TOC The Orthopaedic Center

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Sports Medicine, Arthroscopy
Knee and Shoulder Reconstruction

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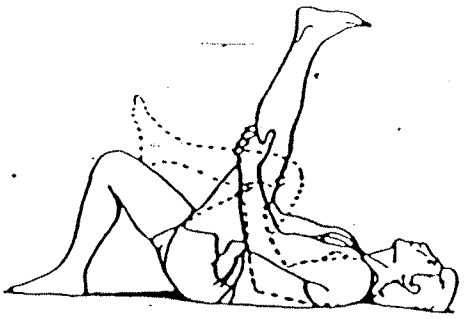
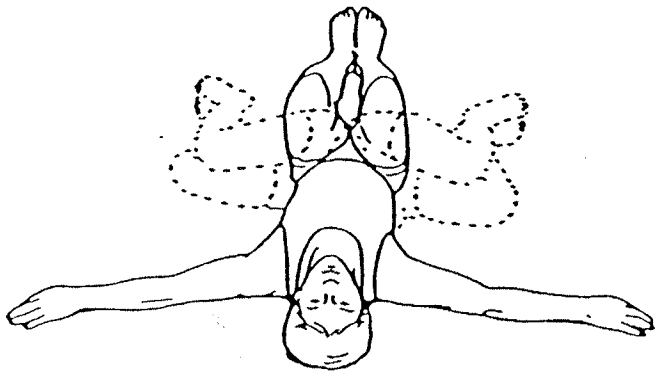
BACK - 34 Active Hamstring Stretch



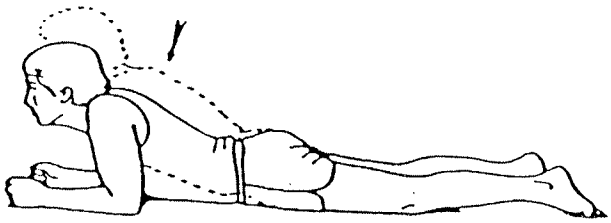
Support back of thigh behind knee. Starting with knee bent, attempt to straighten knee until a comfortable stretch is felt in back of thigh.
Hold 30 seconds. Repeat 3 times on each side.
Do 2-3 sessions per day.

ACK - 30 Lower Trunk Rotation



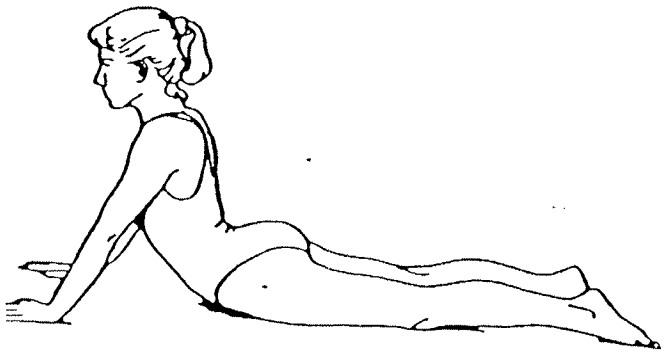
ng both knees in to chest. Rotate from side to side
ping knees together and feet off of floor.
ld 15 seconds. Repeat 10 times on each side.
2-3 sessions per day.

BACK - 1 Prone on Elbows



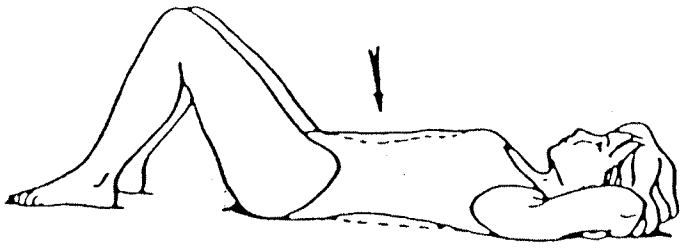
Raise up on elbows as high as possible, keeping hips on floor.
Hold 30 seconds. Repeat 5 times.
Do 2-3 sessions per day.

