



# Risk Management



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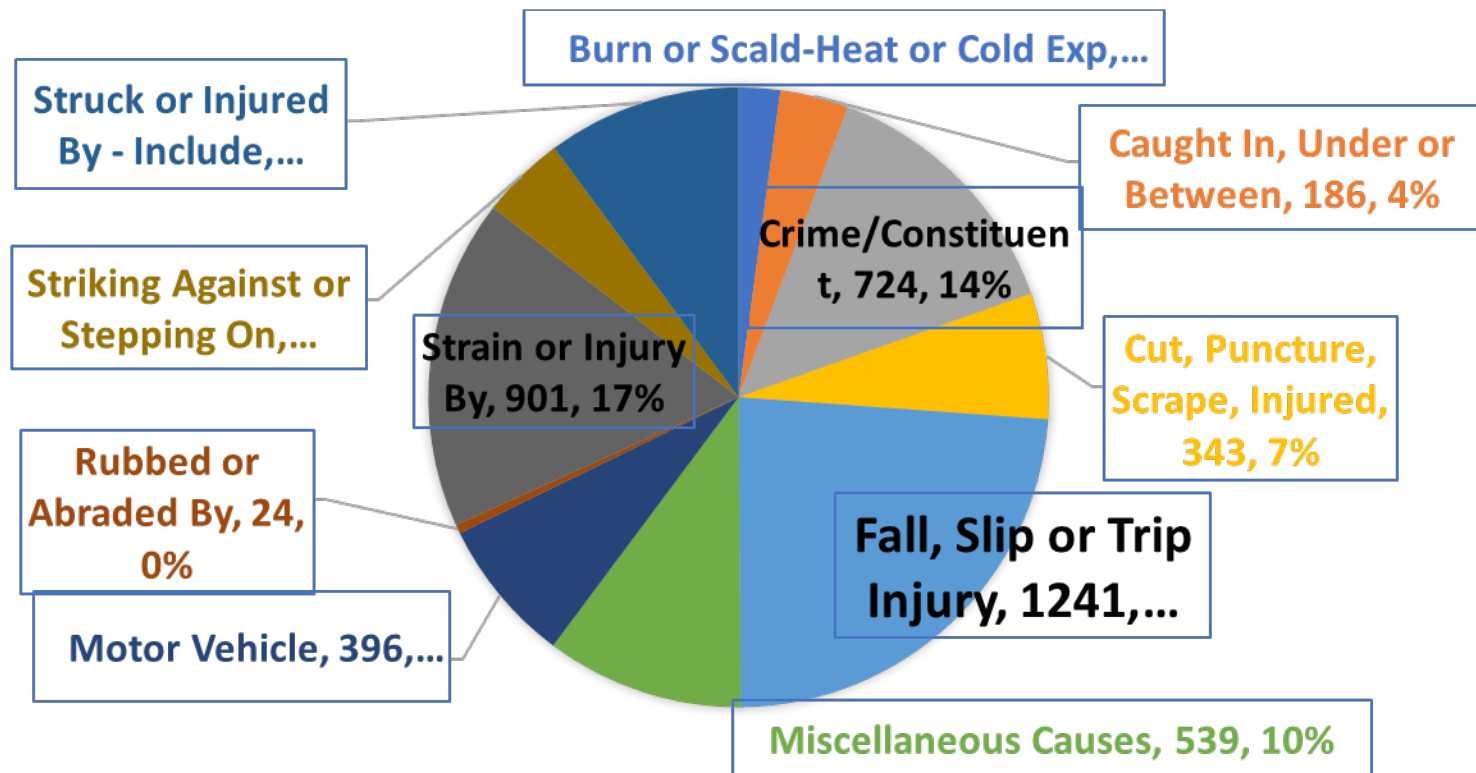
## Preventing Overexertion Injuries - Strains



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- Strains & Sprains are Georgia's **#2** injury cause.
- In FY2019 **901** Strain injuries, **17%** of our total injuries
- These injuries will probably end up costing around **\$8,000,000**





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## What is an Overexertion Injury?

1. Sprains – stretching or tearing ligament
2. Strains – stretching or tearing tendons or muscles

**Muscles** – the tissue responsible for movement of joints. They are attached to bone by tendons, and shorten to create movement of a joint.

