

Workplace Health and Safety Bulletin



Let's Back Up a Bit — Some Truths About Back Belts

Worn by some workers, who lift and carry loads, back belts are also known as back or lumbar supports. Typically, a back belt is a wide elastic band (with or without suspenders) wrapped around the waist and lower back and worn on the outside of work clothes.

Although purchased in the belief they prevent back injury, scientific evidence supporting claims of injury prevention is scarce. The National Institute for Occupational Safety and Health (NIOSH) in the U.S. continues to recommend that back belts not be used to prevent back injuries among workers who have never been injured.

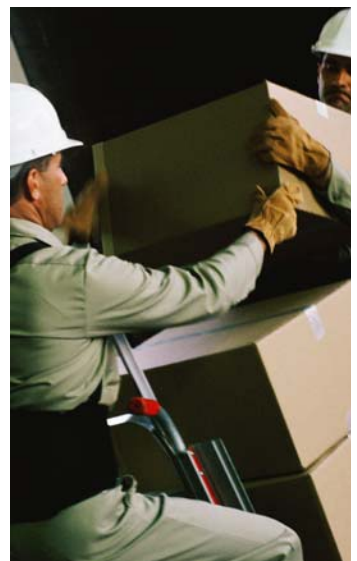
One concern about back belts is that their long-term use may make workers dependent on them, weakening muscles of the lower back and abdomen. Problems may also arise from a worker's false sense of security when wearing the belt. Believing they're protected, workers may lift more weight more often, exposing themselves to greater risk of injury.

It's important to know, however, that back belts may be appropriate in the treatment of certain back injuries. In these cases a back belt should be offered to an injured worker

According to NIOSH, various claims have been made for back belts:

- *Back belts reduce stress on the spine*

Supporting data is inadequate.



- *Increased abdominal pressure reduces stress on the spine*

There is no evidence that stress on the spine is reduced or even if it were, there is no evidence that the chance of back injury would decrease.

- *The additional support provided by the back belt decreases stress on the spine*

Back belts are supposed to support soft tissues surrounding the spine. Evidence is inadequate that such support prevents injuries.

- *Restricting back movement prevents excessive bending*

Side-to-side movement is reduced but forward bending, which places additional stress on the back during lifting, is largely unaffected.

- *The belt reminds wearers to lift properly*

Evidence showing that workers avoid lifting heavy loads is weak at best.

- *Back belts reduce workplace injuries*

A 1994 NIOSH study concluded there was no evidence that back belts actually reduce the risk of worker injuries. Later research in 2000 showed again there was no evidence that the use of back belts (either by requirement or individual choice) reduced the incidence of back pain or back injury claims. A study of the retail industry showed no difference in injury rates between workers who did or did not wear belts.

The bottom line?

There is

- little scientific evidence of increased lifting power,
- little scientific evidence of lower rates of injury in workers wearing back belts, and
- some evidence of potential harm from increased abdominal pressure and increased blood pressure.


Do not rely on back belts to prevent back injuries. Implement an injury prevention program based on workplace redesign and the tasks being performed.


For example:

- reduce or eliminate heavy and repetitive lifting
 - reduce the weight and size of the object(s) to be lifted
 - replace lifting and lowering with pushing and pulling
 - use lifting equipment such as carts, dollies, jib cranes, scissor lifts, etc.
 - reduce the distance that objects must be carried
 - ensure adequate clearance and headroom in work areas
 - rotate workers among task which do not involve lifting
 - suit lifting task to the worker's capabilities.
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