

# MUSICIANS AS ATHLETES

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Hands-On-Care



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▶ Complex physical movements – to achieve end goal

## ATHLETES



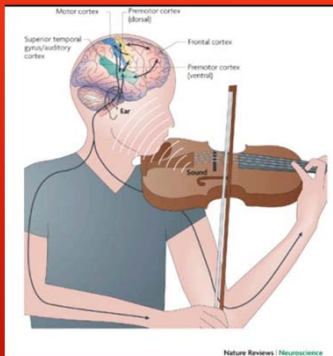
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## MUSICIANS

- ▶ Playing music is using complex physical movements – to achieve goals
- ▶ To carefully choreograph a piece
- ▶ To achieve a Mind and Body connection
- ▶ Requires Focus
- ▶ To Anticipate movements / perfection through practice
- ▶ Requires coordination of movement patterns and between players

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- ▶ Applying science to train musicians
  - ▶ Musicians require physical fortitude and precision
    - ▶ Correct technique
  - ▶ Directed exercises
    - ▶ Flexibility
    - ▶ Maintain posture through long plays
    - ▶ Strength / endurance to carry instruments
    - ▶ Find coordination
  - ▶ Sound mind

## SCIENCE BEHIND MUSIC

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- ▶ Own musical instruments
  - ▶ Comfort
  - ▶ Familiarity
  - ▶ Precision

## INSTRUMENTS

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Strength & Endurance

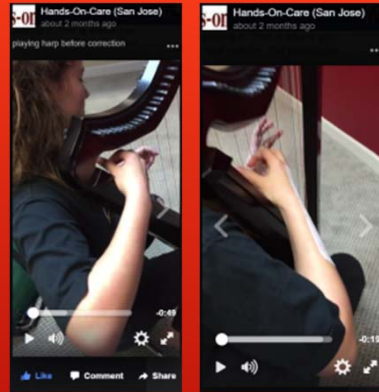
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We need the musician to be able to play music with

- The right posture and technique for long duration. This requires core strength, so
  - Work on their proximal muscles,
  - However, for playing for long duration and avoiding fatigue requires endurance in the core muscles
  - This prevents injuries and technical challenges.

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- ▶ Taping to correct posture to prevent injuries



## ERGONOMICS

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- ▶ Brain loses focus
  - ▶ Form deteriorates
  - ▶ Causes Strain due to fatigue
  - ▶ Leads to poor posture
  - ▶ Which results in improper technique
  - ▶ Resulting in repetitive stress injury

## RSI

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## BRAIN EXERCISE

- ▶ Before playing
  - ▶ Visualization
  - ▶ Imagine sequence of the piece of music to be played
  - ▶ *Motor imagery practice, mental practice, visualization*
  - ▶ *Imagining movements stimulates similar areas of brain activity as actual task performance, which may accompany recovery of motor function, thus resulting in reduced deficit [or disability]*
    - ▶ *20 healthy participants wore a plaster cast for 3 weeks on their non-dominant wrist/hand. One training session for imagery followed by HEP of visualization of movements 15 min/day and once weekly guided movement lead by a therapist.*
    - ▶ *Differences noted for extension and ulnar deviation with moderate effects*

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- ▶ Musicians coordinate
- ▶ Every player is connected

## TEAM WORK

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- ▶ Crucial for mental performance
  - ▶ Food for mental acuity
  - ▶ Preventing highs and lows or jittery effects
  - ▶ Improving muscle endurance

## DIET

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- ▶ New routines –
  - ▶ Small pieces
  - ▶ Go slow before picking up the pace
  - ▶ Easy rehearsals with taping for correct techniques
  - ▶ Timing pieces
  - ▶ Building up on time then pace and difficulty of music played

## TRAINING

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Warm up

- ▶ The musician, after their stretching exercises/warm up, starts to play with the necessary tapes to keep them in check.

Timing / Training

- ▶ The musician times their instrument playing period, at the first sign of fatigue or pain the musician stops the timer and notates it.

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Timing / Training

- ▶ Next session they play the same piece but for less time than previously played, thus preventing any discomfort.

Timing / Training

- ▶ Once comfortable with the time/piece played, they slowly start to increase the time played again without discomfort and notate the time.

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### Timing/ Training

- ▶ Slowly but surely the time is increased with all the pieces in place until musician achieves the skill without breaking down.

### Exercise program

- ▶ They must continue working out and building postural muscles, endurance, and cardio (since a lot of musicians have a sedentary posture, cardio helps to keep the metabolism high which helps with healing).

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### Warm up

- ▶ Pre-warm ups flexibility exercises continue along with post stretching after playing.

### Assessment

- ▶ If they do hurt after playing, first assess what went wrong so that they won't repeat the technique and then apply ice to calm the irritation down.

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▶ Next time, practice the same piece with taping to correct it, until perfected.

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