

How to Gauge the Intensity of Your Workout



Why is this important?

Exercising at the correct intensity can help you get the most out of your workout session. If you are working out at an intensity level that is too low, it will prevent you from reaching your goals. If you are working out at an intensity level that is too high, too often, you can be doing more damage than good. You need to know if your heart rate or level of perceived effort is too low or high, and increase or decrease the intensity accordingly.

Gauging using Heart Rate

One method used to gauge the intensity of your workout is using a target heart rate zone. Your target heart rate zone is the level at which your heart is being exercised and conditioned but not overworked.

The first thing you need to know is your max heart rate. Your max heart rate is the upper limit of what your cardiovascular system can handle during the most intense exercise.

- Max heart rate = $220 - \text{your age}$. *

*This formula is an estimation and if your health depends on a truly accurate assessment of your maximal heart rate, contact your physician to schedule specialized testing.

The second thing you need to know is your desired exercise intensity range. An average intensity range is between 50-85%, and varies depending on your health status and training goals. If you are beginner, your percentages should hover around the lower end (50%), while someone with more experience should be towards the higher end of the range (85%) and maybe even higher.

Once you know these two, you can calculate your desired target heart rate zone.

- Target heart rate zone= Max heart rate (desired exercise intensity %)
 - Example: $(220 - \text{age}) \cdot 0.5$ and $(220 - \text{age}) \cdot 0.85$

Gauging using Heart Rate Reserve (HRR)

Another method used to gauge the intensity of your workout is using heart rate reserve. Heart rate reserve is the difference between your resting heart rate and max heart rate. If you are familiar with using the target heart rate zone method but want a more accurate calculation, this is a great method to use. Like the previous method, you need to know your max heart rate ($220 - \text{age}$) and your desired intensity range (between 50%-85%). But in addition, you need to know your resting heart rate, which is the number of times your heart beats per minute while it is at rest.

- $\text{HRR} = (\text{Max HR} - \text{Resting HR}) (\%) + \text{Resting HR}$

Gauging using Rating of Perceived Exertion/ Borg Scale

Another useful method used to gauge intensity is using rating of perceived exertion (RPE). Your perceived exertion is a subjective measure of how hard the physical activity feels while you are exercising. RPE provides a valuable and complementary guide to heart rate in gauging workout intensity. You can rate your perceived exertion by using a scale of 1 to 10 (modified Borg scale). If you feel that you are at a rating of 9 or 10, you should bring down the intensity or stop immediately, unless you are an athlete or familiar and experienced with your body's response to high-intensity exercise.

Note: When it comes to higher-intensity exercise, how you *feel* during exercise is more important than what your heart rate monitor says. For example, if you feel like you are a 8 or 9 on the RPE scale but your heart rate is on the lower side, you should not ignore your level of perceived exertion.

Perceived Exertion Chart	
10	Very Very Hard Activity Completely out of breath, unable to talk
9	Very Hard Activity Can speak only one word at a time
7-8	Hard Activity Out of breath, can speak a sentence or two
4-6	Moderate Activity Can still carry a conversation
2-3	Light Activity Breathing is easy
1	No Activity

How do I figure out my HR during exercise?

- Many machines such as the treadmill, bike and elliptical have sensors on the handle bars that can detect your heart rate and display it on the screen
- You can use a fitness tracker such as a Fitbit
- You can take your pulse on the inside of your wrist (thumb side) for 30 sec and multiply by 2
- A heart rate monitor chest strap is typically very accurate if used as directed. Be sure to follow cleaning and maintenance instructions to prolong the life of the device. The YMCA's equipment is compatible with Polar heart rate monitors.

Start easy and progress

During your beginning weeks, work out at the lower end of desired intensity level, about 50-70%, depending on your current health status and level of fitness. As you continue to work out over time, gradually build up to the higher end of your target heart rate zone, about 70-85%. Remember to always listen to your body!

Important Note: Make sure to consult with a doctor if you are on high blood pressure medications or have a heart condition to discuss a proper target heart rate zone to meet your individual needs.

Reference:

<http://www.acsm.org/public-information/articles/2016/10/07/the-heart-rate-debate>

http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Target-Heart-Rates_UCM_434341_Article.jsp#.WBEk1o8rLIU