Musculoskeletal disorders (MSDs)—Risk factors

4. Secondary risk factors
   - **Contact pressure** is any external pressure applied to soft tissues of the body. Holding tools where handles press into parts of the hand is an example of contact pressure.
   - **Vibration** can cause damage to nerves and blood vessels as well as other soft tissues.
   - **Gloves** can be a risk factor if they don’t fit properly or if they restrict movement of the fingers and hands.
   - **Temperature**—Cold can reduce the range of motion and flexibility of muscles. Heat can increase fatigue and limit muscle recovery.

**Identify controls**

Two approaches to prevent MSDs are:

1. **Engineering Controls**
   - Engineering controls are measures taken to physically modify the forcefulness, repetitiveness, awkwardness, or vibration levels of a job.
   - Examples include modifying the workstation layout as well as selecting and using tools, work materials, and work methods that will reduce MSD risk.

2. **Administrative Controls**
   - Administrative controls are management-directed work practices and policies to reduce or prevent exposures to risk factors.
   - Administrative control strategies include changes in job rules and procedures such as more rest breaks, job rotation, and training.

The preferred approach is to use engineering controls and design the job to the capabilities and limitations of the workforce. However, administrative controls can be helpful as temporary measures until engineering controls can be implemented or when engineering controls are not practicable.

**Demonstrate**

Ask the crew to describe any tasks that can contribute to MSDs and any solutions that can reduce the risk of MSDs.