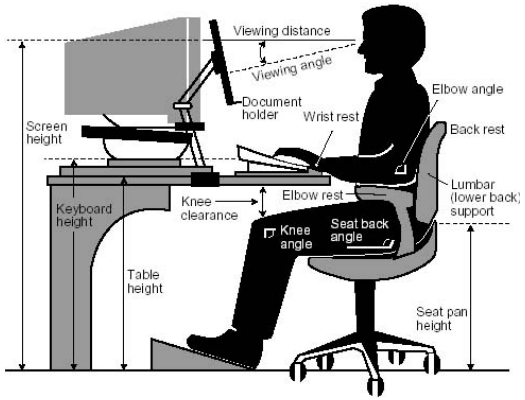
Ergonomics

Ergonomics

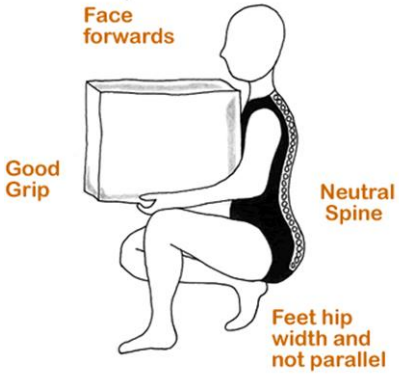
"An **applied science** concerned with designing and arranging things people use so that the **people and things interact** most **efficiently and safely**" (Merriam-Webster)

- Assessment – Quantitative or qualitative, in-person evaluation, phone interview, online survey, photos and video
- Intervention – Recommendations for equipment, exercises, workflow optimization
- Evaluation – Was the intervention effective? What next?

Ergonomics



- Office ergonomics:
  - Desk and chair
  - Computer equipment
  - Document handling

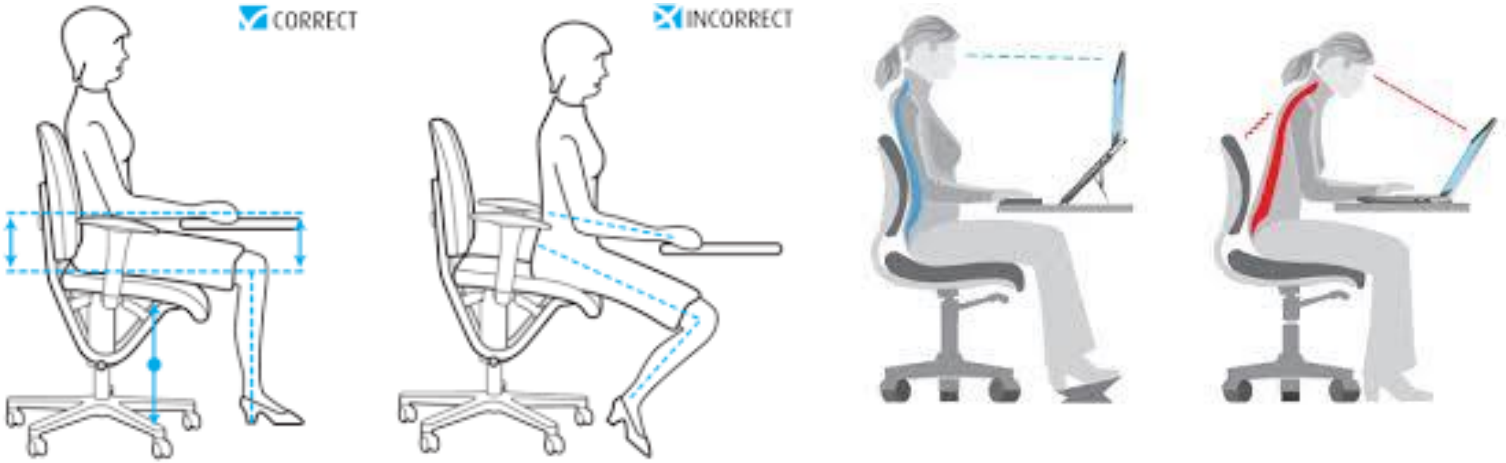


- Outside of the office:
  - Lifting
  - Repetitive tasks
  - Use of hand tools
  - Vehicles
  - Vibration

Sitting – Benefits and Challenges

- Benefits:
  - Uses less energy
  - Allows for fine motor skills and mental focus
  - Less stressful than crouching, kneeling, or stooping
- Challenges:
  - Seating surface influences posture and circulation
  - Over-relaxation
  - Static postures

