

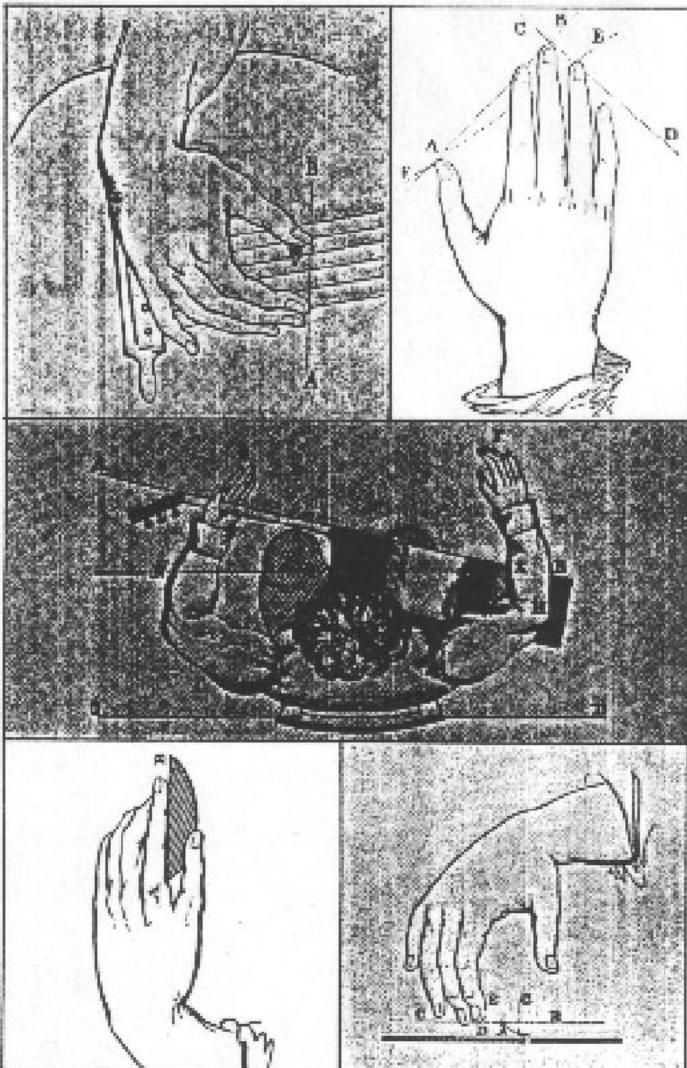


MUSICIAN'S HEALTH SERIES #

BODY & HAND POSITION

The Foundation Of Technique

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The foundation of all guitar technique is proper hand position which requires correct posture and correct positioning of the guitar. Your first thought might be, "What does it matter how I hold the guitar, as long as I'm comfortable?" And besides, I'm used to holding it this way." That's just the problem; you may have become used to a position that is both unhealthy and a hindrance to your playing. It's comfortable simply because it's a habit, but it may be a bad habit. You may be straining to reach certain voicings or phrases. You may even be risking tendinitis (an inflammation of the tendons), which could put you out of business permanently.

Concern for hand position and the health of a hand is not new. In 1756 Leopold Mozart (Wolfgang Amadeus' father) wrote in his treatise on violin playing: "The lower part of the hand (namely, where it joins the arm) must remain free, and the violin must not lie in it, for in so doing the nerves which connect the arm and fingers would be pressed together and so contracted, and the 3rd and 4th fingers prevented from stretching. We see daily examples of such clumsy players, who find everything difficult because they restrict themselves by an awkward position."

Woodwind players have a term, *embouchure* (pronounced "om-boo-shur"), that refers to how they hold their mouths when they play. Guitar players have no corresponding term to denote the coordination of body and instrument, so I am borrowing the term and using it to represent guitarist's hand position, even though, technically speaking, it refers to the mouth. Using the proper embouchure is the best way to develop free technique and to avoid tendinitis. Embouchure is often the first thing that other instrumentalists learn, but guitarists too often neglect altogether.

The way you hold your instrument affects your embouchure. Some guitarists hold an electric guitar one way and a classical another. Think of this relative to another instrument, and you'll see how little sense makes. A pianist certainly would not sit directly facing the keyboard on a Steinway and facing off to the side when playing a synthesizer.

Some guitarists hold the guitar one way when standing, another when sitting. I'll go into this in more detail later, but be aware that whether you are standing or sitting, the instrument should be in the same relationship to your body and your hands in the same relationship to the instrument.

Stephen Carter is Associate Professor of Guitar at Boston's Berklee College of Music. Dr. Richard Norris serves as Carter's consultant to the Musicians Health Series, checking the medical details for accuracy.