CK - 2 Press-Up



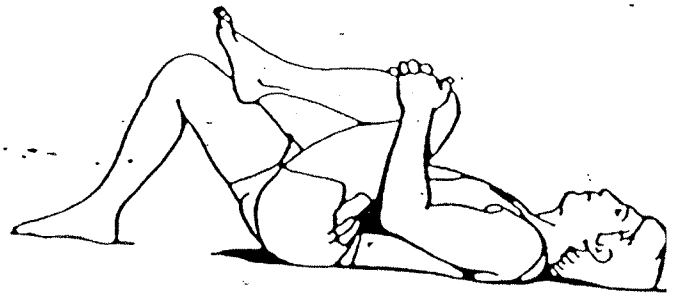
s upper body upward into position shown, keeping hips
ntact with floor. Keep low back and buttocks relaxed.
d 30 seconds. Repeat 5 times.
2-3 sessions per day.

BACK - 22 Pelvic Tilt



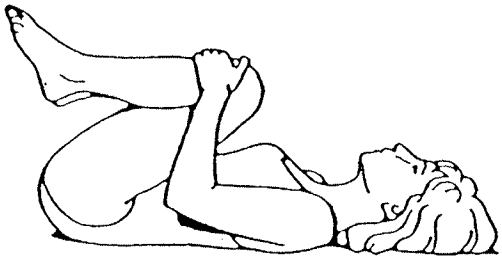
Flatten back by tightening stomach muscles and buttocks.
Hold 5 seconds. Repeat 30 times.
Do 2-3 sessions per day.

BACK - 18 Single Knee to Chest Stretch



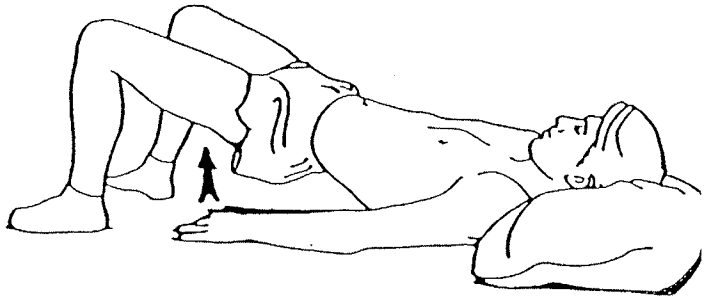
Pull one knee in to chest until a comfortable stretch is felt in the lower back and buttocks. Repeat with opposite knee.
Hold 30 seconds. Repeat 3 times on each side.
Do 2-3 sessions per day.

BACK - 19 Double Knee to Chest Stretch



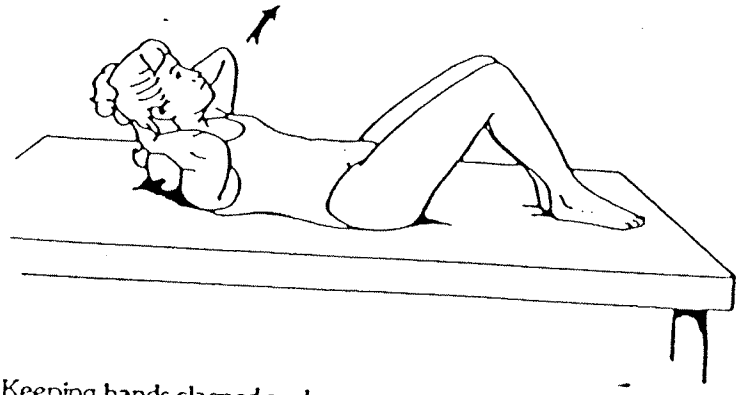
Pull both knees in to chest until a comfortable stretch is felt in lower back. Keep back relaxed.
Hold 30 seconds. Repeat 3 times.
Do 2-3 sessions per day.

TRUNK STABILITY - 9 Bridging



Slowly raise buttocks from floor, keeping stomach tight.
Hold 15 seconds. Repeat 3 times.
Do 2-3 sessions per day.

BACK - 27 Curl-Up (phase 3)



Keeping hands clasped and supporting neck, tilt pelvis to flatten back. Raise head and shoulders from floor.
Hold 10 seconds. Repeat 10 times.
Do 2-3 sessions per day.