Sitting Posture



Sitting – What to do…

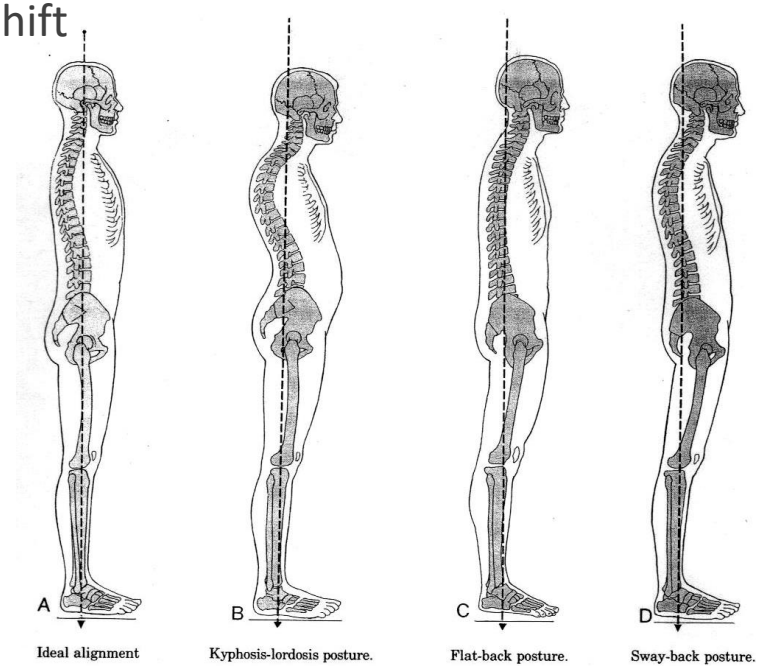
- Pay attention to your breath
- Be aware of habitual postures
- Keep both feet on the floor (or footrest)
- Maintain balance and open angles
- Move/adjust your chair throughout the day
- Take regular breaks to stand and move around

At the computer….

- Look up and away from your computer screen (20-20-20)
- Stretch and relax your arms and hands every 30 – 60 min

Standing – Benefits and Challenges

- Benefits:
  - Allows for more movement and weight shift
  - Maintains active muscle engagement
- Challenges:
  - Pressure on feet, shoes matter
  - Uses more energy than sitting



Ideal alignment | Kyphosis-lordosis posture. | Flat-back posture. | Sway-back posture.

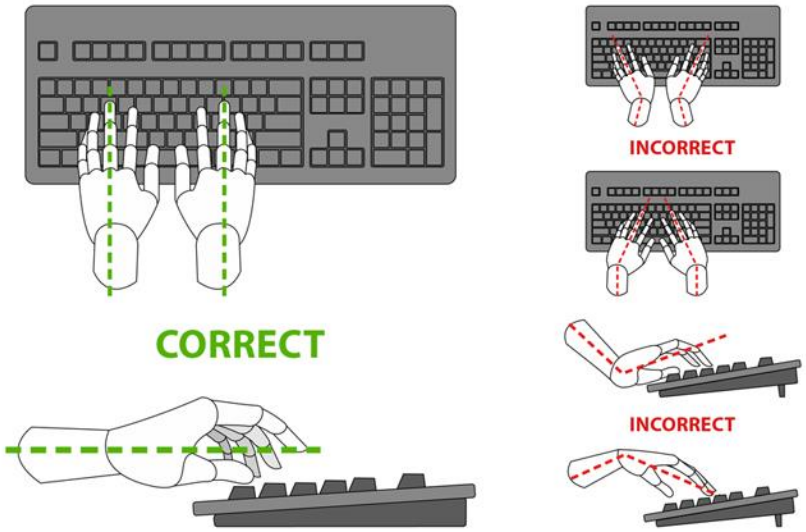
Standing – What to do…

- Sit down periodically
- Wear supportive shoes
- Maintain balanced and relaxed legs
- Maintain pelvis in neutral position
- Explore weight shifts, knee bends, and foot position

