

# Safety at Work

## Permafold®



### Topics

1. Injury Prevention
2. Ergonomics & Musculoskeletal Disorders
3. Back Pain
4. Carpal Tunnel Syndrome
5. Tendinitis
6. Workstation Exercises



Reviewed and Approved by the Senior Medical Advisory Board

This Permafold® is not meant to take the place of expert medical care or treatment. Follow your doctor's or health care provider's advice.

## 1. Injury Prevention

Most workplace injuries can be prevented. What you need to do depends on the job you do and the hazards you are exposed to. Know and follow your workplace's safety measures, such as ones set by the Occupational Safety and Health Administration (OSHA).



### General Workplace Safety Tips

- Help prevent slips and falls.
  - Keep walk areas free from clutter. Secure telephone and electrical cords to prevent tripping.
  - Wear nonskid shoes or footwear with a tread pattern and soles to prevent slips, if needed.
  - Keep walking surfaces dry and free of water, grease, etc.
  - Use proper lighting. Look where you are going. Don't carry things that block your vision.
  - Use handrails where provided.
  - Don't lean back in your chair.
  - Don't climb on chairs or boxes. Use a ladder that allows you to safely and comfortably reach items.
- Don't pile items on stairs or against doors.
- Report injuries and "near misses" of injuries to your supervisor or to security. Follow your company's policies and procedures.
- Don't smoke. Avoid secondhand smoke. Follow your workplace's policy on smoking.
- Learn and follow your workplace's policies on handling violence. Report threats and violent acts to your supervisor.
- Protect your back from injury. (See topic 3.)
- Protect yourself from work-related musculoskeletal disorders (MSDs). (See topics 2 through 6.)

- Follow good health habits so you will be healthy and alert at work.
- Don't drink alcohol before or during work. Don't take illegal drugs or use medicines that cause drowsiness, especially if you operate machines. Find out if and how medicines you take affect you on the job.
- Learn how to respond to accidents:
  - Know where the closest fire extinguisher is and how to use it the right way.
  - Know your closest fire escape route. Plan a fire drill with your coworkers.
  - See that emergency phone numbers (EMS, fire, police, Poison Control Center) are listed near every phone.
  - Take first aid courses for CPR, Heimlich Maneuver for choking, and how to treat injuries.

### Certain Jobs May Require That You Do One or More of These Things

- Wear protective headgear (e.g., hard hats, hair covers, etc.).
- Wear safety glasses with side shields, goggles, face shields, tinted eyeglasses to reduce glare, etc. Keep your eyewear clean and in good condition and replace it if it is broken or has a defect.
- Wear ear plugs or special ear muffs.
- Wear steel-toe shoes or boots.
- Protect your lungs from dust, fumes, gases, vapors, etc. If needed, use the right type of mask or respirator for the material you are working with. Not all masks filter all particles or gases. Have your respirator "fit tested" to assure safe use.
- Use Material Safety Data Sheets (MSDSs), which tell you how to use chemicals safely. These can be on printed pages and in a computer. Know where this data is. Use the information given.



## 2. Ergonomics & Musculoskeletal Disorders

Ergonomics is the science of fitting the job to the worker. The goal of an ergonomics program is to reduce work-related musculoskeletal disorders (MSDs). They are caused from:

- Repeating the same motion
- Awkward or static postures
- Using a great deal of force to do a job
- Vibration

### Proper Computer User Position and Support

*Computer screen should be about 2 feet away from eyes.*

*Use a wrist rest, if needed. Keep wrists straight. Also, put the mouse next to and on the same level as the keyboard.*

*Place top of screen at or just below eye level.*

*Viewing distance*  
*Viewing angle*  
*Place document holder the same height as screen.*

*Keep ears, shoulders, and hips in a straight line. Relax shoulders. Hold elbows close to body.*

