

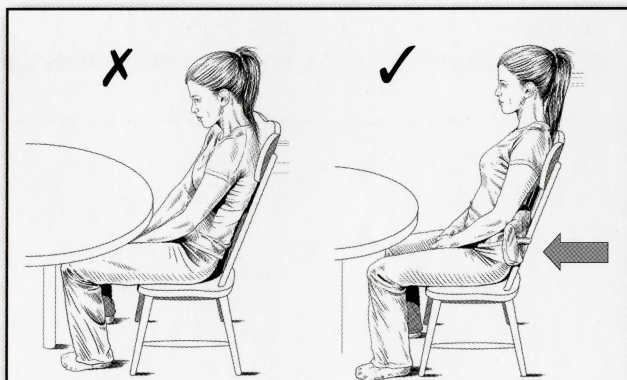
Spine Hygiene

Expanding Your Pain-Free Abilities

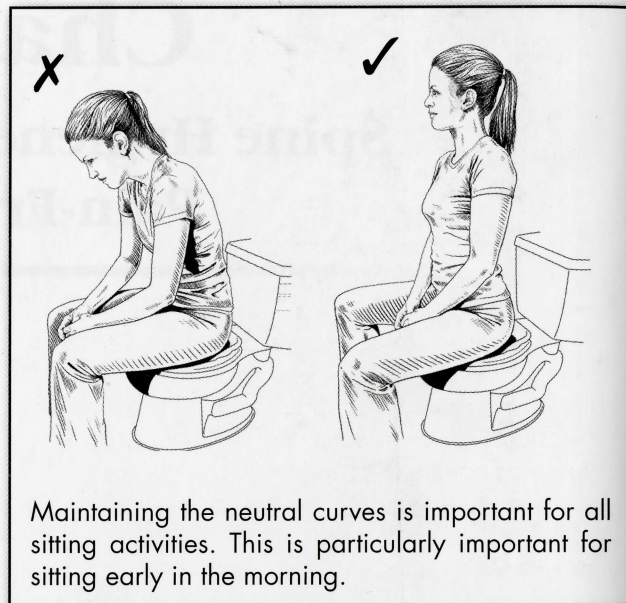
Spine hygiene refers to the daily upkeep of your back. It includes your recovery exercise routine as well as changes to your existing daily motions all day long. Success in removing back pain requires removal of the movement flaws that cause tissue stress. The “movement tools” you perfected in the previous chapter should be allowing you to move with less pain. Now we expand your pain-free abilities through the following recommendations. It's time to stop picking at the proverbial scab.

Be forewarned, some of these suggestions go against prevailing wisdom. Yet they are crucial to achieving and maintaining spine health.

Sitting



Avoid slouched sitting which stresses the posterior parts of the spine discs. This steals pain-free resilience for the rest of the day. Do sit with the neutral curves of the spine maintained which will build a pain-free back in all other activities. Note the lumbar pad supporting the natural curve of the low back.

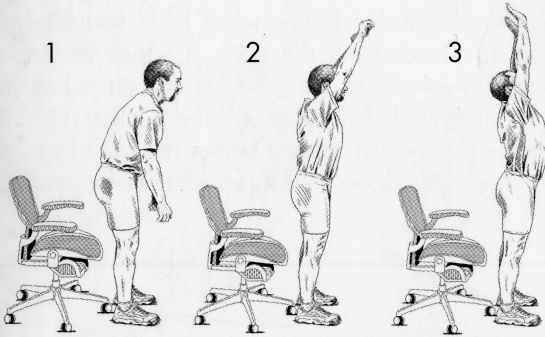


Maintaining the neutral curves is important for all sitting activities. This is particularly important for sitting early in the morning.

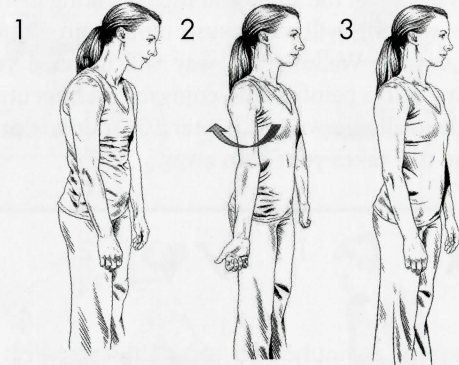
Following time spent sitting, many will notice difficulty in standing upright. In fact, it causes much discomfort. Try this drill to regain the stress-free upright standing posture.

