

Ergonomics



IOWA STATE UNIVERSITY

Environmental Health and Safety

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IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY**Protecting the Safety, Health, and Environment of the Iowa State Community**

Iowa State University strives to be a model for safety, health, and environmental excellence in teaching, research, extension, and the management of its facilities. In pursuit of this goal, appropriate policies and procedures have been developed and must be followed to ensure the Iowa State community operates in an environment free from recognized hazards. Faculty, staff, and students are responsible for following established policies and are encouraged to adopt practices that ensure safety, protect health, and minimize the institution's impact on the environment.

As an institution of higher learning, Iowa State University

- fosters an understanding of and a responsibility for the environment,
- encourages individuals to be knowledgeable about safety, health and environmental issues that affect their discipline, and
- shares examples of superior safety, health and environmental performance with peer institutions, the State of Iowa and the local community.

As a responsible steward of facilities and the environment, Iowa State University

- strives to provide and maintain safe working environments that minimize the risk of injury or illness to faculty, staff, students, and the public,
- continuously improves operations, with the goal of meeting or exceeding safety, health and environmental regulations, rules, policies, or consensus standards, and
- employs innovative strategies of waste minimization and pollution prevention to reduce the use of toxic substances, promote reuse, and encourage the purchase of renewable, recyclable and recycled materials.

The intent of this statement is to promote environmental stewardship, protect health, and encourage safe work practices within the Iowa State University community. The cooperative efforts of the campus community will ensure that Iowa State University continues to be a great place to live, work, and learn.



Wendy Wintersteen
President

Directory of Service and Emergency Providers

Services

Environmental Health and Safety

2408 Wanda Daley Drive | (515) 294-5359

Iowa State University Occupational Medicine Department

G11 Technical and Administrative Services Facility (TASF), 2408 Pammel Drive | (515) 294-2056

McFarland Clinic PC, Occupational Medicine

1018 Duff Avenue | (515) 239-4496

Thielen Student Health Center

2647 Union Drive | (515) 294-5801

Emergency

Emergency - Ambulance, Fire, Police

911

Department of Public Safety/ Iowa State University Police

Armory, 2519 Osborn Drive | (515) 294-4428

Mary Greeley Medical Center

1111 Duff Avenue | (515) 239-2011

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What Is Ergonomics?

Ergonomics is the study of work. The goal of an ergonomics program is to ensure employees can work comfortably with their workplace tools or tasks, thereby decreasing the risk of injury or illness.

Examples of Ergonomic Injuries / Illnesses

The most common types of ergonomic injuries and illnesses are musculoskeletal disorders (MSDs). MSDs are injuries/illnesses that affect muscles, nerves, tendons, ligaments, joints, or spinal discs. Employees may suffer ergonomic injuries/illnesses when work tasks include reaching, bending over, lifting heavy objects, using continuous force, working with vibrating equipment, and/or performing repetitive motions.

MSD injuries/illnesses are determined by the part of the body affected. If you suffer an ergonomic injury/illness, your doctor may diagnose one of the following common MSDs:

- carpal tunnel syndrome
- carpet layer's knee
- De Quervain's disease
- epicondylitis
- hand-arm vibration syndrome
- herniated spinal disc
- low back pain
- Raynaud's phenomenon
- rotator cuff syndrome
- sciatica
- tendinitis
- tension neck syndrome
- trigger finger





Signs and Symptoms of a MSD

Employees suffering from MSDs may experience lessened grip strength, decreased range of motion, loss of muscle function, and the inability to do everyday tasks. Common symptoms may include:

- back or neck pain
- burning sensation
- fingers or toes turning white
- pain, tingling, or numbness in hands or feet
- pain in wrists, shoulders, forearms, or knees
- painful joints
- shooting or stabbing pains in arms or legs
- stiffness
- swelling or inflammation

Ergonomics Programs at Iowa State University

As part of a comprehensive health and safety program, the Department of Environmental Health and Safety (EH&S) offers Iowa State University (ISU) employees a variety of ergonomic resources.

Employees can choose from ergonomic workstation evaluations, online training, or online resource information. If you would like to learn more about a particular topic, please visit the EH&S [online ergonomics page](#).

Online information includes ergonomic services available to ISU employees, an eBook for information on various ergonomically related topics and material on ergonomic risk factors. Additional links provide information on lifting and computer workstation concerns.

Worksite Evaluation

EH&S offers ergonomic a worksite evaluation for a fee. The purpose of an ergonomic evaluation is to identify occupational injury risk factors and make appropriate recommendations based on current guidelines. To request a worksite evaluation:

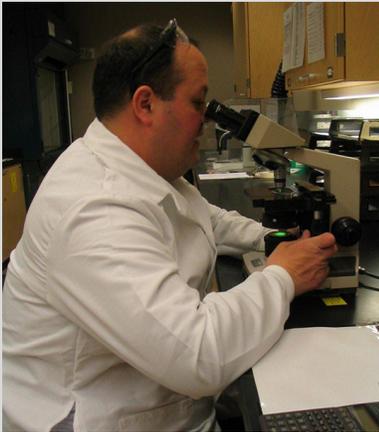
- Inform your supervisor about your concerns and that you would like to schedule an evaluation.
- Fill out the [Ergonomic Questionnaire](#) and submit to EH&S.



- Provide an account number. Basic ergonomic evaluations are available for a fee. Refer to the [Fee Schedule](#) for pricing.
- Call EH&S at (515) 294-5359 to schedule an evaluation.

Causes of MSDs

As is the case with many medical conditions, exact causes of MSDs are not always known. Both non-occupational and occupational factors can contribute to the development of MSDs. Work-related MSDs may be caused or exacerbated by exposure to the following risk factors.



