

Treating the Pain of Playing Musical Instruments

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Many musicians develop pain in one or more joints or tendons after years of playing musical instruments. This pain can result from performing repetitive movements especially if the technique used is not perfect or from overuse associated with long hours of practice and frequent performances. This muscle, tendon and joint pain tends to be intermittent at first, treated easily with a little rest, anti-inflammatory medication and ice. Each time the pain returns it's a little stronger, lasts a little longer and causes the artist more trouble. At this stage the problem is often treated with injections of cortisone and/or physical therapy. Eventually, the problem can become severe enough to require surgery or to force the sufferer to stop playing for long periods or even into retirement.

Drs. Liu and Hayden wrote in their article "Maladies in Musicians" published in *The Southern Journal of Medicine* in 2002 that "Rest is the only reliable treatment for overuse syndromes". This is not correct. There is a treatment unknown to most physicians, chiropractors and orthopedic surgeons which can halt and even reverse the degenerative processes associated with overuse syndromes and injuries from improper and/or awkward technique.

Prolotherapy, also known as proliferant therapy, was developed by osteopathic physicians about sixty years ago. It is a technique that involves stimulating the tissue to heal itself in areas that have been damaged or weakened. How can it do this?

The body responds to tissue injury. If there is damage of tissue cells, as in cutting or tearing tissue especially if associated with bleeding, there is a chemical signal for the body to bring in cells called macrophages to clean up the debris. After the macrophages are finished cleaning up, other cells called fibrocytes are attracted to the area to lay down new collagen. Collagen is the basic material of which tendons, ligaments, fascia, and joint capsules are made. This process takes weeks to months to complete. In a chronic strain or overuse of the tendons, ligaments or muscles despite pain being present, there is no actual tissue "damage" from an injury. Thus the body has no stimulus to heal since there is no actual bleeding or tissue destruction. Thus a chronic strain or overuse injury can last indefinitely and no healing will occur.

The technique of prolotherapy involves injection of a sugar water (dextrose) solution and anesthetic into the painful, strained and weakened tissue whether it is tendon, ligament, or joint. This solution causes cells to

implode and break apart, thus liberating chemicals into the region and initiating the healing process as described earlier. Because this stimulus is rather mild, it often needs to be repeated several times on a biweekly basis to get the full benefit.

Musicians who play different instruments tend to have different strains and pains. Flute players commonly have right shoulder problems because of the way they hold their instruments. Clarinet and oboe players get overuse symptoms in the web space between the thumb and index fingers. Bassoon players frequently develop thumb tendonitis or arthritis. All musicians are subject to low back and neck strains and pain due to long hours of sitting. Even musicians who play the same instrument can have different injuries depending on their own body shape and size, technique and make of instrument. For example, violinists can develop either neck pain or shoulder, elbow or wrist joint pain or tendonitis pain associated with one or more of these joints depending on how they hold their instrument and bow, how they maintain posture and their technique. Musicians who are hypermobile in their joints tend to have more problems including slowing of their finger movements due to the instability in the joint. The principle of healing the tissue remains unchanged no matter the area of injury.

While cortisone injections, commonly given by most physicians, can in some cases be temporarily effective in treating the pain of strained tissue, they do not help tissue healing as can prolotherapy. Other techniques of healing injured tissue such as acupuncture, nutrition and physical therapy modalities and exercise can be coupled with prolotherapy to make it even more effective. Evaluation of the position and size of the musician's arms and hands might suggest a modification of the position of the keys in some instruments such as the bassoon in order to alleviate awkward positions of the wrist or fingers which could cause or perpetuate an injury or re-injure an area that has improved with treatment.

If you or someone you know is afflicted with a chronic strain or overuse pain you can find more information about prolotherapy or find a physician who does prolotherapy in your area by visiting the web site of the American Association of Orthopedic Medicine at www.aaomed.edu. If you are in the Los Angeles area you can see Dr. Kochan at The Institute for Healing Arts Research in Encino by calling 818-995-9331 or get more information or ask questions at www.healingartsresearch.org.