

## **Deep Water Running--Keep running even when you can't**

By most estimates, 70 percent of all runners will experience an injury that will cause them to take time off from their sport. This figure is lower with multisport athletes, but they too suffer their share of injuries, such as stress fractures and muscle tears, that cause them to refrain from their usual training program.

However, there are other training options available that allow you to maintain running fitness while reducing the stress of traditional running. One alternative is deep-water running (also known as aqua-jogging).

### **Deep-water running**

Deep-water running mimics land running with one exception: you're floating. Comparative analyses of deep-water and land-based running have concluded that water running elicits the physiological responses necessary to promote a training effect.

To properly perform deep-water running, athletes use vests or belts to keep their heads above water. The belt is the preferred choice of flotation, since it tends to fit better than a vest or lifejacket and does not restrict the natural arm movement. A tether cord may be used to keep the runner in one place, or the athlete can actually "run" laps.

Athletes new to deep-water running sometimes feel that the flotation device restricts their breathing and that the pressure from the surrounding water further contributes to this constricted feeling. This tightness may cause the runner to breathe more shallowly than usual and become short of breath. It may take a bit

of time for new deep-water runners to adapt their new environment, and they need to pay close attention to their breathing to make sure that it's deep enough. Deep-water running can also be performed without a flotation device. This method requires much more strength to keep the body stable and upright, and running form may be compromised, since staying afloat often becomes the primary concern. The absence of a constricting belt or vest may alleviate some of the tightness around the chest, but it's best to start with a flotation device.

Studies have shown that heart-rate responses during deep-water running are, on average, 10 to 12 beats lower than those achieved during traditional running at matched sub-maximal intensities; therefore, use the rate of perceived exertion during workouts (see RPE document) — otherwise, duplicate in the water those sessions scheduled on land. If your training plan calls for a one-hour recovery run on land, do a one hour recovery run in the water. If it's track intervals on the schedule, do them in the pool at a high intensity with a high turnover rate, with rest intervals of easy water jogging in between each.

Many athletes find deep-water running boring. The key to breaking up the monotony is to vary the workouts. Music can also make the workouts more interesting—check out <http://www.finisinc.com/> for a water-proof MP3 player.

Due to the lack of impact and reduced stress to the body, recovery from deep-water running can be shorter than for traditional running. This means that athletes can deal with more frequent intensity and greater duration in the water.

Recovering from an injury is not the only time that you can utilize this option.

Deep water running can also be an integral part of your yearly training plan. You

can add several workouts each week during the winter months, while in the base periods, to build solid aerobic foundation. Deep water running is also a great alternative as recovery workout throughout the season. You can head to the pool for an easy recovery jog after a hard session on the track or on the bike. For athletes with a high propensity for injury this low stress mode of exercise will reduce the chance of incurring the all too common overuse injuries.

Remember that with any new workout there may be a period of muscle soreness; therefore, introduce alternative forms of running slowly into your training program. Also, check with your physician or physical therapist to determine the appropriate time to introduce water running into your rehabilitation schedule.

### **Sample workouts:**

#### **Interval session**

10-minute easy jog warm-up

5 x 20 seconds hard, 40 seconds easy

4 to 6 x 90 seconds hard, 3-minute easy rest interval

10-minute easy jog warm-down

#### **Pyramid**

10-minute easy jog warm-up

1 minute hard, 1 minute easy

2 minutes hard, 2 minutes easy

3 minutes hard, 3 minutes easy

4 minutes hard, 4 minutes easy

5 minutes hard

10-minute easy jog warm-down

(For a longer workout, go back down the pyramid: 5, 4, 3, 2, 1 and cool down)

### **Drills**

10-minute easy jog warm-up

30 seconds at high turnover, quick, short strides with fast arm movement

3 minutes easy

30 seconds butt-kicks, quick flexion of knee

3 minutes easy

30 seconds high knee, driving the lead knee as high as possible with fast arm movement

3 minutes easy

30 seconds straight-leg kick, drive from the hip with toes pointed down

10-minute easy jog warm-down

(For a longer workout, repeat the set and then warm-down.)

### **Maintain your form**

The water level should hit shoulder height.

The head should be in a neutral position, mouth out of the water, eyes looking ahead.

The body should lean slightly forward.

The arm motion is the same as on land, and hands should be loosely closed, slicing through the water.

The leg motion should mimic the motion on land. A lower stride cadence may result due to the resistance from the water