Ergo Info

Occupational Health Clinics for Ontario Workers Inc.

Tendonitis and Tendinosis

What are Tendonitis and Tendinosis?

Tendons are strong, thick bundles of fibrous tissue that connect muscle to bone. Tendonitis refers to irritation of a tendon leading to inflammation. (Figure 1). Pain, swelling, stiffness, and discomfort is generally experienced as well. Over time, tendinosis may develop due to continued damage and inadequate recovery. It may also result in a thickened, lumpy, and sometimes permanently weakened tendon.

Tendonitis and tendinosis are most often caused by overuse and can occur in any tendon within the body. Typical sites of tendonitis are the shoulder, elbow, hand/wrist, foot, and knee.

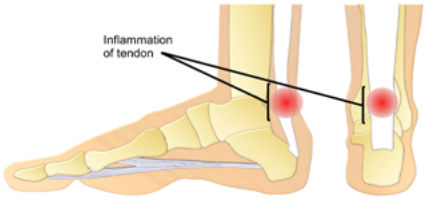

Figure 1: An example of an inflamed tendon, with tendonitis of the Achilles tendon.

Ergonomic Risk Factors

FORCE

- Forceful exertions (e.g. lifting, carrying, gripping, etc.)
- Contact stress
- Mechanical stress

POSTURE

- Awkward postures (e.g., unbalanced loading, extending joints beyond an individual's normal range of motion, 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, and/or altered movement patterns

VIBRATION

- Extended vibration exposure is linked to abnormal tendon function due to tissue fatigue

COMBINATION EFFECT

- Many or all of the risk factors act in synergy to increase the risk of developing tendonitis/ tendinosis

Recommendations for Prevention

- Avoid contact stresses where possible (kneeling, leaning, tight footwear, etc.)
- Decrease external forces
- Take regular breaks
- Adequately prepare and warmup musculature prior to movement
- Increase flexibility of surrounding muscles to reduce stress on the tendons
- Avoid prolonged exposure to vibration

Additional Resources and Tools

OHCOW Ergo Info Sheet: MSDs

MSD Prevention Guideline for Ontario

World Health Organization - Muskuloskeletal Health