

# Virginia Linen Service

## ***BASICS OF ERGONOMICS***

*for*  
*Route Salesmen*

*June 2012*



# Is Discomfort a Real Problem?

- ◆ The body senses discomfort and uses it as a warning to
- ◆ **STOP** doing something.
- ◆ Muscles hurt when they need more oxygen and nutrition
- ◆ Muscles hurt when they need to pump waste out
- ◆ Muscles hurt when working in awkward positions
- ◆ Muscles hurt when used in static positions for a long time
- ◆ Systemic conditions like cardio-vascular disease, obesity, respiratory problems cause poor circulation

◆ ***LOOK FOR A BETTER WAY!***

# Improve Your Comfort – Work in a Neutral Posture When Possible

- ◆ A neutral posture keeps muscles and joints in the strongest, most stable and least stressful positions.
- ◆ Use bone to support the load.

- ◆ *Examples:*

- Arms relaxed at sides
- Wrists straight, not bent or flexed
- Back straight, not flexed forward or bent over
- Body not twisted

Working outside of the neutral posture increases the potential for discomfort, reduces productivity, and in some cases may reduce the quality of work.

# Critical Body Parts to Protect

**Hand**

**Elbow**

**Wrist**

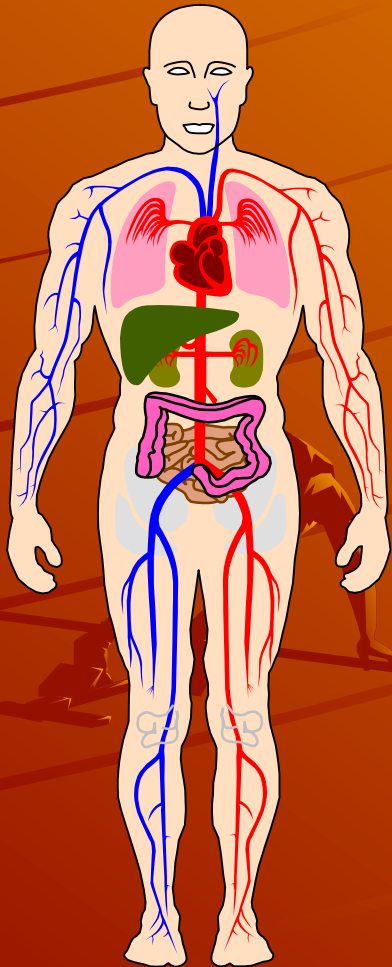
**Neck**

**Back**

**Shoulder**



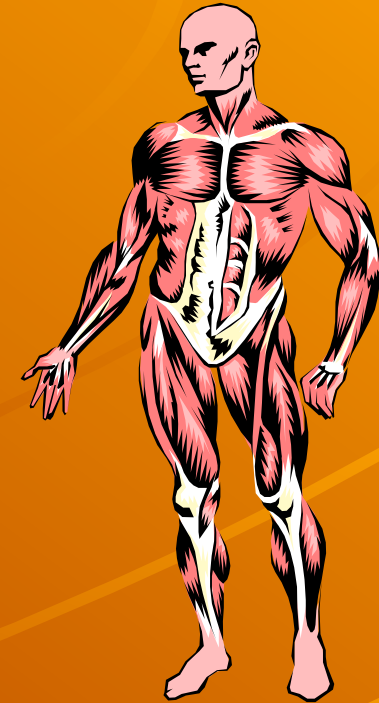
# Musculoskeletal Disorders (MSDs)



- ◆ **Characterized by wear and tear on tendons, muscles, joints and sensitive nerve tissue**
- ◆ **Caused by repetitive use over an extended period of time**
- ◆ **Cumulative; occur gradually over time**

