

OVEREXERTION TOOLBOX TOPIC

When overexertion hazards are present, report them to your supervisor and talk about ways to reduce your risk of developing overexertion injuries.

TYPES

FORCE

High force demands = increased overexertion risk

Force-related **overexertion** hazards can be present when lifting, pushing, pulling, carrying, gripping, using tools.

POSTURE

Awkward or static postures = increased overexertion risk

Posture-related **overexertion** hazards can be present when bending, twisting, reaching, kneeling.

REPETITION

Repetitive movements/actions = increased overexertion risk

Repetition-related **overexertion** hazards can be present when doing the same thing over and over again, with little time for rest.

OTHERS

Other overexertion hazards that can increase overexertion risk

Include contact stress, hand-arm vibration, whole-body vibration, hammering with hand/knee, working in cold temperatures or hot environments.

SOLUTIONS

Gripping tools/equipment

- Provide tools that allow workers to grip the tool using a power grip.
- Choose tools that have triggers that allow for the use of multiple fingers rather than one finger or a thumb.
- Choose tools that can be used with the wrist straight.
- Choose tools with vibration-reducing features.
- Choose tools that are lighter and designed to reduce hand torque and kickback.
- Provide rubber or sponge-type grips on tool handles.
- Maintain tools regularly.
- Inspect tools regularly. Ensure worn or damaged tools are fixed or replaced.

Pushing and pulling

- Provide carts that have vertical or height-adjustable handles to enable different-sized workers to position their hands between waist and shoulder height.
- Use larger wheels on carts and bins as this reduces push and pull forces and they are easier to roll over cracks or holes.
- Ensure that wheels/casters that are suitable for the load being transported and are compatible with the type of flooring.

- Ensure there is enough space so the worker does not have to use awkward postures to move the cart.
- Ensure the flooring is level, smooth and in good condition.
- Ensure workers can see over the top of the cart.
- Push rather than pull carts.
- Maintain carts, especially wheels and wheel bearings.

Heavy, frequent or awkward lifting

- Use mechanical assists to lift/lower loads - such as hoists, pallet trucks, pump trucks, ladder hoists, gin poles, daisy chains, cranes, or chain falls.
- Move objects as close to the body as possible before lifting them.
- Ensure there are no obstacles between the worker and the load being lifted.
- Keep loads off the floor and so that loads can be handled with the hands above knee height.
- Organize the starting and ending location of the lifts to limit the overall vertical travel distance a load has to be lifted.
- Avoid lifts below knuckle level and above shoulder level – limit use of high and low shelves.
- Avoid lifting loads that are heavier than 10 lb when seated – instead, stand and use larger, stronger muscles.
- Split the overall weight of a load into smaller loads.
- Avoid uneven, unbalanced loads.
- Use carts to transport loads rather than carrying them.
- Provide tools/devices to help with carrying tasks - carrying handles, extension handles.
- Train workers to assess all material handling tasks and to ensure that the path is clear of obstructions/trip hazards when carrying items.
- Do not carry objects up and down stairs if two hands are needed to hold objects. Keep one hand free to hold hand rail.
- Improve housekeeping to prevent slips, trips and falls.
- Use shoulder pads when carrying loads on shoulders.

Fixed or awkward postures

- Establish a suitable working height depending on the type of work being done
- Provide sit/stand stools at standing workstations and for tasks with prolonged standing.
- Provide height adjustable chairs.
- Provide false bottoms in deep sinks or containers.
- Limit shelf heights to between knee and shoulder height.
- Provide foot rests at standing workstations.
- Provide anti-fatigue matting for standing work areas with hard floor surfaces.
- Use adjustable scaffolds, aerial and other work platforms to raise the whole body closer to work.
- Place materials used often at appropriate height and less frequently used materials in less desirable locations.
- Use tables, benches, or stands to bring work to waist height.

Repetition

- Implement job rotation.
- Add different tasks to the job to increase the variety of activities.
- Use a work schedule that allows for frequent changes of activity.

- Mechanize the task where necessary.

Repeated impacts

- Look for tools/equipment that will eliminate the need for repeated impacts: e.g. use rubber mallets/other tools instead of the hand.
- Provide workers with well-designed padded gloves/knee pads.
- Change fittings/parts/equipment to minimize the forces used with repeated impacts.
- Limit the time duration required for repeated impacts.

Contact stress

- Change or modify equipment (e.g. use a long-handled screwdriver to prevent the butt from digging into the palm).
- Change or modify work area to prevent sharp edges from digging into skin (e.g. cover sharp or metal edges with padding).
- Use personal protective equipment (e.g. use knee pads while kneeling; use padded gloves when lifting heavy objects by narrow plastic strapping).
- Improve or change work practice to reduce resting or leaning against sharp edges.

Local or hand-arm vibration

- Use vibration-absorbing padding on grips or handles.
- Keep tools well maintained/sharp to reduce vibration.
- Reduce total exposure to vibration by alternating between tasks that use vibrating tools and tasks with non-powered tools or by incorporating job rotation between tasks.

Cold temperatures

- Ensure workers wear well-fitting gloves.
- Ensure that workers wear clothing that keeps them warm without adding a lot of bulk.
- Ensure hand tools are stored in a warm place prior to use.
- Provide alternating periods of cold and warm work (worker rotation) and allow workers to take their rest breaks in warm areas.
- Provide local source heating (portable heaters) for workers.
- Educate workers about the adverse effects of cold and its influence on overexertion.
- Encourage workers to stay well hydrated.

Hot work environments

- Provide alternating periods of cool/shaded and warm work (worker rotation) and allow workers to take their rest breaks in cool areas.
- Provide local source cooling (portable spot chillers) for workers.
- Educate workers about the adverse effects of heat and its influence on overexertion.
- Encourage workers to stay well hydrated.