

## **THE TWO RULES OF RACEWALKING**

There are two technical rules in racewalking. In simple terms, to be legal, a racewalker must

- 1. maintain contact with the ground at all times, and**
- 2. keep the knee of the supporting leg straight from the moment of foot contact with the ground until the leg passes under the body**

## **RACEWALKING IS A SKILL**

by Elaine Ward

Playing golf requires technique. The same is true for bowling, tennis, skiing, horseback riding, swimming - and walking. Like any skill, walking can be done well or so-so.

Would you settle for being a mediocre driver? A mediocre pilot? Most likely not. The risk to life and limb would be too high. Yet, a mediocre walk carries its own physical risks. It can cause biomechanical stresses that age your body and limit your freedom of movement. You can develop chronic low back pain, achy shoulders and neck as well as knee and ankle problems.

Keeping in mind that walking is a skill, you can use the racewalking technique to improve your fitness and appearance.

## **THREE WAYS TO USE THE RACEWALKING TECHNIQUE**

Fitness racewalking is a style of walking that involves your whole body. It strengthens muscles, shapes the body, limbers up joints and helps burn calories. Let's start with your feet.

### **Racewalking Footwork:**

**Start Walking.** Raise your toes up in the air so that you contact the ground toward the back of your heel. Roll forward on the fleshy bridge of the sole of your foot. As your foot passes behind you, push the ground back with your toes.

In regular walking you barely use your foot. You raise your forefoot—just enough to avoid tripping and your poor toes get no action whatsoever. By simply flexing your ankle so that your forefoot comes up into the air, your walking more fully exercises the joints and muscles of your legs.

Let's see how learning to use the potential action of your feet can improve your fitness.

- It takes strength to flex your ankles and raise your toes in the air. Developing this ability as you walk will overcome weakness and instability in your ankles.
- Flexing your ankles to raise your toes stretches the back leg muscles and prevents these muscles from contracting and contributing to an "old" looking walk.
- Flexing your ankles to raise your toes also helps slim and shape your calves far more successfully than walking with a flatfooted stride.
- By rolling from heel to toes, you stimulate the circulation in your feet. Better circulation helps "cold" feet as well as ankle edema.
- Rolling forward from heel to toe gives a rhythmic, gliding quality to your walk. This gait feels good and looks good any time.
- Just as hitting a tennis ball hard or pounding a pillow can release stress, so can pushing the ground back vigorously with each step.

There is an important safety benefit in heel toe walking. If you decide you want to walk more briskly, rolling from heel to toe minimizes the impact of your foot on the ground's hard surface. The jarring created by fast flat-footed walking traumatize your ankles, knees, lower back, shoulders and neck.

### **Hip Rotation:**

Start walking and let your hips rotate forward and backward as your legs move forward and backward. You will feel a twisting in your waist. There is no "boomteeay" or sashay. No side-to-side sway or gyration. Your legs and hips move forward and backward in sync just as nature intended.

By deliberately restricting the rotation of your hips because of cultural bugaboos, you arrest the flow of movement between your upper body and lower body. You isolate the movements of your arms and legs into two separate zones with the trunk of your body acting as a cement pillar. The Tin Man in the Wizard of Oz comes to mind. His arms and legs are attached to a rigid, metal trunk. Unfortunately, you see many tin men and tin women walking around. All that's missing is the grating "clank" and "boink."

- Rotating your hips is a sure way of trimming your waistline and surrounding areas.
- A gentle, steady hip rotation massages the lower back muscles and can help to alleviate spasm and pain.
- Gentle hip rotation can also limber your back and counter the stiffening process of arthritis and aging.
- If you like to walk fast, rotating your hips elongates your stride naturally by utilizing the span between your waist and leg. If you do not rotate your hips, your stride is limited by your leg length.
- Because hip rotation integrates your body's forward movement, the resulting walk looks smooth.

### **Arms:**

Start walking. Swing your arms in the same forward/backward direction as your legs. Keep in mind the purpose of walking is to go forward and all your body parts should cooperate. When your arms swing back and forth in sync with your hips and legs, you have three of the basic elements of good walking technique working for you.

