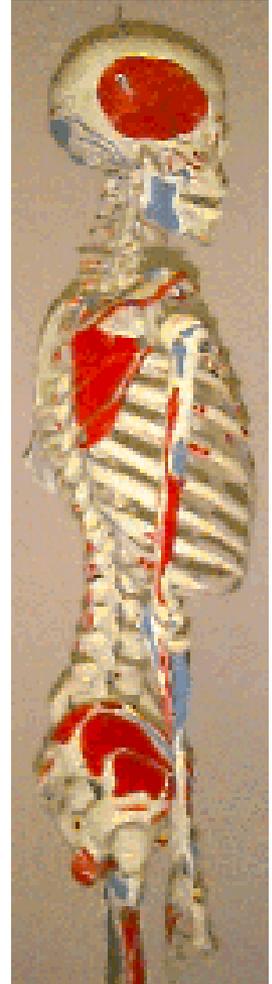


Why Office Ergonomics?



Ergonomics is the science of adjusting your work environment to fit your body and make it most comfortable

- **Musculoskeletal disorders (MSD)** is a condition that affects the part of the body that is subjected to repeated stress, strain or both
- MSD occurs when a part of the musculoskeletal system is called on to work harder, stretch farther, impact more directly or otherwise function at a greater level than it is prepared for. The initial impact to the affected area may be minute, but it is the build up of this trauma that causes the disorder
- **Work-related Musculoskeletal disorders (computer injuries) develop from repeated stress and strain to the body's muscles, tendons, ligaments, joints and nerves. The back, shoulders, neck, arms and hands are most commonly affected.**



Why Office Ergonomics?



Two types of MSDs

- Repetitive strain injuries (RSIs) - Carpal Tunnel, Tendinitis, Lateral epicondylitis (tennis/golfer's elbow)
- Back pain/disorders - spinal disc problems, hernias etc

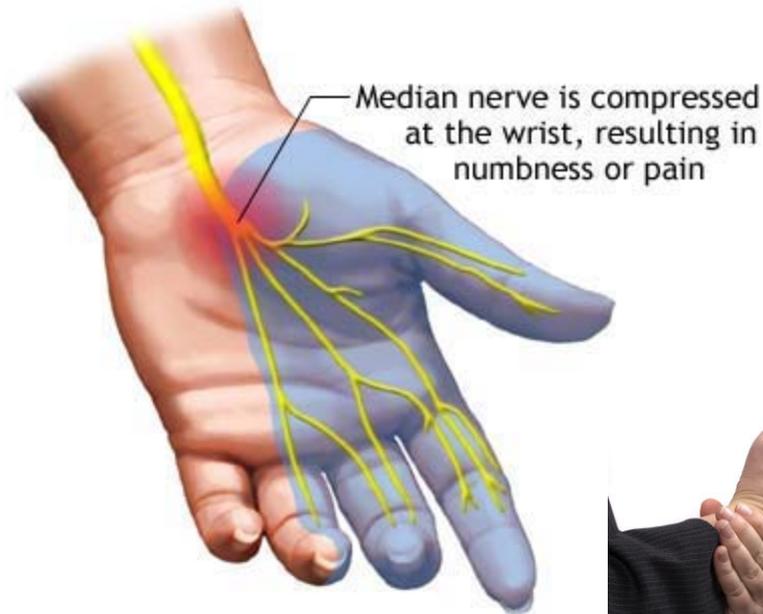
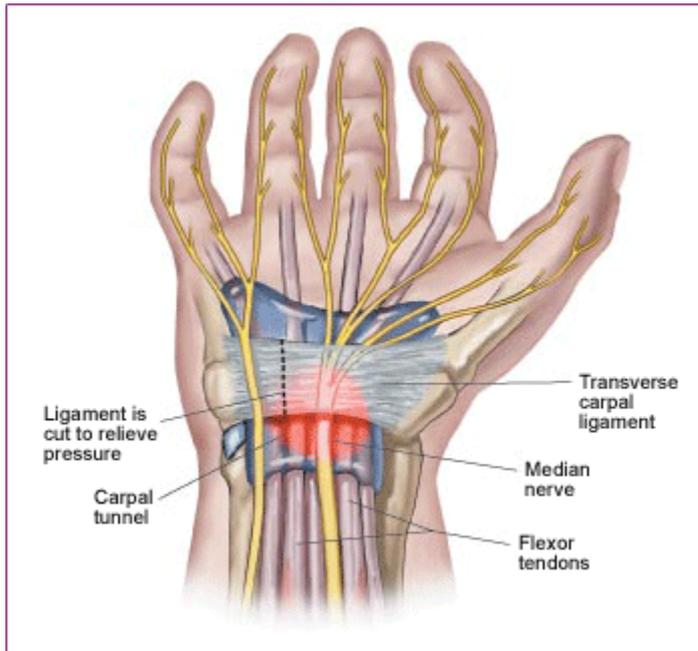
The most common causes of MSDs in the office include:

- Extended periods of unnatural posture while using the computer
- Inadequate lower back support
- Sitting in the same position for extended periods
- Poor ergonomic work station setup



Why Office Ergonomics?

- Repetitive strain injury (RSI) is defined as a cumulative trauma disorder (CTD) stemming from prolonged repetitive, forceful, or awkward hand movements
- Carpal tunnel syndrome (CTS) is a medical condition in which the median nerve is compressed at the wrist. It is a relatively common condition that causes pain, numbness and a burning or stinging sensation in the hand and fingers



Why Office Ergonomics?



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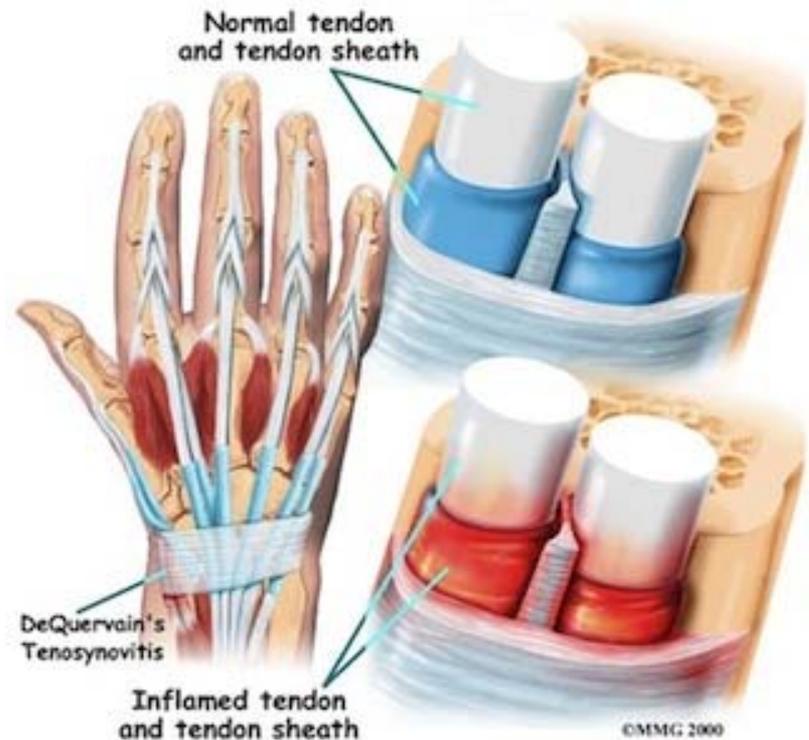


Why Office Ergonomics?