By Steve Carter

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Let's work on posture. Sit down, without the guitar. If your chair has a back, you may sit with your back against it or you may sit on the forward edge of the chair. Make sure your back is straight and your shoulders level. If you're in the habit of slouching, sitting straight may take some conscious effort; imagine being pulled upward by a wire attached to the top of your head. Try to sit comfortably, straight but not stiff.

Proper posture helps prevent fatigue, allowing you to practice longer and more productively. Sitting straight and breathing deeply supplies the oxygen that is essential to the proper functioning of your muscles. Slouching compresses your lungs. If during a long practice session the music begins to blur before your eyes and you become unaccount-

ably drowsy, it may be due to bad posture.

There's also the business of reading music while following a conductor. How many times I've seen a player hunch his back and bury his nose in the music stand! It seems that the harder the passage is, the closer the proboscis approaches the music. Don't go to the music; make the music come to you. Sit up straight so you can watch the conductor, band leader, or lead singer over the top of the music stand, and use your peripheral vision to watch for visual cues from the rest of the band. If you develop good postural habits in practice, they'll serve you well on the gig.

Did your posture begin to slip as you read the last two paragraphs? If so, take a second now to straighten your back and shoulders. This is exactly the kind of reminder you have to give yourself until good posture becomes a habit!

Now let's work on positioning the guitar in a seated position. For this step you'll need something to rest your foot on. A small footstool is ideal, but a hardshell guitar case or even a pile of books about 4" high will do.

In order to get started properly positioning the guitar, we're going to rest it on the left leg. Why? Primarily because, for most players, it is the only way to sit with the guitar and maintain good posture. (Unless you're a classical player, you're probably used to resting the guitar on the right leg. But don't worry—this is just an experiment.) Placing the guitar over



The ideal position for all guitars and postures: The "classic jazz" position with a big hollowbody.

The right leg usually puts the guitar off to the side, rather than in front of you where it belongs, and almost always causes the shoulders to slant.

Keep your left leg straight in front of you, and move the right leg off to the side. Put your feet flat on your footrest. Now pick up the guitar and rest it over your left leg. The headstock should be roughly at shoulder level, the top curve (horn) of the guitar in the middle of your breast bone, the strumming/picking area over your stomach, and the bottom of the guitar resting against your right thigh. If you can't seem to get all this right, try adjusting the height of your footrest. If your guitar has a large body, you may find that the seat of the chair gets in the way; try sitting on the farward edge of the chair to allow room for the body of the guitar between your legs.

Although most of the best players start the guitar about 20 degrees back, I feel that the guitar's top should be nearly vertical. The angle of the guitar should be such that when you look down at it without bending your neck, you can see only the sixth string. I can hear some readers saying, "But how am I to look at the neck?" Easy: Don't. How can you read music if you're glancing at the neck, how can you keep eye contact with the band? You must look at the neck, bend your head a side—don't move the guitar.

Here's the test of proper positioning: Drop your left arm and then lift it straight up with the palm facing up. Your hand should be just about in the middle of the neck, at about

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5th fret. (Try this with the guitar over your right leg—you'll probably miss the neck altogether.) Notice that your elbow is out away from your side and won't touch your body until you are playing in the very high positions.

We used a footrest in order to allow the left leg to support the guitar at the proper height and angle for "testing" purposes. But in many situations a footrest is not practical, so I recommend that, unless you're a classical player, you use a strap all the time. Adjust it so the guitar hangs in exactly the position we've just established. If you have a heavy guitar, be sure to use a wide strap to distribute the guitar's weight over a wider area of your shoulder. (This may seem like a trivial point, but I became painfully aware of the problem after playing two consecutive four-hour gigs on my Travis Bean Fretless bass, which weighs over 10 pounds!)

For the guitar to hang properly, the strap button must be properly placed. Some guitars have the strap button on the heel (back of the neck, where it meets the body), which can cause the top of the guitar to slant outward. If the button is there, you may want to move it. If the guitar has no strap button, you may want to install one. The best location on a cutaway is on the lip curve (horn), while on a non-cutaway it's on the rim, about an inch or two from where the neck meets the body. If you are going to drill into the body, check the thickness of the wood; you may need a shim on the inside for the screw or bolt to hold.

With the strap, the guitar will always be in



Proper sitting position with a solidbody.

the right position whether you stand or sit. I can hear some readers protesting, "But I always stand when I play!" If you're a professional guitarist, the choice of standing or sitting may not always be up to you. If you play a show backing a singer, the band leader may not allow you to stand, because "the singer's the star, not you." Even the club owner may have a say in whether you stand or sit. I

worked for one club owner in the Boston area who would not believe I was a jazz guitar player unless I sat on a stool! Some teachers require their students to practice both standing and sitting, but if you find one way of holding the instrument that works for both, you'll be much better off.

