

MAJOR PROGRAM POINTS

"HAND, WRIST AND FINGER SAFETY IN CONSTRUCTION ENVIRONMENTS"

Part of the "CONSTRUCTION SAFETY KIT" Series

Quality Safety and Health Products, for Today...and Tomorrow

OUTLINE OF MAJOR PROGRAM POINTS

The following outline summarizes the major points of information presented in the program. The outline can be used to review the program before conducting a classroom session, as well as in preparing to lead a class discussion about the program.

- **Our hands, wrists and fingers are valuable tools, the most valuable we'll ever own.**
 - Whether we're completing a project at work or playing catch with the kids, our hands are involved in just about everything we do.

- **In fact, we use our hands and wrists so much that they are exposed to a multitude of hazards.**
 - Fortunately, there are a number of ways that we can protect and care for them.

- **Throughout the day our hands and wrists can encounter hazards such as:**
 - Machines with heavy or fast moving parts that can pinch or grab.
 - Sharp tools that can cut or puncture.
 - Corrosive materials that can damage the skin.

- **If these types of hazards go unchecked, they can cause real problems.**

- **Each year thousands of people suffer unnecessary injuries to their hands, wrists and fingers.**
 - The initial pain caused by these injuries is often just the beginning of a long ordeal.
 - Treatment can be followed by a prolonged recovery period, with many hours of physical rehabilitation.
 - And after recovering from an accident, we often have to work harder to make up for production time that was lost while we were away.

- **Preventing these injuries can be easy.**
 - All you have to do is make an effort.

- **First, let's take a look at how the hand works.**
 - Our hands are made up of a complex system of bones, soft tissue and skin, which give them strength and flexibility.

- **Each hand has 27 bones that form the wrist, palm and fingers.**
 - The soft tissue, muscles, ligaments, tendons, and nerves, bind the bones together and give the hand power, the ability to move and sensation.
 - Skin provides the hand with a protective cover that holds this well designed system together.

- **The way the human hand is constructed allows us to work very efficiently.**
 - The system of nerves in the hand is so refined that we're often able to perform tasks by touch alone, without relying on our eyesight.

- **Our hands also easily adjust into different positions, so that we can perform our work most effectively.**
 - We can form a powerful grip by curling our fingers and thumb around an object.
 - Grasping an object with the entire hand distributes the weight of the object evenly over the muscles and tendons, which also allows the forearms to help with the load.

- **With tasks that demand a delicate touch, the "precision" grip is what is needed. Here, objects are "surrounded" by bringing the thumb, middle and index fingers together.**
 - The precision grip works well for "close-up" tasks like centering a nail or writing with a pen.
 - But avoid using this grip on heavy objects .
 - Instead, choose a good power grip, which will place less stress on your hand and wrist.

- **The "power" and "precision" grips are just two of the various grips that we use to get our work done.**
 - The ability our hands have to adapt to different work situations is one of the things that make them so useful!
- **You can take care of your hands by paying attention to the basics and preparing for the job you'll be doing.**
- **You need to develop a "Safety First" attitude, because the best way to stay safe is to prevent accidents from happening in the first place.**
 - You should be aware of the hazards that exist in your environment.
 - Become familiar with the equipment that you use.
 - Keep track of the work that's going on around you.
- **Pay attention to your "state of mind" as well.**
 - Concentrate on what you are doing.
 - Make sure to control your emotions when things aren't going the way you'd like them to.
- **Stay clear of distractions and learn to pace yourself.**
 - It only takes a fraction of a second for an accident to occur, so be careful.
- **There are a lot of potential hazards in our work environments.**
 - High-speed cutting tools, heavy machinery, and sharp "edges" are just a few of the things that we can encounter.
- **Because of their moving parts, many tools and machines can be dangerous.**
 - If we're not careful, our hands can be cut, pinched, even crushed.
 - So make sure that all safety shields and guards are in place before you start work.
- **Not knowing how to use a machine or tool can lead to an accident too.**
 - So take the time to become familiar with the equipment that you are working with.
 - Follow proper procedures for operating and maintaining it
 - Don't take short cuts.

