

Dr. John R. Chait

Presents



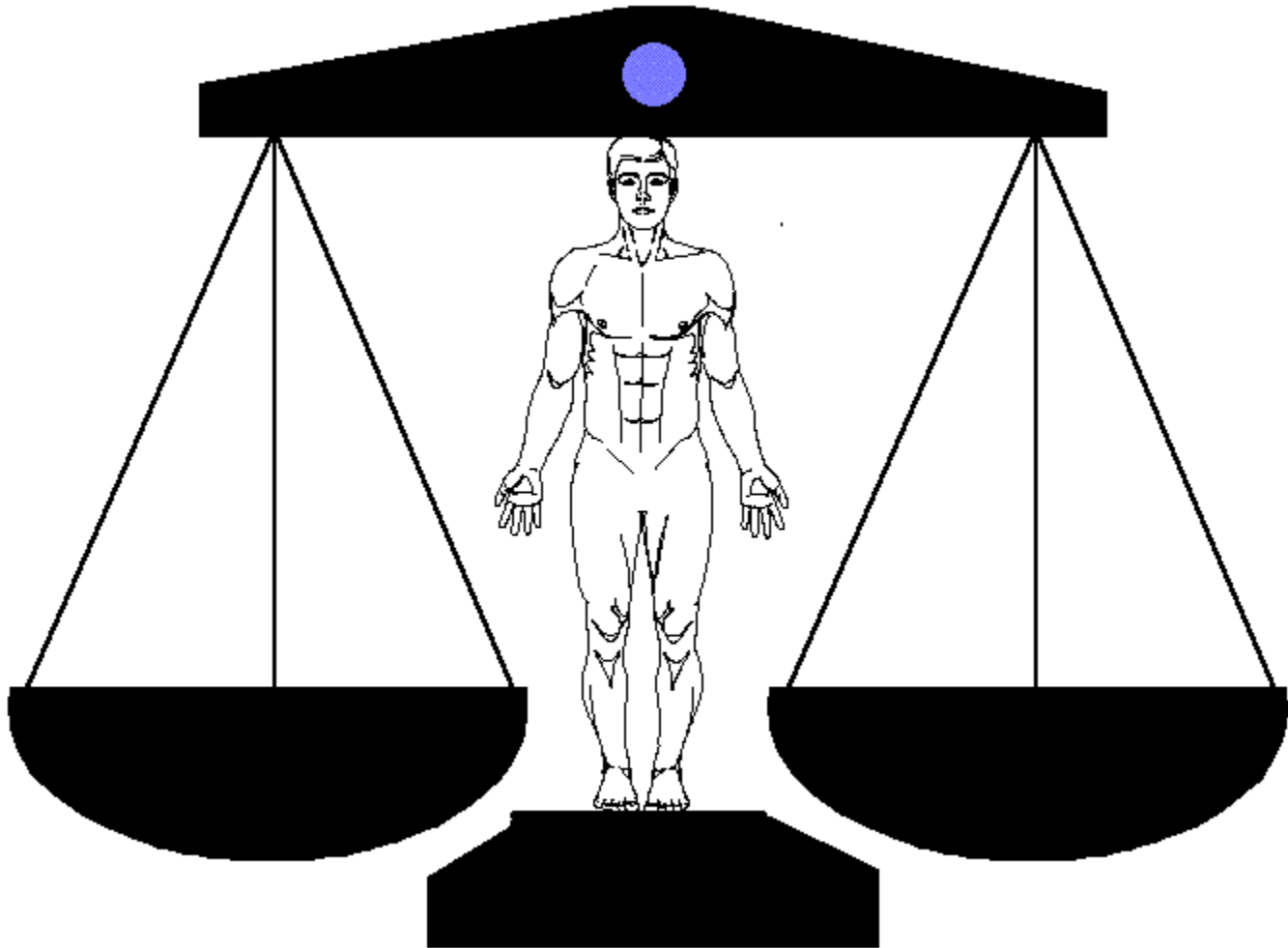
Techno Ergonomics

“ergonomics”

