

OFFICE ERGONOMICS

COURSE OUTLINE

- **Unlike some other places, in an office "one size" does not fit all, and that can be a real "pain"... in the "neck and other places!**
- **For one thing, the areas where we work and the things we work with, our desks, chairs, computers, and other "tools" that we use, typically are designed to try and work well for everybody.**
- **But in truth, we are all different, so efficiency, comfort and safety in the office can often be hard to come by.**
 - However, it can be done... using ergonomics.
- **“Ergonomics” is the study of how the things we use can “fit” us better, so that we can work with them efficiently, comfortably and safely.**
 - This is more than just a matter of convenience, especially when applied to our workplaces.
- **When the things that we work with don’t fit us well, the results can be serious, and include pain, injury, reduced productivity and lost wages.**
- **To understand what we can do to prevent this, we need to look at just how we can be hurt by a workplace that doesn't "work" for us.**
- **Office work would seem to be about as safe a job as you could find. But as many of the millions of people who work in offices every day have found, it can often be a painful experience!**
- **The potential for suffering an injury in the office is rooted in how we perform our everyday activities.**
 - Repetitive movements, such as when we're typing on a computer keyboard, can cause significant damage over time.
 - Awkward body positions, such as we might get into if our workstation doesn't really "fit" us, can lead to trouble as well.
 - The excessive force that we sometimes apply when we’re in a hurry and end up using the wrong tool, or use a tool incorrectly, also increases the risk of injury.

- **Ergonomic injuries occur when our body's ligaments, tendons, muscles, nerves or bones are subjected to stresses they weren't built for.**
 - This can happen suddenly, or gradually over time.
 - The result can be conditions like carpal tunnel syndrome and tendinitis.
 - You've probably heard of them. They're two of the most common physical problems developed by office workers.
- **Carpal tunnel occurs when repeating the same motion over and over inflames the muscles and ligaments in your wrist.**
 - They squeeze the median nerve where it passes through the wrist into the hand.
 - This causes numbness or a tingling sensation, sometimes even severe pain, in your hands and fingers.
- **Tendinitis can result from repetitive motion, too.**
 - Pain from inflamed tendons commonly affects your hands, arms, shoulders, feet or legs.
- **Lower back pain is another common result of working in awkward postures or without enough back support, which can happen all too frequently in an office environment.**
- **Conditions like these are called musculoskeletal disorders (MSDs).**
 - And while they can be serious, they are also preventable.
 - In fact, using ergonomic principles can often make prevention easy.
- **The top of your desk may be familiar territory, but thinking about it ergonomically enables you to view it in a whole new light.**
 - You'll notice risks of injury that you may never have known existed.
 - You'll see how rearranging your desktop, and changing how you use the "tools" on it, can help you avoid those risks.
- **Let's begin with a device that can literally be a pain in the neck, the telephone.**
 - When we're busy, we often cradle our phone between our head and shoulder... so we can use our hands for something else.
- **It's bad enough with a handset's receiver. But cell phones take it to a whole new level.**
 - And both of them can put a significant strain your neck muscles!
 - In these situations, try a telephone headset instead.
 - That lets you get more done without creating a crick in your neck.

- **Does your job require texting? If so, you need to be careful not to develop "thumbitis", a "blistery" condition that can develop on the underside of your thumbs.**
- **How you organize the various tools and materials that you use is ergonomically important, too.**
- **When the things you need are haphazardly scattered in various places around your office, you often have to make lots of long reaches to get at them.**
 - This "over-reaching" can put you in awkward positions that cause chronic injuries like lower back pain.
 - Additionally, when you reach to the side, across your body, or backwards, you can strain the delicate group of tendons that support your shoulder, known as the rotator cuff.
- **To avoid these problems, set up the tools and materials that you use most often so they are within easy reach, about 14 to 18 inches away.**
 - Position as many of them as possible right in front of you.
 - This will prevent you from having to twist and turn if you're sitting.
- **Just about anyone who's ever used a stapler has struggled to fasten more sheets of paper together than it was meant to handle.**
 - That's another good way to hurt yourself.
- **Don't ever "force" any tool to do more than it was designed to do.**
 - Using force increases the risk and potential severity of an injury.
- **The solution? Get a bigger stapler! A heavy-duty model that's made for large jobs.**
- **Here's another example, trying to get a paper cutter to chop through more paper than it was made for.**
 - What's your hurry? Instead of risking injury, make multiple cuts to fewer pages at a time.
 - Using the cutter as it was designed to work is easier and safer.
 - You'll find it doesn't really take that much longer, either.

