

From the office to the outdoors

Daily postures affect your play

By Dr. Geoff Outerbridge M.Sc., D.C.
Photos by Gwen Williams.

TAKING A DEEP BREATH, Andy gripped his mountain bike's handlebars as he attacked the rocky hill without fear or pause. At 36, he felt like a 12-year-old on his first BMX bike.

Then a pain shot through his thigh and spoke to him. Its words were not comforting: Andy, you're too old for this.

Carol could almost taste victory as she strained her knuckles, climbing the steep cliff. Just ahead of her lay the summit. Victory! A flush of adrenaline raced through her veins. Her arm burned as she pushed herself just a bit higher. Before her hand could reach the slight, rocky hold, a sharp pain shot through the base of her neck. Only her rope saved her from a fearsome plunge to the bottom of the rock face.

Andy and Carol may feel that their age (or their chosen sport) is an enemy waiting to leap out at them. But, in most cases it's not. The common injuries they experienced are signs of underlying problems.

What we do with our bodies throughout the day affects our susceptibility to injury.

Prolonged sitting can ruin your weekend enjoyment of outdoor activities.

Most of us spend a great deal of our time sitting at a computer terminal, at a desk, or in meetings. Many of us sit in our

cars while commuting to and from work. We all sit down to eat, and spend much of our leisure time sitting. When we sleep on our side, we are also in a seated position — only sideways. Count up the hours each day you are in this position (knees and hips flexed, shoulders rounded forward, and head positioned in front of your shoulders), and your total may reach 22 hours — virtually all the time.

Our bodies adapt to this seated posture. And this affects our ability to fully enjoy outdoor activities. When muscles are perpetually shortened, they become shorter, tighter, weaker. Knots in muscles may become a common source of pain.

What muscles are most at risk when you sit too long with bad posture? The top ones include: the knee flexors, the hip flexors, low back muscles, chest muscles, shoulder muscles, and upper neck muscles. Tightness of these muscles may restrict normal movement of your joints and affect the functioning of other muscles around joints. Stress, pain, nutritional deficiencies, mechanical asymmetries and repetitive use may aggravate problems further. The accumulation of these chronic problems makes you more susceptible to injury. For those regularly involved in physical activity, the harmful effects of muscle problems are magnified. Most at risk are weekend warriors who sit all week, then get up and play hard without any other regular exercise or stretching routine.

What can you do to reduce the risk of injury?

Reduce time spent sitting. Get up from your workstation frequently and walk around.

Sit and stand with proper posture. Ensure that your workstation is set up properly by having an ergonomics assessment. Even with a perfect workstation, you can still sit poorly (Figure 1A, opposite page); make a conscious, lifetime effort to adopt proper posture. For example, pretend that there's a string attached to the top and back of your head that is pulling it back and up (Figure 1B). You can also try to imagine lengthening your spine. Be sure to let your shoulders relax.

Stretch. Regular stretching throughout the day can help reduce the effects of chronic muscle shortening.

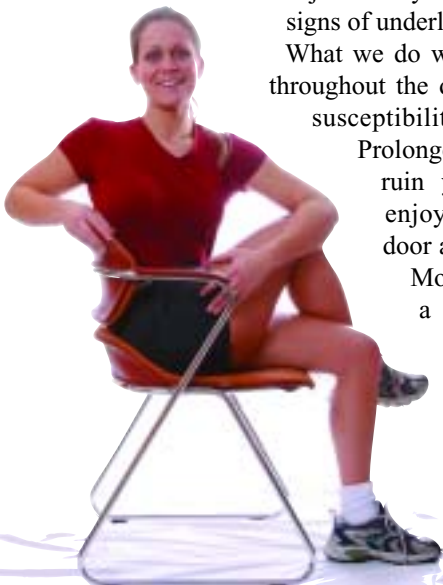
How to Stretch

Stretches shouldn't hurt. You should feel a gentle tension when stretching a muscle, then relax into the stretch and hold the stretch for at least 30 seconds. If the stretch hurts, you may have some underlying problem. In this case, visit a health care professional who can help you manage musculo-skeletal pain.

