

Heart Rate Zone Training

You've likely heard a lot of heart rate zone training terminology tossed around, so I'm here to help you understand what it means and how you can use it to your advantage. Each of these concepts alone warrants an entire thesis, so I am going to break down the basic components of zone training and give you applicable ways to plug the techniques into your training.

Every runner has two ventilatory thresholds, and unique things happen when you cross over these boundaries. The energy systems your body uses to keep you going will change, and you'll notice significant shifts in your respiratory rate. If you've ever run with a friend who picked up the pace while you suddenly found that holding a conversation became impossible, you know exactly what I'm talking about. You may have even experienced an insurmountable buildup of lactate if you finished your run anaerobically with a sprint or finishing "kick."

Most of the time, your runs will take place below your first ventilatory threshold and well within your aerobic capacity. If you can chat with your friend without feeling short of breath, you know you are in the right zone to train muscular endurance and increase the distance you are able to run. If you start to "push the pace" and your breathing becomes heavy and labored, you are working somewhere between your first and second thresholds and making adaptations that will directly influence the overall capacity of your cardiovascular system as well. You are increasing the capacity of your heart and lungs in addition to strengthening your muscles and bones. Finally, work performed above your second ventilatory threshold is anaerobic (without oxygen) and is good for developing speed over very short distances. Training in each zone will elicit a different set of adaptations, because the imposed stress differs in each case. If you want to run further, spend a lot of time in Zones 1 and 2 (between 60-80% of maximum effort). If you want to run faster, kick it up to Zones 3 and 4 (80-100% of maximum effort).

The best and easiest way to track your heart rate is a [GPS or fitness tracker like a Garmin](#). Based on your 100% maximum heart rate value, you can extrapolate your different zones and use them as a guideline for your workout. Things like stress levels and high temperatures can also increase your heart rate though, so it's important to understand the "feel" of each zone in case your numbers become skewed based on external conditions. Low zone work should feel relaxed and "comfortable", with efforts between VT1 and VT2 feeling "hard, but sustainable." Anaerobic effort just feels agonizing!

The other components of heart rate zone training you've likely been exposed to are things like VO2 max (a measurement of your body's ability to utilize oxygen), heart rate recovery (which determines how quickly you can settle back into a normal pace after charging up a hill) and heart rate variability (a metric that many athletes use to determine how their body responds to or recovers from a tough training session). The list goes on and on, and it's easy to get lost in the weeds with a topic this complex. If you understand what training in each zone feels like, and what adaptations you are making by working in each zone, you have grasped one of the most fundamental concepts in the sport.