*Support lower back. Use a backrest, etc., if needed.*

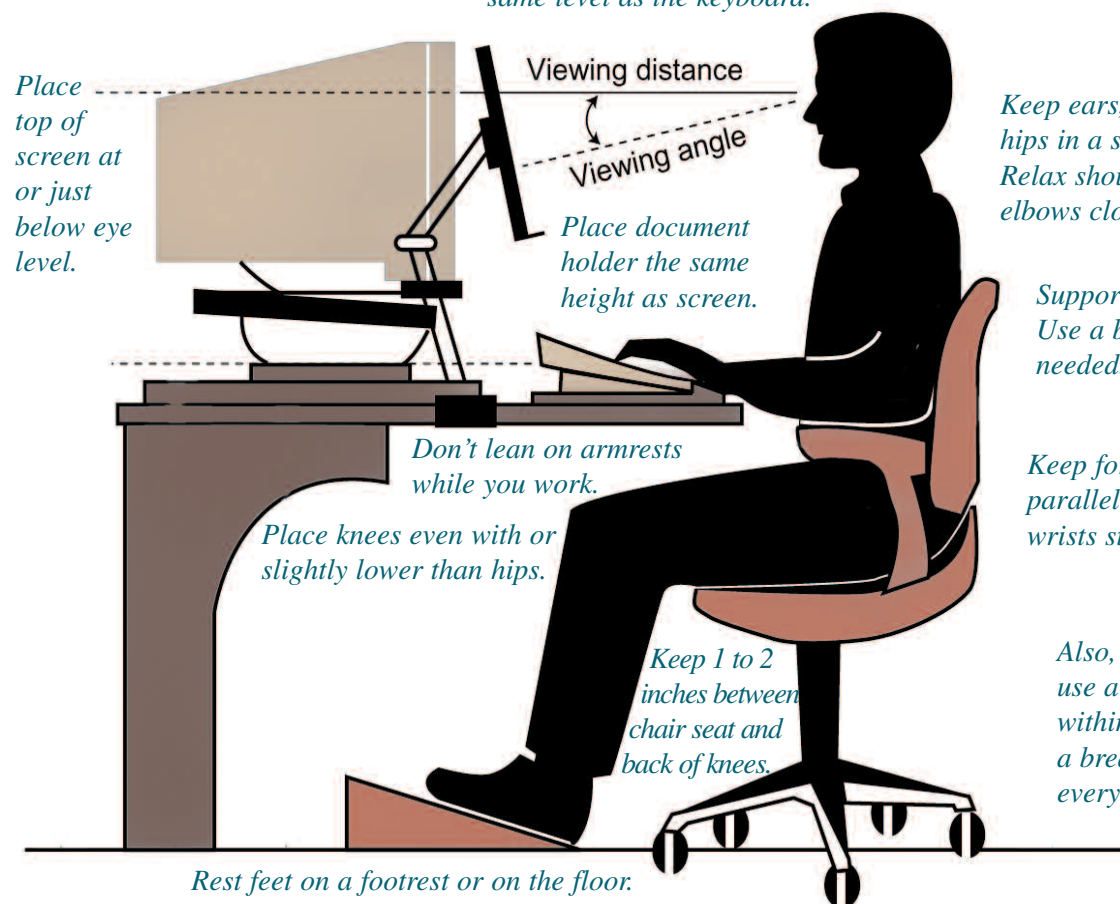
*Keep forearms and thighs parallel to floor. Keep wrists straight.*

*Also, place things you use a lot, like a phone, within easy reach. Take a break from typing every 30 minutes.*

*Don't lean on armrests while you work.*  
*Place knees even with or slightly lower than hips.*

*Keep 1 to 2 inches between chair seat and back of knees.*

*Rest feet on a footrest or on the floor.*



MSDs affect muscles, tendons, nerves, joints, ligaments, cartilage, and discs in the spine. They do not result from slips, falls, or similar accidents. Work-related MSDs can be prevented. See "Proper Computer User Position and Support" below and the "Prevention" sections in "Back Pain" (topic 3); "Carpal Tunnel Syndrome" (topic 4); and "Tendinitis" (topic 5), which are common work-related MSDs. Also, report signs and symptoms of these MSDs and work-related injuries to your supervisor right away. Often, simple changes can keep an MSD from getting worse or prevent future problems.

### Other Workstation Proper Positions

- Keep your head upright and your ears, shoulders, and hips in a straight line.
- Keep your work within reach without having to stretch or strain your arms, shoulders, or back.
- Don't stretch to reach items on an assembly line. Wait for the items to reach you.
- Change positions or tasks often. This avoids repeated stress on a single body part.
- Use the proper tools for the job. Use tools made to reduce vibration and/or pressure, if needed.

## 3. Back Pain

Work-related back pain and injuries are often due to awkward postures, whole body vibration, heavy physical work, and/or improper lifting.

