you play with both hands at once, there are multiple activities for your brain and hands to control, so slow down the tempo at first. *Play only as fast as you can do every single right-hand stroke or left-hand motion correctly—that is, with perfect support of the LMG.*

6. If you have focal dystonia or another injury, you may need to do this first in slow motion, taking care to support properly with the larger muscles, in order to avoid the dystonic or injured response. Then work toward a faster motion.

7. Again, if you are injured, do this first in slow motion. Once you can control the dystonic or injured response, you can progress to doing it more quickly.

A FEW LAST WORDS ABOUT THE IMPORTANCE OF FREEDOM OF MOTION

At the risk of overstating my case, I offer yet a few more comments on the subject of freedom of motion as opposed to economy of motion. The biggest fear that most guitarists, and instrumentalists in general, have about my concepts concerning the large muscles is the exaggerated motion that is necessary, especially in the beginning, for full physical comprehension of the use of the LMG. Sometimes people get confused about my ideas, thinking that they are about the use of large motions instead of the engagement of large muscles. I believe that this misconception arises because many instrumentalists have been taught to be so wary of large motions that they are not able to get past this concept to get to the deeper and more essential concept of engaging the LMG. They often mistrust the exaggeration needed at the beginning stages of this work, moving too quickly to a normal amount of motion before they have mastered the proper support of the large muscles. In their haste, they lose that support. *Large motion is, indeed, significant in my approach, especially at first, but in the end, it is only a tool to use in order to achieve the goal of engaging the LMG.*

Most of us in recent generations have been taught to believe that economic motion is an important key to playing an instrument with speed and accuracy. However, I have observed all too often that this is precisely what gets people into trouble with injuries of one sort or another. Economic motion often turns into excessive tension, probably because it unconsciously encourages the use of smaller muscles and also encourages an unhealthy obsession with accuracy. While technical perfection is a decidedly important goal for which to strive, it is, after all, only a means to an end—the communication of the content, emotion, and artistry of the music itself. *If we are less obsessed with technical perfection and, by association, economic motion, we can be more focused on artistic communication and its corollary, freedom.*

Experience has taught me that *when motion is free and lacking in unnecessary tension, not only do speed, power, and accuracy increase, but also the body steers clear of injury.* Here is a subtle and unexpected example: In plucking repeated chords, when the right hand bounces up and down (that is, toward the soundboard and away from it), there is quite a bit of tension in the hand and arm, and the motion is neither economical nor free. But when the right hand plucks the chords parallel to the soundboard (up toward you and down to the ground), this motion is free and also open to the support of the LMG. Its economy is limited only by the speed at which you are playing. Think, for example, of the Etude No. 4 by Villa-Lobos. If your

right hand bounces up and down for all those repeated chords, you develop tremendous tension in the hand. At the fastest speeds, this motion could easily cause injury. Conversely, keeping your hand relatively still might be a rather relaxed approach to those chords but would automatically emphasize the engagement of smaller muscles. When they tire out, as small muscles are wont to do, they can become quite stressed. However, if your hand plucks the chords by moving parallel to the soundboard, engaging the large muscles correctly, you can allow more motion than you might expect, even when playing up to tempo, because this motion can create a greater sense of freedom in the hand, which then feels more relaxed.

Broader movement that is parallel to the soundboard virtually never causes injury. Because this movement is freer, it can lead to faster speeds than you might expect, with a more relaxed hand and arm. This is counterintuitive for most guitarists, if not downright heretical! But the fact remains that this amount of motion induces less tension because it encourages the support of the large muscles. Therefore, generous movement of the right hand that is both free and parallel to the soundboard can actually be desirable, to a certain extent. Too much motion, of course, can diminish accuracy in faster passages, but even up to moderately quick tempos, the amount of movement can remain quite liberal. *Economic motion is really only necessary in the fastest passages.*

Economical motion may, therefore, be a rather low priority in the development of good technique. Perhaps it should be considered as just a refinement to be introduced late in the learning process—one that supports only the fastest speeds and the highest level of accuracy. On the other hand, freedom of motion, supported by the large muscles, can both prevent and heal injury, as well as lead to effortless playing, greater volume, and more beautiful tone.

Now we move on to the broader subjects of practicing and preparing for a concert with ease.

CHAPTER 6

Suggestions for Relaxed and Effective Practice

Even if you put to use all of the information in the preceding chapters about playing your instrument with physical ease, you may induce other kinds of stress if you don't practice effectively. Without solid preparation, a player can create a good deal of anxiety, insecurity, and mental tension. While there have been a number of publications by guitarists about practicing, from various contributors on the internet to such thoughtful books as *On Practicing* by Ricardo Iznaola (Pacific, MO: Mel Bay, 2000) and *The Musician's Way* by Gerald Klickstein (Oxford: Oxford University Press, 2009), the subject is still not discussed often enough by guitar teachers with their students. Over the years, when I have given students advice on this subject, a surprising number have told me that no teacher had ever discussed the matter with them. In a way, this oversight is understandable. With all the technical and musical details to be crowded into a lesson, it's no wonder that a teacher might forget to discuss ways of practicing productively. I, too, have been guilty of this on occasion. Sometimes a teacher might even take it for granted that the student knows how to practice. But how well you practice is directly related to how well you perform. A thoughtful, well-organized approach pays off richly. There are many different ways to practice effectively. Here are some.

SOUL WORK VERSUS ANALYTICAL WORK: AN OVERVIEW

For the deepest, most productive practice, you must have perspective. You should examine the music up close and from far away, and then even more closely and from even further away. Dig deep down to the roots of the music in order to cultivate it fully and then watch it grow from above ground. This allows you to perceive both the big picture and the fine details, the forest and the trees. Seeing the music entirely as forest or entirely as trees does not add up to a balanced view. A sense of perspective on every level helps broaden the interpretation and secure a technique that effectively serves that interpretation.

> For many years my practice was guided only by instinct. At some point, I began to analyze what I was doing, recognized that there was much missing in my approach, and began to refine my method. The following ideas are the fruit of that investigation.

There are two general kinds of practice: my names for them are "soul work" and "analytical work." Soul work is what you do in order to see the bird's-eye view of the piece on which you are working—its gestalt, its overall unified nature. In the process of soul work, you are setting your sights on the goal. Analytical work gets down to the fine details, the nuance, the practical elements that ultimately accumulate and add up to the realization of that goal. *While the soul work always comes first, the analytical work should be, by far, the predominant part of your practice time. You must take care to separate them very distinctly at first, so that you do no soul work when doing the analytical work and no analytical work when doing the soul work.* Let's examine this more closely.

When you begin to work on a piece of music, the first thing you should do is simply look at the music, without your instrument. Look at the title and think about what it means to you. If there is a preface, read it. Note the opening tempo and character marking, if there is one. Are there words in a foreign language that you don't understand? If so, look them up, and write the translation in the score, so that you remember what they mean. These words are every bit as important as the notes because they tell you how to play those notes. Is the piece tonal, and if so, what key is it in? Are there special sound effects or extended techniques, and if so, perhaps some sort of table or guide that explains them? See how the piece is organized overall—is it a set of variations, sonata form, a short character piece or etude, made up of multiple movements? Can you tell where the

major sections are, and does it seem to have any recognizable patterns? Look at the phrase structure, the harmonic structure, and the rhythmic life of the piece.

Once you have some preliminary sense of what the piece is about, begin to sight-read it.[1] Do not be overly concerned with fingerings (except where they are crucial to the understanding of a passage) or with accuracy or even with precise rhythms. Just play the notes for the purpose of hearing them. Play at a moderately slow tempo—not so slow that you can't get a sense of the musical gestures, and not so fast that you're missing most of the notes. *Play through the piece for an overall sense of how the music sounds, where the phrases are, how the piece is structured, and how it feels.* This is your first bit of soul work. It is not definitive but is only a glimpse of your initial perception of the piece. Try not to stop much (or at all) but, rather, just keep playing all the way through the piece. When you have read the piece a few times, enough to have some sense of it, then it's time to turn to the analytical work.

Specific suggestions and details about analytical work appear below, but for now, let's just look at the overall structure of this practice approach. Your soul work was about defining your goal and having a clearer picture of what you might strive for in your interpretation. Analytical work is figuring out how to accomplish that goal. This will include such tasks as very slow playing, fingering, problem solving, and rhythmic clarification. All these kinds of work require breaking the piece down into smaller bits and analyzing it. *Unlike the soul work, you never play all the way through the piece but rather play in small sections*—maybe only a couple of measures at a time, or eight or sixteen—whatever is a comfortable, bite-sized amount to digest. Remember, do not do any analytical work while you are doing soul work, and do no soul work while doing analytical work. The two modes of working must be kept completely separate, so as to obtain the purest possible results. The sectional, nitty-gritty analytical work is the core of practicing and should occupy most of your practice time. Too many players spend too much time playing straight through the piece in the hope that it will come together by sheer repetition. It would seem that they are doing soul work most of the time. But if you are reinforcing incorrect habits and mistakes, then you are making neither technical nor musical progress. And if you are doing soul work on automatic pilot, your interpretation will become unfocused and poorly considered. Only by

1. Not everyone is a good sight-reader. If this is your weakness, you must work on it! Five to ten minutes of sight-reading each day will help. The better a sight-reader you are, the more spontaneous and lively will be your relationship with the score.

careful attention to detail will you make true, rapid technical and musical progress.

Continue with your analytical work only to the point where you find that the piece feels familiar to both your fingers and your brain, without overworking it. *Once you reach this point, you have two options: either put the piece away for a while or go back to the soul work.* You might put the piece away for a day or two or even a week. When you return to it, start again with the soul work. Play all the way through the piece a number of times. Do not do any analytical work while you do this. Now that you have done a first round of analytical work, perhaps some of your perceptions of the piece have changed. You can probably play it a little faster and more accurately now. As a result, you may have a different overall feeling for the music, or perhaps your interpretation of the character of certain passages has changed. Maybe your phrasing has changed, or maybe your concept of the architecture is different. Play with it. Explore it.

Fingerings determine the phrasing, so make sure that the fingerings you developed during your first analytical period support the big and little phrases you hear now. If they don't, make a mental note to work on this when you return to the analytical work. *Do not work on fingering changes while doing soul work*—remember that for the best results, it needs to be completely separate and distinct from the analytical work.

