

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 $220 - 50 \text{ years} = 170 \text{ beats per minute (bpm)}$. The 64% and 76% levels would be:

- 64% level: $170 \times 0.64 = 109 \text{ bpm}$, 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 $220 - 35 \text{ years} = 185 \text{ beats per minute (bpm)}$. The 77% and 93% levels would be:

- 77% level: $185 \times 0.77 = 142 \text{ bpm}$, 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 Heart Rate	Target 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

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**calculated based on information from the American Heart Association*