Welcome to PMA Companies WebEx Session

All phones are currently muted.

If you are experiencing any technical difficulties, unmute your phone by pressing *6* and announce you are having difficulties.

We will begin the session shortly.

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PMA Companies
Ergonomics Made Easy

Comfortable Computer Workstation Setup

Disclaimer

IMPORTANT NOTICE: This risk control training program provided by PMA Insurance Group is intended to help support your loss prevention efforts. It is not intended to be complete or definitive in discovering or identifying all hazards associated with your business, preventing workplace accidents, or complying with any safety related or other laws or regulations. You are encouraged to address the specific hazards of your business and have your legal counsel review all of your plans and company policies.

Welcome!

Your presenter:

Steve McCarty
Senior Risk Control Consultant

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Your Participation Options

To ask a question
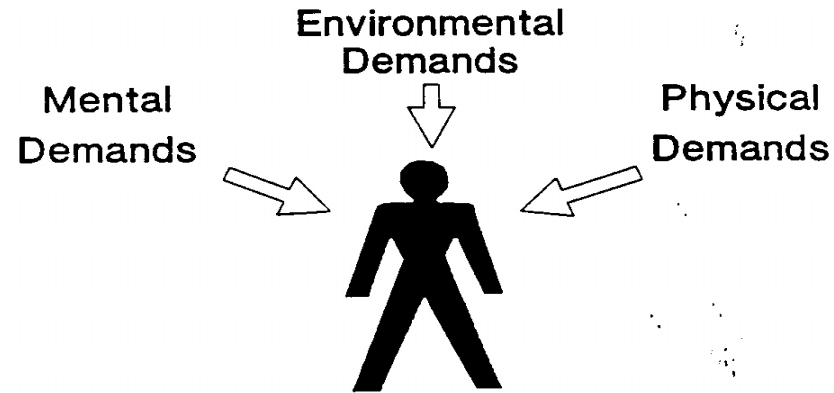
- Raise hand

- Chat

Closing Q & A

To mute and/or unmute your phone, press *6*

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What Is Ergonomics?

- The study of fitting the work to the worker, not the other way around.

- Matching the work to the worker's physical and mental capabilities and limitations.

What is Ergonomics?

Environmental Demands

Mental Demands

Physical Demands

DEMANDS = CAPABILITIES

Task   Operator

Machine

Environment

Results of Implementing Sound Ergonomic Principles

- Decreased Stress

- Decreased Injuries/Illnesses

- Decreased Costs

- Increased Productivity
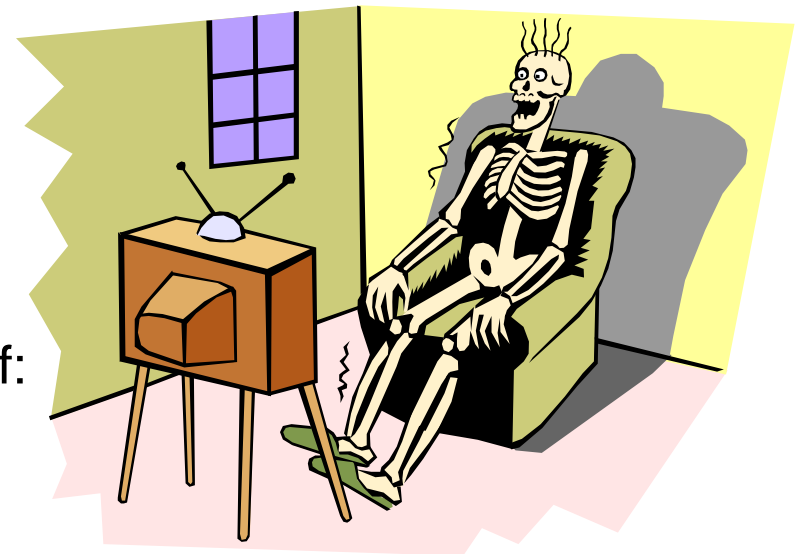
- Increased Profitability

Definitions

- Repetitive Strain Injury (RSI)

- Cumulative Trauma Disorder (CTD)

- Musculoskeletal Disorder (MSD)

Definitions

- Injury to the body's soft tissue
    - Muscles
    - Tendons
    - Ligaments
    - Nerves
    - Discs

- Resulting from a combination of:
    - Repetition
    - Force
    - Long duration
    - Awkward posture
    - Contact stress

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Definitions

Example: Tendonitis--an inflammation of the tendon resulting from overuse of the hand/wrist (as in typing with a computer keyboard).