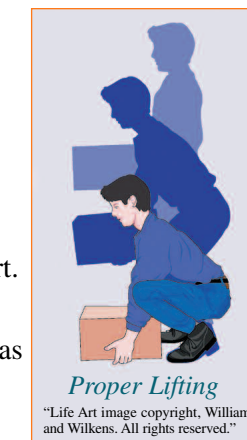
### Signs and Symptoms

- Pain and/or swelling in the back
- Pain, tingling, or numbness in the feet
- Shooting or stabbing pains in the legs

### Prevention

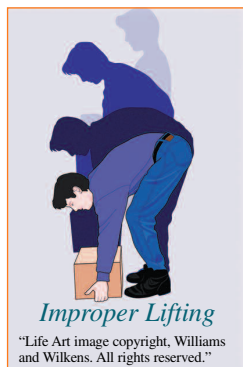
#### Do's for Proper Lifting

- Wear good shoes with low heels.
- Stand close to the thing you want to lift. Plant your feet squarely, shoulder width apart.
- Bend at the knees, not at the waist. Keep your knees bent as you lift.
- Hold the object close to your body.
- Lift slowly. Let your legs carry the weight.
- Get help or use four-wheel carts, conveyors, dollies, etc. to move something that is too big or heavy.
- Wear the proper gear for your job task.



## Don'ts for Proper Lifting

- Don't lift if your back hurts. If you have a history of back problems, get advice on lifting limits from your health care provider.
- Don't lift something that's too heavy.
- Don't lift anything heavy if you're not steady on your feet.
- Don't bend at the waist to pick something up.
- Don't arch your back when you lift or carry.
- Don't lift too fast or with a jerk.
- Don't twist your back when you are holding something.
- Don't lift something heavy with one hand and something light with the other. Balance the load. Don't try to lift one thing while you hold something else. For example, don't try to pick up a computer monitor while you are holding a stack of files. Put the files down. Then use both hands to lift the monitor.



## Treatment / Self-Care

Let your supervisor know if you have signs or symptoms of back pain. See your health care provider for proper diagnosis and treatment. In general, self-care for back pain includes:

- Continuing your regular activities as much as you can, but stopping an activity if it increases pain. Modify any activities and postures that increase stress on the back. Follow the tips in topic 2. Rest your back if you must, but not in bed more than 1 to 2 days, even if your back hurts a lot. Back muscles can get weak if you don't use them. Bed rest should only be used for persons with severe limitations, as directed by their health care provider.
- Taking an over-the-counter medicine to reduce pain (e.g., acetaminophen, aspirin, ibuprofen, etc.)

- Cold Treatment – Apply a cold pack to the painful area for 5 to 10 minutes at a time, for up to 48 hours after back symptoms start.
- Heat Treatment – Apply heat beginning 48 or more hours after back symptoms start. Use moist heating pads, hot-water bottles, hot showers, etc. Use heat for 10 minutes at a time, several times a day. Be careful not to burn yourself.

**[Note:** Spinal manipulation (usually done by a chiropractor or osteopathic physician) may be helpful for some persons in the first month of acute low back symptoms without severe problems. Check with your health care provider about this option. You may need a referral from him or her for your health plan to pay for this. If spinal manipulation doesn't improve symptoms after 1 month, let your health care provider know.]

## 4. Carpal Tunnel Syndrome (CTS)

With this, tendons swell inside the carpal tunnel, the narrow tunnel in the wrist. The swelling puts pressure on the nearby nerves.

### Signs and Symptoms

- Thumb, index, middle, and ring fingers feel numb.
- Tingling feeling in the hand(s)
- Pain in the thumb and fingers. The pain may be worse at night. It can wake you up.
- Pain that starts in the hand and spreads to the arms. The pain can even go to the shoulder.
- Swelling in the fingers, a feeling that your fingers are swollen, or your hands feel weak in the morning
- Trouble holding on to and dropping things
- Having a hard time: Writing with a pencil or pen; opening a jar; buttoning a blouse, etc.



## Prevention

- See topic 2 for proper workstation setup.
- Do not hold an object in the same position for a long time.
- Rest your hands for a few minutes each hour.
- Lift objects with your whole hand or use both hands. Gripping or lifting with the thumb and index finger puts stress on your wrist.
- Exercise your hands and wrists as often as possible. (See exercises C & D in topic 6.)



