

# **Visualizing and Predicting Heart Diseases with an InteractiveDash Board**

Team ID: PNT2022TMID02974

Faculty Mentor:

Ratheeshkumar AM

Team Leader: L Preethi

Team Member: S R Kanimozhi

Team Member: V Kaviya

Team Member: V OviyaSvapna

## **Maximum Heart Rate In Existing Heart Disease By Exercise Angina**

**Talk to your doctor.** Before starting any type of exercise program when you have chronic angina, talk to you doctor. They will be able to give you the clearance to exercise and also give you safety tips.

- Before starting to exercise, ask your doctor if regular physical activity is safe and appropriate for you. Although exercise can help improve angina in many patients, this isn't true for everyone.
- Ask you doctor what types of exercise are best for you. Are you allowed to do cardiovascular exercise? Should those exercises be low intensity or can you do more moderate or high intensity exercises?
- Ask you doctor about what signs and symptoms are dangerous. For example, if you experience chest pain while walking on the treadmill, what should your plan of action be?

**Track your heart rate during exercise.** Tracking your heart rate may be a beneficial practice when you're exercising with angina. It can give you an idea of how hard your heart is working.

- Purchase a heart rate monitor for yourself. You can choose to get a wrist band or watch monitor, however it's best to purchase a chest strap monitor. These are the most accurate.
- When you first start an exercise program after being diagnosed with angina, it's typically recommended to do low intensity exercises that keep your heart rate at about 50% of your maximum heart rate.
- To find your maximum heart rate, subtract your age from 220. For example, if you're 60 years old, your maximum heart rate would be 160 beats per minute.

- Using your heart rate tracker, keep your heart rate right at 50% during your exercise routine. In this example, you'd aim for your heart rate to be around 80 beats per minute.
- If cleared by your doctor, you can slowly build up your aerobic endurance and increase to 60 or 70% of your maximum heart rate. However, don't aim to reach your max heart rate during exercise.
- People with angina can adapt to exercise in a way that allows them to improve their exercise performance. Sometimes, you can take nitroglycerin to improve your exercise performance, but also, sometimes the exercise by itself helps you adapt.

**Consider starting with a cardiac rehab program.** If you have been just diagnosed with angina, your doctor may suggest attending a regular cardiac rehab program. These are great medically supervised programs that can help you get back into regular exercise.

- A cardiac rehab program is provided on an outpatient basis to those who have suffered from a cardiac event or have chronic cardiac conditions. They are designed to help improve fitness levels while reducing symptoms and side effects.

**Start with short bouts of low intensity exercises.** Many people that have angina, are at lower fitness levels. This may especially be true if you've been required to take several weeks or months off from your exercise routine when you were initially diagnosed.

- If you are trying to recover and rebuild your cardiac strength and endurance, it's recommended to start with short bouts of lower intensity exercises.
- Restarting with higher intensity exercises, or trying to go for a longer period of time could cause symptoms to reoccur or for your condition to get worse.
- Aim to start with just 15-20 minutes of low intensity activity each day. If this feels too easy, increase the time to 25-30 minutes the next day, but do not increase the intensity.

**Choose exercises that are low in intensity like walking, water walking, cycling or using the elliptical.**

- As your endurance gets better and your fitness improves, you can very slowly increase first the length of your exercises and then the intensity as well.
- These exercises can increase your heart rate, but you are in full control of how high your heart rate increases during your exercise routine.