



Anarobic Exercise vs. Aerobic Exercise

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Anyone who has followed the media for training information and advice over the past 30 years has seen a complete paradigm shift in cardio training. Just to clarify, cardio training is any type of training that involves the heart and lungs. During the 80's and most of the 90's aerobic training was considered the superior method for reducing body fat and improving cardiovascular health. But more recently, aerobic training has been vilified in favor of higher intensity anaerobic training methods. The aerobic energy system utilizes oxygen while the anaerobic energy system produces energy in the absence of oxygen. According to what the media has portrayed over the past 30 years, training that relies on one of these energy systems must be a completely wrong training choice since human physiology has remained unchanged for thousands of years. This is a perfect example of the pendulum swinging too far in one direction and then an overreaction causing it to swing too far in the opposite direction. The truth is that both systems are extremely important for energy production, fat loss and overall health. In fact, nearly all training methods will involve both energy systems because they both play critical roles in energy production at all levels of training intensities.

Training Intensities and Adaptations Based on Heart Rate

- 80-100 bpm: Recovery from Training – Easy Walking, Light Activities
- 100-130 bpm: Increases Size of Left Ventricular Cavity, Creates Greater Volume of Blood Pumped per beat, Decreases Resting and Working Heart Rates, Increases the Vascular Network – Brisk Walk, Jogging, Riding a Bike, Most Warm-Up Activities
- 130-160 bpm (possibly up to 180bpm): Increases Power Output of Heart, Increases Thickness of Heart Walls = Stronger Heart – High Intensity Intervals (Metabolic Class)
- 160+ bpm: Approximate Heart Rate where the Anaerobic Energy System begins to dominate, allows for a very high rate of energy production, can only last for about 1 minute – finsher at the end of a training session (Sled Push-Pull, Sprints, Barbell Complex, etc.)

Every individual has their own specific heart rate zones that correspond to different training effects, but you can see the examples of activities above that will put you in that particular training zone. If you recall from my earlier training tips articles, I discussed the effectiveness of higher intensity training for fat loss and how aerobic based work is not very effective in losing fat. All training zones are necessary for optimal health while the higher intensity zones are most beneficial for fat loss. However, aerobic and anaerobic energy systems are interrelated in nearly every training activity. For example, a 25 sec of work/15 sec rest protocol used in Metabolic Class will utilize the anaerobic energy system at higher intensities but the aerobic energy system will also be highly involved throughout the entire training session (especially during the 15 second rest period). I actually consider most of the Metabolic Class to be an aerobic training session (aerobic power training). If it were a true anaerobic session it would consist of an extremely high intensity exercise for 30-60 seconds followed by a necessary 3-5 minutes of total rest!

Although I provided a brief overview of the energy systems and how they relate to the training process, it should be clear that they aren't separate systems (one system just becomes more active than the other based on intensity of work). Furthermore, one energy system is not more important or one is not a bad choice to train as a part of a properly designed program because both play critical roles.