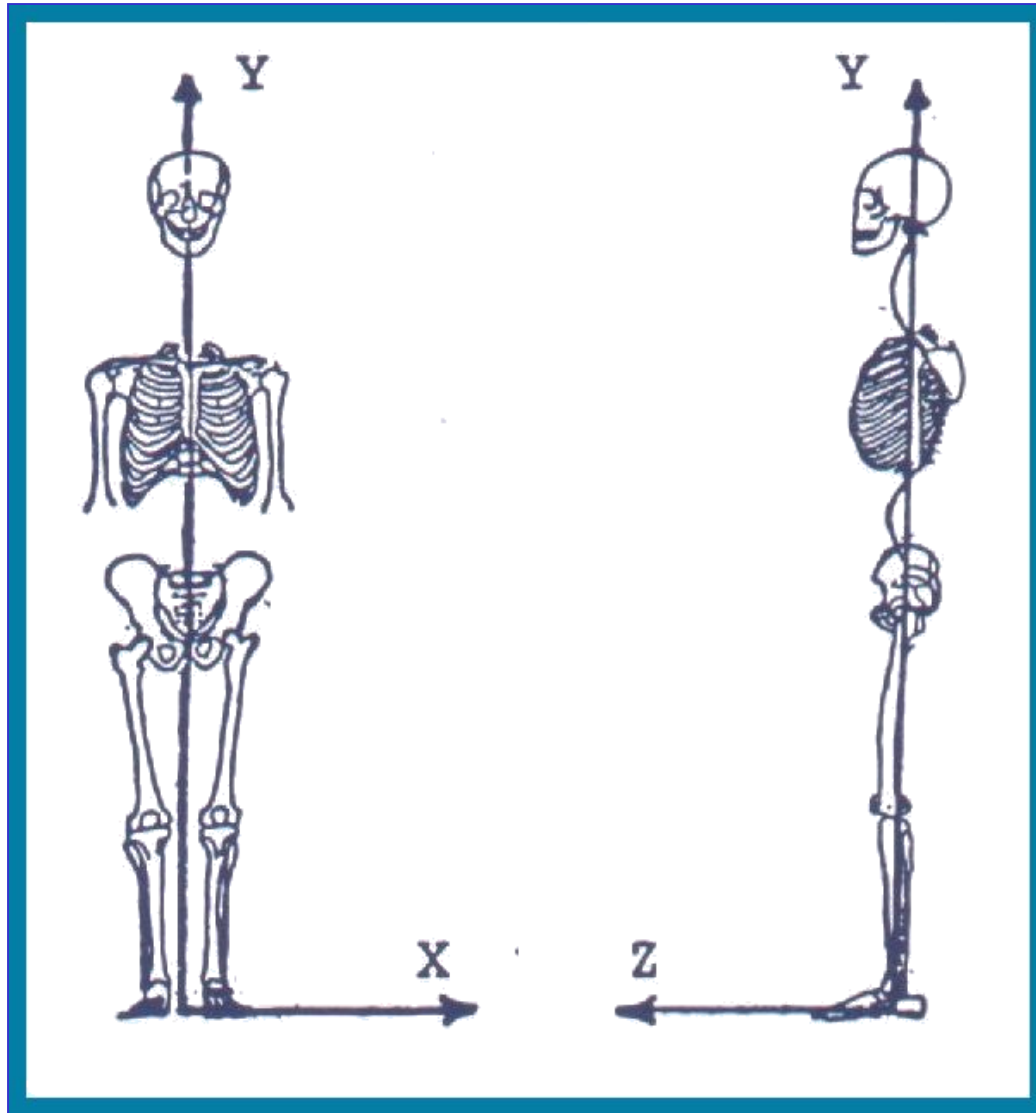
The study of the design and arrangement of equipment so that people will interact with the equipment in healthy, comfortable, and efficient manner. As related to computer equipment, ergonomics is concerned with such factors as the physical design of the keyboard, screens, and related hardware, and the manner in which people interact with these hardware devices.

Def. From the Free online dictionary of computing.

