

Computer technology is changing the nature of the workplace. About seventy percent of the American workforce now sits on the job. This increasingly sedentary work-style can result in a variety of adverse health effects. Common complaints include excessive muscle fatigue, musculoskeletal disorders (MSD), eye strain, stress, and headaches. Research has shown that these symptoms can result from problems with the equipment, work stations, office environment or job design, or from a combination of these factors along with various lifestyle causes outlined below:



Lifestyle Causes

- **Dehydration:** Healthy muscles are comprised of at least 70% water. Dehydration causes muscle fatigue, strain, tendonitis, and other disorders of the movement system. Soda pop is not water, it's liquid junk.
- **Poor Nutrition:** Eating too many "empty" calories that don't contain the nutrients our body needs is a primary cause of injuries and disorders of the movement system. Tobacco contains toxins that increase inflammation.
- **Inflammation:** Inflammation causes many lifestyle-related disorders, including heart disease and movement system disorders. Too much sugar and fat within our diet can contribute to inflammation.
- **Fatigue:** Adequate amounts of rest and sleep are very important ingredients for our health.
- **Poor Fitness:** Poor levels of physical fitness increases the risk of disease and injury.

*Prevention is a **shared** responsibility! The company is responsible for a safe work environment and procedures, and all workplace athletes are responsible for using their body properly and keeping their body fit for work.*



Ergonomics is about working smarter! An ergonomics improvement process is part of management's commitment to maximize efficiency and to limit worker fatigue and discomfort.

Proper warm-up & body mechanics will reduce daily fatigue and give you more energy left over at the end of the day! We are ALL athletes in life, so we need to warm-up like athletes to improve our performance and to reduce risk of injury. We should also plan to work smarter... not harder! Proper body mechanics should always be used to avoid excessive fatigue and injury.



Drinking plenty of water is one of the most important things you can do for your health! Healthy muscles are comprised of at least 70% water. Dehydration of the muscles and tendons is a primary cause of muscle fatigue, strain, tendonitis, and other disorders of the movement system. How much water do you need every day? Your Body Weight \div 2 = # oz. of water per day (Example: 160 pounds \div 2 = 80 oz. of water per day)

Healthy eating is one of the most important weapons that we have to fight against injury and illness. The foods we choose to eat determine what our bodies look like on the outside and how well our body functions on the inside. Eat fewer "empty" calories from dead foods, and eat more calories from living foods. Living foods include fruit, vegetables, nuts, and seeds. Living foods are harvested. Dead foods are processed and not good for you.



Adequate amounts of **rest and sleep** are very important ingredients for our health. When we don't get enough sleep, increased release of stress hormones raises the level of inflammation in the body. If rest and sleep deficits persist, we become more vulnerable to injuries and chronic diseases. Sleep experts generally agree that most adults require between 6.5-9 hours of sleep each day to maintain optimal health and safety.

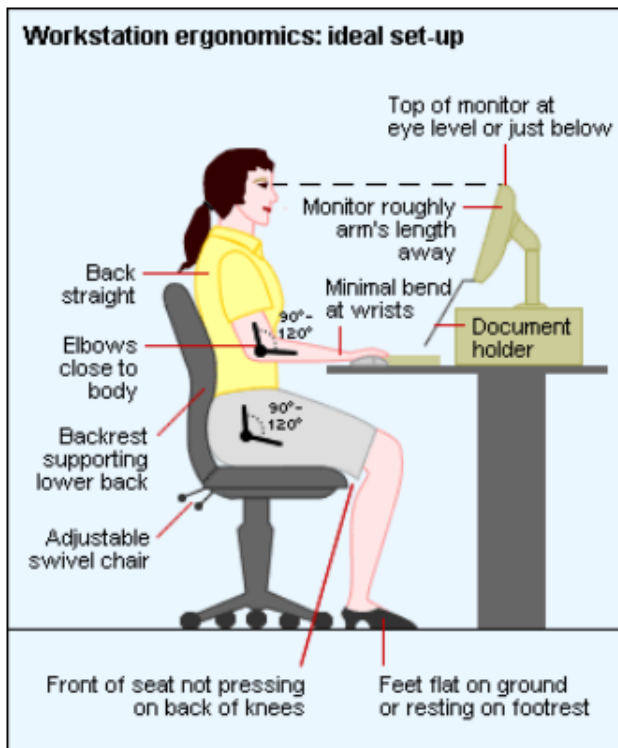
We need to maintain our **physical fitness** levels to prevent injuries and illness. There's a correlation between poor levels of physical fitness and increased risk of disease and injury. The lower the level of fitness, the higher the risk of injury. Four types of exercise for your fitness plan: 1) Aerobic or cardiovascular exercise, 2) strength training, 3) stretching exercise, and 4) relaxation exercise.



Workplace athletes can use **ice or cold therapy** to control fatigue and soreness after activity. Ice application should be between 15 to 20 minutes applied directly onto the skin of the affected area. An initial aching will be felt when the ice is on the skin. After 5 minutes, this should go away as the ice takes effect. Ice is a great anti-inflammatory! Never use heat after activity.

Vitamin & mineral supplements are not a substitute for healthy eating, but they can fill in the gaps and help combat fatigue and inflammation. Experts recommend three daily supplements: 1) a quality multivitamin and mineral supplement, 2) a vitamin D supplement with calcium and magnesium, and 3) omega-3 fatty acids





Seating

- Chair should be vertically adjustable and on a five-point base.
- Chair should have an adjustable lumbar (low back) support with a backrest that provides adequate support for your back.
- Chair seat pan should have adequate width and depth to provide for good fit, and the cushion should provide adequate comfort.
- Chair seat pan forward tilt and depth (forward and backward) adjustability is a plus.
- Chair seat pan should have a rounded front that does not pressure the back of your knees and legs.
- Chair should allow for proper body positioning with knees at or below the level of your hips, and feet resting flat on floor or supported by footrest.
- Chair armrests (if any) should support your forearms and not interfere with swivel or movement of the chair

Monitor

- The screen should be located directly in front of you so there is no twisting of your head or neck).
- The top line of screen should be at or slightly (0-30 degrees) below eye level, and located at least arm's length away from you.
- You should be able to clearly read the screen without bending your head, neck or trunk forward/backward.
- The monitor should be in a location that eliminates glare on the screen which might cause you to assume an awkward posture to read screen.
- The monitor should be placed at a right angle and/or away from windows and task lights to avoid glare and bright light directly behind the screen.

Keyboard and Mouse

- The keyboard and mouse locations should allow you to keep your upper arms and elbows close to body.
- There should be weight bearing support for your arms (chair arms, desktop, or wrist rest) when you are using your keyboard and mouse.
- The keyboard position and angle should allow for a neutral wrist posture so hands are in a straight line with forearms (not bent up/down or sideways toward little finger).
- Your arms and wrists should rest upon surface areas (chair arms, desktop, or wrist rests) that are absent any sharp or hard edges

Other Ergonomic Considerations

- There should be adequate desktop space available to perform job tasks without twisting, side bending, or reaching.
- There should be adequate clearance for your feet, knees, and legs, and enough space to allow you to swivel your chair (without leg obstruction) to perform work tasks.
- A headset should be provided if your job requires frequent telephone use and phone communication is combined with hand tasks such as typing or writing.
- A document holder to position hard paper copies in a vertical orientation should be provided if your job requires frequent viewing of documents while entering data into computer. The document holder (if provided) should be placed at about the same height and distance as monitor screen.