

FLEXIBILITY EXERCISES

AVOID WARM-UPS THAT STRAIN THE MUSCLE

Athletic injuries are now part of the American scene and language. Hamstring pulls, slipped discs, and tennis elbows are familiar to everyone. All injuries, even small ones, are serious business. Think of the body as a chain. One link can weaken the entire chain.

Many medical studies substantiate that the higher the level of competition, the higher the injury rate. There are many methods used to reduce the chance of injury. First, one is not to over train. There is an upper limit to the amount of work even the most highly conditioned body can perform. The average athlete can sustain body stress only twice a week. That means going all out. The point at which this is reached varies, depending upon condition, age, sex, and weight.

Second, stretching is an important way to prevent strains and sprains. It also improves strength, agility, speed and balance. There is a difference between the feeling of a "good stretch" and stretching to make your muscles hurt. Stretching should feel comfortable and relaxing. When you stretch to feel pain, you increase muscle tension and you won't be able to relax.

Literally millions of runners "warm-up" with strenuous stretches. And more millions sweat through vigorous calisthenics in their own homes. While this surge for fitness-including stretching exercises-has proved beneficial to our health, it has a negative side. Injuries are occurring, not just to runners and bicyclists and Sunday ball players, but to home "stretchers" who strain too hard or use potentially dangerous exercises.

A professor in orthopedics echoes the warning against "unnatural" stretching: "Some people are no longer limiting themselves to gentle, natural stretching. Now they are trying to become contortionists." Who are the estimated 10 percent of the exercisers who are doing themselves more harm than good?

For the most part, they are those who throw themselves vigorously into old-fashioned "standard" exercises such as locked-knee toe touching or straight-legged sit-ups, both of which put undue pressure on back and nerves (see illustration for "don'ts).

They are runners or weekend athletes who "warm-up" with such dangerous methods as the "hurdler's stretch" or "ballet stretch."

Then there are those who just don't have the anatomy for vigorous exercise and those who have serious health conditions. Anyone with back, joint, heart or respiratory problems should check with his doctor before starting any regular exercise program.

Yet, with care, a regular flexibility exercise program can have important advantages for a majority of people of all ages-probably including you. They are valuable in maintaining or even increasing the range of motion-the range within which a person may move his joints. This has particular application to older people, even some with arthritic conditions.

The right kinds of flexibility exercises can be extremely beneficial in the prevention and alleviation of back problems. Many physicians prescribe specific exercises to supplement their treatment for back troubles. A study by Alexander Melleby of nearly 12,000 back pain patients showed that a carefully controlled exercise program over several years produced some 80 percent success-full or partial relief.

And, not in the least, such exercise makes many people feel better-physically and mentally. Done correctly, it can relax the mind and muscles. Relax and enjoy it: You're not out to build strength (there are other exercises for that) or win ballgames. Do your exercises slowly and smoothly without bounces or jerks. Breathe deeply and regularly. Relax during and between exercises, letting your thought flow freely.

As one who used exercise successfully for back troubles put it: "The workout did best when I lazed along and melted into the carpet after each limb moved, relaxing into a trance."

SOME EXERCISES NOT TO DO

Among the potentially harmful stretching exercises are these common ones.
It is recommended that you NOT DO them.



1. HURDLER'S STRETCH—Popular as a "warm-up" with runners, this exercise stretches muscles and ligaments in the groin much further than they should be. It also can injure the knee cartilage and ligament and the sciatic nerve, which runs along the back of the leg.



2. DUCK WALK (DEEP KNEE BEND)—Squatting or walking like a duck in this deep knee position was the first exercise to be President's Council on Physical Fitness. It can tear the lateral knee cartilage.



3. BALLET STRETCHES—Unnaturally elongated sciatic nerve and too much pressure on the back of the knees, low back ligaments, muscles, joints and discs are the result of this exercise designed only for highly conditioned dancers.



4. LOCKED-KNEE TOE TOUCHING (AND STRAIGHT LEG SITUPS)—Practically built into the heritage of calisthenics, these two exercises can be among the most injurious. The sciatic nerve is stretched in both cases-and undue strain is put on the back. It's better to use bent knee exercises, or avoid them altogether if you have any back troubles.

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HOW TO AVOID PREVENT AND SERIOUS INJURY

For the approximately 6700 professional athletes in America, sports may be the pot of gold at the end of the rainbow. For example, the average professional football player earns about \$72,000 a year. For the pro-hockey player, it is \$100,000. In baseball, the average is \$115,000. In basketball, \$175,000. Like victory and defeat, injury is part of sports and exercise. Almost 15 million people each year are injured in the pursuit of fitness and competition, according to a special study by the Consumer Product Safety Commission.

