

SETTING THE CEILING OF THE FAT-BURNING RANGE

Name: _____ Date: _____ Ambient heart rate: _____

A metabolic zone has a ceiling and a floor, delineated by the types of fuels burned. The fat-burning range is a range of heartbeats in which you have plenty of oxygen and thus can readily metabolize fat. To maximize fat burning, you should train within the floor and the ceiling of the fat-burning zone.

The number of calories burned per minute of physical activity determines the burn rate during exercise. The higher the burn rate, the higher the number of calories burned per minute.

The type of activity you do affects your burn rate. Choosing activities that use large muscle groups and that require you to support your body weight result in the highest energy expenditure (EE_{sum}). Body weight also affects burn rate. If you are heavier than someone else, for example, you will have a higher burn rate than that person because you have more body weight, or mass, to move. Body composition also affects burn rate; if you have a higher percentage of lean (fat-free) muscle mass than someone else, your burn rate will be higher.

To exercise within your fat-burning range, you must first know the limits of that range. You learned how to set the floor of your fat-burning range in worksheet 5.6. In this activity, you learn how to set the ceiling, called the anaerobic threshold heart rate, or fatmax.

Instructions

1. Select an activity and warm up, maintaining a low-intensity (zones 1 and 2), constant pace for five minutes.
2. Gradually increase your intensity until you reach the highest heart rate you can sustain for 10 minutes.
3. After holding this heart rate for 10 minutes, quickly slow down for a two-minute active recovery.
4. Now quickly increase your pace or intensity until you reach the same highest heart rate; hold this heart rate for 10 minutes.
5. After completing the second 10 minutes, record your highest heart rate number in your Heart Zones Education Log notes section as your estimated anaerobic threshold. This is the ceiling of your fat-burning range. If you could have sustained a higher heart rate for 10 minutes, add 5 to 10 bpm to the highest heart rate number.

The highest heart rate that you can sustain for two 10-minute workouts with a brief rest between them is your estimated anaerobic threshold heart rate.

Questions

Why is it important to know your fatmax number?

What factors affect your burn rate when you are doing physical activity?

Why do you burn more calories per minute when you have more muscle mass?