#### **The Power of Ergonomics:**

#### **Fitting your Workstation to You**

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#### Definition of Ergonomics

Ergonomics is the science of designing the job to fit the worker, rather than forcing the worker's body to fit the job to reduce/prevent work-related musculoskeletal disorders and injuries SISISI

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- Arranging the workstation
- Changing habits
- Using adaptive tools and equipment

## Musculoskeletal Disorders/Injuries

- Injuries and disorders of the soft tissues (muscles, tendons, ligaments, joints, and cartilage) and nervous system.
- Exposure to multiple risk factors that can cause or exacerbate the disorders, not from a single event or trauma.
- Develop gradually over weeks, months, or years
- Pain, numbness, tingling, stiff joints, difficulty moving, and muscle loss
- When the physical capabilities of the worker do not match the physical requirements of the job



# Cost of MSDs

- 34% of all lost-workday injuries and illnesses
- 600,000 MSDs requiring time away from work every year
- \$1 of every \$3 spent for workers' compensation
- \$15 billion to \$20 billion in workers' compensation costs
- Prevents people from returning to their jobs or handling simple, everyday tasks



#### **Computer Ergonomics**





- Top of monitor should be around <u>eye level or</u> <u>slightly lower</u> (~15° lower).
- Monitor should be centered and ~1 arm's length away from you.

Top of the monitor is at or below eye level so user can read it without bending their head down/back.

Monitor placed approximately an arm's length away so user can read the screen without leaning head, neck or trunk forward/backward.



#### **Standing Desk Ergonomics**

- Same as sitting desk ergonomics. Except legs, torso, neck, and head are in-line and vertical, with feet slightly apart.
- Can keep one foot elevated on a footrest that is slightly in front of the user.
- Alternate postures regularly and mix standing with sitting tasks.



Height Backrest Lumbar support Seat depth Arm rest



#### **Neck Pain**



- 1. Poor positioning of the computer monitor height
- 2. Distance away from monitor is too far
- 3. Documents on screen are in small font
- 4. Head and neck are not in-line with torso when seated
- 5. Copying notes from a book or document
- 6. Not taking rest breaks

## **Shoulder Pain**



- 1. Positioning of your armrests
- 2. Keyboard and mouse positioning
- 3. Not taking rest breaks

## Wrist Pain



- 1. Arm positioning on the keyboard
- 2. Hard surfaces or edges of desk
- 3. Not taking rest breaks

### **Back Pain**



- 1. Sitting position
  - a) Distance from screen
  - b) Keyboard and mouse position
- 2. Chair settings
- 3. Not taking rest breaks

## Leg Pain



- 1. Chair design
- 2. Chair settings
- 3. Not using a footrest
- 4. Not taking rest breaks

#### **Eye Strain**



May be caused from:

- 1. Bright lighting (above or behind)
- 2. Not reducing glare
- 3. Font size, contrast and brightness screen settings
- 4. Not taking eye breaks (20 min-20 ft-20 sec Rule)
- 5. Not blinking often to refresh eyes



### Questions?



#### References

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