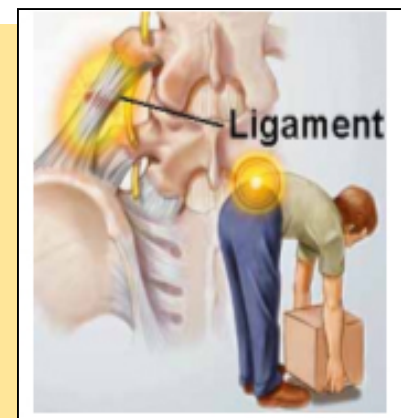
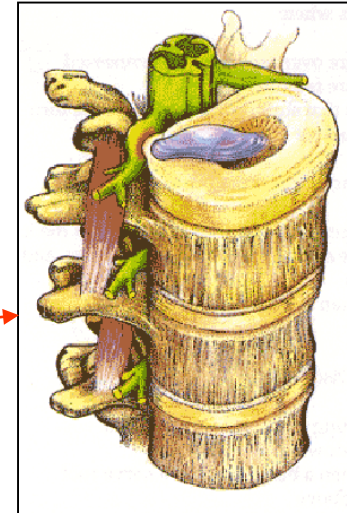
**Tendons** – the tough connective tissue which connects muscle to bone



**tendon-  
muscle  
junction**

**Ligaments** – very tough connective tissue which connect bone to bone, and hold the tendons in place and stabilize the joints.

**inter-  
vertebral  
muscle**





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## How do Overexertion Injuries Occur?

Overexertion occurs when the load, whether lifted, carried, pushed, pulled or otherwise handled, exceeds the limits of the human joint system doing the work.

In this case  
the “lower back”





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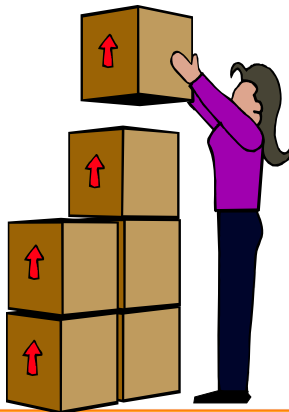


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## Overexertion injuries have been associated with these activities:

- lifting
- repeated bending at the waist
- bending at the waist with twisting
- long term bending at the waist



- pushing/pulling
- carrying
- reaching
- long term poor posture - sitting or standing
- sitting while absorbing vibration through the body (as in truck driving)







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## Personal Factors

Some personal factors have been associated with overexertion injuries:

- aging and its loss of body flexibility (becoming stiff)
- poor physical condition
- overweight





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## What do people say who have had overexertion injuries?

- I was moving too quickly to perform the task
- I was positioned in an awkward posture

So...

Perform the task twice:

Once With Your



and

Once With Your



As you think about the task, determine what has to be done to perform it safely and then follow through.





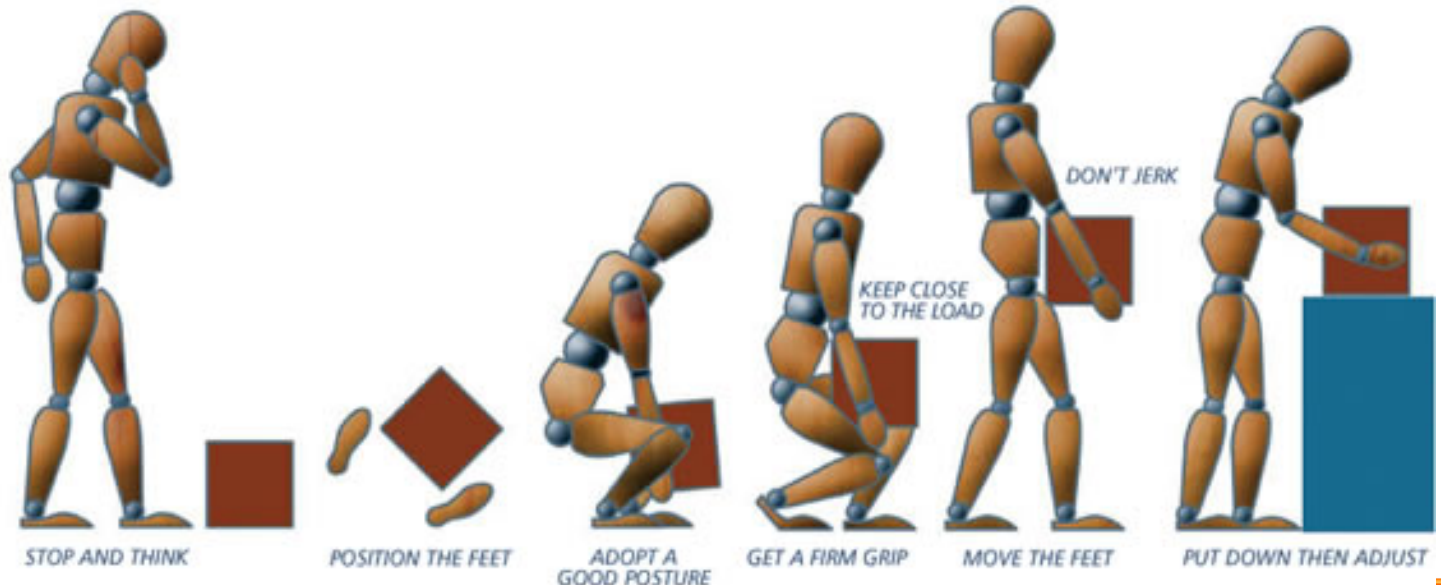
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## Good Techniques For Lifting:



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- Assess the weight of the load (by observing or pushing).
- Make sure your footing is stable and the path is clear.
- Bend at the knees.
- Hug the load (keep the load as close to the body as possible).
- Keep the back straight.
- Avoid twisting.
- Avoid heavy loads (lighten if possible).
- Get help with heavy loads.







## The process of moving materials

- *Reaching* for the load by bending, reaching, or squatting
- *Lifting* the load
- *Transferring* the weight of the load to a carrying position
- *Carrying* the load to the needed location
- *Depositing* the load by
  - lowering it to the ground,
  - throwing it, or
  - handing it to another person



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## Plan the lift

- How much am I lifting?
- Where is it going?
- What is in the way?
- What is the surface like between me and my destination

**"If you fail to plan,  
you are planning to  
fail."**

*- Benjamin Franklin*

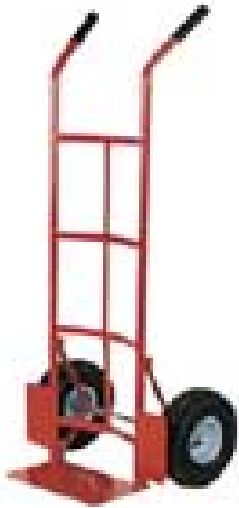




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## Ideas for proper carrying:

If there is a mechanical device like a hand truck, cart or pallet jack... **use it!** (the more you carry something, the greater the chance that you can be injured)

**If there are no mechanical devices...**

**Keep the load as close to the body as possible.**

**Better to take more loads of less weight than try to take it all at once.**





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## Ideas for reducing reaching



### Remove obstacles



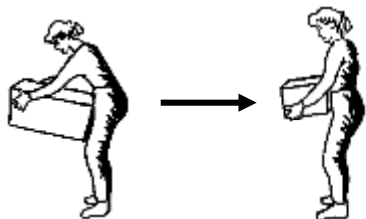
← This bin has fold down door so the worker can get the product with less bending

### Slide closer



← An adjustable height pallet jack with a turntable would allow this worker to turn and raise the load to get the product, instead of reaching.

Reduce shelf depth and try to store products between knee and shoulder height



→ Reduce package size



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## Reducing reaching



Reduce Shelf Depth

Install Gravity Feed Racks





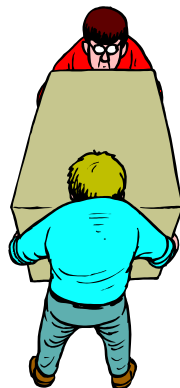


## Ideas for reducing lifting hazards

Use mechanical assistance



Team lifting



Use a mobile ladder





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## Good Ideas for Pushing/Pulling:

If you have the option, push rather than pull.

The handles on the carts to the right have been modified so persons of different heights can push them with their hands at the appropriate height





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## Reducing bending

### Add handles

The manufacturer of this product included cutout handles in the box, so the handler could lift it from a higher level. Also, storing them on one or more pallets raises the level of the handles even more.



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## Reducing lifting

### Arrange storage

This person has placed a cart just below the level of the shelf, so she can just slide the box onto the cart deck rather than lift it.





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## Questions?

### **C. G. Lawrence, III, MS, CSP, REM, ARM-P**

*Chief Loss Control & Safety Officer*

*(404) 657-4457*

*Charles.Lawrence@doas.ga.gov*

### **Hiram Lagroon, BS**

*Chief Loss Control & Safety Officer*

*(404) 463-6309*

*Hiram.Lagroon@doas.ga.gov*