You can perform these stretches throughout the day. Although it's best to warm up before stretching, gentle stretching at work is beneficial. It reduces tension, increases circulation, and improves flexibility, in those muscles that are shortened throughout the day.

A few stretches a week won't reverse any muscle shortening that is happening all day long. Perform stretches regularly throughout the day. Stretching is an active, lifetime measure that will help prevent injuries. It's not just something to do when you feel pain or experience some problem.

The stretches described here are not the only ones you should do regularly. These only address problems caused from sitting for prolonged periods. You can stretch the same muscles in many different ways. The following stretches are described because they are easy to do throughout the day in your workplace.



Exercise Regularly for Great Outdoor Capability

When you sit constantly at work, physiologic changes to your body may eventually lead to chronic joint difficulties. Stretching is only one part of a preventative/rehabilitation program. Get involved in exercise programs that incorporate some posture-improving exercises. Talk to your health care provider or personal trainer for advice.

So, before you jump up from your desk and hit the trails, fields, roads or rivers, think about what state your body is in and how you can avoid problems. With a bit of professional care and ongoing preventative maintenance, Andy and Carol can reduce their risk of future injury and continue enjoying their passions without painful interruption.

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FIGURE 1A:

In the seated position, our knees are flexed, hips are flexed, shoulders rounded, and our head is forward.



FIGURE 1B:

Even with a perfect workstation, it is important to maintain proper posture throughout the day. Imagine a string attached to the back

of your head that is pulling up and back (Arrow).



NECK

Sit tall and bring your head straight back as if trying to make a double chin. You'll feel stretching at the base of your neck near the shoulders, or at the base of your skull.



OUTSIDE THIGH STRETCH

While standing, cross one leg in front of the other. The leg that is behind is the leg to be stretched. Turn your upper body

sideways, away from the back leg. Keeping your back straight, bend forward at the waist until you feel a stretch along the outside of the back leg. Put your hands on a chair or table to support your upper body weight if needed.

CHEST

(below) Stand in a doorway and place your elbow on the inside of the door jam, just slightly above your shoulder. Hold your forearm and palm flat against the door jam. Take a step forward with one foot and lean your chest forward. You'll feel stretching across the front of your chest and shoulder.

LOWER BACK EXTENSORS



Sit tall in a chair and place one foot over the opposite leg and place the outside of the ankle on the outside of the opposite knee. Pull the bent knee toward the chest while turning the upper body toward the hip of the bent knee. As you turn further, you will feel a stretch in the lower back and hip on the side of the bent knee. Be sure to maintain an upright posture. You can use the back of the chair to increase the stretch.

HAMSTRINGS

Place one foot in front of the other, with the heel of your front leg on a chair or the floor, toe in the air, and knee straight. Your hips should be facing the front foot with your back leg slightly bent. Keep your back straight, and try to bring the front toe toward your body (arrow) as you rotate forward at the hips. Be sure not to round your back. You should feel the stretch from your buttock to the back of your knee. If you do not feel stretching, place your front heel on a higher surface. Be sure that the chair or surface is not on wheels.



SHOULDERS

Place both hands behind your back with your arms straight. Grasp one wrist with the opposite hand, and pull down on the wrist and toward the opposite hip (arrow). The wrist you're pulling down is the side of the neck you

will stretch. Let your head tilt away from the arm being pulled. You'll feel the stretch between your neck and shoulder. While in the stretch position, roll your head slightly forward or back to find the position where the stretch is felt to be the strongest.



HIP FLEXORS

Stand with your feet shoulder-width apart and toes facing forward. Take a large step forward into the lunge position. Keep your upper body upright and hips facing forward. Bend your back knee slightly as you shift your weight slightly forward and try to push your hips down and forward toward your front foot. Do not let your front knee pass in front of your front foot. Try to keep the pelvis tucked under and the stretch should be felt in the front of the thigh and hip of the leg that is back. This stretch can also be performed while kneeling.