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Exercise for low back pain

exercise for low back pain

Exercise is an important adjunct to your treatment. However, be sure to follow your doctor's instructions carefully. Do not overdo exercise, particularly when beginning. Start by trying the movements slowly and carefully. If the exercise causes some mild discomfort, which lasts a few minutes, do not be alarmed. This will disappear as your muscles become stronger. But, if pain is more than mild and continues for more than 15 to 20 minutes, discontinue exercising and speak to your doctor.

General Information

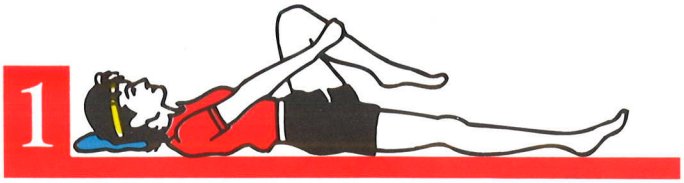
Wear comfortable, loose clothes. Do the exercises on a hard surface covered with a thin mat or heavy blanket. If it makes you more comfortable, you may put a small pillow under your neck. Always do the exercises in the order marked by your doctor. (Please note: Consult your doctor before doing these or any other exercises.)

Instructions: _____

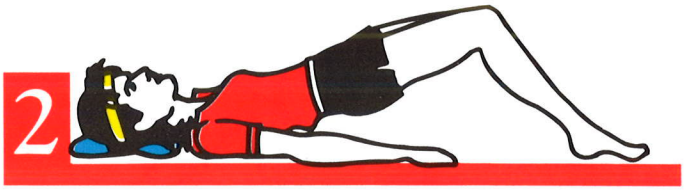
_____

Doctor: _____ Date: _____

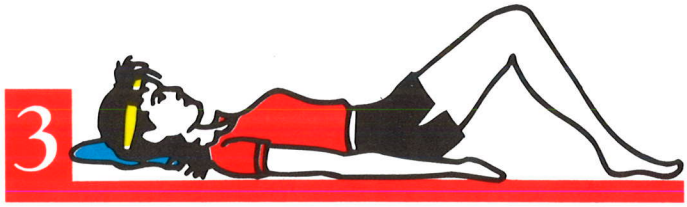
Exercises for acute stage



Lie flat on the floor in relaxed position, bring right knee toward chest, clasp hands around the knee. Pull right knee toward chest firmly and, at same time, straighten left leg. Hold 3 to 5 seconds. Do 5 times. Repeat with opposite leg. Repeat 5 times or as recommended.



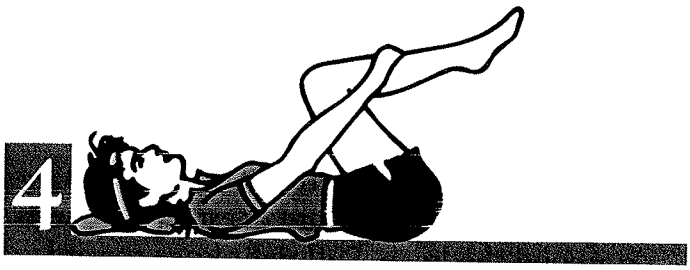
Lie on floor with knees bent, feet flat on floor, arms at sides, palms down. Tighten muscles of lower abdomen and buttocks so as to flatten the lower back. Slowly raise lower back and buttocks and hold 5 seconds. Relax. Do 5 times or as recommended.



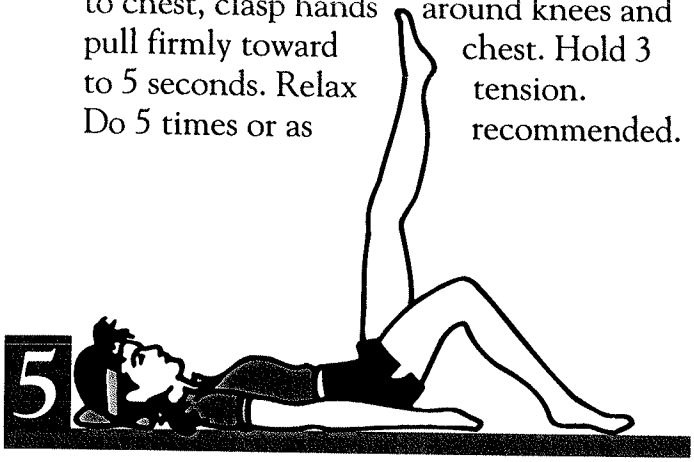
Lie on back with knees bent, feet flat on floor, hands at sides, palms down. Tighten muscles of the abdomen and buttocks so as to push the lower back flat against the floor. Hold 3 to 5 seconds. Relax. Do 5 times or as recommended.

