

ERGONOMICS



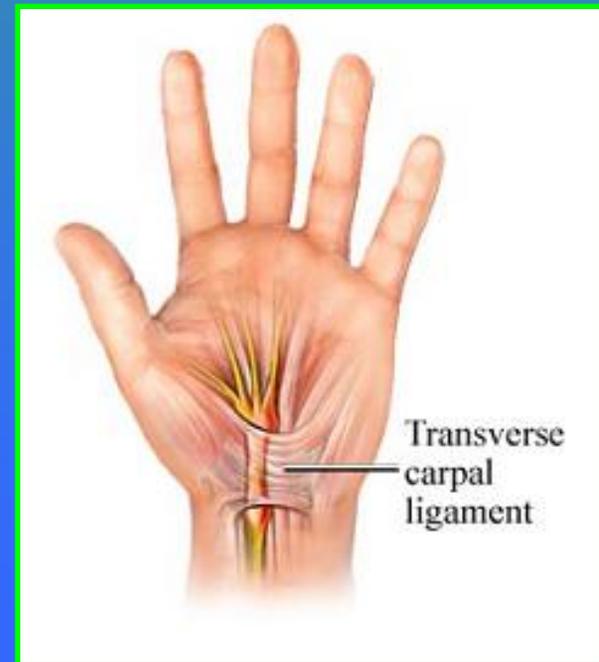
The Art & Science
of Fitting the Work to the Person

WHY?

Disorders of the soft-tissues such as muscles, tendons, nerves, or blood vessels and joints.

Common Office Environment Disorders:

- Carpal Tunnel Syndrome
- Tendonitis
- Back Strain/Sprain
- ...and others



WHY THE INCREASE IN MSDs

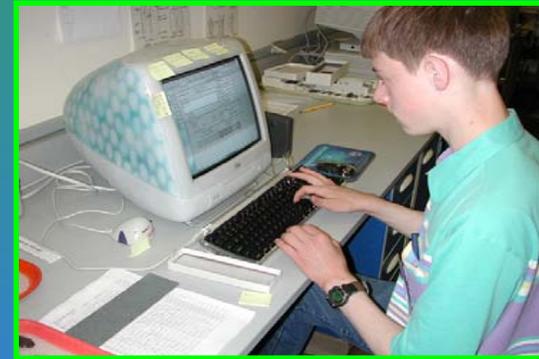
- Efficiency in production
- Specialization / less variety
- Improved diagnosis
- Increased awareness
- Higher personal expectations for well-being
- Less fit workforce
- Aging workforce
- Longer Working Hours

Risk Factors

Repetition



Posture



+

Force



Insufficient
Recovery



Symptoms of Disorder or Injury

- Numbness
- Burning
- Pain/Aching
- Tingling
- Cramping
- Stiffness
- Decreased range of motion
- Deformity
- Decreased grip strength
- Loss of function

**For the best outcome,
report symptoms when they first appear so the
causes can be addressed.**

Prevention Hierarchy

Engineering – Design the Risk Factors out of the job

1st

Adjustability

Neutral Position

Reduce
repetitiveness

Administrative–
Implement work
practices to reduce
exposure to risk factors

2nd

Multi-tasking

Mini-breaks

Work Hours

PPE – Protect the
worker from the full force
of the risk factors.

