# Ergonomics: Fitting the Job to the Employee



## Safety Gram

MARCH 2021

# "Safe and Healthful Working Conditions"

Musculoskeletal disorders (MSDs) affect the muscles, nerves, blood vessels, ligaments and tendons. They are conditions that effect the entire body and can cause serious damage to body structures if they are responded to quickly. Examples of MSDs are:

- Carpal tunnel syndrome
- Tendinitis
- Epicondylitis (affects the elbow)
- Muscle strains and low back injuries

MSDs are the number one cause of lost or restricted work time. They account for about 30% of all worker injuries or illnesses, according to data from the Bureau of Labor Statistics (BLS).

The best and most reliable way to prevent MSDs in the workplace is implementing and being sensitive to Ergonomics and Ergonomic practices.

#### Ergonomics (er-go-nom-ics / ər-gə-'nä-miks):

the science of how humans interact with objects in a system so they interact as safely and efficiently as possible. Fitting the job to the employee.

The purpose of the Chemistry and
Biochemistry Department Safety Committee
is to help protect researchers, workers, and
students in the department.
Please contact us with any questions,
concerns, or suggestions about department
safety or working conditions.

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### "Identifying Problems"

The first step in assessing what ergonomic practices would be best to implement is to identify problems you see that may lead to MSDs. You can do this by observing working conditions and observe how tasks are being done. When observing these conditions:

- <u>Exerting excessive force</u>: lifting heavy objects or people, pushing or pulling heavy loads, manually pouring materials, or maintaining control of equipment or tools.
- <u>Performing the same or similar tasks repetitively</u>. Performing the same motion or series of motions continually or frequently for an extended period of time.
- Working in awkward postures or being in the same posture for long periods of time.
   Using positions that place stress on the body, such as prolonged or repetitive reaching above shoulder height, kneeling, squatting, leaning over a counter, or twisting the torso while lifting.
- Localized pressure into the body part: Pressing the body or part of the body (such as the hand) against hard or sharp edges.
- <u>Cold temperatures</u>, In combination with any one of the above risk factors may also increase the potential for MSDs to develop.
- <u>Combined exposure to several risk factors</u>. May place workers at a higher risk for MSDs than does exposure to any one risk factor.

### "Ergonomics in the Office"

Below is a case study on the risk factors for MSDs in the office environment and suggestions on how to implement good ergonomic practices.