Many people allow one or both arms to swing across their bodies. This sideways motion conflicts with the forward progression of the legs and creates lower back stress. By relaxing your shoulders, you will free your arms to swing fully.

- The size of your arms swing affects the size of your stride. A little arm swing promotes a little stride. A full, natural arm swing supports a full, natural stride.
- An energetic, full arm swing increases the aerobic benefits in walking. Visualize the arms of a symphony conductor. The conductor's movements are large and vigorous. Most have very long and productive lives.
- If you want to walk faster, speed up your arm swing (even shorten your arms in a right angle).

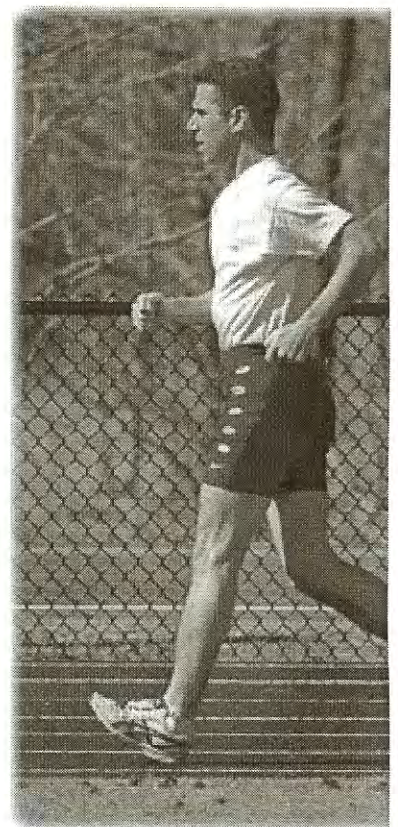
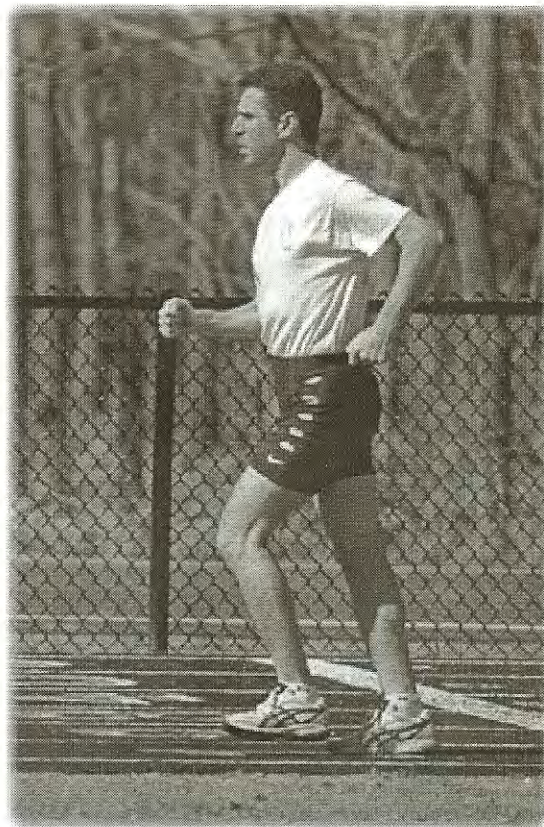
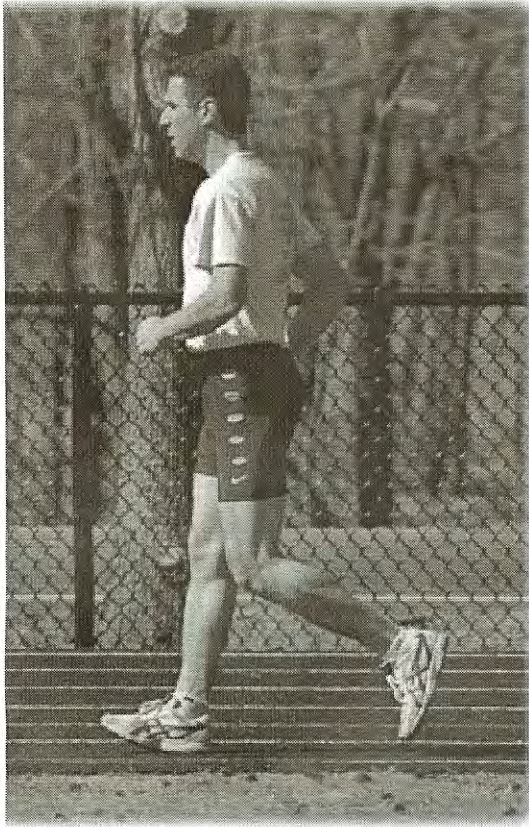
Racewalking is walking at its maximum. The technique is efficient and biomechanically safe for fitness walking. You have been given three elements of the technique and some of their benefits. Try them, but be patient. When you change old habits, it can take time, but the rewards will be well worth it.

