

**“I Can’t Play Today Because…”**  
**Medical Problems Interfering With Students’ Practice and Performance**  
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Commonest causes are acute trauma (injury) and overuse-related problems

But trauma is important in all groups

Brasses 11x more likely to have trauma as cause of problems than overuse

Percussionists 6x “

Most at risk: Strings and keyboards, as expected; 62.6% of musicians under 25 y/o

Gender differences

Trauma – males 60.8% (highest in school musicians and professionals (>75% in each)

Overuse – males 29.1%

Trauma

Common causes

Sports participation 57% (2/3 of these from ball sports)

Worst: basketball (by >3x); football, snow sports, volleyball, roller sports

Falls, household accidents, motor vehicle accidents

Common conditions: fracture (52.8%), ligament sprain (18.1%), esp. hand and upper extremity

Prevention – common-sense approach for everyday causes; eyes on irregular ground while texting!

For sports

“Spring training” for the hands is important when resuming any sport involving a ball

Wear protective equipment, appropriate to each sport, for all practices and games.

Overuse

From music 83.7% ; keys & strings 75.8%; collegiate students 46.8%

Causes and risk factors

Time x intensity problems, technique errors, genetic factors

Gender, large instruments, the day job, other nonmusical activities (sports, conditioning)

Common conditions: muscle strain (59.2%), tendinitis/tenosynovitis (16.7%)

Music teacher has a unique and important opportunity to:

1 - Observe students in multiple practice and performance situations

2 - Act as the “early warning system” for playing-related problems by:

Recognizing and identifying potentially troublesome practices, conditions, problems

Modifying practice and performance to stop or reverse the situation

3 - Prevent problems by teaching and monitoring correct playing techniques

Observe student for evidence of problems (especially pain or discomfort)

Drop and shake (hand)

Abnormal shrug, stretch, rub

Fidgeting (sign of discomfort)

Squinting to see music – poor posture from uncorrected vision problems

Return to playing

When pain is gone

When musician has regained flexibility, muscle strength, endurance, and coordination which may have been lost or decreased during time of treatment

Modify practice routines or techniques if needed

Prevent recurrence or new problems – gradual re-entry, avoid pain and improper technique

Avoid a too rapid return – can cause recurrence, new problems

Set written schedules if needed, and monitor them

“Musical therapy” from teacher to regain playing skills: exercises, technical modifications

## Basics of prevention

- Remember the causes of music-related problems and work to avoid them
- Application of logic and common sense, attributes not always adequately present in students
  - Teacher/coach most helpful here
  - Permanent changes needed
  - Don't forget general health, too

## Controlling practice factors

- 25–5 rule should become lifetime habit for any musician
  - Play/practice 25 minutes of every 30, followed by 5 minutes' rest
  - Get away from instrument during breaks; mental rest is as important as physical rest
- Vary practice patterns, material
  - Recognize potentially damaging effects of different repertoire
  - Practice times should minimize stressful repetition of passages, especially when little musical progress seems to be made; avoid stress-caused pain
  - Prolonged preparation for auditions, juries, recitals usually needed

## Controlling technical factors

- Posture – seated or standing – being in balance, allowing freedom of movement
  - Be aware of undetected vision (refractive) errors; squinting player may have poor posture
- Hand position for holding and playing instrument
  - Observe for excessive or abnormal hand/upper extremity forces on keys, strings, sticks, mallets
- Instrument support
  - Can help maintain proper posture, minimize muscle force & physical stress
  - Proper seat height (piano, cello, students with overly long or short legs) and spacing
  - Padding for flute (Bo-Pep, etc.) to support portions of hands
  - Neck straps are available for clarinet, oboe, EH
  - Bassoon: seat straps while sitting, and shoulder straps or harness when standing
  - Floor pegs to support low clarinets, bassoon, EH
  - Harnesses and other body supports distribute the weight of saxophones and tubas
  - Chin & shoulder rests – proper combination for the individual string student (trial and error)
- Ultimately, changing shape of instrument may be the answer

## Playing relaxed (physically)

- Work from position of rest for greatest efficiency (hang hand down at side; look at its position)
- Learn to relax specific muscles, especially those not needed for task
- Avoid simultaneous co-contractions of opposing muscle groups (inefficient)
- Doesn't come naturally for many; must be taught
- Minimize mental tension also
- Efficient instrument support always helps

## Controlling environmental factors

- Proper seating; seat should be level, not tilted backward (cellos should tilt forward!)
  - Don't crowd flutes, large instruments, or those held at side (bassoon, saxophones, Fr. horns)
- Adequate light to see music, conductor; be especially aware of problems with pit ensembles
- Avoid prolonged, loud, continuous music; use hearing protection (see below)
  - Noise-induced hearing loss (NIHL) – nerve deafness caused by repetitive or prolonged exposure to high noise levels. It cannot be treated, and progression must be prevented by decreasing exposure to high sound levels – both degree and duration
  - Protective ear plugs (attenuators) for both indoor and outdoor use — conductors, too!
  - In-ear monitors for stage use
  - Larger rooms, higher ceilings, absorbent surfaces
  - Environmental (shields; rearrange seating; risers)
  - Shorten periods of extreme sound intensity – modify rehearsal procedures