12-11-2004

# Common Injuries of Musicians

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WESTERN MICHIGAN UNIVERSITY

The Carl and Winifred Lee Honors College

Centennial 1903•2003 Celebration

**THE CARL AND WINIFRED LEE HONORS COLLEGE**

**CERTIFICATE OF ORAL EXAMINATION**

Lynette Lukomski, having been admitted to the Carl and Winifred Lee Honors College in Fall 2000 successfully presented the Lee Honors College Thesis on December 11, 2004.

The title of the paper is:

"Common Injuries of Musicians"

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# Common Injuries of Musicians

Musicians face many challenges throughout their careers; dealing with an injury should not be one of them. Unfortunately, studies show that up to seventy-five percent of musicians suffer playing-related injuries. These injuries can retard musical growth, can take time out of practices and performances, and may cost a musician his/her job. Fortunately, many non-invasive treatments can be used if injuries are diagnosed quickly, and prevention techniques are available to prevent an injury from ever occuring. Factors such as age and genetics (physical and mental characteristics inherited from parents) should be considered as well when a musician decides his/her practice schedule. The physical demands of long practice sessions are harder on an aging body, and a person's genetics may make him/her more susceptible to certain injuries. Below are the links for information on common injuries of musicians:

# Injuries

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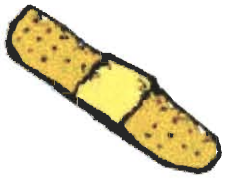
Most injuries are related to overuse of delicate joints, tendons, ligaments, and muscles. Others are related to poor posture and positioning for both playing your instrument and other daily activities. Genetic predisposition (the traits you inherit from your biological parents) can also play a part in determining one's chance of acquiring an injury, along with the aging process, which affects susceptibility to injury and the healing process. Injuries may be acute or chronic, meaning that they may heal and never return or they may linger for years to the rest of your life. If one has an injury, a diagnosis and treatment plan from a medical doctor will enable quickest and best recovery, to prevent the injury from interfering with performing abilities. A comprehensive list with descriptions of injuries is below. DO NOT DIAGNOSE YOURSELF using this list, but rather seek medical expertise if you have any symptoms that are affecting your performing ability. Only a medical expert can tell the difference between injury and minor localized pain.



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# Nerve Compression and Tendonitis

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**Nerve compression:** Numbness, tingling, and weakness near site of nerve compression.CAUSE: biological (your personal body structure) and incorrect positioning that causes constriction of a nerve.

- Carpal Tunnel Syndrome (CTS): numbness and tingling on thumb side of hand and on the thumb, index finger, middle finger, and half of the ring finger. Fingers may feel tingly and weak, losing dexterity. Compression is in middle of wrist.
- Cubital Tunnel Syndrome: tingling and pain on inner elbow, especially when elbow is bent. Compression is at the elbow.
- Throacic Outlet Syndrome: fatigue and numbness of the hand and/or arm with use, aching of limb, and coldness or discoloration of hand. Compression is where the shoulder, neck, and chest meet.
- Guyon's Canal Syndrome (Ulnar nerve compression at the wrist): Decreased sensation on the palm side of the ring finger and little finger and/or weakness in the ring and little fingers.
- Pronator Teres Syndrome: Pain and weakness down the affected wrist and hand.
- Wartenberg Syndrome (Radial Sensory Branch Neuropathy): Pain and numbness on the nail side of the thumb and the thumb side of the wrist.
- Flexor Tenosynovitis: numbness of the median innervated fingers during and shortly after playing.
- Bowler's Thumb: numbness and tingling on thumb.

**Tendonitis:** Tendonitis is inflammation of a tendon (the tissue that connects muscles to bones) leading to severe and debilitating pain. The pain may be at one or multiple sites, will persist when part of body is moving or at rest, and may cause some loss of coordination. CAUSE: overuse of a muscle group.

- De Quervain's Disease: Tendonitis at base of the thumb
- Trigger Finger: Inflammation of tendons in the palm and fingers.

