

Interval Training Builds Fitness Fast - Vary Your Training Intensity to Boost Your Performance

Interval training has been the basis for athletic training routines for years. The first forms of interval training, called "fartlek" involved alternating short, fast bursts of intensive exercise with slow, easy activity. Fartlek was casual, unstructured training that perfectly fit its English translation: "speed play."

What is Interval Training?

The interval programs of today have become highly sophisticated methods of structured training for athletic performance enhancement. Physiologists and trainers have designed interval programs that are specifically suited to individual athletes. These sessions include precisely measured intervals that match the athlete's sport, event and current level of conditioning. Often the appropriate intensity and duration of the intervals is determined by the results of anaerobic threshold testing (AT) that includes measuring the blood-lactate of an athlete during intense exercise.

How Interval Training Works

Interval training works both the aerobic and the anaerobic system. During the high intensity effort, the anaerobic system uses the energy stored in the muscles (glycogen) for short bursts of activity. Anaerobic metabolism works without oxygen. The by-product is lactic acid, which is related to the burning sensation felt in the muscles during high intensity efforts. During the high intensity interval, lactic acid builds and the athlete enters oxygen debt. During the recovery phase the heart and lungs work together to "pay back" this oxygen debt and break down the lactic acid. It is in this phase that the aerobic system is in control, using oxygen to convert stored carbohydrates into energy.

The Benefits of Interval Training

This repetitive form of training leads to the adaptation response. The body begins to build new capillaries, and is better able to take in and deliver oxygen to the working muscles. Muscles develop a higher tolerance to the build-up of lactate, and the heart muscle is strengthened. These changes result in improved performance particularly within the cardiovascular system.

Interval training also helps prevent the injuries often associated with repetitive endurance exercise, and they allow you to increase your training intensity without overtraining or burn-out. In this way, adding intervals to your workout routine is a good way to cross train.

According to the American College of Sports Medicine, more calories are burned in short, high intensity exercise. If you are counting calories burned, high intensity exercise such as intervals are better than long, slow endurance exercise.

You don't need to be a world-class athlete and have sophisticated blood analysis to take advantage of the benefits of interval training. The standard "speed play" training of fartlek works well for the rest of us. This type of interval work is based upon your subjective needs. Simply pay attention to how you feel and set your intensity and duration accordingly.

Interval Training Safety Tips

- Warm Up before starting intervals
- Assess current conditioning and set training goals that are within your ability
- Start slowly. (for example: walk 2 minutes/ run 2 minutes) In general, longer intervals provide better results
- Keep a steady, but challenging pace throughout the interval
- Build the number of repetitions over time

- Bring your heart rate down to 100-110 bpm during the rest interval
- To improve, increase intensity or duration, but not both at the same time
- Make any changes slowly over a period of time
- Train on a smooth, flat surface to ensure even effort
- You can also use circuit training as a form of interval training

Advanced Interval Training Workouts

You can take a more scientific approach to interval training by varying your work and recovery intervals based on your pre-determined goals. Here are the four variables you can manipulate when designing your interval training program:

- Intensity (speed) of work interval
- Duration (distance or time) of work interval
- Duration of rest or recovery interval
- Number of repetitions of each interval

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http://www.kellysfitness.net/files/Interval_Training_Benefits.pdf

Interval Training Benefits

In the past exercise physiologists held that interval training was only for highly trained athletes and not for those people who want to lose body fat. New studies show that interval training promotes the loss of body fat while building superior cardiorespiratory levels of fitness.

What are the benefits of interval training?

- Interval training increases muscle mass, heart rate recovery, strength, power, speed, and Post Exercise Caloric Expenditure (PECE). Studies show that anaerobic interval training is far more effective in creating PECE than aerobic exercise by 38 percent. From a fat metabolism standpoint, interval training increases lean muscle tissue as oppose to decreasing lean muscle tissue with aerobic training. An increase in lean muscle tissue will speed up your metabolism as well as improve fat mobilization and utilization.
- Interval training increases your anaerobic or lactic acid threshold. As your VO2 max increases, you will be able to exercise at higher heart rates without experiencing the pain of lactic acid accumulation in the muscles. This will allow you to expend more energy (calories) in a shorter period of time.
- Interval training promotes the recruitment of Type II muscle fibers to do aerobic work. It also induces changes in skeletal muscle oxidative enzyme activities similar to those observed in endurance training. Interval training also increases mitochondrial size and number. The muscle mitochondria are where oxidation takes place to utilize fuel sources such as glycogen and fat.
- Interval training takes less time. The average bout of interval training is thirty minutes as opposed to sixty minutes for aerobic exercise. The average frequency for interval training is three times per week as opposed to four to six times a week for aerobic exercise. This time saving feature of interval training allows time for cross training (i.e. weight training).