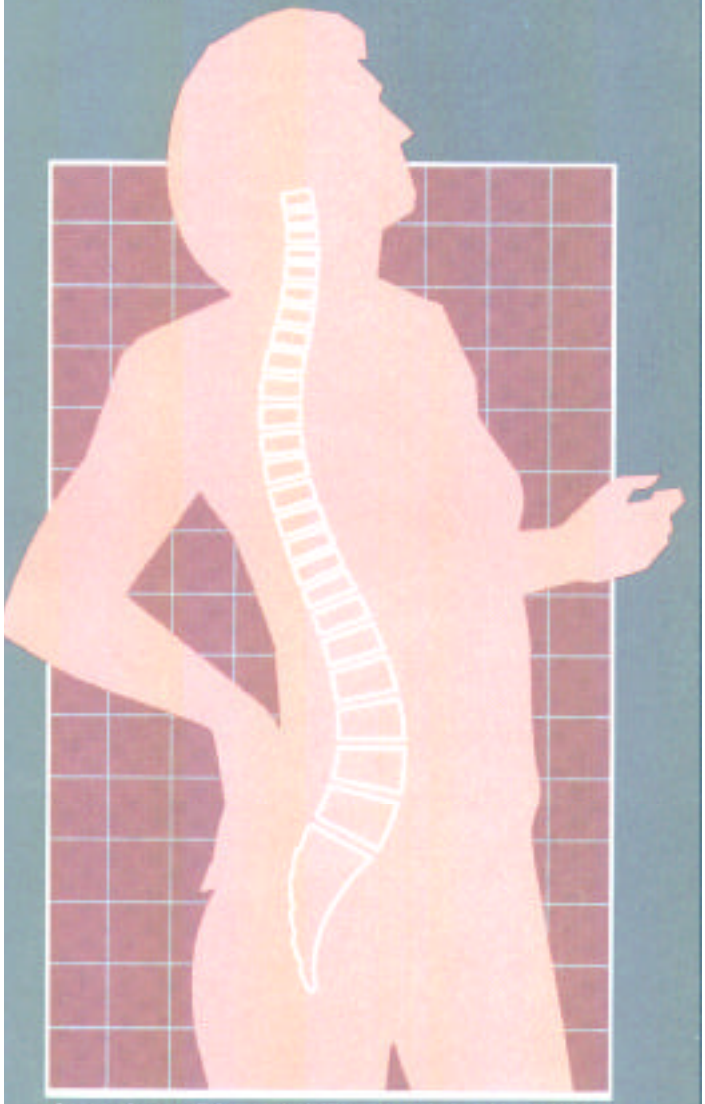
Taking Care of Your BACK

A Physical Therapist's Perspective



American Physical Therapy Association

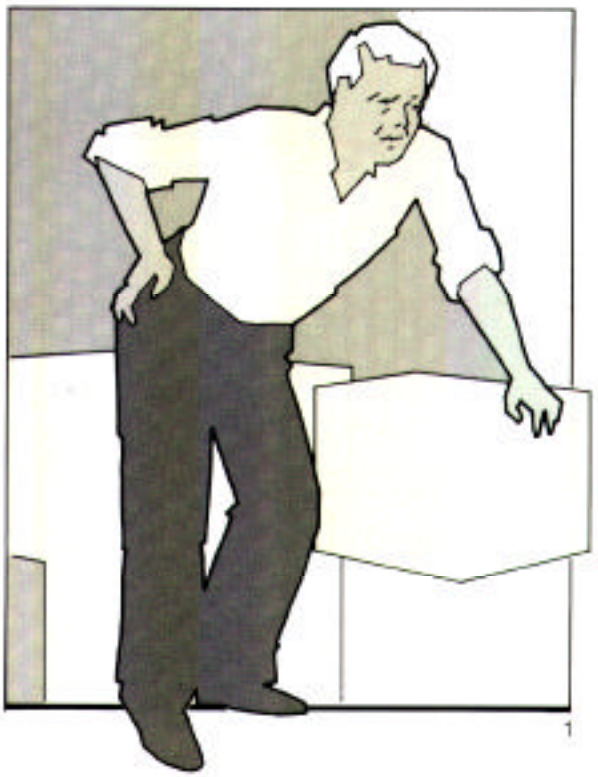
Taking Care of Your Back

By standing on their 'hind' legs, human beings freed their hands for work and gained the dexterity to create civilizations. Since ancient days, though, people have paid the price of walking erect . . . with their backs.

