



RISK MANAGEMENT

TEXAS WOMAN'S UNIVERSITY

Movements to Avoid

According to the National Institutes for Occupational Safety and Health (NIOSH), the following ergonomic risk factors are most likely to cause or contribute to a musculoskeletal disorder:

- Awkward postures
- Extreme temperatures
- Contact stress
- Force
- Repetition
- Static postures
- Vibration

Common Symptoms

- Constant fatigue
- Decreased range of motion
- Decreased grip strength
- Loss of sensation
- Swelling numbness
- Tingling
- Aching, burning, or shooting pain

If you are experiencing any of these symptoms, report to your supervisor and request that a member of the Office of Environmental Health & Safety perform an ergonomic assessment. If you can, avoid the following movements to reduce the risk of musculoskeletal disorders:

- **Bending:** the deeper the bending motion, the greater the physical stress on the low back. Frequent bending regardless of weight is not recommended. Bend at the knees, and not at the hips.
- **Twisting:** this motion puts uneven forces on the back, thereby presenting additional physical stress. The greater the twist, the more physically stressful the task.
- **Reaching:** the distance that a load is held away from the body greatly affects the forces on the back, shoulders, and arms. The farther the reach, the more physically stressful the task.

- **One-Handed Lifts:** by nature, these tasks place uneven loads on the back and present a greater physical stress than two-handed lifts.
- **Handholds:** the inability to get a good grip on the load presents a greater physical stress. Utilize handholds such as handles, slots, or holes that provide enough room for gloved hands. Wear protective equipment to avoid finger injuries and contact stress. Ensure that gloves fit properly and provide adequate grip. Suction devices are helpful in lifting junction boxes and other materials with smooth, flat surfaces.
- **Catching or Throwing Items:** any tasks involving catching or throwing items are physically stressful and therefore, are good candidates for redesign.
- **Extreme Temperatures:** be aware of extreme temperatures that can affect lifting and material handling. For example, muscle flexibility decreases in cold temperatures, and hot temperatures can lead to heat stress. Wear appropriate clothing for the temperature in which you will be working. Drink lots of water to avoid dehydration in excessive heat.
- **Low visibility or poor lighting:** this increases the chance of trips and falls. Do what you can to adjust work schedules to minimize exposure to extreme temperatures or low visibility. Provide proper lighting for areas with low light and try to perform work during daylight hours when possible.