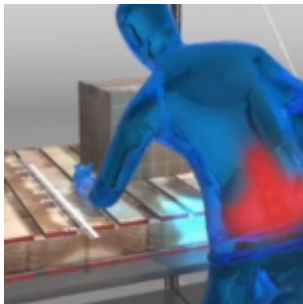


Too Much Standing at Work Has a Big Impact on Worker Fatigue, Says Study



Studies have shown the health risks associated with individuals spending too much time sitting on the job. But a new study has shown that standing for too long at work may not be any better for workers. The study, by researchers from ETH Zurich and the University of Michigan, looked at the long-term effects of muscle fatigue after workers stood for five hours.

The study is important because many workplaces require workers to perform their tasks standing, including retail staff, assembly line workers and healthcare professionals. In fact, the analysis of the European Survey of Working Conditions (2012) found that 47% of employees stand for more than 75% of their work time. And prolonged standing at work has been associated with fatigue, leg muscle pain and backache.

For the study, the researchers had 14 men and 12 women from two different age groups'13 young adults (18'30 years old) and 13 older workers (50'65 years old)'simulate standing work for five hours, including 5-minute seated rest breaks and a 30-minute lunch. The participants performed various light manual tasks on a workbench adjusted to elbow height to prevent torso flexion. The tasks included computer work, reading and playing games.

At the end of the simulated work day, the researchers

quantified the subjects' muscle fatigue using electrically induced muscle twitches (muscle twitch force [MTF]), postural stability and subjective evaluation of discomfort. The younger group was also tested on a control day.

The researchers concluded that five hours of standing has a significant impact on worker fatigue in the lower limbs. Key findings:

- The results suggest that long-term fatigue develops after five hours of standing work with regular 5-minute rest breaks and persists for at least 30 minutes after a seated recovery period.
- There was no evidence that fatigue had developed after two hours of standing work with five minutes of seated rest in between. So this standing work duration including the rest breaks may be acceptable, while the 5-hour cycle may present some risk. And it's expected that after a common 8-hour work shift, the long-lasting effects of fatigue from standing work will be more pronounced than what was found in this study.
- Subjective evaluation of discomfort may not be sensitive to the long-lasting effects of fatigue in contrast with objective measurements. Thus, the researchers concluded that specific objective tests, such as muscle twitch force, are preferable for measuring long-term muscle fatigue.

Bottom line: Too much sitting or standing isn't good for workers' health. Instead, you should strive to strike a balance for workers.

In other words, encourage workers who sit for most of the work day to get up regularly and move around, while encouraging workers who mostly stand to take regular rest breaks. Lastly, encourage *all* workers to regularly stretch during the day.