Exercise for low back pain

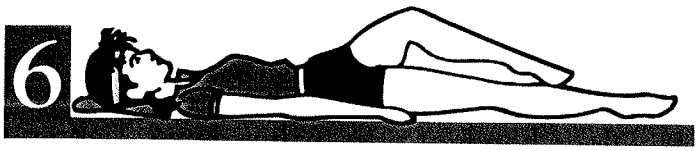
Exercises for Sub-acute/recovery stage



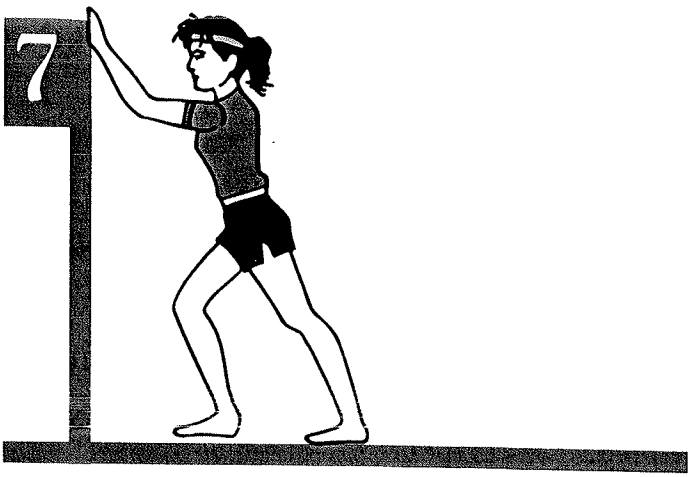
Lie on floor with knees bent, feet on the floor and arms at sides. Bring both knees to chest, clasp hands around knees and pull firmly toward chest. Hold 3 to 5 seconds. Relax tension. Do 5 times or as recommended.



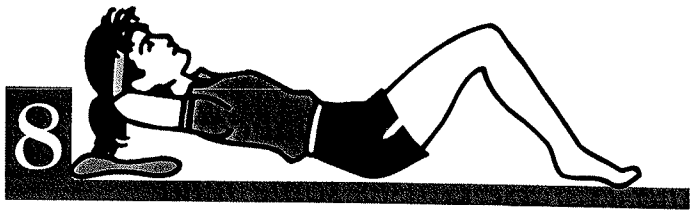
Lie on back, knees bent with feet flat on floor, arms at sides, palms down. Raise left leg up as far as comfortable without overstretching muscles behind the leg. Return left leg to starting position and repeat 5 times. Repeat exercise with right leg. Do 5 times or as recommended.



Lie flat on back, arms at sides, palms down. Slowly raise left leg, bringing raised leg toward the opposite side of the body until you feel the stretch. Repeat with right leg. Do 5 times or as recommended.



Stand with hands against wall, left leg approximately 18 inches behind right foot, keep heel flat on floor and left knee straight. Slowly bend forward until you feel the stretch behind the calf. Hold 3 to 5 seconds. Release tension and repeat 3 to 5 times. Repeat with opposite leg.



Lie flat on floor, hands clasped behind neck, knees bent, feet flat on floor. Tighten buttocks and at the same time lift head and shoulders 2 to 4 inches off floor, without pulling on neck. Hold 3 to 5 seconds. Repeat 5 times or as recommended.