We developed this to combat the stresses to the discs that build up during a period of sitting. Use the drill to break up periods of sitting to avoid building up back discomfort. Start with getting up from the chair and repeating every 20 minutes. Then adjust this time interval as you experiment with what works best for you.

Standing

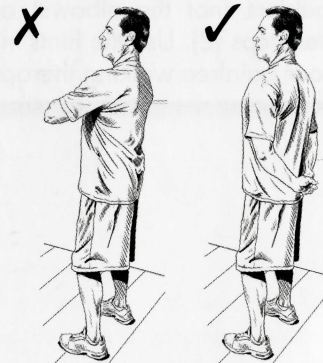


Typically, the back pained person rises from the chair and stands slouched (1). The corrective drill starts with raising the arms overhead, count to 10 (2). Now reach higher and reach farther back for another count of 10 (3). In this position, fully and deeply inhale, working into an upright and stress free standing posture. Drop the arms and relax. Now you have prepared your back to take on the next challenge, be that walking or another sitting session.



The Drill

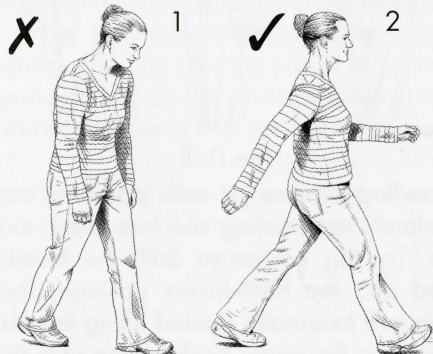
Poor standing posture (1) robs pain-free activities by constantly contracting the low back extensor muscles. Try this corrective drill: the thumbs are extended into the hitch-hikers position, then the shoulders are externally rotated lifting the rib cage and posturing the upper body in-line with the hips (2). Now, notice the back muscles relax (3).



Standing with the arms folded across the chest increases the load on the back muscles and the spine. In contrast, spine hygiene principles include standing with the hands clasped behind the back to reduce muscle activity and the associated cramping.

Walking

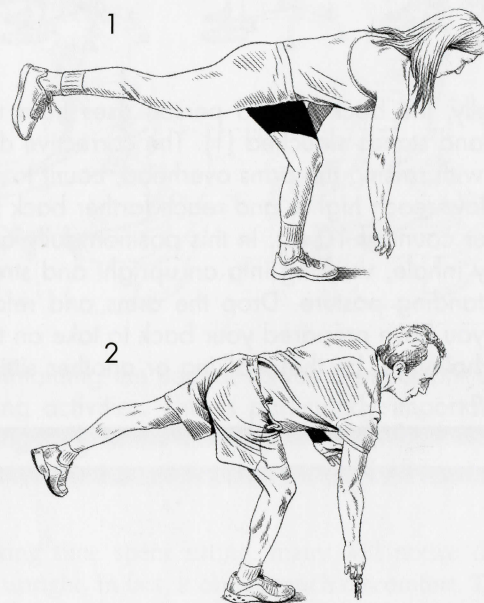
Pain causes flexion at the spine and hips resulting in a slouched posture. Slow walking will also cause more pain. Typically the arms are not swung. Walking this way will increase your pain. Change walking into a painfree and enjoyable therapeutic activity. Use some of the drills shown in Chapter 10. Your goal is to create a walking style that takes your pain away.



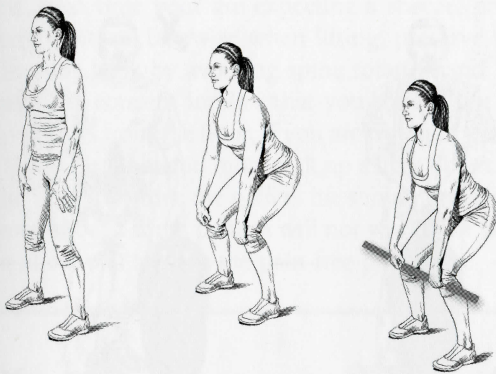
Fix the painful “mall strolling” pattern (1). Instead turn walking into a therapy by correcting your posture to one that is more upright, swing the arms about the shoulders (not the elbows) and take larger and faster steps (2). Use the hints in chapter 10 to create your painfree walking therapy.

