Loss Control & Risk Management
Approach to Control Ergonomic Risks

CBIA Ergonomic Conference
Office Environments
December 8th, 2016

Course Outline – Controlling Ergonomics In Office Environments

1. Experience in the Industry
2. Most Common Ergonomic Issue in Office Settings
3. Office Ergonomic Basic Rules
4. Loss Control Approaches
   - Computer Work Station Assessments
   - Most Common Mistakes
   - Common Control Methods
5. Newest Technology
6. Stretches and Exercise
7. Questions
CBIA Workers Comp Program

• FutureComp is the Third Party Administrator for the CBIA Workers Comp Program
• It is a Self Insurance Group
• Currently consists of 189 manufacturers across the State of Connecticut
• We work with these Members on a regular basis to help identify ergonomic exposures, implement controls, and help them manage claims after they occur
• This includes exposures associated with office environments
• Many of the risk management items covered in this conference are services we offer to the CBIA Workers Comp Members

Most Common Ergonomic Issue in Office Environments

Lack of initial ergonomic orientation, training, and best practices!
Office Ergonomic Issues

- Even if you have basic office workstation exposures, you should at minimum provide a general overview of standard ergonomic principles
- Neutral positions and postures are ideal
- The tools that are provided to an employee to make them more comfortable at their work station (chairs, keyboard trays, wrist and foot rests…etc)
- Who to ask if they are having an issue with their workstation set up
- That any problems or issues should be reported immediately so corrective actions can be taken

My Basic Office Ergonomic Rules

It is important to communicate when doing an ergonomic assessment in an office environment that;

- Any changes or suggestions are going to feel awkward at first. The changes are for the positive. If there is initial discomfort, try the recommended position for short durations. Ultimately, the body will acclimatize to newer/better positioning.
- The ultimate goal of an ergonomic assessment is to not have an employee sit like a robot for 8 hours a day. We simply do not want an individual to work in bad posture or develop bad habits for 8 hours a day
Computer Work Station Assessments

- You do not have to be a safety professional in order to conduct a computer work station assessment.
- All individuals are of different shape and sizes, it's important to take some time to set up workstations to the individual, especially in high demand computer environments.
- Office ergonomics is all about the 90 degree rule as it supports neutral position or posture.
- Body parts do not have to be exactly 90 degrees, but as close to possible is best.
- The extremes is when problems or issues occur.

Goal of Ergonomic Assessments

- We want to at least provide the education and knowledge to your employees that the image below left reflects poor habits, whereas below right reflects ideal posture.
- Again, we don't have an issue if on occasion an employee finds themselves using occasional poor habits, but for the majority of the work day we should be promoting good posture/work habits, more so if pain or discomfort persists.
- The other goal of ergonomic assessments is to help the employee understand what tools they need for their specific station and work requirements and that those resources will be made available.
What’s the Most Important Tool for a Carpenter?

What’s do you think is most important ergonomic tool for an office worker?
Work Chairs

- Overall, we have seen some improvement as it pertains to the quality of chairs that are being provided in the office environment when compared to what is seen out on production floors.
- However, if you ever took a moment to ask some of your employees if they knew how to adjust the chair he or she sits in, you would probably be surprised by some of the responses.
- Most ergonomic assessments start with the chair and the chair can effect other components of the workstation.
- If you are going to invest in providing quality ergonomic chairs, you should invest the time in educating and training your employees on the features so they can maximize benefits.
- A lot of office supply and chair manufacturing companies will offer training aids, tutorials and other resources to assist you.

https://www.youtube.com/watch?v=2ezjFaithbI0
Ergonomic Chair Adjustment – Office Master

Before the Assessment

- Before actually starting an ergonomic assessment, you need to ask the individual about their normal daily routines.
- The most common desk routines could include, but not limited to:
  - Keying (document creation, data entry, email, accounting…)
  - Mousing (can be a component of keying, but see exposure increase in design, engineering, art…)
  - Hand Writing
  - Telephonic Conversation
  - Client Meetings
- These questions will help you determine primary risk and areas of focus.
- General question could be, “what percentage of your time is spent on the phone…”
Observe Work Practices

