

## HIGH-INTENSITY INTERVAL TRAINING (HIIT)

### What is High-Intensity Interval Training (HIIT)

A popular form of high intensity interval training followed by different recovery times. The intense work periods can range from a few seconds to 98 minutes long, and are performed at 80-95 percent of a person's estimated maximum heart rate (MPHR). The recovery periods may last equally as long as the work periods and are usually performed at 40-50 percent of a person's maximal heart rate. Total workout time is from 20-60 minutes alternating work with rest periods.

### How to Calculate Maximum Predicated Heart Rate (MPHR)

$$\text{MPHR} = 220 - \text{Age}$$

**How to Calculate Work Period Heart Rate** - During the work period your heart rate should be 80 - 90 percent of your maximum predicted heart rate (MPHR)

$$\text{Target Heart Rate for Intense Work Period} = \text{MPHR} \times 80 - 95\% (.80 - .90)$$

**How to Calculate Recovery Period Heart Rate**- Heart rate should be 40-50 percent of MPHR.

$$\text{Target heart rate for Recovery Period} = \text{MPHR} \times 40 - 50\% (.40-.50)$$

### Why is HIIT so Popular?

HIIT can easily be modified for people of all fitness levels and special needs. The workouts can be employed in all types of exercise modalities: walking, cycling, swimming, aqua training, group exercise classes; just to name a few.

### Benefits of HIIT

- Aerobic and anaerobic fitness
- Helps to support blood pressure control
- Helps to support cardiovascular health
- Helps to support Insulin sensitivity (helps the exercising muscles utilize glucose for fuel to produce energy)
- Helps support blood glucose control
- Helps support and improve cholesterol profiles
- Helps reduce abdominal fat and supports healthy body weight while maintaining muscle mass
- Supports adequate release of growth hormone
- Opioid release “exercise high” supports immune system

## **Safety**

Prior to beginning HIIT training a person is encouraged to establish a base level of fitness described as consistent aerobic training 3-5 times a week for 20-60 minute sessions. Safety in participation should always be a priority and individuals should focus on finding their own comfortable level of training intensity.

## **Intensity of Work Interval**

Heart rate should range 80 - 95% of your Maximum Predicted Heart Rate (MPHR). If using a subjective indicator, the work interval should feel like you are exercising “hard” or “very hard”. The Talk Test is a good tool to use as well. If it is difficult to carry on a conversation that is a good measure of a “hard” or “very hard” work interval.

## **Intensity of Recovery Interval**

The intensity of the recovery interval should be 40-50% of your Maximum Predicted Heart Rate (MPHR). The recovery work should be a physical activity that feels very comfortable in order to help you recover and prepare for your next work interval.

## **Work to Recovery Ratio**

Work to recovery ratio is important. For example, a ratio of 1:1 might be a 3-minute hard work (or high intensity) bout followed by a 3-minute recovery (or low intensity) bout. These 1:1 interval workouts times are 3, 4, or 5 minutes followed by an equal time in recovery.

## **Total Workout Time**

Total workout time is from 20-60 minutes alternating work with rest periods.

## **Frequency of Work Intervals**

HIIT workouts are more exhaustive than steady state endurance workouts. Therefore, a longer recovery period is often needed. Perhaps start with one HIIT training workout a week, with your other workouts being steady state workouts. As you feel ready for more challenge, add a second HIIT workout a week, making sure you spread the HIIT workouts throughout the week.