After another brief period of soul work, return to the analytical work. Deepen the progress you made before by practicing even more slowly or by refining the details of dynamics, or by re-fingering, and so on. Because the piece may be a bit easier to play now, you might choose to increase the length of your bite-size passages. Use what you learned from your soul work to take the piece to a new technical and musical level. Once you feel you have reached the next level of progress, either put the piece away again or return to the soul work. By this time, your analytical work has probably become more assimilated and synthesized, and your musical interpretation more sophisticated. The piece may be feeling more integrated and more organic. Ideas may occur to you as to how to make it even better.

Continue to go back and forth between the soul work and the analytical work, clearly separating the two. Eventually, *what happens naturally is that the boundaries between the two become less and less defined, and they ultimately disappear.* You are now at an advanced stage of practicing the piece. This is probably another good time to set the piece aside for a while. When you return to it, soul work and analytical work will have merged to become one and the same thing.

SUGGESTIONS FOR ANALYTICAL WORK

Correcting Mistakes

The way we correct mistakes while practicing determines the effectiveness and efficiency of our practice. The correction of errors can be quite easy if you think about it logically. Here is one simple problem-solving method: When you notice a mistake in your playing, stop and think of three questions: *where, what, and how.*

1. **Where exactly is the problem?** Which note or notes were missed? Identify it or them precisely. For example, you might say to yourself, "The written note is C# on the fourth fret of the A string, but I'm playing an open D instead." Or, "I'm making a buzz when I play that C#."
2. **What exactly is causing the problem, and which hand is responsible?** Following through with the same examples, you might think, "My right hand is plucking the D string instead of the A string." Or, "My left hand fingertip is landing too close to the fret."
3. **How do I correct the problem?** Continuing with the same examples, you might conclude, "Pluck the A string, not the D." Or, "My fingertip needs to land closer to the middle of the fourth fret."

It sounds like an obvious and laborious process, but you will see that when you stop and take the time to ask yourself these specific questions, you can solve your problem with much greater clarity. Run through this three-step method slowly and deliberately at first. It will soon speed up and become more natural. You will then become an expert at correcting mistakes effectively and quickly.

Fingerings

Guitarists often have a tendency to work out fingerings much too soon in their practicing process. Fingerings have a profound effect on phrasing. *If you do not yet know or have an interpretation of where the phrases begin and end (that is, if you haven't done enough soul work), you should not begin work on your fingerings.* Improvise them until you feel fairly secure in your understanding of the phrasing. When writing in your fingerings, always use a pencil, and make liberal use of an eraser. Be open to changes of fingering as you become more familiar with the music. Your ideas about which is the most technically effective or most lyrical-sounding fingering

may change, or your sense of the phrasing may change. If you practice consciously, you can unlearn a fingering just as easily as you learn it. *Never be afraid of changing your mind.* Flexibility is one of a musician's most valuable assets.

Four Practice Tempos

When practicing, students often make two general mistakes regarding tempo. They don't practice slowly enough, and when they increase the tempo, they do it in small increments, just a few beats per minute on the metronome. In my experience, *working with four practice tempos—very slow, moderate, faster-than-performance tempo, and performance tempo—is generally a more efficient approach to practicing.* Let us consider each one.

Very slow is the most important practice tempo. This is the tempo at which you lay down all the foundations of accuracy: the notes, rhythms, dynamics, and even memory. It is also the tempo at which you learn how to play a passage with physical and mental ease and memorize it securely, as well. How slow is very slow? You don't find it on a metronome. *It is the tempo at which you can learn to play every note perfectly, with no mistakes and no anxiety.* If that means you can only play one note every five seconds, then that's fine. You want to find the tempo of perfect ease. If you cannot play the passage with ease and accuracy at a very slow tempo, you will only play more and more frantically and with more mistakes as you increase the tempo. You have to lay down a perfect foundation first. Most of your practice, especially in the early stages of learning a piece, should be at this very slow tempo because this is the tempo at which most of the problems will be solved.

Another important advantage of very slow practice is that *while your playing is very slow, your thinking can be quick.* In other words, you are able to have more thoughts per note than at a faster speed. When you cultivate the ability to think ahead at the slow tempo, because you have the time to do so and because your physical movements are slow, then when you speed up, those helpful thoughts are incorporated at the faster speed.

While everyone is different, I would venture to say that about 60 percent of your practice time might be at the very slow tempo, with maybe around 20 percent at the moderate tempo, and about 10 percent apiece for the final two tempos. In fact, the amount of time spent at the very slow tempo should probably be quite a bit more than the other three tempos combined. This is just an approximation, mentioned only to give a general idea of the proportion of time you might spend on each tempo.

In order to find a moderate tempo, think first of what your final performance tempo goal is for the day. This is not necessarily the finished tempo for the piece. Your moderate tempo will be approximately halfway between your performance tempo of the day and your very slow tempo. It is a tempo at which you can still play accurately and with ease, but you are forced to speed up your reflexes in order to play more quickly. Nothing should feel difficult or frantic at this tempo. If you have practiced for long enough at the very slow tempo, this one will feel just as easy after a few run-throughs. The goal here is to *bring the same relaxed ease you developed at the very slow tempo to a comfortably faster tempo and feel secure with it.*

Once this is mastered, find the tempo that is just slightly faster than your chosen performance tempo of the day. This speed may be a little beyond your reach, especially the first time through. It may even feel impossible to gain control at this speed. However, keep trying to master it as you try to come to terms with speeding up your reflex responses. *Do your best to keep physical tension at bay while playing at this speed.* With each repetition, you should be able to get closer and closer to getting the passage under control. If you can do that, good for you! If not, that's okay, too—just get as close as you can to mastering the passage at this tempo.

Then relax the tempo back to the performance tempo. This should feel relatively easy, now that you have struggled with getting it to a faster speed. *The goal here is to find the same relaxed quality of control that you had at the very slow and moderate tempos.* If you have been unable to attain this same quality, then you have chosen an unrealistic performance tempo for this moment. You will need to adjust it to a slower tempo the next time you practice playing at the four different tempos.

Working with these four practice tempos will shorten your practice time and make it much more effective. It may seem that spending so much time at the very slow tempo would be extremely time-consuming. It is, at first. But if done well, this practice will pay off handsomely in the end with much quicker progress, as well as a greater sense of security and control. For most of my teaching career I have repeatedly said to my students: *The slower you practice, the faster you progress.* In fact, in my own experience, I have found that the better I know a piece, the slower I can play it. Playing a piece at an extraordinarily slow tempo can be really effective for weeding out the subtle problems that remain even after working on the piece for quite a while.

The more sophisticated your control of a piece is, the less you need to practice at the very slow tempo or even the moderate tempo. At a more advanced stage, your practice time proportions might be reversed to something like 10 percent apiece for the very slow and moderate tempos,

20 percent for faster-than-performance tempo, and 60 percent for performance tempo. At the most advanced stage, you might completely eliminate the very slow and faster-than-performance tempos and use only the moderate tempo as a warm-up for your performance tempo.

Right-Hand Positions

> In recent years I have sometimes noticed a certain inaccuracy in my right hand. Sometimes subtle, sometimes obvious, it felt like an insecurity in the positioning of my hand over the strings that would lead to missed notes. I began to explore what I could do to engender more security in the control of my right hand. This process brought about a revelation of something that is rarely, if ever, discussed.

Just as we can delineate positions in the left hand (first position, seventh position, and so on) that are very useful to the hand's orientation on the fingerboard, we can think of the right hand in terms of positions, as well. Right-hand positions are more fluid and harder to define than those of the left hand, but they are nonetheless useful. *Think of a right-hand position as the position of the hand when p, i, m, and a are placed on adjacent strings*—for example, when *p* rests on the fourth string, *i* is on the third, *m* is on the second, and *a* is on the first. (Remember to keep the top joint of the finger directly over the string.) We might call this position *p*-4 or *a*-1, as the outer fingers can help define the position. If we move it one string back, *p* rests on the fifth string, *i* on the fourth, *m* on third, and *a* on the second—thus, *p*-5 or *a*-2 position. Shifting back another string, it would be *p*-6 or *a*-3. Move back yet one more string, and *p* is now no longer on a string, but we could define this position as *a*-4, and *a*-5 would be the next position back. Conversely, moving forward one string from our original *p*-4 position, *p*-3 would be the only name for that position, since *a* no longer rests on a string, and *p*-2 would be the next position forward.

Now let's analyze a little ascending scale fragment, played with *m* and *i*, starting on the G string and continuing on the B string: G–A–B–C–D. If possible, visualize the following first, before playing it. If we start with *m* on the open G, we are in *p*-5. This is because if you place *m* on the G string and the other fingers on adjacent strings, *p* is on the fifth string. In order to play *i* on the note A, we move forward one position to *p*-4. To play *m* on the open B, there is no change of position. But when *i* plays the note C, we move forward one position to *p*-3. Finally, when *m* plays D, we move back one position to *p*-4.

Now play the five notes very slowly, and see how these position shifts feel. *Shift to the new position only at the exact moment when it is needed,* not a moment before or after. For the last position shift, from the note C to D, it may not be practical at a faster speed to make a full position shift. Try shifting just a half-position or even a bit less—just enough to be aware that, in order to play the D, you would shift back very slightly. When you get comfortable with consciously moving from one position to the next, with precise timing, speed it up a little. See if you can get the position shifts to be fluid and natural. Speed it up a little more, and you will begin to see how your right hand now plays these five notes with increased confidence and security because it knows exactly where it needs to be at every moment.

For comparison, imagine the same scale fragment starting instead with *i* on the open G. We begin in the *p*-4 position. In order to play the note A with *m*, we move back one position to *p*-5. The open B, played with *i*, requires a radical shift of two positions forward to *p*-3. In order for *m* to play the C, we shift back one position to *p*-4, and when *i* plays D, we once again shift forward one position to *p*-3. *The radical two-position shift from A to B is the big event here,* while playing A, C, and D might each require a mere half-position shift (or less). Now try playing these five notes on the guitar, very slowly, and see how it feels. Make the position shift timing very precise, not a moment too soon or too late. Once you are comfortable with it, speed it up and let it turn into natural playing.

Considered in this way, starting this scale fragment with *i* would seem to be less desirable than starting with *m* because of the greater number of position shifts. At the same time, with this analytical understanding of right-hand positions, you can also see that the issue of string crossing may actually be less important than you think. *Any string crossing can work, as long as you know which position you are in, which position you are going to, and when to make the shift.* Any passage you play can be worked out in this way.

