

PERFORMANCE 101: How Judge Exercise Intensity and Fitness with RPE (How you Feel)



An easy way to judge exercise intensity and fitness is to use a RPE scale

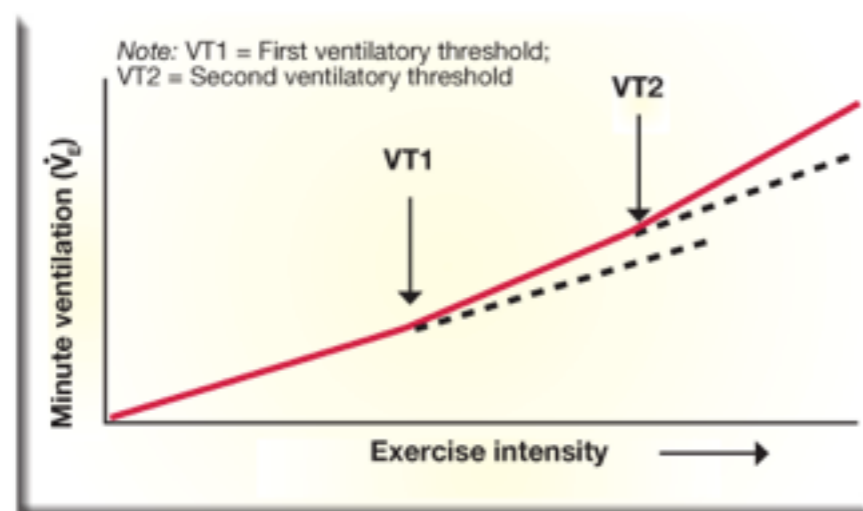
Rated Perceived Exertion (RPE) is a subjective measure of how a person feels during physical activity. It is a great way to judge an activity. It is a total body observation of heart rate, increased breathing, and muscle fatigue. The **RPE** scale runs from 0 – 10. The numbers in the RPE chart relate to phrases used to rate how easy or difficult you find an activity (cardiovascular, strength, sport, etc). An easy way to understand if you are getting fitter after training for sometime is to evaluate if the same activity at the same level has the same RPE. If the RPE is lower you are getting fitter. Example: Walking at 4 mph at 5% grade was a RPE of 6 (DIFFICULT) and now is an RPE of 4 (SOMEWHAT HARD). This difference suggests that you are now fitter. Most people who are unfit do not have the tolerance to reach an RPE of 6. HIIT areas Yellow and Orange. Max is Red.

RPE	Talking	Breathing	%VO Max
1	Normal	Normal	35
2	Normal	Normal	45
3 Moderate	Easy	Comfortable	55
4 VT-1 Somewhat Hard	Somewhat Difficult	Noticeable	65
5-VT2 Hard	Difficult	Deep but Steady	75
6-VT2	Difficult-Very Difficult-Lactic Acid Burn	Deep and Somewhat Rapid	85
7-VT3	Very Difficult	Deep and Rapid	90
8-VT3	Extremely Difficult	Very Deep and Very Rapid	95
9	No	Very Deep and Very Rapid	98
10	Impossible	Breathlessness	100

MORE DETAILS about the RPE chart: WHAT IS THE DIFFERENCE BETWEEN VT1, VT2 AND VO2 MAX? VT1 is called the First Ventilatory Threshold. It is a marker of intensity that can be heard in a person's breathing at a point where lactate begins to accumulate in the blood. As the intensity of the exercise begins to increase, VT1 can be identified at the point where the breathing rate begins to increase. A person who is at VT1 can no longer talk comfortably while exercising. VT2 is called the Second Ventilatory Threshold. It is a higher marker of intensity that can also be heard in the person's breathing. At VT2, the lactate has quickly accumulated in the blood and the person needs to breath heavily and can no longer speak at this intensity. At this point, the exercise duration will also decrease due to the intensity level. This marker can also be called the anaerobic threshold or lactate threshold. VO2 max is the maximal consumption of oxygen. VT3 occurs just before VO2 Max. It is the maximum capacity of the body to transport and use oxygen during exercise and reflects a person's physical fitness. Measuring VO2 max is a laboratory procedure that requires equipment to measure the amount of oxygen consumed and the amount of carbon dioxide expelled. This test will take an individual to the absolute maximum exercise intensity that he or she can achieve; maximum heart rate can also be measured at this point. A reconditioned individual has a lower VO2max than someone who is conditioned. As an individual becomes more conditioned, his or her VO2 max will increase. A sedentary person will reach VT1, VT2 and VO2max at a much lower intensity of exercise than a more physically active person. For example, an extremely reconditioned person may reach his or her VT1 just while walking. Conversely, a more conditioned person will reach these markers at a higher intensity of exercise. For example, he or she may reach VT1 at a running speed of 6 miles per hour.

TRAINING: You can use the RPE chart in your training. If you want to do high intensity interval training then you should work between VT-1 (somewhat difficult) and into VT-2 (difficult-very difficult) for the high portion of the interval. During the recovery portion work between a 2-3 RPE. You can see based on the chart when you are doing HIIT your breathing can become shallow and rapid.

Figure 2
Ventilatory response to increasing exercise intensity



Ratings of perceived exertion (RPE) correlate fairly well with this three-zone model:

- “moderate” to “somewhat hard” (RPE = 3–4, 0-to-10 scale) below VT1
- “hard” (RPE = 5–6, 0-to-10 scale) between VT1 and VT2
- “very hard” to “extremely hard” (RPE = 7–10, 0-to-10 scale) above VT2 VT3