

Injury Prevention: The Teacher's Responsibility
by Dr. "Dutch" Workman

Great teachers produce great musicians. To mentor someone into a great musician is more of a responsibility than most realize. We rarely see how much influence our words and actions have. Seemingly meaningless things stay with our students forever. What a tremendous responsibility teachers have. This article is to remind the teacher and the student of the impact that proper and correct teaching has on a player's career, especially with respect to injury prevention.

Perhaps great players are that way because they are taught proper technique and injury avoiding concepts. Good teachers make difficult things easy. They guide us around the potholes of playing such as: Poor technique, improper use of an instrument, or various habits that may impair our playing with time.

There are also players who were destined to be great musicians, but their potential was unrealized because injury brought their career to a premature close, or limited their physical ability to play. How many musicians do you know that can only play for limited periods of time because of pain or fatigue? You must have full use of your body (and mind) in order to reach your full playing potential. If you do not use proper techniques, you are sure to hit the musicians "glass ceiling" that prevents you from playing to your full potential.

For the purposes of this article, we are referring to teachers of private instruction because they spend so much one on one time with the student. However, we must not overlook the impact of the teacher in a classroom situation or as an author.

Although there are many ways a teacher affects injury, the following are a few key areas that every teacher and student should be concerned with.

WARMING UP: Although no conclusive evidence of the benefits of warming up have ever been documented, seasoned musicians are well aware of its many great advantages both physically and mentally.

Warming up loosens the muscles and joints, preparing the body for performance. When at rest, the body pools much of the blood closer to the heart. As the activity level of the body increases, blood is shipped to the areas most involved in the activity. The most active areas receive the greater supply of blood. This gives them a feeling of warmth thus, the term "warmed up." In addition, the nerves become more alert because of the body's need to communicate more keenly with the active area. It will be more aware of all senses (pain, fine touch, joint motion, vibration, etc.) in order to insure that the body is functioning properly.

As an analogy, when you sit in a parked car, you are usually not very focused on what the car is doing. However, as you start it up and shift into gear, you become increasingly more focused on what is happening, in order to drive it properly and safely. The body responds in much the same manner, alerting areas of the body that are to be used, and closely monitoring them during use.

As the muscles receive more blood they become warmer and more flexible. I like to compare them to strands of spaghetti: brittle until they are warm and moist. They then become flexible and less apt to break. This image may help illustrate the fact that as our muscles get colder (less activity), we become less flexible, and increase the possibility of injury. Conversely, the warmer (more activity) we get, the more flexible the muscles become. It is obviously best to operate the muscles when they are soft and flexible in order to avoid injury.

Once your body has started pumping the blood around, begin going through the basic movements involved in playing your instrument (snare players should begin the basic rudiments, mallet players should practice scales and runs, etc.). Further into the warm up, you should play variations of dynamics also. This way, you alert the body to areas that need increased circulation and attention in order to operate optimally.

Begin slowly, and concentrate carefully on the fine movements your body performs as you are playing. When you hit a glitch, repeat it until it smoothes out. If you just gloss over it and go on, you can be sure that it will be the one movement to trip you up during performance.

Progress into working the specific movements you will be doing during performance. Begin with the easy and progress to the more difficult as you feel more comfortable. By doing this you convince yourself that you are able to perform all sections smoothly.

A good warm up can also help you mentally. The mind often wanders and/or is easily distracted (especially around performance time). When you warm up, it bridle your thoughts, and helps the mind get on track to play. As you start to warm up, begin to focus your thoughts on the upcoming performance. Go through it mentally, and physically to familiarize yourself once again with the movements and mood of the music. Most important, do not let yourself warm-up too quickly. Part of the warm up is to channel your mind and body. In most cases with the adrenaline surge of an approaching performance, this means slowing down and relaxing.

How do you know when you are warmed up? As you progress through the warm up process, your body will begin to move more freely and without hesitation. You will play more smoothly and confidently without restriction or doubt. You may even reach a point that has become known as "The Zone", where anything your mind wills, the body will execute. You can teach yourself to achieve that level through patience and proper warm up. You will get more effective each time you do it. As with most things, you can warm up too much. Stop when things feel good.

Incorporate all of your faculties for a great performance. The performance is a continuation of the warm up like a car going from a standing start to high speed through a series of shifting gears.

ADDRESSING THE INSTRUMENT: There is a world of different instruments. A student needs a teacher experienced in playing their particular one(s). Select someone that has spent hours playing using techniques taught them by those with experience. Good teachers spend time adding to them to hone and improve their abilities. In this way, they discover the most efficient and affective ways to express music and avoid pain and/or injury. Always learn from the mistakes and successes of others. I have heard it said: "Wise is the man that learns from his own mistakes, but wiser is he who learns from the mistakes of others."

Any instrument should be set up to accommodate the musician that is playing it at that moment. Since each musician is unique in his/her physical make up, an instrument must have the ability to adjust to the player. The teacher is best suited to set the instrument up properly and educate the student on proper set up in the future. In fact, this should be one of the first lessons taught.