- Once you have an idea of what the individual does on a day to day basis, ask them to go about their normal job duties and observe for five to ten minutes.
- If they do a lot of excel work, ask them to open up a spreadsheet and mimic their normal routine
- If they spend a lot of time on the phone, ask them to pretend they are on the phone
- Make sure to observe from all angles and note any significant bending, twisting, reaching and or awkward postures for any portions of the body

Then Start with the Chair

- Again, it is probably the most important component of a computer workstation
- It is often the most adjustable piece of equipment and other components can be modified easily to conform with chair arrangement
- Common things to look for with chair setup:
  - Start with making sure seat height is appropriate to promote a 90 degree with other work components, with a primary focus on height of desk
  - It is alright if an employee's feet are off the ground, a foot rest may be necessary
Assessment Continued

- Determine if the employee is utilizing the back rest (back of chair). If the employee is leaning forward, chair may need to be pulled closer to desk, seat pan adjusted back or forth or alternative solution implemented (lumbar support insert)
- Once chair is at desired height and back rest is providing support, other features of chair can be manipulated to position employee in ideal posture. The focus should be on maximizing blood flow (90 degrees)
- Ideally, when chair is set up in appropriate position, elbows and hands should almost be level with the desk surface. This should allow for easy arrangement of other computer components to promote proper ergonomics
- Chair arm rests will also be set up parallel with desk surface and other components
- There could be situations where the type of chair will not allow for proper alignment with other features. This could be a sign that an adjustable desk is needed and or a keyboard tray

Positioning of Components

- Once an employee is set up in proper posture and positioning, you want to arrange work components based on the discussions you had with him or her.
- For instance, if an employee spends the majority of their time on the phone taking physical notes, the phone should be located in the “usual” work area and there should be sufficient space closest to the individual to hand write notes
- In most office environments, you will see monitors located in “non-working” area, keyboard and mouse located in the “usual” work area
Positioning

- The ultimately goal is to set up workstation in a manner to prevent any unnecessary prolonged bending, reaching, twisting...etc.
- If the components are arranged in a beneficial manner, the employee is less likely to develop bad habits, such as leaning on desk, bending neck to talk on phone, twisting to see monitor...etc.
- You may have to make some adjustments several times until you get into the ideal position

Most Common Mistakes

General Positioning:

- Monitor, keyboard and mouse not directly in front of seated position
- Workstation elements located too far away from seated position
**Most Common Mistakes**

**Monitor to High/Low:**

- If monitor is too high then you are more likely to bend neck to look up
- If monitor is too low, more likely to bend neck to look down

![Monitor to High/Low](image)

**Most Common Mistakes**

**Allowing Wrist/Arms Sit On Desk/Edge:**

- Circulation is key to preventing MSDs, when you allow your body to rest on a hard surface, you reduce the amount of blood flow
- Worst thing possible is to place your arms on wrist on the edge of a desk
- Wrist rests help cushion, but still reduce the amount of circulation

![Allowing Wrist/Arms Sit On Desk/Edge](image)
Most Common Mistakes

Other common ways to reduce blood flow:

• Sitting with legs crossed while in chair or one leg on chair
• Putting feet on bars or casters directly below the chair

Slouching:

• Can be a direct result of how arm rests are set up.
• Too low and an individual could lean to one side possibly creating awkward postures
• Too high could result in raised shoulders
• Slouching is also a result of sitting in position for a prolonged period of time.
Most Common Mistakes

Dual Monitors:

• Dual monitors are being introduced more and more in the work place to make individuals more efficient

• Much like the rest of the ergonomic set up, without appropriate training and knowledge dual monitors are typically not set up correctly

• Most common set up, monitors side by side.

