No health and wellness program should be used for emergency or urgent care needs. In an emergency, call 911 or go to the nearest emergency room. The information provided through any health and wellness program is for informational purposes only and provided as part of your health and wellness benefits. The health and wellness team is not a substitute for your doctor’s care. Your health information is kept confidential in accordance with the law and may be used to provide health and wellness recommendations as applicable. The health and wellness program is not an insurance program and may be discontinued at any time.
Before we get started…

GOALS:

- Increase your knowledge and awareness of musculoskeletal importance and how it relates to ergonomics – the BASICS
- Review simple stretches to incorporate into your day
- Develop 1-2 follow up goals for strategies to incorporate guidelines

This presentation is NOT…

- NOT meant to provide a detailed musculoskeletal or ergonomics analysis (Please note that expert resources are available to you if you desire additional information)
- NOT a replacement for expert advice or medical care
- NOT a forum for discussing specific details of worksite environments
What is **ergonomics**?

**Ergonomics** is creating a work space for people to be productive and safe. It’s fitting the working environment to the person, not the person to the environment.

**Ergo** = work and effort  
**Nomos** = laws, to study

**er·go·nom·ics**
Of adults experience back pain at some point in their life.

Can musculoskeletal disorders impact you?

On average adults spend 50-65% of their waking hours sedentary*

Risk increases when you:
- Stay in a fixed or awkward position
- Repeat the same movement
- Exert extra force

Participating in proper ergonomic practices may help reduce these risks.

Goals of ergonomics:
↓ musculoskeletal injuries
↓ discomfort
↑ health and safety
↑ work efficiency & productivity
What are the potential risk factors? Where can you make simple changes starting today?

- Prolonged awkward postures
- Frequent or heavy lifting, pushing, pulling or carrying of heavy objects
- Vibration and temperature
- Repetitive motions
How is your posture?

Do you notice…
• Neck / head alignment
• Back position
• Shoulder positions
• Hand and arm placement
• Ankle and feet positions

How does it change when you are sitting vs. standing?
Take Back Your Back

The spine supports and allows for movement.

Support structures include:
- Muscles
- Tendons
- Ligaments
Two steps to decrease risks to your core

• **Step 1:** Keep your spine in its natural curve. Avoid slouching, use your abdominal muscles, and take stretch breaks to help your spine stay in its neutral position.

• **Step 2:** Improve the ergonomics of your work space in SIMPLE ways by adjusting your space to fit your needs.

Prevent unnecessary stress on your spine!
Where do you stand?

To take a quick look at your own alignment, imagine a line through:

- Center of the earlobe
- Tip of the shoulder
- Midway through the chest
- Slightly behind or at the hip joint
- Back half of the knee joint
- Ankle bone
Risk factors could affect the muscles, nerves and tendons which support our upper and lower body limbs.

Many musculoskeletal disorders can be prevented with YOUR involvement.

Recognize the capabilities and limitations of the human body.
Tips on making your workstation work for you

• Sitting can be hard on your back! Sitting for long periods of time may cause increased pressure on the muscles, tendons, and skeletal system.

• Making *simple* adjustments to your workstation could help prevent the development of an ergonomic problem.
Take time for your spine

- Leaning forward, back unsupported
- Excessive neck and trunk flexion

- Support your back, use arm rests
- Head upright and over shoulders
- Lift the chest and relax shoulder blades
- Use a document holder
Excessive upper extremity activity
Shortened chest muscles
Excessive shoulder rotation & activity

Raise chair, 90 degree bend in elbows
Keep arms close to body and items within arms distance, use arm rests
Shoulders over hips
Chair closer to the work surface
• Leaning forward, back unsupported
• Excessive neck flexion
• May cause additional pressure on the spine, muscles, tendons and nerves

• Comfortable level from eye sight
• Enlarge font size
• Adjust screen resolution and contrast
• Use phone for short durations and consider use of a headset
Monitor Quick Tips

- Make sure the top line of the monitor’s screen is at or just below eye level when you’re sitting upright.
- To avoid eye strain, neck pain and shoulder fatigue, put the monitor directly in front of you, generally about 20 to 40 inches away. This helps avoid neck twisting.
- Place monitor perpendicular to window.
Monitor Quick Tips

- Free of dust and smudges
- Adjust brightness, contrast, and tilt
  - Free from flicker
- Anti-glare coatings/filters
- Appropriate size for the tasks performed
Monitor Placement

If you wear bifocals or trifocals, reading the screen may be a challenge. Tilting your head backward to read through the lower portion of your glasses can lead to neck, shoulder and back problems.