Body Balance



Normal Posture



Normal Sitting Posture



Proper PC Posture

Ears aligned with
shoulders

Proper lumbar
support

Proper seat
height



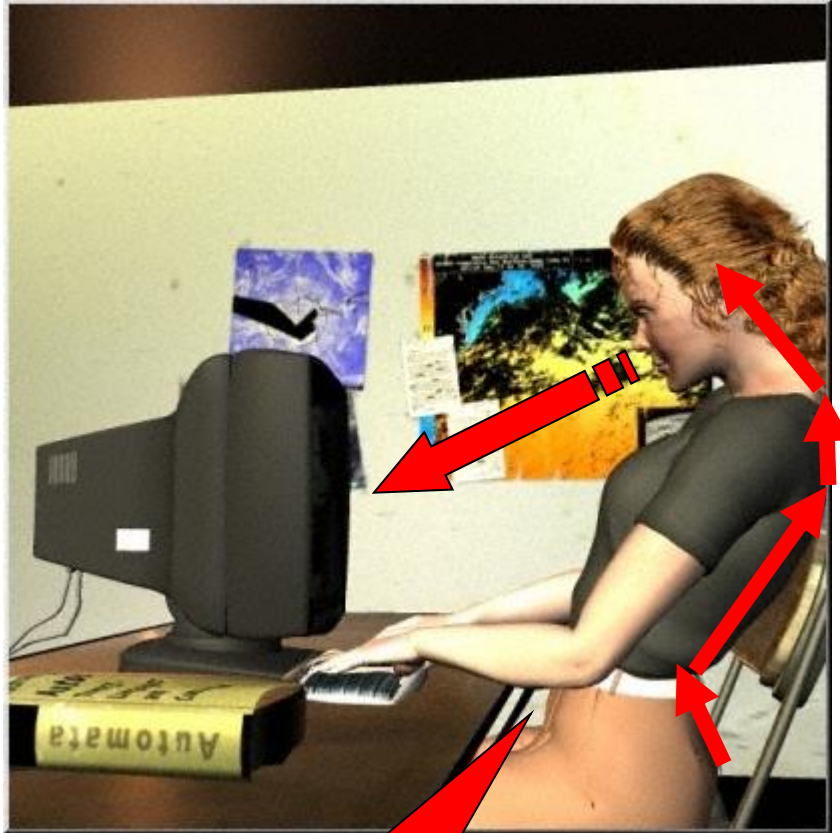
Correct
monitor height

Elbows bent 90
degrees

Feet flat on floor

Be Ergonomic Conscious

Poor Ergonomic Workstation



No Armrest

Good Ergonomic Workstation



Armrests support arms and take pressure off the upper back

WRONG!

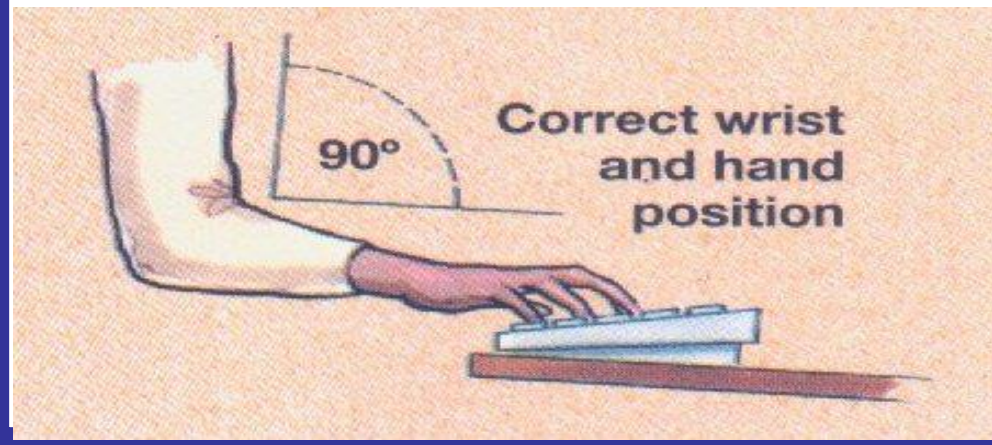
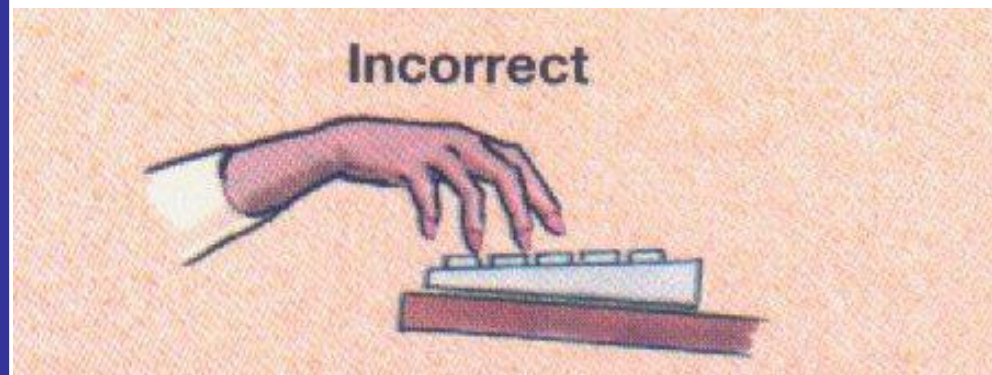


Guidelines to Remember

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- The computer screen should be positioned to avoid glare.
- High luminance sources in the computer user's peripheral field should be avoided.
- The head should be tilted forward 15 degrees or less to maintain a vertical position.
- The elbows should be kept close to the body or supported.
- Wrists should be kept straight in a natural position.
- The keyboard slope should not be greater than 15 degrees.
- The user's lumbar curve should be maintained at all times.
- The edge of the seat pan should be at least 2-4 inches from the soft tissue area behind the knee [popliteal area].
- Feet should never dangle and should be supported.
- Fingers on the home row of a keyboard should be approximately 0 to +1.5 inches above elbow rest height.
- The backrest should support the lower back area and not interfere with the turning motion.

Key Board Ergonomics



☞ Mouse Ergonomics ☞

☞ The mouse should be positioned at a comfortable level to the right or left side of individual. There should be a level plane between the hand, the wrist, and the forearm with support for all. It is a good idea to use two mouse pads if possible, one for the mouse, and one for the persons elbow. There should be an approximate bend of 90 degrees of the elbow.