At first, it may seem rather time-consuming, but after a while, you will become very good at feeling the position shifts as you go, so that you don't always have to analyze each passage. For particularly problematic passages, if you take the time to analyze the right-hand positions in this fashion, you will discover where the problem is and be able to fix it. *Undoubtedly, the issue will involve either the number of positions required to shift (you are not shifting enough, or you are shifting too far) or the timing of the shift (too late or too soon).* Shifting positions where no shift is required can be just as disruptive as shifting too little or too far. Once you figure out these issues, you can easily and permanently fix the problem. The names of the positions are not particularly important—they are just handles to hold on to. What's

important is the awareness of your hand's orientation at every moment and the precise timing for each position shift.

Finally, it must be said that right-hand positions are sometimes impossible to define perfectly. For example, when *p* is on the sixth string and *i*, *m*, and *a* are on the top three strings, which position is that? Depending on what precedes or follows it, you might think of it as *p*-6 with an extension of the other fingers, *a*-1 with an extension of the thumb, or something in between, but it is impossible to define this position precisely. When dealing with ambiguous right-hand positions, just do your best and use the general concept, rather than the specific labels, to guide you. When used as a helpful tool, rather than as an explicit principle, the knowledge of right-hand positions can greatly improve your accuracy and security.

The Metronome

Speaking of tools, the metronome can be either beneficial or detrimental, depending on how it is used. Many players tend to rely on the metronome either too much or too little. Ideally, a balance must be found, one that takes into account both the strengths and weaknesses of metronome practice. Beyond its essential use as an indicator of tempo, the metronome is, of course, most useful in correcting wayward rhythm and inaccurate timing of the fingers. Once those corrections are made, if you keep working with the metronome, your rhythm may become choppy from overaccenting, your phrasing might lose a feeling for the long line, and you may have a hard time finding a sense of rubato. Also, a certain subtle tension will insinuate itself into your playing because of the constant pressure to meet the metronome's exact beat. On the other hand, if you *work with the metronome just long enough to solve the problems of rhythmic and technical inaccuracy, and no longer*, then when you stop the metronome work, you can make a conscious effort to play with fewer accents and think instead of the longer line, while dealing with the nuance of rubato.

Another detriment of metronome practice is the subtle negative psychological effect that it can have. Many of us unconsciously think of the metronome click as a taskmaster that whips us into shape. With each crack of the imagined whip, the notes and rhythms may become more accurate, but the mental and physical tension increases as well. If you instead *think of the metronome as your chamber music partner, trying to align yourself with it in a friendly, nonthreatening way, with the goal of making music,* then the metronome becomes a gentle, helpful collaborator, and your practice and playing become much more relaxed.

Dotted-Rhythm Practice

The number of practice methods in general is seemingly infinite. Limits are set only by a player's imagination. Always cultivate your resourcefulness for inventing new methods. There are, however, two general practice methods that are particularly effective and save a lot of time, though they may seem to be somewhat labor-intensive at first.

> The great composer Virgil Thomson taught me some subtleties about the first of these two methods that I had not considered before. They are very helpful and make a big difference. I share them with you here.

Dotted-rhythm practice is a commonly known method, although it is not always executed in the most productive way. What follows is a detailed approach. First, it is important to mention that this method is only appropriate for passages with notes of equal value—say, all eighth notes or all sixteenth notes. As an example, let's consider a passage of eighth notes repeated in groups of four:

To begin, convert them to dotted rhythms:

The more extremely dotted you play the rhythms, the better. So you might actually play like this:

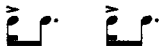
Or even better, you might play this:

The point is to get the short notes as close as possible to the long notes. This develops the speed of your mental and physical reflexes for two notes at a time.

Begin with a very slow tempo. Play the short note as quickly as you can, and make the dotted note a very long note. This allows for a long recovery time between the quick movements required of both hands, which gives you a nice rest after the lightning-fast exchange of the two notes that are close together. Play through an entire passage of even eighths (or sixteenths or thirty-second notes) with

this exaggerated dotted rhythm at the very slow tempo. *Play it at a moderately loud volume, with full confidence.* Do this two or three times for accuracy and to feel very secure with every one of the quick-reflex moments. Be sure not to miss any problem moments. The ones you don't notice are probably the ones that need the most attention, so remain alert! *Then play it through at the same tempo, but soft and relaxed. Do not relax the speed of the dotted rhythm, but rather just relax any tension that might have accrued in learning this rhythm.* Again, play through it this way just a few times, in order to work it in.

Then reverse the dotted rhythms (or their double- or triple-dotted versions):



Be sure that the accent is now on the short note and not the long one. Now the two notes that sound very close together are the two that were far apart before. *Be sure to play the first two notes and the last two notes as quickly in succession as possible,* and allow for plenty of recovery time in between, still in your very slow tempo. Again, *play the passage several times through at this tempo, at a moderately loud volume, and with full confidence. Afterward, repeat the passage several times softly and in a relaxed manner.*

Once both dotted rhythms are mastered at the very slow tempo, play the passage with the original even-note rhythms at a faster tempo. You will see how your reflex response in all cases has been sped up to accommodate the faster overall tempo, and how quickly you will have advanced the speed of the passage and the confidence with which you play it.

When working with a passage that is rhythmically arranged in groups of three, instead of two or four, you need to add one more dotted rhythm pattern. For example, consider a passage of repeated eighth notes in groups of three:

Instead of two dotted rhythm patterns to practice, there are now three, starting with this one:

Then there is this pattern; be sure to accent the sixteenth note:

Finally, play the third pattern:

In this way you ensure that all three notes have the opportunity to be placed as close as possible to their neighbors. *With each dotted rhythm pattern, remember to play the passage moderately loud at first, with full confidence, and then soft and relaxed.* Then return to the original, even-note rhythms at a faster tempo. This practice method, if done carefully, can solve many problems at once and save a lot of practice time.

Right-Hand-Alone practice

The second general practice method is one that has been championed by my colleague, the guitarist Manuel Barrueco. I've added a few thoughts of my own in the following description.

Another effective general practice method is playing a passage of music with the right hand alone. It is effective for virtually any music. Choose a short passage and play through it slowly, so that it becomes familiar. *Then slow down the tempo some more and play it with only the right hand. Take care to use the exact same right-hand fingerings on the exact same strings.* You may need several attempts just to figure out the patterns, the timing of string changes, and the fingering. Go as slowly as you need to go in order to do this accurately and securely. Don't let any small detail elude you! Make sure that you play the passage with right hand alone exactly as you played it with both hands. *When you have worked this out perfectly, listen to the new melody produced by the open strings, along with the rhythms, and learn it.* Singing the open-string notes out loud can be useful. It will help you teach the patterns to your brain and fingers. When you become familiar with the melody and rhythms of the open strings, it is time to add your left hand back. *Slow the passage down a little at first, since now you have to think about both hands at the same time. Then bring the passage up to speed, and you will see how much more securely you play it.* Like the dotted-rhythm practice method, this right-hand-alone method may seem laborious at first, but it can save you a great deal of time.

ORGANIZING YOUR PRACTICE SESSIONS

Practicing is not an art. Art comes from dreams and the unconscious. Practicing is a fine craft that is honed by intelligent, aware, and conscious forethought. If you give your practice careful, mindful consideration, you will excel in this craft and prepare yourself well for the art of performance.

Practicing in "Bite-Size" Sections

The bulk of your practicing should be in small sections. Just how small they are depends on what is bite-size for you. As a general rule, "bite-size" is only as much as you can take in at one time so that you can learn that passage with full understanding and security. The great cellist Yo-Yo Ma said that his father taught him early in life to practice only two measures at a time! The size of your practice section is the territory you set out to conquer. You don't have to be heroic and conquer a large territory each time. It is much more sensible and pleasurable if you set a smaller goal, thereby making the conquest easier and giving you the confidence to move on to the next small territory. The accumulation of small victories adds up to a greater and more secure triumph in the end.

Practice especially the passages that need work. Do not make the mistake of mindlessly practicing the easy parts again and again. This is a waste of time and numbs your attention to detail. It is best to focus on the passages where there are problems to be worked out, so that you can bring them up to the level of the easier passages. This will even out the level of overall difficulty, making the entire piece feel less like a minefield and more like a friend.

Reserve run-throughs of the movement or piece you are working on for the end of the practice session. Many players have the bad habit of running through the piece over and over again, and this occupies most of their practice time. This quickly deteriorates into practicing on automatic pilot, which should never take up the majority of your practice time. In automatic pilot practice, problems don't get solved, and objective listening doesn't take place. It does, however, serve a function toward the end of a practice session, when you might wish to summarize all that you have learned and see how much of it "sticks." Playing on automatic pilot can also give you a sense of the bigger issues of overall flow and interpretation. This is a version of soul work, which, as discussed above, should occupy only a small percentage of your practice time. The majority of your practice needs to be analytical work, done in small sections.

Variety

> The older I get, the more I realize that new ideas for practicing are limitless. Each new piece brings with it new challenges, and the same can be true of familiar pieces as well, as long as I can stay aware and open. Thus there is no end to finding fresh and ever better ways of practicing.

To tweak an old adage, "Variety is the spice of practice." If you practice the same way all the time, you are preparing yourself for boring, lifeless playing. Nowhere is this more evident than in the decision of where to begin a practice section. When you break a piece down into small chunks, do you always begin them in the same places? Are those places always at the beginning of a musical idea or section? Are they always at the beginning of a phrase? If your answer to any of these questions is yes, please consider adding more variety to your practice.

When working on a passage, try starting in a new place, maybe every other time you play it. If, for example, after playing through it once or twice, you have solved a couple of problems at the beginning of the passage, next time start in a spot somewhere after those problems. Don't get stuck in one place. Keep moving forward in the piece.

Transitions are very important. In order to practice them, *begin at the end of one section and practice the transition to the new one.* This way, you don't get caged into sections but, rather, develop the freedom to move easily between them.

Don't always start a practice section at the beginning of a phrase—try starting somewhere in the middle instead. If the passage you are working on has a musical problem (such as dynamic clarification), then by all means begin at the beginning of the phrase. But if what you are working on is not a musical problem but a technical one, then try to think more mechanically and begin somewhere in the middle of a phrase, maybe even off the beat or in the middle of a measure. The more you work this way, the better you know the piece from every angle. This also gives you the experience of starting in odd places, which can come in handy in case you ever have a memory or concentration lapse in performance. You won't always have to return to the beginning of a major section to resume because you are familiar with starting in odd places.

