

Always bend from the knees, never from the waist (Figure 5). Follow these suggestions when lifting a large or heavy object:

- stand the object upright,
- position feet shoulder-width apart, close to the object,
- squat or bend at the knees,
- tighten stomach muscles,
- roll the object onto bent knees and then up into arms,
- hold the object close to your body so that the thigh muscles are doing most of the work, and
- slowly lift by straightening knees.
- lower loads by reversing this process.

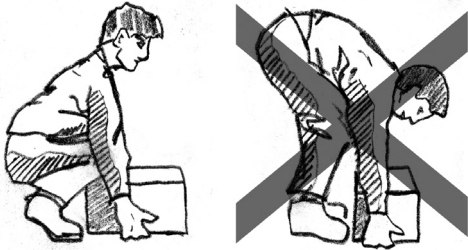


Figure 5. Technique for lifting heavy objects.

Be careful when pushing or pulling heavy objects — use arm or thigh muscles and not the back. Never use jerky, twisting, or rough movements; move slowly and deliberately. Let gardening equipment and tools do the job for you. For example, use large-wheeled garden carts that support their own weight to transport items around the garden (Figure 6). Whenever possible, find someone to assist you with lifting, pushing, or pulling.

Long-handled tools can make work easier by extending reach and reducing body movement necessary to complete a task. Lightweight and small-bladed tools can reduce the amount of load and resistance. Stand as close to the work area as possible, and use arms and legs to do work instead of the back.

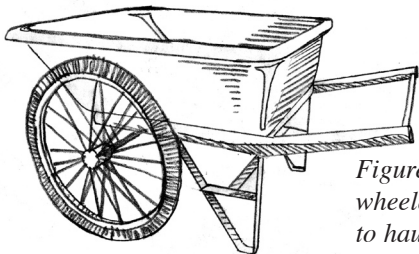


Figure 6. Use large wheeled garden cart to haul objects in the garden.

Additional tips:

- Mow lawns regularly so that grass doesn't get too tall. An overgrown lawn takes more effort to mow.
- Adjust mower handle height to hip level and push mower with a straight back.
- Many new mowers have “power assist” features. Be careful to adjust the pace to avoid straining the back, trying to either hold the mower back or push against the power drive.
- Use ground covers or mulch to reduce lawnmowing, weeds, and watering needs.
- Use a watering wand with an on/off control. Raise the spigot, relocate to edge of beds with short length of hose and post.
- Use soaker hoses or a sprinkler system for irrigation.
- Choose low maintenance plants such as groundcovers instead of annuals and turfgrass.
- Use raised beds to reduce bending.
- Ask others for assistance with tasks that are difficult or cause strain.
- Buy garden supplies in small, light-weight quantities.
- Take frequent breaks and rotate between jobs so that back or knees are not strained for long periods of time.
- Be conscious of the twisting motion that can be produced when throwing mulch or shoveling soil as it can cause back strains.
- Be aware of situations that could lead to a fall such as wet lawn or loose gravel.

*Back Pain Answers.Com – www.BackPainAnswers.Com; U.S. Food and Drug Administration www.fda.gov/fdac/features/1998/298_back.html; *Spine-Health.com* www.spine-health.com; Your Orthopaedic Connection www.orthoinfo.aaos.org/

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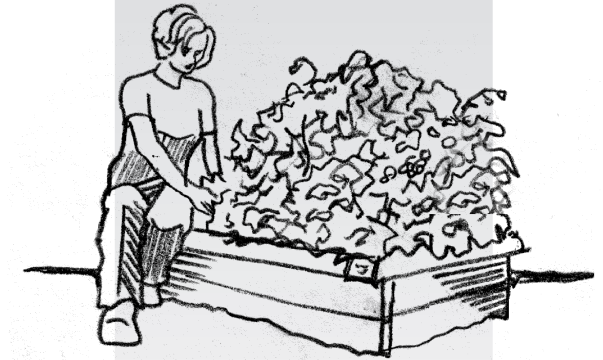
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Gardening and Your Health:



Protecting Your Knees and Back

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Knees

Many gardening tasks require knee strength and stability, whether kneeling, sitting, standing, or walking. The best way to protect knees from the stress and strain is to condition them with strengthening exercises and stretching.