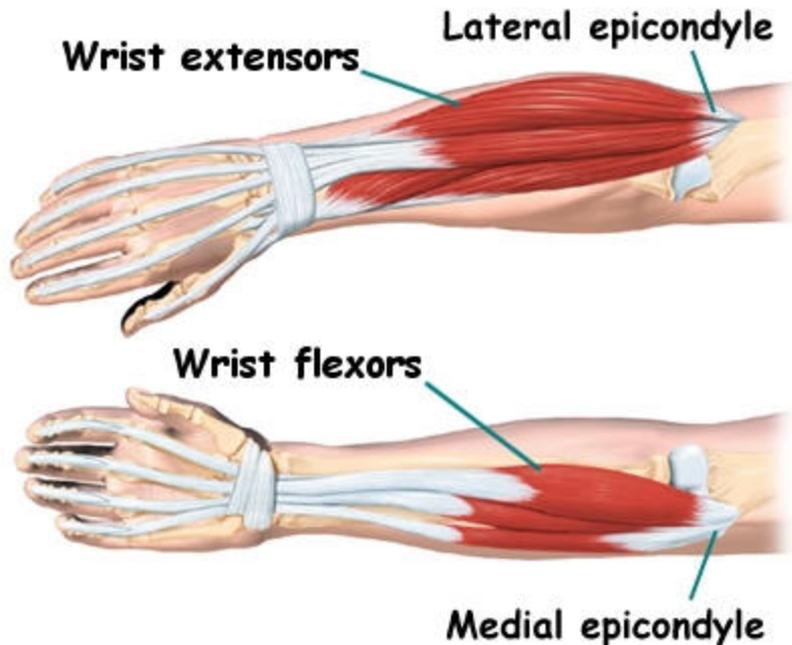
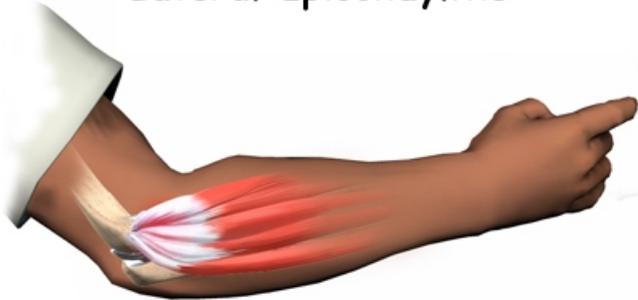
What is Tendonitis?

inflammation of bands of connective tissue that join muscle to bones and joints, due to Physical trauma or hereditary disease



Why Office Ergonomics?

Lateral Epicondylitis



What is Epicondylitis?

It is the inflammation of the tendon located at the bony origin of the inside (wrist extensor muscles) and outside (wrist flexor muscles) edge of the elbow.

They are further classified into

- lateral epicondylitis aka tennis elbow (pain in outside edge of elbow). The damage is specific to the tendons of the muscles that straighten the fingers, pull the wrist back, and turn the palm up
- medial epicondylitis aka golfer's elbow (pain in the inside edge of the elbow). The damage is specific to the tendons of the muscles that close the fingers, bend the wrist forward, and turn the palm down

Why Office Ergonomics?



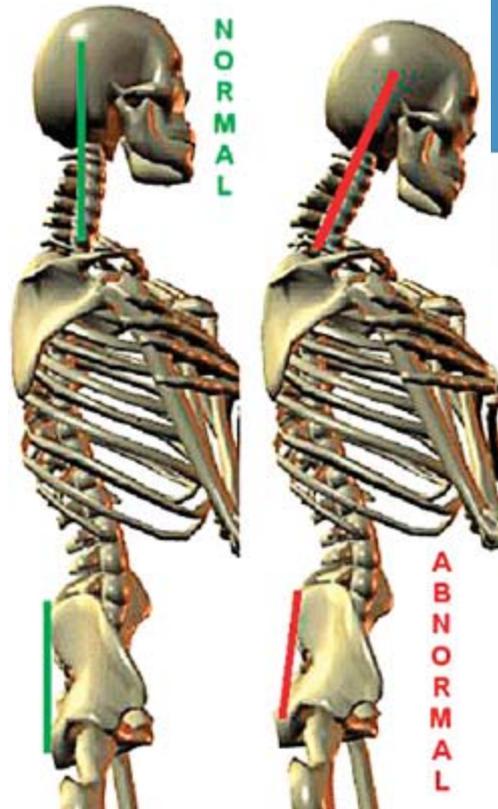
How is Epicondylitis caused in the office?

- Reaching forward for the mouse onto a desk that is higher than the keyboard.
- Reaching for the mouse placed to the far side of the keyboard.
- Gripping the mouse tightly while using wrist motion to activate.
- Planting the wrist down and swiveling the mouse using wrist motion.
- Reaching frequently for the phone or to take heavy manuals or binders down from high shelves.
- Pulling thick files out of densely packed cabinets or drawers.
- **Tennis elbow** is caused by repetitive wrist extension (bending back) resulting in a strain of the associated muscles
- **Golfer's elbow** is caused by repetitive wrist flexion (bending downwards) resulting in the strain of the associated muscles



Why Office Ergonomics?

