

Exercise walking for better back health

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People with ongoing or recurrent episodes of lower back pain should consider the benefits of walking as a low-impact form of exercise. Aerobic exercise has long been shown to reduce the incidence of low back pain. However, people with low back pain often find some forms of exercise too painful to continue, and therefore don't get the exercise they need to maintain good health. Exercise walking is one way to benefit from regular exercise while not aggravating the structures in the lower back.

For some back conditions, walking will aggravate or cause too much pain to be bearable. For these patients, other low-impact exercise may be advisable, especially water therapy (pool therapy such as aqua jogging or deep water aerobics). The body's buoyancy reduces compression on the lower back, allowing for more pain free movement.

Benefits of exercise walking

It has long been known that there are many inherent health benefits from a regular routine of exercise walking, such as:

- **Strengthens muscles in the feet, legs, hips, and torso** – walking increases the stability of the spine and conditions the muscles that keep the body in the upright position.
- **Nourishes the spinal structures** – walking for exercise facilitates strong circulation, pumping nutrients into soft tissues and draining toxins.
- **Improves flexibility and posture** – exercise walking along with regular stretching allows greater range of motion; helps prevent awkward movements and susceptibility of future injury.
- **Strengthens bones and reduces bone density loss** – regular walking for exercise helps prevent osteoporosis and can aid in reducing osteoarthritis pain.
- **Helps with controlling weight** – any regular exercise routine helps maintain a healthy weight, especially as one ages and metabolism slows.

For people with ongoing back pain, balanced and stable walking maintains and enhances one's ability to continue doing everyday activities, while reducing the likelihood and/or severity of additional episodes of back pain.

To realize the full benefits of exercise walking, certain guidelines need to be followed as outlined below.

Stretching before walking

Prior to exercise walking, gentle (((((((((static, non-ballistic)))))))) stretching should be done to prepare the joints and muscles for the increased range of motion needed. It is important to take an easy five minute walk to warm up the muscles before stretching so they're not completely cold when stretching.

Discuss with a healthcare practitioner the best way to do stretches, and be sure to include the neck, arms, hips, upper and lower leg muscles (including the hamstring muscles in the back of the thigh), and ankles.

Techniques for exercise walking

Using the following techniques will help improve the benefits of walking:

1. Walk briskly, but as a general rule maintain enough breath to be able to carry on a conversation.
2. Start out with a 5 minute walk and work up to walking for at least 30 minutes (roughly 2 miles) at least 3 to 4 times a week.
3. Maintain good form while walking to get the optimum aerobic benefit with each step and help protect the back and avoid injury. These elements of form should be followed:
 - **Head and shoulders:** Keep the head up and centered between the shoulders, with eyes focused straight ahead at the horizon. Keep the shoulders relaxed but straight - avoid slouching forward.
 - **Abdominal muscles:** It is important to actively use the abdominal muscles to help support the trunk of the body and the spine. To do this, keep the stomach pulled in slightly and stand fully upright. Avoid leaning forward as you walk.
 - **Hips:** The majority of the forward motion should start with the hips. Each stride should feel natural – not too long or too short. Most people make the mistake of trying to take too long of stride.
 - **Arms and hands:** Arms should stay close to the body, with elbows bent at a 90 degree angle. While walking, the arms should keep in motion, swinging front to back in pace with the stride of the opposite leg. Remember to keep hands relaxed, lightly cupped with the palms inward and thumbs on top. Avoid clenching the hands or making tight fists.
 - **Feet:** With each step, land gently on the heel and midfoot, rolling smoothly to push off with the toes. Be mindful about using the balls of the feet and toes to push forward with each step.

Using a treadmill for exercise walking

When using a treadmill for walking exercise, all of the above guidelines are still important, with the additional caution to avoid using the handrails as much as possible (unless they are needed to keep balanced).

Walking shoes for exercise walking

Exercise walking, as with other forms of exercise, requires the right equipment for a safe and effective routine. Good walking shoes are an important investment, and choosing the appropriate walking shoes is an important step in maximizing the benefits of exercise walking.

Finding the proper walking shoe may take some time and a bit of money, but it is essential for achieving long and short term benefits. Shoes are the most important piece to equipment in walking.

Walking shoes interact with the back

Walking shoes provide a basic protection and mechanical support for the foundation structures of the body – the feet – which in turn help keep the entire body balanced and aligned. When there is a minute imbalance in the feet, the compensatory domino effect causes changes throughout the body.

Specifically, when the body's natural gait motion is off balance, the body counterbalances the problem by redistributing weight. This ultimately changes the natural posture and alignment of the spine, leading to muscle strain and back pain over time. Though the imbalance may seem minor, in the long run, the stresses added to the body can add up and cause unnecessary wear and tear.