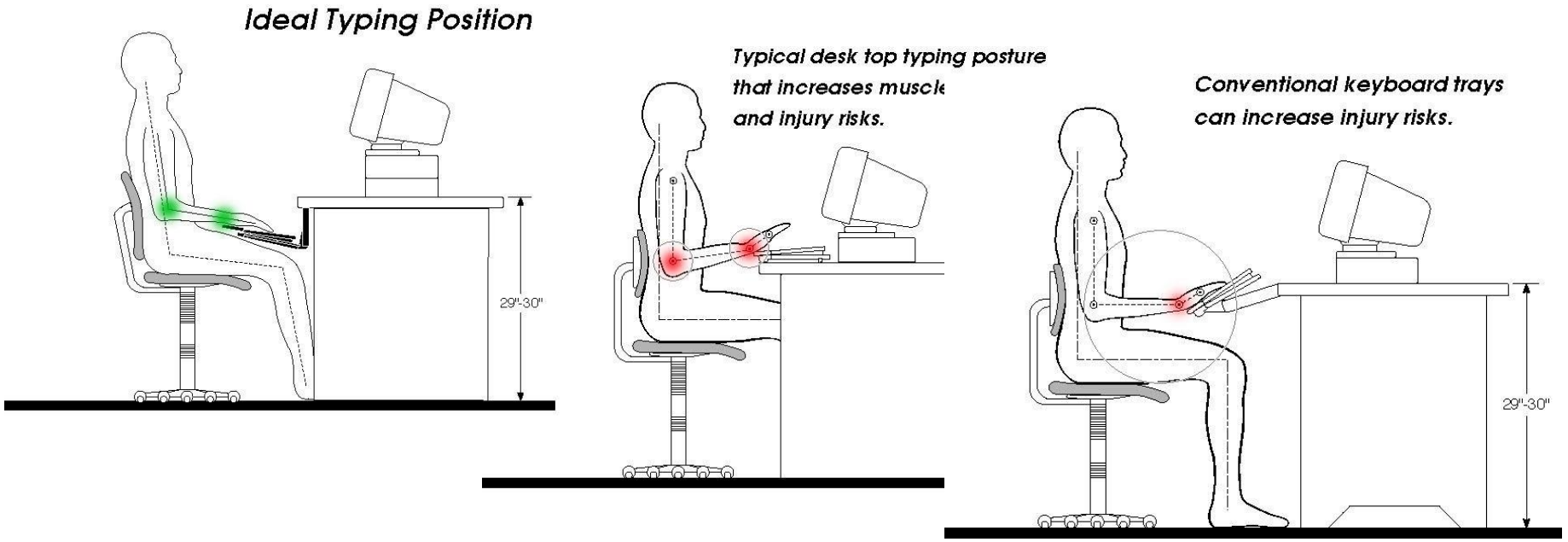
At the computer…

- Look up and away from your monitor (20-20-20)
- Stretch and relax your arms and hands every 30 – 60 min

Keyboarding

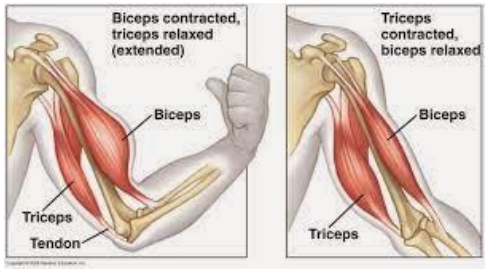


Keyboarding



Moving – Benefits and Challenges

- Benefits:
  - It's what your body is 'built' for!
  - Cardiovascular fitness
  - Muscle tone and bone density
  - Mental focus/emotional resilience
- Challenges:
  - Repetitive motion stress
  - Disruption (time and motion)
  - Mobility issues

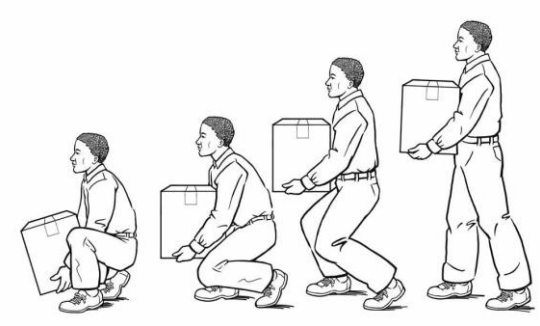


Moving – What to do…

- Walking
  - Hold your head up
  - Wear supportive shoes
  - Maintain pelvis in neutral position
  - Maintain forward momentum with arms
  - Use activity trackers or cell phone apps

Moving – What to do…

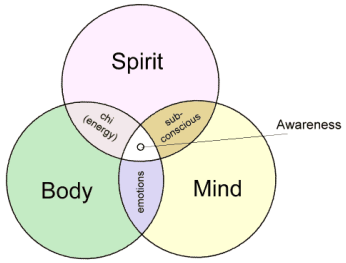
- Lifting
  - Have a plan before you pick it up!
  - Keep load close to body
  - Maintain natural back curve, avoid twisting
  - Engage your core – energize your belly
  - Use your legs, not your back, to lift things



- Hand tools and task work
  - Avoid prolonged contact with hard surfaces
  - Use bent handles instead of bent wrists
  - Keep hands relaxed to avoid excessive gripping force

Awareness and Wellness

- Check out March 2015 Safety Spotlight for tips and tools http://ucanr.edu/sites/ucehs/files/207901.pdf
- Nurture yourself - prioritize healthy eating, sleeping, and rest
- Consider mental or emotional triggers/associations
- Pay attention to your patterns and habits (mental and physical)
- Seek new experiences (new perspectives support new habits)



Tools and Resources

ergo iSEAT
Self Evaluation And Training
University of California, ANR

- Online tools & guides:
  - UC-ANR website: http://safety.ucanr.edu/Safety_Training_Resources/Ergonomic_Training/
  - Computer workstation: https://www.osha.gov/SLTC/etools/computerworkstations/positions.html
  - Farm ergonomics: http://ohioline.osu.edu/aex-fact/pdf/AEX_981_6_10.pdf
  - NIOSH hand tool selection guide: http://www.cdc.gov/niosh/docs/2004-164/pdfs/2004-164.pdf
  - CalOSHA publications and posters: http://www.dir.ca.gov/dosh/puborder.asp

- Contact UC-ANR EHS:

http://safety.ucanr.edu/Safety_Training_Resources/Ergonomic_Training/Ergonomic_Assessment/

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