

# **MSI RISK FACTORS**

## **Contact Stress**



Local contact stress is the physical contact between body tissues and hard objects or surfaces in the work environment, such as tools, machinery, and work surfaces.

Hard objects pressing into the skin create a pressure point that can compress blood vessels causing restricted blood flow and decreased tissue tolerance, causing an increased risk of injury. Contact stress can also irritate nerves, tendons, and ligaments, compromising their ability to function properly.

Body parts most susceptible to contact stress are the sides of the fingers, palms, wrists, forearms, elbows and knees.

### **Examples of contact stress:**

- Resting forearms on a desk edge.
- Holding a tool that has ridges or hard edges on its handle which dig into the hand.
- Kneeling to do floor work (e.g., laying flooring).
- Striking an object with the hand like a hammer.
- Leaning the stomach against a machine or table edge.
- Sitting with the back of the legs compressed against the front of the seat.





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#### **Control Measures**

- Use ergonomically designed tools with cushioned grips.
- Use the correct tool for the job.
- Use tools that are the proper fit for the worker's hands.
- Use tools with handles long enough to extend beyond the palm and without sharp or hard edges that dig into fingers.
- Select a chair and work surface that suits the worker's body size.
- Use knee pads when work requires kneeling.
- Wear shoe inserts for prolonged standing.
- Wear gloves to protect from sharp, hard objects.



Handle ends do not dig into palm of hand.

#### What can you do?

- Avoid using the hand, knee or other body parts as a hammer.
- Take your regularly scheduled breaks.
- Follow safe work practices and procedures.
- Change positions and tasks frequently.
- Remove clutter or obstacles in your workstation and keep frequently used materials within easy reach.
- Report ergonomics-related concerns and any signs or symptoms of MSI.



No compression in wrists or behind knees.