Back Belts
SafetyNet #: 29

A. Summary
Back belts are wide belts that encircle the abdomen and lower back. They are usually made of elastic material and can be cinched tightly around the waist, like a girdle, when one is ready to lift something heavy. They often have suspenders that hold them in place when they are not cinched tightly. They have become popular with workers in jobs that require heavy lifting; for example, warehouse workers or longshoremen, baggage handlers, and stocking clerks.

B. Claims for Back Belts
Proponents of back belts claim that they prevent back injuries by various means, including reducing internal forces on the spine during lifting, increasing intra-abdominal pressure which counters the forces on the spine, stiffening the spine which decreases forces on the spine, restricting bending range of motion to prevent overextending, and reminding the wearer to lift carefully. They claim that back belts have reduced injuries in the workplace.

C. Scientific Support
Unfortunately, none of the above claims has been conclusively proven to date, according to the National Institute for Occupational Safety and Health (NIOSH), which has continued to review the scientific literature on the effects of back belts. NIOSH also has concerns that use of back belts can lead workers to lift more than they should because of a sense of security, putting them at greater risk of injury. Because of the inconsistent and unproven effects of back belts, NIOSH does not recommend the use of back belts to prevent injuries while lifting. Instead, they recommend that employers implement an ergonomics program that reviews the work environment and work tasks to identify the hazards of lifting. Training workers in identifying lifting hazards and using safe lifting techniques and methods is the most effective way to reduce lifting injuries.

D. UC Davis Position
EH&S and Occupational Health Services concur with NIOSH and do not support the use of back belts nor consider back belts to be personal protective equipment for the following reasons:

- Back belts have not been shown to protect employees from back injuries.
- They do not protect people when using improper lifting methods.
They do not reduce any of the physical risk factors that contribute to back injuries such as vertical height to lift, horizontal height form the load, frequency of lifting, duration of lifting, and the load.

- They cannot replace the necessary physical conditioning needed for the job.
- They will not provide support for lifting loads beyond a person's normal capabilities.

**E. Recommendations for Supervisors**

If an employee feels a back belt is needed to safely perform the job,

- Evaluate the work area and method to see if changes can be made to reduce loads to the back. Consult with the UC-Davis Ergonomics Program 530-752-6079, if assistance is needed.
- Provide employees training in back injury prevention. Ergonomics Program of Occupational Health Service offers training classes, literature, and videos on back injury prevention.
- Have the employee discuss medical reasons for needing a back belt with an Occupational Health Services Physician (530-752-2330).

If you decide to wear a back belt at work or at home, it is very important that you understand that:

- You should always consult your health care provider before wearing a back belt if you are receiving medical care for back symptoms.
- There is evidence of adverse health effects from wearing a tight back belt for prolonged periods. Tighten the belt only for short periods.
- Long-term use of a back belt may increase your risk of back injury when you stop wearing the belt.

For further information about safe lifting techniques, back conditioning or back belts, contact Occupational Health Services.

**Contact**

**Ergonomics Team**
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**More information**

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