

BODY AWARENESS AND PHYSICAL WELL-BEING IN PRIVATE STUDIO INSTRUCTION

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The text is centered and flanked by two symmetrical, ornate decorative flourishes. These flourishes consist of elegant, swirling lines that form a frame around the text, with small circular accents at the ends of the swirls.

OVERALL PREMISE



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- Purpose of this Presentation: *provide educators with tangible strategies for incorporating injury prevention methods into student lessons and daily practice routines to promote expressivity, technical proficiency, and longevity*
 - The Scope of this Presentation
 1. General terminology and anatomy
 2. Identify common injuries among musicians
 3. Stretching, strengthening, and ergonomics
 4. Discuss body awareness, healthy eating, and other natural options
 5. Modifications to practice routine and environment
 - The Limits of this Presentation
 1. Information presented is more broad than in-depth
 2. Individual needs vary, including medical treatment and long-term solutions
 3. Mental well-being, performance anxiety, or hearing

INJURY PREVENTION: MY STORY



Overuse from playing?

From minimal to debilitating

My treatment plan

Recovery process

What I didn't know

One Year Later...

INJURY PREVENTION: MY STORY



Ergonomic adjustments to work environment, modifications to equipment, kinesiology tape, altered (improved) practice regimen, better understanding of physical capabilities and limitations

I.P. IN PRIVATE TEACHING



Reasons we avoid discussing injury prevention with students

- We perceive pain as weakness
- We have limited understanding of the body
- We are not experts in medicine

However...

- Injury is common for musicians because of the nature of our occupation: repetitive use of soft tissues (muscles, tendons, ligaments) for extended periods of time
- We are experts in *music*: our instruments and the demands of our field
- Like athletes, musicians require trainers — studio instructors

GLOSSARY



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- Biomechanics: ways the body is designed to move
 - Ergonomics: the relationship between individuals and their work environment as it affects efficiency and physical safety
 - Inflammation (— itis): a protective tissue response to injury, “swelling”
 - Ligament: a band of fibrous tissue that attaches the bones of a joint together
 - Musical ergonomics: musical ergonomics involves our physical relationship with our instrument and equipment, where balance is achieved such that individuals do not jeopardize their well-being to meet the perceived needs of the instrument
 - Pronation: palm-down position
 - Supination: palm-up position
 - Tendon: a strong fibrous tissue that attaches muscle to bone
 - Wrist extension: position that requires extensor muscles to bring fingers back
 - Wrist flexion: position that requires flexor muscles to bring fingers down

RSI: INTRODUCTION



NO PAIN, NO GAIN

Overuse and Repetitive Strain Injuries (RSI)

- Overuse: occurs when a bone, joint, or soft tissue is stressed beyond their anatomical limit
- Repetitive Strain Injury: trauma disorders caused by overuse and repetitive movements of the hand and arm
 - Damages soft tissues (tendons, tendon sheaths, muscles, ligaments, joints, and nerves) of the hand, wrist, elbow, arm, neck, and shoulder (upper body, upper extremity)
 - Results in inflammation, dehydration, or restrictions of the area
 - Three Types of Soft Tissue Injuries
 1. Muscle-tendon overuse injuries, including sprains (ligaments) and strains (muscle-tendon unit)
 2. Nerve disorders or entrapments
 3. Neurologic disorders (those that effect nerves but show symptoms of muscle-tendon injuries)

**** Muscle-tendon overuse injuries make up the majority of injuries occurring in musicians ****

**** RSIs = Tension + Repetition + Poor Posture + No Rest ****

RSI: INTRODUCTION



RSIs: WHY MUSICIANS?

