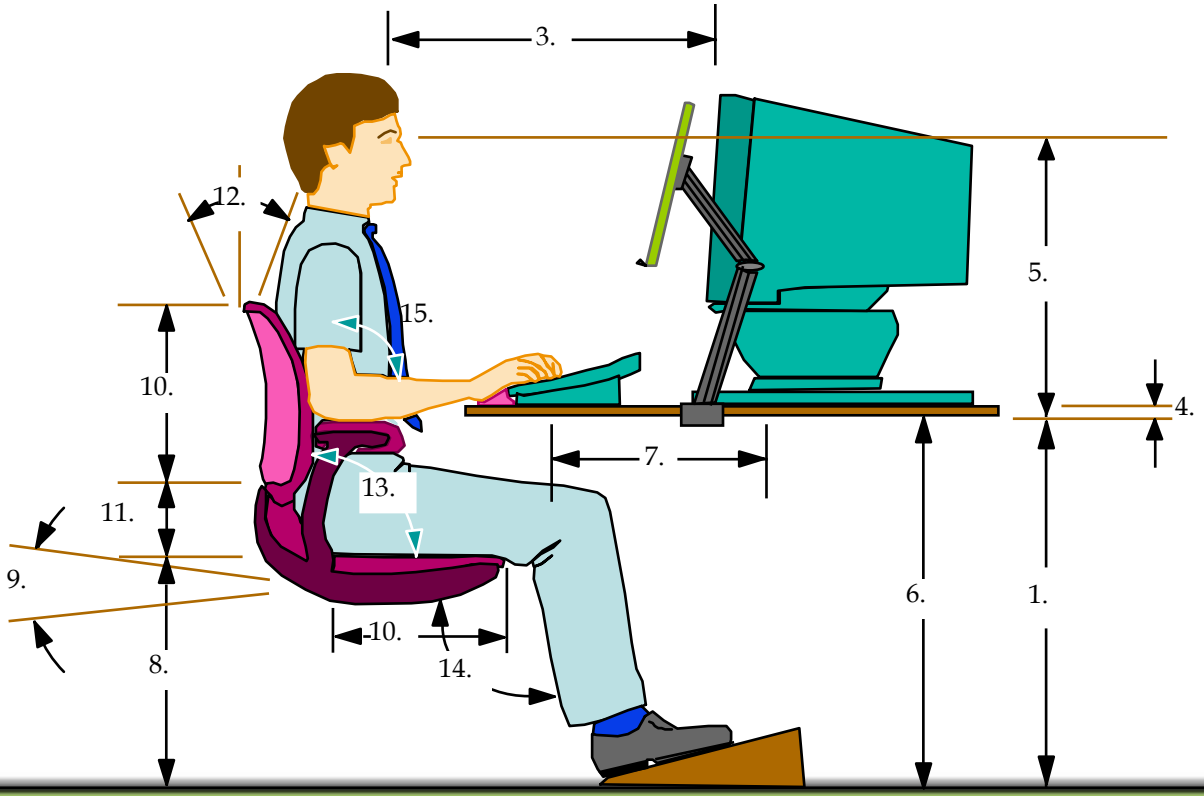
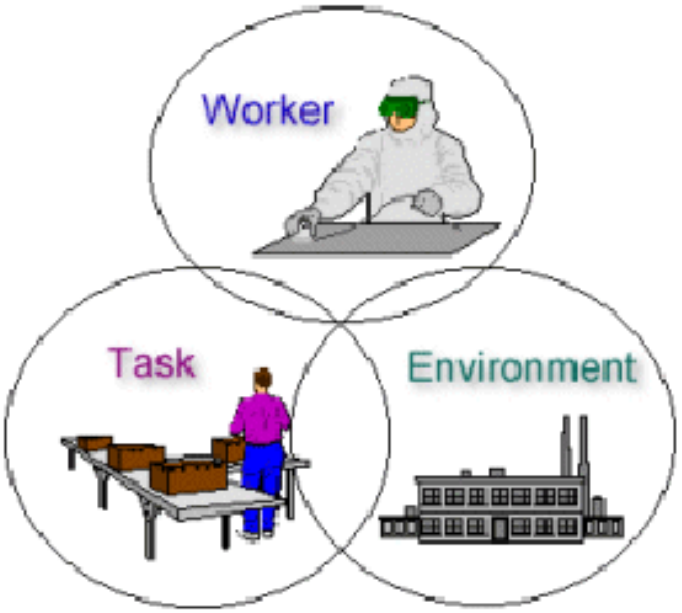
Ergonomics