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# Muscle and Other Physical Injuries

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**Muscle Injury:** Small tears in the muscle, often wear the muscle attaches to the tendon. CAUSE: Overuse and misuse of a muscle and/or failure to stretch and warm-up muscles before use.

- Lateral Epicondylitis (Tennis Elbow): Tenderness and pain over the thumb side of the elbow.
- Muscle Strains of neck, shoulders, and back: Positioning is uncomfortable at site of strain
- Rotator Cuff Lesions: A lesion in any part of the muscle-tendon units that enable shoulder rotation. Common symptoms include pain at night and pain that worsens with activities, particularly when using your arm over your head. In addition to pain, your arm and shoulder may feel weak when you use your arm over your head or when you raise your arm out to the side of your body.
- Occupational Cramp: Stiffness, cramps, tightness, and fatigue caused by overuse when the same muscular action is repeated during playing.
- Focal Dystonia (writer's cramp): painless incoordination or loss of voluntary highly controlled movement caused by overuse. Symptoms go away when individual is not playing instrument and may last months to years.

**Other Physical Injuries:**

- Osteoarthritis: Inflammation of a joint due to wearing away of the cartlidge covering the joint head. CAUSE: overuse and your personal biological structure
- Dorsal Wrist Ganglion: A fluid filled cyst on the back of the wrist that may lead to inflammation of adjacent tendons and possible decrease of mobility. CAUSE: Leakage from fluid around your wrist bones. This leakage can be caused by overuse and strenuous positioning.
- Bursitis: Inflammation of capsules that cover joints. This inflammation cause pain during both rest and use, although pain may be higher during use. CAUSE: Joint infection, rheumatoid arthritis, joint overuse, and other joint injuries
- Dupuytren's Contracture: Fingers are permanently bent in an awkward-looking position. CAUSE: biological inheritance from parents.

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# Emotional and Mental Health Problems

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Difficulty dealing with day to day activities as a result of long term changes in mood, anxiety, or perceptions of reality. CAUSES: alterations in the chemicals in your brain, traumatic events, difficulty coping with stress.

- Stage Freight: Feelings of anxiety or panic when performing in front of an audience. Symptoms may range from slight to severe and may go away, worsen, or plateau over time.
- Anxiety: Irregular or rapid heart beat, feeling of butterflies in stomach, uncomfortably warm, hyperventilation, weakness, sweating, confusion, headaches, muscle tension, racing thoughts, fear, tension, excess worry, and feeling trapped or lonely.
- Depression: Constant sadness, an "empty" mood, feelings of hopelessness, guilt, and helplessness; decreased energy, loss of enjoyment with hobbies, difficulty concentrating, insomnia, weightl loss/gain, restlessness, irritability, and thoughts of suicide.
- Insomnia: A wide variety of symptoms, all of which prevent typical, healthy sleep patterns from occurring (some of them are: not being able to fall asleep, waking up multiple times during the night, waking up too early and not being able to fall back asleep)

  *The addition of any mental or emotional health problem to a physical problem may increase the severity of the physical symptoms.

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# Injury Prevention for Musicians

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Research shows that injury prevention is not practiced enough by musicians. This research also shows that musicians report decreased pain and fatigue when using injury prevention techniques. Below is a list if injury prevention techniques that can lengthen your career as a musician and enable you to reach your highest potential as well.