Contact stress

Pressing the body against a hard or sharp edge can result in placing too much pressure on nerves, tendons and blood vessels. For example, using the palm of your hand as a hammer or resting your arms against a sharp counter top or desk edge can increase your MSD risk.

Awkward postures

Posture affects muscle groups that are involved in physical activity. Awkward postures include repeated or prolonged reaching, twisting, bending, kneeling, squatting, working overhead with your hands or arms, or holding fixed positions.

Forceful exertions

Force is the amount of physical effort required to perform a task (such as heavy lifting) or maintaining control of equipment or tools. The amount of force depends on the type of grip, the weight of an object, body posture, the type of activity, and the duration of the task.

Repetition

Repeating the same motions over and over again places stress on muscles and tendons. The severity of risk depends on how often the action is repeated, the speed of the movement, the number of muscles involved and the required force.

Vibration

Operating vibrating tools over extended periods of time may lead to nerve damage. Examples of vibrating tools include sanders, grinders, chippers, routers, drills, and saws.



Ergonomic Features to Look For

There are a number of tool characteristics to look for when creating ergonomically-friendly workplace environments. Consider the following when examining your workplace environment.

Keyboard trays

Ideally, an office workstation should have two work heights, one for writing and document viewing (around 30 inches above the floor) and another for optimal keying height (around 26 inches above the floor). Because most new desks have a fixed work surface height of 30 inches, a keyboard tray can be used to create a lower keying height. As with ergonomic chairs (described below), the acquiring keyboard trays is the responsibility of departments. Contact EH&S at (515) 294-5359, for information on keyboard tray purchases.

Chairs

To accommodate individual body characteristics, consider using an adjustable ergonomic chair. Desirable ergonomic features to consider when choosing a new desk chair include an adjustable backrest, lumbar support, chair height, seat panel depth, and armrests. Other important chair features are discussed in the EH&S' [Ergonomics eBook](#).

If you are considering buying a new chair, Procurement Services at (515) 294-4860, has a number of ergonomic chair models available for purchase and evaluation at the Administrative Services Building (ASB).

Accessory Installation and Furniture Alterations

To schedule ergonomic accessory installation, workstation furniture adjustment, and relocation, contact Storey Kenworthy.

If your office area will be relocated or requires redesign, submit a [Request for Services to FP&M](#) and request that one of their designers assist with the redesign. Design Services can evaluate your work areas and develop an efficient layout for office furniture.

Information and Ergonomics Training

There are a number of resources available for further information and instruction on creating ergonomically-friendly workplace environments. These resources can prove invaluable in creating a better working environment.

Online Training

An online ergonomics training course entitled “Office Ergonomics” is available through [Learn@ISU](#). This course focuses on the prevention of repetitive motion injury, proper workstation configurations, and information on computer-related eyestrain. A “Sprains and Strains” classroom course is also available through the [Learn@ISU](#).

Work-Related Injuries, Illnesses, or Exposures

Iowa State University employees exposed or injured while at work or in the course of employment may seek medical attention at the McFarland Clinic PC, Occupational Medicine Department, 1215 Duff Ave, Ames, IA; (515) 239-4496. Supervisors should call the McFarland Clinic Occupational Medicine Department during regular work hours to schedule an appointment for the employee. Any relevant safety information such as an SDS should accompany the employee to the appointment.

Medical Emergencies

If injury, illness, or exposure is life threatening, dial 911. Be prepared to provide any relevant safety information, such as an SDS. When an employee requires emergency treatment, the incident must be reported to EH&S (515) 294-5359 as soon as possible. Provide assistance to injured or exposed personnel by following the [First Aid Procedures](#).

Reporting

All work related injuries, illnesses, or exposures must be reported to the employee’s supervisor, even when medical attention is not required or is refused by the employee:

An [Incident Report](#) must be completed by the injured employee and/or the supervisor through the ISU Incident Portal within 24 hours of the incident. Upon submission of the report, the supervisor will receive an email requesting information relating to the incident investigation as part of the incident reporting process. The supervisor is asked to reply directly to the email with answers to the questions asked within 24 hours of receiving the email. Questions regarding the form may be forwarded to University Human Resources at (515) 294-3753. Contact EH&S at (515) 294-5359 for guidance and assistance, especially when a serious injury or major loss occurs.

For additional information access [EH&S accidents and injuries page](#).



Student Accidents and Injuries

Students not employed by Iowa State University who are exposed or injured in the classroom or laboratory should seek medical attention at the Thielen Student Health Center, 2647 Union Drive, (515) 294- 5801. All accidents and injuries sustained by Iowa State University students while in academic classes or events sponsored by the university must be reported to Risk Management by the student or a university representative using the [ISU Incident Portal](#).

OSHA Ergonomic Regulations

There are no Occupational Safety and Health Administration (OSHA) ergonomic regulations at this time. However, ergonomic hazards must still be addressed in the workplace. Under Section 5(a)(1) of the Occupational Safety and Health Act, OSHA requires that ISU provides employees workspace free from recognized hazards that are causing or are likely to cause death or serious physical harm to its employees.

University Nondiscrimination Statement

“Iowa State University does not discriminate on the basis of race, color, age, ethnicity, religion, national origin, pregnancy, sexual orientation, gender identity, genetic information, sex, marital status, disability, or status as a U.S. veteran. Inquiries regarding non-discrimination policies may be directed to Office of Equal Opportunity, 3350 Beardshear Hall, 515 Morrill Road, Ames, Iowa 50011, Tel. 515 294-7612, email eooffice@iastate.edu”