Physical Causes

High-intensity activity without frequent rest

Poor posture and ergonomics

Improper or misuse of technique

Chronic muscle tension

Equipment set-up

Additional Causes

Demands of schedule, repertoire, and/or expectations

Inadequate or insufficient warm-up/cool-down

Comprehension v. Execution

Striving for perfection

Memorization

** remember: pain is the body's way of telling us something is **wrong** **

RSIs IN MUSICIANS



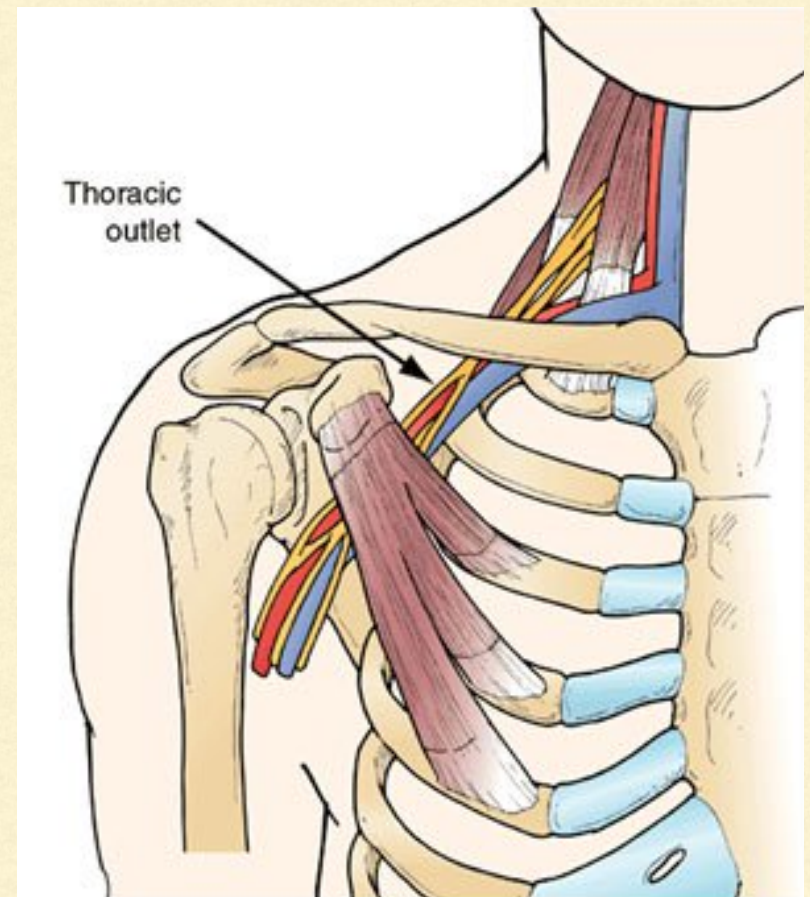
Most Common Repetitive Strain Injuries in Musicians

- Neck: Thoracic Outlet Syndrome
- Elbow: Golfer's elbow, Tennis elbow
- Forearm: Intersection Syndrome
- Wrist/hand: Carpal Tunnel Syndrome, DeQuervain's Syndrome
- General/Other: nerve compressions, muscle strains, tendonitis, focal dystonia

** diagnosis and treatment of RSIs is challenging because they often involve several anatomical components **

RSI: THORACIC OUTLET SYNDROME

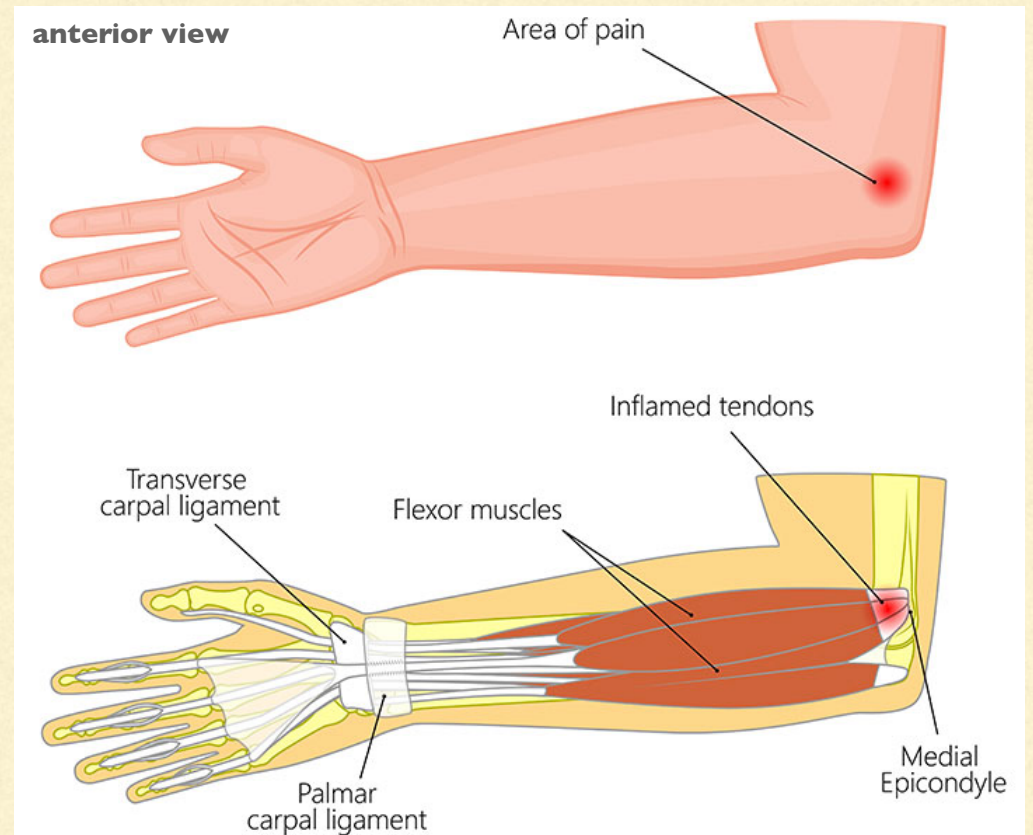
- Definition: compression of the nerves at the base of the neck (thoracic outlet region) affecting the shoulder, arm, and hand
- Symptoms
 - numbness, tingling, aching
 - weakness through pinky/ring finger, forearm, and neck
- Causes and Occurrences
 - Common in musicians who stand to perform
 - Heavy lifting and manual labor involving repetitive motion of the shoulder
 - Specific neck or shoulder positions (ex. violin, saxophone, percussion)