## Injury Prevention Tips:

- Stretching and warming up all muscle groups before and after practice and performances
- Strengthening abs, back, chest, and shoulders to maintain proper posture; and gentle strengthening excercises for hands and wrists to prevent strain of their delicate muscles. Aerobic exercise 3 or 4 times a week for at least 20 minutes to maintain endurance.
- Use proper technique and avoid excessive tension. Stay relaxed!
- Don't over play difficult passages
- Make sure a full and complete recovery is present before retuning to a normal playing routine
- Be careful when lifting any heavy object or taking part in any physically stressful activity. The injury does not have to be cause by your instrument to affect your playing. For example, don't hold the phone on your shoulder.
- Have the highest quality of instrument that you are able to afford. Higher quality instruments take less effort to play.
- Use proper lighting, dark enough copies, and comfortable temperatures whenever possible
- Modify your instrument, if possible, to make it feel more comfortable for you to play, and to enable proper posture and technique.
- If possible, sit with hips bent at a less than ninety degree angle. A wedged seat cushion, rolled up towel, or 2X4 placed under the rear chair legs can fix this problem.
- See your doctor for regular check-ups and engage in a healthy lifestyle

## Helpful hints for specific instruments:

- Cello: sit in a forward slowpling seat and hold their posture straight, instrument should be tilted to the left rather than tilting one's torso to the right, use a straigt pin so cello may easily be rotated to reach the A string.
- Violin and Viola: keep right elbow down.
- Flute, Violin, and Viola: keep neck in as neutral position as possible (avoid exagerated tilting)
- Clarinet and Oboe: invest in a neck strap and an instrument attachment

# Injury Treatment

Musicians and Injuries Home Page

DO NOT TREAT YOURSELF! This page is intended to educate people on some of the treatments they may expect if they have acquired an injury. The treatment received will depend on the type and severity of the injury. Seeking professional help in the early stages of an injury is extremely beneficial to the musician because the least invasive treatment will most likely be used. This means lower costs, faster recovery, and a quick return to typical playing for the musician. Often, multiple treatments will be used, and a patient may see a number of different clinicians (including occupational therapists, physical therapists, and hand therapists) in addition to the physician. If practice sessions are stopped or shortened for a period of time, then returning to playing must be gradual. Pieces should also be performed at a slow tempo and then gradually increased to the intended tempo. THE MOST COMMON MISTAKE IS RETURNING TO NORMAL PLAYING TOO QUICKLY IN THE HEALING PROCESS. Another note to remember is that chronic conditions may require chronic treatment.

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**Nerve Compression:** Treatment from least to most invasive includes use of an overnight splint, stretching and strengthening excercises, rest periods during practice, cold/heat treatment, ensuring proper body positioning and technique, anti-inflammatory medication, a break from playing, steroid injections, and surgery. If surgery occurs, then rehabilitative therapy may follow.

**Tendonitis:** May heal itself, although the healing time period can be quite painful. Treatment may include reduced playing time, a resting splint that keeps the affected area immobile, stretching and strengthening exercises, anti-inflammatories, steroid injections (cortisone), ultrasound and/or electrical stimulation to decrease swelling, and massage.

**Muscle Strain:** Massage, heat treatment, improved positioning and technique, and decreased intensity and length of practice until condition improves.

**Occupational Cramp:** Massage, muscle relaxers, and practice breaks when needed

**Muscle Tears:** Decreased intensity and length of practice (complete break from playing may be needed), steroids, and possible surgery.

**Osteoarthritis:** Anti-inflammatories and pain reducers, resting splint, breaks when playing

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**Dorsal Wrist Ganglion:** Smashing of ganglion, steroid injections, possible surgical removal of ganglion.

**Bursitis:** Frequent practice breaks, anti-inflammatories, steroids

**Dupuytren's Contracture:** Surgery only if contracture is preventing functional use of hand; otherwise nothing is done

**Stage Freight:** Counseling, hypnosis, beta-blockers or other anxiety medication

**Anxiety:** Counseling, medication

**Depression:** Counselling, anti-depressant medications, hospitalization in extreme occasions

**Insomnia:** Regulation of sleeping patterns, change in diet, non-medicinal sleeping aids (water fountain, use of white noise), over-the counter or prescription sleep medication

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This website is intented to educate amature and professional musicians on injuries that musicians frequently encounter. I made this webpage in part of a fulfillment to graduate from the Lee Honors College at Western Michigan University with a Bachelors of Science in Occupational Therapy and a Minor in Music. Occupational Therapy enables people whow have injuries, disabilities, medical conditions, or impairments to lead as independent of lives as possible. Occupational Therapists focus on the client's concerns regarding his or her daily activities with an emphasis on improving quality of life.

