

# PERFORMING ARTISTS' HEALTH CORNER

A prelude to performance for dancers, musicians, singers and actors

BY KATHERINE EWALT

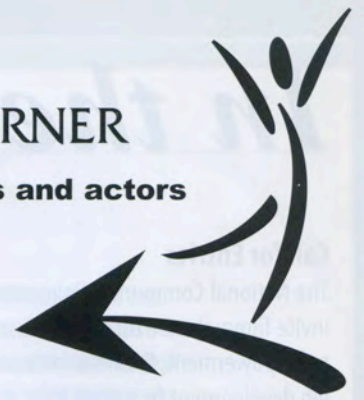


Figure 1: Wrist & finger flexion



Figure 2: Playing with wrist flexed



Figure 3: Playing with neutral wrist position

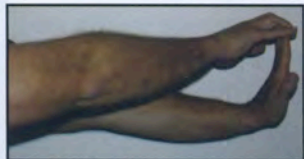


Figure 4: Wrist flexors stretch



Figure 5: Wrist extensors stretch

The Performing Artists' Health Corner is a regular column for SDP that presents information and/or advice about performing arts-related injury as a resource and should not be used to self diagnose or treat. Performers who experience ongoing pain should seek the advice of a physician or clinician to avoid aggravating current symptoms or potentially causing other more serious injury. No individual diagnosis or treatment plans will be provided through this forum. E-mail questions to: [info@PAARTSsandiego.com](mailto:info@PAARTSsandiego.com).

**Q. I am a professional electric bass guitar player. The index and middle fingers, and sometimes the thumb, on my right hand go numb after playing bass for awhile. Is this carpal tunnel, and what can I do to relieve the numbness? — Deadened Digits**

**A.** Musicians are vulnerable to a number of musculoskeletal injuries that are caused or aggravated by playing their instruments. One study found 39% of professional and university student musicians to report symptoms such as pain, weakness, numbness and tingling that interfered with their ability to play their instrument at the level they were accustomed to playing.<sup>1</sup>

Frequent playing-related injuries include tendinitis and peripheral nerve entrapments, which commonly affect the upper extremities, neck, back and facial musculature. Many musicians assume the symptoms they experience are "normal" and find ways to play around their limitations. Unfortunately, if not managed early, these symptoms can become chronic and even disabling.

Each instrument presents a unique set of injuries related to the physical and postural demands of playing that specific instrument. For guitar/bass guitar musicians, carpal tunnel syndrome (CTS) is a common injury that results from highly repetitive hand or finger actions. These repetitive movements may cause the tendons to become inflamed leading to swelling around the tendon and, thereby, decreasing the space in the carpal tunnel, a narrow passageway at the base of the hand that houses the median nerve and tendons. Diminished space increases pressure on the median nerve, which compromises its ability to function.

In guitar/bass guitar players, CTS occurs more commonly in the left hand due to awkward postures, forceful exertion, and high repetitions of motion at the fingers and wrist, particularly if playing in the 12th or 13th positions for extended periods. However, symptoms can certainly develop in the right hand, especially with repeated fingering and/or plucking of the strings (opposed to picking) with the wrist flexed (figures 1-2). Signs and symptoms of CTS are often progressive and may include:

- Numbness and tingling in the hand or fingers

- Pain at night
- Decreased sensation (feeling of touch) in the index finger, middle finger and/or thumb
- Reduced dexterity of the hand or fingers
- Decreased strength/grip strength
- Atrophy (reduction in size) of the hand muscles
- A feeling of swollen/stiff fingers

Treatment of CTS relies on the identification and minimization of contributing factors related to playing technique and posture, including wrist alignment (figures 2-3). Additionally, modifying playing time, frequent breaks during playing sessions, as well as stretching muscles of the hands and wrists (figures 4-5), neck and shoulders can help to manage symptoms. Ice can be used to calm inflamed tissues at the end of practice, rehearsal or performance. In some cases, wrist splints are used to limit motion at the wrist, particularly at night.

Early and accurate assessment will prevent further injury and promote resolution of current symptoms. As carpal tunnel syndrome has some symptoms in common with other disorders, it is recommended that musicians who experience these complaints avoid self-diagnosis and seek the advice of a physician or clinician well versed in performing arts medicine. **SDP**

**Model for figures: Doug Booth, guitarist, bassist, music faculty, Grossmont College; owner, Sound Booth Productions**

<sup>1</sup>Zaza C. *Playing-related musculoskeletal disorders in musicians: a systematic review of incidence and prevalence. Canadian Medical Association Journal, 1998; 158(8).*

Katherine Ewalt, MS ATC, NCTM, HHP, is the owner and director of Performing Arts and Athletic Restorative Training Specialists (PAARTS) Wellness Studio in San Diego. She is the dance medicine consultant to the San Diego Ballet. For more information, contact (619) 225-5762.