In our modern, industrial society, back pain is the most common cause of loss of activity among adults under 45. It's estimated that over 80% of all American workers suffer back pain at some time during their careers.

And the cost, to all of us, is staggering. American industry loses billions in productivity, and consumers and insurers pay billions more for treatment.

But there's good news too. Most bad backs respond well to rest and conservative treatment. And most injuries can be prevented. This booklet tells how and why backs go bad, and how a licensed, professional physical therapist can help you put it right again.

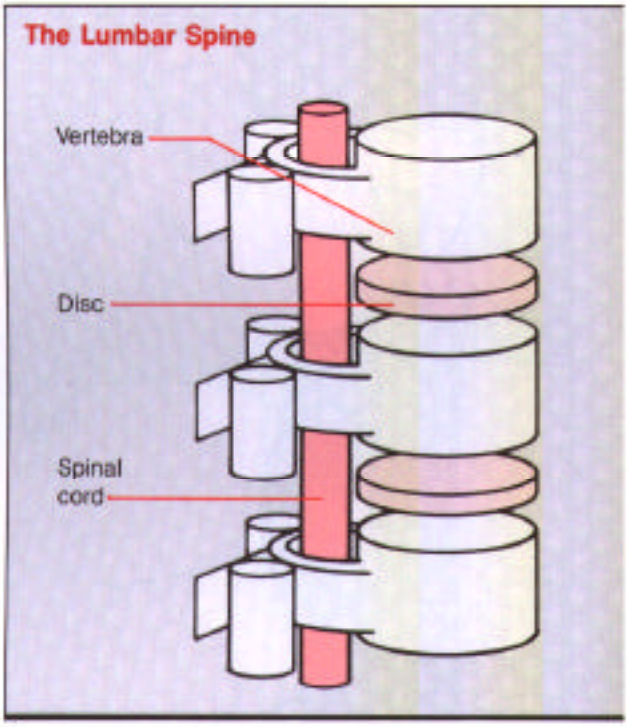


Your Back

Your body depends on the spinal column for structural stability. The shoulders, rib cage and pelvis are anchored to the spine for strength and support. You also depend on the spine for mobility—the ability to twist, bend and flex your body for different activities.

The spine is constructed of 24 jointed bones, or vertebrae, stacked from the pelvis to the skull in a gentle "S"-curve. Between the vertebrae are spongy discs that cushion the bones and bond the stack together. Pairs of bony projections, called *facets,* connect the rear of each vertebra to form a series of interlocking joints. The column is wrapped tightly in ligaments and supported by muscle.

Openings in each vertebra align to form a protective tube, the *vertebral canal,* for the spinal cord. Major nerves, connecting the spinal cord with other parts of the body, pass through spaces between the vertebrae.



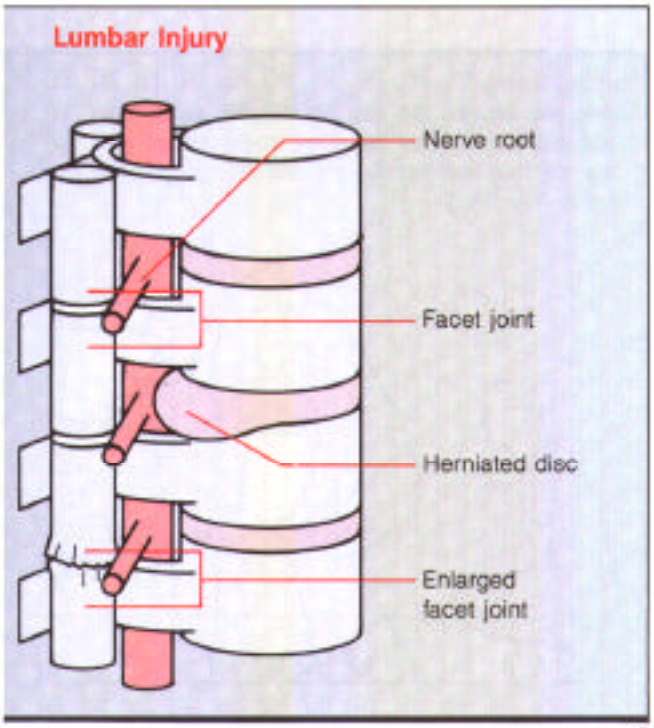
Your "Bad" Back

By far the most common site of back pain and injury is the lumbar region—the low back. Your lumbar spine bears the brunt of bending, stooping, sitting and worst of all, lifting. Low back pain usually emanates from degenerative changes to the lumbar discs.

