



ERGONOMICS



FOR CSULB EMPLOYEES

Campus Roles in Workstation Evaluation

- Appropriate administrators, managers, supervisors
 - Ensure that employees have training in the proper techniques for setting up their workstations.
 - Ensure that employees have the right equipment to perform their jobs in a safe and healthy manner.
 - Ensure that employees use the tools and techniques provide to them.



Campus Roles in Workstation Evaluation

- Safety and Risk Management
 - Design and conduct ergonomic training for employees.
 - Conduct specific worksite evaluations as required by regulation.
 - Advise administrators, managers, supervisors and employees in methods they can use to implement proper ergonomic techniques.



Campus Roles in Workstation Evaluation

■ Employees

- Use the ergonomic equipment and techniques provided by the university.
- Advise supervisors or managers when a problem occurs regarding their workstation.
- Work with the supervisor or manager to resolve the ergonomic problem.



DEFINITION OF REPETITIVE MOTION INJURY

- Repetitive motion injury is also known as cumulative trauma disorder or repetitive stress injury.
- This type of injury is caused by repeated motions, excessive force, vibration, exposure to cold, awkward positions and over exertion. The arms and hands are especially vulnerable.
- These disorders can involve nerves, blood vessels, or tendons, which connect the muscles to the bones.



DEFINITION OF ERGONOMICS

- Ergonomics is the system of fitting the equipment necessary to do a job to the individual performing the work.



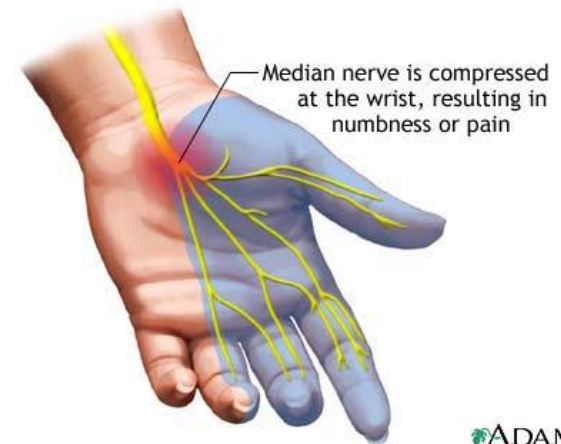
IDENTIFICATION OF RISK FACTORS

- Repetitive motion injuries, their consequences and symptoms are:



CARPAL TUNNEL SYNDROME

- Carpal tunnel syndrome is a nerve disorder resulting from pressure on the median nerve where it passes from the forearm through the carpal tunnel in the wrist into the hand.
- Symptoms include: pain, numbness and tingling in the first three fingers and the base of the thumb.



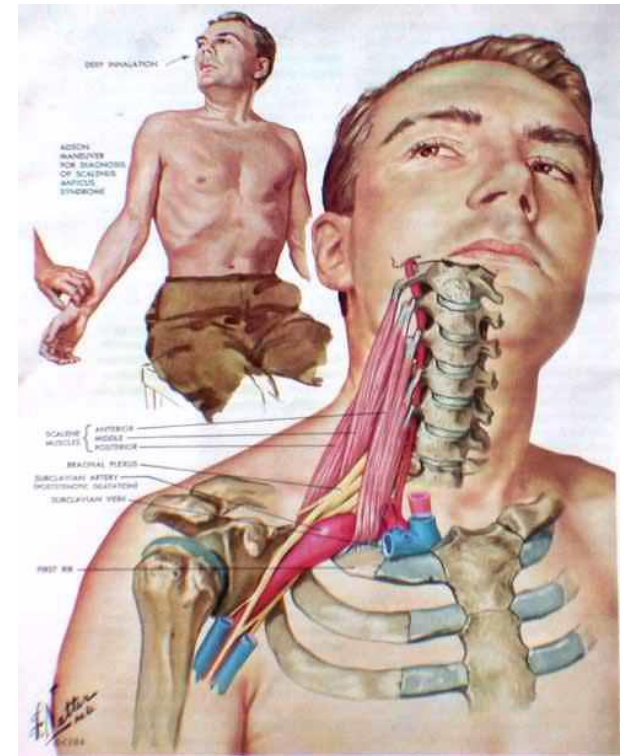
TENOSYNOVITIS

- Tenosynovitis is the swelling of the sheath surrounding a tendon, which contains a lubricant called synovial fluid. Repetitive motion may stimulate the sheath to produce excess fluid, which accumulates in the sheath.
- Symptom is pain in the sheath.