Example: Carpal Tunnel Syndrome--compression on the median nerve in the wrist (from inflamed tendons).
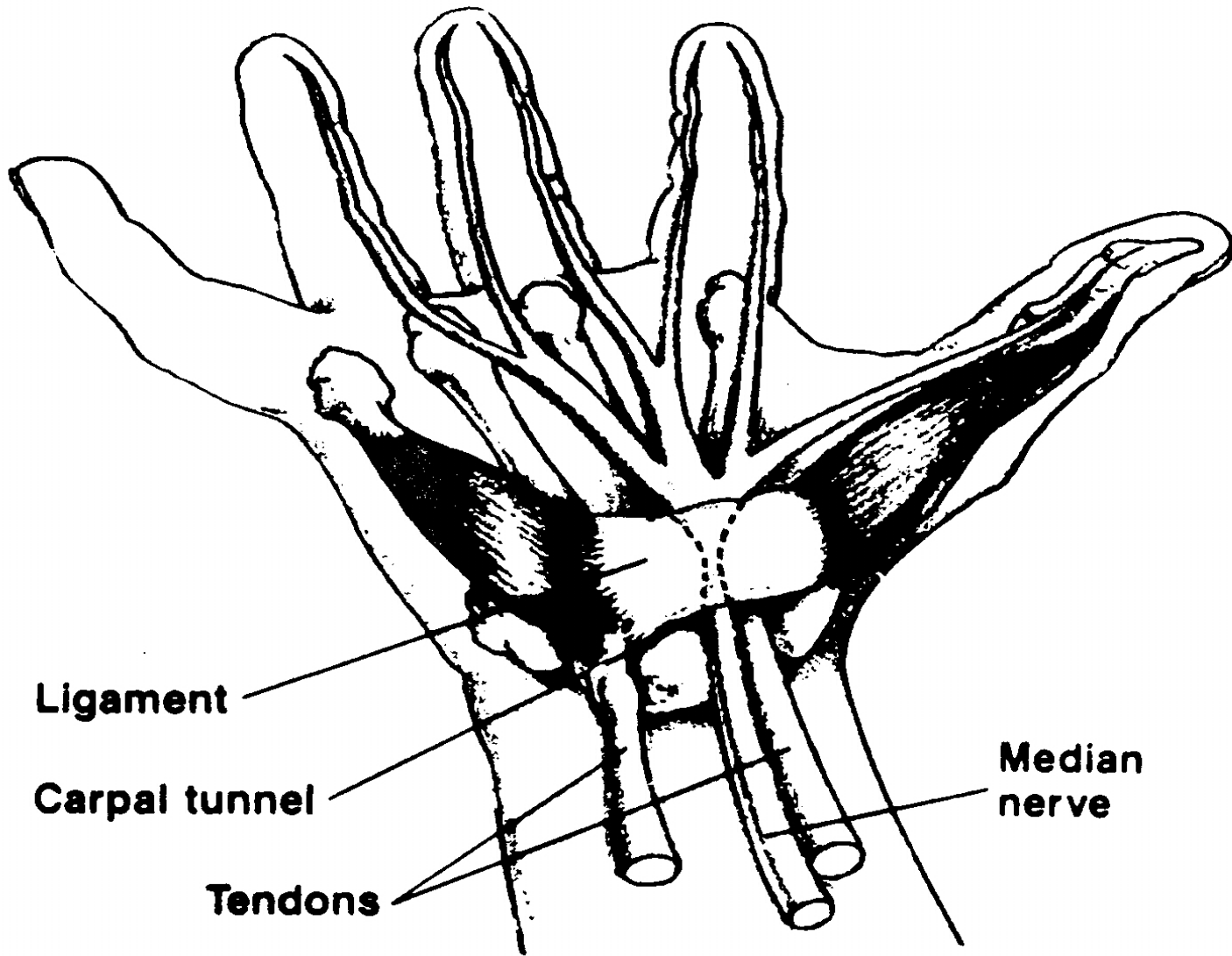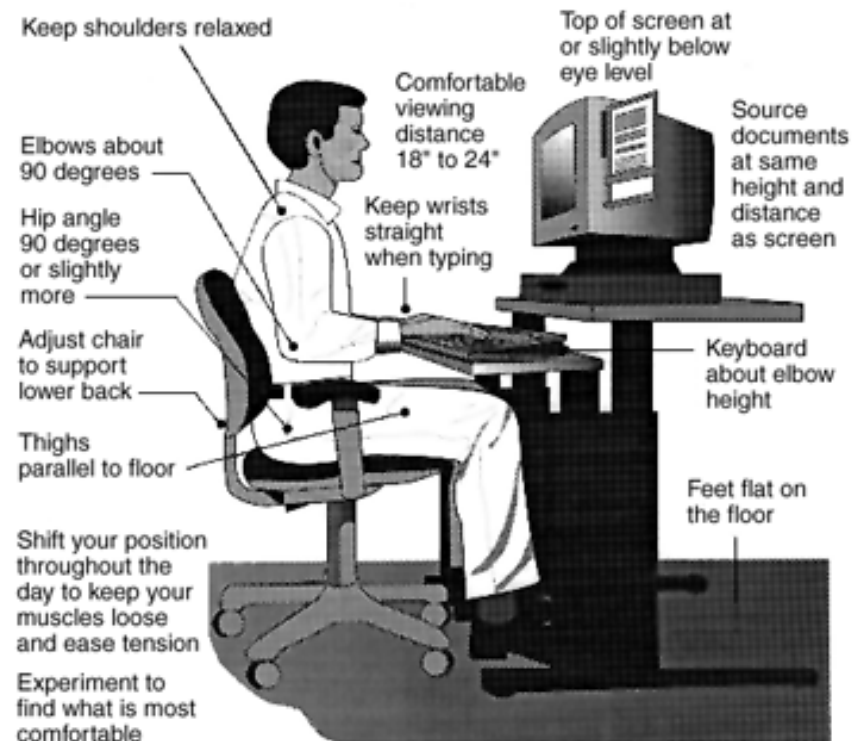
Ligament

Carpal tunnel

Tendons

Median nerve

The Statistics

- >50% of all occupational injuries and illnesses every year are caused by MSDs.
- 1.8 million American workers report MSDs each year.
- 1/3 of all lost workday injuries and illnesses are a result of MSDs.
- Cost businesses $15 - $20 billion/year in Workers' Compensation costs.
- Cost of avg. Carpal Tunnel Syndrome (CTS) case: $30,000.