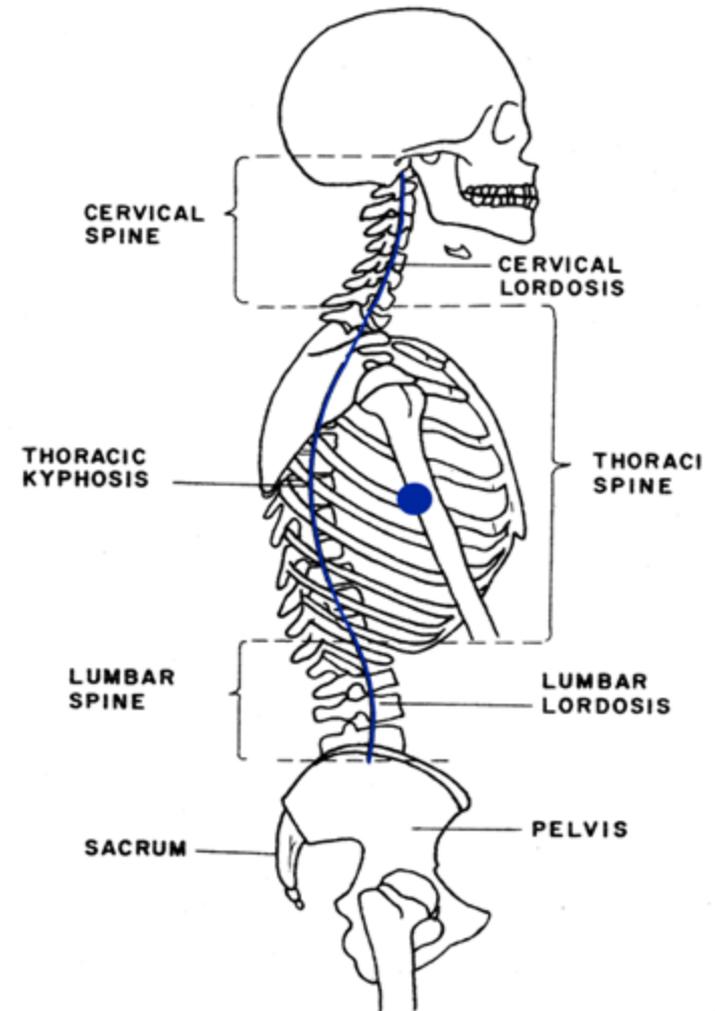
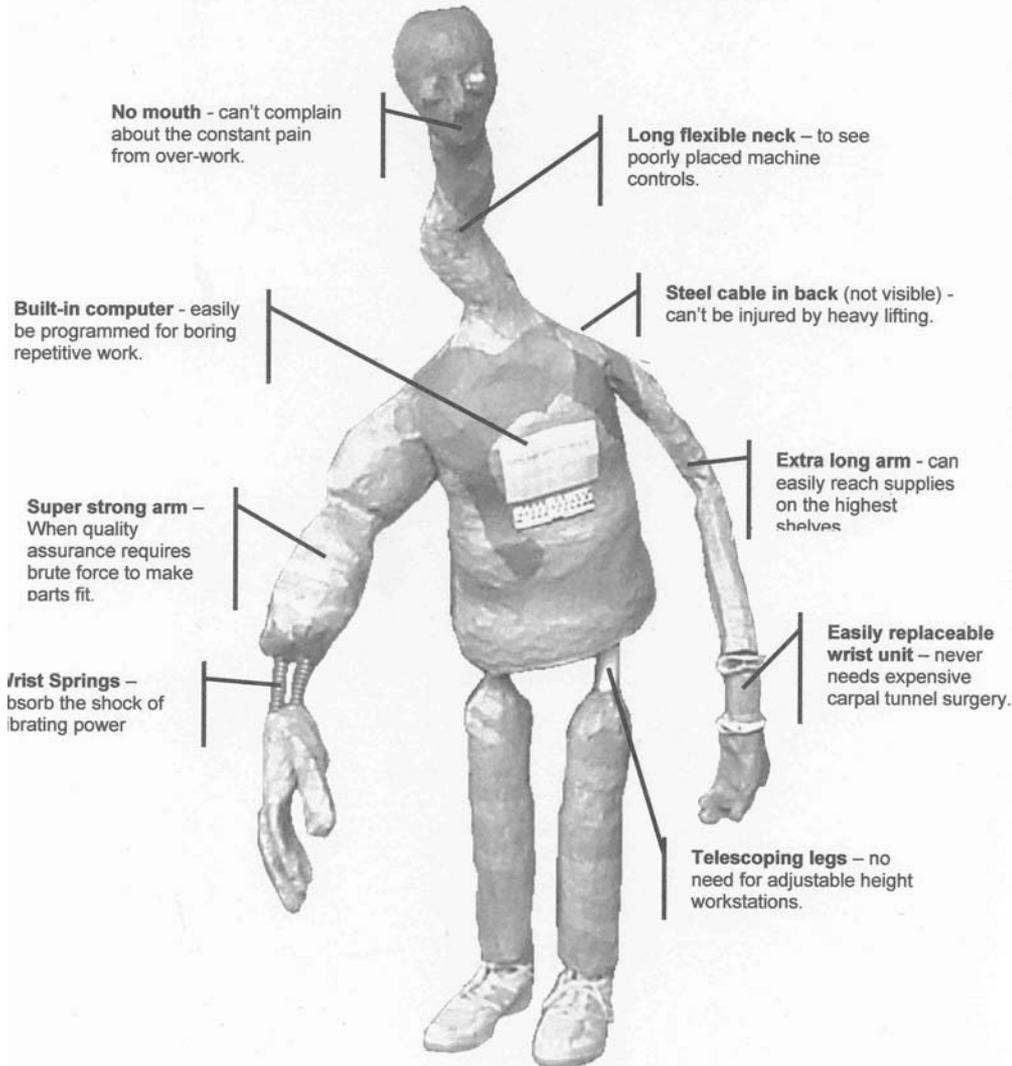
What is Cervical Torticollis (turtle neck, wry neck)? damage to one of the discs in the neck and results in a noticeable limitation of movement and postural deformity