- **To avoid awkward postures and the musculoskeletal disorders that they can cause, you need to set up your desk so you can maintain “neutral positions” while you’re working.**
 - A "neutral position" is a comfortable working posture in which your joints are naturally aligned, which makes everything easier on your body.
- **The first step in getting yourself set up to work in neutral positions is to adjust the height of your chair. You need to align it properly with your desk or other work surface.**
 - If your chair doesn't have armrests, adjust it so that when you rest your forearms flat on the worksurface they form an angle between 90 and 120 degrees with your upper arms.
 - If your chair has armrests, adjust its height so the armrests are on the same level as your work surface.
- **This should force your elbows to form the 90-to-120 degree angle that you're looking for.**
- **Your chair should also provide firm support for your lower back, hips and thighs.**
 - Your thighs should be roughly parallel to the floor, your knees at about the same height as your hips, and your feet placed slightly forward.
- **To prevent strain on your spine, the back of your chair should fit firmly into the “forward curve” of your lower back. This is called “lumbar support”.**
- **If you need more lumbar support than the chair itself gives you, you can place a "lumbar cushion" behind your back, or use a pillow or a rolled-up towel.**
- **Once you've gotten your arms and back squared away, the next step is to ensure solid support for your feet.**
 - If they are resting flat on the floor after you adjust your chair, you’re all set!
 - But if your feet are not flat on the floor, you’ll need to get a footrest and set it up so that it fully supports them.
 - "Dangling feet" put a lot of stress on your spine, and that's a recipe for lower back pain.

- **The next thing you need to look at is your computer.**
 - Start with the correct placement of your keyboard (it doesn't matter whether you're using a desktop or a laptop, the placement should be the same).
 - This is crucial to preventing repetitive motion disorders like carpal tunnel syndrome and tendinitis.
 - Position the keyboard so that your wrists are flat and your fingers rest comfortably on the “home” keys of a, s, d and f on the left and j, k, l, and semi-colon on the right.
- **The important thing to remember is that your wrists should be flat. You shouldn't have to bend them up or down.**
 - Many keyboards are adjustable to help you with this, but you may find you'll need to use a separate wrist pad. You can also use a rolled-up towel if necessary.
 - You may have to re-adjust the height of your chair a bit to get into this position, but it's worth it.
- **This neutral positioning of your wrists relieves pressure on the median nerve, where carpal tunnel syndrome begins.**
- **When you're keyboarding, remember to keep your elbows close to your sides, and type gently!**
 - Using too much force is something else that can strain your hands and wrists.
- **"Mouse-placement" is important too. Position it close to your keyboard, within easy reach.**
 - When using your mouse, you can avoid repetitive-motion problems by moving your whole arm instead of just your wrist.
- **Once your keyboard and mouse are positioned, it's time to adjust your monitor.**
 - Having it at the wrong height or the wrong distance from you can cause eyestrain and neck pain.
 - Position it from 16 to 27 inches away from your eyes.
 - You should be looking down at it, at a 5-to-20 degree angle.

- **And here's a tip for when you're looking at documents while you're using your computer.**
 - It's best to position a document at the same distance and height from you as your computer screen.
 - That way you avoid the strain and fatigue of constantly moving your head up and down, and refocusing your eyes.
 - If you don't already have a "document stand" try to get one. They're pretty inexpensive.
- **Remember, all of these adjustments are aimed at maintaining "neutral positions", and reducing physical stress and strain when you're at your workstation.**
- **Our bodies are engineered for movement. That's why it's a good idea to "stir yourself up" and stay limber during your workday.**
 - Even if you've arranged your workstation perfectly, sitting still for prolonged periods of time just isn't healthy.
- **"Limbering up" gives your body a break from the physical burdens that you normally place on it, and reduces the uneven stresses that can lead to pain and injury.**
 - One thing that will help is to change your position now and then.
 - Make small adjustments to your chair or backrest.
 - Stand up and take a walk.
- **You can even do simple stretching exercises right at your desk.**
 - There are a number of easy, "low-impact" routines that focus on relaxing the trouble spots where tension and pain are likely to start.
- **For instance, if you do a lot of keyboard work, this one's great for your fingers, hands and wrists.**
 - Stop typing and ball your hands tightly into fists.
 - Next, relax them and spread out all of your fingers, fully extending them. Do this 5 times for each hand.
 - Then use one hand to gently push back the fingers of the other hand. Hold this position for 5 seconds, and repeat with the hands reversed.
 - Do this periodically throughout the day and your hands will feel a lot better.