** Thoracic Outlet Syndrome is almost entirely caused by postural issues **

RSI: GOLFER'S ELBOW

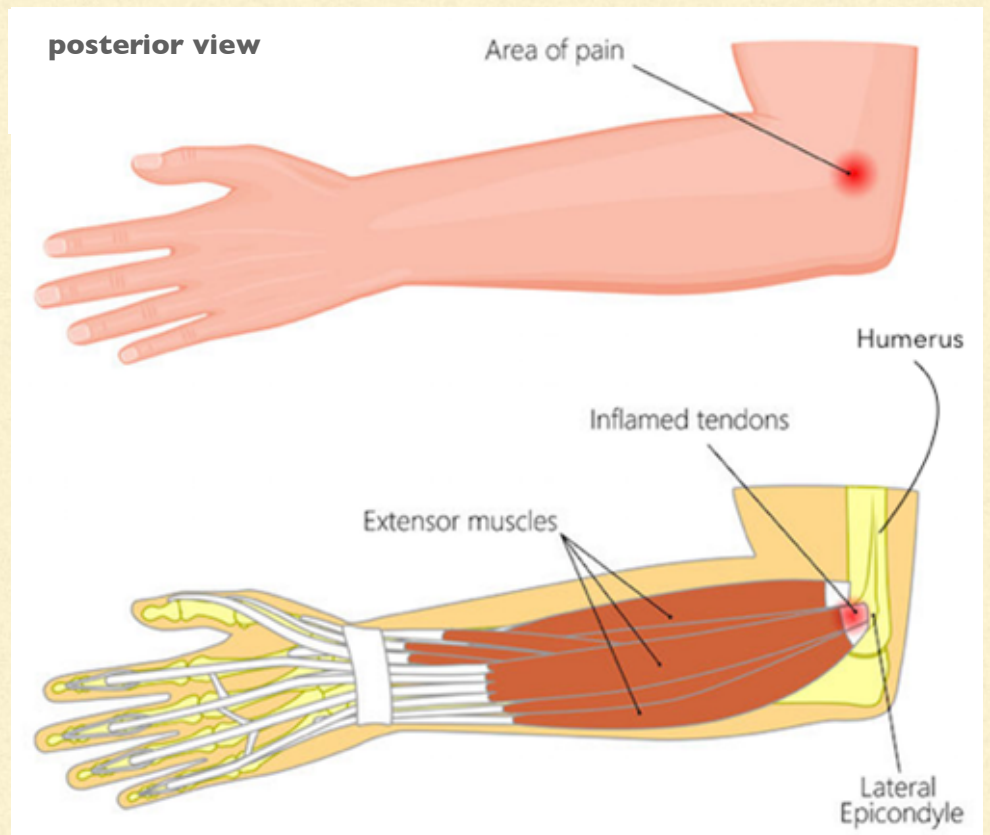
- Definition: inflammation of the tendon at the medial insertion point of the elbow (also known as medial epicondylitis) caused by overuse or misuse of the flexor muscles of the wrist
- Symptoms
 - Pain, tenderness, stiffness in the forearm
 - weakness along the inner side of the forearm
- Causes and Occurrences
 - Common in musicians who who pronate and supinate
 - Specific hand positions (ex. euphonium or guitar)