3rd

Wrist braces

Lumbar pillow

Self-Checks for Your Workstation

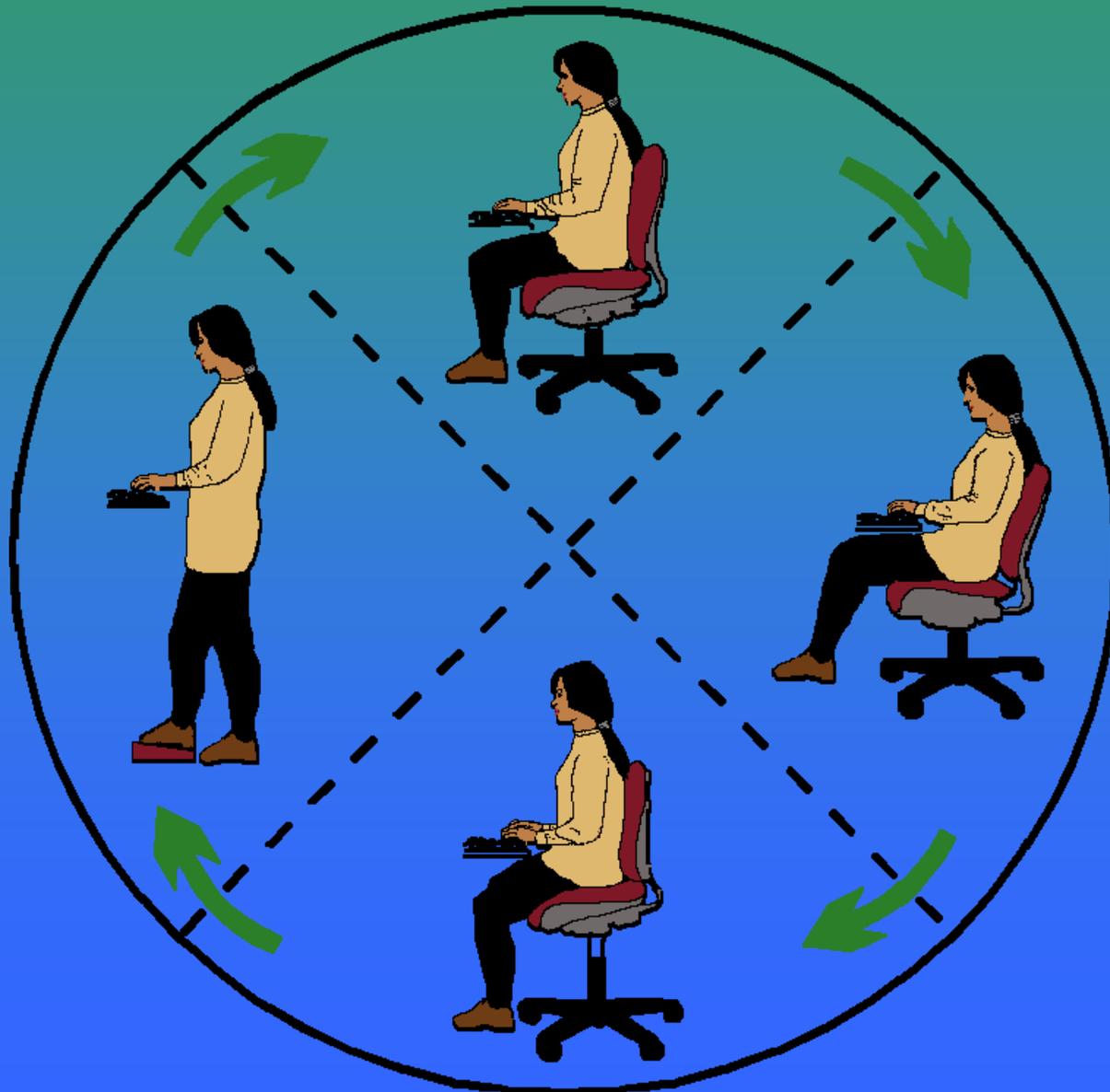
Benefits:

- Improve comfort
- Reduce chances of injury
- Increase productivity
- Less fatigue
- Enhance job satisfaction
- Extend work life
- Protect enjoyment of many life activities



Use the following slides to help you adjust your workstation.

NEUTRAL POSITION

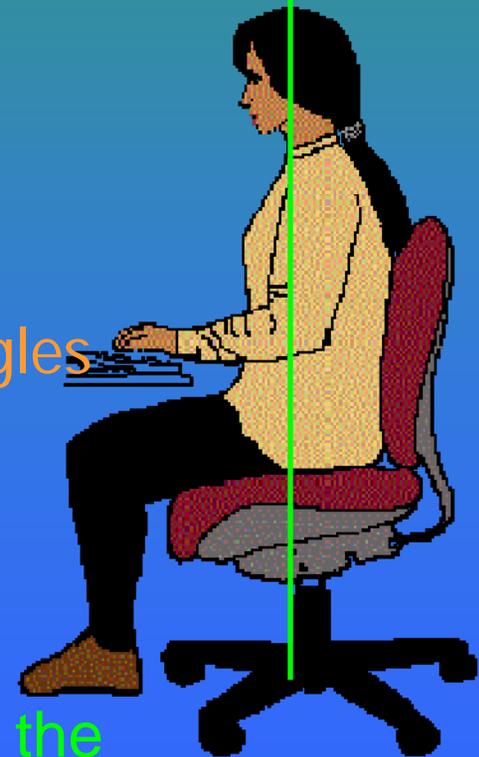


BASIC NEUTRAL



"90-degree" posture:

- Sit upright
Ears, Shoulders, Elbows, Hips aligned
- Elbows, hips and knees bent at right angles
- Feet flat on the floor or footrest.