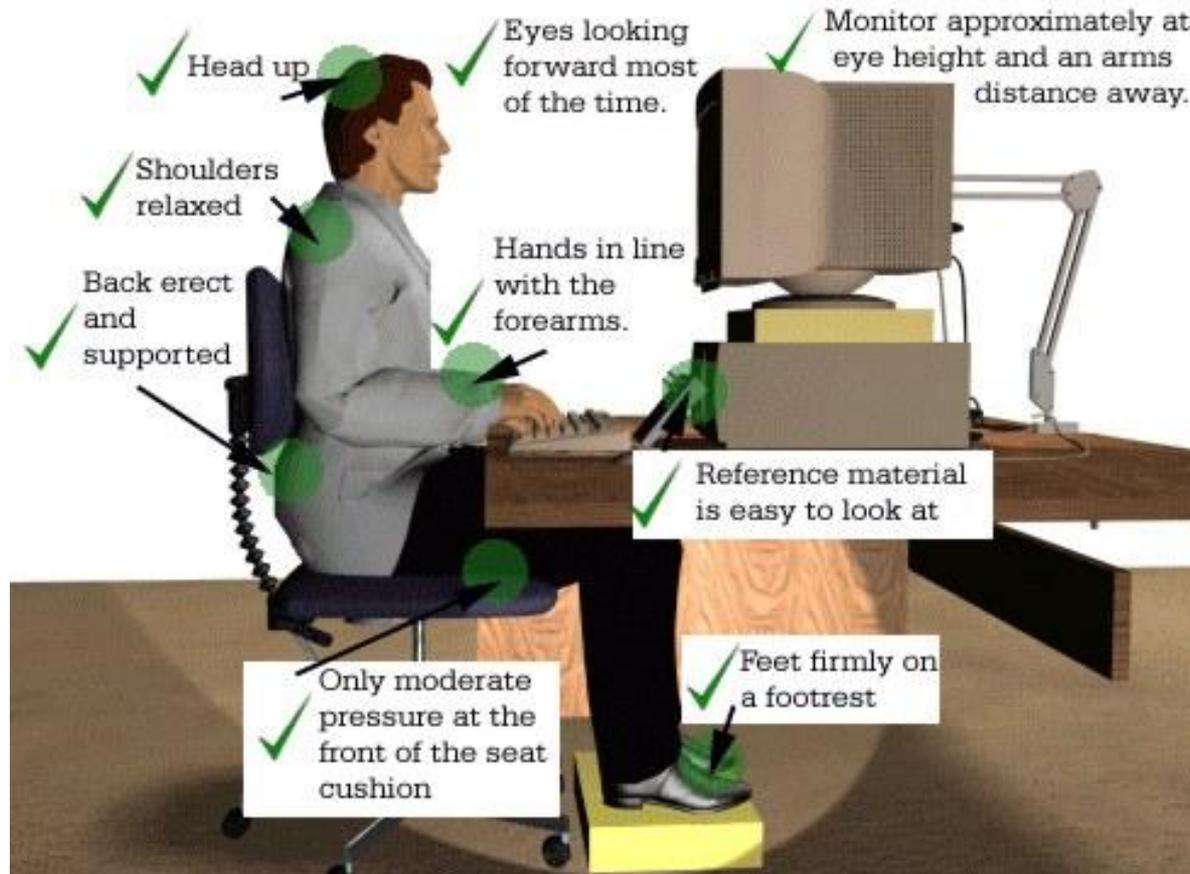
The symptoms are sometimes accompanied with pain radiating down the arm or into the shoulder blade region, and headaches.

