

Study Finds Workplace Resistance Training Can Help Prevent MSIs



There are many ways employers can prevent workers from developing musculoskeletal injuries (MSIs), such as adjusting their workstations and ensuring they use appropriate hand tools. And according to a new study by Institute for Work & Health (IWH) researchers, employers can add workplace-based resistance training to the list of measures that can help prevent and manage MSIs of the neck, shoulder, arm, elbow, wrist and hand.

The systemic review, which was published as an open access paper in the *Journal of Occupational and Environmental Medicine*, is an update of an earlier, similar IWH review published in 2010. The update synthesizes findings from 61 studies that the reviewers judged to be of medium or high quality.

The findings for resistance training were the strongest coming out of this latest review. Resistance training refers to exercises that cause the muscles to contract against an external resistance, such as dumbbells, rubber exercise tubing, one's own body weight, etc., with the expectation of increases in muscle strength, tone, mass and/or endurance.

'While the studies on the effectiveness of resistance programs varied in the level of detail provided, according to those that supplied specifics, the resistance programs ranged from 20 minutes to one hour per week, spread across one or multiple days per week, with and without the involvement of a physiotherapist,' says Emma Irvin, head of IWH's systematic review group and co-lead of the study.

But it found moderate evidence that some programs have no effect on the prevention and management of MSIs, including job stress management, electromagnetic biofeedback and workstation adjustments with minimal worker involvement.

Bottom line: Implementing a workplace-based resistance training exercise program can help prevent and manage upper extremity musculoskeletal symptoms and disorders. And workplaces should also consider implementing stretching exercise programs (including yoga), workstation forearm supports and vibration feedback on mouse use, if applicable to the workplace.

For more on ergonomics in the workplace and ways to identify and prevent MSIs, visit the OHS Insider's Ergonomics Compliance Centre, which contains

information, tools and other resources such as:

- Infographic: Exercises for Office Workers
- MSI Risk Factors Toolbox Talk Handout
- Ergonomics risk factor checklist
- Model Worker MSI Symptoms Survey
- How to justify investing in ergonomics
- How to identify and assess ergonomics-related hazards
- 7 strategies for making your ergonomics program a success.