This is the basic neutral position that most office personnel should utilize a majority of the time spent seated .

Back Relief

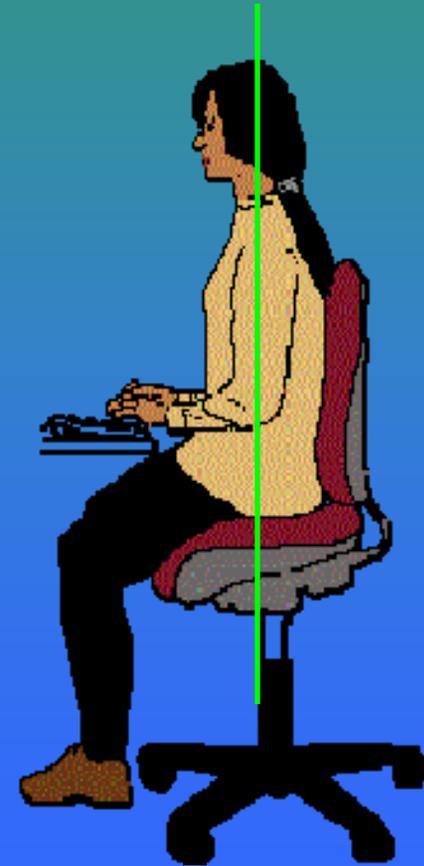


Forward tilt posture:

Raise the chair height a few inches and tilt the front downward about 8°.

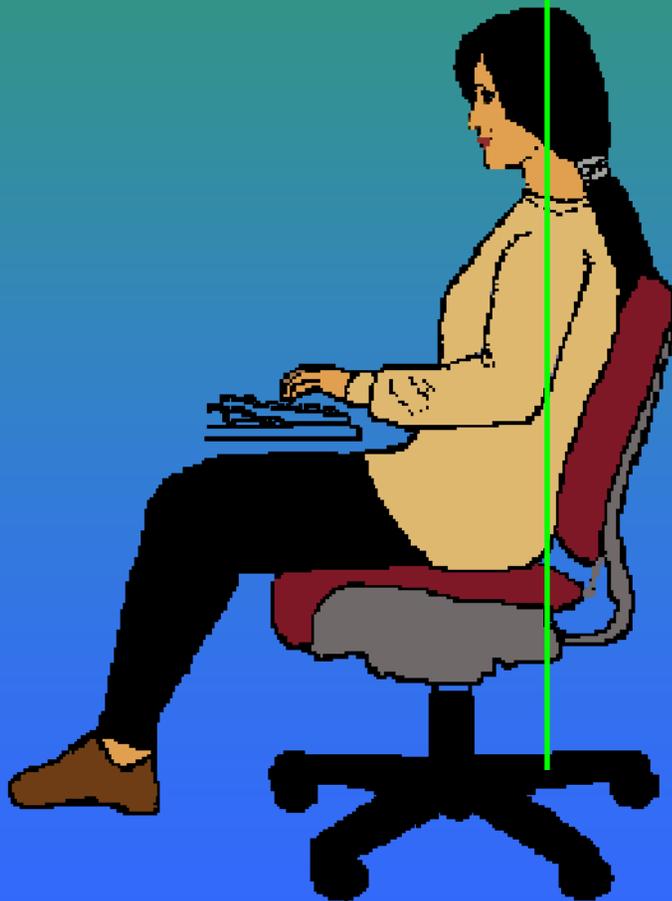
Opens hip angle allowing legs to support some weight.

Not recommended if you have knee or foot problems.



May be used occasionally throughout the day, but not recommended for long periods at a time.

Lower Body Relief



Reclining posture:

Lean back 10° - 20° into the chair's backrest and put your feet out in front of you.

Opens hip and knee angles to help relax back muscles and promotes blood circulation. Leaning back too far can result in an awkward neck posture.