Ergoman

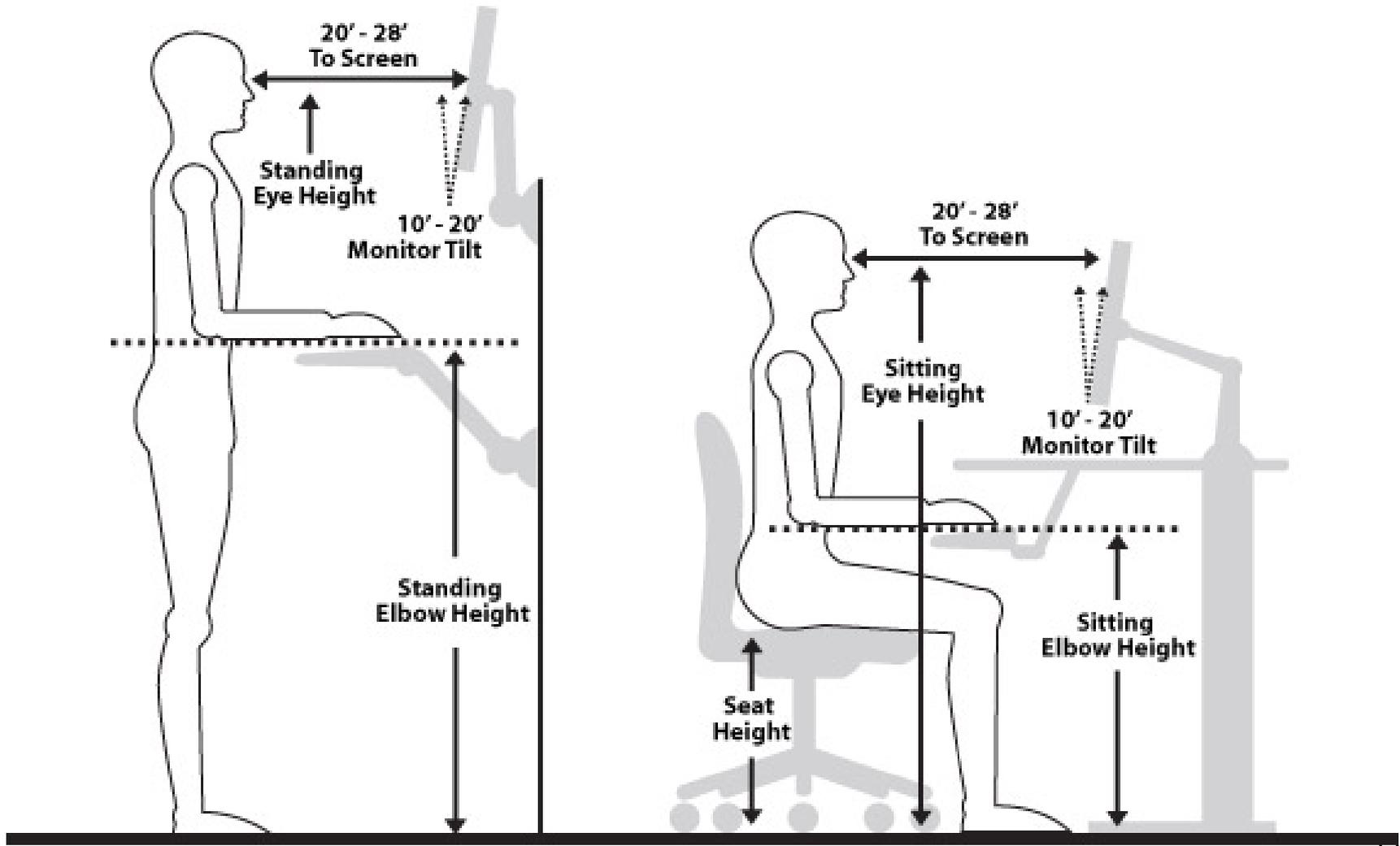
The Perfect Employee



Tips for Office Ergonomics



Tips for Office Ergonomics



Tips for Office Ergonomics

Give your eyes a break by looking at a distant object regularly