Bending

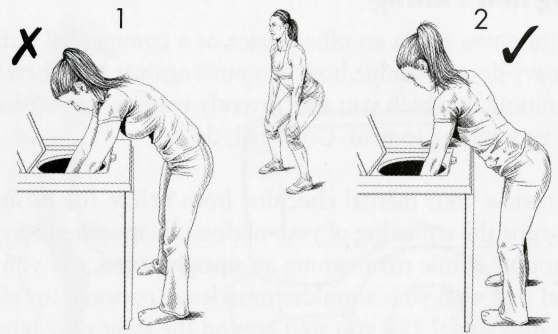
You know the dreaded feeling when faced with the prospect of picking up a sock from the floor. If you’re looking for an alternative to the squat in the previous chapter, when bending to pick up relatively light objects, try the “Golfer’s lift”. This is another pattern in which motion comes from the hips, not the back. Avoiding spine flexion means avoiding many potential pain triggers.



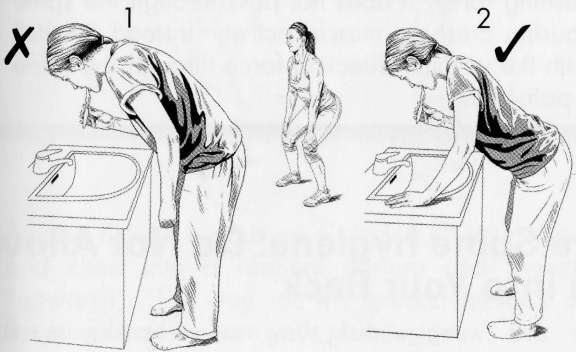
The Golfers Lift preserves the “sweet spot” and pain-free spine posture while picking up light objects from the floor. Begin by standing in your neutral, pain-free posture. Now, bend at the stance hip, moving your torso forward while keeping the back flat, you will be able to reach the floor! For proper balance, as your torso moves forward, extend one of your legs straight out behind you to act as a counter-weight. You may hold a chair or other sturdy object with the non-reaching hand. Practice this move for balance and no pain. Some find more comfort reaching with the arm opposite to the support leg (1), yet others prefer the same side arm (2).



Recall the short-stop squat or hip-hinge style. Incorporate the “anti-shrug” pattern to stiffen the back in a pain-free posture. This is adapted to all squats and bends including lifting.



All daily activities are opportunities to spare the spine or make it sensitive to pain – the choice is yours. Here the hand (2) is supporting the back while one hand gathers the laundry with a neutral spine. Complete the task to upright standing with the anti-shrug, hip-hinge technique.