Your new walk will optimize your fitness. You will lose unwanted pounds while slimming and trimming. By developing your walking skill, you will feel good about yourself and look good to others.

## BASIC TECHNIQUE - FEET

1. Proper foot technique involves holding the toes up during foot contact, land on the heels, rolling over the foot (with toes still raised), and pushing off from the toes. When done properly, a racewalker makes little sound with the feet. (As a racewalkers, you will almost always hear a runner coming up from behind. However, you will probably not hear a racewalker coming from behind you until he or she is about to pass you.) Holding the toes as high as possible prior to foot contact has a second, very important benefit. It will help you straighten your knee before heel contact.
2. Unless you have a biomechanical problem that limits foot angle, your feet should point forward (rather than toed in or toed out).
3. The feet should track very closely -- as if you are trying to walk on a beam no more than about 4" wide. Some walkers even cross their feet, having the left foot track further right than the right foot (though most instructors argue against this now.)
4. As a beginning racewalker, you will probably not be able to use your ankles and toes to drive your self forward -- relying more heavily in the large muscles of the leg. As you get better, however, you will learn to use the feet more effectively in propelling yourself forward.
5. As you toe off, the foward-moving foot should skim very close to the walking surface. This action requires some bending of the knee but it should not be much more than is required to skim the surface. However, avoid the tendency of some new racewalkers who, focused on having the knee straight when required to do so, also tend to keep the knee too straight when bringing the leg forward. Walking "stiff legged" significantly limits leg speed.
6. Proper foot movement during the driving phase involves landing slightly to the outside of the heel, rolling the foot inward as it passes under the body, and rolling again slightly to the outside as you toe off.





## **The Rear Foot**

Many race walkers do not hold their rear foot on the ground long enough. The longer you leave your rear foot on the ground, the more efficient your stride, for many reasons:

Your hips are able to pivot, thus lengthening the stride and allowing time for your leg to swing forward and your heel to strike the ground.

The motion stretches your hip muscles as they swing the leg forward, and the resulting reflex pulls the leg forward faster. As the faster-moving swing leg propels your body forward with greater force, you gain even more speed.

Your body exerts a force against the ground due to gravity. When you stand still, this force is completely vertical. By keeping the foot on the ground longer, the ground reactive force of the body's weight becomes more horizontal than vertical when you lift your heel and move to toe off. This force helps maintain contact with the ground while contributing to forward body propulsion.

## **Transitioning From One Leg to the Other**





The goal when your heel strikes the ground is to position the foot close to a 45-degree angle with the ground. After heel strike, smoothen your stride by rolling onto the midsection of your foot and through to your big toe. Avoid slapping your foot against the ground. If you feel or hear a slap, stop, stretch your shin, and start again.

### **Carry That Knee Low**

To remain efficient, race walkers must pay careful attention to how their legs swing forward after push off. Drive your leg forward with the knee as low to the ground as possible. While some upwards motion is necessary to break contact with the ground, it should be minimized. Therefore, when the rear foot lifts up, it rises only an inch or two off the ground. This is seen throughout Figures A to C. By the time your foot swings under your body, it is almost parallel with the ground (Figure B).