Practicing Backward

Another useful way to vary your routine is to *practice backward.* For example, you might choose to first practice the last eight measures of a piece (eight being an arbitrary number in this case). When you have mastered them, move back to the previous eight measures. Master them and move back to the previous eight measures, and then the previous eight measures. Then perhaps it is time to play through all thirty-two measures from their beginning to the end. Once you have a comfortable sense of flow for this large section, you can begin a new section, starting with the previous eight

measures and so on, until you have completed a new section of thirty-two measures, which you can then play through in its entirety. Work backward in this fashion until you reach the beginning of the piece. In this way, when you run through each individual section as well as the entire piece, *you are always going toward something familiar.* When you practice this way, everything feels lighter and easier, less like trudging uphill and more like gliding downhill.

Organizing Your Practice Day

How many hours a day do you practice? If you practice eight hours per day, you are practicing too much. Playing an instrument is an athletic activity, and eight hours of it is unhealthy for the body. If you practice intelligently, with conscious care and attention, you can get a lot done in just a few hours. A lot can even be accomplished with only one hour of practice, if it is done intelligently. Everyone is different, with varying speeds of learning and amounts of time needed for reinforcement of what has been learned.

> Six hours in a day would be my personal maximum. That would only occur if I were practicing intensely to prepare for a competition or on short notice for a concert. Normally, for me, two to four hours is generally sufficient and productive.

For everyone there is a point at which repetition and reinforcement overstay their welcome and begin to have a reverse, negative effect on progress. It is important for each individual to learn where that point is and not to go beyond it; in other words, how much repetition is enough for you to assimilate it and how much beyond that is wasted time and effort.

Another common source of inefficiency is encountering a problem and trying to solve it by simply playing it over and over again. A more productive procedure would be to *stop and think about what the problem is and how to solve it, perhaps using the where-what-how method described earlier or some other way, and then proceed to play the passage in context, reinforcing the correction.* Once you understand these issues, you can trim the waste from your practice time, making it more efficient and thereby exerting less physical effort and, at the same time, being kinder to your body.

How much time do you spend warming up? This is a highly personal and individual matter. Some, like Segovia, need two hours of scales and other exercises to feel sufficiently warmed up for the day. Others, like me, need

about five minutes. Most people fall somewhere in between. There is no value judgment whatsoever on the length of time you take to warm up. *You must take whatever time you need for your fingers, body, and brain to feel limber and focused and to establish your sense of tone, accuracy, and rhythm.* However much time that is, on any given day, be sure to take it (never short-change it!), so that you establish a solid foundation for the day's practice.

How long do you practice in one sitting? Both the body and the brain withstand quite a bit of exertion when we practice. Playing an instrument is an athletic activity that gives a workout to the large and small muscles of the hands, arms, and torso, as well as the heart. It also intensely engages the brain, which makes hundreds of calculations every minute, if not more, just to read, play, and interpret the notes. This can all be rather taxing and doesn't even account for the energy of processing the emotional response to the music. Given this amount of effort, *it is extremely important for the body and brain to rest at frequent intervals.* The longer you practice in a day, the more rest you need between your practice sessions.

So when do you need to rest? Knowing the limits of excellent mental concentration and focus is a good beginning. *Most people cannot and should not go beyond one hour of practice at a time.* Sixty minutes is a lot. Your attention span may not be that long. Again, there is no judgment here. If forty-five minutes suits you better, or even twenty minutes, then make that the limit of your practice session. Be kind to your brain and your body by not overworking them. *Only practice for as long as you can focus clearly on what you are doing. The moment your concentration becomes fuzzy is the moment you need to take a break.* If you practice for as long as sixty or even forty-five minutes, it is advisable to take a brief break in the middle. Getting up to stretch or get a glass of water is enough to reset the body and the brain for a little while and can be a well-advised part of your practice routine. There is also a lot to be said for just staring out the window for a few minutes in order to counterbalance the close-up intensity of looking at a score or at your instrument.

How do you organize each individual practice session? *Making a general plan and setting specific goals for the session is a good idea.* You don't have to adhere to it too strictly, but just the act of making a general plan helps focus your work and increase your productivity. Consider questions like the following: What piece or movement will I cover? Do I plan to cover all of it or just a certain section or number of sections? Will I do both soul work and analytical work, or just analytical work? What kind of specific analytical work do I expect to do? As you proceed with practicing, you might change your mind about some of the answers to your questions along the way, you may discover new pathways, you may not get as far as you expected, or you

may go even further than you expected. *Begin your practice session with a realistic plan, but one that is not set in stone, and then be open to change, discovery, and invention as you proceed.*

How do you spread out your practice sessions during the day? *If you practice for an hour and wish to do another hour, it is absolutely essential to take a break of at least ten minutes.* Your body and brain need a minimum of that much time to recuperate from the intense work of the previous hour. *Practicing more than two hours back-to-back, even with breaks, is a very poor idea.* The law of diminishing returns becomes self-evident—productivity decreases, and the body and brain tire to a potential point of damage. *It is much wiser to spread out your practice sessions throughout the day.* For example, if you want to practice four hours in a day, one scenario might be to practice in two hour-long sessions in the morning (separated, of course, by a good break) and then one hour in the late afternoon and one in the evening. Or, if your concentration and energy are stronger in the evening, then try one hour in the morning, one in the afternoon, and two in the evening, with a break.

Practicing close to bedtime is never advisable. Because of the physical and mental exertion required for practicing, you need enough time to relax and wind down before settling into sleep. Give yourself at least an hour of down time before going to bed.

Finally, *try to have at least one practice session in the morning.* Whether you consider yourself a "morning person" or an "evening person," you will find, like most people, that getting your practice started early in the day establishes a solid foundation of concentration and work orientation for the entire day.

The Importance of Stretching

Like everyone else, no matter how well I have been working, I accumulate tension in my body during a practice session. My upper and lower back seem to bear the brunt of this activity. Over the years I have come to understand that playing an instrument is a kind of athletic activity. Like any athlete, we need to stretch in order to prevent our bodies from holding the accumulated tension.

After every practice session, do some sort of stretching exercise. While the hands and fingers may benefit a little bit from stretching, it is much more important to stretch the larger muscles. There are a number of stretches you can do. Here are two suggestions.

Stand up straight, with your feet a little further than hip-width apart and with knees straight. Bend down from the waist, falling as far as is comfortable, dangling your arms freely and continuing to keep your knees straight. Loosen your head as it dangles there along with your arms. Feel your lower back and the traction of your spine opening up, and relax into it. Breathe fully and calmly from the diaphragm, as described in Chapter 2. As you breathe, you might gradually increase the stretch, falling lower and closer to the ground. Don't force it; let it happen naturally. When you are falling about as far as you'll go—you may be touching the ground at this point, or you may not—swing over a couple of inches to the left for a few moments. Next, swing over a couple of inches to the right of center for a few moments. Then come back to center. Hang down for a little while longer, if you like, while paying attention to your breathing. Also be aware of the feelings in your spine and lower back. Then come back up slowly, controlling the upward motion from the middle of your body. Keep your chin tucked in, close to your chest, and let your head come up last, until you come to a fully upright position. *This stretch opens up your lower back, which tends to get significantly compressed or stressed when you sit practicing for long periods of time.*

The second suggested stretch is a simplified version of the basic yoga pose Tadasana, or Mountain Pose. First, stand with your feet hip-width apart, and balance yourself on the four corners of both feet (the base of the big toe, the base of the little toe, the inner heel and the outer heel). Drop your sacrum down and lift your sternum up, so as to lengthen your spine, as described for the sitting position in Chapter 1. Then release any excess tension and correct any backward tilt of the head. Tuck your tailbone all the way in, then stick the tailbone all the way out, and finally let the tailbone come to rest about halfway between the two extremes, letting it hang naturally. (Once you get familiar with the proper tailbone placement, you can go straight there without going to the extremes.) Very gently lift the middle of the top of your head straight up, without tensing your neck, keeping your chin parallel to the ground. Supinate both arms, so that your palms are facing out, and bring your arms a little away from your torso. Your shoulder joints are now open. Do not lift your shoulders. You may take the supination a little further, if you like, so that your palms are almost facing to the side. As you supinate further, be aware of drawing your shoulder blades, especially the bottoms of the blades, in toward your back (but not toward each other), and then gently release them downward. Now relax the pose so that everything feels less extreme. Enjoy this pose for at least a minute, maybe for a few minutes. Enjoy the relaxation and ease of your breathing. *This stretch brings you out of any hunching that you might have done during practice and renews a sense of openness throughout the entire body.*

Another Way to Release Tension

I have also found that stretching alone isn't always enough to alleviate the build-up of tension. There are many different kinds of tension that can accumulate—the pressure of deadlines, a limited amount of time available in my schedule, the emails I need to write, my next appointment, and so on. What I have found is that letting go of all that for a little while is the best way to renew my energy. Here is one simple way to accomplish that.

Lie down on the floor, preferably on a soft or carpeted surface, with feet and hands outstretched. (A bed will do, but it is not as conducive to conscious awareness as is the floor.) You might wish to do this resting exercise with a partner for the first time, so that he or she can read the following instructions to you, giving you time to get comfortable with each one. Your arms can be at a comfortable distance from your torso, which opens up your chest a bit, and the palms of your hands should be facing up, to open up your shoulder joints. Your feet might want to fall to the side, and if so, let that happen. Pull your sacrum away from your spine, so that it lies flat against the floor, while maintaining a curve in your lumbar spine. First, focus on your breath, and allow yourself to breathe naturally and easily. Then, slowly scan your body, starting with your toes and working up to your head, like this: Relax the toes and release any tension that is there. Then relax the feet, first the tops and then the bottoms. Relax the ankles and then the calves and shins. Let go of any tension you might be holding in the knees and then the top of the thighs and the back of the thighs. Relax the pelvic area and soften the abdominal muscles and the muscles in the back around the lumbar region, letting them fall toward the floor. Soften the ribcage and the pectoral muscles around the ribcage. Relax the upper back and let it fall toward the floor. Release any tension you feel in your shoulders. Let your arms fall into the floor, releasing any tension you feel in the mid-arm, elbow, forearm, wrist, palm, and fingers. Relax and soften all the muscles of the neck. Release your jaw. Release all tension in your face, including your mouth, cheeks, forehead, eyebrows, and eyes. And finally, relax the top of your head. Enjoy this fully relaxed state for a few minutes. When ready, roll over onto your side, gently push yourself up with your hands, and come back up to standing.