That takes care of positioning the guitar, so now let's position the left hand. First, the thumb. There are two schools of thought on the subject of the left thumb. One says to point it toward the headstock; the other says to point it toward the ceiling. The latter is closer to the violin tradition.

Bil Leavitt, Chairman of the Berklee Guitar Department, plays with the thumb pointing toward the headstock, so that when he is playing in the second position (the 2nd through 5th frets), his thumb is behind the 1st fret, about two-thirds of the way around the neck and toward the bass strings. My thumb points toward the ceiling, approximately behind the fret in which my 2nd finger is playing (the metal fret itself, not just the playing area).

Either way, the fleshy ball of the thumb rests against the neck, and it is on this that you pivot or slide from position to position. It's important to keep the thumb behind the neck to ensure left-hand fluidity. The thumb's knuckle shouldn't be bent. A slight bend is okay (and may be natural if you have a long thumb), but "breaking" the knuckle causes two problems: stiffening of the fingers, and collapsing the wrist, which results in further stiffening of the fingers.

You can observe the first problem by hold-

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ing your hand away from the guitar and firmly bending the knuckles. Now wiggle the fingers. You can see that the further the thumb knuckle is bent, the more rigid the fingers become. You can observe the second problem by hooking your thumb over the neck and "breaking" the knuckle again. This causes the wrist to collapse. Now take your hand away from the guitar, bend the wrist way back, and wiggle the fingers. You can feel the tension in the back of your hand. This is because the wrist is not allowing clear passage for the "pushrods" that run from the fingers to the forearm. Now bend the wrist slightly inward and wiggle the fingers again—much easier. It's okay for the wrist to bend slightly inward, or the wrist may be straight, but avoid bending the wrist back.

There is one time when it's necessary to hook the thumb over the neck: when you're bending a string. Then you need the leverage that the hooked thumb allows. So hook the thumb only when bending strings; otherwise, keep it behind the neck.

Now let's look at the right hand. Guitarists and string players often don't pay enough attention to right-hand positioning. String players have a saying: "The left hand makes the virtuous, the right hand, the artist." It's possible to develop great picking speed using an unorthodox right-hand position, but artistry requires more than speed. It requires, among other things, flexibility and subtlety.

There are three points of movement available to start: the elbow, the wrist, and



This right-hand position works even on a tiny solidbody.

the digits (thumb and fingers). The elbow supplies the large movements and the brute strength, the wrist supplies smaller movements, and the thumb and fingers provide the subtlest movements.

The model for the right arm is hollowbody guitar position. If you can, get a hollowbody to experiment with. An arch-top is best, because the bridge is slightly raised, encouraging a slight inward bend of the wrist. Rest your

elbow on the front binding, your arm parallel to this point. Try to keep your forearm off the top so the top can vibrate. Here individual differences come into play. If you have a long forearm, this may not work. Howard Roberts, for instance, has a very long forearm, so his arm rests very low on the front of the guitar. If you play a thin hollowbody or a solidbody, the pivot point for the arm will be about 2" below the elbow. The important thing is to stabilize the arm while still allowing free movement. A happy by-product is the natural bend this gives to the wrist; we'll soon get to the importance of this.

Holding the pick in the jazz tradition involves bending the 1st finger in toward the palm and holding the pick between the side of the finger and ball of the thumb. This causes the wrist to bend in slightly and allows the pick to hit the strings at the proper angle. The pick should hit the strings on the perpendicular; that is, it should not slant toward the floor or the ceiling, nor should the rotated toward the nut or the bridge. This "flat" attack gives you the fullest, loudest sound by bringing out all the overtones. Then, once you've mastered this, you may want to experiment with different pick angles to color your sound.

The angle of the pick is important not only to sound, but also to accuracy. One player I know tells of a time when his right hand gradually developed a bad angle. He was not aware of it until he noticed that he was missing a lot of upstrokes. To analyze the problem he practiced in front of a mirror and discovered that his right forearm was rotated so that the pick was not hitting the strings on the

perpendicular cut from below. He experimented and found that if, when looking down at his right hand, he could see his second knuckle, his hand was in the right position. Soon his upstrokes were as accurate as ever.

Here's a way of finding the natural right-hand position. Hold your hand out, palm up. Rest a pencil in your palm and gently curl the fingers inward, but not letting the tips touch the palm. Notice that the ball of your thumb naturally closes on the side of your index finger. Now, still holding the pencil, put the pick between the ball of your thumb and the side of your index finger, near the tip. Next, turn your hand over and without dropping the pencil, pick a few notes. You can see that if you stretch out the fingers, you'll drop the pencil. Put the pencil down, put your hand in the same position again, and play. Keep the fingers curled but not tense. If after a while your fingers straighten out, try imagining the pencil in your hand again, just as a reminder of good hand position.