🖱️ Mouse Ergonomics 🖱️

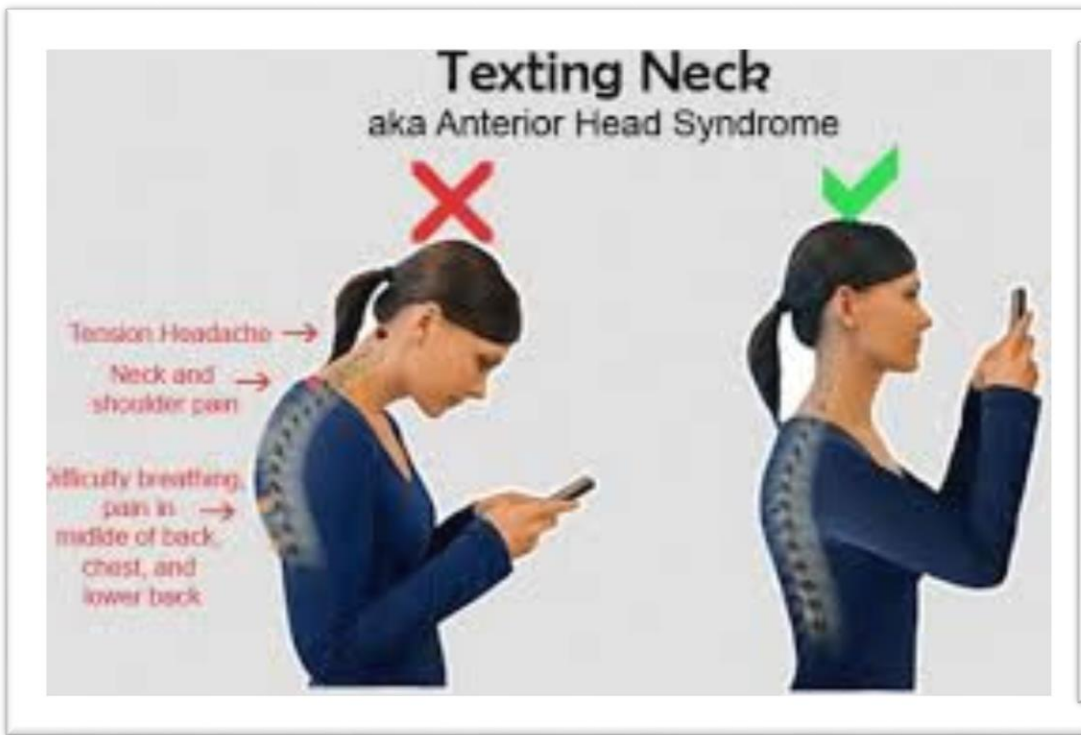
- 🖱️ The motion of the mouse should be controlled with the muscles of the shoulder, (Not the wrist or hands) making sure that proper angles are maintained.
- 🖱️ If possible set up you're PC to single mouse click to open programs instead of double clicking.
- 🖱️ Do passive stretching exercises before and after manning the mouse.
- 🖱️ Take periodic breaks to give your joints a rest.

