Determining Exercise Intensity

How hard should you be working?
Exercise Intensity means how hard you are working. The benefits you receive from exercise are directly related to the level at which you work. That's why it's important to evaluate your exercise intensity.
Use the methods below to determine your exercise heart rate.

**LEVELS OF INTENSITY**

- **Light Activity**: Almost unnoticeable changes to breath and heart rate.
- **Moderate Activity**: Small increases to breath and heart rate.
- **Vigorous Activity**: Large increases to breath and heart rate.

*Hint*: Use the methods below to determine your exercise heart rate.
**MEASURING INTENSITY**

01 **Talk Test**

- If you are performing light activity you should be able to sing while doing the activity.
- If you are performing moderate level activity you should be able to carry on a conversation.
- If you are performing high level or vigorous activity you should feel winded and out of breath.

02 **Rate of Perceived Exertion (RPE)**

RPE is a scale appropriate for all individuals and subjectively allows individuals to determine their level of intensity. If done well it can correlate to an individual’s heart rate.

The suggested level of RPE for moderate intensity exercise is between 11-13.
Calculate your target heart zone. To do so you will need to use the Karvonen formula. We will walk you through the steps.

Before starting you will need to determine your resting heart rate by taking your pulse before you get out of bed in the morning. This can be taken by gently placing your middle and index finger on your wrist or neck. Count your pulse for 10 seconds and multiply by 6.

### 4 Steps to Calculate Target Heart Rate Zone

1. **Step 1**
   
   - $\text{Max Heart Rate (MaxHR)} = 220 - \text{your age}$

2. **Step 2**
   
   - $\text{HR reserve} = \text{MaxHR} - \text{resting HR}$

3. **Step 3**
   
   - $\text{HR reserve} \times ___\% = \text{of HR zone}$

4. **Step 4**
   
   - $\text{Low end of HR zone} + \text{Resting HR} = \text{Low end of your target training zone}$
   
   - $\text{High end of HR zone} + \text{Resting HR} = \text{High end of your target training zone}$

- $\text{HR reserve} \times 40\% = \text{low end of HR zone for moderate intensity exercise.}$
- $\text{HR reserve} \times 60\% = \text{high end of HR zone for moderate intensity exercise.}$
- $\text{HR reserve} \times >60\% = \text{vigorous exercise intensity}$
Meet Joe.

Joe is 20 years old.

Joe has a resting heart rate of 60 bpm.

Joe wants to workout at a moderate intensity level so he can get the most benefit out of his workout. This is how Joe will calculate how hard he should work.

1. $220 - 20 = 200$ (MaxHR)
2. $200 - 60 = 140$ HR Reserve
3. $140 \times .40 = 56$
   $140 \times .60 = 84$
4. $56 + 60 = 116$
   $84 + 60 = 144$

Example

Joe calculates his Exercise Heart Rate Zone

Joe feels like his workout started fairly light at an 11 but now he is able to keep it at a somewhat hard pace or a 13 for the rest of his workout.

Joe is able to carry on a conversation with his friend while he exercises but when he tries to sing the lyrics to his favorite song he finds he is unable to.
Precaution should always be taken when beginning and exercise program. Be sure to check with your doctor if you have any concerns.