Tips for

Protecting Your Back

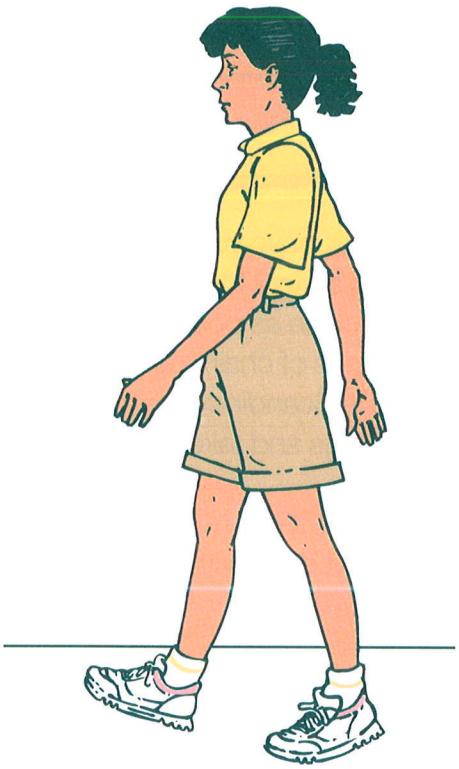
What's the best way to deal with low back pain? Do everything possible to avoid it! Chronic back pain can disrupt your life-style and impair your ability to work, so it's important to take steps to reduce or eliminate stress on your back. But even if you have already experienced some sign of low back pain, you can help stop it from getting worse. The following tips are easy to learn and remember—and easy to incorporate into your day-to-day activities. Yet they go a surprisingly long way toward protecting your back.

You are unique. So is your back. This information is not intended as a substitute for the personal care of your physician. Report any activity that causes back pain or tingling, numbness, or weakness in your legs.

❑ Bending and Lifting

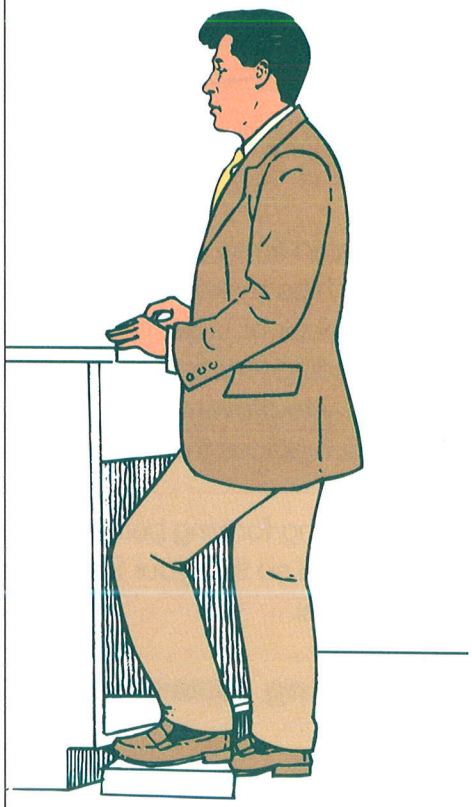
Bend at your knees rather than at your waist. When lifting and carrying an object, hold it close to your body—no higher than chest level. Don't twist while lifting. Push rather than pull when moving heavy objects such as furniture, and remember to bend at the knees.

❑ Walking



Walk with good posture—head high, chin tucked in, toes straight ahead—and wear comfortable shoes. Use your natural stride, and swing your arms naturally at your side.

❑ Standing



Stand with one foot forward and knees slightly bent while maintaining good posture. When standing for a long period of time, try to elevate one foot by using a low stool or other prop. Change your position frequently.