RSI: TENNIS ELBOW

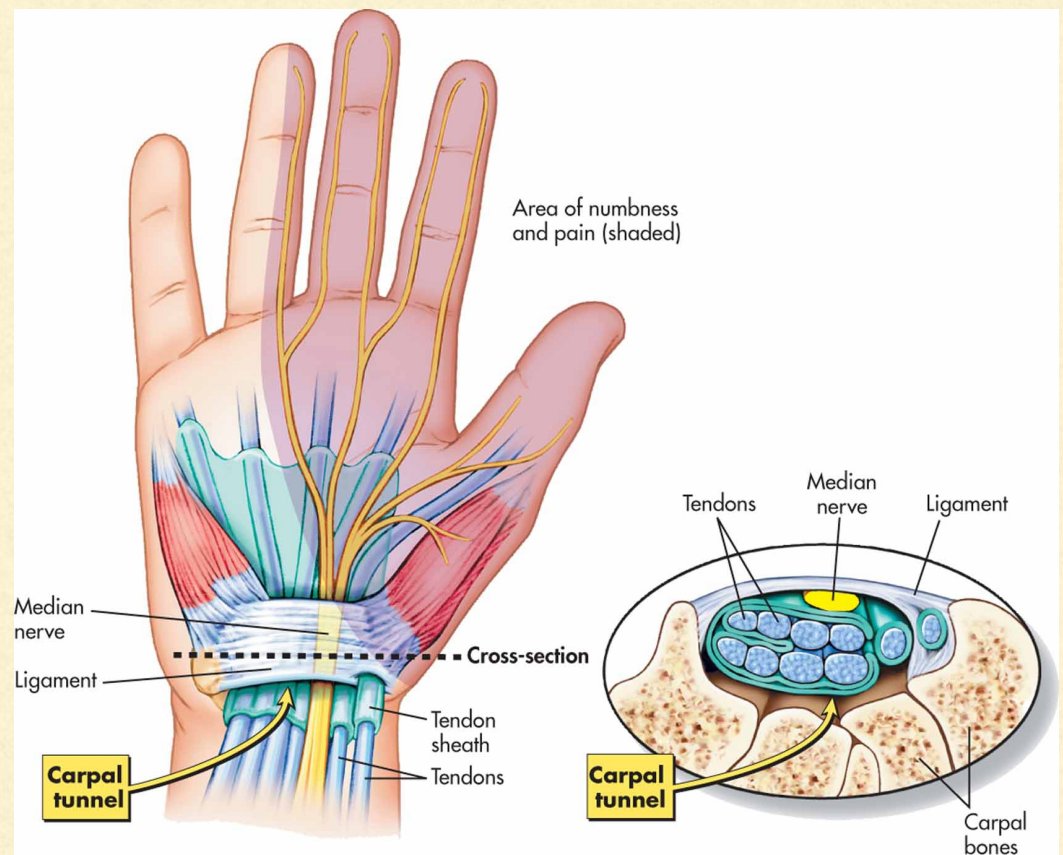


- Definition: inflammation of the tendon at the lateral insertion point of the elbow (also known as lateral epicondylitis) caused by overuse or misuse of the extensor muscles of the wrist
- Symptoms
 - Pain, tenderness, stiffness in the forearm
 - weakness along the outer side of the forearm
- Causes and Occurrences
 - Common in musicians who pronate and supinate
 - Specific hand positions (ex. Flute or conductor)



RSI: CARPAL TUNNEL SYNDROME

- Definition: compression of the median nerve as it passes through the carpal tunnel commonly caused by inflamed tendons within this area
- Symptoms
 - Numbness, pain, and weakness of the thumb, index, and middle fingers
 - Pain extending to from fingers to elbow
- Causes and Occurrences
 - Not common in musicians due to instrument position or technique
 - HOWEVER very common in individuals who have poor computer ergonomics



** diagnosis of CTS is difficult because the causes and symptoms are similar to other RSIs **

FIRST AID FOR RSIs



NO PAIN BRAIN, NO GAIN

Do **NOT** be indifferent to pain

- Seek a health care provider (preferably one with experience in repetitive strain injuries in musicians)
 - Orthopedic surgeon (specifically upper extremity), occupational therapy, physical therapy, chiropractor, acupuncture
 - Symptoms worsen or last for longer than 2-4 weeks
 - Impacts activities of daily living or loss of control/strength
- REST: both short and long breaks, with little to no use of upper extremity
- ICE: reduces pain caused by inflammation (20 minutes on — 30 minutes off)
- ANTI-INFLAMMATORIES: Ibuprofen or other NSAIDS
- MODIFICATION and SELF-AWARENESS: check posture and ergonomics, alter practice routine or equipment (neck strap, different chair, chin rest, shoulder or lap pads, splints, end pins, weight brace, etc), modify daily activities
- REDUCE ACTIVITY: strive for **quality** over **quantity**

** injury prevention and recovery occur with modifications to posture, routine, and environment **

EXERCISES FOR MUSICIANS



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- Stretching: intended to allow the body to *do* a specific activity with reduced risk of injury
 - Purpose of Stretching
 1. Maintain length and flexibility of relaxed muscles; relax tight and restrictive muscles
 2. Circulate oxygen-rich blood to the area and helps prevent injury
 3. Improve range of motion
 - Five Rules of Stretching
 1. Never stretch to the point of pain, and STOP if you feel: numbness, tingling, or increased coldness in an area
 2. Do not 'bounce' or have excess movement
 3. Use gentle pressure and only stretch as far as feels natural (force causes overstretching)
 4. Remember to breathe
 5. Hold stretch for 10-30 seconds
 - When to Stretch
 1. When you first wake up
 2. Before and after your practice session
 3. Before you strengthen or exercise