



# Interval Training

by author PJ Wren

Interval training—periods of high-intensity activity followed immediately by periods of rest—is a great way to train for all ages and fitness levels. Once reserved for serious athletes, it is now widely used by everyone from cardiac patients to those wanting to lose weight. Why not try it?

Interval training may sound intense, but fear not, you may be currently doing intervals and not even know it. For example, walk/run programs—running for a specified time and recovering with a walk—are interval programs. Any group exercise class consists of performing intervals for the whole hour. Even yoga has forms of intervals in it, with hard-to-hold poses accompanied by the child's pose to recover.

## Lose the muffin top

Interval training is the go-to exercise for people looking to lose weight. Take, for example, a person who walks on the treadmill at three miles per hour. At that pace he or she would expend five calories a minute, based on a 150 lb (68 kg) person.

Now, take that same person and ask them to add periods of sprinting to their walking, and they will increase their caloric expenditure from five to 14 calories a minute! Since weight loss is all a numbers game, by burning more calories than is consumed, those who want to can trim a little (or a lot) of fat from their bodies.

## Healthy hearts

A recent study compared a group of individuals who performed moderate-intensity exercise (staying at one steady speed throughout the workout) to a group that performed interval training. The interval training group had a lower incidence of heart disease. Clinical trials also showed that interval exercise increased the participants' aerobic fitness, decreased their resting blood pressure, and improved their glucose control better than the moderate intensity group.

Researchers reported in the *Journal of Applied Physiology* (June 2006) that performing repeated bouts of high-intensity, sprint-type exercise resulted in profound changes in the participants' skeletal muscle and endurance capacity. One usually sees changes like that after training for hours each week. Less time in the gym for better results—who doesn't want that?

## Training wheels

If you haven't done interval training before, start out on a stationary bicycle. The easiest way to transition from rest to high intensity is by simply pressing the "up" arrow on the bike to increase the resistance, while at the same time increasing your RPMs by pedalling faster.

Intervals on a stationary bike also require the least amount of skill and coordination. Most people can pedal faster, whereas on the treadmill you do need a level of skill and comfort to increase the speeds to an all-out sprint of eight or nine miles per hour.

## Warming up

Due to interval training's high intensity, remember to warm your body up properly to get it ready for the work that it's about to do. One of the best ways to warm the body up is simply to do a slower version of what you are about to do. Aim for five to 10 minutes, building the intensity up as the warmup time progresses.

## It's all in how you rest

The recovery, or rest, part of your interval training is key. Without a sufficient amount of time to recover, you will not be able to perform at 100 percent at your next interval. If you leave too long a break in between

intervals, you will not enjoy the benefits that interval training can provide your heart, lungs, and other working muscles.

Start out with a 1:3 work to rest ratio. For example, if you sprint for one minute on the treadmill, recover for three minutes with a brisk walk or light jog. Lower your heart rate to about 50 to 60 percent of your maximum before performing the next interval. If you need more time to recover, then lower the intensity of the next interval.

Interval training can safely be performed one to two times a week, allowing two days to recover in between workouts.

### **The interval madness workout**

You can incorporate intervals during a weight training session. Also called circuit training, it allows you to cycle through the entire routine without stopping.

Traditional weight training moves are used strategically as the “rest” part of the interval program. Partner them with a variety of plyometrics and power moves for the high-intensity interval part of the workout.

Aim for one to three cycles of the entire routine, and don't forget to warm up and cool down.

### **Benefits of interval training**

- more calories burned in a shorter amount of time
- fun, due to the variety, which in turn increases exercise compliance
- less chance of injury due to cross-training
- improves neuromuscular coordination, the harmonious functioning between muscles and the ability to move them
- better trained slow- and fast-twitch muscle fibres
- increased tolerance of lactic acid (that awful burning sensation in our muscles when we push ourselves hard)
- increased aerobic capacity and anaerobic threshold
- improved ability of the body to use fat as a fuel

### **Indoor sport-specific interval training exercises**

<b>Sport</b>	<b>Exercise</b>
soccer	squat thrusts
downhill skiing	stair running
running	seal jacks
hockey	single-leg lateral hops
snowboarding	quick lunge crossovers
snowshoeing	squat jumps
cross-country skiing	mountain climbers



### Push-up

Time: 60 seconds

Keep your hands wider apart than your shoulders and your core engaged. Either do a traditional push-up from the toes, a modified push-up from the knees, or an advanced push-up with your hands on an upside-down BOSU ball or on a wobble board.



### Jump squats

Time: 30 seconds

Stand with your feet hip-width apart, core engaged. Squat rearward, pressing the bum back and tracking the knees with the toes. As you come up and out of the squat, propel yourself upward, jumping in the air. Land softly back on your feet and immediately do another squat jump. Do not rest!



### One-arm row

Time: 30 seconds each arm

Lean forward on a weight bench or ball, keeping the back level with the ground and supporting yourself with your nonworking hand and one knee. Start with the working arm straight down and pull the dumbbell up, with your elbow brushing by your side. %



### Quick lunge crossovers

Time: 30 seconds

Start in a split lunge position, with staggered stance and neutral spine. Drop down into a lunge, and as you come up, propel yourself up in the air, changing lead legs. Land firmly and perform again with the leg that was behind you and is now in front. Lunge as low and as fast as you can.



### Mountain climbers

Time: 30 seconds

Position yourself on the floor in a full straight-arm plank, balancing on your toes and hands. Keep your shoulders over your hands and your spine neutral. Step around to your left side with your left foot. Keep the bum down; plant the left foot close to the left hand. Step back and perform with the right leg. Go as fast as you can.



### Crunches

Time: 60 seconds

Perform on a ball, a BOSU, or the ground. Use your abdominals to curl up and slowly roll back down. Keep hands light behind the ears.



### Supermans

Time: 60 seconds



Lie face down on a mat with your arms extended above your head. Keeping your chin tucked in, lift your upper and lower body up and off the mat. Pause, then slowly lower.



### Squat thrusts

Time: 30 seconds

In a full plank position, with straight arms and balancing on your toes and hands, quickly jump both knees in toward your chest, aiming for feet landing between your hands, and back out again. Continue without stopping.

### Squat and shoulder press

Time: 60 seconds



Hold onto a pair of dumbbells and rest your hands in front of you at shoulder height. Position feet hip-width apart. Squat rearward, and as you come up, press the dumbbells up and above the head.

### Seal jacks

Time: 30 seconds

Start with your feet together and arms straight, palms together and in front of the body at shoulder height. As you jump the feet out, open the arms up. Jump back together, slapping hands together.



*PJ Wren is a personal trainer and writer who always trains interval style. Her motto is "go hard, or go home!" fitnesswithpj.com Personal trainer Brendan Rolfe shows us the perfect form. Contact him at rawehealth.com or brendan@rawehealth.com.*