Neutral Position

Body postures/ positions which minimize stress and strain on the body's soft tissue.

Keep shoulders relaxed

Elbows about 90 degrees

Hip angle 90 degrees or slightly more

Adjust chair to support lower back

Thighs parallel to floor

Shift your position throughout the day to keep your muscles loose and ease tension

Experiment to find what is most comfortable

Comfortable viewing distance 18" to 24"

Keep wrists straight when typing

Top of screen at or slightly below eye level

Source documents at same height and distance as screen

Keyboard about elbow height
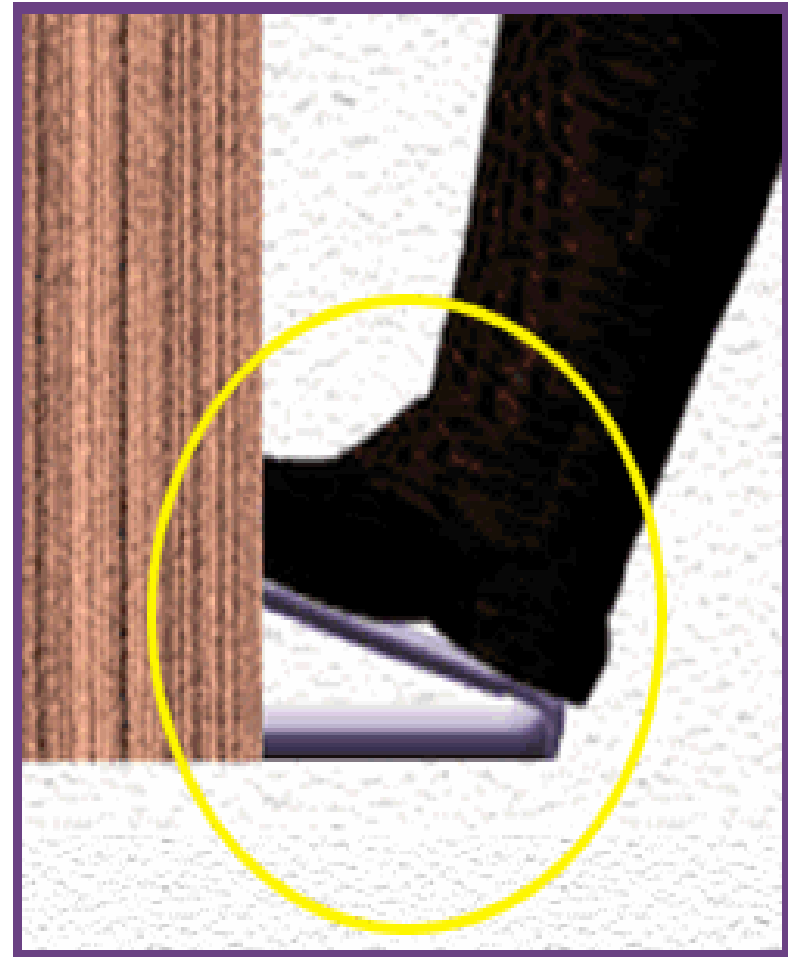
Feet flat on the floor

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Seat Height

- Raise or lower your chair seat until your lap is parallel to the floor.

- If raising your chair, make sure your feet remain supported.

- Use a foot rest when feet can't be firmly planted.
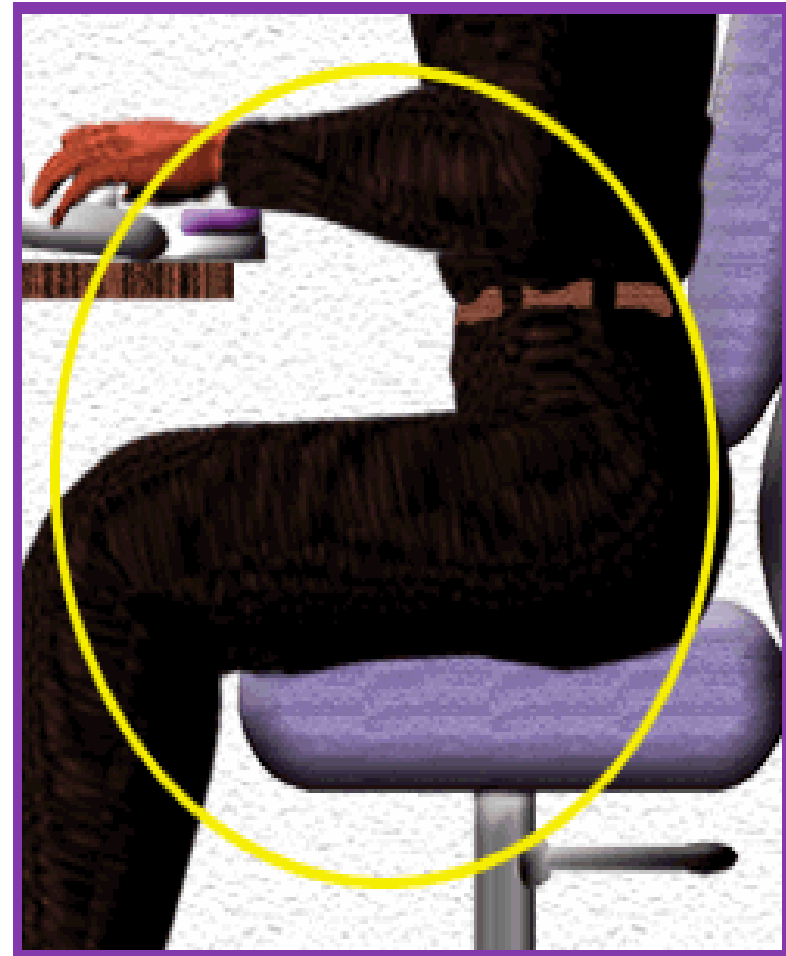
Foot Support