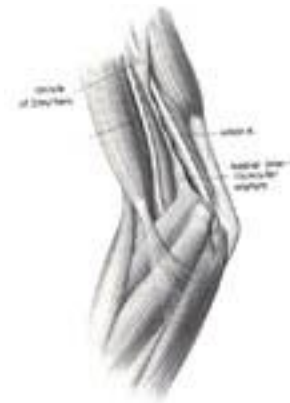
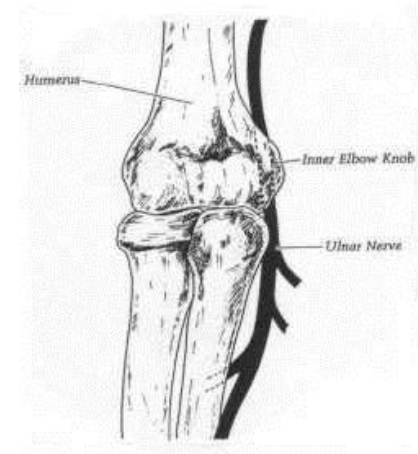
THORACIC OUTLET SYNDROME

- Compression of the nerves and blood vessels between the neck and the shoulder.
- Symptoms include numbness in the fingers and tingling in the arm.



ULNAR NEURITIS

- Inflammation of the ulnar nerve caused by pressure. Leaning on the elbow on a hard or sharp surface for long periods may cause this condition.
- Symptoms include tingling and numbness in the small finger and ring finger.



REPETITIVE MOTION DISORDERS

- Carpal Tunnel Syndrome
- Tendonitis
- Tenosynovitis
- Thoracic Outlet Syndrome
- Ulnar Neuritis



METHODS USED TO CORRECT, MINIMIZE, OR AVOID A REPETITIVE MOTION INJURY

Ergonomic work station evaluations.
Areas of interest are:

- 1) Work space layout
- 2) Video display terminal setup
- 3) Lighting – glare / task light





4) Work posture – chair, foot support, desk height

5) Work habits - work pacing, micro breaks/exercise

ENGINEERING CONTROLS

- Work station design
- Adjustable equipment
- A written report will be made to the appropriate manager after each ergonomic work station evaluation. A copy will be provided to the employee.

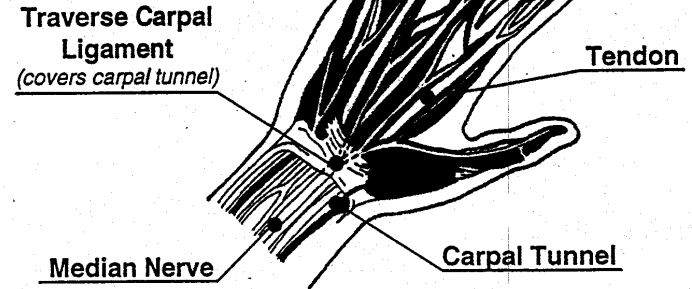




- *The employee must make a conscious effort to learn to use equipment properly, to be aware of neutral body position, and the necessity of exercise to relieve physical stress.*

CARPAL TUNNEL SYNDROME SYMPTOMS

1. Swollen feeling of the fingers, yet no physical evidence of swelling
2. Numbness in the thumb or hand
3. Tingling in the thumb or hand
4. Pain in the fingers or hand