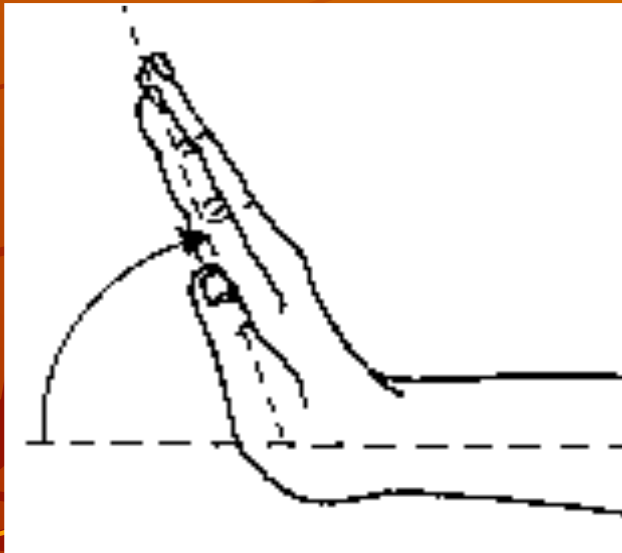
# Common Signs and Symptoms of MSDs

- ◆ Pain
- ◆ Numbness
- ◆ Tingling
- ◆ Burning
- ◆ Cramping
- ◆ Stiffness



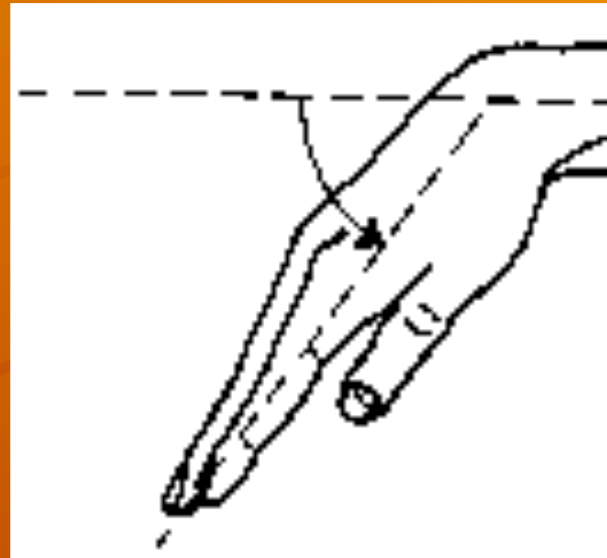
# Hands and Wrists

◆ Wrist Extension



Lower Strength

◆ Wrist Flexion

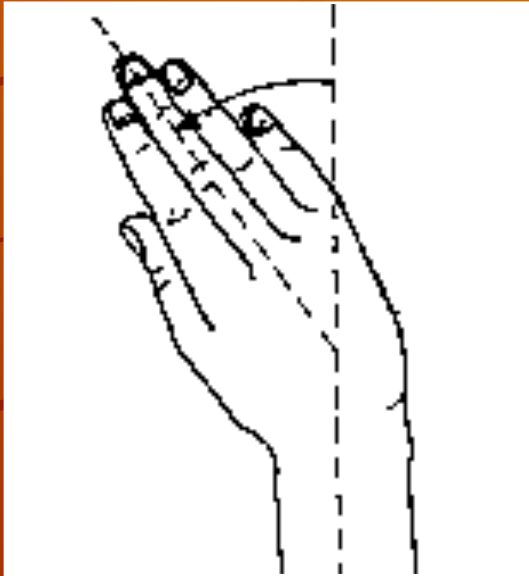


Less Grip

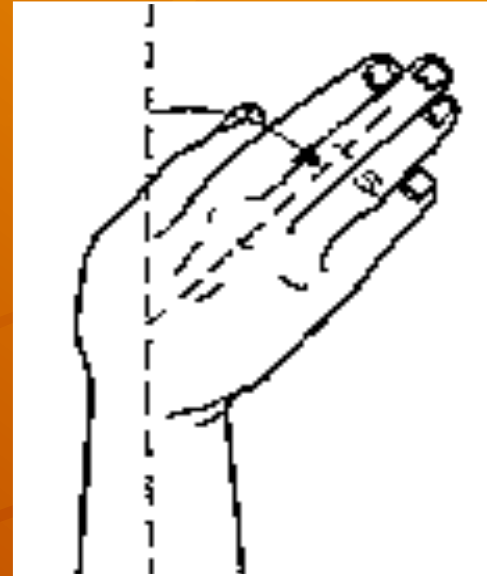


# Hands and Wrists

## ◆ Radial Deviation



## ◆ Ulnar Deviation

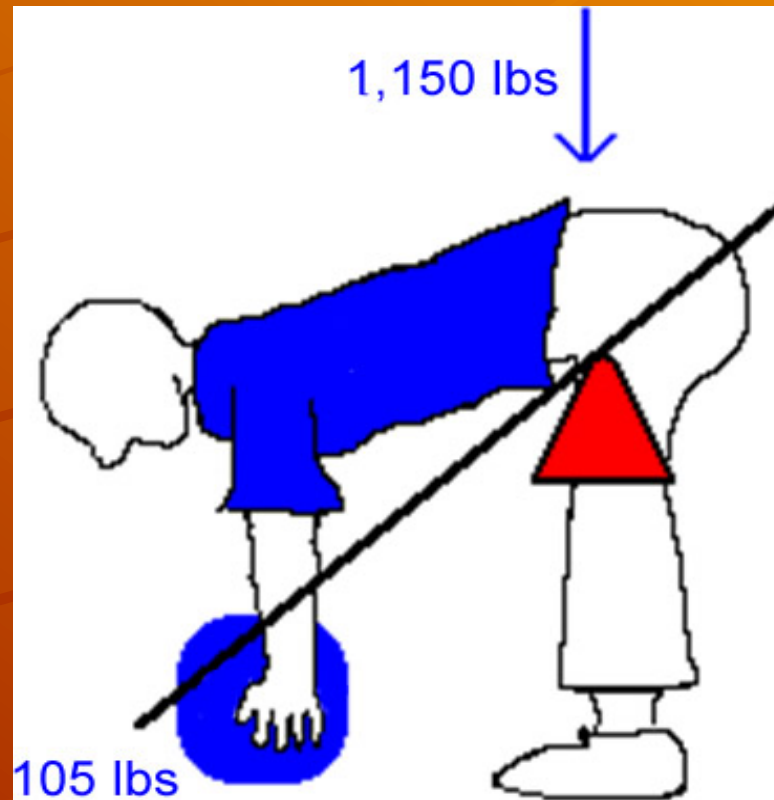


- ◆ **Lifting with or bending your wrist while under load and in an awkward position overloads the wrist.**

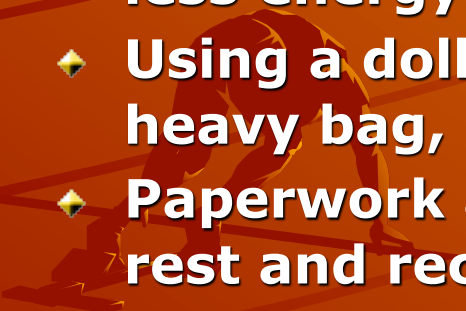
- ◆ **Try to lift with the wrist straight and avoid bending the wrist during the lift.**



# Forces Involved in Lifting



# Pace Yourself and Conserve Energy

- ◆ Exertion uses energy and will make you tired before the end of the route.
  - ◆ Working in a poor posture wastes energy.
  - ◆ Heavy lifting wastes energy.
  - ◆ Walking to make another trip to the truck may use less energy than handling a heavily loaded dolly.
  - ◆ Using a dolly rather than carrying or dragging a heavy bag, may conserve energy.
  - ◆ Paperwork and driving allows time for muscles to rest and recover.
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# Consider Your Nutrition

- ◆ **Feed your muscles**
- ◆ **Stay hydrated in hot weather by carrying water**
- ◆ **Feed your body during the day. A series of smaller nutritional snacks during the day can replace the nutrition that your muscles can absorb quickly**
- ◆ **Beware of **sanitation**, clean your hands before eating**



# To Push or to Pull? That is the Question!

- ◆ **Push the load with your legs, not the back or upper body**
- ◆ **Lean your body against the dolly and let your body weight start the load moving**
- ◆ **Watch for hazards along the route**
- ◆ **Don't pull the load**
- ◆ **Stop and open the door and push the load through**
- ◆ **Carry a door stop**



# Stretching Can be Done Anywhere

- ◆ Improves bloodflow
- ◆ Keeps working muscles fresh and loose
- ◆ **Goal:** To do frequent but mild stretches within pain-free range



- ◆ **Stretching should never cause pain**





# Falls by Driver Salesmen



- ◆ Stop the truck where you can enter and exit safely, not on a curb, or on a slippery surface.