# Resources

Musicians and Injuries Home Page

Alcantara, P. (1997). Musician's guide to Alexander's Technique. NY, NY. Oxford University Press.

- The benefits of proper body positioning and pracitce methods are discussed along with how to change daily movement patterns to enable ease of movement, balance, and support. One particular area focused on is the force required to do certain movements, and how to prevent injury by using the least force neccessary.

Barton, R. (2004). The Aging Musician. WORK: A Journal of Prevention, Assessment & Rehabilitation, 22(2), 131-8.

- Body positioning, technique, anatomical structure, and age are all examined as factors that can affect susceptability to injury in the case study of a 71 year old jazz musician. The study showed that with occupational therapy, the musician can overcome the challenges related to aging in order to continue professional performance.

Brandfonbrener, A.G. (2003). Musculoskeletal Problems of Instrumental Musicians. Hand Clinician. 21(2):231-9.

- Injuries related to muscles, tendons, and ligaments are discussed along with the importance of stretching and conditioning to prevent injury. Subjects in this study were both professional and amateur musicians. Risk factors including the particular instrument, the musician's gender and individual physical characteristics such as hand size and joint properties, and the duration and intensity of playing are studied.

Brandfonbrener, A.G. (1997). Orchestral Injury Prevention: Intervention study. Medical Problems of Performing Artists, 12(1), 9-14.

- A wide variety of injury prevention techniques are discussed, along with the injuries they prevent. The risk factors for each instrument of the orchestra are studied along with the compatability each instrument has with different body types.

Guptill, C.A. (2000). An Occupational Study of Physical Playing-Related Injuries in College Student Musicians. Kalamazoo, MI. Western Michigan University.

- College musicians were surveyed on the type and intensity of injuries they had. Descriptions of each injury is given along with a discussion on the importance of injury prevention.

Heming, M.J.E. (2004). Occupational Injuries Suffered by Classical Musicians through Overuse. Clinical Chiropractic, 7(2), 55-66.

- This research established that the two highest risk factors for a music related injury are being female and a string player. Also established was that most injuries are due to overuse and occur in the shoulder and thoracic spine. Causes, descriptions, and treatments of overuse injuries are summaried.

Hoppmann, R.A. (2001). Instrumental Musicians' Hazards. Occupational Medicine. 16(4), 619-31.

- Factors relating to injury, prevention techniques, and common injuries relating to musicians are explained. This research stresses the importance for close collaboration of the various health professionals, music educators, and performers.

Norris, R. (1993). The musician's survival manual: A Guide to Preventing and Treating Injuries in Instrumentalists. International Conference of Symphony and Opera Musicians.

- This book describes a variety of injuries and lists their causes. Proper technique and positioning are thoroughly discussed

Winspur, I. & Warrington, J. (2003). Hand therapy for the musician: instrument-focused rehabilitation. Hand Clinics. 19(2), 287-301.

- This article stresses the importance of using the instrument early on in treatment to facilitate proper body positioning and technique, and to make instrument modifications if neccessary. Evidence showed the secondary propblems were more frequently avoided with the use of instruments early on in treatment.

Wynn-Parry, C.B. (1998). The musicians hand: A clinical guide. Malden, MA. Blackwell Scinece Inc.

- Specific injuries to the hand are discussed along with structural weaknesses of the hand and the progression of injuries that are not treated.

Liu, S., Hayden, G.F. (2002). Maladies in Musicians. Southern Medical Journal, 95(7), 727-34.

- Physical injuries and mental health issues of musicians are discussed. The pros and cons of various treatments were studied, showing those diagnosed at the beginning of an injury have a better prognosis, and are less likely to have further complications.