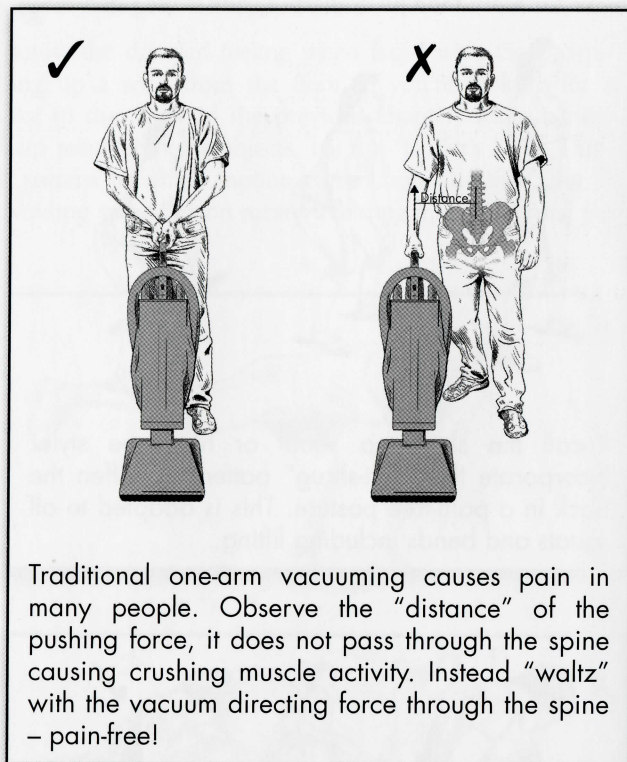
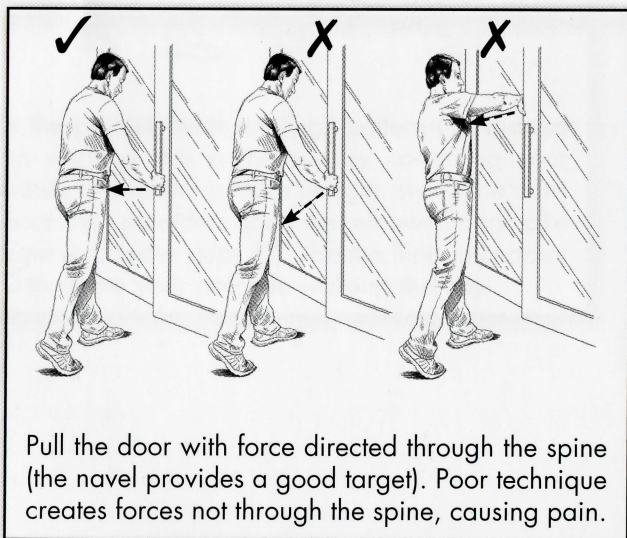
Brushing the teeth without hip-hinging stresses the discs making them painful (1). Begin with the hip-hinge, sliding your hands down the thighs. Then place one hand on the counter-top, and brush your teeth with the other (2). When finished, place one hand on one knee, then the other hand to knee and perform the stiffening “anti-shrug”. Now “pull the hips through”. You are building pain-free resilience.

Pushing and Pulling

Next time you are in an office space or a commercial building with a heavy door, examine how you push against it. If there's one in the building in which you are currently reading, get up and try it before proceeding to read. Go ahead, do it.

Now review your mental checklist from before the push. Did you fine-tune the stiffening of your abdominal muscles to just the right amount? While maintaining an upright torso, did you then reach and pull with your shoulder muscles as opposed to twisting through your torso? Did you step around the door only releasing the brace after letting go of the door?

When pushing or pulling, another key principle is to direct the force from the hand right through the navel. In other words, the pathway of pushing or pulling should draw a line either directly towards or directly away from the center of your core.