And now, the most important element of all: the wrist. Keep it loose! To get the feel of the "loose wrist," we'll use the pencil again. Hold the pencil by the end, between your thumb and first finger. Now, like a nurse shaking down a thermometer, shake the pencil. What we're trying to do when we play is to deliver all the energy through the pick and into the strings. Shake the pencil again. Notice how loose your wrist feels. Look at the shape of your arm, wrist, and fingers. You'll probably find that your fingers are curved in toward your palm. Now deliberately stretch the fingers out straight. Can you feel how this dis-



The same principle works with any solid-body size or shape.

pales the energy away from the tip of the pencil? Have you ever seen a nurse hold his or her fingers out like that while shaking down a thermometer? Of course not. And now you know why. There are simple laws of physics and physiology at work here, and we want to put those laws to work for us as we play.

Pick up your guitar (taking a moment to adjust your embouchure) and strum a very

active rock rhythm. Notice that your right hand naturally assumes this "loose wrist" position. You can use this same motion (though on a smaller scale) for picking single notes.

Curving the fingers and arching the wrist prevent anchoring the hand, which makes many players feel uncomfortable. They long for the security of touching the guitar with some part of the right hand. But there are several problems with anchoring the hand.

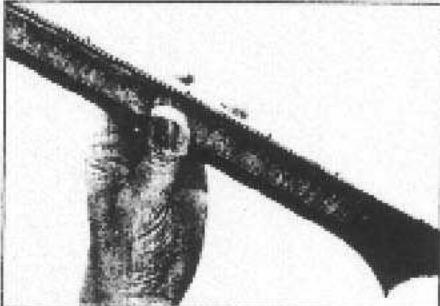
Many players, especially rockers, rest the right wrist on the bridge. Bill Leavitt calls this "solidbody syndrome." But if you rest your wrist on the bridge, then you are limited to the tone color produced by picking there. And it's obvious that with the wrist firmly anchored, you can't get the kind of movement you get when you shook the pencil.

Of course, laying the right hand gently on the strings to produce muting or to control feedback is a useful technique; you just don't want to lay the wrist down unnecessarily. Leavitt tells of a gig he once had where the stage was so small that he had to put his amp under the piano. Since he was using a big hollowbody electric, he had to lay his wrist on the bridge to stop feedback. After leaving that gig, which lasted a year-and-a-half, he discovered that his playing had deteriorated because he had developed a habit of laying his wrist down. His solution was to roll up a dry washcloth, wrap rubber bands around it, and put it on the bridge so that he could not collapse his wrist. After a while he was able to take the washcloth off and play with the proper right-hand position.

Some players anchor the right hand by

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resting the fingers on the pickguard. The problem with this is that it introduces friction and conflict. After all, we're trying for free



Correct position with the left thumb about two-thirds of the way around the neck.

movement, and resting the fingers will, to however slight an extent, limit that freedom. And if you're playing an acoustic flat-top, you may find your fingers falling into the soundhole!

As a compromise, some players allow the nail of the little finger to glide along the pickguard, allowing a measure of security to the right hand while introducing a minimum of friction. I've known players who have raised their pickguard for just this reason. Then there is the other extreme. George Van Eps has no pickguard, maybe because he started on banjo, where it's impossible to lay the right hand down.

It's interesting to see Barney Kessel and Herb Ellis play a guitar duo gig. Kessel plays

with a collapsed wrist, while Ellis uses the "classic jazz" right-hand position. I guess this just shows that a fine player can make anything work for him. But there are advantages if you can develop the free right hand—primarily increased dynamic range and richer tone.

Embossure is a habit, and it is best devel-



The correct right-hand and pick position for a flat hollowbody.

oped by simply taking a moment at the start of each practice session to attain the right posture and to position the instrument and the hand properly. Once you have played the first note, forget about all that and concentrate on the music. By repeating this procedure daily, the correct habits will develop automatically.

If you've been playing for years, a change to correct embouchure can improve your playing. You may go through a period of transition during which you feel very awkward with the new position. Due to this unfamiliarity,

you may be even less accurate than with your old way of playing. But you can minimize the problem by using the new posture only when practicing. Only when you're very comfortable with it should you attempt to use it on the gig.

Your new embouchure may feel awkward at first, but I think you'll find the greater expressiveness it provides is well worth the effort. As with anything else in music, you have to find your own way, continually refining your embouchure until your music flows freely into and out of your instrument. ■

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