

It Hurts When I Play:

Medical Problems of Musicians

In order to perform at a high level, most instrumental musicians must have full use of their musculoskeletal system, which includes the muscles, tendons, ligaments, and bones that carry out the brain's commands. While aches and pains in the arms and legs can happen to anyone, they can be a major problem for musicians if they interfere with the ability to practice and perform. In addition to everyday bumps and falls, the very act of practicing and performing can cause damage that impairs one's ability to perform. The goal of this fact sheet is to provide information that may help musicians avoid performance-related musculoskeletal injuries or allow them to seek help promptly before a chronic problem develops.

Performance-related problems of the arm and hand are fairly common among instrumentalists. Surveys of professional symphony orchestra musicians have found that over half are affected at any given time. Studies done at the Eastman School of Music have shown that about 10% of students develop a performance-related hand problem each year; a study from Houston showed that it was a common problem among performing-arts high-school students. Reports from Europe and Australia confirm the findings in North American studies, and the case histories of some famous soloists are well known. While most injured musicians recover within a few weeks, some are left with chronic pain and impairment.

THE MUSCULOSKELETAL SYSTEM

The musculoskeletal system consists of muscles, tendons, bones, ligaments, and their blood vessels and nerves.

- *Muscles* contract to produce the desired movement of an attached bone or (in the face) section of skin. Muscle overuse results in stiff, sore muscles.
- *Tendons* connect muscles to bones. They have a poor blood supply, so they take longer than muscles to strengthen and to recover from injury. Tendinitis (or tendonitis) is inflammation of a tendon.
- *Ligaments* connect bones to each other at a joint. Some people have longer ligaments than other people, making them hyperflexible or "double-jointed." We do not know if this hyperflexibility is a potential problem or not.

CAUSES

Our understanding of the causes of musicians' arm and hand problems is incomplete; however, we do know that:

- Women are roughly twice as likely to develop a problem as men are.
- Pianists and string players are more likely to develop a problem than other instrumentalists.
- A sudden increase in playing time increases the risk of a problem developing.
- Most of the problems seem to develop as a result of overuse of certain muscles and tendons in the arm and hand.
- In the university setting, freshmen are no more or less likely to have a problem than seniors or graduate students.
- These problems seem to peak in early fall and again in February-March-April at the Eastman School of Music.

PREVENTION

Since most performance-related musculoskeletal problems are caused by overuse of the muscles and tendons in the arm and hand, prevention is both possible and preferred.

Some Common-Sense Guidelines:

- *Avoid over-practicing.* Know how many hours of practice you can tolerate. If you need to increase your total playing time, do so gradually (i.e., by no more than 25%-50% per week). Plan your practicing in consideration of your other obligations (playing and otherwise), so as to avoid "marathon" practice sessions, especially before a lesson, jury, or other performance.
- *Take breaks while practicing.* A good rule of thumb is a 5-10 minute break every hour. Some individuals need to take a break every half-hour. A "break" is putting down the instrument and, if possible, leaving the room.
- *Avoid excessive repetition in practice sessions.* While repetition is an important component of instrumental practice, repetition of a particularly stressful motion can be physically harmful, especially if the repetition is excessive. Vary your practice routine, alternating periods of intense repetition with a variety of other motions and periods of rest or score-study.
- *Participate in a regular exercise program.* The ideal form of exercise for musicians would provide good aerobic training, involve the upper body, and be unlikely to result in injury. Swimming is an excellent all-around exercise. Aerobic dancing classes, rowing, and cross country skiing can also be beneficial and low-risk. Nautilus equipment can provide good conditioning, but be sure to get proper instruction in its use. Exercise is a good tension and stress reliever, too.
- *Work closely with your teacher to develop and maintain good technique.* You may wish to talk to your teacher about taking lessons in the Alexander or Feldenkreis techniques.
- *Be careful how you use a computer keyboard and mouse.* Set it up properly and take frequent breaks.

EARLY RECOGNITION

In addition to listening to the music they are producing, musicians should also "listen" to their bodies. Aches and pains must not be ignored. The adage "no pain, no gain" probably has no place in the studio. Certainly any discomfort that lasts more than two or three days should be cause for concern. Keep in mind that other uses of the hands (typing, handwriting, waiting on tables, etc.) can contribute to an overuse problem. Pain related to overuse can start during the practice session or several hours later. Overuse problems may be especially likely to start during periods of increased stress.

RECOVERY –

Recovery from a performance-related musculoskeletal problem involves several steps, which you should take in conjunction with your teacher and your primary care provider.

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RECOVERY

Recovery from a performance-related musculoskeletal problem involves several steps, which you should take in conjunction with your teacher and your primary care provider.

Step One:

Allow the overused muscles and/or tendons to heal. The cornerstone of this healing process is REST. If the problem is severe, complete rest of that limb for a short time may be necessary. On the other hand, a minor irritation of one particular muscle can heal if the specific action that precipitated the problem is temporarily avoided. If certain normal daily activities make the limb hurt, they should be avoided as well.

Adjuncts to rest include anti-inflammatory medicines (aspirin, ibuprofen, and others) and the use of heat and cold. Physical therapy is often helpful as well. Your primary care provider can discuss the options with you.

Step Two:

Gradually resume a practice schedule in a way that avoids a recurrence of the problem. Your primary care provider and your teacher can recommend a practice schedule for you - sometimes beginning with only 10 to 20 minutes at a time, followed by at least 10 minutes of rest. At first you still may need to use ice and/or heat. Gradually you will return to your pre-injury level of practicing and performing.

Step Three:

Step 3 is the long-term approach to avoidance of repeat injury. You may need to take more frequent breaks (e.g., 5 minutes every 30 minutes) during practice sessions and be especially careful about extra heavy practice sessions before a big performance. Review the suggestions in the Prevention section of this brochure for additional ways to avoid second and third injuries.

SCHEDULING AN APPOINTMENT

Call 275-2662 to schedule an appointment at the University Health Service (UHS). UHS offers a full range of services. All visits to UHS are confidential.

LINKS

Performing Arts Medicine Association
http://www.artsmed.org/links_index.htm

WHEN TO USE HEAT OR COLD

Heat: Use heat to warm up and relax tight muscles and tendons when they have been resting.

Ice: Use ice to cool off muscles and tendons that have been working (and may be hurting).