HAND, WRIST AND FINGER SAFETY IN HEALTHCARE ENVIRONMENTS

COURSE OUTLINE

- **Our hands have the strength, dexterity and sensitivity to grasp, lift and manipulate objects of many shapes and sizes.**
  - That's because they are designed very efficiently.

- **The 27 bones that give the hand and wrist their structure are connected by muscles, ligaments and tendons.**
  - This allows the hands to move and gives them strength.

- **The nerves in the hand not only provide sensation but tell the muscles when and how to move as well.**
  - They are also responsible for the “muscle memory” that lets you do repetitive tasks without having to think about them.

- **Blood vessels feed the tissue in the hand.**
  - The whole system is covered by layers of skin which shield your nerves, bones, and blood vessels from your environment and its threats.
  - But there's only so much that skin can do to protect that system.

- **All of the tissue in the hand and wrist is close to the surface.**
  - The bones in the hand are small.
  - Its joints can be complex.

- **So you are just one slip of a hammer or letter opener away from causing serious damage to your hand, wrist or fingers.**
  - In fact, any heavy, sharp or hot object or surface can injure your skin, nerves, connective tissue and bone.

- **But it isn’t just injuries from traumatic accidents you have to worry about.**
  - Your hands are also vulnerable to strains and stresses that can cause injuries gradually.
  - These are called "ergonomic" hazards.

- **The wrist, for example, is an ergonomic "weak spot".**
  - Nerves, muscles, tendons, ligaments and blood vessels pass through it on their way to the hand, and placing extra strain on the wrist can damage all of these over time.
  - So to keep our hands, wrists and fingers safe, we need to watch out for ergonomic hazards that can hurt us as well.

- **Hand, wrist and finger safety starts before you even begin working.**
  - It can be easy to rush into a task, especially when you're on a deadline.
  - But failing to prepare before doing a task that uses your hands, wrists and fingers can slow you down permanently.

- **Before you start any task you should first ask yourself if you're in the right "state of mind" to work safely.**
  - If you're feeling angry, you're more likely to get hurt.
  - So if you're upset, take a minute to cool off.
  - Then refocus on the task at hand.

- **Human error occurs most often when workers are distracted.**
  - From forgetting to take off jewelry to glancing away while using a power tool, being distracted can have serious consequences for your hands.
  - So before you take on a task, make sure your head is "in the game".

- **Next, take a good look at your facility.**
  - Identify any hazards that could affect your hands and do what you can to eliminate or control them.

- **For example, "pinch points" are a common problem.**
  - These are the spaces between two moving machine parts, or objects that your hands or fingers could get caught in.
  - You need to be aware of these so you can avoid them as you work.

- **In your facility, you should look out for things like…**
  - Adjustable beds.
  - Closing doors.
  - Medical equipment with moving parts.

- **You'll also want to keep an eye out for any spinning equipment.**
  - It's easy to get a sleeve, bracelet or ring caught in them.

- **Be aware of any "hot" or "cold" surfaces as well, especially if you don't have protective gloves on.**
  - One wrong move and your hands could be burned… or frost bitten.

- **If your facility has any automated machines, don't assume you can trust them just because they do the work "on their own".**
  - If they malfunction or start unexpectedly and your hands are in the way, you could be seriously injured.

- **If you've never worked with a tool or completed a specific task before, ask a coworker or supervisor to walk you through it.**
  - Trying to perform a new task often has a "learning curve" when you are more likely to make mistakes, which can lead to a hand or wrist injury.
  - So it's best not to do something on your own the first time.

- **The best way to protect our hands, wrists and fingers from injury is to prevent accidents from happening in the first place.**
  - That means paying attention to the basics and never forgetting that safety is your number one priority.
  - When in doubt, consult your tool user's manual or talk to your supervisor.

- **You should always inspect hand and power tools before working with them. Look for…**
  - Dents.
  - Scratches.
  - Frayed wires.

- **Never use a tool if it is…**
  - Worn.
  - Dull.
  - Broken.

- **You might be tempted to use a dull tool instead of hunting down a new one.**
  - But dull and worn tools require you to apply extra force.
  - The more force you use, the more likely the tool is to get "out of control", which can result in an injury.

- **For tools or equipment that use guards or other safety devices, check that they are in place and fully functional.**
  - You might feel like a guard is slowing you down, but a little additional time is a small price for your hands' safety.
  - Guards and other safety devices can't protect you if they've been damaged or removed.

- **When you begin to work, remember to pace yourself.**
  - "Hurrying" can result in taking risky "short cuts" that increase the chance of an injury.
  - A "deliberate and steady" approach will help you keep track of what your hands and fingers are doing at all times.

- **That way you can finish a task safely by keeping your hands clear of…**
  - Sharp edges.
  - Pinch points.
  - Moving parts.
  - Other hazards.

- **When you're lifting supplies, pieces of equipment, or other heavy items, take your time and make sure you have a good grip on the load before picking it up.**
  - The closer your hands are to the bottom of the object, the better.

