

## Heart Rate and Rate of Perceived Exertion

Determining optimum and healthy cardiovascular exercise is something we need to consider before beginning an exercise program and there are two factors we rely upon to determine these factors. They are Heart Rate and Rate of Perceived Exertion. A huge factor to consider is heart rate during your aerobic exercise. The question I am frequently asked as a personal trainer is: "What should my heart rate be during exercise?" The answer is both simple and complicated. It takes a little figuring out and just a little bit of math. First of all, you need to figure your resting heart rate which is usually a beat a minute or a little more than that depending on your age. In general young persons have a fast heart rate which is around 80 to 100 beats per minute. As a general rule of thumb consult with your doctor before beginning any exercise program and determining heart rate. There are three phases of typical cardiovascular exercise: the warm up, the cardiovascular output, and the cool down. When you begin exercise you should slowly increase your heart rate (warm up). The cardiovascular output is when your heart rate should be in between 65-85% of your maximum heart rate. "What is your maximum heart rate?" you ask. Well this is where your calculation comes in to play. Your maximum heart rate should never exceed 220 minus your age. If you are 25 years of age your maximum heart rate should not exceed  $220 - 25 = 195$  beats per minute. And don't forget the cool down or the last 5 minutes of exercise in which you bring your heart rate down. To burn calories most efficiently you need to exercise for 20-30 minutes at 65-85% maximum heart rate. So the 25 year old client would ideally keep his or her heart rate in between 126-165 beats per minute for 20-30 minutes of exercise. To calculate this number the formula is 220 minus your age and then multiply that number by .65 for the lower number and multiply it by .85 for the higher number. The calculation for the 25 year old client looks like this:  $(220 - 25 = 195 \times .65 = 126 \text{ bpm})$  and  $(220 - 25 = 195 \times .85 = 165 \text{ bpm})$  Today's cardiovascular equipment at a gym or ones you may use at home have heart rate sensor's that detect your heart rate by holding on to them while exercising. Some of the equipment will even tell you if you are working hard enough or too hard because it has asked for your vital statistics before you began exercising and will calculate the numbers accordingly. Sometimes this can be a deterrent because it does not accommodate for those who can work harder or those who have to work less hard because of individual circumstances. I often create cardiovascular activity for my clients so they can work harder from time to time and will often reach their maximum heart rate for a minute or so during their program. This happens when you perform interval training. During an interval of one minute or so you will work hard enough to reach higher than 85% of your maximum heart rate and possibly even reach your maximum heart rate. I highly recommend that you do not exceed your maximum heart rate during your interval. Once you finish your interval bring your heart rate down by taking deep breaths and slowing down the activity. You can rapidly bring your heart rate down by taking deep breaths and slowing down the activity. Whatever you do, do NOT stop activity altogether as this creates a hazardous condition and could cause faintness and in extreme conditions a heart attack. Another way you can monitor your cardiovascular activity is called Rate of Perceived Exertion or RPE. RPE is used as a means to quantify the subjective feelings of the intensity of exercise. The scales describe a range of intensity from resting to maximal energy outputs and are used as a visual aid to exercisers in keeping their efforts in the effective training zone. The ratings range from 6-19 and are rated as follows:

6-8 Very, very light

9-10 Very light

11-12 Fairly light

13-14 Somewhat hard

15-16 Hard

17-18 Very hard

19 Very, very hard

\*Source: ACSM Guidelines for Exercise Testing and Prescription Ideally you'd like to keep the RPE in between 9-16 for at least 20-30 minutes of your aerobic exercise. Remember you need 5 minutes warm up time and 5 minutes of cool down time making your total exercise time 30-45 minutes long. It is important to note that when exercising in the water RPE is the most effective means to determine effective training zones. The reason is because heart rate is affected differently in the water than it is on land. The reason we rely on heart rate and RPE is to determine optimum, healthy exercise. Always warm up and cool down before and after your cardiovascular activity. The preferred time for cardiovascular activity is 20-30 minutes 3-5 times per week at 65-85% of your maximum heart rate, which is 220 minus your age. Always consult with your doctor before beginning any exercise program. Individual differences vary depending upon the status of your health.

## About the Author

Introduction to the Official Web site of the International Sivananda Yoga Vedanta Centers. Lots of information on Jnana Yoga, Bhakti.

Source: <http://www.productsherbal.com>