



# LABORATORY 3.3

Name \_\_\_\_\_ Date \_\_\_\_\_  
Instructor \_\_\_\_\_ Section \_\_\_\_\_

## Determining Target Heart Rate

Practice taking your heart rate at both the carotid and radial locations. You can feel the carotid pulse next to the larynx, beneath the lower jaw. The radial pulse is located on the inside of the wrist, directly in line with the base of the thumb. Use a stopwatch to count for 15, 30, and 60 seconds. To determine your heart rate in beats per minute (bpm), multiply your 15-second count by 4, and your 30-second count by 2.

Try locating and taking the heart rate of a classmate at both the radial and carotid locations. Record your resting pulse counts in the spaces provided.

Carotid Pulse Count (self)		Heart Rate (bpm)	Radial Pulse Count (self)		Heart Rate (bpm)
15 seconds	× 4	Calculate		× 4	Calculate
30 seconds	× 2	Calculate		× 2	Calculate
60 seconds	× 1	Calculate		× 1	Calculate

Carotid Pulse Count (partner)		Heart Rate (bpm)	Radial Pulse Count (partner)		Heart Rate (bpm)
15 seconds	× 4	Calculate		× 4	Calculate
30 seconds	× 2	Calculate		× 2	Calculate
60 seconds	× 1	Calculate		× 1	Calculate

The target heart rate (THR) range is calculated in steps.

**STEP 1: Calculate your estimated maximal heart rate ( $HR_{max}$ ).**

$$HR_{max} = 206.9 - (.67 \times \text{age})$$

**STEP 2: Calculate your heart rate reserve (HRR) by subtracting your resting heart rate from your  $HR_{max}$  (use the 60-second count from above).**

$$HRR = HR_{max} - \text{resting heart rate}$$

$$HRR = \underline{\quad} - \underline{\quad}$$

$$HRR = \underline{\quad}$$

**STEP 3: Calculate 50% and 85% HRR (use decimal values).**

$$\text{Lower end of THR} = 0.5 (HRR) = \underline{\quad}$$

$$\text{Upper end of THR} = 0.5 (HRR) = \underline{\quad}$$

**STEP 4: Add your resting heart rate back to these values.**

$$50\% \text{ HRR} + \text{resting heart rate} = \underline{\quad}$$

$$85\% \text{ HRR} + \text{resting heart rate} = \underline{\quad}$$

$$\text{THR} = \underline{\quad} \text{ bpm to } \underline{\quad} \text{ bpm}$$

Scan to view demonstration videos of locating the radial and carotid pulses. ▶



radial pulse



carotid pulse

- Which of the resting pulses did you find easiest to locate on yourself?  
\_\_\_\_\_ Carotid \_\_\_\_\_ Radial
- Which resting pulse was easiest to locate on your partner?  
\_\_\_\_\_ Carotid \_\_\_\_\_ Radial
- Which of the two locations would you prefer to use when counting exercise heart rate?  
\_\_\_\_\_ Carotid \_\_\_\_\_ Radial  
Why? \_\_\_\_\_

To submit the completed lab, save the form to your computer and email it to your instructor or upload it to their digital dropbox as directed.