Use different types of mice to limit repetitive stress

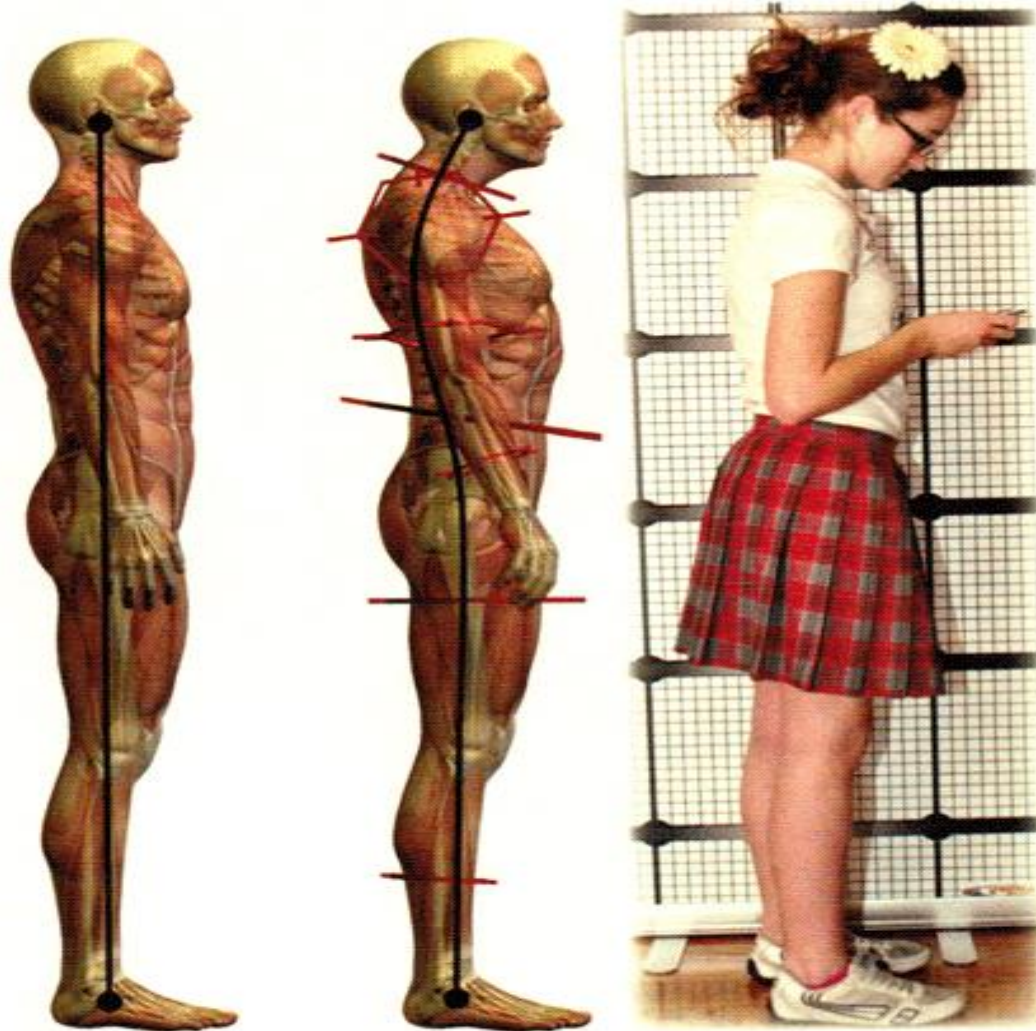


The Cell Phone

Friend or Foe



Texting



Texting Puts The Head 4.5 Inches In Front of the Shoulders. Teens Average 11,000 Text Messages per Month, or 30 Hours of Use

“Loss of the natural curve of the cervical spine leads to incrementally increased stresses about the cervical spine,”

“These stresses may lead to early wear, tear, degeneration, and possibly surgeries.”

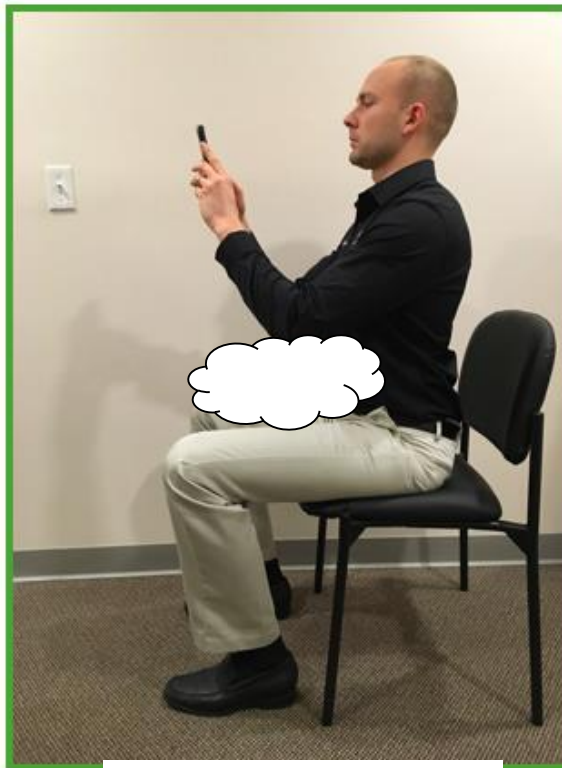
wrote study author Dr. Kenneth K. Hansraj, a spinal and orthopedic surgeon.



Texting



Bad



Best!!!