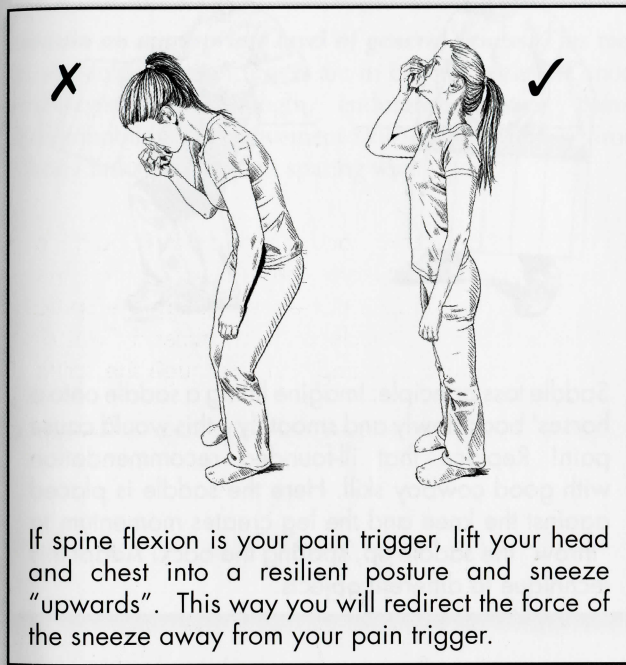


More Spine hygiene: Do Not Allow Pain into Your Back

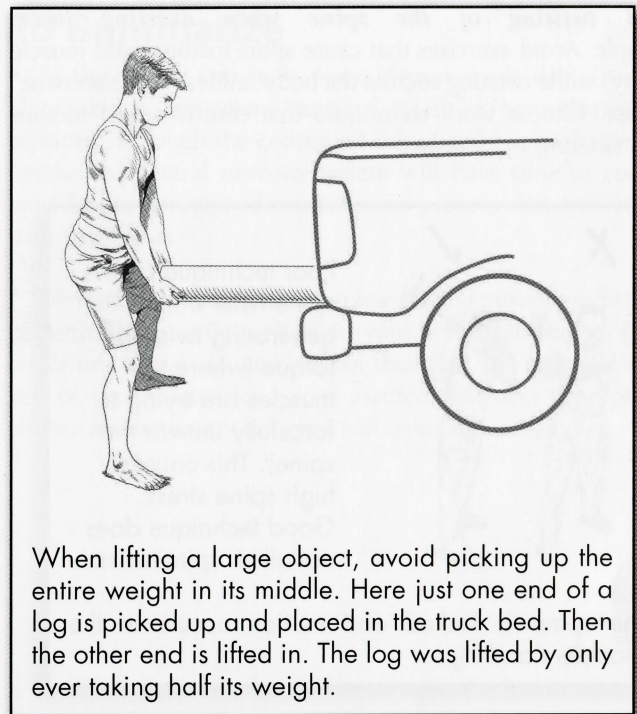
Now that we've added some more healthy movement adaptations to our list of spine-sparing techniques, here is a checklist of principles to formalize what you have learned thus far. The keys to practicing good spine hygiene include:

- **Employ a variety of postures:** You are now aware of the postures that cause your pain. When in one of these postures, adjust it to your optimal position before the pain begins. For example, if sitting is tolerable for 10 minutes before pain can be expected, then change to a standing posture at eight minutes. Or, consider an alternate posture such as kneeling for a short period of time. Even for people who don't usually experience back pain, prolonged periods in one position may cause them grief. The key is to mix it up as much as you can throughout the day, while sparing your spine of course.

- **Prepare for more load by adjusting your spine posture:** As an example, next time you are expecting a sneeze, prepare with a resilient posture. Likewise when lifting, preserve the natural curve in your back by avoiding spine rotation and bending at the hips. This concept implies that you should not repeatedly pick up objects from the floor, if you are trying to preserve your spine. If you find that you must pick up a light object repeatedly from the floor consider the golfers lift shown previously. Recall tying your shoe, a squat pattern will not work, nor will a sitting posture allow you to obey the pain-free principles.



- **Choose postures to minimize loads on your body:** Recall how holding an object away from your body places more load on your back muscles and thus more load on your spine. Therefore when carrying, lifting or moving objects, hold them as close to your body as possible. (keep the hand loads close).
- **Strategically alter a task to minimize the actual weight of the load being handled:** In some tasks it is possible to just lift one half of the object at a time (for example, positioning boxes up on one corner or lifting only one end of an object such as a log). Don't overburden yourself when there is the option to lift smarter.



- **Avoid immediate strenuous exertions after a prolonged activity such as sitting or stooping:** Your spinal discs need a minute or two to "equilibrate" stress. For example, if you have been gardening or sitting for a while, don't stand up and lift immediately. Do stand and walk for a few minutes in order to rebalance the spinal discs and to minimize stress and pain. Recall the restoring drill following sitting earlier in this chapter.
- **Avoid lifting or spine bending shortly after rising from bed:** The risk of injury is higher at this time of day because the discs are swollen. Example: Get dressed by bending at the hips: Avoid exercises such as sit-ups or the infamous "pulling the knees to the chest stretch" early in the morning. This is something often mistakenly recommended for morning stiffness.
- **Stiffen your core appropriately:** This technique often eliminates the micro-movements in your spine that trigger pain. Remember to stiffen the abdominal wall like a dimmer switch. The important element is to match the effort of stiffening to the task. More contraction is required for heavier tasks. Develop the ability to deliver just enough to control the pain trigger for "light" tasks.

- **Avoid twisting of the spine when exerting force:**

Example: Avoid exercises that cause spine loading (and muscle activity) while twisting such as the bodybuilder's "Russian twist" exercise. Choose work techniques that control spinal motion when twisting.