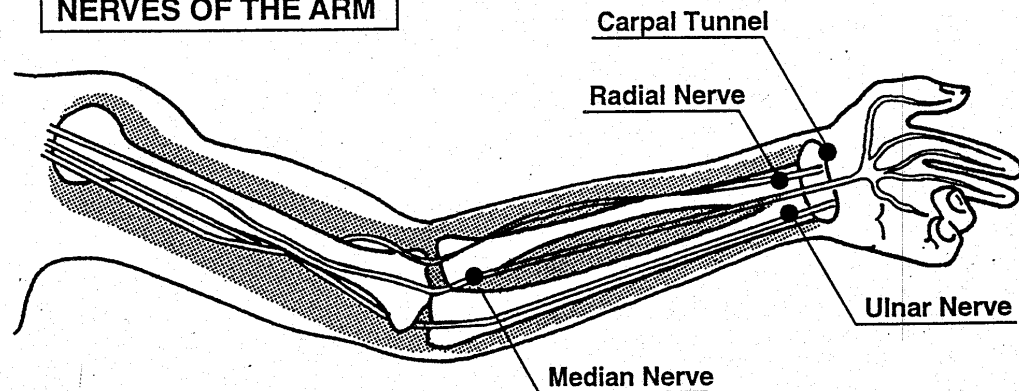


NERVES OF THE HAND

5. General arm and hand weakness
6. Burning sensation in the hand and arm
7. Loss of muscle strength at the base of thumb
8. Dry, shiny palms and clumsiness of the affected hand
9. Changes in sensation and power to squeeze things

If you are experiencing any of these symptoms, your workstation should be evaluated by you and a person trained in office ergonomics. Ask your supervisor and/or department's Health and Safety Coordinator for assistance.