What is Ergonomics

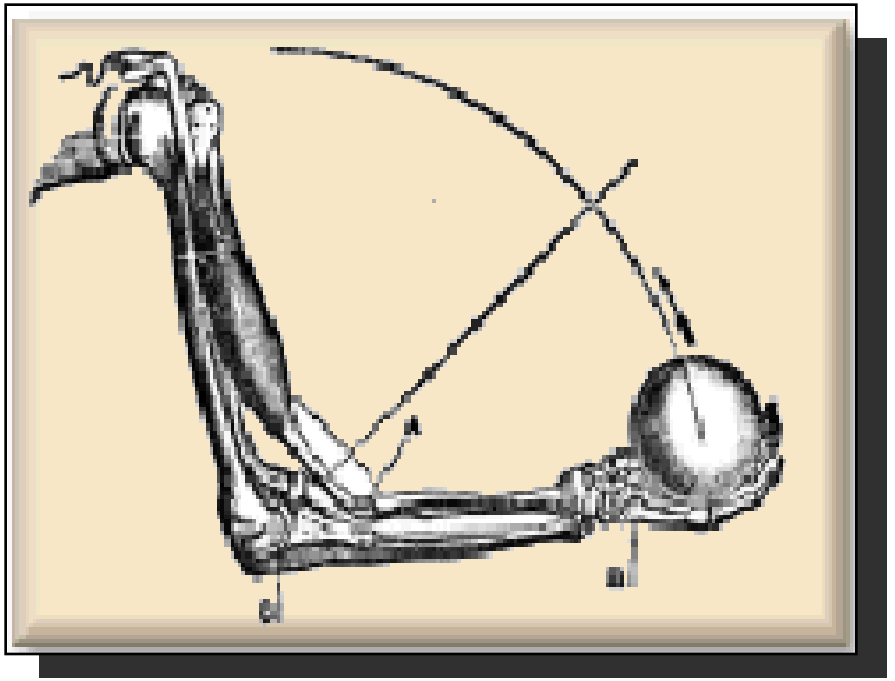
Ergonomics is the science of adjusting environments, tasks, or procedures to fit the individual.



Musculoskeletal Disorders

Improper ergonomics can result is your developing a Musculoskeletal Disorder(MSD)
MSDs can affect your:

- Muscles
- Tendons
- Nerves
- Joints
- Ligaments
- Cartilage
- Nervous system



Musculoskeletal Disorders

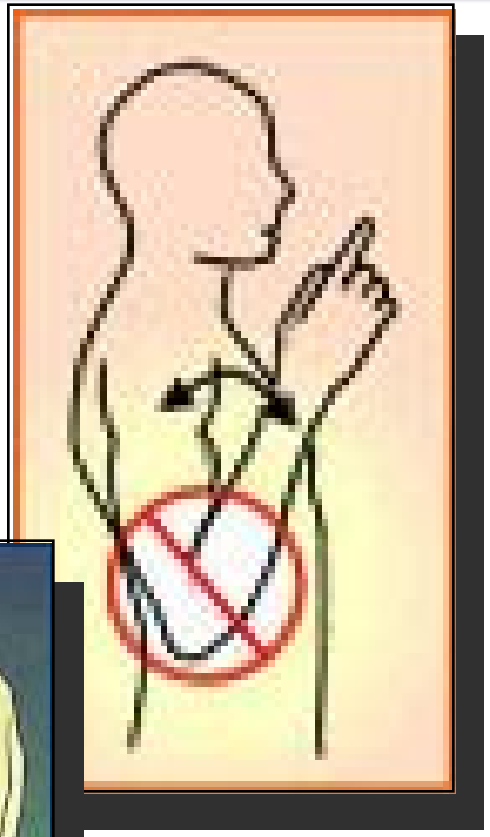
MSDs can impact almost any part of your body, including:

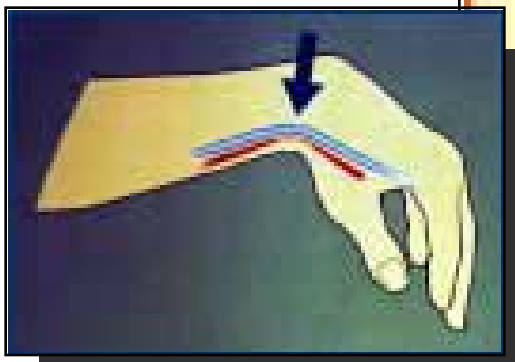
- Upper torso (back, neck, and shoulders)
- Upper extremities (arms, wrists, and hands)
- Lower extremities (legs and feet)

Musculoskeletal Disorders

Signs and symptoms of MSDs include:

- Pain, numbness, and tingling
- Cramping
- Swelling or stiffness of joints
- Reduced range of motion





Common types of MSDs include:

- Cumulative trauma disorders
- Repetitive stress injuries
- Repetitive motion injuries

MSD Risk Factors

Factors that contribute to the development of MSDs include:

- Awkward postures
- Repetitive motions
- Forceful exertions
- Contact stress
- Vibration

Awkward Posture

Posture is important. Awkward postures are a risk factor for MSDs.

Awkward postures include bending, twisting, and working with your hands above your head or your elbows above your shoulders.

Repetitive Movements

Some jobs may require you to perform the same movements over and over again.

Repetitive movements can irritate your tendons and increase pressure on your nerves.

Force

Force is the amount of muscular effort used to perform work.

Exerting large amounts of force can result in fatigue and physical damage to your body.

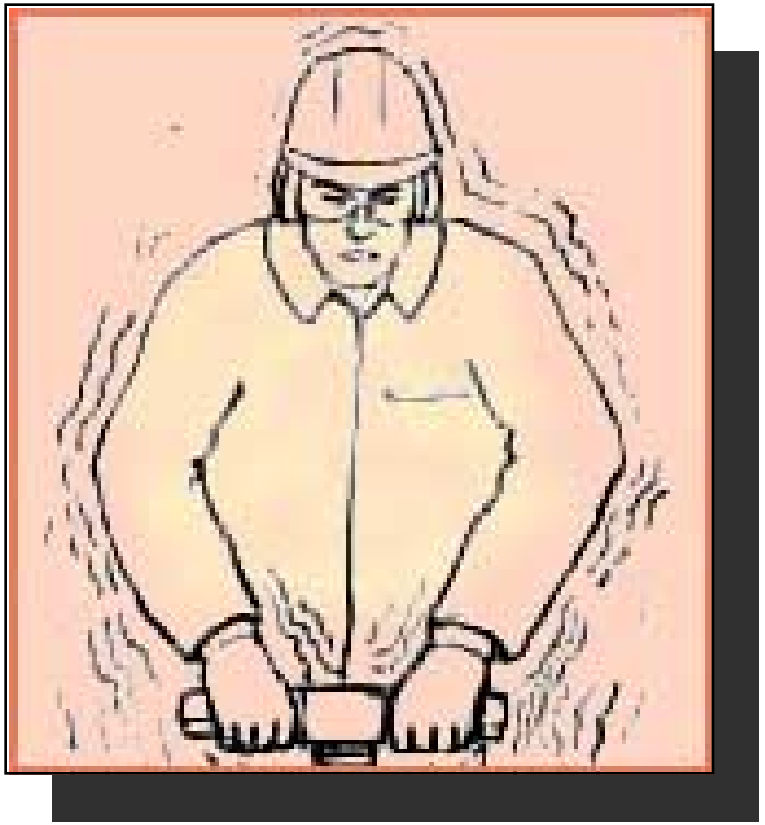
Contact Stress

Contact stress occurs internally when a tendon, nerve or blood vessel is stretched or bent around a bone or tendon. External contact stress occurs when a part of your body rubs against a sharp or hard object such as the edge of a desk or table.