Good

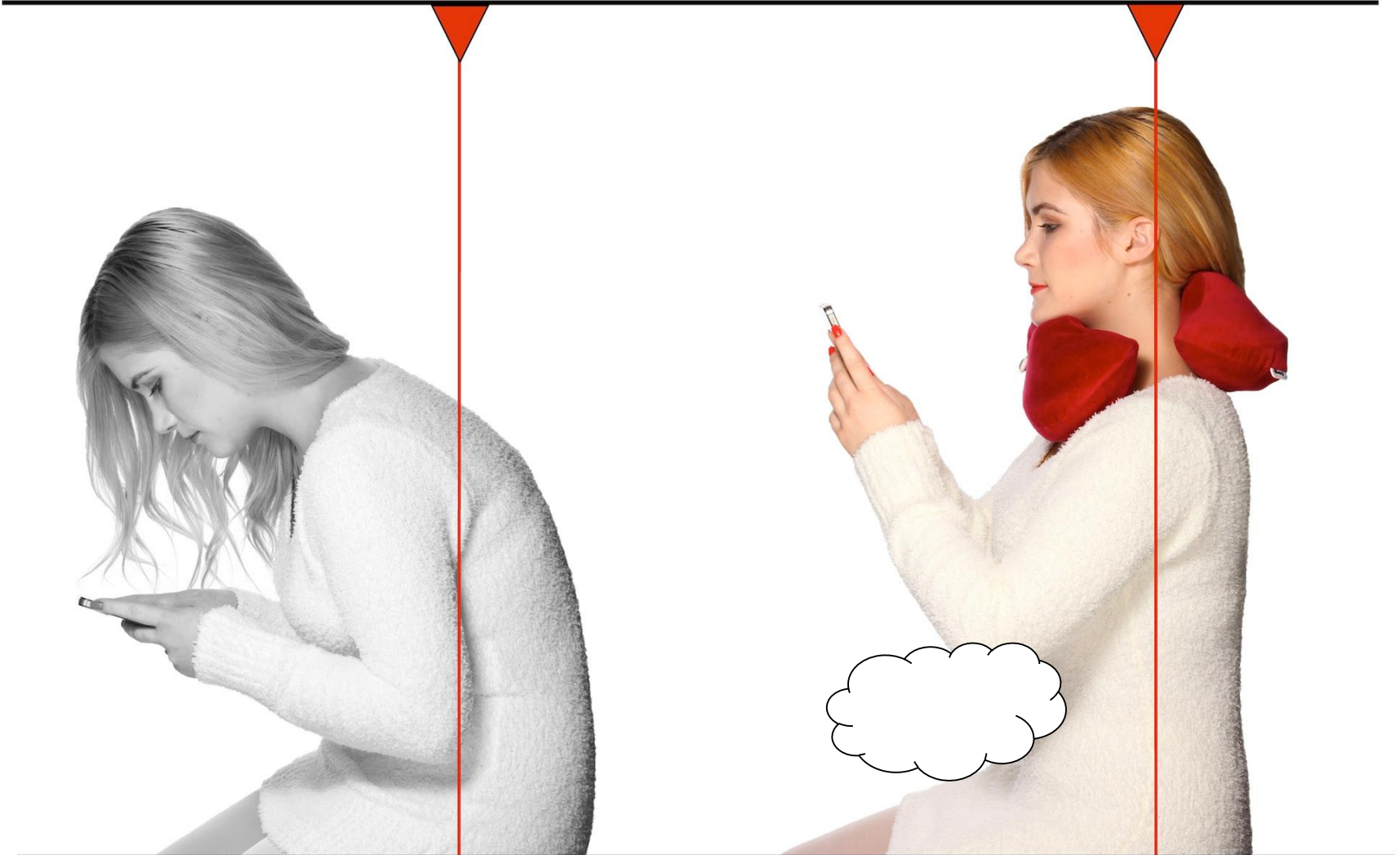


Forward Head Posture (FHP)

or "Text Neck" Syndrome is a condition which, develops when the head is not properly aligned with the neck causing a curvature of the spine.

Correct your Head Position

Neck Sofa with the patented inner "Support Structure" allows you to re-train how, you use specific wireless devices. Supporting your head allows for weight and added pressure to be minimized. Thereby providing proper posture alignment. Better posture of course means better overall health.





Ergonomic Equipment

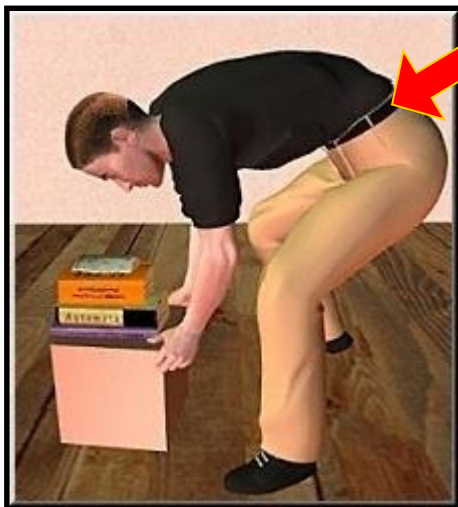
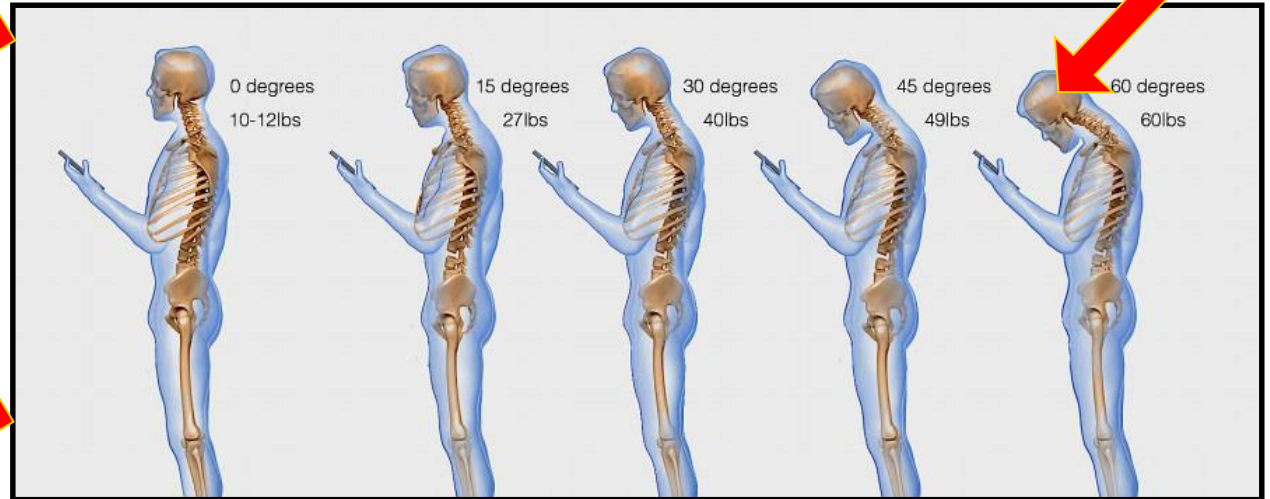