If you don't rush through this and do it in a conscious manner, you will feel completely refreshed afterwards. It is a remarkably quick and effective way of releasing both physical and mental tension. I recommend that you make time to do it at least once a day. You might do it right after one of the stretching exercises or just by itself, sometime during a practice break. *The few minutes that it takes will add a lot more focused concentration to your available practice time and will help prevent fatigue at the end of the day.*

Mental Practice

Mental practice is very effective.[2] Practicing in your mind without the guitar can be an efficient, clarifying way of preparing you for practice with the guitar. There are many ways of doing this. Be inventive and create a few. Here are some examples.

Read through the score and hear it in your mind's ear.

Read through the score at an extremely slow tempo, and imagine what your left and right hands are doing at every moment, perhaps one at a time at first, and then together.

Hear the score in your mind's ear, without the music, and imagine what your left hand is doing at every moment. (This can also be a good method of memorization.) Then perhaps go through the score again, and picture what your right hand is doing. Then visualize both hands together. Imagining the right hand alone or both hands together may prove to be too complex a task, but just imagining the left hand alone is very helpful.

You will be amazed at how much effective practice you can do without your instrument in hand! *Mental practice not only brings to your attention musical and technical aspects that you might have missed otherwise, but it also enables you to practice while giving your body a rest.*

2. Many scientific studies have been done about mental practice. Some examples may be found in these journal articles: Nicolò Francesco Bernardi, Alexander Schories, Hans-Christian Jabusch, Barbara Colombo, and Eckart Altenmüller, "Mental Practice in Music Memorization: An Ecological-Empirical Study," *Music Perception* 30, no. 3 (February 1, 2013): 275; and Magdalena Ietswaart, Andrew J. Butler, Philip L. Jackson, and Martin G. Edwards, "Editorial: Mental Practice: Clinical and Experimental Research in Imagery and Action Observation," *Frontiers in Human Neuroscience* (October 15, 2015): 573.

When to Let Go

As we age, it can become increasingly natural and desirable to learn to let things go. I wish I'd had more of this perspective when I was younger. It is an approach to life that can be applied directly to music making, with great benefit. And you don't have to be old to do it!

A true sign of wisdom in practicing is knowing when to put a piece aside. Because we are afraid that we haven't learned a piece well enough, most of us tend to be afraid to let it go for a while. But there is a limit to how long we can work on a piece before the work begins to rigidify and the assets of practice turn into deficits. In order to know when this turning point occurs, you must remain conscious of how the piece is sounding and feeling. Ask yourself from time to time: Could this be a time to put the piece away for a while? Doing so early in the learning process is sometimes a good idea when, for example, you have the fingerings ingrained in your fingers and your brain. Try it. Put it away and work on something else for a few days. Then come back to the first piece, doing a little soul work at first. You will almost certainly discover that, after playing through it a couple of times, your playing of the piece has improved since you last played it. The fingerings and musical concepts that you developed before your break will somehow have settled in, without your working on it, and everything will feel easier. You may also have fresh ideas about the music. *When you put a piece away for a time, your mind and body somehow have the inclination and ability to keep working on whatever you've been practicing, without your being aware of it and without any conscious effort.*

The revelation here is that you can actually improve your playing without practicing at all. You simply let the piece simmer on the back burner, like cooking rice. First, bring it to a boil, the time when you're ready to put the piece aside (knowing when that boiling point occurs is half the challenge). Then let it simmer for a while (the period of not playing the piece). The difference between cooking rice and practicing is that, with practicing, you have to keep going back and forth between boiling and simmering, over and over again, before it's done. When a player lets the boiling go on for too long, the music becomes a very dry thing indeed. Letting the piece go for a while is a healthy, restorative aspect of practicing.

Record Yourself

I almost never feel that I can give enough practice performances. Even when I am able to run through a program for private audiences or friends several times before a public performance, I rarely feel well-enough prepared. When I discovered that performing for a recording device is almost as good as performing for people, this feeling changed. Now, recording myself has become a regular part of my preparation for any concert.

Once you are quite well advanced in the process of learning a piece, one of the best ways of getting to the next level is to record yourself. You are, after all, one of your toughest critics, and a recording is the equivalent of a blatantly honest mirror. Difficult as it may be, you can listen to yourself on a recording more objectively, with all the blemishes more readily apparent. Then you can fix the problems with clarity. The key to this process is doing it in the most effective manner. I suggest the following process.

Work on only one movement or piece at a time. *Make a recording of the piece without stopping, as if you are giving a live performance.* Even if you have a technical problem or a lapse in memory or concentration, or even if you just hate the way you are playing, keep going, just as you would in a concert.

When finished, you can either choose to listen to the recording immediately or wait a while, perhaps an hour or a day. When you listen to the recording, have the music in front of you. *Make mental notes only. Do not write down any markings or comments.* If you do, as the recording continues, your attention will be unfocused, and you will undoubtedly miss other problems. Don't worry about forgetting details. You will remember all the issues you hear because your brain has an enormous capacity for retaining detailed information. You can trust it. Listen for technical errors, phrasing, dynamics, and other musical choices, and mentally note any places where you had to stop for technical reasons or where you had concentration or memory lapses.

When you are done, put the music in front of you, take your instrument in hand, and play the piece from beginning to end, correcting all the mistakes or solving all the problems, one by one. *Take the time you need to make corrections thoroughly.* If you have memorized the piece, the next step is to put the score aside and play the piece again, from beginning to end, reinforcing all your corrections and solutions, without the score. If the piece is not memorized, simply run through the piece again and reinforce

what you've changed with the music still in front of you. The first time you use this recording process it may be a bit unpleasant and exhausting, as there will no doubt be many problems to fix. *Try not to be upset with yourself. Instead, be calm and patient.*

Work for two or three days on what you have learned from your first recording session. Then make a second recording, and go through the exact same process. It will probably be quite a bit easier and maybe even be a little more fun. In fact, the more you work with this process, the easier it gets. Work on the insights gleaned from this recording session for another two to three days, and repeat. By the third recording, you may be having a great time because you are probably starting to sound much more as you intended from the start, and perhaps even better. Repeat this process as many times as you like, but *remember to put the piece away when it gets stale and start fresh later.* Putting the piece aside after, say, two or three recordings might be healthy. You will see how much progress you make when you record yourself this way. Recording is one of your most effective practice techniques.

Listen

And now, the simplest and best advice about practicing: *Always listen!* It is easy to get so caught up with the technical and physical aspects of playing that the music itself can be neglected. Remember that technique is only a means to an end—the expression of music. No matter how much technical and physical work you do, you must ultimately return to questions like the following: How does it sound? Is it expressive? Am I being true to the details of the musical gestures? Am I conveying the overall atmosphere and character and underlying meaning of the piece? The only way to answer such questions is to listen. And when you listen carefully, you get closer to the core of the music—its soul.

The Importance of Exercise and Rest

Finally, it bears repeating that playing an instrument is an athletic activity. It makes our heart pump harder, it moves our fingers, hands, and arms with remarkable frequency at sometimes astonishing rates of speed, and it gives our bodies quite a workout. Usually, this all occurs while seated, so the athleticism is subtle. Because our athletic activity is generally done while sitting, and because it greatly involves the smaller muscles, it is

important to get the rest of the body moving and to exercise the largest muscles. No athlete would do what he or she does without keeping in good overall shape and supporting it with other exercise. A musician is no different. *Seek out exercise that suits you, feels good, and doesn't injure your body.* There are many options; brisk walking, running, swimming, bicycling, weightlifting, competitive sports, yoga, and tai chi are but a few. *Each of them has physical risks with which you need to be well acquainted in order to avoid injury.* Swimming, yoga, and tai chi are particularly beneficial because they exercise the entire body and involve less risk of injury than do some of the others. Whichever you choose, make exercise a regular part of your routine, so that everything you do in the practice room can be supported with a healthy body, mind, and spirit.

At the same time, *do not underestimate the importance of resting.* Just as putting a piece aside for a while is a desirable part of your practice, putting your instrument away for a while is also beneficial. Sometimes, players are reluctant to take a break from their instrument because they are afraid they will get out of shape or lose the thread of progress they have made. On the contrary, when you take a vacation from your instrument, your body, mind, and spirit restore themselves. When you return to playing, you come back refreshed and with more energy. You can take several days, a week, or several weeks. Take as much as you need or think you can afford. Even if you take several weeks off, it will only take you a few days to spring back to your normal playing level. Taking breaks in this manner will make you a much healthier player, relax your practicing overall, and prolong your playing life.

CHAPTER 7

Preparing for a Concert

Students often ask me how I prepare for a performance as the concert date draws near. There are many different ways to answer this question. I have found that there are all kinds of poor choices I might make in the weeks and days before the concert, as well as the day of the concert, that can sabotage the progress I have made in previous practice. I know that I am not alone in this! Taking advantage of my own negative experiences, I can offer you some positive bits of general advice. Naturally, what you do to prepare for a concert may be completely different from what I do. It is a very personal matter. However, in accordance with the theme of this book, there are certainly many ways of instilling ease into your preparations.

As your performance date nears, the benefits of all the relaxed and effective practice you have done can fly out the window if you are anxious and tense. It would be ideal if you could maintain the same sense of ease you have worked to achieve all along. In fact, you may actually be able to make it even easier as you approach the date of your performance. *If you consciously decide to let the weeks, hours, and moments before a concert be calm, confident, and measured, then you can have the same qualities in your performance.* Following are some ways of achieving this end.

A FEW WEEKS BEFORE THE CONCERT

Many guitarists who prepare a full concert program make the mistake of practicing all of that repertoire all of the time in the months leading up to

the concert. They are worried that if they don't, the work they have done on the pieces will be lost or that it will take too much time to recover it. This is simply not true. Remember the wisdom of putting a piece aside. Even after a long period of not playing it, it will only take a few run-throughs to bring it back to the level at which you left it, and then beyond. It is wiser to *work on individual movements or pieces and master each of them as you proceed, returning to them one at a time, when you are ready to perfect them further.* You can group the individual movements of a piece together or juxtapose two different pieces later, when you are at a very advanced stage of learning your concert program.