Vibration

Excessive vibration can:

- Decrease blood flow
- Damage nerves
- Contribute to muscle fatigue



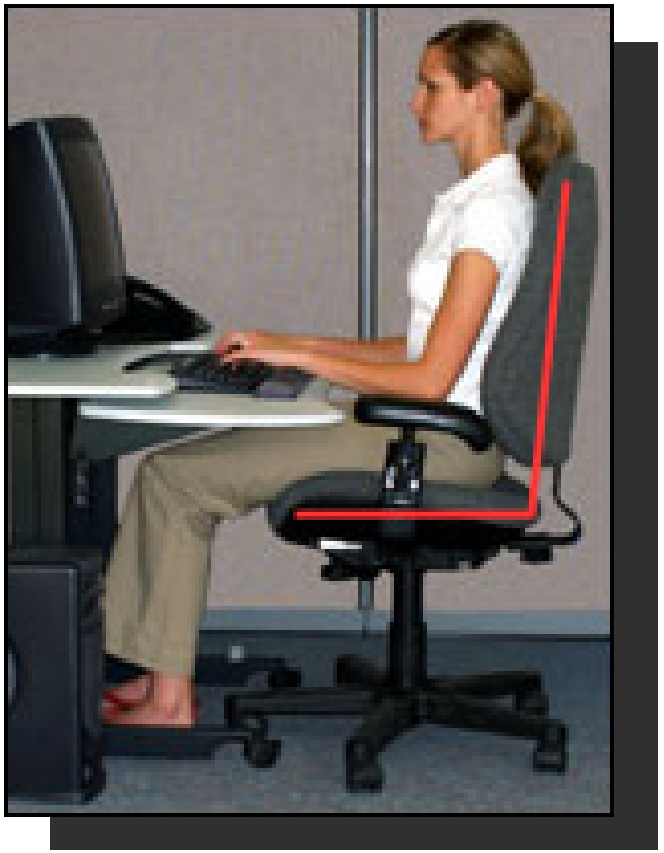
Personal Risk Factors

There are also personal risk factors that can contribute to the development of MSDs. These personal risk factors include:

- Physical condition
- Psychological stressors
- Gender
- Age
- Body size
- Medical condition

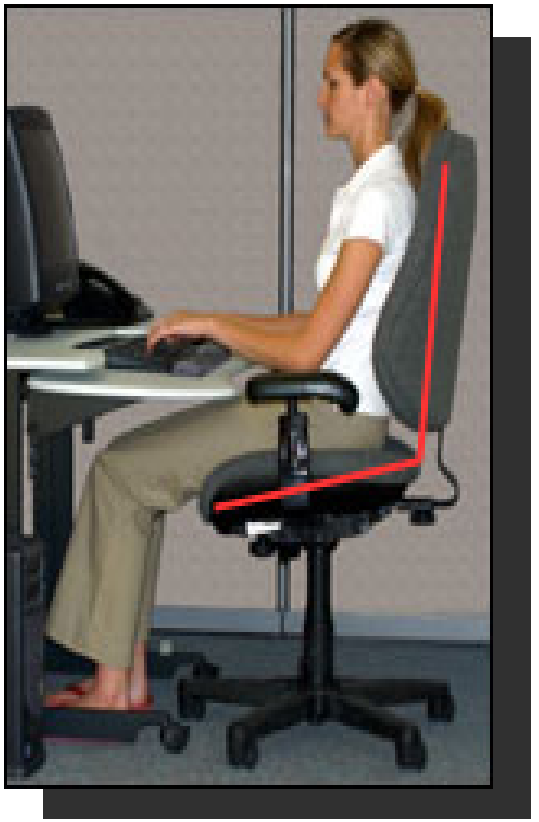
Good Posture

A good working position is an upright sitting posture, in which the torso and neck are approximately vertical, the thighs are approximately horizontal, and the lower legs are vertical.



Good Posture

Another good working position is a declined sitting posture with the buttocks higher than the knees and the angle between the thighs and the torso is greater than 90 degrees.