- If a foot rest is needed, it should be on an incline to prevent foot flexion

- Avoid using a box, your CPU or other horizontal object.

Leg Room

- Lower your chair.

- Raise your work surface.

- Clear out materials, wires, equipment, and papers stored within your leg space.

- Move your computer away from credenzas or other inhibiting furniture to an area with sufficient leg clearance.
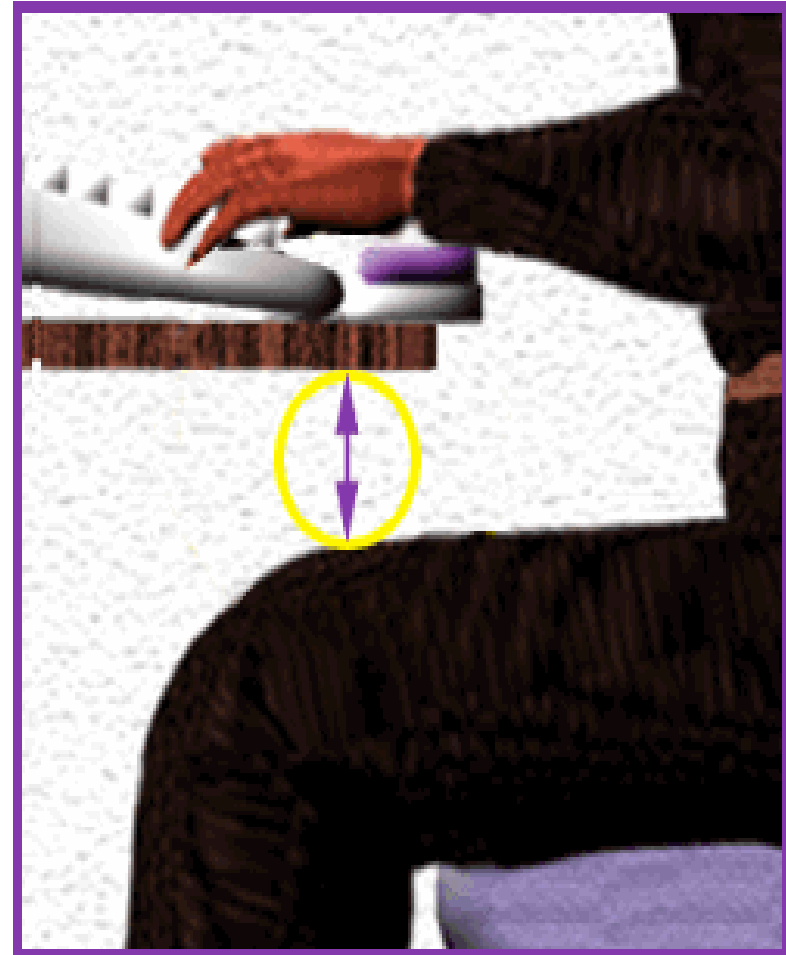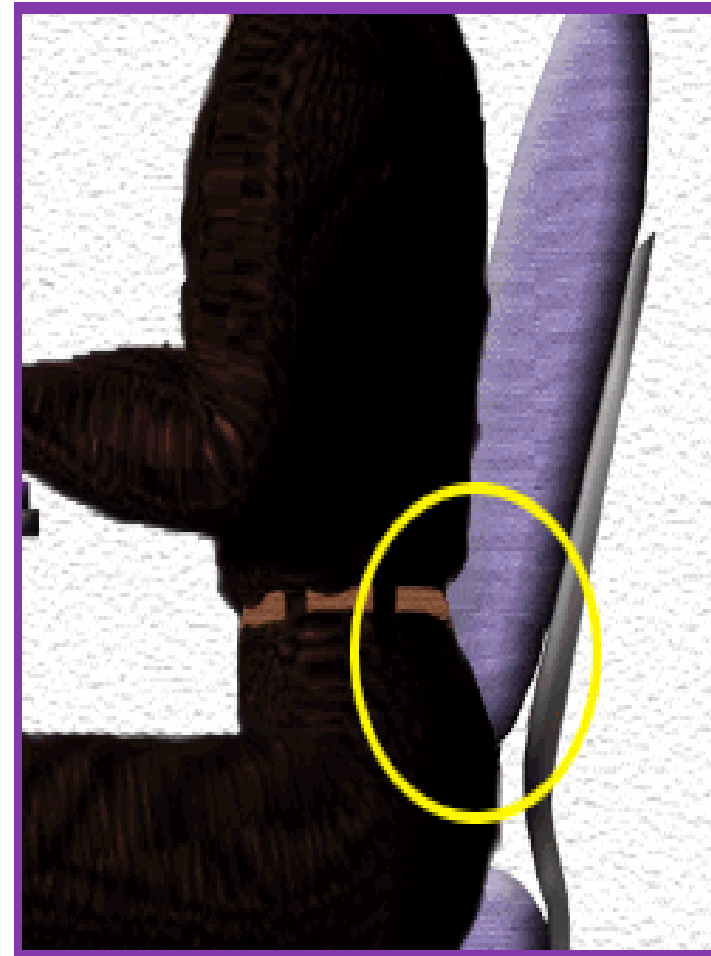
Seat Depth