About three weeks before the concert, you might start putting several pieces together, in program order, as well as playing through an entire half of the program. As of two weeks or so before the concert, you might play through the entire program every day, or every other day, to get a sense of the endurance required, gauge the musical and emotional flow, and get a feel for the overall architecture of your program. *At this stage, you should listen less for details than for the Big Picture.* You have already done a good deal of analytical work. Now is the time to relax your grip on the fine points, take them more for granted, and allow the program to breathe and be alive. As a student in school you might be able to cram for an exam, squeezing most of your study into one sleepless night, but as a performer, this is hardly possible and certainly not ideal. You don't want to crash into the concert. On the contrary, you want to coast into it. Not speedboating, but sailing. Not uphill plodding, but downhill sledding. In other words, *the closer your performance is, the more you want your program to feel easy and free.*

Don't make the mistake of letting the concert performance be the first time you play through the program for other people. *Practice playing parts of the program, as well as the whole program, for friends or colleagues in informal settings.* There are many potential distractions that can occur while performing for others, from physical movements and sounds they make to internal thoughts you might have, as well as noises outside the room. Playing for other people will bring out some of these challenges, and by experiencing and reacting to them, you will be better prepared for them. You might even wish to encourage your practice audience to not sit still while listening but, rather, to move freely and even to make noise sometimes. It is a rare audience that sits completely still for an entire performance anyway, so you might as well be prepared for this. It may be somewhat difficult at first, but *the more you play for others, the easier it will be.* There is no substitute for playing for a live audience, but if it is just not possible to arrange these practice performances before a concert, then record yourself playing the whole program a few times. Performing for your most critical listener, yourself, will make performing for an audience easier.

THE DAY OF THE CONCERT

Every individual is different. What you do on the day of your performance is a personal matter, with as many variations as there are players. However, there are probably a few things you don't want to do. *It is not a good idea to overpractice.* Playing each piece on the program more than once is probably too much. This will only make you self-conscious, and *self-consciousness is the enemy of a good performance.*

Try not to think of the day as particularly special. Rather, think of it as a day like any other, which in fact, in the larger scheme of things, it is. The only way it might be different is that you need to save your energy for the concert and take it as easy as you can for the rest of the day. For this reason, you don't want to be overactive and exert a lot of unnecessary physical energy. *Conserve your energy.*

Some players do not practice at all on the day of a concert, other than warming up. If you are extremely confident in your preparation and in yourself as a performer in general, this may be a good thing to try. You are thoroughly prepared for this concert and nothing you do, or don't do, on the day of the concert is going to change that. So decide to *trust yourself* implicitly. For some people, especially those with a strong sense of self-confidence and self-esteem, this approach works very well. For others, it may not work as well. You might want to experiment to see what is right for you. I would not, however, recommend running through the program in your head, as some do. In my opinion, this tends to make you self-conscious. It is too much mental processing on a day when it is best to nurture your intuitive side. If you try not practicing on the concert day, it is best to go all the way and trust both your preparation and your spontaneity.

WHAT I DO ON THE DAY OF A CONCERT

You might find it interesting or helpful to know what I do on a concert day. Of course, this is an example of only one individual's approach. It may be completely different than what you need, but perhaps there are certain aspects of it that you may wish to incorporate in your own way. So here is my typical concert-day plan.

I practice for about an hour in the morning and a bit less than an hour in the late afternoon, running through the whole program, not necessarily in order, during that time. Sometimes I run through the program backward, beginning with the last piece and ending with the opener. *I choose one of three options: play very slowly and softly, play very slowly but with*

normal dynamics, or play up to tempo but very softly and with little expression. I prefer to save the expression and total involvement for the actual performance. If there are any very slow movements in the program, I might take them at a faster tempo. *I try to play everything differently than I will in concert, so that the concert performance feels fresh.* When practicing very softly or with little expression, I imagine what the dynamics and expression will be when I play the concert later. I try to do this with a minimum of mental effort.

When I take a break from practice, say, during the morning or right after lunch, *I like to go for a brisk walk or do something physically active to get everything in my body circulating and flowing.* Because I have somewhat limited energy for social engagement in general, I try to keep social interaction to a minimum, conserving that energy for the concert and social activities afterward. Someone more gregarious than I might wish to have more social interaction so as to keep from feeling too static and introverted. Everyone is different. Know what it is that you need.

In the early-to-mid-afternoon, I usually take a nap, if possible. I allow two hours for this—a half-hour to get sleepy and an hour and a half to complete a natural sleep cycle. Sometimes I'm not sleepy enough for a nap, in which case I'll read a book or watch television in bed. If I do this, I try to keep my body in a sleep state, my mind as disengaged as it can be, so that at least I have something approaching a true nap. This is an essential part of my concert day because *the nap helps me feel renewed energy for the concert, as well as for greeting the audience and any other post-concert social activities.*

Knowing when to have my pre-concert meal and what to eat are extremely important issues for me, as I am somewhat hypoglycemic. Because of this, I need to have some form of meat or fish at both lunch and dinner to give me enough fuel for the rest of the day. In addition, before a concert, it is not advisable (for me or for anyone) to eat too much carbohydrate such as bread, rice, potato, or pasta, as these can overwhelm the energy benefits of the protein. On the other hand, I don't want to entirely eliminate carbohydrate from my meal, as it is fuel for the brain. Many people are hypoglycemic and do not know it. *If you feel mentally foggy or irritable or low-spirited before eating a meal, or in general, you might experiment to see if eating more meat or fish protein and/or cutting down on carbohydrate intake affects you.* If you are a vegetarian, eating meat or fish may not be an option for you. However, the combination of not eating enough meat or fish and eating too much carbohydrate can be disastrous for someone like me and create many problems in performance such as memory lapses, low energy, or an overall bad mood.

The timing of the meal is also important for me. If I eat too close in time to the concert, my stomach will still be digesting the meal, and my body and brain will feel a bit sluggish. So I try, when possible, to eat about three hours before a concert, which is enough time for the meal to be digested but not enough time for the "fuel" to be depleted. If you are not hypoglycemic, you need not worry about all these details, but if you are, they could make a big difference in the success of your performance.

AT THE CONCERT HALL

Every concert situation is different. There is often some unusual or surprising situation that you must handle. The backstage area might be too cold or too hot, there may be no backstage area at all, or the dressing room might be very far from the stage. *Be prepared for and open to anything different than what you expect.* In fact, expect the worst, so that anything better will be a delightful surprise!

The most important preparation you have to do before the concert has to do with the stage and the concert hall. There are four simple necessities you must always consider: the chair, the lighting, the acoustics, and the space in general.

Find the right chair first. As discussed in Chapter 1, it should have a seat that is flat and parallel to the ground, and the height needs to be such that your thigh is more-or-less parallel to the ground. If you don't find the best chair possible, then much of the good work you have done on alignment, and all the positive effects from that work, may be lost.

Check the lighting to see that you can see your instrument clearly when your body is properly aligned, as well as when you move around. Make sure you can see clearly when you play high up on the fingerboard, as well as in the lower positions. Poor lighting can easily throw you off guard and interfere with your concentration, so be sure that it is the best it can be.

Listen to the acoustics. This is obvious, but you might try doing it this way: play staccato notes, perhaps each note on the fingerboard, from the lowest note to the highest, slowly enough to be able to listen to the reverberation of every note in the hall. In this way, you can "hear the room." Does the sound die quickly, or does the note reverberate for a while, and if so, for how long? What is the quality of the sound in the room, as opposed to what you hear at the instrument?

Get physically and psychically familiar with the concert space. While playing, look around the room a bit and get a feel for each part of the room. Get a feeling for the space immediately around you. The great guitarist

Roland Dyens liked to spend many hours in the concert hall before performing so that he could become completely familiar with the space and make it his friend. You may or may not wish to go to this extreme, but you need to find some degree of comfort in the space before the audience is invited into the hall.

All the same things apply when you make a professional recording or a video. Consider the same four simple necessities in order to make yourself comfortable in the recording space physically, mentally, and acoustically.

BACKSTAGE

When you spend time backstage before a concert, *create a relaxed environment for yourself.* Don't overpractice. Rather, practice just enough to feel secure and confident. Do some body stretches, if you like, or meditate. Read a book, check your email, or, if it makes you comfortable, talk to people backstage. Know what you need or like to do to feel relaxed, easy, and confident. Often, the excitement of the upcoming performance can turn into a surge of adrenaline. While it helps give your playing a kind of excitement and emotional presence, adrenaline in excess is not helpful. The great cellist Janos Starker used to advise his students to "be exciting, not excited." Breathing exercises can be effective in counteracting excessive adrenaline. The breathing method described in Chapter 2 is one such exercise. If you can stay mindful of your breathing for several minutes, until you are breathing completely naturally, without any artificial help or strain, you will feel much calmer. Finally, you might wish to focus your concentration and avoid performance anxiety by thinking about the six golden rules that follow.

SIX GOLDEN RULES

Performance anxiety affects almost everyone, from the rank beginner to the most seasoned professional. Even one of the greatest cellists of all time, Pablo Casals, had severe stage fright, so much so that he sometimes asked to be pushed out onto the stage! Throughout my life, I have certainly had my share of it. There have been times when it seemed so overwhelming that I questioned whether I should continue performing. During such moments of darkness, there was little to console me, but in the more positive light of day, when I was able to think more objectively, I came to realize that there are, in fact, many ways to help overcome this problem. A lot of books have been written on the

subject,[1] and there are many online articles as well. Some years ago I compiled a list of "Six Golden Rules," the result of a combination of anti-anxiety methods I had learned from others and my own thoughts on the subject. They have helped me and many other people. Perhaps you will find them useful, too.

Performance anxiety can begin so innocently. First you notice someone in the front row tapping his feet. You wonder to yourself whether you're really maintaining a steady beat. Then someone else whispers something to her neighbor, and you worry that perhaps your hair is disheveled or your tie is crooked, or maybe you're making those funny grimaces again that you thought you'd conquered. Worse yet, they are probably discussing how strange or inauthentic your interpretation is, or they are commenting on how many notes you are missing (you are missing a lot by now). Oh, your teacher is really going to yell at you. And your girlfriend or boyfriend is going to be very disappointed. Your students aren't going to know what to say to you because this is going so badly. Your hands are shaking or sweaty or cold. Maybe you're not cut out for this stuff after all. . . . Sound familiar? Believe me, you're not alone. It is truly remarkable what paranoia most of us generate during performance in order to defeat ourselves.

