

Stretch It Out

Segment 4

Purpose

To demonstrate the importance of stretching activities before and after exercise

Background

To move the body, muscles and tendons must be flexible—able to bend and stretch. Some people's muscles and tendons are more flexible than others. With practice, everyone can increase flexibility. Heavy physical activity can cause muscle soreness and tendon damage as the muscles contract. Daily stretching and stretching before and after exercise warms the muscles and connective tissue and increases the flow of oxygen and nutrients to the muscles. Stretching keeps muscles healthy, increases flexibility, and decreases the chances of muscle injury during physical activity.

Materials
masking tape
cm measuring stick
science journal



Procedure

1. Put a strip of masking tape on the floor.
2. Sit on the floor with your legs straight out in front of you.
3. Make sure your back is lined up with the strip of tape on the floor.
4. Place your hands on your thighs, keeping your arms straight.
5. As you slowly exhale, bend at the waist, sliding your hands along your legs toward your feet.
6. Ask a partner to mark the place where your fingertips comfortably reach.
7. Measure the distance between this mark and the tape strip on the floor.
8. Record the length in your science journal.
9. Now do some simple stretches.
 - a. Lie on the floor. Lift one leg and grasp the lower leg with both hands. Pull the leg gently toward your nose, keeping the leg straight. Stretch out to the side. Raise the other leg and repeat.
 - b. Lie on your stomach. Raise your upper body off the floor, arching your spine. Then raise both feet. Try to touch your head with your toes.
 - c. Kneel and sit on your heels. Bend down until your forehead touches the floor. Stretch your arms in front of you. Inhale, then exhale and stretch your arms out a little farther.
 - d. Stand with both feet flat on the floor. Bend both knees as far as you can without lifting your heels from the floor. Repeat three or four times.
 - e. Lie on the floor. Lift one leg and bend the knee so the lower leg is parallel to the floor. Point the toes forward. Put the toes back and stretch toward the shin. Switch legs.
10. Sit on the floor again, with your back lined up with the strip of tape.
11. Now try reaching towards your toes again.
12. Ask your partner to mark the place where your fingertips reach this time.
13. Measure the distance between this mark and the tape strip.
14. Record the distance in your science journal and calculate any difference in distance.
15. Repeat the activity each day for one week.
16. Record your findings and discuss them.

Discussion

1. How did the distance you could comfortably reach change after the stretching exercises?
2. What effect did stretching each day for one week have on your results?
3. Why is stretching before and after exercise important?

Extension

Try bending over and touching your toes. After you complete a few stretching activities, bend over and touch your toes again. Did you notice any difference?