- If possible, adjust your chair seat depth so you can sit fully back in your chair.

- Try a chair with a shorter seat pan.
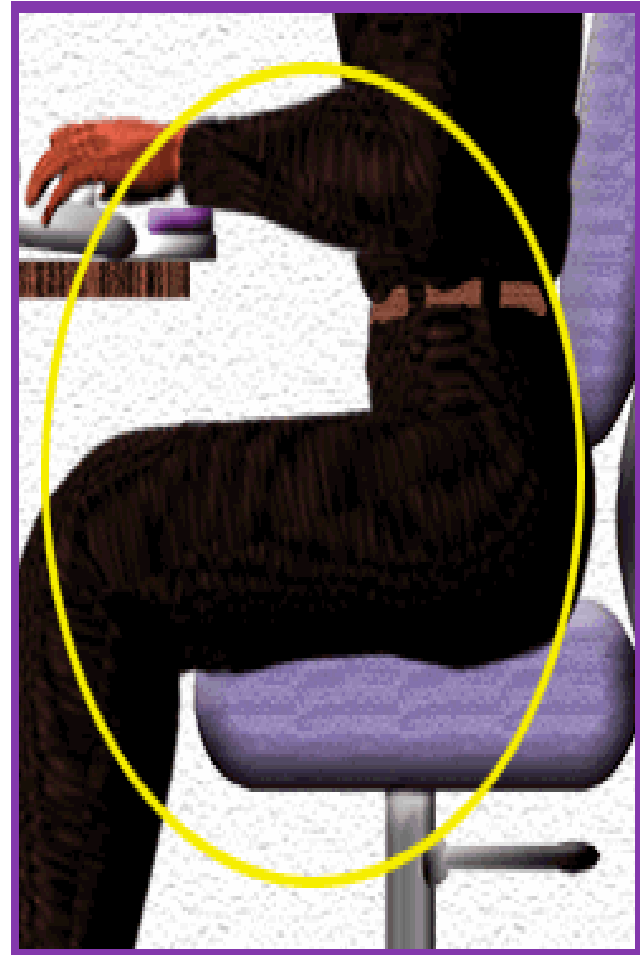
Lumbar Support

- Adjust back rest so that it "bulges out" in the small of your back.

- If no adjustment is possible, use a lumbar support (cushion or pillow).

Relaxed Shoulders

- Adjust the armrests on your chair so that shoulders are not raised.

- Most of your arm support should come from using the palm rest.

- Arm rest may be used to provide light support for mousing hand.
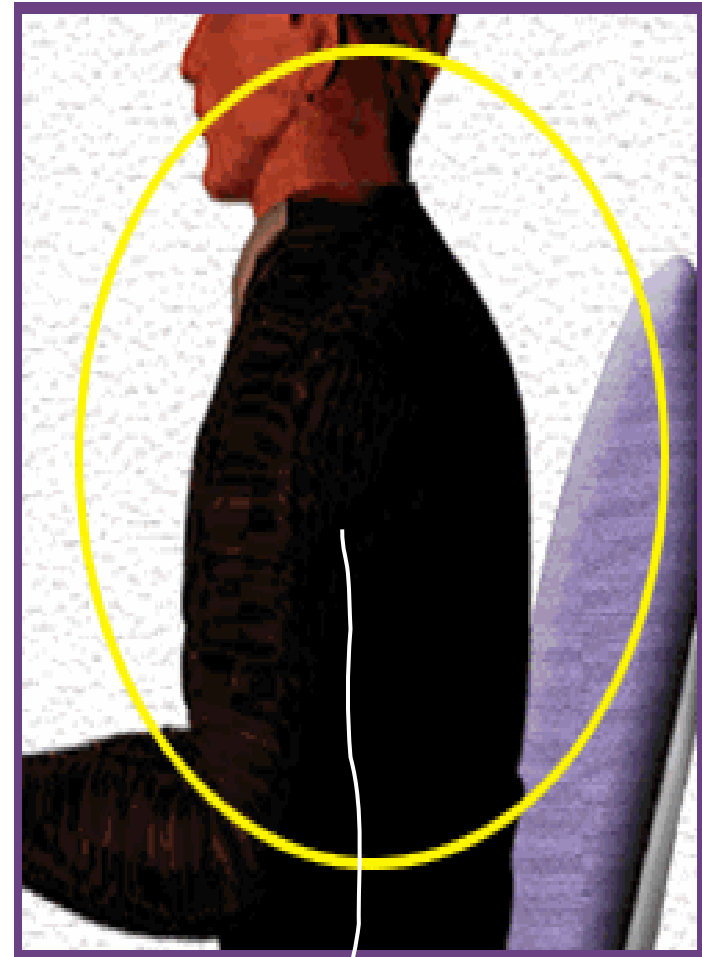
Arms by Your Side