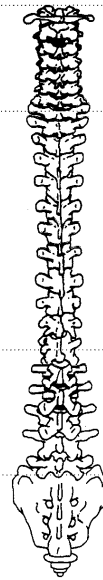
NERVES OF THE ARM



BACKSAFE®

POSTURE

STANDING SPINAL CURVES



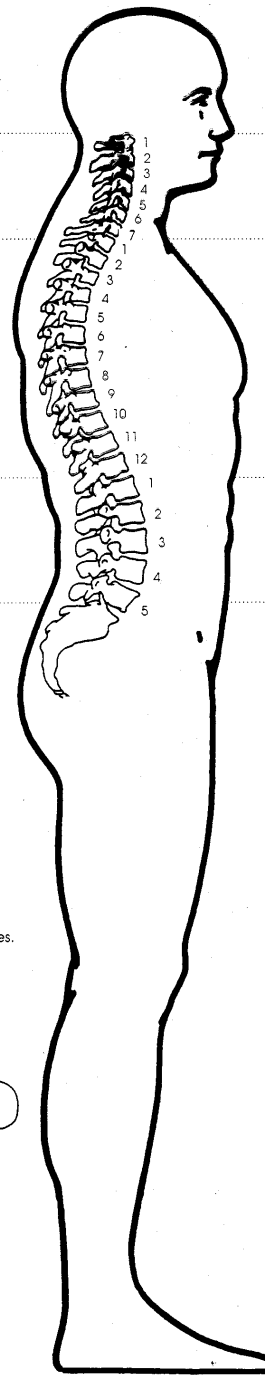
Back view of spine should be straight

CERVICAL CURVE NECK

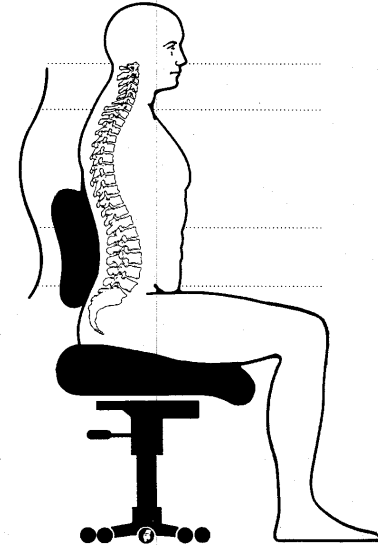
THORACIC CURVE UPPER BACK

LUMBAR CURVE LOWER BACK

SACRUM & COCCYX



SITTING MAINTAIN SPINAL CURVES

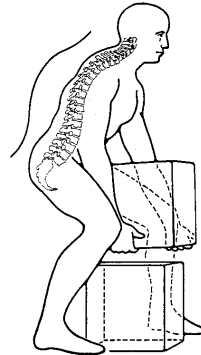


PROPER SUPPORT

LIFTING

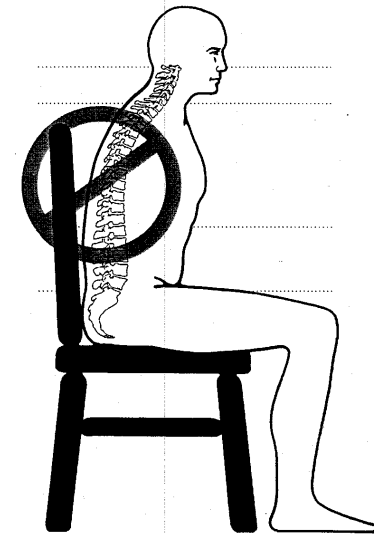
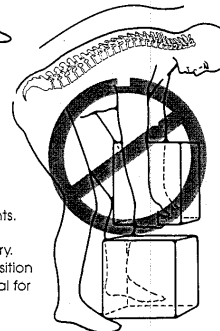
▶ PROPER LIFT

- ❑ Broad based or diagonal stance and balance.
- ❑ Maintain spinal curves.
- ❑ Load close.
- ❑ Use legs.
- ❑ Squat lower for deeper lifts.
- ❑ Head up.