Can I keep posture upright?



Be ergonomic conscious

Can a pillow cause me harm?



Use 1 pillow behind head (while lying on back) and 1 pillow between legs (while lying on side). **Cervical pillow is preferred.**

Do not sleep on stomach.

Need **REM** (4th stage of sleep) for proper repair. - Medications block

New mattress **every 7 years.**
Flip Mattress 1 X per Month.
Pancake-Head to toe. Put it on Calendar.

While in bed try to **emulate erect normal posture** as much as possible.



CORRECT SLEEPING POSTURE

INCORRECT POSTURE



CORRECT POSTURE



Repetitive Strain Injury

- Repetitive strain injury (RSI) costs U.S. businesses an estimated \$15 and \$20 **billion** per year, according to the Federal Occupational Safety & Health Administration (OSHA).
- One of the easiest risk factors to address is improper workstation configuration, including the use of an appropriate pointing device and keyboard.
- Properly designed ergonomic input devices can reduce computer-related pain and demonstrate a significant effect on the incidence of RSIs for primary prevention.
- If hypothetical company employing 500 computer users reduces repetitive strain injuries and symptoms by 10%, the company could **save \$700,000 annually.**

Pain and Symptoms Associated with Texting and Computer Use

Low back pain

Leg pain (sciatic)

Neck/Mid back pain

Headaches

Arm, wrist, or hand pain

Carpal tunnel

Shoulder pain

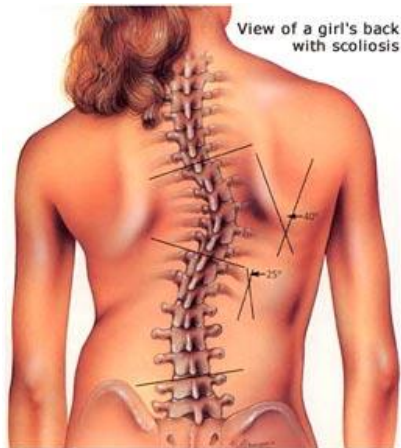
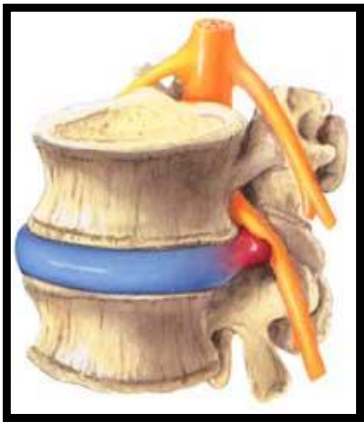
Fatigue or tired muscles

These symptoms may be pinpoint or may radiate.

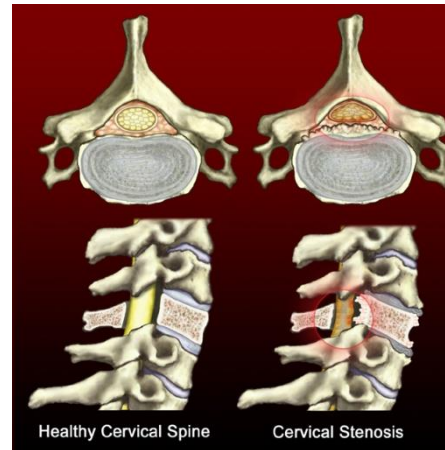
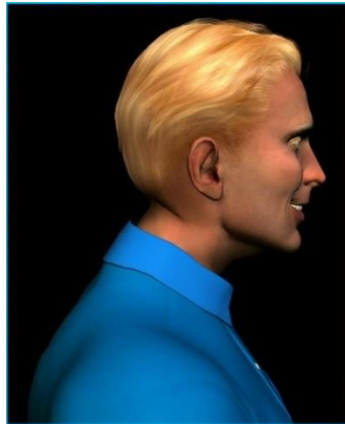
These symptoms can be helped through Chiropractic adjustments.