- Relocate your keyboard and mouse so you can reach them with your upper arms relaxed by your side.

- Sit closer to your keyboard and mouse. This may require you to adjust your armrests, work surface height, and other equipment. Make sure you maintain adequate thigh clearance.

- If your armrests get in the way and are not adjustable, consider having them removed.
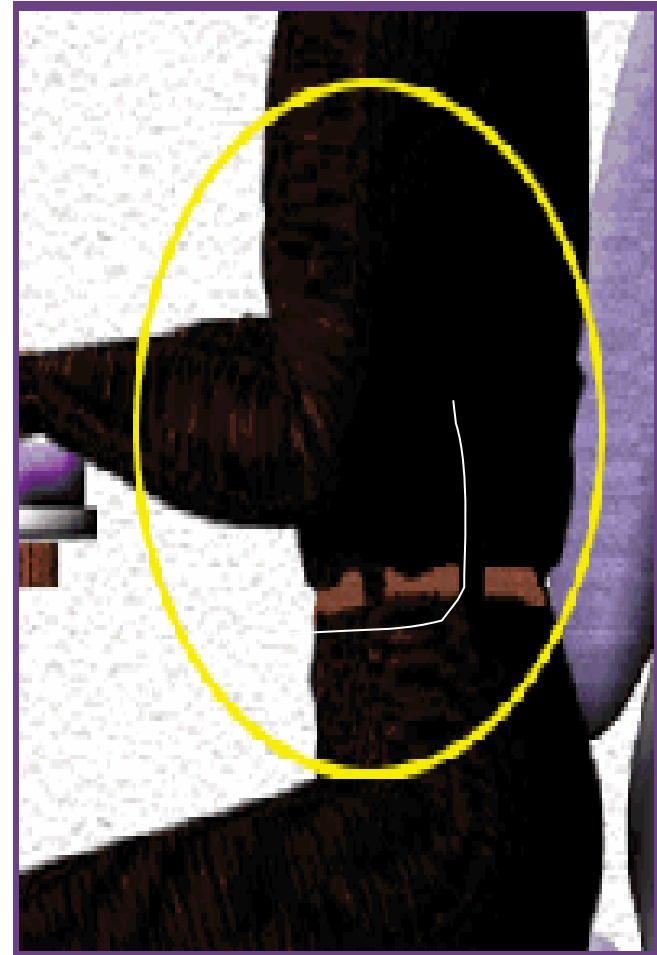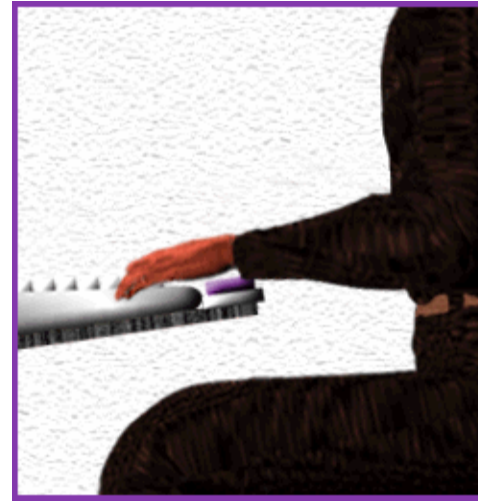
Keying

Level | Slight Negative Slope

- Adjust your chair or keyboard tray so your wrists and forearms are in a neutral position, where forearm, wrist and hand form a straight line.

- At a minimum, use a padded palm rest for your keyboard and mouse on the desk top.

- Preferably, use an articulating keyboard/mouse tray.

- If the arms of your chair are too high to permit a neutral posture or interfere with keyboard tray, adjust to a lower setting or remove them.

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Keyboards & Mice

- Standard keyboard should be good enough if you have a palm rest and/or keyboard tray.

- Split keyboard may be advisable for obese or wide framed employees.

- Use palm rest for mouse or mouse designed to keep wrist in neutral position.

