

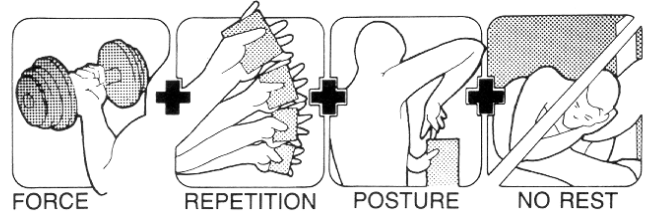
SAFE WORK



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Ergonomic Risk Assessment

Definition: An ergonomic risk assessment (ERA) is the evaluation of the factors within a job that increase the chance of someone suffering an ergonomic injury. An ERA evaluates the stresses on the muscles, bones and tendons of a worker's body to determine if there is a risk of developing a work-related musculoskeletal disorder (WMSD).



Ergonomic risks: Aspects of a job which increase the chance of developing an injury to the muscles, bones or tendons in the body, including: awkward postures, repetitive movements without variation, forceful movements, and vibration.

Purpose: The purpose of an ERA is to identify jobs which contain ergonomic risks that may lead to injury. Because every worker is different, a risk assessment *will not* tell you which worker will suffer an injury, or when the injury might occur. An ERA *will* tell you if a worker has an increased chance of developing a WMSD, and what aspects of, or movements within, the job you should focus on to reduce this risk. The ERA aims at finding a solution through ergonomic control measures (job modification) in order to make it safer for everyone performing that work. By combining information from the ERA with injury statistics, the physical demands of the job can be evaluated in order to prioritize ergonomic interventions.

Ergonomic control measures: Changes made to (parts of) a job to reduce the chance of a worker suffering an injury.

Participants in the Ergonomic Risk Assessment: An ergonomic risk assessment should include:

- 1) the *worker(s)* performing the job, so they understand what the ERA process is going to accomplish;
- 2) the worker's direct *supervisor*, so that there is an understanding of why a job (or part of the job) needs to be modified, and what the new expectations of work will be; and
- 3) *management*, so that they are aware of the costs associated with WMSDs and the benefits that the ERA can provide to the company.

It would be beneficial to include company support professionals such as a nurse, engineer, or safety personnel as they will bring more resources to the group performing the ERA.

Timing of the Ergonomic Risk Assessment: The following events should trigger an ERA:

Definitions:

Acute injury – an injury which occurs immediately after exposure to an ergonomic hazard.

Chronic injury – an injury which occurs some time after exposure to an ergonomic hazard.

- 1) *When an employee suffers a WMSD (chronic or acute)*, their body is reacting to an ergonomic stress. Unless the ergonomic risk is identified and controlled, the possibility remains for another worker performing similar movements, or the same worker upon returning to an unmodified job, to develop a WMSD.
- 2) *The introduction or modification of a process* is another event that should include an ERA.

(Cont'd)

Incorporating ergonomics into the introduction or design stage of a project will prove a more efficient use of time and resources rather than dealing with the results of expensive injuries and decreases in production at some point in the future. Likewise, when a process is being modified significantly, it is important to consider how the changes could impact on the physical requirements to perform the work.

- 3) *Complaints or concerns raised by the worker(s) performing the work* is the final event that warrants an ERA. Investigating complaints is a proactive step towards reducing the costly aspects of WMSDs, lost time injuries, absenteeism, and workers compensation premiums. Workers who are tired or sore can not produce at the same level of quality and productivity as healthy workers. Workers will know which jobs contain ergonomic risks, even if they do not know what an 'ergonomic risk' is. The discomfort or pain that workers feel during their shift or at the end of the day is enough of an indicator that there is likely a better, safer, more efficient way of doing their work. Performing an ERA is an effective means of reducing the frequency and severity of WMSDs in the workplace.

Performing an Ergonomic Risk Assessment: In order for an ergonomic risk assessment to be successful:

- 1) The management group must be briefed on the importance and benefit of the ergonomic initiatives that are being undertaken to ensure that sufficient resources are available to properly complete the process.
- 2) The workers need to be briefed on why the assessment is being completed and how they are involved in the solution process.
 - The first step in the ERA is to identify the jobs most in need of attention. This is done by reviewing injury statistics, worker concerns/complaints, and physical demands analysis. Prioritizing those jobs with the greatest potential for injury will assist in ensuring that the ergonomic interventions will have the greatest impact possible.
 - Once a job has been selected, actual performance of the assessment will require a bit of time and ergonomic knowledge. Refer to the Workplace Safety and Health Division's Ergonomic Guideline for assistance. This guideline contains a series of worksheets that are designed to systematically address the ergonomic hazards within a job, and provides direction when seeking to reduce the presence or impact of those hazards. The guideline can be found on-line at: <http://www.gov.mb.ca/labour/safety/publication/guidelines/ergonomics/index.html>.
 - Videotape is a powerful assessment tool, therefore, consideration should be given to its use in the ERA. This method allows more people access to the assessment process than would be possible with everyone huddled around watching the worker performing the job. Video can also be used for training purposes in addition to determining best work practices.

The Next Step: Once an ERA has been performed on a certain job, there will be a list of the ergonomic risk factors that exist in that job. These risk factors should be controlled so as to minimize or eliminate the chance of a worker suffering from a WMSD. These control measures should be decided in consultation with the workers affected, their supervisors and management. The control measures can include making physical changes to the job (e.g. providing a sit/stand option, or tilting work surfaces etc.), or making administrative changes (e.g. job-rotation, or a two-person lift policy, etc.). When either of these options is not reasonably practicable, personal protective equipment may be beneficial (e.g. anti-vibration gloves, etc.). Proposed changes should have an ERA performed on them to ensure that the original ergonomic risks are reduced and others are not being introduced.

For more information on ergonomics, please contact the Workplace Safety and Health Division at (204)945-3446 or on-line, at: <http://www.gov.mb.ca/labour/safety/ergonomics/index.html>.