

# TOOL BOX TALKS

## Protecting the Spine

The spine is a remarkable structural component of our bodies. The spine literally holds our bodies in the upright position. It is made up of bones, discs, ligaments and tendons that support the upper body above the hips for our lifetime. But like any other mechanical component, it can wear out with use and abuse. Degeneration is the medical term given to the situation caused when the back begins to wear out. Misuse, heavy lifting, repetitive and awkward twisting all lead to degeneration. Review this tool box talk to better understand how we can protect our spinal column.

## WORKSAFE TIPS

### BACK INJURY FACTS

- The back is the most commonly injured part of the body.
- 95% of American adults complain of back pain.
- After the first major muscle pull or strain, the back becomes more susceptible to injury.
- Severe injuries require surgery, but surgery may not provide definitive pain relief & return to full flexibility.
- The only way to protect the spine is to lift safely and avoid forceful, awkward postures.

### DISCS

- Primary job - shock absorber between vertebrae.
- 23 discs in the spinal column.
- There are no nerves in discs – you cannot feel “disc pain”.
- Discs are damaged OVER TIME by ABUSE.
- The outer wall of discs is made of tough fiber sheets.
- The inner disc is a nucleus made of a fibrous gel.
- The nucleus is the major carrier of the body’s load.
- **Herniation** occurs when the disc wall ruptures and the nucleus pushes through the outer wall.
- This occurs over time, as a result of multiple instances of disc overpressure.
- When the nucleus of the disc breaks through the outer wall, painful nerve contact occurs.
- In order for discs to function properly, they must be WELL HYDRATED and not ABUSED.

### DISC DEGENERATION

- Over time and as we age discs dehydrate.
- As the disc dehydrates it becomes less pliable.
- As the fluid support of the disc is diminished, injury can occur more often.
  - The nucleus of the disc pushes through the outer wall into the structures nearby, causing intense pain.

THIS WORKER IS LIFTING INCORRECTLY. THE HEAVY LOAD IS PUTTING INTENSE PRESSURE ON THE DISCS.



THIS WORKER IS LIFTING INCORRECTLY. THE FLOOR-LEVEL LIFT IS PUTTING ALL OF THE WEIGHT ON THE DISCS.



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## Safe Lifting

Safe lifting practices are crucial for everyone no matter what industry you work in. Over time, repeated injury to the spine causes degeneration, which is the painful aging of spinal bones, discs, tendons and cartilage. Review these following safety tips with your employees.

### Toolbox Tips

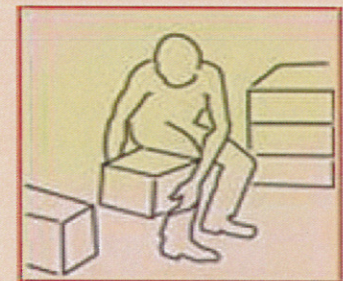
1. Do simple stretches for 5 to 10 minutes before beginning a long day of heavy lifting.
2. Drink plenty of water which keeps muscles hydrated and flexing well.
3. Use gloves that help your hands grip the load. Re-shape the load to make it easier to grasp.
4. Break down the load to allow for two or three trips.
5. Plan the route. Identify trip hazards and slip hazards that can cause a fall, strain or sprain.
6. Get help with heavy loads; ask others for help.
7. Keep your feet shoulder width apart.



Get close to the load and keep your spine straight.





Do not lift with the back.



Do not twist while lifting. Twisting puts a lateral force on the spine.

*These advisory materials have been developed from national standards and sources believed to be reliable, however, no guarantee is made as to the sufficiency of the information contained in the material and Missouri Employers Mutual Insurance Company assumes no liability for its use. Advice about specific situations should be obtained from a safety professional.*

### For more information:

 [www.worksafecenter.com](http://www.worksafecenter.com)  1.888.499. SAFE (7233)

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