- Adjust mouse motion setting to avoid excessive side bending of wrists. (Handout)
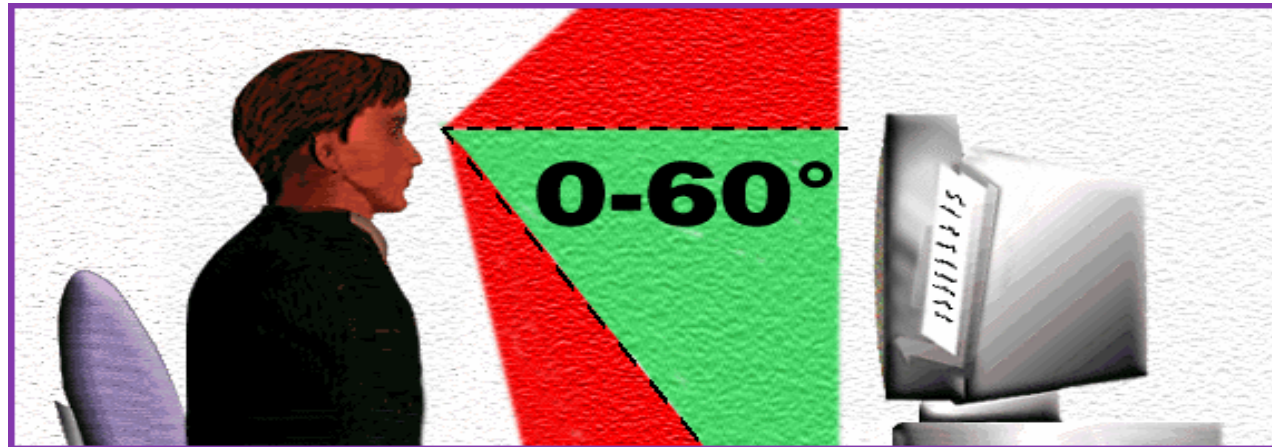
Monitor Position

- Move your monitor directly in line with your keyboard.
  - Belly button – "B" key – center of monitor

- Utilize an "in line" or side document holder if you frequently refer to hard copy documents.


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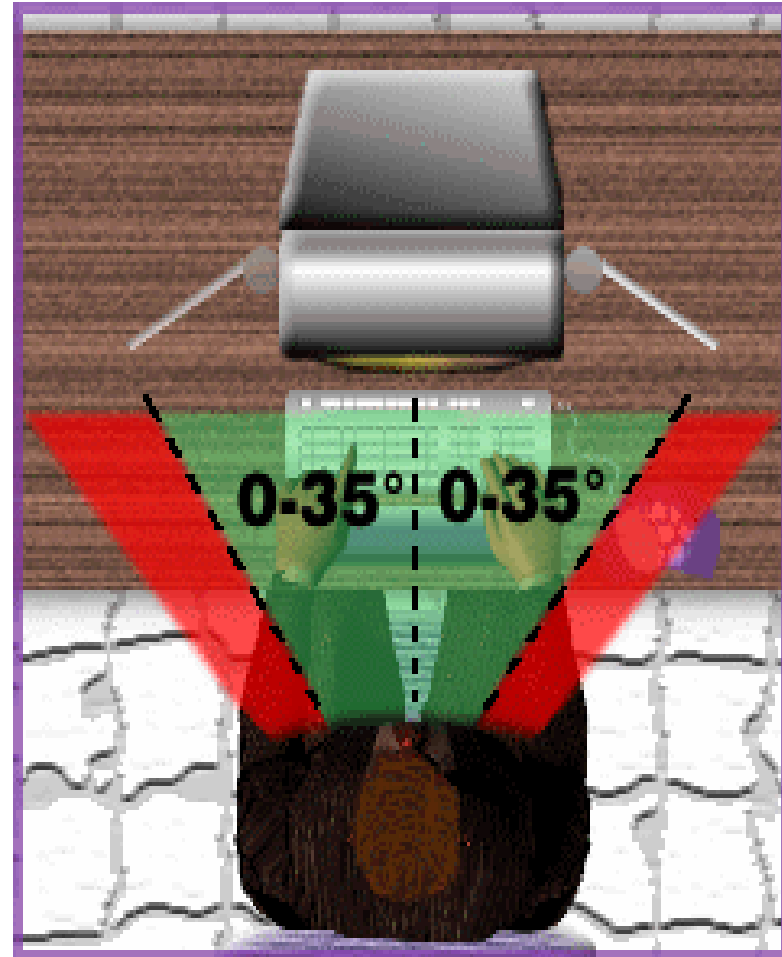
Monitor Position

- Top of monitor screen should be slightly below eye level.

- Bifocal wearers may want to have monitor positioned a little lower to avoid tilting head back.

- Avoid having monitor adjusted upwards to reduce neck tilting and glare.

Viewing Distance

- Adjust your viewing distance so there is at least 20" between you and your monitor.

  - Rule of thumb: Arm's length away.