It all begins when our minds wander. Some distraction, usually minor, occurs, and we become less and less able to concentrate. The results are nervousness, memory lapses, technical errors, and general discomfort with and, ultimately, fear of performing. The whole mess can often be avoided quite simply by thinking a few essential thoughts before going on stage. A few years ago, after experiencing a string of unpleasant performances much like the description above, I did a lot of soul-searching about what kinds of thoughts and feelings were distracting me in performance and what advice I could give myself to counteract them. The result was this list of six golden rules that summarize issues crucial to successful concentration in performance.

I meditate on these a few minutes before going on stage. Ever since the beginning of this practice, I have had fewer concentration lapses in concert and have found performing to be far more fun and satisfying than ever. In addition, my students and all those with whom I have shared these ideas have had similar benefits and have been astonished at how quickly their performance anxiety dissolved.

1. One recommended example is Don Greene, *Performance Success: Performing Your Best under Pressure* (New York: Routledge, 2002).

Golden Rule One

Before performing, you must first *remind yourself that you have practiced to the best of your ability.* You have used your practicing skills in the most effective way you know at this time. True, your playing can always be better, but given all the circumstances that have led to this moment, you have, in fact, done your best.

The time to practice has passed. Instead, you are going to use your "Automatic Pilot," which you have been training in the course of your practice sessions. The Automatic Pilot (AP) is at work, for example, as you learn the fingering for a piece. When you repeat and reinforce the new patterns, the AP retains them, so that when you go on to practicing, say, dynamics, you don't have to think too hard about the fingering.

The most comforting aspect of the AP is that it works all by itself. It is, indeed, automatic. So when it is time for you to perform, all you need to do is *trust your AP to do most of your work for you.* No effort or thought is required to bring back all that you have practiced. It will be there for you. It is your best friend.

Golden Rule Two

Do not judge what just happened or is about to happen. Self-judgment during a performance is futile because it takes you out of the present, into the past or future, and destroys the natural flow of your thoughts and physical actions. Whether the judgment is positive or negative does not matter. It introduces a verbal aspect into an activity that is most successful when it is done in the nonverbal mode. Music is not a language of words; it is a language of gestures. *When you perform music, it is best to think and communicate in nonverbal, nonjudgmental terms.* In this way, you can preserve the music's purity, as well as its magic. Besides, your judgment of your own playing during a performance is not always accurate. When a performance of mine has been recorded, I am often surprised how good my playing sounds in places where I thought I played poorly, and vice versa. It is best to reserve judgment for after the performance, preferably after you have listened to other people's reactions.

Rather than judge your playing, simply *observe it without verbal description, and motivate your intentions.* For example, when you are about to make a crescendo, have the intention of making a crescendo and then feel it as you are doing it. There is nothing verbal about this process. You are, rather, putting intention into action—that is, motivating your intentions. When

subject,[1] and there are many online articles as well. Some years ago I compiled a list of "Six Golden Rules," the result of a combination of anti-anxiety methods I had learned from others and my own thoughts on the subject. They have helped me and many other people. Perhaps you will find them useful, too.

Performance anxiety can begin so innocently. First you notice someone in the front row tapping his feet. You wonder to yourself whether you're really maintaining a steady beat. Then someone else whispers something to her neighbor, and you worry that perhaps your hair is disheveled or your tie is crooked, or maybe you're making those funny grimaces again that you thought you'd conquered. Worse yet, they are probably discussing how strange or inauthentic your interpretation is, or they are commenting on how many notes you are missing (you are missing a lot by now). Oh, your teacher is really going to yell at you. And your girlfriend or boyfriend is going to be very disappointed. Your students aren't going to know what to say to you because this is going so badly. Your hands are shaking or sweaty or cold. Maybe you're not cut out for this stuff after all. . . . Sound familiar? Believe me, you're not alone. It is truly remarkable what paranoia most of us generate during performance in order to defeat ourselves.

It all begins when our minds wander. Some distraction, usually minor, occurs, and we become less and less able to concentrate. The results are nervousness, memory lapses, technical errors, and general discomfort with and, ultimately, fear of performing. The whole mess can often be avoided quite simply by thinking a few essential thoughts before going on stage. A few years ago, after experiencing a string of unpleasant performances much like the description above, I did a lot of soul-searching about what kinds of thoughts and feelings were distracting me in performance and what advice I could give myself to counteract them. The result was this list of six golden rules that summarize issues crucial to successful concentration in performance.

I meditate on these a few minutes before going on stage. Ever since the beginning of this practice, I have had fewer concentration lapses in concert and have found performing to be far more fun and satisfying than ever. In addition, my students and all those with whom I have shared these ideas have had similar benefits and have been astonished at how quickly their performance anxiety dissolved.

1. One recommended example is Don Greene, *Performance Success: Performing Your Best under Pressure* (New York: Routledge, 2002).

Golden Rule One

Before performing, you must first *remind yourself that you have practiced to the best of your ability.* You have used your practicing skills in the most effective way you know at this time. True, your playing can always be better, but given all the circumstances that have led to this moment, you have, in fact, done your best.

The time to practice has passed. Instead, you are going to use your "Automatic Pilot," which you have been training in the course of your practice sessions. The Automatic Pilot (AP) is at work, for example, as you learn the fingering for a piece. When you repeat and reinforce the new patterns, the AP retains them, so that when you go on to practicing, say, dynamics, you don't have to think too hard about the fingering.

The most comforting aspect of the AP is that it works all by itself. It is, indeed, automatic. So when it is time for you to perform, all you need to do is *trust your AP to do most of your work for you.* No effort or thought is required to bring back all that you have practiced. It will be there for you. It is your best friend.

Golden Rule Two

Do not judge what just happened or is about to happen. Self-judgment during a performance is futile because it takes you out of the present, into the past or future, and destroys the natural flow of your thoughts and physical actions. Whether the judgment is positive or negative does not matter. It introduces a verbal aspect into an activity that is most successful when it is done in the nonverbal mode. Music is not a language of words; it is a language of gestures. *When you perform music, it is best to think and communicate in nonverbal, nonjudgmental terms.* In this way, you can preserve the music's purity, as well as its magic. Besides, your judgment of your own playing during a performance is not always accurate. When a performance of mine has been recorded, I am often surprised how good my playing sounds in places where I thought I played poorly, and vice versa. It is best to reserve judgment for after the performance, preferably after you have listened to other people's reactions.

Rather than judge your playing, simply *observe it without verbal description, and motivate your intentions.* For example, when you are about to make a crescendo, have the intention of making a crescendo and then feel it as you are doing it. There is nothing verbal about this process. You are, rather, putting intention into action—that is, motivating your intentions. When

subject,[1] and there are many online articles as well. Some years ago I compiled a list of "Six Golden Rules," the result of a combination of anti-anxiety methods I had learned from others and my own thoughts on the subject. They have helped me and many other people. Perhaps you will find them useful, too.

Performance anxiety can begin so innocently. First you notice someone in the front row tapping his feet. You wonder to yourself whether you're really maintaining a steady beat. Then someone else whispers something to her neighbor, and you worry that perhaps your hair is disheveled or your tie is crooked, or maybe you're making those funny grimaces again that you thought you'd conquered. Worse yet, they are probably discussing how strange or inauthentic your interpretation is, or they are commenting on how many notes you are missing (you are missing a lot by now). Oh, your teacher is really going to yell at you. And your girlfriend or boyfriend is going to be very disappointed. Your students aren't going to know what to say to you because this is going so badly. Your hands are shaking or sweaty or cold. Maybe you're not cut out for this stuff after all. . . . Sound familiar? Believe me, you're not alone. It is truly remarkable what paranoia most of us generate during performance in order to defeat ourselves.

It all begins when our minds wander. Some distraction, usually minor, occurs, and we become less and less able to concentrate. The results are nervousness, memory lapses, technical errors, and general discomfort with and, ultimately, fear of performing. The whole mess can often be avoided quite simply by thinking a few essential thoughts before going on stage. A few years ago, after experiencing a string of unpleasant performances much like the description above, I did a lot of soul-searching about what kinds of thoughts and feelings were distracting me in performance and what advice I could give myself to counteract them. The result was this list of six golden rules that summarize issues crucial to successful concentration in performance.

I meditate on these a few minutes before going on stage. Ever since the beginning of this practice, I have had fewer concentration lapses in concert and have found performing to be far more fun and satisfying than ever. In addition, my students and all those with whom I have shared these ideas have had similar benefits and have been astonished at how quickly their performance anxiety dissolved.

1. One recommended example is Don Greene, *Performance Success: Performing Your Best under Pressure* (New York: Routledge, 2002).

Golden Rule One

Before performing, you must first *remind yourself that you have practiced to the best of your ability.* You have used your practicing skills in the most effective way you know at this time. True, your playing can always be better, but given all the circumstances that have led to this moment, you have, in fact, done your best.

The time to practice has passed. Instead, you are going to use your "Automatic Pilot," which you have been training in the course of your practice sessions. The Automatic Pilot (AP) is at work, for example, as you learn the fingering for a piece. When you repeat and reinforce the new patterns, the AP retains them, so that when you go on to practicing, say, dynamics, you don't have to think too hard about the fingering.

The most comforting aspect of the AP is that it works all by itself. It is, indeed, automatic. So when it is time for you to perform, all you need to do is *trust your AP to do most of your work for you.* No effort or thought is required to bring back all that you have practiced. It will be there for you. It is your best friend.

Golden Rule Two

Do not judge what just happened or is about to happen. Self-judgment during a performance is futile because it takes you out of the present, into the past or future, and destroys the natural flow of your thoughts and physical actions. Whether the judgment is positive or negative does not matter. It introduces a verbal aspect into an activity that is most successful when it is done in the nonverbal mode. Music is not a language of words; it is a language of gestures. *When you perform music, it is best to think and communicate in nonverbal, nonjudgmental terms.* In this way, you can preserve the music's purity, as well as its magic. Besides, your judgment of your own playing during a performance is not always accurate. When a performance of mine has been recorded, I am often surprised how good my playing sounds in places where I thought I played poorly, and vice versa. It is best to reserve judgment for after the performance, preferably after you have listened to other people's reactions.