# Use Both Arms When Balancing the Dolly



- ◆ This load requires 124 lb of force just to pull the dolly back .
- ◆ It should not be pulled back using just one arm, as this adds severe stress to the shoulder.



- ◆ Use Both Arms to balance the dolly.
- ◆ Would you lift 124 lb with just one arm?



# What if You Have Just One Bag?

- ◆ Is it better to drag just one bag or to wheel it?
- ◆ Repeated dragging, especially on concrete can damage the bags
- ◆ Don't twist while dragging or lifting the bag
- ◆ Dragging is still better than carrying the bag but a dolly is the best



- ◆ Dragging can place pressure on the back unless the employee keeps his back in the same position and transfers the load to his legs

# Here We Risk a Fall and a Back Injury

- ◆ The driver salesman may have obstacles that cause unnecessary ergonomic stress
- ◆ One bag from this establishment weighed 102 lb. Carry some extra bags to make the load easier to handle
- ◆ Grease on your shoes can cause a fall when loading the truck



- ◆ Here is the risk of a fall and a back injury
- ◆ Go around the obstacle course if you can

# People Don't Like to Make Trips

- ◆ **Size up the amount of material to be moved. If the load is too big or unstable, make another trip**
- ◆ **Conserve your energy and strength by handling manageable loads**



- ◆ **How many bags are too many to handle?**



# Loading the Truck

- ◆ Position the truck and dolly to work from side to side without twisting
- ◆ If you have to turn, pivot the feet without twisting the back while under load
- ◆ Watch the curb
- ◆ Stop in a clean dry location



# Lifting Bags Into the Truck

- ◆ Spread the weight among both arms and maybe a knee
- ◆ Using the knee to assist in the lift and spreading the load to both arms makes the job easier



- ◆ Use the bumper as a platform if necessary
- ◆ Try not to lift from floor or ground level if you don't have to

# Lifting Above the Shoulders

- ◆ **Lifting above the shoulders and lifting from floor level produces the most stress on the back**
- ◆ **Lifting between the height of the knees and height of the chest produces the least strain on the back**





# Stay Close to the Load

- ◆ **Get down close to the load by kneeling rather than trying to lift while standing or squatting**
- ◆ **Place the load up on your knee, then get up**





# Handling Mats

- ◆ Mats are heavy, but a mat or two may help stabilize the load



# Leave Room on Top for Light Bags

- ◆ Try not to over extend when reaching above the shoulders



# Place the Heaviest Bags on the Truck Floor

- ◆ Plan the route and save space on the floor for heavy bags
- ◆ Move heavy bags as little as possible and keep from twisting



# Size up the Force Required

- ◆ Consider the route of travel to the truck, distance and what you will encounter when handling the load





# Unloading is Under Your Control

- ◆ Leave some open floor space at the end of the truck
- ◆ Remember the heavy bags and when you will load them. Some may be slid to the rear and lifted while standing on the ground



# Unloading is Under Your Control

- ◆ Using the handles on the bag saves your grip
- ◆ You can work side to side when unloading



# Think About the Safe Handling of Bags by the Production Workers

- ◆ **If you can, place heavy, bags so laundry workers can lift them near waist height**





# Unloading at the Branch

- ◆ **Position the cart so you can load side to side when loading the bottom to minimize twisting**
- ◆ **Consider the height of stacking and things that can fall off**
- ◆ **The top may be loaded while standing in the truck**
- ◆ **Try not to overload and note floor and parking lot conditions**



# Note the Conditions of Wheels

- ◆ Identify carts that need wheel maintenance
- ◆ Equipment in proper, safe working condition makes your job easier



# Finish the Route Feeling Good!

- ◆ By Working Smart
- ◆ By Conserving Energy
- ◆ By Pacing Yourself
- ◆ By Avoiding Unnecessary Ergonomic Stress
- ◆ By Making the Best Use of the Dolly
- ◆ By Making Another Trip to the Truck Rather than Struggling with a Heavy Load
- ◆ By Feeding your Muscles
- ◆ By Staying Hydrated

**Feel Good Tomorrow!**

# QUESTIONS?

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## ◆ Disclaimer

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