In short, the instrument should be set up in a way that allows you to do the most frequent movements easiest. Constant repetition of bad technique causes pain and injury. More important, it produces a bad habit that must eventually be broken or it will break you.

For example: Marimba; if played at the top end mostly during a particular piece, the musician will naturally position her/or himself at the top end, not the middle; orchestra; if using mostly snare on a piece, he/she will position the snare most conveniently (while observing well known studio musicians do sessions for movie music, I noticed that the instruments were *constantly* being repositioned to accommodate what was being played).

There is a reason that stands come with position adjustments (height, angle, etc.). It is to help the musician avoid extreme reaching that forces the body to extend unnecessarily. When extremes are necessary, they should be kept to a minimum. I have written and advised extensively on setting up instruments properly – contact me should you want more information on that topic. Of late, I notice changes made in various instruments allowing them to conform more easily to the musician.

With so many options, it is difficult to decide which are most necessary. Allow me to discuss basic things that are necessary to our ergonomics and injury prevention.

First, protect your ears. Important steps to protect you hearing are: The use of drum silencing pads when possible, ear protection when you can, the ability to discern how loud is too loud, and the intelligence and self-respect to turn it down when necessary. An experienced teacher can really enlighten you on this important subject.

Don't be one that has to lose hearing in order to understand its importance.

Seats are important to those who spend the majority of their time sitting during a performance. How can you be a stable player if you are not grounded on a stable foundation? You should make sure you use a seat that is solid and comfortable.

Shoes are extremely important to those in the marching band and the drum corps. Marching equipment in general must be selected carefully. Some of it works for you and some works against you. How you feel while playing in it should be a sign to you.

PROPER TECHNIQUE: As musicians, our hands and feet are invaluable, and irreplaceable. Most injuries (especially career ending ones) come from damage to them. Ours is not just a matter of hitting something, but doing it repetitively. Most of us use our hands constantly, and repetitive improper use is sure to cause damage. In fact, it is documented that intensive activity for prolonged periods of time accelerates the risk of degenerative disease in the joints of the upper extremity and neck of musicians (1). How we use our bodies is so important to a lifetime of playing at our full potential. Yet, it is such a difficult thing to learn without proper teaching.

For example: If a runner has poor form, he can run without pain for a short distance. However, increased intensity (faster speed) and repetition (longer distance) magnify any weakness in his technique, making it a very large obstacle. This rule applies in any physical activity - even percussion.

In addition, improper technique becomes increasingly more difficult to change as time passes. You may not recognize the wear it puts on your body until many years have gone by and you reach a level that magnifies the error - making it undeniably obvious. By that time, the habit has formed, enabling change only through great effort. Not to mention, the injury already done throughout the years can rarely, if at all be reversed.

If you experience pain during or after you play, if you develop blisters, joint pain, muscle tension, etc. your technique can and should be improved. Resistance to pure body movement causes friction, and produces injury. Good technique never allows that to happen.

I hope you can see how important it is to start off on the right foot with a teacher who understands and teaches proper technique.

Teachers - teach your students to use the entire body to play. Just as the entire instrument contributes to the overall sound, overall movement contributes to smooth technique and smooth sound.

BODY AWARENESS: I think that this is most important of all the concepts we have discussed. The ability of a person to perceive what is going on in their body is a very difficult thing to do. It only comes through constant attention and

concentration on feedback the body is giving you. Your body will tell you if it is being used improperly, but if the most experienced players have a hard time listening to their bodies, you can imagine how little the beginner knows about it.

The body has protective mechanisms. Pain and fatigue are two of the body's early warning signs. They warn of impending danger. A good teacher can detect when the student is beginning to show the signs of fatigue and pain, and has the expertise to correct them.

However, the teacher that goes further (the expert teacher) not only shows that same perception, but establishes a communication and trust with students encouraging them to say when they feel something out of the ordinary. In order for the teacher to detect and correct the problem, he/she must call on years of experience.

Each of us as teachers should constantly be searching out ways to better eliminate problems through improved technique - spotting the technical deficiencies that cause the problem. Our field is currently in transition. We are making great inroads to not only the best techniques, but also into understanding why those techniques work most efficiently. The teacher can learn more about injury cause and prevention than ever before. With greater knowledge in recent times comes the greater responsibility to learn and implement it in our playing and teaching.

It is time to expand our knowledge of ergonomics and injury prevention that will prolong and enhance our playing. Imagine how much better you could be if you were pain free and efficient for your entire career. In this way, teachers can truly help students be all that their potential holds.

IN CONCLUSION: Like I always tell my patients, "Now that you're well again, you can stay that way if you stop doing what caused the problem in the first place." The teacher plays a pivotal role in helping the student discover what caused the problem and how to end it. More important, they can prevent you from developing the problems in the first place.

These are just a few areas that should be taught to all musicians by a qualified teacher. If you are a student, spend some time searching for one. They are specialists. Can you put a price as to how much a truly talented and well-informed teacher is worth?

If you are a teacher, constantly practice and study to better qualify yourself, and have pride in our profession as teachers - it has a strong affect on people's lives. □

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