If you are concerned about injury, there are many things you can do for yourself.

- Pick a safe sport one which is enjoyable to you
- Stretch (Look at the do exercises)
- Use strength training
- Train, but do not over train

Almost every athlete (professional/amateur) understands that stretching is an important way to prevent strains and sprains. Why is stretching so important? Every time you exercise or compete, your muscles are slightly injured-so called micro-tears. When the muscle heals-usually in twenty four to forty-eight hours-they heal slightly shorter in length. The scar tissues draws the torn microfibers together.

Stretching and flexibility exercises lengthen the muscles and tendons. This method also fills the muscles with blood and makes them pliable. The more pliable the muscles are, the less likely they are to sprain or strain.

These gentle stretching exercises see illustrations) are designed to put joints through their range of motion, to relax you and to give you more flexibility. If you don't include some flexibility training with your regular workout (weight-training, basketball, etc.), you may end up with a decrease in joint-mobility.

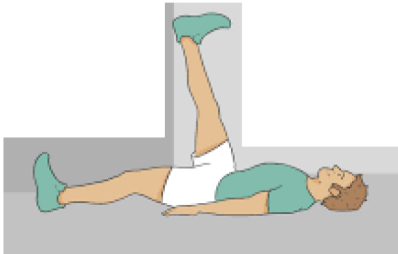
After stretching, you should warm up. Warming up increases the blood supply to the muscles and raises their temperature. Like flexibility exercises, warming up makes muscles and tendons more pliable and resistant to injury. The key to a good "warm up" is to slowly increase the pace of your workout so that your muscles can adjust to the increased pace and remain free from injury.



1. RELAXICISERS— A good set to start with. Lie flat on your back with knees bent (1) Fatten small of your back by tightening your stomach muscles and tilting your pelvis up. Hold 10 seconds. Relax. Repeat 5-10 times. (2) Slide one leg forward until it lies flat on mat and slowly drag it back to bent position. Repeat 5 times with each leg. (3) Limber each arm by bending at elbow, then letting it drop to mat. Repeat 5 times. (4) Shrug shoulders without Lifting them from mat. Repeat several times. (5) Slowly let your head roll from side to side. Repeat 3 times.



2. BACK/KNEE STRETCH— From same position, curl forward, grasp one knee and put it toward your chest. Hold for 5 seconds and return it to original position. Repeat 5-10 times with each leg.



3. BACK/LEG STRETCH— From same position, bring one knee toward chest. Then extend your leg slowly toward ceiling, pointing your toes. Lower the leg to the mat slowly and bring it back to basic position. Do each leg and repeat this time flexing your foot as it points to the ceiling.



4. HIP EXTENSION— Lying face down, bend a knee and raise the leg off the mat 3-4 inches. Return it to mat and repeat with other leg. Do 5-15 repetitions.



5. TORSO CURL— From flat-on-back position with knees bent, curl slowly up to touch your fingertips to your knees. Lower slowly, relax and repeat 5-10 times. (Don't move up more than halfway— 45 degrees)



6. CAT BACK— Kneel on all fours. Arch your back like a cat, dropping your head and tucking in your pelvis. Reverse exercise by pulling back-pushing back your buttocks. letting your stomach drop and raising your head. Repeat slowly 5-10 times.



7. FOOT FLEXORS— Sitting with legs slightly apart, rotate heels and feet inward about 45 degrees. Repeat 5-15 times. Now rotate heels and feet outward about 25 degrees. And repeat.



8. HIP ABDUCTION— Either standing or lying down on your side, extend one leg sideways- not more than 45 degrees. Hold 5 seconds or so and slowly return to ground. Repeat with each leg 5-10 times.



9. SHOULDER STRETCHES— loosen your shoulders by (1) "Shrugging"- slowly elevating your shoulders toward your ears, holding for 5 seconds and slowly lowering them. And (2) with arms extended, pull back your shoulder blades, first, then expand them. Repeat 5-10 times.

10. TORSO STRETCHES—With your feet 12 Inches apart, arch your arms over your head. Slowly bend to one side, hold for 5-10 seconds and return. Then repeat on other side. work up to 8 repetitions. Now reach for the stars with one arm. while extending the opposite arm and leg out to the side. Hold for three seconds and repeat three times. Reverse arms and legs and repeat on other side three times.

