

CPH News and Views

A semi-monthly column on emerging topics related to healthy workplaces

Issue # 7: The Hazards of Just Standing Around

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A job where you “just stand around” may seem easy and hazard-free. However, static standing (standing in one place without walking for extended periods of time) can lead to back and leg problems due to a lack of proper blood flow. These outcomes are preventable, preferably through a combined approach of ergonomics to reduce static standing, exercise, and reduction of individual risk factors, including excessive weight.

Static standing occurs in many industries such as cashiers, assembly workers, corrections officers and police. In one of the few studies of static standing, 59% of workers in Quebec province were found to stand while working; 9.4% reported foot/ankle pain and 6.4% lower leg pain. It is not uncommon that people stand for socially imposed reasons rather than to improve work efficiency. Employers (or customers) may perceive that workers aren't working hard if they are seated, even if they are actually just as productive. Some manufacturing locations have tried to eliminate seating as part of a “lean production” program, even if the jobs still involve static standing rather than constant moving as in the classic application of lean production.

Risks from static standing

There are numerous potential health risks from prolonged standing or walking on hard surfaces, such as lower back pain, leg pain and discomfort, fatigue, lower-extremity swelling, varicose veins, chronic venous insufficiency (see below), and (more rarely) a poorer prognosis after diagnosis of coronary artery disease and preterm births. There are also some risks, although fewer, from extensive active walking. Harder or uncomfortable flooring is especially problematic.

Plantar Fasciitis is a painful condition involving soft tissues of the plantar surface of the foot, affecting at least 10% of the population, and being the most common cause of heel pain. It has been associated both with intense running in athletes and military recruits, and also with prolonged standing at work. Regular exercise and walking appear to lower the risk, and obesity is a risk factor. If treated effectively, most cases of plantar fasciitis resolve without surgery or prolonged immobilization. Accordingly, in the work setting, providing opportunities to sit and walk can play an important role.

Chronic Venous Insufficiency is a common condition that involves problems with the return of blood from the legs back up to the heart, often as a result of defective valves in the leg. It produces swelling, fatigue, varicose veins, and other complaints. It can be thought of as a kind of high blood pressure of the veins of the leg. It is more common in standing occupations, with increased risk among older people, women (particularly related to pregnancy), smokers, obese individuals, and those with family history, prior leg injury or surgery. It commonly includes symptoms such as “heavy” or painful legs, but there can more rarely have more serious consequences such as skin ulcers, blood clots, and chronic venous stasis disease.

These health risks exist for all workers who stand for long periods, particularly after many years in such work, but they tend to be especially high among certain demographic/health groups such as diabetics, who have poorer circulation in the extremities, heavier individuals, shorter individuals, and older individuals.

Solutions

There are several approaches to reducing risk from static standing.

- (1) Systematically evaluate and modify jobs with prolonged static standing. This can include a worker survey to identify jobs with prolonged standing and to get worker suggestions for improvements. This process might include assessing jobs to see if standing is actually necessary to production, or is just a social norm.
- (2) Providing alternative postures, including the choice of the use of chairs, “sit-stand stools”, “bar rails” for resting feet, or job rotation or activity breaks with tasks with active movement.
- (3) Installation of more resilient surfaces, particularly in areas with static standing or common walkways. These can include softer flooring, cushioned “ergo mats,” or shoe inserts.
- (4) Medical surveillance and information for workers with identified medical conditions may be helpful.
- (5) Worksite health promotion programs might encourage weight reduction, exercise, and prevention/management of diabetes through healthier food choices in vending machines, walking tracks at the workplace, and health education.
- (6) For workers with chronic venous insufficiency, there is evidence that mild structured exercise, coupled with lower limb strengthening, is beneficial over about 6 months (typically done as part of a physical therapy regimen).

In conclusion, static standing is a worker safety issue that can be addressed through reassessment of the need to stand, ergonomic improvements, and health promotion.

Tim Morse is an ergonomist and epidemiologist with a background in worker education and research interests in health and safety committees and under-reporting of occupational illnesses.

Useful Websites:

<http://www.hazards.org/standing/index.htm>

http://www.ccohs.ca/oshanswers/ergonomics/standing/standing_basic.html

References:

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