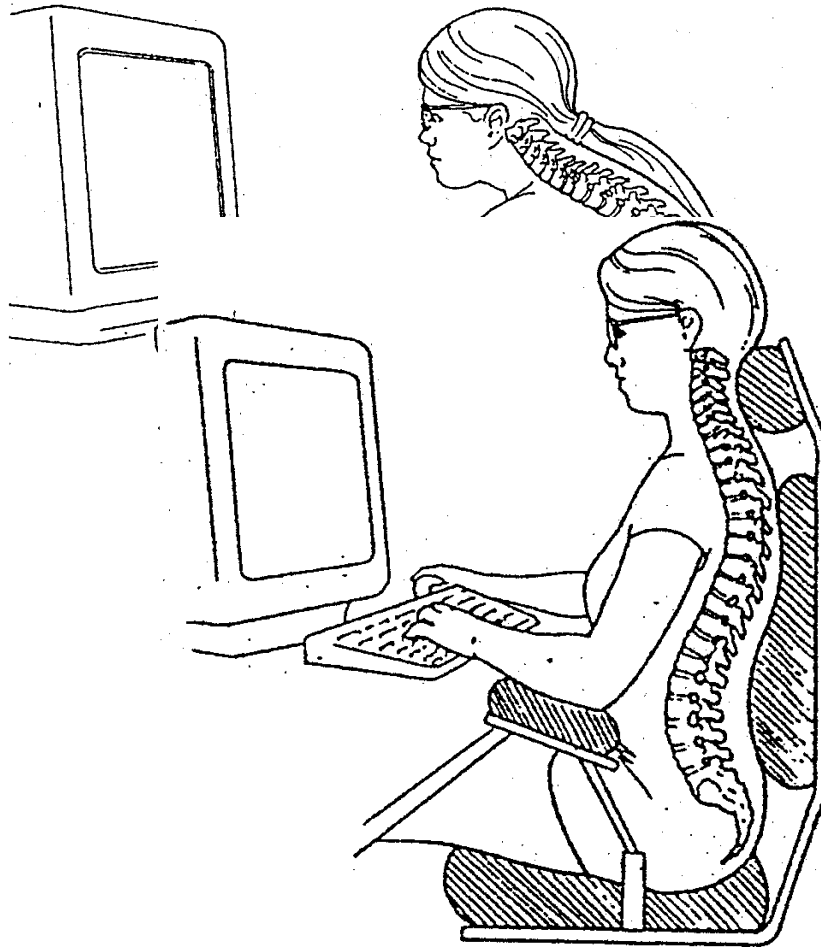
IMPROPER LIFT ▶

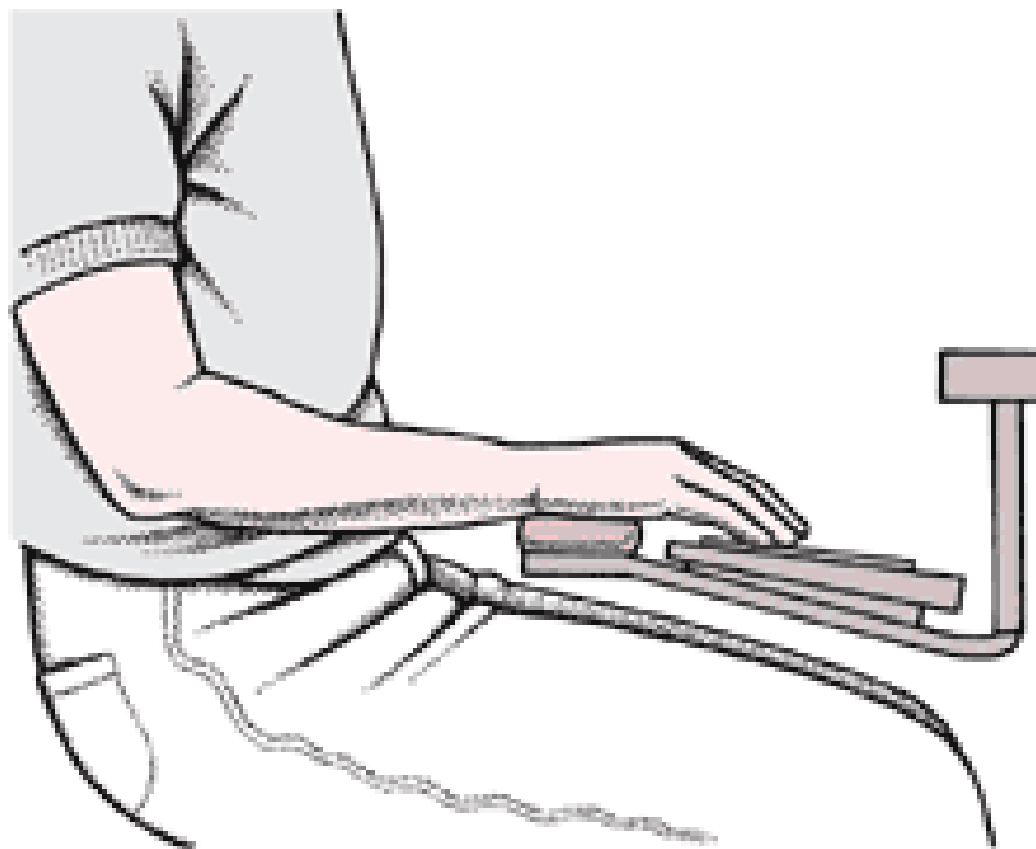
- ❑ Loss of spinal curves to support back.
- ❑ Posture forces body to use spinal ligaments.
- ❑ Load too far away.
- ❑ Position prone to injury.
- ❑ Deeper lifts in this position increase the potential for injury.