Finding the correct walking shoes

The right walking shoes can help foster excellent balance and posture during exercise walking, while poorly fitted walking shoes can cause pain or increase susceptibility to injury. It is best to find a technical running shoe store that will watch the individual's walk and will provide a shoe that fits based on the individual's specific biomechanics (this service is not typically found in large chain store).

Walking shoes should allow the feet to naturally roll slightly inward (pronation) and outward (supination) to help absorb the different forces acting on the body. For many people, either one or both feet under pronate (roll outward) or over pronate (roll inward), altering the balance and length of the leg during stance, as well as gait. Some shoes are designed to control over pronation, whereas others are designed to encourage pronation. Therefore it is important to make sure that walking shoes match each individual's specific biomechanical pattern.

An additional side effect of pronation and supination is the change in the natural curvature of the arches of the feet.

- Over pronation – one or both feet excessively roll inward, causing the arch to flatten – also known as “flat-feet”. This will create excess motion in the leg as it internally rotates. The pelvis tilts to compensate for the rotation of the leg, tightening muscles in the lower back, fatiguing and stressing the components of the spine.
- Under pronation – one or both feet fail to pronate and excessively roll outward, impairing the body's ability to absorb shock. This added force is absorbed through the joint and muscles of the lower back and lower extremities, which over time may cause injury.

The feet are the crucial elements of gait motion, and maintaining a smooth gait is critical to preserving good spinal health. To ensure the correct balance during

exercise walking, one must limit over pronation and under pronation of the feet. Good walking shoes should provide this stability.

Guidelines for buying walking shoes

There are three essential factors that should be taken into consideration before purchasing a new pair of walking shoes.

- **Stability** – the shoes should have a balanced and secure feel throughout range of motion.
- **Flexibility** – the shoes should allow for a good degree of give at the base of the toes, providing smooth motion.
- **Comfort** – walking shoes should comprise contours and padding conformed closely to the feet, providing a snug fit at the heel and midfoot, with ample room in the forefoot.

When trying on shoes for exercise walking, it is advisable to examine the following four particular areas of walking shoes:

- **Heel counter** – the area of the shoe that holds the back of the heel, just underneath the Achilles tendon. This area should be snug but not tight, comfortably cupping the back of the heel. A good heel counter will help prevent the feet from over pronation or supination.
- **Midsole** – the area between the tread and the cloth upper of the shoe. This is the most important component of any footwear. Midsoles are made of a variety of materials that give the shoe greater or lesser degrees of cushioning, support, and flexibility.
- **Insole** – the area inside the shoe, on the bottom, where the sole of the foot is in contact with the shoe. It should contour comfortably to the foot. It is designed to reduce shear forces between the foot and the shoe and provide some shock absorption.
- **Toe box** – the entire area that surrounds the toes. The toe box should provide adequate room for the toes to move freely. Wiggling and bending the toes at the knuckles should be unrestricted. Conversely, too much space will cause shifting and discomfort. There should be approximately one half to a full thumb's width between the end of the longest toe to the end of the toe box.

Fitting guidelines for walking shoes

Here are some general guidelines to consider when getting fitted for a new pair of walking shoes.

- Have the salesperson take dimensions of both feet since there may be differences. Take measurements while standing, as feet expand when bearing weight. Base new shoe size on these measurements, not on previous shoe size.
- Take foot measurements at the end of the day, since feet tend to swell throughout the course of the day.

- Try on and lace up both walking shoes (left and right) while wearing regular socks. Stand up and walk around to make sure the fit is correct.
- Never buy walking shoes that immediately feel too tight. Though they will go through a break-in period, if walking shoes initially feel very tight, they are too small.

Finally, keep in mind that arch supports or orthotics can supplement the original shoe to help attain the best fit.

Walking shoe inserts

Walking shoes alone may not provide the needed comfort or support needed for exercise walking. Because of discrepancies in leg length or foot shape, each shoe may need certain adjustments in order for the feet to feel or perform balanced within the walking shoes.

Orthotics are removable shoe inserts that are placed within the walking shoes to remedy these discrepancies. They should enhance shock absorption, weight distribution, and alignment of the feet and body while walking. Some inserts may provide support for a flat arch, while others provide padding for a sore heel. Store bought orthotics can be relatively inexpensive compared to custom-made orthotics, but are nonspecific for discrepancies between the left and right foot.

Other additions to walking shoes include heel and sole lifts. These are added to the heel or sole of the exterior of the shoe. Their purpose is to compensate for leg length inconsistencies.

Having the appropriate walking shoes is an important element in exercise walking. The combination of proper footwear and sound exercise walking technique will impart the maximum benefits of an exercise walking routine.