

Ergonomics Fact Sheet

Standing on the Job

If you are a store cashier, assembly-line worker or road construction signaler, there is a good chance you stand for long periods on the same spot. Of course, many other occupations require workers to work from a standing position with little opportunity to walk or move about.

Most people have experienced the feelings of fatigue associated with standing to wait in long lines. Constant standing is tiring for the body. For workers who do this on a daily basis, problems such as aching feet, swollen ankles and calves, varicose veins, leg, hip and/or low-back pain are often reported.

What can be done to reduce fatigue and improve comfort for workers who stand on the job?

Our bodies are designed to work most efficiently and comfortably when we are able to change position on a regular basis. This can mean moving our whole body or large parts of it as when we walk, bend, and use our arms. To improve circulation in the lower part of the body, tiny movements within the leg muscles are also important. These aims can be achieved in the following ways.

1. Determine whether it is feasible to provide a **sit-stand arrangement** at the workstation. Depending upon how and where the hands are used within the workstation, and upon other movement requirements, it may be possible to add a chair to allow the worker to alternate between sitting and standing throughout the workday or night. A mix of sitting and standing is less fatiguing for the body than full-time sitting, or standing.
2. Install a **foot bar** under the workstation to allow the person to rest a foot on it, thereby varying his/her low back posture over the course of time. Ideally, the bar would be easily adjustable to accommodate people of different height - three positions at 8", 10" and 12" above the standing surface would suffice.
3. Provide **anti-fatigue matting** for workers to stand on. Standing on concrete or other hard flooring is tiring. However, with the correct thickness of matting (e.g. half an inch), the leg muscles work lightly

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and imperceptibly to maintain balance, thereby improving circulation in the lower extremities. If you plan to purchase this specialized type of matting, consider the following points:

- ◆ **Thickness:** Thicker matting is not necessarily better - too much need for balancing will add to fatigue.
 - ◆ **Replacement:** The cushioning effects diminish over time, meaning that the matting must be replaced on a regular basis. The frequency of replacement will depend on many factors including mat quality, type and how heavily it is used. Workers can provide feedback about when it's time to replace the matting.
 - ◆ **Other workplace factors:** Consider other constraints and conditions that may also have to be satisfied, such as:
 - ▶ hygiene requirements (e.g. in food processing locations)
 - ▶ cleaning requirements - does debris fall to the floor?
 - ▶ is it a wet or dry environment? Are chemicals used that may damage the matting? Is slipping a safety concern?
 - ▶ do carts or other wheeled equipment have to be maneuvered over the area?
 - ◆ **Cost:** Prices vary widely by type and supplier. Note that everyday door or entrance rubber mats are much less expensive, but will not provide the anti-fatigue benefits afforded by specially designed matting.
4. Ensure that there is **toe clearance** at the base of the workstation wherever people will have to stand. This allows the person to stand close to the counter or workstation, thereby reducing the potential for leaning forward while working. Provide at least 4" of clearance both vertically and forward to accommodate large feet.
 5. **Avoid use of foot pedals.** Provide hand-activated switches, or devices that are actuated by some other means. If foot pedal operations are required, ensure the pedal is low-profile such that the worker's heel maintains contact with the floor while activating the pedal. Also, provide a pedal that allows operation by either foot. A wide pedal, or one that can be moved in front of either foot, will afford this opportunity.

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6. Consider implementing **work rotations** so that periods of standing are shortened and are shared by more than one worker. Note that if you choose to rotate workers, periods of standing must be broken by periods of sitting or other task requiring movement. Simply rotating through several standing workstations will not provide the physical benefit you're hoping to achieve.
7. **Enlarge a job** by adding other necessary work tasks, such as workstation clean-up, planning, or other administrative work that provides a change in body position.
8. **Individual workers** can do a couple of things to improve their comfort if prolonged standing is part of the job. Do "**toe raises**" (raise up onto the balls of the feet, then place heels back down; repeat) to increase circulation to the lower legs. Take advantage of any pauses in work to do some **mild stretching**, to squat or bend to change body position. If anti-fatigue matting is not available, workers can try wearing **cushioning shoe inserts** (ideally in comfortable shoes). Note that you may need a half size larger shoe to accommodate a shoe insert.

How can I learn more?

If you have a question contact the OHS Division's Ergonomist by E-mail at pettits@gov.ns.ca, by telephone at 424-5032 or toll-free at 1-800-952-2687, or write to:

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