the physician and sportsmedicine

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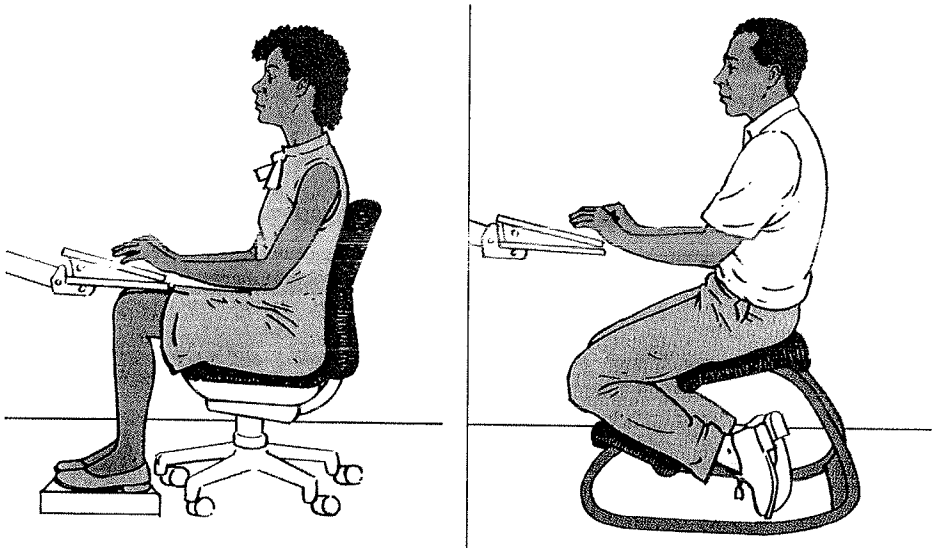
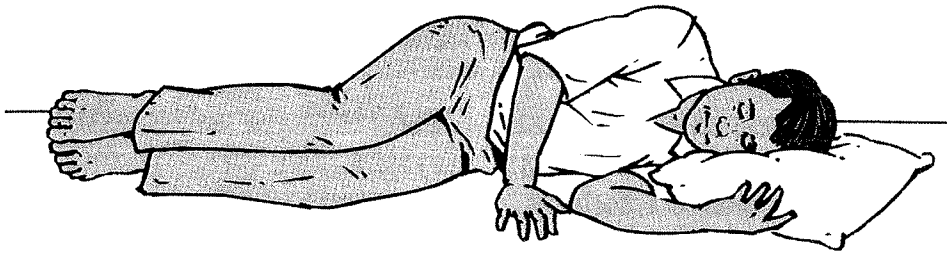
❑ Sitting



While seated firmly against the back of a chair, have your knees higher than your hips by adjusting the seat or using a stool to prop up your feet. At a desk or table, pull your chair in as close as possible to avoid bending forward. There are several types of chairs designed specifically to prevent back pain, such as the Scandinavian-style chair-stool which places the weight on the lower legs and takes pressure off the back.

Avoid sitting for long periods of time. When driving, move the car seat forward so that your knees are bent, and drive with both hands on the wheel.

❑ Sleeping



On your side, sleep with both knees and your lower body slightly bent. On your back, place a pillow under your knees. If you must sleep on your stomach, sleep with a pillow under your waist rather than under your head. Sleep on a semi-rigid mattress.

❑ Turning and Reaching

Turn by moving your feet rather than by twisting at the waist. At the office, place your telephone and other frequently used objects where you will not have to twist your body to reach them. Use a stool to reach objects overhead.

❑ Notes

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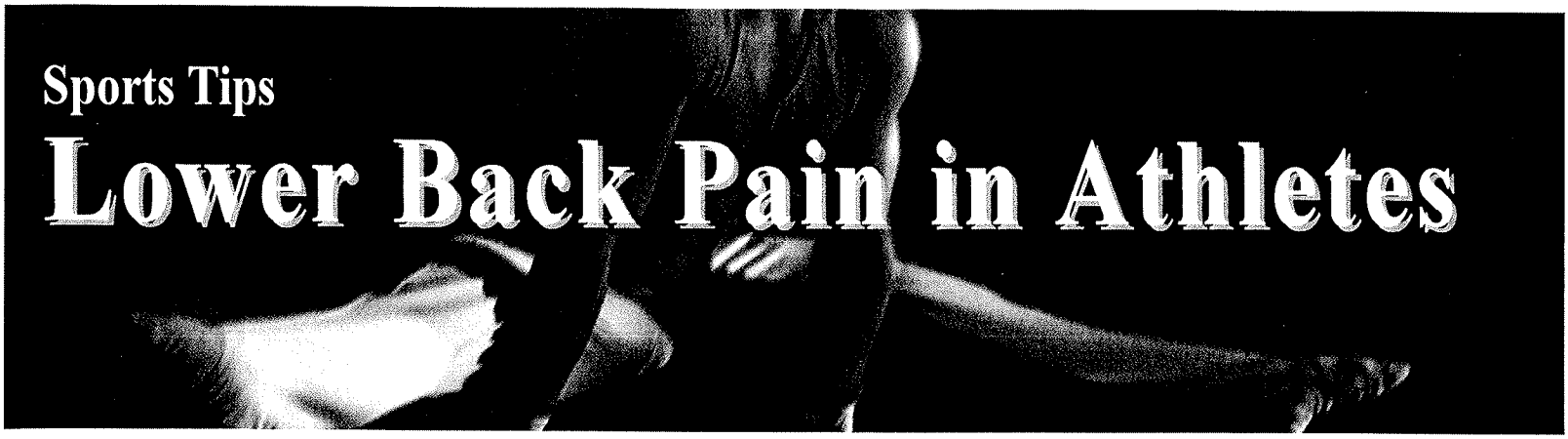
Sports Tips