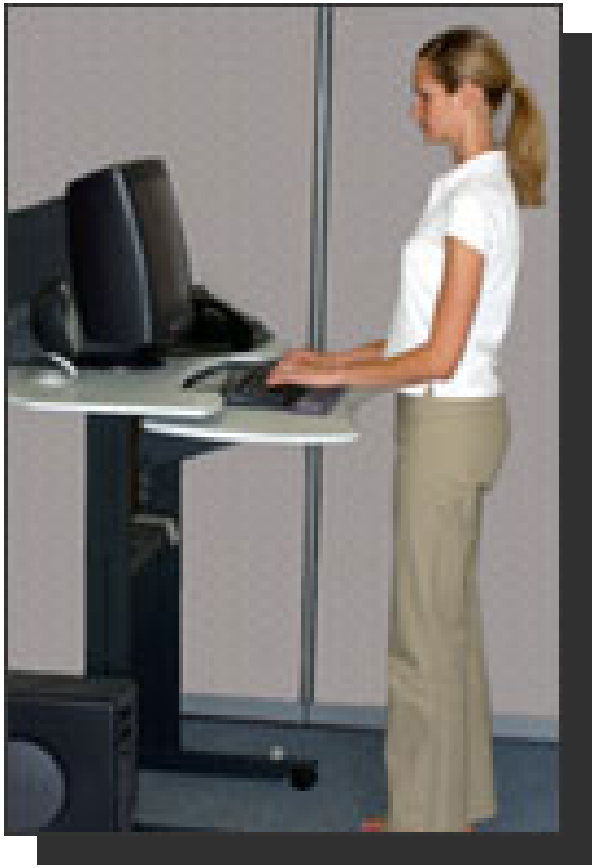


Good Posture

In the reclined sitting posture, the torso and neck are straight and recline between 105 and 120 degrees from the thighs.

Good Posture

An upright standing posture is a good working position. In this position the legs, torso and neck are approximately in-line and vertical.



Lifting

The most common work-related medical problem is lower back pain.

This is often a result of poor lifting techniques. If you have to do any lifting:

- Think before you lift!
- Test the load and ask yourself – "Can I lift it safely?" If not, get help!
- Make sure there is nothing in your path that could cause you to fall.

Lifting

Lifting safely means:

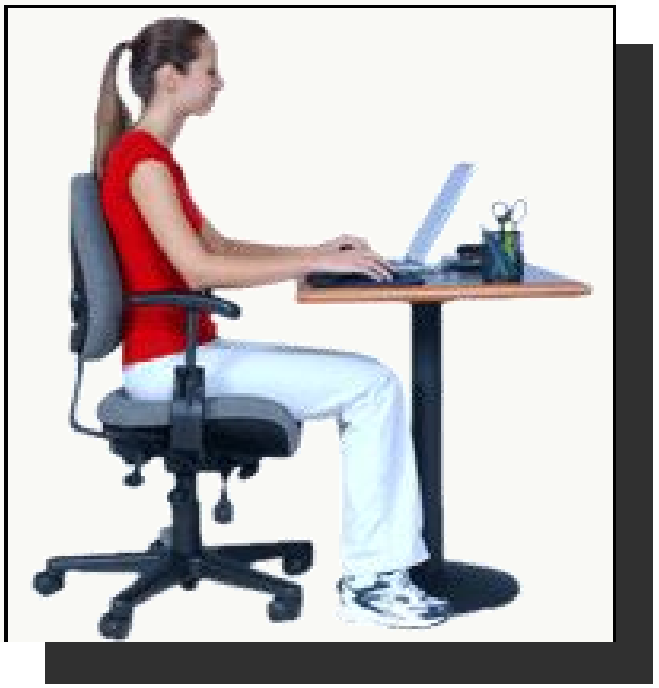
- Squat to bend at the knees
- Keep your head up
- Get a good grip with both hands and hold it close to the body
- Lift smoothly using your legs
  - Do not use your back
- Turn with your feet, don't twist your back

Ergonomics

Ergonomics In Action

Understanding and practicing good ergonomics can:

- Make your job less stressful on your body
- Increase your safety and productivity
- Create a more comfortable environment
- Prevent injuries and illnesses



Summary

Here are some actions that will help you StartSafe and StaySafe when it comes to ergonomics:

- Adjust your tasks or environment to fit you
- Reduce risk factors
- Avoid unnecessary movements
- Always practice safe lifting
- Use the tools that are right for you
- Perform light stretching and other exercises before and during work