

Heart Rate Monitoring for Training Effectiveness

In the spirit of February being named “American Heart Month” by the American Heart Association, I wanted to mention a couple tips on using heart rate to improve training efficiency. *Fitbit* and other health monitoring devices were a hot item this past Christmas and this technology has allowed real time heart monitoring to be far more accessible. With a little bit of body awareness and knowledge your heart rate can provide valuable information regarding whether or not that day would be a good day to train or if a rest day is needed. Furthermore, heart rate monitoring during exercise can also tell you specifically what part of your conditioning you are training.



Energy that your muscles need during workouts is produced from three different systems depending on the intensity of the exercise. You can produce energy aerobically (requiring oxygen) or anaerobically (not requiring oxygen). Anaerobic production can then be further broken down into two distinct systems. Aerobic energy production is far more efficient but takes longer to produce and needs oxygen. Therefore, as the intensity of your exercise increases your body switches to more anaerobic production to get energy to your muscle fibers faster but fatigue sets in as a result, limiting the amount of time you can stay in an anaerobic state. By staying in an aerobic state you can perform longer periods of work at a lower intensity.

By monitoring your heart rate during runs or workout sets you can ensure that you are staying within your most efficient energy system. One form of cardio where this is important is called long slow distance (LSD). These are the high mileage runs that generally last 30 to 90+ minutes. Staying within a heart rate range of 120 to 150 beats per minute for most people will keep you in the aerobic zone and allow you to not fatigue within the first 10 to 15 minutes. Highly trained distance runners can maintain

a heart rate range towards the higher end of that range and possibly beyond. Heart rates below that range will usually not provide the right stimulus for cardiovascular benefits. For athletes who like to perform high intensity interval sets, which produces higher heart rates, it is recommended that your rest sets last long enough that your heart rate returns to under 120 beats per minute. For this type of workout, rest sets are equally as important as the work set. It is important to note that as an athlete ages the heart rate range recommendation can be slightly decreased or towards the lower end of the previously stated range.

Heart rate can also be used to determine days when a rest day would be far more beneficial than running 5 miles on the treadmill. Upon waking, if you notice your heart rate is continually elevated more than normal this could be a sign your body needs a day off. Performing relaxation techniques and providing your body with proper nutrition are important on those days, not another workout. For more serious athletes, new technology is making a different measure of fatigue more accessible. Heart rate variability is a tool similar to the heart rate being used by professional athletes to track training responses even more accurately. As for now, listen to your body. Use your heart rate to not only improve your workout but to decide the best days to do strenuous workouts. And as always, keep moving well.

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