- **Here's an easy exercise for whenever your neck muscles stiffen up.**
 - Turn your head slowly from one side to the other.
 - Hold each turn for 3 seconds.
 - Repeat the cycle 5 to 10 times.
- **To stretch the muscles of your upper back and shoulders...**
 - Hold your elbows at a 90 degree angle to your body.
 - Then slowly push them back as far as they will go, and hold for 5 seconds.
 - Doing about 5 to 10 repetitions will loosen you right up.
- **An alternative is to...**
 - Roll your shoulders in a wide circular motion.
 - Rotate them forward 5 times, then backward 5 times.
 - It's good to repeat this cycle 5 to 10 times as well.
- **There is even an exercise that can provide relief for the muscles in your lower back.**
 - Begin by sitting up straight.
 - Bend at your waist and lower your upper body slowly down to your knees.
 - Hold this position for a few seconds, then sit back up.
 - Take a deep breath and relax.
 - Repeat several times to get the best effect.
- **Combining these "limbering" exercises with good workstation design can help you to avoid many potential ergonomic problems, and keep you going comfortably throughout your day.**
- **Ergonomics is crucial to creating a healthier and safer workplace for yourself. But the process doesn't begin and end with arranging things in your office and occasionally stretching out.**
- **You need to prepare yourself as well, by living healthier, both physically and mentally.**
 - Consider the issue of workplace stress.
 - Studies have shown that stress makes your muscles more tense, which makes injury more likely.
- **But you can combat stress with relaxation exercises that can reduce both physical and mental tension. An easy and effective one is "deep breathing".**

- **It consists of three easy steps:**
 - Sit up straight and fold your hands loosely in your lap.
 - Slowly take a deep breath through your nose, relaxing your abdominal muscles so that your lungs can fill freely.
 - Hold the breath for two seconds, then purse your lips and blow the breath gradually back out between them.
- **Make a habit of doing deep breathing three or four times during a workday... or whenever you feel stressed.**
 - You can make "deep breathing" even more effective by adding a mental component to the exercise, called "mind clearing".
 - As you breathe, focus your thoughts on peaceful, relaxing images, like a walk in the woods or lying on a beach in the sun, and let your stress evaporate.
- **Another thing that will make you healthier and more resistant to illness and injury across the board is regular aerobic exercise.**
 - Whether you walk, jog, bike, play basketball, whatever you enjoy, you want to work up a sweat and increase your heart rate for at least half an hour, three to four times a week.
 - Your heart will be healthier, you'll lower your blood pressure, reduce stress and even build some muscle, all of which will help you avoid ergonomic injuries.
- **Eating healthier helps, too. Well-balanced, low-fat, low-salt meals will make you feel better and lower your risk of ergonomic injuries as well.**
- **Lastly, you need to get rid of any unhealthy lifestyle habits. Smoking, drinking and using drugs all work against your mental and physical wellness, and can make you more susceptible to injuries of all types.**
- **As we've seen, employing good ergonomic practices, and knowing what types of exercise can help to prevent stress and strain, will let you work more comfortably and safely.**

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- **When the things we use at work don't "fit" us well, it can put unnecessary strain on our bodies.**
- **Organizing the tools and materials on your desktop, and using them correctly, can be key to avoiding ergonomic injuries.**
- **You can work more comfortably, and more safely, if you maintain "neutral positions".**
- **Moving around during the workday, and doing occasional stretching exercises, can help to prevent strains and pain.**
- **Taking good care of yourself both mentally and physically can help to prevent ergonomic and other injuries as well.**
- **Even though one size doesn't fit all, ergonomics shows you how to arrange your workplace so that it does fit you... and lets you work more comfortably, efficiently and injury-free!**