## An Integrative Approach to Retraining Musicians' Injuries

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When something is broken, we should fix it. Mechanics know this, athletes know this, but musicians often live in a world of denial or feeling that they can do it themselves. I have been retraining musicians' approach to the instrument and mental focus for many years and, while I have had many triumphs, I have had my share of frustrations.

This is because there is often more than just the "physical" problem going on. What do I mean by that? Well, tension has three sources: physical, mental and emotional. ALL of them manifest in the physiological profile of the person. In my work with surface electromyography biofeedback, I have seen manifestations of this all the time. Someone will come and play for me and the physiological tension readings will be high. With sEMG and video, I can assess their muscles, body alignment, and how their body interacts with their instrument. They often come to me specifically because something hurts.

But what is displayed on the screen in terms of physiological activity may not stem just from their technique. Every event in our lives gets "written" in our cellular memory - biography becomes biology. We can feel our muscles tighten when we are worried, under stress or experience emotional trauma or loss. We develop patterns of physiological and emotional response that become automatic. And these patterns lie in our sub-conscious beliefs which occupy 90-95% of our brain! We will address this later in the article.

Regardless of which came first, the physical, or the mental/emotional tension, it is time to begin re-examining the person's approach to the instrument.

Many injured musicians don't understand the need for biofeedback retraining or believe in the possibility of moving differently to play the piano. After all, they play their instrument the way they always have done, the way they were taught to play. Or, at least that is what

they think. But many factors affect the ways our bodies interact with our instruments. For example, if we pull a shoulder or back muscle, strain a tendon, or have any other "life happens" experience that involves some physical annoyance happening to us, our bodies develop compensatory ways of working around the affected muscle or area affected. These movements feel "normal" and often, when the strain or pain goes away, the unnatural compensations do not go away. They might, in fact, be innocently starting a chain reaction of muscle activity that over time can cause fatigue, muscle pain and reduce our ability to perform optimally.

Musicians often stress their bodies to "get the notes" and perfect repertoire. Often, they do not take the time to exercise and strengthen their muscles that they are demanding so much from. Many of the movements that are developed while learning a piece are not optimal, in fact, they can be quite clumsy. But musicians do not take time to analyze the movements as they are learning the piece. These movements become habits that get wired together. This becomes our "new norm" and our bodies become used to this and identify it as a natural approach to the instrument. As we were led to believe in conservatory training, no pain no gain. Too few teachers understand the principles of efficient movement. The movements that can cause injury do not necessarily feel bad or painful. Indeed, they are not dangerous in non-repetitive tasks. They are dangerous for musicians because practicing an instrument is extremely repetitive.

Often musicians resort to transparently poor strategies like going back to the way they play before, doing too much too quickly, or worse, experience feelings of denial, wishful thinking, or "toughing it out." They say "I'll rest over the weekend and it will be better on Monday," or "I guess I just overdid it, I'll take it easy for a while." Sometimes the first symptoms are even welcomed, and people say "I must really be making progress in my practicing, I can feel it in my arms" (the "no pain no gain" fallacy). Or else, misled by discussions in the literature, they say "I just tried to do too much without proper warm-up; I'll be careful always to warm up from now on," or "I guess I need to exercise and develop strength in my fingers." As the injury persists and they become desperate, they go to doctors, physical therapists, chiropractors, acupuncturists, nutritionists, massage therapists--the list is

endless. All of these professionals can help, especially in treating the acute condition, but only to a certain extent. Something more needs to be in place to reaffirm corrections that were made to posture and tension release. Neuromuscular re-education – a fancy name for physiological retraining - is really necessary, to help the person relearn patterns of movement and play the piano without danger of re-injury.

Thomas Mark cites that approximately 95 percent of pianists' injuries are not medical problems; they tend to stem from the way the person uses his body. However, I must reiterate the point that many of these injuries are also the result of "life happens" events resulting in compensations with the way one uses the body. For instance, a rotator cuff injury can result in some compensatory muscle patterns through the arm and fingers. Health care professionals can help with some of this type of problem, but usually don't hold all the answers for a permanent cure. An injured pianist also needs a retraining specialist or experienced pedagogue who can train their technical movements properly. In the case of injury, many physical and occupational therapists do not know how to teach a client how to play his or her own instrument. While they can successfully train gross motor movements that are essential to daily living, they may lack the knowledge and expertise to train the elements of fine motor control necessary for music performance. Having an educated teacher explain the necessary movements in detail to the therapists can be very helpful.

Learning a less stressful way to move at the instrument means abandoning old habits and replacing them with new ones. For woodwind and brass, it may mean trying some finger assist devices to take the pressure off the joints and muscles and help stabilize alignment. For string players, custom made chin and shoulder rests may be the best answer. It is also very important to consider the size of the instrument in relation to the physiological structure of the musician. There are several different sized violas and variations in their weight as well. This is possible to do, although it takes time, patience and, most importantly, application.

The problem usually does not exist only on the physical level., so, in a dialogue asking if there are any issues mentally or emotionally that cause them anxiety. Often the answer is yes, but realize there may be more issues lurking behind the surface. Now here is where teachers must be very aware of professional lines in the sand. It is not our job to take on the role of a psychologist, in fact you should not attempt to do so. What you can do is suggest it to the musician.

Old patterns may be embedded in our minds as well as our bodies. When we are moved emotionally by the music we perform, we have tendencies to hold those feelings in our bodies. Think about the way your body responds when you feel extremely happy or sad. You get what we call a "gut" reaction. Muscles tighten, making it more difficult to move freely. We have to learn to let go of these emotions in our physical bodies and let them come out in the sounds produced. Here is an opportunity for musicians to explore assistance from holistic psychotherapy, meditation and other mind/body therapies because their sub-conscious beliefs are not accessible to them!

Retraining at the instrument demands that we examine our whole selves and our relationship with our instrument. It can cause us to re-examine our attitudes and beliefs. It is a holistic process, for it is our whole beings that learn and perform music. Success of the process depends on the compliancy and patience of the musician.