Lower Back Pain in Athletes

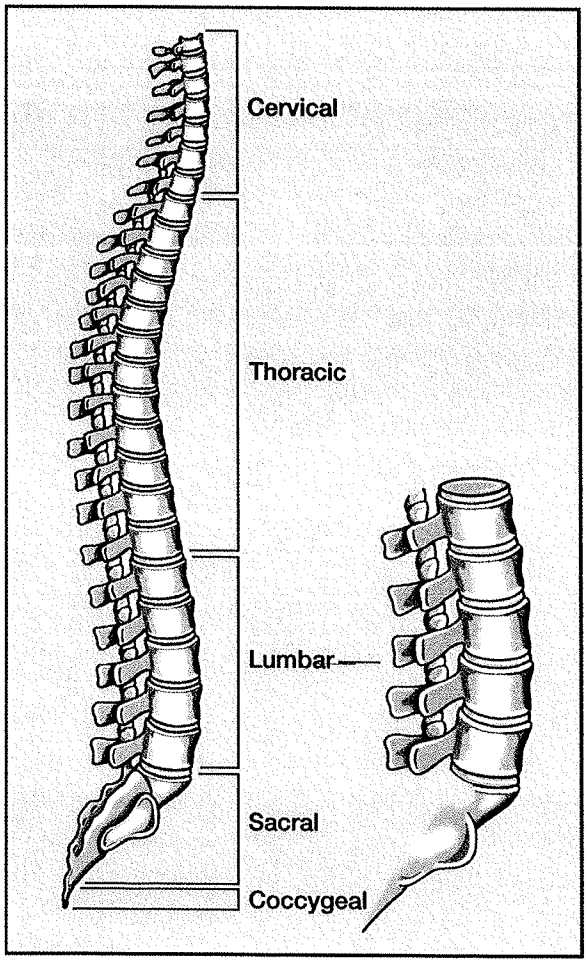


How Common is Low Back Pain?

Low back pain is a very common problem in industrialized countries, affecting over 70% of the working population. Back pain is also common in such sports as football, soccer, golf, rowing, and gymnastics.

What are the Structures of the Back?

The spine is composed of three regions from your neck to the lower back. The cervical region corresponds to your neck, the thoracic region is the mid-back, or back of the chest, and the lumbar area is the lower back. The lumbar area provides the most motion and works the hardest in supporting your weight, and enables you to bend, twist and lift.



Each area of the spine is composed of stacked bony vertebral bodies with interposed cushioning pads called discs. The vertebral bodies provide protection for the spinal cord and nerve roots that exit the spinal cord. Between each vertebral body, the disc serves as a shock absorber, giving you the flexibility to move. Each disc consists of a jelly-like fluid filled center or nucleus surrounded by a stiff ligament-like outer ring, called the annulus. This hydraulic type of system enables you to perform heavy lifting and twisting tasks by moving fluid in and out of the discs. However, this hydraulic ability of the disc diminishes with time and can lead to injury.

What Structures of the Back Can Cause Pain?

