

# Percutaneous Coronary Intervention (PCI) Education

## **What is Percutaneous Coronary Intervention (PCI)?**

PCI is a minimally invasive procedure used to open blocked arteries of the heart. This will allow blood to flow through the artery and supply oxygen to the muscles of the heart.

## **How is the procedure performed?**

A small puncture is created, commonly in the wrist or groin for a catheter to enter. This catheter is then guided to the heart, where a balloon on the tip of the catheter is inflated to help open the narrowed arterial wall. A small wire mesh (stent) is then positioned to keep the artery open.

## **Post procedure precautions**

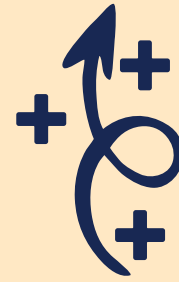
Immediately after the procedure, you will be instructed to rest in bed completely to minimise risk of bleeding at the puncture site. For the next 1 month, there are precautions (unless otherwise advised by your doctor) you must adhere to. This is to ensure that your heart gets adequate time to recover.

- No heavy lifting
- No climbing stairs or walking up slope
- No driving

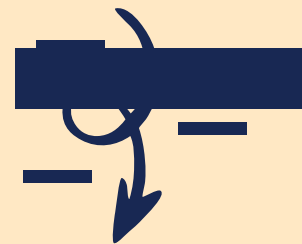
During this period, you are encouraged to engage in light walking exercises.

## How does exercise benefit your heart?

- Increase HDL (good) cholesterol levels
- Maintain healthy weight range
- Improve blood pressure control
- Improve blood sugar control
- Improve ability to perform daily activities



- Reduce LDL (bad) cholesterol levels
- Reduce recurrence of a heart attack
- Reduce complications of heart disease
- Reduce obesity
- Reduce anxiety and depression



### Important

For the 1st month after the PCI, you are encouraged to keep your activities and walking between light to moderate intensity. Exercise intensity refers to how hard your body is working during physical activity. The following pages will explain the various methods you can use to determine the intensity of your activity.

# 1. Rate of perceived exertion (RPE) scale

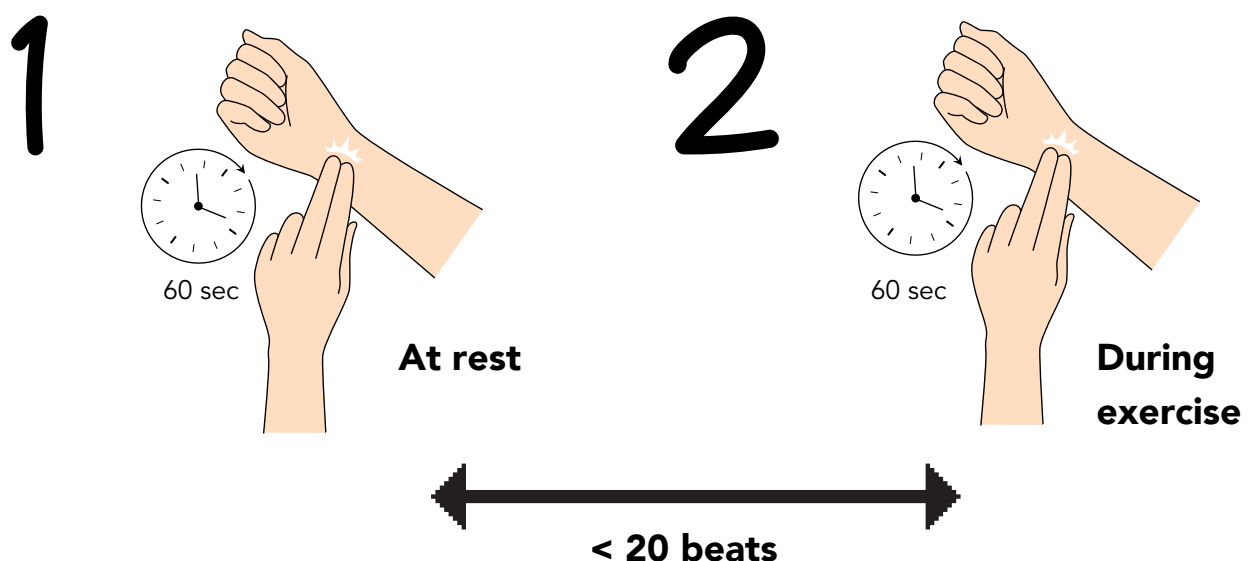
0	Nothing at all	Able to maintain a conversation or sing with no breathlessness or sweating			
0.5	Extremely weak (Just noticeable)				
1	Very weak				
2	Weak(light)				
3	Moderate			Able to maintain a conversation with some breathlessness or sweating	
4					
5	Strong (heavy)	Only able to speak a short sentence			
6					
7	Very strong				
8		Only able to say a few words			
9					
10	Extremely strong (almost maximal)				
	Maximum				