Use minimum force when typing on the keyboard

Interrupt long periods of sitting at regular intervals

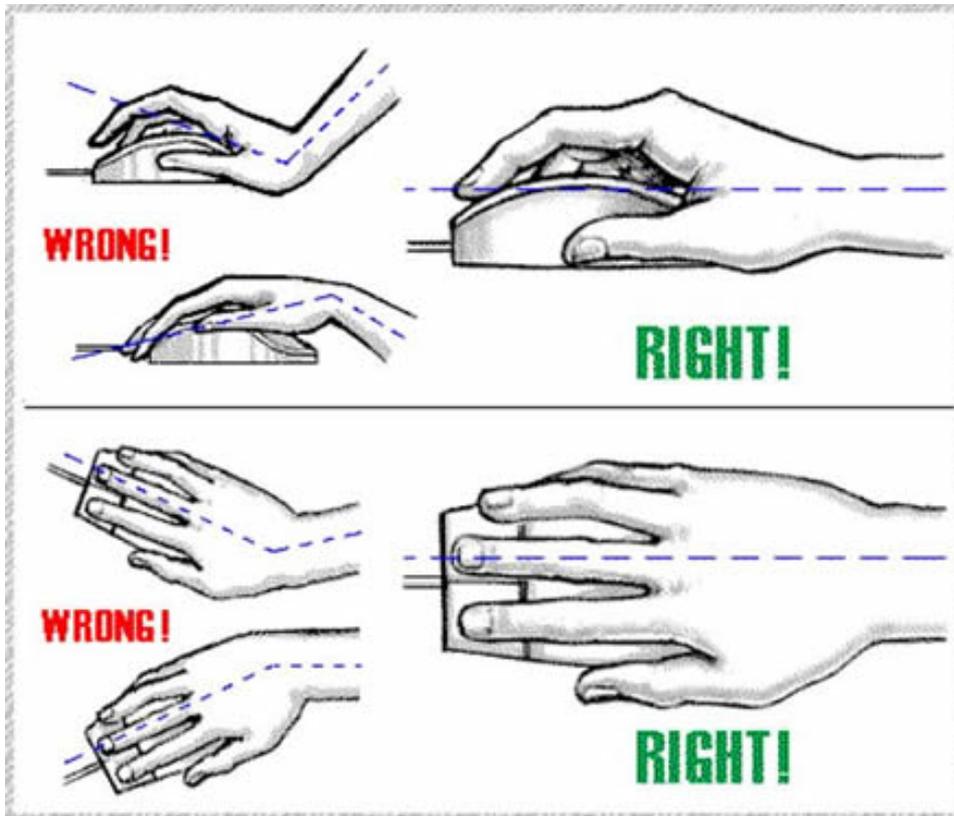
Alternate between tasks that use different muscle groups