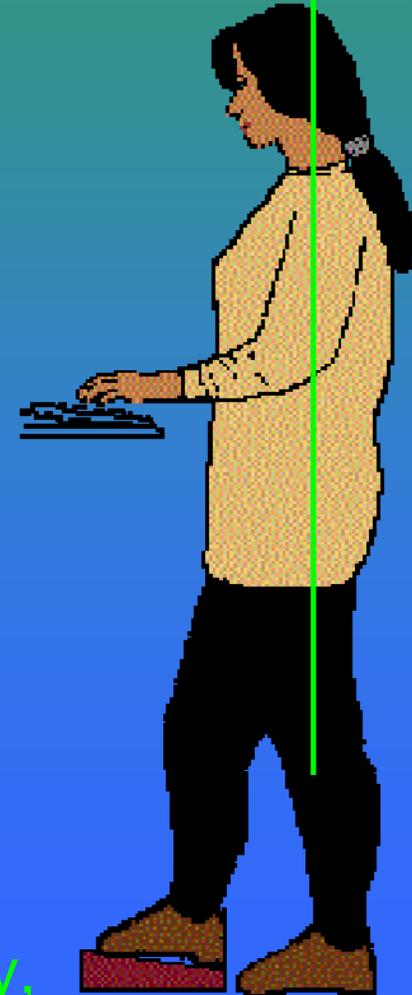
May be used occasionally throughout the day, but not recommended for long periods at a time.

Standing Neutral



Standing posture:

- Provides biggest change in posture
- Good alternative to prolonged sitting
- Can be fatiguing, have chair available
- Prop one foot up on a low footrest occasionally to help shift your weight.



May be used occasionally throughout the day, but not recommended for long periods at a time.

The Chair

IMPORTANT FEATURES!

1. 5-Caster Base
2. Height adjustability
3. Seat depth adjustability – either seat slides or back moves fore/aft - or chair is available in numerous sizes
4. Waterfall edge to the front of the seat
5. Backrest adjustability – up/down, angle, and flex
6. Armrests are padded and adjustable – up/down, in/out and/or removable



The Chair

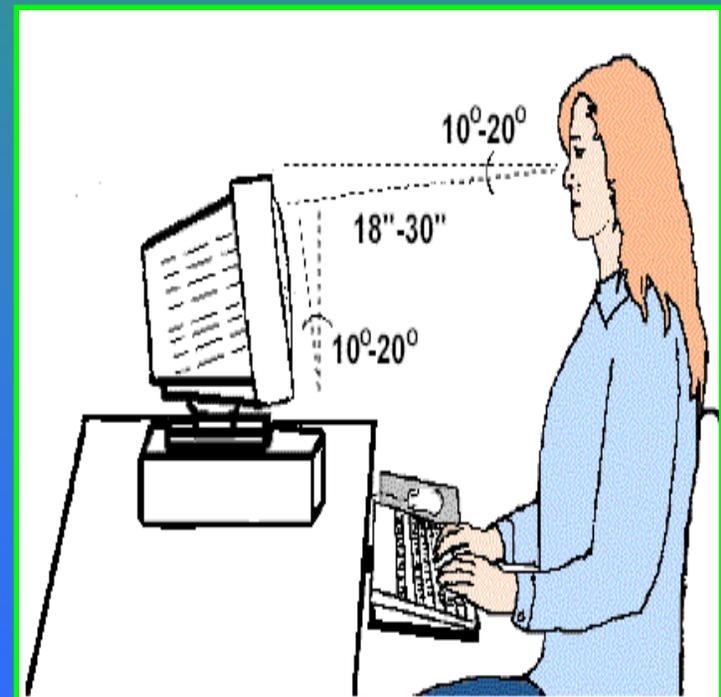


Make existing chairs fit better

- Learn to properly adjust your chair.
- Fix a malfunctioning chair.
- Use a lumbar cushion for additional support or if seat is too deep.
- Pad armrests that are hard or that have square edges.
- Remove armrests if they contribute to awkward postures.
- Use a foot rest, or raise monitor to help reach a neutral position.
- Take microbreaks and frequent position changes – Keep encouraging this even with the BEST chairs!

The Monitor

- Locate monitor directly in front of keyboard, no twisting should be involved to view screen.
- Top of screen is slightly below eye level, even lower if wearing bi/tri-focals
- Approximately arm reach away.
- At right angle to overhead lights and windows.



Input Devices

Keyboard, mouse, vertical mouse, joystick, track ball, stylus, voice activation, touch screen

- **Proximity** – Elbows aligned with ears, shoulders and hips. No reaching.