## 2. Talk test

Intensity	Talk Test	RPE
Light	You are able to talk and sing during the activity.	1 - 2
Moderate	You are able to talk but unable to sing during the activity.	3 - 4
Vigorous	You are only able to speak a few words but unable to sing during the activity.	5 and more

## 3. Calculating heart rate

Another simple way to gauge if your exercise is of sufficient intensity is to check your heart rate. It is recommended that your heart rate during exercise does not exceed more than 20 beats from your resting heart rate. You may either manually count your heart rate (as shown in the diagram below) or use a fitness tracker.



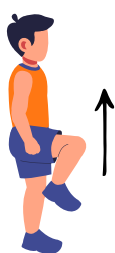
## Ensuring a safe exercise programme

### (a) Before exercise

Warm up is important as it helps to gradually increase your heart rate, and blood flow to your muscles.

This helps to prepare the body for increased demand during exercise and minimises your risk of developing injuries during exercise. Here are some warm up exercises you can consider!

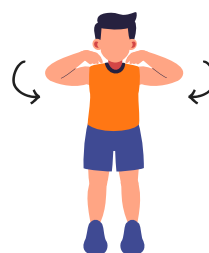
- Avoid exercising if you are unwell.
- Exercise either before or at least an hour after a meal.



Static marching



Neck stretch



Shoulder rolls





























### (b) During exercise

You are encouraged to perform a simple walking program during the first 4 weeks after a PCI. For the first 2 weeks, you may start off with 5 minutes of walking, 2 - 3 times a day. It is recommended to keep your RPE between 1 to 2 i.e., light intensity.

If you are able to tolerate this intensity well, you may gradually increase your RPE to be between 2 to 4 i.e., light to moderate intensity for the next 2 weeks. You may also increase the duration of your walk by 2 or 3 minutes.

If you have been sedentary prior to the PCI, be sure to start slow and give yourself adequate rest breaks as required.

This table will help you keep track of your activity through the week.

	<b>Exercise Frequency</b> -Shade the hearts for every day you exercise! Track your progress!						
<b>Week 1</b> Time: _____	 Mon	 Tues	 Wed	 Thurs	 Fri	 Sat	 Sun
<b>Week 2</b> Time: _____	 Mon	 Tues	 Wed	 Thurs	 Fri	 Sat	 Sun
<b>Week 3</b> Time: _____	 Mon	 Tues	 Wed	 Thurs	 Fri	 Sat	 Sun
<b>Week 4</b> Time: _____	 Mon	 Tues	 Wed	 Thurs	 Fri	 Sat	 Sun

\* Your physiotherapist will help you determine your walking duration

**STOP** exercising if you are feeling any of the following symptoms.



Nausea/vomiting



Shortness of breath



Giddiness



Cold sweats



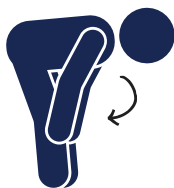
Chest discomfort

If symptoms do not resolve with rest and/or GTN, call **995**.  
 If your symptoms resolve with GTN, proceed to your nearest emergency department for further workup.

### (c) After exercise

Be sure to perform cool down exercises is important as it aids in muscle recovery and promotes the gradual return of heart rate and blood pressure.

Here are some cool down activities you can do!



Hamstring stretch



Tricep stretch



Quadricep stretch

### What happens after the 1st month of PCI?

If your healthcare team decides that you are medically safe to progress your exercise regime, you will be enrolled into an outpatient Cardiac Rehabilitation Programme. At this programme, you will be taught how to exercise safely under the close guidance of a physiotherapist. Through that you would be able to improve your heart function and gradually return to the activities you love doing e.g., sports, travelling, caring for your young children.

For more advice, consult your doctor or physiotherapist.

Contributed by Physiotherapy, Rehabilitation, Allied Health Services

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