With aging, the resilient disc material dries-out, shrinks and loses some of its "spring". Under the stress of lifting, coughing or sitting improperly, the deteriorated disc can bulge or even rupture, spilling its spongy pulp into the surrounding space.

This *herniated* disc can press on the adjacent nerve root. This irritation can cause pain, numbness and tingling, or painful muscle spasm.

Loss of disc thickness can also cause wear and arthritic enlargement of the facet joint, constricting the space between the vertebrae leading to abnormal pressure on the nerve.



Avoiding Back Injury

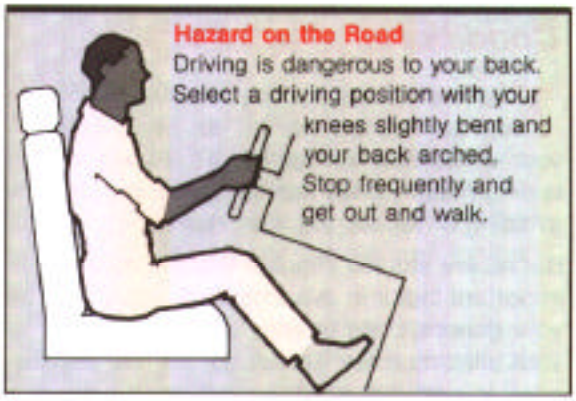
Everyone is vulnerable to back injury, but certain occupations present added risk. Truck drivers sit for long periods while being jostled by vibration; they lead in back injuries. Nurses are also at high risk; bending over bedsides and lifting and moving patients are hazardous to *their* health.

Everyday activities can be dangerous, as well: even sitting puts an added load on the lumbar spine! Expectant mothers find their backs stressed in new ways. Parents lifting babies and toddlers are also at risk.

We can't avoid every stressful activity. The key to avoiding back injury lies in minimizing the risk inherent in any activity by applying these simple principles.

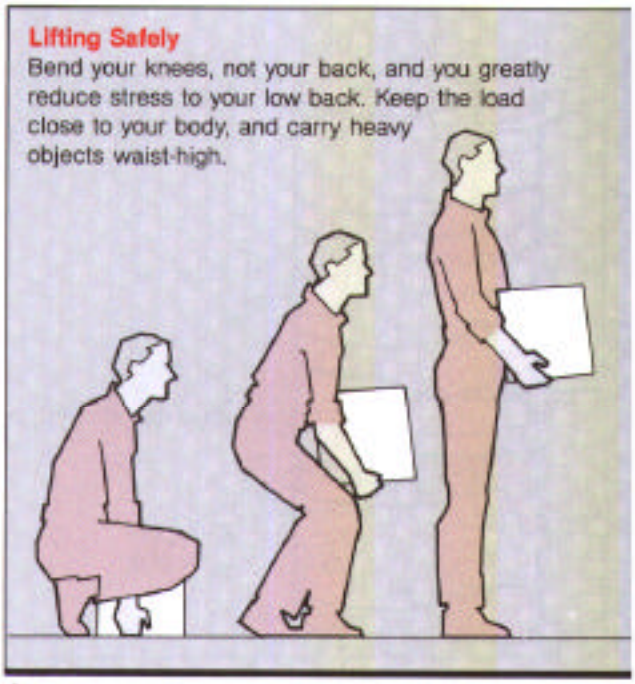
Work on your posture. Don't slouch. Maintain the natural "arch" in your lower back whether standing or sitting.

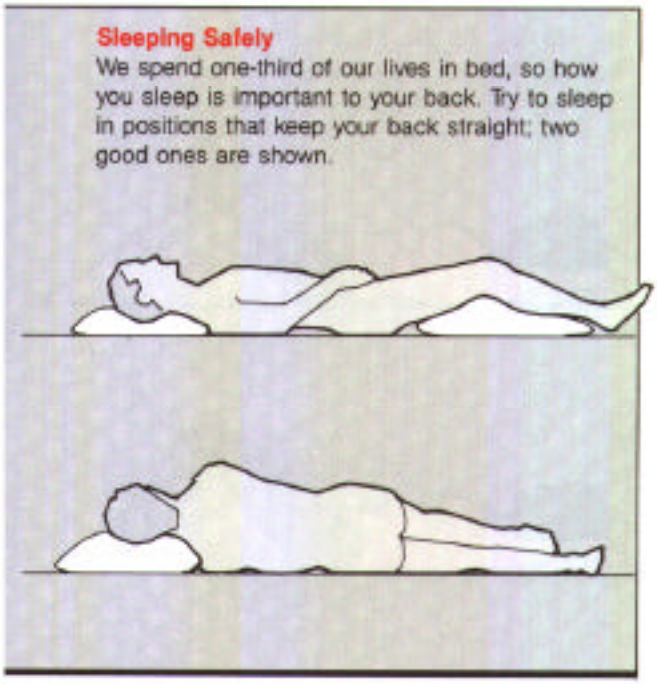
Lift with your legs. Don't bend over the object, bend your legs and keep your back straight (see diagram). And most important, don't twist as you lift!