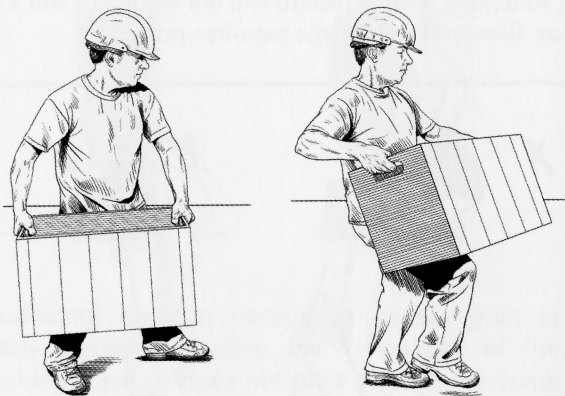


Poor technique allows spine twist while generating twisting torque (where the muscles are trying to forcefully untwist the spine). This causes high spine stress. Good technique does not allow spine twist.

The spine is locked and motion occurs in the shoulders and hips.

- **Use momentum when exerting force to reduce the spine load:**

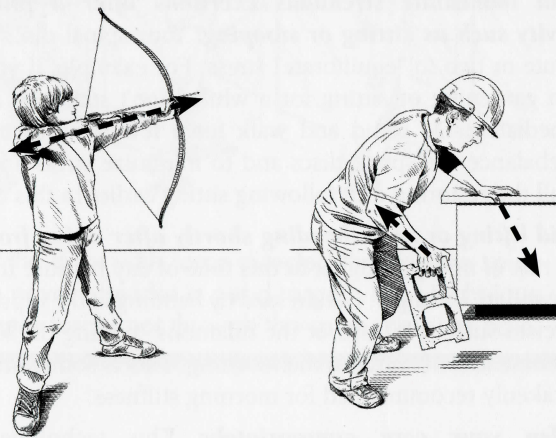
This is in contrast to the often heard recommendation "always lift slowly and smoothly" – this is an ill-founded recommendation for many skilled workers. It is safer to generate momentum in the torso first and transfer it to an object being moved as long as the spine is stiffened in a neutral posture.



Saddle toss principle: Imagine lifting a saddle onto a horses' back slowly and smoothly – this would cause pain! Replace that ill-founded recommendation with good cowboy skill. Here the saddle is placed against the knee and the leg creates momentum to "throw" the saddle up, sparing the back. Adapt this technique to different objects.

- **Avoid prolonged sitting:** This goes back to the idea of varying your postures but it is worth repeating. Whether in the car, at the office, or on the couch, it is important to take standing and walking breaks to help alleviate your back strain. And, use a lumbar support if you have flexion intolerance.

- **Consider the best rest break strategies:** One size does not fit all meaning that breaks have to be customized for different jobs and tasks. The break should be the mechanical opposite of the task demands. Example: If dynamic work is performed, sit for a break. If the task requires sitting then the rest break should be walking. If your job requires sitting you must walk on your breaks and at lunch.



Archers bow principle: A bow and arrow requires a push with one arm and a pull with the other. The spine remains neutral. Adapting the technique to lift objects follows the principles of spine hygiene.

- **Consider the right accessories to foster joint conserving postures:** Example, if kneeling reduces the need to stoop through your back, then use knee pads. If dirty, or sharp edged and heavy objects are to be lifted and carried, use a leather apron to hold the load close to your body.
- **Plan movements before executing them:** Plot your movements to spare joints, reduce distances travelled, and back up distal joint movement with stiffness at the proximal joints. These carefully executed patterns will soon become second nature and you will be able to spare your back without even thinking about it.
- **Maintain an appropriate level of general fitness:** This means that all components of fitness are in balance with one another (flexibility/stiffness, strength, endurance, power, balance, stability/mobility, and movement skill) to steer forces through the body linkages in a joint sparing way.

To Summarize

At this point, you have years of movement habits to break. Unconscious movement patterns need to be unlearned and replaced. Through the continued use of good spine hygiene, the overheated central nervous system will have time to cool. You have begun the pain desensitization process that will ensure a pain-free future.

Be mindful to adhere to the spine sparing movement principles presented here until they become your new habits. If your focus or concentration lapses, you can bet that pain will return to remind you of your inattention. Rest assured that over time pain-free alternative movement patterns will come naturally.