Name/Title: **Calculating Heart Rate Zone Properly**

Purpose of Event: To incorporate technology to assess if students are taking their heart rate accurately.

Suggested Grade Level: 4-5

Materials Needed: Enough stations in the gym that the class is divided into groups of three, Strapless Heart Rate Monitor.

Description of Idea

This is best done when class is rotating through fitness stations and the class is divided into groups of three. The station before the Heart Rate (HR) station should be able to elevate the students HR to 65 to 85% max HR. We do the shuttle run as the station immediately prior to the HR station, and it works well.

After the shuttle run or other cardio station the students immediately come to the teacher at the HR station. Using their index and middle finger students find their carotid artery which is located on their neck, below the chin and between the throat and the side of the neck.

Ask the students if they are able to feel their pulse. If a students can't feel their pulse help direct them to their carotid artery. Using a stopwatch have the students count their pulse for 30 seconds then double the number of beats to find beats per minute (BPM). Record the results.

Show the students how to use the strapless Heart Rate Monitor (HRM). The back of the HRM watch touches one wrist and the finger from the other hand touches the watch face on the indicated HR area. Give students the HRM and record results from HRM next to what the students calculated when counting their pulse.

You now have the data to assess how well they calculated their HR. (I did this lesson with some classes before purchasing the HRM. Some of the students calculated heart rates that could not have been accurate. This prompted me to buy a HR monitor for them to use. It was amazing how much better the students calculated their HR when they knew that they were going to check it with a HRM afterwards.) Have the students compare the HR they recorded manually with the HR reading from the HRM.

Next students put their BPM into a HR zone chart to see if they are working in their target HR. If students were in their target HR zone let them know that this is how they should feel when they are getting a good workout. If they were too high or too low ask them how they could modify the workout to get into the target zone next time.

Estimated Maximum Heart Rate is 220 minus your age.
For Example: A 55-year-old would have the following calculation for Max Heart Rate:

220 – 55 years = 165 beats per minute, or bpm
To calculate the target heart rate zone (65-85%):
Max heart rate x target % = Target Heart Rate
165 x 65% (or .65) = 107 bpm
165 x 85% (or .85) = 140 bpm
This person's target heart rate zone is 107 bpm to 140 bpm.

Teaching Suggestions:

There are many target HR zone graphs like the one in the video available online. Choose one that you like to include in your lesson.

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Thanks for contributing to PE Central! **Posted on PEC: 11/7/2013**.