Consider…

- Adjusting the monitor and your chair to avoid needing to tilt your head
- You may need to lower the monitor or tilt the screen up toward you, so you can maintain appropriate neck postures
- Raise the chair height until you can view the monitor without tilting your head back
  - If needed, raise the keyboard and use a footrest
Keyboard and mouse placement

• Place the keyboard directly in front of you. It should be at a distance that allows your elbows to rest close to your body with your forearms parallel to the floor.

• Place your mouse within easy reach. Don’t bend your wrist upward. Sit high enough so your hand rests naturally on it. Keep mouse on same surface as keyboard with a workable surface area.

• If using a mouse causes pain or discomfort, switch to a trackball or other pointing device; also consider a keyboard or mouse rest.

• Features of a mouse include: long cord for proper placement, comfortable fit to your hand, moves easily, usable for left and right hand users.
Your Chair

• **Height:** Stand in front of the chair and adjust the height so the highest point of the seat, when in the horizontal position, is just below the knee cap. When seated, your thighs should be parallel to the floor and your knees even with your hips. The seat should allow your feet to rest flat on the floor. *Consider a footrest if needed.*

• **Back rest:** Adjust forwards and backwards as well as up and down so that it fits the hollow in your lower back. The back should conform to the natural curve of your spine and provide good lower back support. *Use a pillow or a rolled-up towel if needed.*

• **Armrests:** Should be soft and allow your shoulders to relax while your elbows stay close to your body.

• **Other reminders:** Check that the clearance between the front edge of the seat and the lower part of the legs (your calves) fits a clenched fist (about 2 inches). Bend at the hips when you lean forward. Don’t round your lower back. When sitting, try not to slouch…your back supports your weight best when it’s not curved.

*Remember to get up and MOVE throughout the day!*
Protect your back

Weight of the average human upper torso + load = Strain on the back
Power Zone

- Keep objects below shoulders and above the knees
- Lift closer to your body - avoid overextending/reaching
  - Reduce forceful exertion
Avoid awkward positioning

Use caution with…

• Reaching
• Lifting
• Bending
• Pushing and Pulling
• Lowering
• Carrying
Find ways to include movement throughout your day

• Alternate between sitting and standing
• Take stretch breaks and incorporate deep breathing exercises
• Place reminders on your calendar to move
• Check your posture
• Take walking breaks
• Host walking meetings
• Partner with someone for additional encouragement
• Use the stairs
Give your body a break

- Conduct a warm up stretch
- Stretch the muscle to the point of resistance
- Complete stretches a couple times throughout the day
- Drink plenty of water
- Take time for deep breathing and don’t forget to move during the day
Simple stretches can help...

- Increase range of motion
- Reduce soreness, aches and stiffness
- Improve overall functional performance, posture, circulation

Hands behind head and elbows out
Bend wrist with opposite hand
Bend both knees at 90 degrees
Arm over head and bend to side

Remember to always consult your healthcare provider prior to engaging in new physical activity regimens and follow any given restrictions.
Always start with the appropriate chain of command at your site, including your Manager or Supervisor as well as your Safety Team. These individuals can help provide additional support.

If further assistance is needed, please reach out to:

Kevin Sedensky CSP  
Montgomery County Safety & Risk Manager  
(937) 224-3861 ~ sedenskyk@mcohio.org

Consider the variety of telephonic coaching programs available to you, in addition to several wellness opportunities to help you with your goals!

Optum HealthCare Advisor Team: 1-855-583-3165  
Onsite Health Promotion Specialist (Jennifer Burns): (937) 225-4885
Resources

Resources