Musculoskeletal Health Program PPOP

What are our priorities?

The National Institute for Occupational Safety and Health (NIOSH) Musculoskeletal Health Program works with partners in industry, labor, trade associations, professional organizations, and academia to prevent work-related musculoskeletal disorders (MSDs). MSDs are soft-tissue injuries caused by sudden or sustained exposure to repetitive motion, force, vibration, and awkward positions.

Current objectives of the program are to:

- address risk factors for MSDs through improved assessment methods
- develop and evaluate the effectiveness of interventions
- use workers' compensation data to better understand risk factors
- disseminate information on effective risk control methods and technologies.

What do we do?

- **Surveillance:** Locate and use unique sources of surveillance data (including surveys, insurance, and workers' compensation data) to identify and prioritize areas that need MSD research to support under-served worker populations.
- **Intervention Effectiveness:** Develop and evaluate cost-effective interventions to prevent MSDs for high-risk jobs. As seen in the top graph, businesses with jobs that have high rates of MSDs

(e.g., manual material handlers and nursing assistants) may need scientifically proven programs, technologies, and strategies to control MSD risk factors.

- **Communication:** Share new information, control technologies, and prevention methods through a variety of formats tailored to the needs of specific worker and employer populations.

What have we accomplished?

- [Published](#) a commentary review of industrial exoskeletons which describes the need for research to evaluate the safety and health effectiveness of exoskeletons across various industry sectors.
- Published studies in the [American Journal of Industrial Medicine](#) and [Journal of Agromedicine](#) highlighting the need to control ergonomic hazards in Alaska's seafood processing industry.
- Promoted awareness of [new guidelines](#) to prevent worker hand, wrist, and elbow MSDs on

the [NIOSH Science Blog](#). The guidelines modified the American Conference of Governmental Industrial Hygienists (ACGIH®) Threshold Limit Value (TLV®) for Hand Activity to better protect workers.

- [Published](#) a study in Applied Ergonomics recommending work methods in confined vertical space for reducing the risk of low back disorders.
- [Published](#) tools and methods used by professional ergonomists in Applied Ergonomics.

What's next?

- Promote awareness of the importance of preventing workplace MSDs using technologies and effective interventions through the NIOSH Science Blog, eNews, and webinars.
- Publish a study that summarizes the work-related biomechanical risk factors associated with the incidence of rotator cuff syndrome.
- Conduct ergonomic job analyses among seafood processors, who are ethnically diverse and often immigrants, and at high risk for MSDs.
- Publish guidelines in MSD risk assessments and interventions in collaboration with the AIHA and the International Ergonomics Association.


Centers for Disease Control and Prevention
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At-A-Glance

The mission of the Musculoskeletal Health Program is to reduce work-related MSDs, such as carpal tunnel syndrome and low back pain. This snapshot shows recent accomplishments and upcoming work.

Number of lost workdays due to MSDs per 10,000 workers
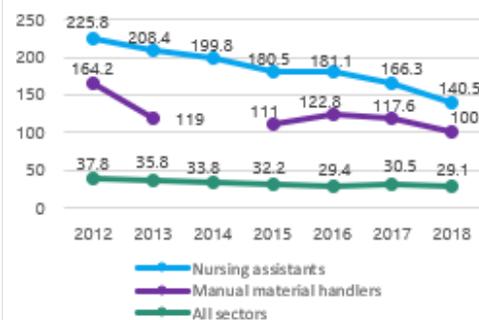
Source: U.S. Bureau of Labor Statistics. 2014 data unavailable for manual material handlers

Cumulative downloads of NIOSH Lifting Equation Calculator: 8/17- 2/20

Source: NIOSH Web Team

Direct cost of workplace injuries due to overexertion involving outside sources

Source: Liberty Mutual. Due to method improvements data from 2019 should not be compared to previous years.

To learn more, visit
www.cdc.gov/niosh/programs/msd
March 2021