

ERGONOMICS: PHYSICAL PLANT

Preventive Measures and Controls

Materials Handling

- Test the load prior to lifting to determine if it is light enough to lift.
- Plan your route before lifting and carrying the load.
- Instead of carrying one heavy load, separate it into smaller, lighter packages and make multiple trips. Use a cart or trolley or ask a co-worker for assistance.
- Place or store heavy items at mid-body height to make retrieval easier.
- Do not lift objects that are slippery, extremely hot or unevenly balanced.
- Make sure you can fit through narrow spaces and that your fingers are out of the way when you set the object down.

Lifting, Lowering and Carrying Loads

- Keep your arms and the load as close to your body as possible.
- Bend with your knees and let your legs and hips do most of the work.
- Do not arch your back.
- Use small steps when walking with a heavy load.
- Do not use fast or jerky movements when lifting, especially when lifting heavy objects.

Pushing and Pulling

- Always use two hands when pushing or pulling. Do not pull with one arm extended behind your body.
- Ensure that good visibility is possible without awkward motions such as twisting or stretching. If your vision is blocked when pushing a cart from the back, move to the front corner of the cart to push.
- Keep your upper arms against your rib cage with your elbows in. Keep your hands at or slightly above waist level. Keep your feet shoulder width apart.
- Bend your knees slightly and move the load by shifting your weight. For example, with one leg in front of the other, bend your knees and move the load by shifting your weight from your back leg to your front leg.

Vehicles

- Inspect the vehicle from the exterior for any obvious defects or dangerous conditions prior to use.
- Position seat, mirrors, radio, working papers, etc. at the start of your shift to your size and configuration.
- Avoid keeping bulky or sharp objects in pants pockets or utility belts when seated for long periods of time.
- Assess weight and position of heavy or awkward objects prior to moving them from the trunk, vehicle cargo area or bed. Beware of any load-shifting and respect the force of gravity on tilting objects or stacked materials.
- Pay particular attention to road and walk surfaces.
- Maintain high visibility of other motorists and use caution when stopping for loading or unloading.
- Always wear your seatbelt no matter how short the trip.
- Connecticut law prohibits the use of cell phones while driving.

Using Hand and Power Tools

- The center of gravity of a hand or power tool should be aligned with the center of your gripping hand.
- Tools with angled handles or tools with pistol-grips are beneficial where the force is exerted in a straight line in the same direction as the straightened forearm and wrist, especially when the force must be applied horizontally.
- Know the job before you start and select the right tools to perform the task(s).
- Try not to bend your wrists when operating the tool.
- Avoid high contact and static loading.
- Try to reduce excessive gripping force.
- Avoid awkward and extreme joint positions.
- Reduce or avoid repetitive finger motions.
- Limit vibration.
- Minimize the amount of force to trigger devices.
- Do not use tools in poor and/or dull condition.

Working in Awkward Locations

- Try to keep your body in a neutral posture.
- Use mechanical devices to help reduce/eliminate reaching.
- Stretch your muscles to warm up before working in awkward locations.
- Take frequent, short breaks.
- Remember to have all tools required for the job in an easy-to-reach location.
- A buddy system may be required for some of these locations.
- Use task lighting.
- Ladders and elevated locations pose fall hazards. Inspect your equipment and/or location before starting work.

Extreme Weather Conditions

- Dress in layers, preferably fabrics made of wool, cold weather synthetics or blends. Avoid cotton, which does not wick perspiration readily.
- Stay dry as water and perspiration decrease thermal retention of most fabrics.
- Keep your extremities covered, especially your head and hands, since those are the areas where you lose most of your body heat.
- Avoid caffeine and tobacco products as they are well recognized as vasoconstrictors.
- Take periodic breaks in warm, dry areas to warm up.
- Beware of ice, snow and other hazards when walking and maneuvering.
- Wear loose, comfortable clothing, preferably made of natural fabrics.
- Beware of the progressive signs of heat exhaustion and heat stroke.
- Take periodic breaks and drink plenty of fluids, avoiding caffeinated beverages.
- If you are working outdoors, pay attention to sun exposure by wearing a wide brim hat and using high SPF-rated sunscreen.
- Be aware that perspiration can make your grip slippery.