• This promotes twisting of neck and or body

• Ideally, you want your primary monitor set up directly in front/square, with secondary to side

Ideal Arrangement
Misconception

- Most people automatically assume that ergonomic improvements are going to be costly investments.
- They can be depending on the technology you want to invest in, but a perfect example of low cost ergonomic improvement would be using a ream of paper to get a computer monitor up to appropriate height.
- Always start small when making operational safety improvements. What you may think is the answer to the problem, may create other unwanted issues. Get feedback from the employee to help limit unwanted spending.
Laptops

- It is nearly impossible to set up and work on a laptop directly in an ergonomic fashion.
- If you are going to expect employees to work long periods on laptops, you should invest in docking station, wireless keyboards and mouses so they can mimic standard office environments.

Newer Technology

- The following are just some of the newer approaches we are seeing out in office environments.
- When conducting ergonomic assessments, our main focus is trying to set individual up in neutral posture based on classic or standard cubicle equipment.
- As more information on these ergonomic controls come forward, they will probably become more common in the work place.
Stretches & Exercise

- Many companies, especially those technologically heavy have actually implemented exercise/stretch programs in an effort to reduce ergonomic risks and exposures
- The programs do not have to be done in a large conference room or everyone standing, simply having a Supervisor kick off the morning shift with everyone taking 5-10 minutes to stretch at their workstations could be beneficial
- If your company is not at the point of implementing formal programs, at minimum provide employees with the resources so that he or she can do on their own and or at home

Core Muscles

- Stretches and exercises focused on building core muscles has become popular not only in preventing workplace injuries, but improving the overall quality of life
- Core muscles have a significant impact on the rest of the body and strengthening it could reduce ergonomic, lifting/material handling and other work related injuries
- Talk to your healthcare provider or Loss Control Consultant as they should be able to provide you some resources to strengthen the core. The following are just some examples....
Stretches and Exercise

Stretching is a form of preventative maintenance for your body.

**CURL UP**
Begin lying on your back with one leg bent, your other leg straight and your hands under your lower back. Curl your upper body off the floor, hinging at the bottom of your shoulder blades. Hold for six seconds, lower your shoulders back to the ground and repeat ten times. Use your hands to monitor the small natural arch in your lower back. Make sure to keep your neck relaxed.

**SIDE PLANK: LEVEL 1**
Begin lying on your side with your knees bent. Raise yourself into a side plank position with your elbow supporting your upper body with knees bent. Maintain this position, hold for ten seconds and repeat ten times. Make sure to keep your trunk stiff, do not let your hips roll forward, backward or drop to the floor.
BIRD DOG
Begin on all fours with your arms positioned directly under your shoulders and your knees resting on a cushioned surface. Straighten your opposite arm and leg at the same time so that your leg and arm are parallel to the floor for five seconds. Return to the starting position. Repeat with opposite side and conduct 15 repetitions. Do not let your trunk (waist) twist. Make sure to keep your back straight and chin tucked during the exercise.

Other Basic Stretches:
- Wrist Extension
- Shoulder Stretch
- Lower Back Stretch
- Leg Stretch
Summary

- Workstation set up and review should be part of a new employee orientation program if computer type processing is going to be a part of that individual’s daily routine.

- The end goal of an ergonomic assessment is to provide an employee information on best practices based on them as an individual...we do not expect them to sit like robots all day, we just don’t want them to be in bad postures all day.

- As with any change, initially it is going to feel weird and different. If it is too much to make a complete change, start slowly and work way until it becomes habit.

- Office ergonomics is all about neutral positions, avoiding as much twisting, turning, bending, leaning...etc.

- Be aware of the “common” bad habits and try to break them.

- Make sure employees are aware that resources/tools can be provided and where to request them.

- Exercises and stretches are good maintenance mechanism to prevent ergonomic injuries.

Questions
References

- https://www.youtube.com/watch?v=2ejLFaibtb0
- http://www.staples.com/ergonomic/directory_ergonomic
- https://assets.entrepreneur.com/article/1441790442_standing-1.jpg