Rather than judge your playing, simply *observe it without verbal description, and motivate your intentions.* For example, when you are about to make a crescendo, have the intention of making a crescendo and then feel it as you are doing it. There is nothing verbal about this process. You are, rather, putting intention into action—that is, motivating your intentions. When

subject,[1] and there are many online articles as well. Some years ago I compiled a list of "Six Golden Rules," the result of a combination of anti-anxiety methods I had learned from others and my own thoughts on the subject. They have helped me and many other people. Perhaps you will find them useful, too.

Performance anxiety can begin so innocently. First you notice someone in the front row tapping his feet. You wonder to yourself whether you're really maintaining a steady beat. Then someone else whispers something to her neighbor, and you worry that perhaps your hair is disheveled or your tie is crooked, or maybe you're making those funny grimaces again that you thought you'd conquered. Worse yet, they are probably discussing how strange or inauthentic your interpretation is, or they are commenting on how many notes you are missing (you are missing a lot by now). Oh, your teacher is really going to yell at you. And your girlfriend or boyfriend is going to be very disappointed. Your students aren't going to know what to say to you because this is going so badly. Your hands are shaking or sweaty or cold. Maybe you're not cut out for this stuff after all. . . . Sound familiar? Believe me, you're not alone. It is truly remarkable what paranoia most of us generate during performance in order to defeat ourselves.

It all begins when our minds wander. Some distraction, usually minor, occurs, and we become less and less able to concentrate. The results are nervousness, memory lapses, technical errors, and general discomfort with and, ultimately, fear of performing. The whole mess can often be avoided quite simply by thinking a few essential thoughts before going on stage. A few years ago, after experiencing a string of unpleasant performances much like the description above, I did a lot of soul-searching about what kinds of thoughts and feelings were distracting me in performance and what advice I could give myself to counteract them. The result was this list of six golden rules that summarize issues crucial to successful concentration in performance.

I meditate on these a few minutes before going on stage. Ever since the beginning of this practice, I have had fewer concentration lapses in concert and have found performing to be far more fun and satisfying than ever. In addition, my students and all those with whom I have shared these ideas have had similar benefits and have been astonished at how quickly their performance anxiety dissolved.

1. One recommended example is Don Greene, *Performance Success: Performing Your Best under Pressure* (New York: Routledge, 2002).

Golden Rule One

Before performing, you must first *remind yourself that you have practiced to the best of your ability.* You have used your practicing skills in the most effective way you know at this time. True, your playing can always be better, but given all the circumstances that have led to this moment, you have, in fact, done your best.

The time to practice has passed. Instead, you are going to use your "Automatic Pilot," which you have been training in the course of your practice sessions. The Automatic Pilot (AP) is at work, for example, as you learn the fingering for a piece. When you repeat and reinforce the new patterns, the AP retains them, so that when you go on to practicing, say, dynamics, you don't have to think too hard about the fingering.

The most comforting aspect of the AP is that it works all by itself. It is, indeed, automatic. So when it is time for you to perform, all you need to do is *trust your AP to do most of your work for you.* No effort or thought is required to bring back all that you have practiced. It will be there for you. It is your best friend.

Golden Rule Two

Do not judge what just happened or is about to happen. Self-judgment during a performance is futile because it takes you out of the present, into the past or future, and destroys the natural flow of your thoughts and physical actions. Whether the judgment is positive or negative does not matter. It introduces a verbal aspect into an activity that is most successful when it is done in the nonverbal mode. Music is not a language of words; it is a language of gestures. *When you perform music, it is best to think and communicate in nonverbal, nonjudgmental terms.* In this way, you can preserve the music's purity, as well as its magic. Besides, your judgment of your own playing during a performance is not always accurate. When a performance of mine has been recorded, I am often surprised how good my playing sounds in places where I thought I played poorly, and vice versa. It is best to reserve judgment for after the performance, preferably after you have listened to other people's reactions.

Rather than judge your playing, simply *observe it without verbal description, and motivate your intentions.* For example, when you are about to make a crescendo, have the intention of making a crescendo and then feel it as you are doing it. There is nothing verbal about this process. You are, rather, putting intention into action—that is, motivating your intentions. When

you motivate your intentions without verbal intervention, there is a forward flow. *This easy flow is the ultimate goal of performance.*

Golden Rule Three

Do not second-guess any audience member's reaction to your playing. During a performance most of us feel quite certain that we know exactly the responses of our teachers, students, or colleagues, boyfriend, girlfriend, or spouse, or a critic or some respected musician we happen to spot in the audience. More often than not, these thoughts prove to be completely, ludicrously inaccurate and only serve to remove us further from the moment and the music.

> I once played an informal house concert with no more than fifteen people in the audience. As soon as I came out to perform, I noticed a person who looked familiar but whom I could not identify. For most of the first piece, I was not thinking about the music but rather about who he was. Finally, I concluded that he was a respected vocal coach and accompanist I once met briefly. He was undoubtedly going to listen to the Schubert lieder arrangements on my program with an acute perception of detail and, ultimately, I was absolutely sure, with disdain. Not only during the Schubert, but throughout the entire concert, I was obsessed with thoughts like these. Not surprisingly, the whole experience was quite unpleasant for me. Afterward, when he came to speak to me, I discovered that he was not the vocal coach at all but, in fact, a bassist. He had nothing but enthusiastic praise for my performance.

What an incredible waste of energy! How remarkable it is that the vast resources of one's imagination can be used for such futile, self-destructive mind-games! You probably have had similar experiences. Trying to imagine what someone in the audience is thinking about your playing is useless and distracting. *Please yourself only.*

Golden Rule Four

Be on stage, not in the audience. Be in the giving mode, not the receiving one. Be in the music, in the moment. These are three ways of saying more or less the same thing. You cannot be performer and listener at the same time. Leave the response to the audience. Your task is to communicate

to the listener what you have practiced, thought about and felt. The most effective way of accomplishing this is by being present in the moment and not by dwelling on any moment that is past or one that has not yet occurred. A good example of this is when you read a piece of music that is familiar and your eyes follow the notes at a natural, steady pace. The reading feels easy, and your music-making is accurate and relaxed. This is the same forward flow that is the ideal we seek in performance. *When that forward flow is present, you are completely on stage, giving, and in the moment.*

Golden Rule Five

Single out one aspect of your playing that is the top priority among things you need to be reminded of at this time. Do not think about this when you are performing, but rather sometime before you go on stage, when you are thinking about the other five golden rules. Sometimes, for instance, you might remind yourself about a specific postural issue; sometimes, you might need to play with less pressure in the left hand; or you may wish to encourage yourself to play more boldly. The variety of issues to consider here is infinite, as they are specific to the individual, and they always evolve over time, depending on whatever has been top priority for you in recent practice sessions. Choosing more than one item to consider, however, will probably burden your abilities to concentrate, so try to focus on just one aspect, and think about it for a few moments.

Golden Rule Six

Enjoy yourself! Don't forget that your performance is the time when you are finally able to share with your listeners what you have worked so hard in the practice room to achieve. This is a time of joy and not a time for correcting errors or other faults. Players tend to be too self-critical in performance. The practice room is the proper place for that. If you have not been critical enough in the practice room, then you leave yourself vulnerable to the punishing self-criticism that is likely to arise in the hyper-aware state that you are in when you perform. *The more critical you are in the practice room, the more fun you can have onstage.* The practice room is your workplace; the concert hall is the place for sharing and celebrating the music. The great pianist, Artur Rubinstein was fond of saying that "the ideal performance is a free walk on firm ground."

Let your emotions for the music be present. Don't let minor details obscure your feelings about the music. For most listeners, music comes alive not through technique, but through the emotions. If you allow your emotions to fully emerge, then you will truly communicate with your audience.

Let your excitement for the music be present. Let the right amount of adrenaline and your genuine, lively passion for the music come through. This allows the music to be compelling and vibrant.

SUMMARY OF THE SIX GOLDEN RULES

1. Trust your automatic pilot.
2. Do not judge. Motivate your intentions nonverbally. Achieve forward flow.
3. Do not second-guess any audience member's reaction. Please yourself only.
4. Be in the moment. Be on stage, not in the audience.
5. Think about your top playing priority of the moment.
6. Be emotional, be exciting and enjoy!

Review Before Performing

These are my six Golden Rules. I recommend that you *think through them five to ten minutes before going on stage.* Think about what each one means to you, as an individual. For instance, as you look at Rule Three, you might think about specific people who might be in the audience and remind yourself that you are not going to second-guess their opinions about your playing. Maybe even see their faces close-up in your mind's eye, and then cross them out with a big X, one by one! Consider each Golden Rule briefly, but vividly.

Do this little meditation for just a few minutes, and then get back to your warm-ups or stretching exercises or whatever you like to do just before performing. Don't give these ideas another thought. Then go give the best performance of your life.

INDEX

"Every guitar student should read this book. Leisner has distilled all his experience and insights into a very readable and practical work."

—**Eduardo Fernandez**

"David Leisner developed body/joint awareness, breathing and meditation exercises, muscle stretching, etc., along with incorporating larger muscle groups into his guitar mechanics and technique, a concept itself antithetical to what was going on in the 1990s when I was in training. But after working with David for one summer, his innovative technique has had a long lasting impact on my playing over the years."

—**Jason Vieaux, Grammy-winning performer**

PLAYING WITH EASE is a book about ergonomic technique for the guitar, as well as other instruments. Renowned classical guitarist David Leisner offers an introduction to the basic anatomy of movement, advice on relieving unnecessary tension, pioneering ideas about engaging large muscles, and tips for practicing and concert preparation.

DAVID LEISNER has a multi-faceted career as an electrifying performing artist, a distinguished composer, and a master teacher. "Among the finest guitarists of all time" (American Record Guide), Leisner has recorded for the Azica, Naxos, Telarc and Koch labels, and has a concert DVD published by Mel Bay. David Leisner has premiered works by many important composers and has been a pioneer in the rediscovery of 19th-century guitar composers, Mertz and Matiegka. His own compositions are performed, recorded and published worldwide. He is currently the Chair of the Guitar Department at the Manhattan School of Music. Visit www.davidleisner.com for more information.

OXFORD
UNIVERSITY PRESS

www.oup.com

Cover image: Mark Adam Webster

ISBN 978-0-19-069331-2