

## Causes of Performance Injuries

Janet Horvath, former assistant principal cello of the Minnesota Orchestra, wrote a helpful book about injury prevention for musicians entitled *Playing Less Hurt*. It is a journey of the performance injuries she sustained that almost ended her professional career. Through her work with Kinesiotherapist Jon Kabance, President of Biokinetix in Chicago, a practical approach to practice and performance for all musicians evolved.

Performance injuries occur when a musician plays their instrument for prolonged periods of time without having warmed up their bodies or working to strengthen their hand, arm, and shoulder muscles. Such injuries as tendonitis, carpal tunnel syndrome, tennis elbow, nerve entrapments, cubital tunnel syndrome, and thoracic outlet syndrome are common among musicians. In fact, “more than 75% of all musicians will suffer from a music related injury”, which is an even higher risk of injury than professional athletes experience.

Each time you play, you are exposed to an abundance of repetitive stress and audio logical injuries. In fact, some of you may already be experiencing pain in your fingers, hand, arms, shoulders, back and/or neck (Horvath, 2004). Musicians put their bodies through a tremendous amount of physical stress. Repetitive stress injuries are caused by a combination of force and tension, repetition, poor posture, and inadequate rest.

### *Force and Tension*

You may be using too much force and/or tension when you play, which tires you out quickly. According to orthopedic physiotherapist Barbara Paull in her book *The Athletic Musician*, “Those who use their hands and arm muscles very forcefully with many repeated, fast-paced movements, suffer from rapid muscle fatigue.”

### *Repetition*

Playing an instrument requires tremendous repetition of movements. For example:

- In Ravel’s *Bolero*, the snare drum player will repeat a 24-note rhythmic pattern non-stop during the piece and make 5,144 arm strokes.
- In the final movement of Mahler’s *Symphony No. 5*, a violinist will play 800 measures of mostly 8<sup>th</sup> notes requiring 6,400 left-hand finger movements.

### *Poor Posture*

The goal is to practice and perform with a neutral posture. We sometimes allow ourselves to assume stressful postures. Our goal is to keep our bodies in as neutral and relaxed a posture as possible; keeping shoulders down and relaxed, elbows slightly away from our bodies, wrists straight, fingers naturally curved, and head and neck straight and aligned with our spine. However, sometimes our instruments require awkward postures. However, we must return to a neutral posture as soon as possible to avoid continuing the awkward posture for long periods of time.

### *No Rest*

Musicians must take breaks during practice periods and avoid cramming for lessons, rehearsals, or performances. Let your arms hand down along your sides from time to time during practice. Sometimes it’s necessary to take a day off from playing our instrument. Repetitive stress injuries are cumulative.