Sit with care. Prolonged sitting in one position is a back hazard you might not suspect. Lumbar support and periodic breaks to move around are essential (see driving box).

Control your weight. Being overweight, especially if you have a "pot belly", puts added stress on your lower back. The important benefits of conditioning are discussed in the next section.





Conditioning Your Back

The muscles of your back provide *structure* as well as mobility—they help hold your spinal column together. That's why maintaining healthy back muscles is so important in avoiding or recovering from injury.

But recent studies indicate that the most important factor in avoiding back injury may be your general conditioning, not the power of your back muscles. This suggests that regular aerobic exercise, such as walking or swimming, may provide all the conditioning a healthy back needs.

After injury, the first step in getting your back healthy is gentle exercise to improve flexibility. When you've recovered and are free from pain, your physical therapist may recommend mobilization and strengthening exercises.

Treatments for Bad Backs

For thousands of years, back sufferers have sought a cure in vain. Cave drawings depict early 'patients' and attempts to treat their ailment. Medical science is still searching for more effective therapies; unfortunately, there is as yet no simple cure for low back pain.

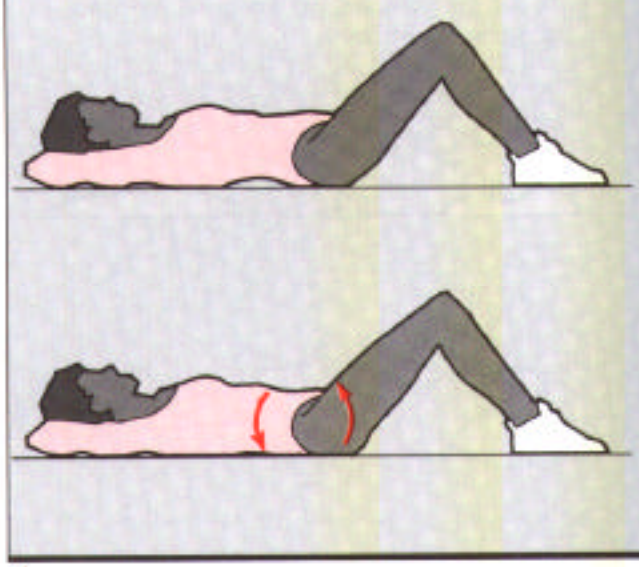
While there is disagreement about specific treatments, most experts prefer a conservative approach to treating acute back pain.

Bed Rest. For 48 hours or until the acute period passes. *Stay in bed*—even for meals, if possible. If your bed sags in the middle, add a board under your mattress. Heat or ice may help ease muscle spasm and aid circulation.

Pain Medication. Pain medication prescribed by your physician will help get you through the

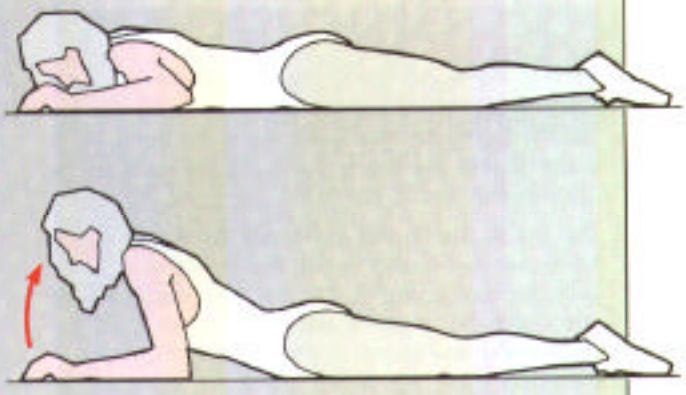
Mobilization Exercises

This gentle exercise is a good way to get started. (1) Lie flat on the floor with knees flexed. (2) Rotate the pelvis to gently push the small of your back toward the floor. Release and repeat several times.