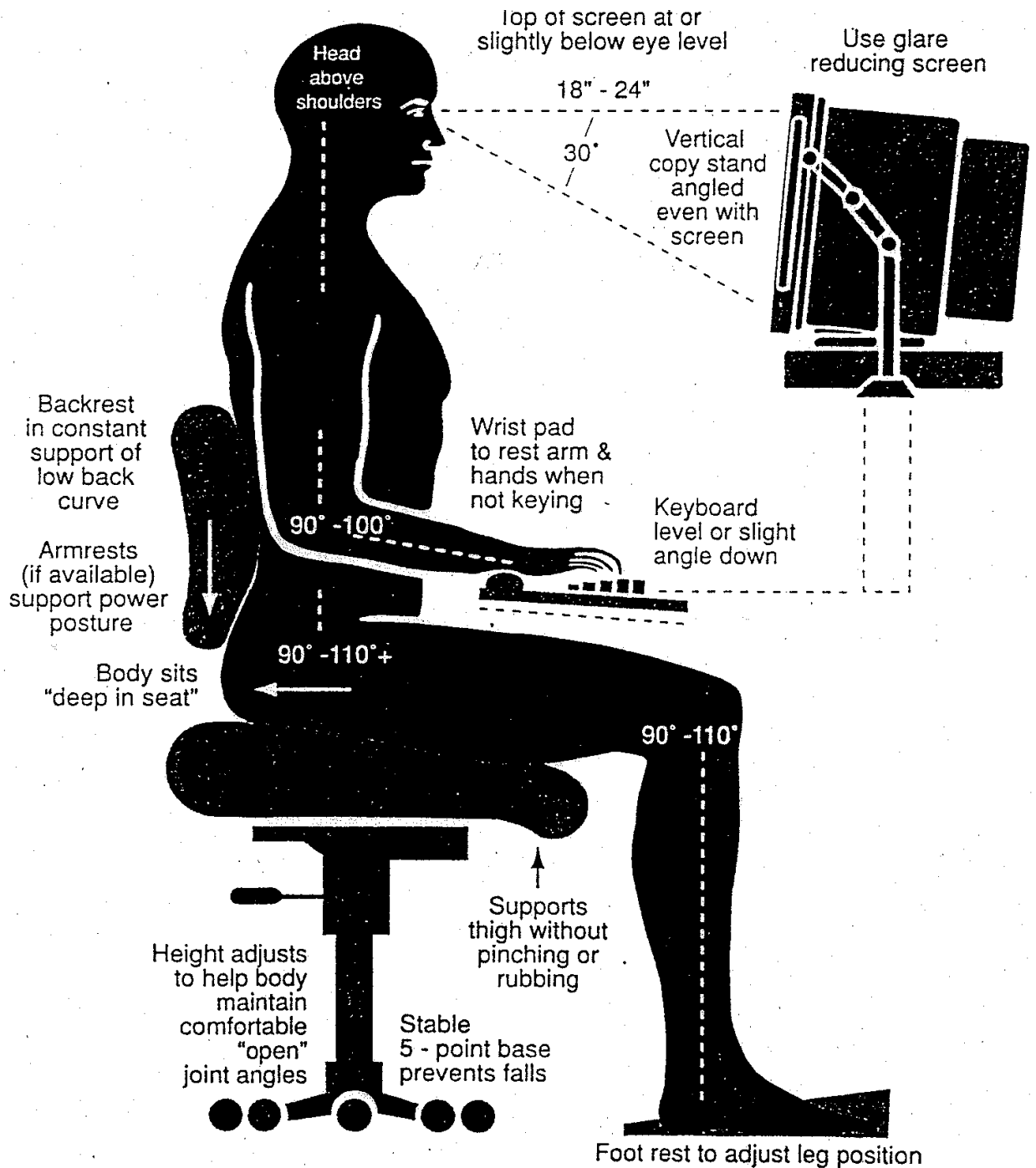


SLOUCHING OR POOR SUPPORT
CAUSES LOSS OF SPINAL CURVES



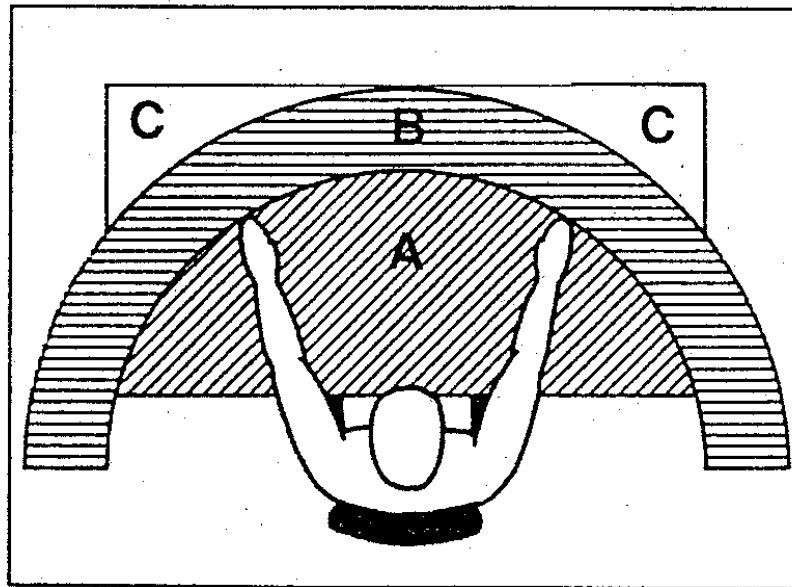



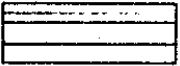
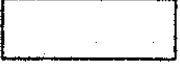






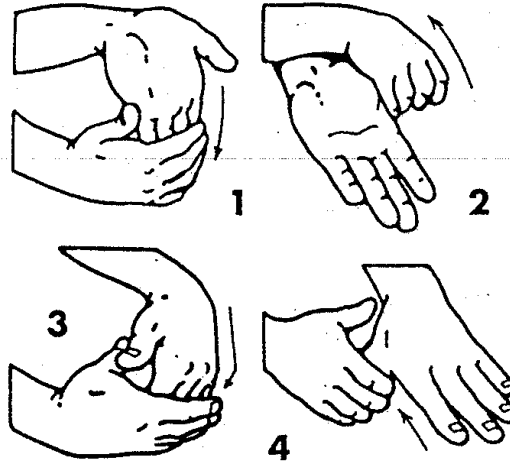
PLACEMENT ZONES



- A** 
Frequent use zone
- B** 
Moderate use zone
- C** 
Occasional use zone

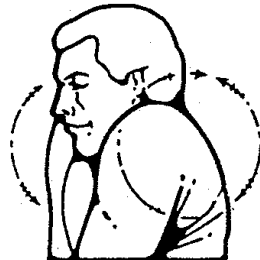


HAND AND WRIST STRETCHES



1. Straighten your arm with the palm up, and gradually apply downward and backward pressure against the fingers.
2. Reach over the top of hand gently pull the thumb straight back.
3. Repeat with the hand palm down and, pull fingers back.
4. Gently pull thumb straight back.