- **Then, bend your knees and use your legs to lift.**
  - Carry the load with both hands, and close to your body.
  - If it starts to feel too heavy, or your fingers are slipping, stop immediately and set it down.
  - The last thing you want is to strain a muscle or hurt your hand trying to catch a falling object.

- **Sometimes, despite all the precautions you take, you can still injure your hand.**
  - If you do, seek medical care immediately.

- **Even if the injury seems minor, it could become more severe as time goes by.**
  - The sooner you are treated, the better.

- **When you're working hard to keep patients safe and healthy, it can be easy to forget about your own well-being.**
  - But when you are handling patients and medical tools, your hands, wrists, and fingers can be at risk if you don't know how to properly protect them.

- **For instance, when a patient needs help with repositioning themselves in bed, it can be easy to strain your wrist.**
  - To protect your wrists and hands during this process, avoid trying to lift too much of the patient's weight.
  - Instead, you'll want to move them by rolling or sliding them.

- **To start, position yourself on one side of the bed, while a coworker stands on the opposite side.**

- **With your knees slightly bent and your back straight, place your palms on the patient's hips and shoulders.**
  - Keep your elbows slightly bent and your fingers pointing upward to reduce strain on your wrists.

- **Then, slowly roll the patient onto their side.**
  - If you are on the side of the bed that the patient is rolling away from, gently push them toward the other caregiver.
  - If you are on the side they are rolling toward, you will be "receiving" and stabilizing them.

- **Next, place a drawsheet on the bed and roll the patient back onto it.**
  - Once they are positioned in the center of the sheet, you can slide them into the desired position.

- **You should follow a similar process if you're transferring a patient into a chair or onto a gurney.**
  - Avoid lifting too much weight.
  - Use drawsheets and coworkers for assistance.
  - You can use a "slider" onto a gurney as well if one is available.
  - Remember to keep your elbows bent and your fingers pointing upward.
  - Take your time! Rushing this process can hurt you and your patient.

- **Another thing to look out for while treating patients is needlestick injuries.**
  - Any employee who uses or disposes of needles can accidentally wound themselves with a used needle.

- **This can lead to blood-borne infections like…**
  - HIV.
  - Hepatitis B.
  - Hepatitis C.

- **Hands, wrists, and fingers are most at risk in these situations.**
  - That's why you should always be very careful when you are handling needles.

- **The Centers for Disease Control (CDC) offers guidelines for preventing needlestick injuries, including…**
  - Avoid using needles when alternatives are available.
  - Avoid recapping needles.
  - Plan for their safe handling and disposal before beginning any procedure using needles.
  - Promptly dispose of any used needles in sharps disposal containers.

- **If you do suffer a needlestick injury in your hands, wrists, or fingers, immediately wash the wound with soap and water.**
  - Then, apply an antiseptic and clean dressing.

- **Once your wound is clean and the needle is disposed of, notify your supervisor about your injury and seek advice from another medical professional.**

- **"Ergonomics" is the study of how we can work more efficiently and safely by minimizing any discomfort and fatigue.**
  - "Ergonomic hazards" are situations or processes that can force the body to move in ways it isn't designed to.

- **Ergonomic hazards often don't cause immediate injuries.**
  - But over time they can result in painful and debilitating conditions such as carpal tunnel syndrome, repetitive motion syndrome and tendinitis.

- **To prevent these injuries, you need to avoid things such as…**
  - Working in awkward positions.
  - Repetitive motions.
  - Applying excessive force, either manually or with a tool.

- **"Repetitive motion" is making the same movements over and over again, without a break.**
  - If your work involves repetitive motions, you should insert other tasks into your routine throughout the day to vary the movements that you make.
  - If you find yourself working in an awkward position, stop what you're doing and try to find a less stressful way to get the job done.

- **When you're using your hands, keep your wrists as straight as possible.**
  - This "neutral" position will allow the tendons to slide easily through their "sheath", preventing strain and damage.

- **To achieve a "neutral" position, you may need to change your overall body position by standing up or sitting down.**
  - Or you could reposition the material that you're working with… turning it, raising it or lowering it.
  - Sometimes, using a differently sized or designed tool can also help you get into a more natural posture.

- **To avoid using excessive force when you're working with a tool, you first need to understand the two types of "grips" your hands can make.**

- **For tasks that require strength, such as using a hammer or handsaw, you should curl your fingers, palm and thumb around the object.**
  - This is called the "power grip".
  - It distributes the weight of the object evenly over the muscles and tendons of the entire hand.
  - It also allows the wrist and forearms to help carry the load.

- **When you need a delicate touch, such as when positioning a nail or twisting a small screwdriver, you'll want to use a "precision grip".**
  - This grip brings the ends of the thumb, middle or index fingers together around the object.

- **But if we try to use the precision grip for tasks that require power, we will end up applying excessive force to try and get the job done.**
  - This can injure our hands, wrists and fingers.

- **Another situation where we can find ourselves applying excessive force is when we try to "overpower" a stuck or heavy object, manually or with a tool.**

- **None of these situations are safe, or healthy, so if you find yourself using excessive force while performing any task…**
  - Stop what you're doing before you hurt yourself.
  - Find a way to get the job done without straining.