Perform stretching exercises regularly



Singapore General Hospital, Occupational Therapy Department

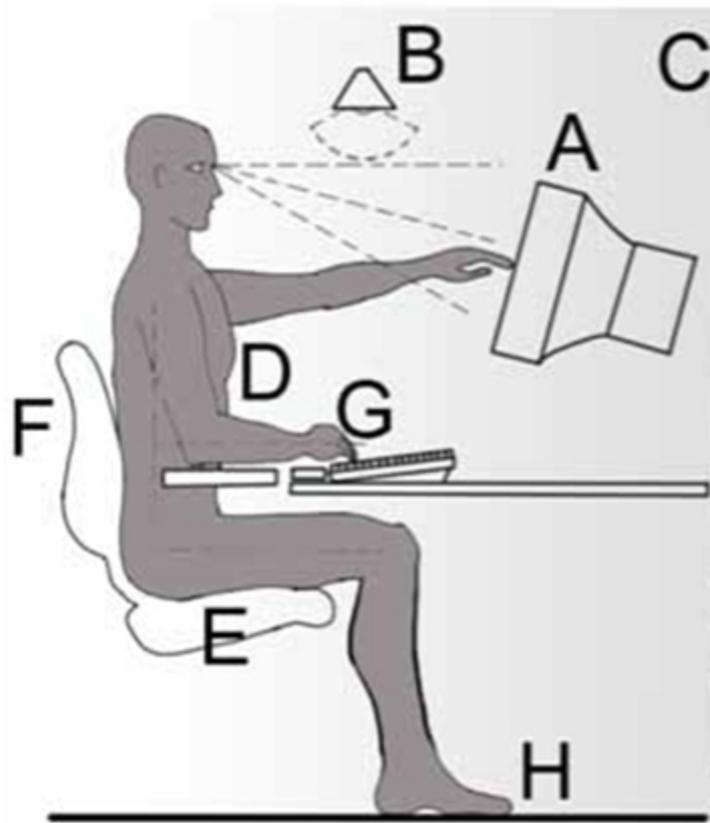
Tips for Office Ergonomics



Avoid CTS!

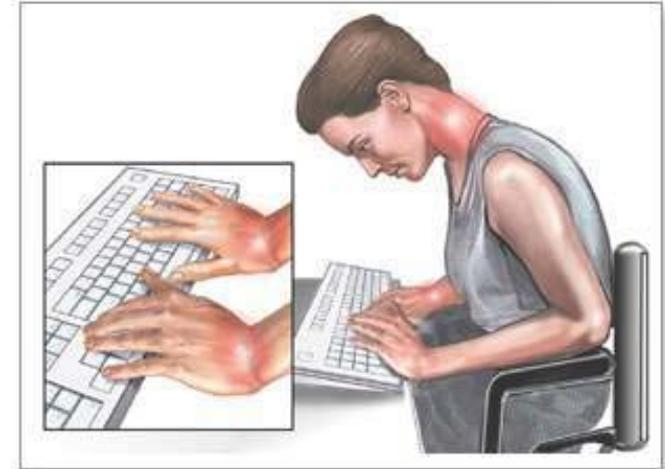


Tips for Office Ergonomics



- A- Position monitor 18" to 24" away (approximately arm's length) and about 15° to 30° below your line of sight.
- B- Don't let light shine in your eyes or on your screen.
- C- Square screen to your line of vision.
- D- Forearms 90° from your spine.
- E- Thighs 90° from your spine.
- F- Use a well-made, adjustable office chair, preferably with padded, adjustable arms.
- G- Use a wrist pad to support your hands when not typing.
- H- Feet flat on the floor.

Ergonomically Correct?



Any activity or situation which makes an existing medical condition worsen



Ergonomically Correct?



Ergonomically Correct?



Don't be a Spock- Adjust your monitor height



Spock's monitor location may lead to discomfort



Uhura's monitor is positioned much better

Position the top of your monitor at or slightly below seated eye height



Favor a slightly lower monitor height if you:

1. Work with hardcopy,
2. View through bifocals or progressive lenses, or
3. Look at the keyboard when typing

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Email lsd.ergo@lbl.gov for assistance

Ergonomic Furniture