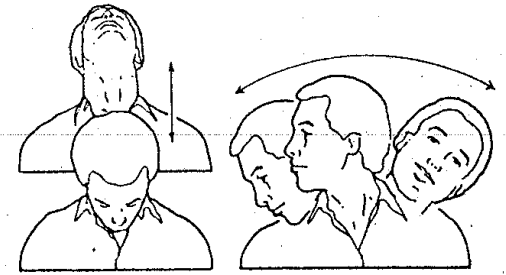
SHOULDER ROLLS



Roll shoulders forward in 3 large circles then backwards.

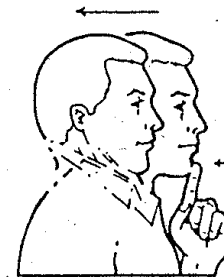
YOUR BACKSAFE CONSULTANT IS:

NECK STRETCHES



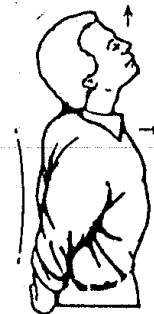
Bend head downward, and gently upward. Slowly and fully turn head to one side, then the other. Side bend the neck toward shoulder, hold, then look down.

CHIN TUCKS



Pull the chin and head straight backward as if to make as many chins as you can! Hold for a few seconds, repeat three times.

CHEST AND SHOULDER STRETCH



Clasp hands behind back and slowly straighten and raise the arms. Arch your back. Sitting forward in the seat or standing up may help.