- Viewing distances will vary some from person to person. Make sure you can clearly see the characters on your monitor.
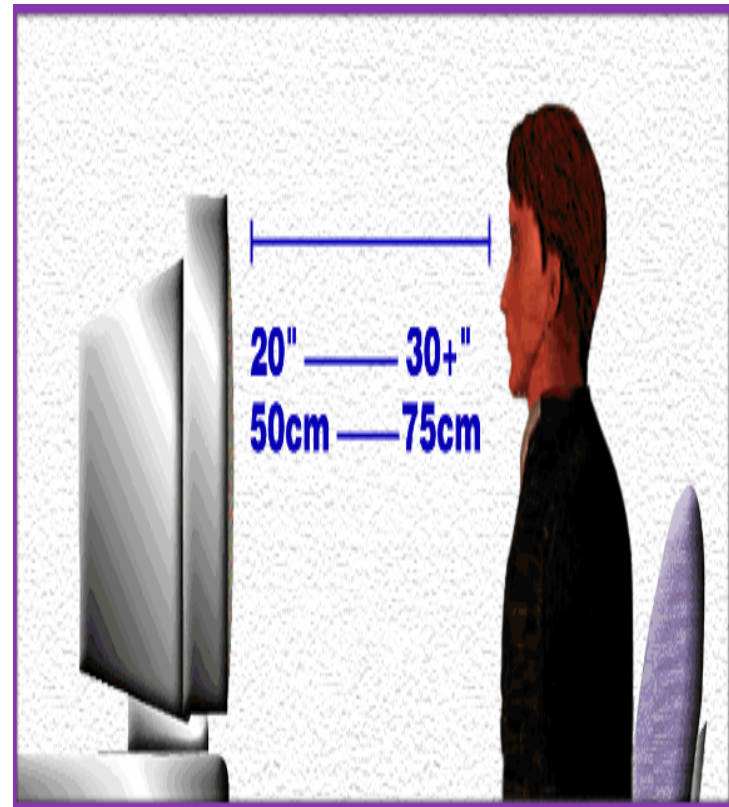
Monitor Glare

- Avoid having monitor face window or other light source.

- Install or adjust window curtains and blinds to avoid glare.

- Best view is when the monitor is at a right angle to your window.

- Keep monitor angle perpendicular to work surface.

- Install a glare screen on your monitor for CRT monitors.

- LCD monitors are much easier to read (less eye strain) and do not typically pose glare issues.
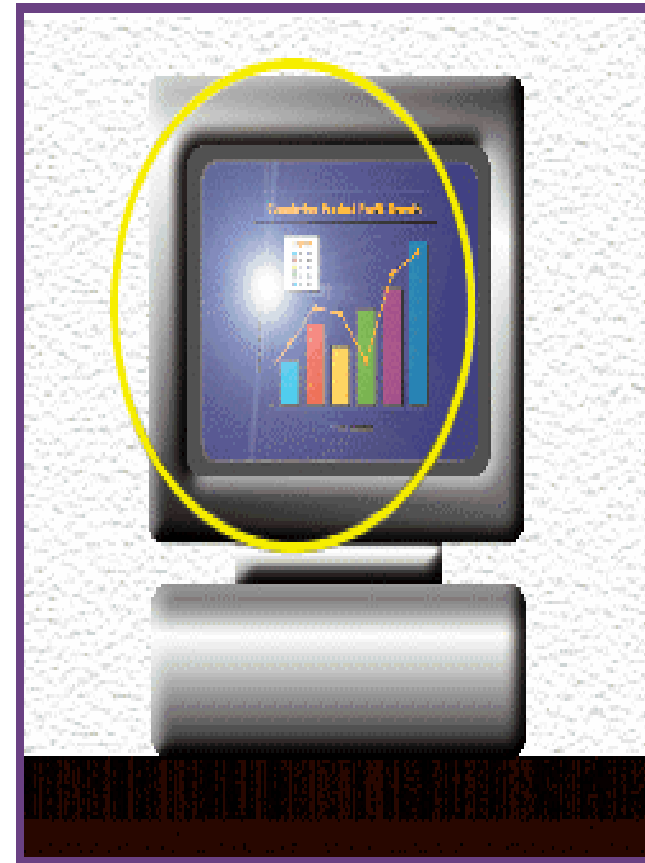
Eye Strain & Corrective Lens Use

- Have your vision checked at least annually.

- Talk with your eye care professional about vision correction options for computer use.

Phone & Head Set Use

- If you *infrequently* cradle the phone between your head and shoulder, consider attaching a phone hand cradle.

- If you *frequently* cradle the phone between your head and shoulder, consider obtaining a phone head set.

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What's Good?
What Could Be Improved?

What's Good?
What Could Be Improved?

Stretching for Health

- Some stretching exercises will be provided to you after this session via e-mail.

- You can do just a few exercises anytime during the day. Try some of them **before** you get stiff and sore.

- Frequency

  - Ideally: Every 20 minutes, take 20 seconds

  - Minimum: Once per hour

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Stretching for Health

- Consult your physician before any exercise program. Stretching should not cause pain. If it does, discontinue stretches until you see your doctor.

- General rule of thumb: Whatever posture you are maintaining while keyboarding and mousing, do something different/opposite during your stretch break.

- Remember, movement is necessary for health and comfort.

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Focusing Technique (for eye relaxation)

While sitting or standing...

– Look out a window or as far away from work area as possible.

– Focus on an object at least 20 feet away.

– Then move your eyes around and look at other objects.

– Look back at computer screen.

– Repeat often throughout the workday.

Preventing MSDs

- Apply guidelines from this presentation and handout.

- Switch job tasks regularly.

- Keep frequently used items within easy reach, without having to raise your shoulder.

- Obtain assistance from your PMA Risk Control Consultant.

- Report persistent symptoms to your supervisor as soon as possible.

With a few adjustments, you too can sit comfortably at your workstation!

Trying to Practice What I Preach!