

What is Rotator Cuff Strain?

The rotator cuff is a term used for a grouping of 4 small muscles surrounding the shoulder joint. The muscles within the rotator cuff group are the supraspinatus, infraspinatus, teres minor, and subscapularis (Figure 1). These four muscles are the primary stabilizers of the shoulder joint and assist in overhead arm movements and rotation through the upper arm and shoulder. Injury typically occurs in the form of a [muscle/tendon tear](#) or [tendonitis](#) of one or more of the muscles or tendons within the grouping.

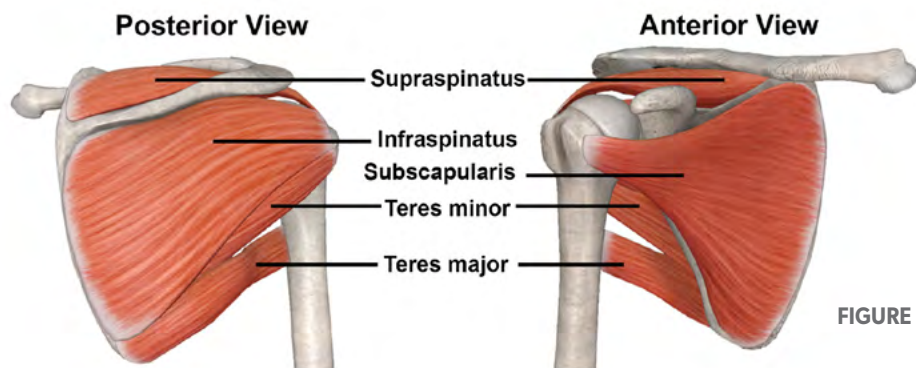


FIGURE 1: Rotator cuff muscles

Ergonomic Risk Factors



FORCE

- Forceful exertion – either creating or resisting movement



POSTURE

- Awkward postures (e.g., arm elevation, arm overhead, arm abduction, etc.)



INADEQUATE RECOVERY TIME

- Similar muscle actions performed multiple times in a short period
- Sustained muscle contractions without enough rest
- May lead to fatigue, weakness or altered movement patterns



TEMPERATURE

- Warmer environments increase chance of dehydration
- Colder environments decrease muscle flexibility



COMBINATION EFFECT

- Many or all of the risk factors act in synergy to increase the risk of developing muscle strains/tears

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Specific Recommendations for Prevention

- Avoid/minimize forceful exertions
- Minimize awkward shoulder postures
- Adequately prepare and warmup musculature prior to movement
- Take regular breaks and vary tasks
- Prepare according to temperature – increase fluid intake in heat, increase warmup in cold

For industry/workplace specific recommendations contact an OHCOW Ergonomist.

Additional Resources

[OHCOW Ergo Info Sheet: MSDs](#)

[MSD Prevention Guideline for Ontario](#)

[World Health Organization - Musculoskeletal Health](#)