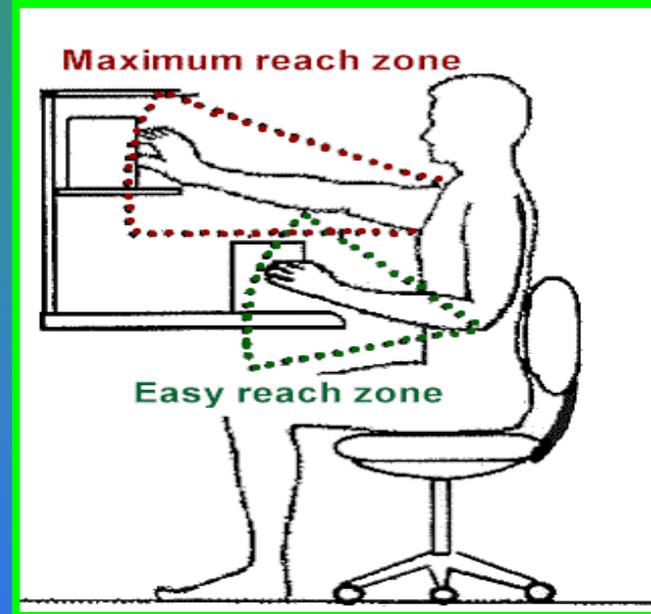
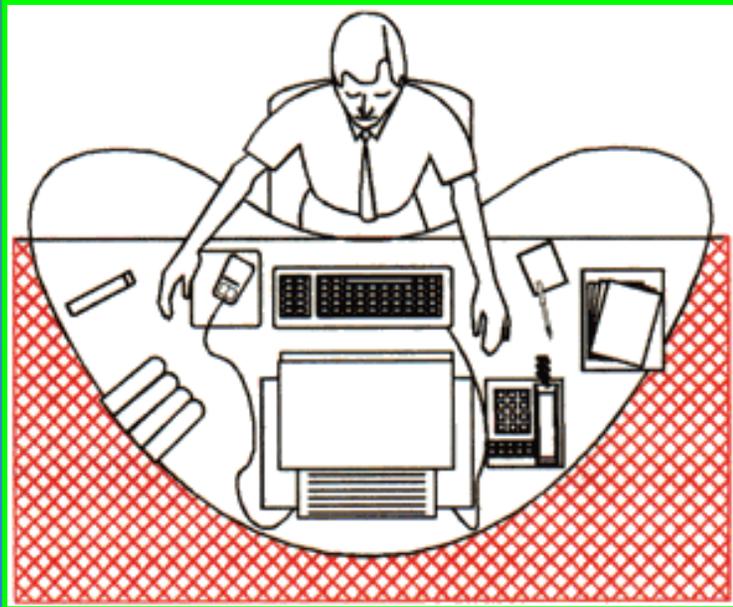
- **Angle** – Wrists & forearms parallel to the floor. No forearm or wrist angle.

- **Padding** - Gel pads. No resting on hard edges.

- **Repetition** – Vary tasks, use “hotkeys”, autocorrect, word recognition and other software features to reduce repetitive keying/mousing.