(1) Lie prone on the floor and slowly raise your head. Repeat. (2) With improvement, place your forearms on the floor and raise your upper body on your elbows. Repeat.

(3) With further improvement, your therapist may have you fully extend your back, raising your upper body on extended arms.



period of most severe pain, but it won't help you get better.

Traction. Recent studies indicate that in-hospital traction may be effective only because it confines the patient to bedrest. Most experts agree that short applications of lumbar traction in a clinical, outpatient setting can be an effective treatment.

Manipulation. Manual mobilization of the lumbar region may assist recovery; restoring range of motion, reducing spasm and stimulating circulation.

Epidural Injection. Epidural injection of anti-inflammatory or pain medication has been shown to be an effective treatment for many patients with low-back symptoms.

Surgery. Surgery should be considered only with the failure of conservative treatment to control severe, chronic pain or neurological symptoms. While laminectomy (a procedure that allows removal of disc material) enjoys a good success rate, there are risks. It may be wise to talk with several orthopaedic or neurosurgeons before taking this serious step.

Keep in mind that once you've had a back injury, you'll probably be vulnerable in that area for the rest of your life. Any successful treatment approach must include a program for preventing reinjury.

But, can I have sex?

While suffering from acute back injury, sex is probably out of the question—and probably the last thing on your mind. As soon as the acute stage passes, though, you can start to resume sexual relations.

The psychological and emotional benefits of a healthy sexual relationship may aid recovery, and the pelvic motions of gentle intercourse are good exercise for conditioning your low back. If you have questions, don't be afraid to ask your therapist.

How Physical Therapy Can Help Your Back

The licensed physical therapist brings a unique perspective to caring for your back: *The patient is the most important participant in the healing and prevention process.*

It is, after all, your back. And whatever treatment you receive from others, it can't overcome treatment you give your back, day-in and day-out.

Your physical therapist will involve you in your care, teaching you to be, in a way, your own therapist. So that as you go about the routine of daily life, you'll be healing yourself, not causing reinjury. It all starts with a careful evaluation.

Evaluation. Physical therapy places greatest emphasis on this process. Your therapist will take the time to talk with you and perform a thorough physical evaluation to identify the dysfunction that causes your pain.

Therapy. Your physical therapist will plan a treatment regimen suited to your individual problem, and begin working to restore flexibility and ease discomfort. Treatment may include heat, cold, massage, traction, manipulation and exercises for relaxation, conditioning, and restoring range of motion.

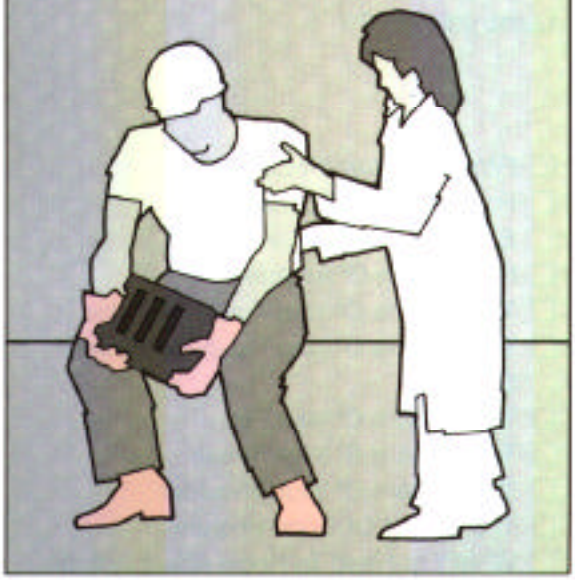
Teaching. You don't need to become an 'expert' to avoid or overcome injury, but you may need to learn some new habits. Your physical therapist will help you continue therapy on your own with a home program designed to fit your needs.

Aftercare. The goal of physical therapy is to return you to normal life as soon as possible, with the skills you need to prevent reinjury. You won't need to visit your therapist again unless you have an acute injury.

As a respected member of the professional health care community, licensed physical therapists work in hospitals, industrial and sports setting, home care, schools and in private practice.

Physical Therapy's Expanding Role on the Job

Physical therapists are helping industry prevent lost productivity due to back injury.



About APTA

The American Physical Therapy Association is a national professional organization that represents more than 74,000 members throughout the United States.

APTA serves its members and the public by expanding understanding of the physical therapist's role in the health care system. We promote excellence in the field with improvements in physical therapy education, research, and practice.

Acknowledgements

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