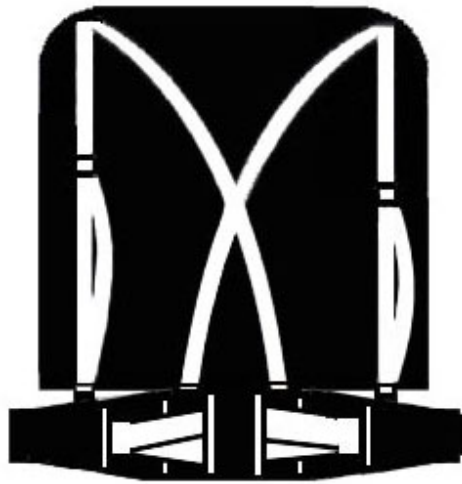


Back Protection



Training Guide

Use a Back Support Belt to Prevent Back Injuries

Because of the incidious progression of back problems, it is always difficult to determine how a back problem began. If you often lift heavy objects or simply want to have better posture, then wear a back support belt and you are already one step ahead in preventing back injuries.

What is a back support belt?

Back support belt, also called "back belts" or "abdominal belts" were originally used in medical rehabilitation therapy. Leather belts have also been used by athletes during weight lifting. Recently, the "industrial back belt" has become popular. While there are many types of belts on the market, the most common style is of a lightweight, elastic belt worn around the lower back which is sometimes held in place with suspenders.

How a back support belt works?

A back support belt is worn around the lower or middle back, similar to a girdle. It can also have shoulder straps or braces to keep it secure and to give additional support to the back. The belt is designed to prevent back strain and injury by keeping your spine aligned and by forcing you to maintain a proper posture.

Do I need a back support belt?

Back support belts are ideal for those who are engaged in heavy lifting, such as people in industrial and construction work.

BACKBELT instructions



1 With two hands at same time adjust the elastic internal support band firmly around your waist and assure it with the Velcro®

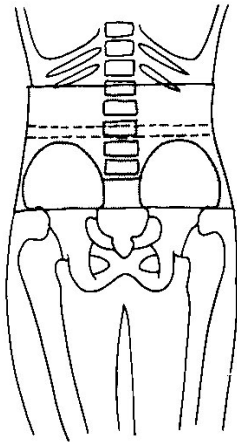


2 Adjust the suspenders until you feel them snug but not very tight



3 Pull out the second elastic belt forward and assure it with the Velcro® until you fill safe and comfortable

However, it is recommended that you should wear a supportive belt only for the first few days or weeks after a severe back injury while the area is healing or only during the lifting of very heavy object. If you have never had a back injury, it would avoid a belt entirely. It is more important to focus on using proper form and posture when bending and lifting and even sitting, and to perform conditioning exercises regularly to keep your trunk muscles strong.



Important:

The back support should be centered at the top of your hip bone as shown above.

A back support belt alone will not reduce your risk of back injury.

- Use your back support belt together with a "total" health and safety program
- Wear your back support belt as much as necessary and as little as possible. Use it to lift heavy objects and remove or loosen it when not lifting
- Do not use a back support belt to increase your load lifting limit. Maintain good physical conditioning (strength and flexibility)
- Make sure your belt is comfortable and fits your size and shape

There are two types of back support belt: lumbar support belt and full back support belt.

A lumbar support belt focuses support to the lumbar area and is used for general back support needs such as lifting, exercising, and standing.

A full back support belt covers the entire back with a large pad and is used in rehabilitating spine or back injuries, as well as for correcting problems in posture.

Buying Tips:

MATERIAL Choose a rigid, non-stretch belt with an adjusting buckle. These are more durable and effective than elastic belts. Look for one made of lightweight nylon or plastic for durability. If you will use them for exercise or physical activity, look for a more flexible belt that conforms to your movement.

THICKNESS Choose a back support belt that covers your entire lower back area. Thin belts do not distribute weight effectively and may add more strain to your back. For full back support belts, make sure the pad is thick and rigid to firmly hold your posture, but light enough to allow movement.

Proper ways to move heavy objects

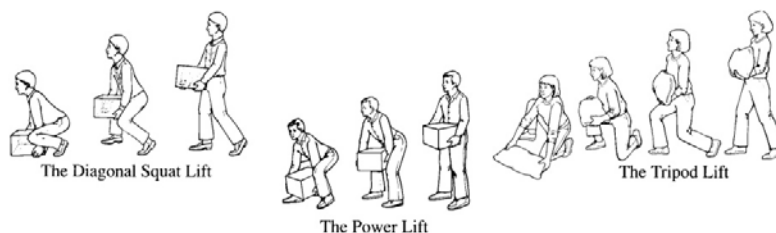
Maintaining proper posture is the best way to keep your back in good shape and thus to prevent back pain. This is not only true in sitting, standing and sleeping positions, but also applies while you are moving objects. Statistics show one of the common causes of back pain is injury to the spine caused by improperly lifting and moving of heavy objects. This is preventable once you follow the following steps whenever you need to move heavy objects.

- **Bend with your knees:** Make sure you bend with your knees when you need to bend and lift an object
- **Keep the weight close:** Make sure you keep the load close to your body whenever you need to carry and lift heavy objects
- **Balance:** If you can split your load into two and carry half in each hand, this would distribute load evenly and maintain your centre of gravity inside your body.
- **Don't twist:** If you twist while lifting an object, your back may get seriously injured. Twisting creates too much pressure on your lower back's structure.
- **Always push your load:** You should always keep in mind that pushing the load is better than pulling it. Pulling strains your back much more than pushing does.