Possible Long term Effects of Texting and Computer use

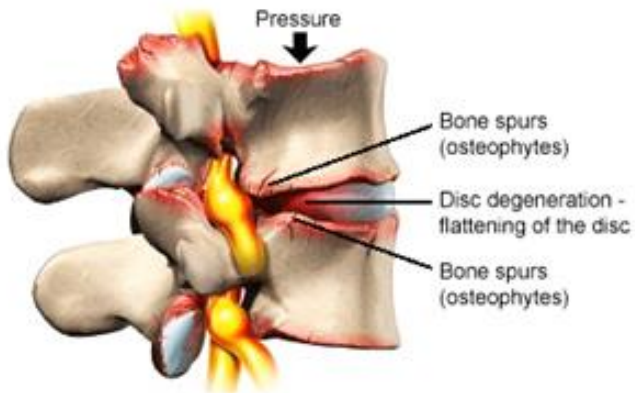


View of a girl's back with scoliosis



Healthy Cervical Spine

Cervical Stenosis



Possible Medical Treatment for these conditions



***Medicare and
Many insurance
companies will
cover
Chiropractic
adjustments***



In Office Posture Analysis

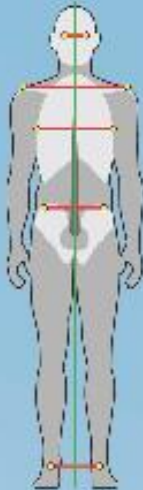
1. Schedule with Kelly at table.
2. Receive a certificate and an appointment.
3. Receive an in office posture/ergonomic analysis
4. No charge for this service



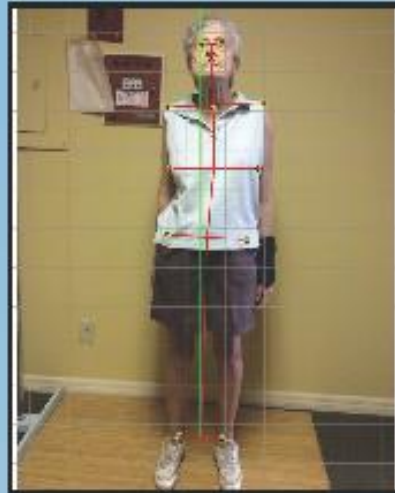
"The Patient and any other person responsible for payment has a right to refuse to pay, cancel, payment, or be reimbursed for any other service, examination, or treatment which is performed as a result of and within 72 hours of responding to the advertisement for the free, discounted fee, or reduced fee service, examination, or treatment." This discounted plan can be considered an economic hardship and does not apply utilization of health care insurances, workers compensation, Medicare, nor personal injury cases. Additional X-ray views will be billed at the Time of Service Discounted Price of \$25.00 Per x-ray film.

Good posture is simple and eloquent by design in form and function. The body is designed to have the head, rib cage, and pelvis perfectly balanced upon one another in both the front and side views. If the posture is deviated from normal, then the spine is also deviated from the normal healthy position. Unfortunately, abnormal posture has been associated with the development and progression of many spinal conditions and injuries including: increased muscle activity and disc injury, scoliosis, work lifting injuries, sports injuries, back pain, neck pain, headaches, carpal tunnel symptoms, shoulder and many other conditions. Additionally, postural abnormalities in adolescent years have been recognized as one of the sources of pain syndromes and early arthritis in adulthood. Therefore, posture should be checked and corrected in children before more serious problems can occur.

Normal



Your Posture from Front



Your Posture Viewed from the Front

Head is shifted 0.35" right and is tilted 4.9° right

Shoulders are not shifted significantly left or right and are tilted 2.9° right

Ribcage is shifted 0.94" left

Hips are shifted 0.88" left and are tilted 3.6° left

Any measurable deviation from normal posture causes weakening of the spine as well as increased stress on the nervous system which can adversely affect overall health.

Normal



Your Posture from Side



Your Posture Viewed from the Side

Your head weighs approximately 9.0 lb and is shifted 3.13" forward

Based on physics, your head now effectively weighs 37.1 lb instead of 9.0 lb

Shoulders are shifted 0.35" backward

Hips are shifted 0.15" backward

Knees are shifted 2.37° forward

PAIN SCALE

0 1 2 3 4 5 6 7 8 9 10

During this assessment, you noted that your pain was 0 out of 10 (worst possible pain). Remember that pain and symptoms can be directly associated abnormal faulty body structure - ie. Abnormal Posture

Chait Chiropractic Center
www.chaitchiropractic.com

Questions and answers

4221 Bee Ridge RD.
(941) 371-1070