

Rheumors
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America's Second Most Common Malady

By Evan L Siegel, M.D.

OH, MY ACHING BACK! Only the annoyance of a runny nose prompts more visits to a physician's office than this common cry for help. Millions of people seek care for low back pain each year, and it is estimated that up to 80% of all adults will experience back pain at some point in their lives. The peak incidence of low back pain is between ages 55 to 74, but a large proportion of patients are in the 25-44 year age group. The estimated yearly cost of low back pain in terms of medical costs, lost work time, and other expenses is 24 billion dollars!

The upright posture enjoyed by human beings depends on a strong bony spine made up of a column of vertebral bodies, and a variety of structures and tissues designed to assist in their support. These include joints, muscles, ligaments, and gelatinous disks located between the vertebral bones. In addition to maintaining posture, the spine also performs the indispensable function of protecting the spinal cord. The spinal cord is the central conduit of the body for all nerve impulses traveling to and from the brain. As such, it sends smaller nerves weaving their way through special openings in the vertebral bones to eventually make contact with even the most distant parts of the body. Back pain, when it occurs, can arise from an abnormality involving any of the components of this complex interplay of structures. It is often very difficult to tell which of these structures is the cause of an individual patient's pain.

Low back pain can occur as a symptom of an incredible diversity of underlying ailments. These may range in severity from the benign and most common processes such as strain of a muscle or ligament, to the herniation of intervertebral disk, to more serious and sometimes ominous processes such as fracture of a vertebral body or invasion of bone by cancer. Many structures in and around the spine may contribute to back pain. These may be as unusual as the Aorta (largest central blood vessel) or the membrane surrounding the abdominal contents.

Most back pain starts suddenly, often after an awkward movement perhaps associated with bending, lifting, twisting, or possibly even sneezing. Other times, back pain can begin gradually and build up to a more serious level. Some patients will have chronic back symptoms punctuated by intermittently severe acute episodes. The type of onset can give clues to the reason for the pain.

The vast majority of patients with back pain can be treated conservatively, without surgery or other invasive procedures. Such treatment consists of limited bedrest, analgesic and sometimes anti-inflammatory medications, as well as physical therapeutic modalities. The latter may consist of heat or ice application, massage of the back

muscles, and gentle stretching exercises in the early phases of pain. A Physical Therapist may additionally use ultrasound, electrical stimulation, gentle traction, and other modalities to help relieve pain and relieve muscle spasm. The therapist is then instrumental in directing a muscle strengthening and back mobility program to help prevent future injuries.

Danger signs associated with acute back pain include associated fever, severe progressive neurologic symptoms such as numbness or weakness, loss of bowel or bladder control, and unrelenting excruciating pain. Patients with such symptoms need prompt medical or surgical evaluation.

Some simple guidelines for common daily activities will help keep your back off the casualty list. Your doctor or physical therapist can help expand this list and tailor it for your specific needs.

- Maintain near ideal body weight and pursue frequent low impact aerobic exercise.
Abdominal strengthening exercises (abdominal crunches, not sit-ups) will improve lumbar support.
- When lifting, bend your knees, not with your back. Never twist while lifting.
- Sit with both feet flat on the floor, back against the chair or against a lumbar support.
Don't slouch.
- Move car seat forward to keep knees level with hips while driving. Stretching for the pedals puts strain on the back.
- Sleep on a firm mattress. Lying on your side with knees bent, or on your back with knees on a pillow is best.
- Always maintain good posture while walking or standing.

Remember to always treat your back kindly. In return it will always be your biggest supporter!

Questions and Answers

By Norman S. Koval, M.D.

Q. Can gastrointestinal diseases cause back pain?

A. Gastrointestinal disease is not an uncommon reason for back pain. The back pain is usually felt in the region of the lumbar spine. The nature of the pain is usually a dull ache or colicky symptoms. The signs and symptoms that raise the physician's index of suspicion for intestinal causes of back pain are alteration of bowel habits and abdominal tenderness. Laboratory and x-ray tests will usually provide the diagnostic answers. Treatment consists of surgical removal of the mass if tumors are involved, of stones if the gallbladder is involved, or antibiotics if there is an infectious process.

Q. Can lack of exercise cause back pain?

A. A recent review in the Back Letter revealed that there is a general decline in the physical condition of Americans and this, combined with the accompanying increase in obesity, has dire implication for their health. Some studies suggest that inactivity and debilitation have a variety of deleterious effects on the spine and surrounding tissue. Physically fit patients have fewer and shorter attacks of low back pain and are more tolerant of pain. Overweight, unfit people - a substantial proportion of Americans - often recover slowly from back pain, according to many studies. Forty to fifty million Americans are essentially totally sedentary. They do virtually no exercise whatsoever. Exercise programs should be tailored to the patient's general physical condition. Discuss with your physician the level of activity that you should be introduced to so that you do not overtax a deconditioned cardiovascular or musculoskeletal system.

FUN RHEUM
By Emma DiIorio, M.D.