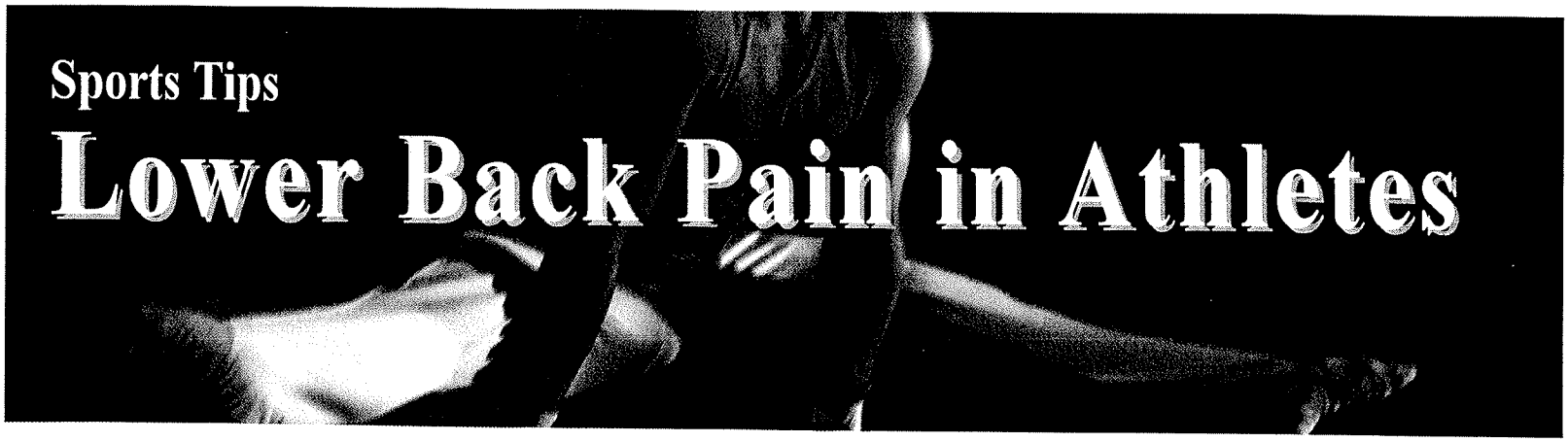
Low back pain can come from all the spinal structures. The bony elements of the spine can develop stress fractures, or in the older athlete, arthritic changes, which may pinch the nerve roots. The annulus has a large number of pain fibers, and any injury to this structure, such as a sprain, bulging disc and disc herniation will result in pain. Finally, the surrounding muscles and ligaments may also suffer an injury, leading to pain.

How is the Lower Back Injured?

Injuries to the lower back can be the result of improper conditioning and warm-up, repetitive loading patterns, excessive sudden loads, and twisting activities. Proper body mechanics and flexibility are essential for all activities. To prevent injury, it is important to learn the proper technique in any sporting activity. Improper mechanics lead to

Sports Tips

Lower Back Pain in Athletes



increased loads on the lower spine, making it more susceptible to injury.

What Tests can be Done to Diagnose the Cause of Back Pain?

A good history and physical exam by your physician will provide the most information leading to an accurate diagnosis of lower back pain. Several different diagnostic tests are also helpful to aid in this assessment. X-rays reveal any abnormalities of the vertebral bodies, such as arthritis, fractures, and slippage. MRI's best identify degeneration, bulging and herniation of the discs. A stress fracture is best seen with a bone scan.

What are the Common Injuries Suffered by the Lower Back?

Mechanical low back pain is the result of an injury to the surrounding muscles of the lower back. It is most likely due to poor conditioning and body mechanics, as well as lack of adequate warm-up.

A small tear or sprain of the annulus is usually caused by a sudden movement or lifting an excessive load. Since this structure contains a large number of pain fibers, this is quite painful. In addition to the back pain, there may also be pain along the sciatic nerve into the buttocks.

A bulging disc occurs as the disc degenerates and begins to wear out and the annulus weakens as the jelly-like fluid begins to push out, causing pain. The pain is similar to a torn annulus, but the degeneration and bulging will appear on a MRI.

With a disc herniation, the nucleus is squeezed through the annulus into the spinal canal. It may press against the nerves causing pain, numbness, tingling, and weakness.

While an isolated excessive load may cause this complete herniation, it is usually the result of multiple lesser injuries that lead to the disc degeneration and final rupture.

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