## Treatment

Let your supervisor know if you have symptoms of CTS. See your health care provider for proper diagnosis and treatment. The sooner CTS is diagnosed, the better it can be treated. Treatment may include:

- Preventing further damage; wearing a wrist brace at night while sleeping and during the day, if needed
- Over-the-counter medicines to reduce pain and swelling (e.g., aspirin, ibuprofen, etc.)
- Physical and/or occupational therapy
- Cortisone shots in the wrist area
- Surgery, if needed

## 5. Tendinitis

This is inflammation of a tendon (tissue that connects muscle to bone). Constant wear and tear on wrists, elbows, and shoulders may create tiny tears in tendons.

### Signs and Symptoms

- Severe or persistent pain or swelling in wrists, shoulders, forearms, knees, etc. The pain hurts more at night and may wake you from sleep.
- Tenderness or stiffness and limited motion in the affected area, such as a shoulder, arm, or wrist

## Prevention

**To Prevent Muscle Tension When You Work on a Video Display Terminal (VDT)**

- Use a chair that supports your back and can be adjusted to a height that feels right for you.
- Take a 15-minute break, if you can, for every 2 hours you use a VDT. Go for a short walk, etc.
- Use the lightest pressure you can on keyboard keys.
- Do stretching exercises of the neck, shoulder, and lower back every 1 to 2 hours.
- Give your body time to recover from what you do at work all day by doing different activities at home. If you work at a computer all day, don't play on your computer at home at night.
- Don't hold the phone between your head and shoulder. This leads to neck pain. Use your hand to hold the phone.



## Treatment / Self-Care

Let your supervisor know if you have signs and symptoms of tendinitis. See your health care provider for proper diagnosis and treatment. In general, self-care for tendinitis includes:

- Taking an over-the-counter medicine to reduce pain and swelling (e.g., aspirin, ibuprofen, etc.)
- Using **R.I.C.E.**
  - Rest the injured area for 24 to 48 hours.
  - Ice the area for 10 to 20 minutes every 2 hours for the first 48 hours or until the area no longer looks or feels hot.
  - Compress the area. Wrap it with an elastic bandage. Do not cut off circulation. Remove the bandage every 3 to 4 hours, leaving it off for 15 to 20 minutes each time.
  - Elevate the area above heart level, if possible.

- Applying heat once the swelling is gone. This is usually after 48 hours of the onset of symptoms.
  - Use a heating pad set on low (adults only) or use a hot-water bottle, heat pack, or hot, damp towel wrapped around the injured area for moist heat. **Note:** Damp heat should be no warmer than 105°F.
  - Apply heat to the injured area for 20 to 30 minutes, 2 to 3 times a day.
- Applying liniments and balms. Follow package directions.

## 6. Workstation Exercises

### A. Shoulder Stretch

Push your shoulders backwards, then up towards your ears, then forward to make circles. Repeat 3 to 5 times. Do it again in the other direction.

### B. Neck Rolls

Touch your chin to chest. Slide your chin from shoulder to shoulder until you feel looser.



### C. Finger Fan

Spread the fingers of both hands wide. Hold for 5 seconds then relax. Repeat 3 times.



### D. Thumb Stretch

Put your hand out like you are going to shake hands. Using the other hand, pull the thumb back for 5 seconds. Relax. Do this 3 to 5 times. Repeat, switching hands. Then, gently pull your thumb to your palm and do it again with the other hand.



## E. Tall Stretch

Reach up as high as you can 3 times, first with one hand and then with the other.

## F. Squeeze a ball

Squeeze a foam ball 5 to 10 times. Put the ball down and stretch your fingers.



## G. Rag Doll

Stand straight, then hang forward from the waist with knees slightly bent. Hang limp for a couple of minutes. Then slowly roll up by straightening your lower back, then your middle back, upper back, shoulders, and neck.

## H. Arm Circles

Extend your arms straight out and move them slowly around in smaller to larger circles, forward then backward. Do this several times.



## For Information, Contact:

National Institute for Occupational Safety and Health (NIOSH)  
800.35.NIOSH (356.4674)  
[www.cdc.gov/niosh](http://www.cdc.gov/niosh)

Occupational Safety and Health Administration (OSHA)  
202.693.1999 or [www.osha.gov](http://www.osha.gov)  
[For emergency situations: 800.321.OSHA (6742)]

For free health information, access the American Institute for Preventive Medicine's Web site:  
[www.HealthyLife.com](http://www.HealthyLife.com) and click on "Online Products/365 Health Topics."