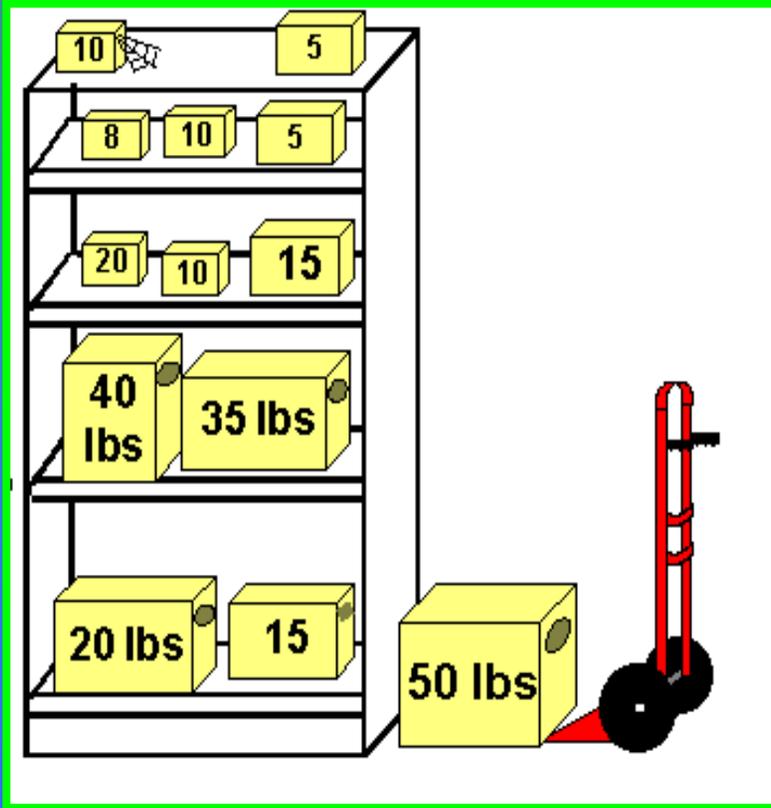


The Layout

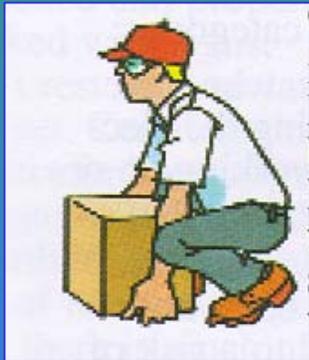


Keep the items used most often closest to you.
The workstation layout should minimize reaching.

Materials / File Management



1. Plan Your Pick & Place



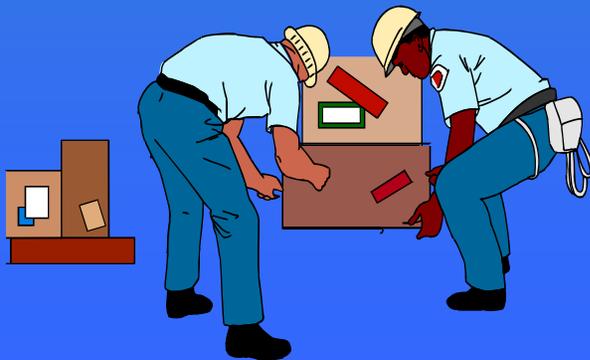
2. **STAND/
Kneel
close to
the load**



3. **Bend
your
knees -
not
your
back!**



4. **Let your
legs do
the lifting.
Follow
your feet.
No
Twisting!**

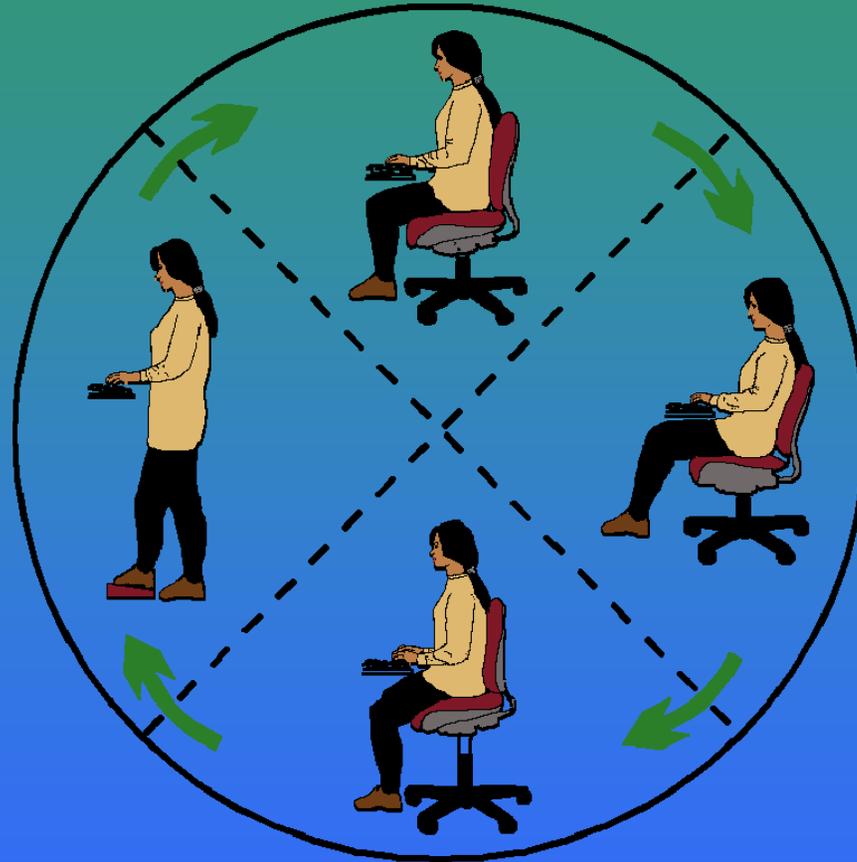


Get Help
with
heavy or
awkward
loads!



Use
the
right
tools!

Questions or Concerns?



**Contact your Supervisor or
Human Resources Dpt.**