- **Don't wear loose clothing that could get caught up in moving parts and pull your hands in with it.**
- **Use common sense when you're working.**
 - Be alert for the unexpected, think ahead and keep track of what your hands and fingers are doing.
 - Take the time to be safe!
- **When you are working with tools, be careful of handles that pinch your hand.**
 - They can lead to injuries to your nerves, tendons and blood vessels.
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- **Avoid handles with sharp edges and "finger grooves".**
 - Protect yourself by choosing tool handles that are smooth or padded.
 - They can be more comfortable, too!
- **Handles should be shaped or positioned so that your wrist can be kept straight when you're using them.**
 - They should be long enough to extend across the palm, to avoid pinching nerves within the palm itself.
- **"Trigger switches" on power tools should be situated so that you use your middle finger or thumb to press them, instead of your index finger.**
 - This allows the index finger to help balance the tool, without the additional stress of pressing the trigger.
- **Be careful with tools that cause vibration.**
 - The combination of rapid movement and the way a tool is held can hurt circulation, or pinch nerves and tendons in your the hand.
 - Vibration-absorbing gloves can help to protect you in these situations.
- **Even when you've selected the right tools, and are paying attention, things can go wrong.**
 - So it's best to use PPE to ensure your safety.
 - Gloves are the most basic piece of protective equipment for the hand.
 - It's important to select gloves that provide the best protection from the hazards that you're working with.

- **Light outside work can often mean scratches, blisters and even poison ivy.**
 - You can protect yourself from these hazards with a pair of simple cloth gloves.
- **Work involving rough surfaces, splinters and sparks can also lead to injuries.**
 - Heavy-duty leather gloves will shield your hands from nicks and minor burns, and protect against bruising.
- **Operations involving sharp-edged tools, such as knives, can mean painful cuts and scratches.**
 - In these situations cut-resistant gloves made of metal mesh or similar materials are what you should wear.
- **Intense heat and flames can both burn your hands.**
 - Heat-resistant gloves made of aluminized fabric or other special materials will let you work safely near high temperatures.
- **Contact with corrosive substances such as petroleum products, organic liquids or lyes can also damage the skin.**
 - Here, you should protect yourself with gloves made of rubber, vinyl or neoprene.
- **Gloves do a good job with most hazards, but in some circumstances you'll need extra protection from minor irritants that might sneak through.**
 - Special "barrier creams" cover the skin with another, invisible protective coating.
 - To get their full effect, barrier creams should only be applied to clean skin, and should be reapplied often.
- **Some jobs require protection that is even more specialized.**
 - To guard against heat and splintery or abrasive materials, hand pads or guards will help keep your hands safe.
- **To protect against pinching hazards, use "finger guards" made of fabric or metal.**
- **Remember, no single type of PPE will protect you in every situation.**
 - So talk to your supervisor to determine what is right for you.

- **Choosing the right type of protective gear is just the start.**
 - Other factors, like the correct fit and the care of your PPE, are also important.
- **Make sure your gloves are long enough to keep hazards from sneaking under them.**
 - Trapped materials can become irritating and cause cuts and scratches.
- **Be sure to get a proper fit.**
 - If gloves are too large for your hands, they will feel clumsy and may get caught in machinery.
 - If they're too small, your hands can tire quickly.
 - Gloves that are too tight can also wear out prematurely, increasing the chance of an accident.
- **Remember to inspect and test your gloves and other protective equipment before each use.**
 - Look for rips and other defects.
 - Exchange or repair anything that is damaged.
- **Wash your PPE regularly, especially after exposure to contaminants.**
 - But keep it separate from your family's wash.
 - Your PPE may contain chemical residue that could damage clothing.
- **Be sure to follow recommended storage procedures for your equipment.**
 - Keep rubber and plastic gloves away from heat and sunlight.
- **It's also a good idea to keep spare gloves on hand, in case you forget your regular pair.**
- **In addition to the "external" hazards caused by machinery and tools, we need to be aware of "internal" hazards, those ergonomic problems that can physically occur within the hand itself.**
 - Your muscles, ligaments and tendons can all be "stressed" by performing "repetitive motions".
 - Many jobs require you to do the same things over and over again.
 - That means making the same stressful movements with your hands and fingers for long periods of time.

- **Occasional or short-term exposure to these hazards shouldn't cause problems.**
 - But long-term stresses over months and years can result in significant injuries.
- **We can reduce the risk of developing these types of problems by:**
 - Alternating our work.
 - Varying the motions we make.
 - Cutting down on unnecessary movement.
- **As we have seen, we use our hands in a wide variety of ways.**
 - And there are just as many ways to protect and take care of them.

*** * * SUMMARY * * ***

- **Be aware of the hazards in your environment.**
- **Learn how to work safely with the machines and equipment that you use.**
- **Select tools that minimize stress and other hazards.**
- **Use gloves and other protective equipment when needed.**
- **Avoid "repetitive motions" that can lead to ergonomic problems.**
- **Your hands do a lot of work for you! You need to keep them safe, so they continue to be your number one tool!**