In addition to the above tips, following posture guidelines are also helpful for your back health.

- **Standing:** Always keep one foot ahead of the other with your knees bent slightly. This reduce pressure on your lower back.
- **Sitting:** To reduce strain on lower back to a minimum, sit with your hips slightly higher than knee level.
- **Reaching:** Never reach for anything above shoulder level as over-reaching can lead to strains in your arms and back. Consider to use a stool.

Always lift with these three basic principles



Preventing Back Pain

- **lose weight** - too much upper body weight can strain the lower back; you can use the healthy weight calculator to find out whether you need to lose weight
- **wear flat shoes with cushioned soles** as they can help reduce the pressure on your back
- **avoid sudden movements** which can cause muscle strain
- **try to reduce any stress, anxiety and tension**, which can all cause or worsen back pain
- **stay active** - regular exercise, such as walking and swimming, is an excellent way of preventing back pain

*Back belts can also make employees **more mindful of their backs** and the things they need to do to protect their backs, such as practicing proper lifting techniques, maintaining good posture, and not lifting too heavy a load.*

Tips for a Healthy Back

To maintain your back in tip-top condition, there are a number of tips you should follow. Following top 10 tips will help you avoid getting back injury:

1. **Standing** – When standing, it is very important you always keep one foot in front of the other and keep your knees slightly bent. Doing this will keep pressure off your lower back.
2. **Sitting** – When you sit, make sure your knees are at slightly higher than your hip level. This reduces stress on your lower back. If you need to work in an office chair for a long period, make sure your chair is ergonomically designed and have an appropriate back support. If your chair doesn't come with back support, consider to use a back support pillow.
3. **Reaching** – It's also important you use a stool or steps when you're going to reach for things above shoulder level. Stretching too much can cause strains to many of your back muscles.
4. **Moving heavy objects** – For your back safety, it is better to push objects rather than to pull them. When you push, you should always use the power of both your arms and legs. If the items you want to move are heavy, don't hesitate to ask for help. If you can't get any help, consider to use appropriate lifting machinery and trolley.
5. **Lifting** – Whenever you need to lift an object from floor, always bend with your legs and not with your back. This preventive measure alone can help you reduce a large percentage of injury risk to your back. Keep the object close to your body at all times, always wear a back support and ensure you're not straining too much on your spine.
6. **Carrying** – As advised above, keep the object as close to your body as possible. Use a trolley or cart whenever possible.
7. **Sleeping** – Research shows that sleeping on your back hugely increases the pressure upon it. It is better for your back if you sleep on your side with a pillow between your knees. If you prefer to sleep on your back, placing two pillows under your knees will significantly cut the pressure on your back.
8. **Quit smoking** – Nicotine reduces the blood flow throughout your body. One notorious side effect of nicotine is to exacerbate back pain.
9. **Weight control** – If you're overweight, you're always putting extra strain on your back. Moreover being in overweight is bad for your general well being. Try your best to maintain yourself within 10lbs of your ideal weight, and you would be at less risk of back pain.
10. **Treat minor back pain** – If you experience minor or niggling back pain, treat it before it is getting worse. Over the counter anti-inflammatory drug, gentle exercise, hot and ice pack should help. Gentle stretching routine such as Pilates and Yoga also help relieve minor back pain.

Weightlifting Belt

Weightlifting belts protect the lower back in a few ways: First, they increase intra-abdominal pressure, or the pressure within the abdominal cavity, so the abdominal (or core) muscles support the spine as much as possible. Weightlifting belts also help protect the lower back by reducing hyperextension and possible inflammation around the spine resulting from heavy lifting. The belt helps keep the lower back propped up so it can't fall back into a potentially harmful position. And the belt is useful during heavy weightlifting that places pressure on the spine, since it prevents spinal shrinkage, a sci-fi sounding term that refers to the compression of the vertebral discs. Some experts recommend using weightlifting belts when moving loads upwards of 85 percent of a one-rep max (or 85 percent of the amount of weight you can move once).



When your pain is caused by a traumatic accident, you need professional help as soon!

First of all - DO NOT APPLY HEAT to your spine. Your back is inflamed and applying the heat will increase inflammation and pain. If you apply ice to your back, you reduce inflammation and pain. Make sure to wrap it in cloth, otherwise you may ice-burn your skin. It will only feel cold for about 2-5 minutes, then the pain will start to numb away. You can do it every 2 hours for 10-20 minutes. When using ice, get a gel ice-pack. It is soft when frozen, has a good surface area and doesn't run down your trousers when it melts.

Some people still apply heat to their backs - it may provide short term pain relief, but will cause damage long term. Please - do not take hot baths, when your back is not at its best – a prolonged awkward position and heat can trigger inflammation and pain. Bed rest is also not recommended. Try to stay as active as possible, of course without causing more pain.

Try to avoid sitting. Walking around or lying down will help the recovery. If you have to seat, make sure you have reclined 40-45 degrees from vertical and have supported your lower back with the pillow, preserving/restoring the natural curve in your lower back. This will lessen the pressure onto sensitive areas in your lower back aiding faster repair.

Please do not wear support belts for days, because they weaken your back and make things worse in the long run. They are made to support your back after severe trauma and for heavy-lifting only.

Please do not exercise when in pain! Some people exercise and run through pain, thinking it will "go away". Pain will only subside, as the body heals, so let it heal. Exercise is a strain to the body and adds to the damage. However exercise is extremely beneficial when taken at the correct phase of care. But NOT when you are in pain.

References:

Occupational Safety and Health Administration <https://www.osha.gov>

The National Institute for Occupational Safety and Health <https://www.dc.gov/niosh>