Test your knowledge of rheumatic diseases by answering the questions below.

1. Do you know which famous person listed below had what rheumatic disease? Try matching the two columns.

- | | |
|--------------------------|-------------------------|
| A. Pierre Auguste Renoir | 1. Gout |
| B. Paul Klee | 2. Reiter's Syndrome |
| C. Benjamin Franklin | 3. Rheumatoid Arthritis |
| D. Mary Queen of Scots | 4. Scleroderma |
| E. Christopher Columbus | 5. Marfan's Syndrome |

2. Which disease has been termed the "disease of kings"?

3. How did "Lyme" disease derive its name?

4. Which disease is associated with the gene HLAB27?

(print upside down)

Answers: 1. A-3, B-4, C-1, D-5, E-2; 2. gout; 3. The first cases were discovered in Old Lyme, Connecticut; 4. ankylosing spondylitis

LET'S GET PHYSICAL (THERAPY) **Physical Therapy - A Hands On Approach**

By Phyllis Euley, RPT

Physical Therapy is a drug free approach to the treatment and management of patients with many different musculoskeletal problems. Physical therapy makes use of a variety of physical modalities and therapeutic techniques to help alleviate pain, prevent development of future disability and assist patients in achieving their fullest physical capabilities. Another important part of any physical therapy program is patient education directed at teaching patients ways to continue their treatment beyond the physical therapy office, through an individually developed home care program.

MODALITIES

A variety of "modalities" are used in physical therapy. These are physical therapy interventions primarily meant to relieve pain or relax tightened musculature.

Hydrocollator packs or hot packs:

Heat is used for:

- 1) decreasing joint stiffness
- 2) decreasing pain
- 3) relaxation (decreasing muscle tension)
- 4) increasing circulation
- 5) decreasing swelling

Cold packs:

For those patients who are heat sensitive or have a preference for cold over hot, cold packs can be used to achieve basically the same results as hot packs. Cold is often considered to be more effective than heat in reducing or preventing swelling in cases of acute injuries.

Ultrasound:

Ultrasound is a form of heat that is considered to have the deepest penetration, and is therefore used in conjunction with hot packs to heat a specific area.

Traction: Mechanical traction is used for stretching either the neck or the lower back. Its effect is to elongate the soft tissues along the vertebrae (muscles and ligaments). This is helpful in assisting relaxation and encouraging realignment of intervertebral joints and structures.

Massage: Therapeutic massage is used primarily to enhance relaxation of muscle tension

and spasm. It can also help to increase circulation and dissipate swelling.

Paraffin: This is a form of heat application using melted paraffin wax that is used primarily for arthritic hands. The goals are relief of pain and the enhancement of mobility in the joints. Its advantage over warm water soaks is that much greater temperatures can be used without causing burning.

Electrical Stimulation: Electrical stimulation is used either in conjunction with ultrasound or by itself. Its primary effect is to enhance relaxation in the deeper muscles and tendons, and to increase circulation. Certain types of current are also used to enhance healing of chronic wounds (such as decubitus ulcers) and as an aid in muscle re-education in the case of stroke patients or in patients with nerve damage.

TENS: Transcutaneous Electrical Nerve Stimulation is a type of electrical current used in the relief of both chronic and acute pain. Most times the patient is taught how to use this machine and then a unit is sent home for a trial period.

Exercise: Exercise comes in many forms and is used for many different reasons:

1. **Passive Exercise** - Passive exercise is done by the therapist with the patient totally relaxed. It is used to stretch muscles and tendons and to increase range of motion of a joint.
2. **Active Exercise** - This is exercise done by the patient. It is done for stretching muscles and for increasing strength and endurance.
3. **Active-Assistive Exercise** - This is exercise done by the patient with assistance from the therapist. It is usually used to increase mobility of a joint or muscle.
4. **Resistive Exercise** - This is a set of exercises done against some form of outside resistance to increase muscle strength. Usually weights or graduated resistive bands (called therabands) are used to provide the resistance.
5. **Isometric Exercise** - This is a form of exercise used to increase muscle strength without using any joint motion. It is usually used in the case of a painful or deteriorated arthritic joint, where resistance against the joint motion would only enhance pain and cause further inflammation and joint damage.

Physical therapy must be ordered by a physician. In conjunction with other medical treatments such as medications or cortisone injections, it can be an important adjunct in the treatment and management of many diverse rheumatologic, orthopaedic or neurologic problems.

EXERCISE INSTRUCTION AVAILABLE

Arthritis & Rehabilitation Therapy Services (ARTS) offers exercise instructions, conducted by their Physical Therapists, to small groups of patients on a bi-weekly basis.

Areas of concentration are:

BACK

Back exercises for people with osteoporosis.

LOW BACK

Exercises for strengthening and mobility for low back.

LOWER EXTREMITY

General strengthening for people with arthritis.

To register, call ARTS at 301-942-2520, or speak with your physician. Classes are covered by most insurance carriers.

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