The muscles that protect the knees are the quadriceps (front of thighs) and the hamstrings (back of the thighs). To ease strain on the knees, practice strengthening exercises regularly, and stretch before starting gardening activities. Your doctor should recommend specific exercises and stretches that are appropriate for you.

Squatting can put unnecessary strain on the knees if done incorrectly or for long periods of time. When squatting, keep feet flat with weight evenly distributed. Squatting with heels off the ground can potentially damage knee ligaments. Preferred work positions would be having one knee on the ground, working on hands and knees using a kneeling pad, or sitting on a chair or stool (Figure 1). If you use a chair or stool, place it close to the area where you are working and use long handled tools to avoid straining the upper body. If a kneeling pad is inconvenient to carry, then try using strap-on knee pads.



Figure 1. Preferred work positions.



Raised beds can make gardening easier, reducing the need to stoop or bend down to get close to the soil. The height of raised beds can be adjusted to suit the gardener's needs. Raised beds with wide borders can offer a convenient place to sit while working (Figure 2). The width of raised beds should be narrow enough to allow the gardener to work without straining or reaching. Some people may find it easier to use beds high enough to stand at, while others may want to design a bed to slip their knees under while sitting (Figure 3).

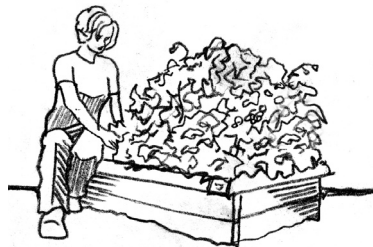


Figure 2. Work in raised beds to reduce strain.

Figure 3. Some garden beds can be designed to sit at like a table.



Back

Lower back pain, whether caused by muscle aches or a herniated disk, can make gardening a difficult task. Research has shown that, in most cases, prolonged bed rest can actually make pain from acute or chronic back problems worse. Studies show that individuals who continue their normal activities as much as possible after an initial 24 hour rest period experience less pain, have more flexibility, and are better able to do work than are individuals who stay in bed.* While each case is different and persons should consult with a doctor before resuming activities, many individuals will be able to continue gardening activities with some minor adjustments recommended by their physician.

Exercise can have many benefits for individuals recovering from back injury. It can improve mood and reduce pain by releasing endorphines, the "feel good" hormones, to the brain. Exercising can help to maintain flexibility and fitness level, preventing the muscles and tissues around the injury from tightening up, which can increase susceptibility to strain. Lastly, exercise can strengthen the muscles that support the back and reduce the likelihood of re-injury.

To avoid aggravating a back injury, it is important to know how to move, sit, stand, and work in ways that will reduce strain. When walking keep a slight arch in the lower back, slightly tensing the abdominal muscles, and don't slouch. Sit with feet supported and knees level or higher than hips. Use correct postures when doing garden chores such as raking, shoveling, hoeing, etc. (Figure 4).



Figure 4a. Correct work posture.

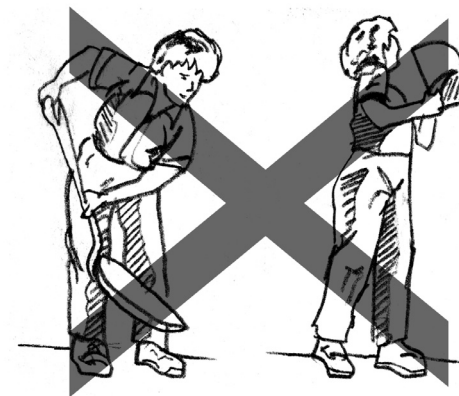


Figure 4b. Incorrect work posture.