- **Choosing the right tool for the job can be very important when it comes to protecting our hands.**
  - It means more than "using a hammer to drive nails" and "using a saw to cut wood".

- **Tools come in all shapes and sizes.**
  - The "right" tool is the one that fits you as well as the job you're doing.

- **The shape, size and feel of the handle on a tool can be very important in preventing strains and other injuries.**
  - A handle that is too short for your hand can damage nerves, tendons and blood vessels by placing excessive pressure on the palm.
  - To prevent this type of damaging "localized pressure", you should choose tools with handles that are longer than the widest part of your hand.

- **For a safe, strong grip, the handles should also be thick enough for the end of the thumb to just cover the ends of the index and middle fingers.**
  - Handles should be free of sharp edges or finger grooves as well.

- **Handles that are padded with soft or "grippy" material are often a good choice.**
  - They are comfortable, easier to control and help absorb shock.

- **Make sure that the handles on your tools will allow you to keep your wrists straight as you use them.**
  - Working with your wrist in a bent position can injure the nerves, muscles and other connective tissues that pass through it.
  - So be sure to try tools out before you use them, to confirm that they fit you well.

- **Power tools require the same type of examination as hand tools. Make sure that…**
  - The handles are comfortable and "fit" your hand well.
  - They allow you to work with a straight wrist and a power grip whenever possible.
  - Their power switches and safeties are easy to operate.

- **Some power tools can vibrate hard enough that they can damage the hands that hold them.**
  - Hammer drills, grinders, chipping hammers, chainsaws, hedge trimmers as well as many other tools have this potential.

- **Over time, these vibrations can lead to a condition known as "hand-arm vibration syndrome".**
  - This begins with a “tingling” and loss of nerve sensation, and can develop into a painful and potentially debilitating condition.

- **To protect your hands when you're using these types of tools, you should…**
  - Limit the amount of time you work with them.
  - Avoid gripping the tool too hard.
  - Try not to "force" the tool… let it do the work.
  - Wear gloves that are designed to absorb as much vibration as possible.

- **Whenever you work with hand or power tools you should monitor yourself continuously.**
  - Tingling, numbness or feelings of discomfort in your hands, wrists and fingers could indicate the start of ergonomic problems.
  - If you notice any of these symptoms, let your supervisor know about them immediately.

- **One of the simplest and most effective ways you can protect your hands and fingers from injury is to put on a pair of gloves.**
  - But it's important to remember that not all gloves are created equal.
  - You need to choose the ones that will give you the best protection from the specific hazards that you encounter while you work.

- **For instance, light landscaping work can cause scratches and blisters… sometimes even involve encounters with poison oak or ivy.**
  - But you only need a basic pair of cloth gloves to protect you from these hazards.

- **Gloves made of leather are more durable and can protect you from…**
  - Materials with rough or splintery surfaces.
  - Sparks or “slag” that is thrown from the equipment that you're using.

- **Sharp-edged tools and materials can cause painful cuts and scratches.**
  - Cut-resistant gloves made of metal mesh or similar tough materials can guard against these problems.

- **If you are exposed to high temperatures in your facility, you should wear heat-resistant gloves made of aluminized fabric or other special materials.**

- **Gloves made of rubber, vinyl or neoprene can protect your hands from corrosive substances such as…**
  - Organic fluids.
  - Lyes.
  - Petroleum products.

- **Disposable gloves made of latex, nitrile and polyethylene can shield you from biological hazards such as…**
  - Germs.
  - Bacteria.
  - Viruses.

- **Whatever types of gloves you wear, you need to make sure that they fit properly.**
  - Gloves that are too large will feel clumsy and can snag in machinery.
  - Gloves that are too small can tire your hands, and can tear or split as well.

- **Always inspect your gloves for rips and other defects before you put them on.**
  - If you find any problems, don't use them!
  - Get yourself another pair.

- **Remember, no one type of glove can protect your hands in every situation.**
  - No gloves will protect you if you don't wear them!

*** * * SUMMARY * * ***

- **Protect your hands by preventing accidents before they happen. Always follow safe work practices and stay focused on what you're doing.**

- **If you need to help reposition a patient or transfer them off of their bed, avoid lifting their weight and use a rolling or sliding technique instead.**

- **If you use a needle on a patient, avoid needlestick injuries by wearing the right gloves and disposing of the needle promptly.**

- **Avoid ergonomic hazards such as repetitive motions, working in awkward positions and using excessive force when you're performing any task.**

- **Choose tools that "fit" you, and the task that you're doing. And use them in ways that place the least stress on your hands, wrists and fingers.**

- **Never try to operate a tool that you are unfamiliar with, or that has been altered or damaged.**

- **Wear gloves that are designed to protect you from the specific hazards that you encounter in your job.**

- **Now that you understand the hazards that can affect your hands, wrists and fingers, and know how to avoid and protect against them, you can go home pain-free at the end of every day!**