



Occupational Safety and Health Division

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GUIDELINES ON WORK IN STANDING/SITTING POSITIONS

Please note that the following advisory is provided for the benefit of enhancing workplace safety and health and companies should also consider their own unique situations.

In any workplace, there may be employees or employees required to perform physical or manual tasks. Certain types of equipment or tools may also be required to perform the job and different motions may be involved. The workplace must therefore be designed in such a manner as to provide for the motions that are required to operate the equipment.

In the design of the workplace, the position of the operator must be considered. Should the operator work from a sitting position, standing position or a combined sitting and standing position?

Factory occupiers who plan to make changes to existing layout or nature of work so that workers have to sit or stand in fixed positions for prolonged periods should inform the Chief Inspector of Factories.

Continuous standing or sitting while working is a common source of discomfort and fatigue. Frequent changes of body positions, including alternating between sitting and standing, help to avoid fatigue. It is therefore desirable to have both standing and sitting arrangement for any work task. Whenever possible, a worker should be able to work sitting or standing at will. The following guidelines will help you to determine which position is best, given the type of job to be done and the measures that can be taken to reduce the health effects of prolonged sitting or standing work.

Before considering the requirements for the design of a workstation and a chair, take into account the anticipated tasks. The work may require visual, manual, or foot tasks, or combinations of these. Each of these types of tasks requires different modifications in work station design.

SITTING AT WORK

Sitting requires the muscles to hold the trunk, neck and shoulders in a fixed position. Prolonged sitting at work can cause backache and result in curvature of the spine which affects the function of internal organs of breathing and digestion. It may also slacken abdominal muscles. A poor body position is largely responsible for the ill effects of prolonged sitting. Prolonged sitting:

- reduces body movement, making muscles more likely to pull, cramp or strain when stretched suddenly,
- causes fatigue in the back and neck muscles by slowing the blood supply and puts high tension on the spine, especially in the low back or neck.
- causes a steady compression on the spinal discs

Sitting may be required in certain tasks, eg, in work requiring:

- Fine manipulative hand movements
- A high degree of body stability and equilibrium
- Precise foot control actions
- All materials and tools to be located within the seated workplace
- No heavy material handling tasks (more than 4.5 kg)
- Relatively fixed body posture for extended time periods

Where prolonged sitting at work is required, the following measures should be taken:

- 1 Adopt a good sitting position by learning how to adjust the workstation to fit individual needs for specific tasks.
- 2 Select a chair with:
 - controls that are easy to operate from sitting position
 - a seat that adjusts for both height and tilt
 - a seat that does not put pressure the back of thighs or knees
 - a backrest that is shaped to support the lower back and does not give way
 - a front edge curved downwards
 - non-slip, breathable fabric on the seat
 - a stable five-point base
 - a minimum seat width of 40 cm
 - arm rests where practical, that do not interfere with free movements within the workstation
- 3 Adjust the chair's height to 25-35 cm below the work surface.
- 4 Introduce five minutes of exercise, such as walking for every 40 to 50 minutes of sitting. Where practical, jobs should incorporate "activity breaks" such as work-related tasks away from the desk or simple exercises which employees can carry out on the worksite.
- 5 Use a footrest of appropriate height when necessary.

STANDING AT WORK

Work which requires prolonged standing, especially in a fixed position can cause sore feet, swelling of the legs and pain in muscles of the legs, back, shoulders and neck. In the long term, it can cause varicose veins and degenerative damage to the joints of the spine, hip, knees and feet.

Standing may be required in certain tasks, eg, in work requiring:

- frequent handling of heavy objects (more than 4.5 kg)
- mobility to reach and perform work
- extended reaches and moves of substantial magnitude
- manual downward forces of substantial magnitude
- mobility to monitor large areas

Where prolonged standing at work is required, the following measures should be taken:

- 1 Organise work to allow task variations so that work postures can alternate between standing and sitting positions preferably in equal proportions.
- 2 Ensure work surface for assembly line or mechanical jobs are 5-10 cm below elbow height.
- 3 Provide a seat with adjustable height at the workstations to allow employees to sit occasionally.
- 4 Short breaks from standing would be useful. These breaks could be part of any existing breaks or exercise breaks. Knee-bending, which uses the thigh and calf muscles simultaneously, is one of the effective way for suppressing lower-leg swelling and minimizing subjective complaints.
- 5 Advise employees to wear comfortable shoes. Shoes should provide a firm grip for the heel, have cushioned insoles and heels not higher than 5 cm, and allow freedom to move the toes.
- 6 Provide footrest or foot rail to allow the worker to shift body weight from one leg to the other.
- 7 Implement a medical monitoring system for workers suffering from musculoskeletal complaints.

Employees who are obese, pregnant or have a history of varicose veins should not be allowed to work in fixed standing positions for the whole shift. Employees should be given an adjustment period when they return to work after an absence following illness.