## Visualizing and Predicting Heart Diseases with an Interactive Dash Board

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## **Exploration Of Max Heart Rate During The Chest Pain:**

### **Average Max Heart Beat Achieved during Chest Pain:**

Here we are plotting the average Max Heartbeats recorded for a person based on Gender and Chest Pain Type.

For moderate-intensity physical activity, your target heart rate should be between 64% and  $76\%^{1,2}$  of your maximum heart rate. You can estimate your maximum heart rate based on your age. To estimate your maximum age-related heart rate, subtract your age from 220. For example, for a 50-year-old person, the estimated maximum age-related heart rate would be calculated as 220 - 50 years = 170 beats per minute (bpm). The 64% and 76% levels would be:

• 64% level:  $170 \times 0.64 = 109$  bpm, and

• 76% level:  $170 \times 0.76 = 129 \text{ bpm}$ 

This shows that moderate-intensity physical activity for a 50-year-old person will require that the heart rate remains between 109 and 129 bpm during physical activity.

For vigorous-intensity physical activity, your target heart rate should

be between 77% and 93%  $^{1,2}$  of your maximum heart rate. To figure out this range, follow the same formula used above, except change "64 and 76%" to "77 and 93%". For example, for a 35-year-old person, the estimated maximum age-related heart rate would be calculated as 220 - 35 years = 185 beats per minute (bpm). The 77% and 93% levels would be:

- 77% level:  $185 \times 0.77 = 142$  bpm, and
- 93% level:  $185 \times 0.93 = 172 \text{ bpm}$

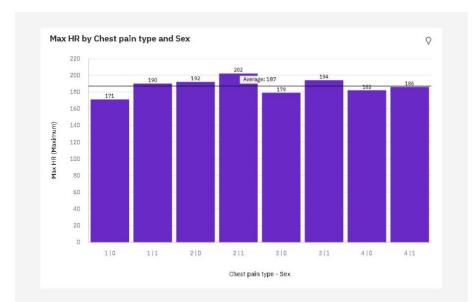
This shows that vigorous-intensity physical activity for a 35-year-old person will require that the heart rate remains between 142 and 172 bpm during physical activity.

# Maximum and Target Heart Rates by Age

Age	Maximum	Target
	Heart Rate	Heart Rate
20	200	100 - 170
30	190	95 – 162
35	185	93 – 157
40	180	90 – 153
45	175	88 – 149
50	170	85 – 145
55	165	83 – 136
60	160	80 – 136

## pinkribbonrunner.com

<sup>\*</sup>calculated based on information from the American Heart Association



#### Details

The total number of results for Max HR, across all chest pain type - sexes, is 270.

The most common value of **Chest pain type - Sex** is 2|1, occurring 129 times, which is 47.8 % of the total.

The largest value of  ${\bf Max\ HR}$  is 1, occurring when  ${\bf Chest\ pain\ type\ - Sex}$  is 1|0.