

INTRODUCTION

Exercise is an important part of a healthy lifestyle. It can:

- make a person's body and mind function better.
- have positive effects on a person's overall sense of health.
- improve a person's physical activity level.



- ward off or limit health problems like coronary heart disease, diabetes, high blood pressure and high cholesterol.

This brochure aims to help you find the right balance and approach to exercise that suits your congenital heart condition. Having a heart defect should not stop you from being active and participating in sports, as long as you do it wisely.

Overall risk of death in congenital heart disease patients related to exercise is small.

YOUR HEART IS SPECIAL

There are many types of congenital heart conditions that can limit our exercise ability and **you need to be familiar with your diagnosis**. It will be a good indicator to decide what level of activity and what kind of sports you can participate in.

Speak to your doctor about the sport or activity that you intend to take up. He can advise you based on your medical history and/or arrange an exercise test for you. The exercise test will help him gauge the level of activity suitable for you. He may refer you to a physiotherapist to advise you on the exercises suitable for you. Remember, every individual is unique and different. What is suitable for others may not be suitable for you.

A FEW POINTERS TO NOTE

- You are the best judge on how much you can do
- It is good to start slowly, especially if you have been inactive
- Walk and talk rule – slow down on your exercise if you cannot walk and talk at the same time
- Find out what is your target heart rate (ask your doctor)
- Have your doctor or physiotherapist to guide your sports instructor (if you have engaged one)

AREAS OF CAUTION

- Never hold your breath while exercising
- Watch your heart rate while exercising especially if you are prone to arrhythmias
- Try to avoid excessive fluid loss by replacing them adequately when you perspire
- Avoid exercising for at least half an hour after taking a medicine that lowers your blood pressure
- Do not engage in any activities that may cause bruising if you are on a blood thinner e.g. Warfarin
- Avoid contact sports
- Avoid competitive sports except in very mild and uncomplicated congenital heart disease. Seek advice from your doctor

If you have any of the conditions listed below, you should restrict yourself to mild intensity sports or no sports at all:

- Moderate to severely narrowed heart valves
- Weak pumping chambers (ventricle)
- Severe pulmonary hypertension
- Most cyanotic patients (blue)
- Some "Mustard" or "Fontan" patients

***Avoid contact sports and Isometric exercises if you have:

- Marfan Syndrome
- Others diseases with dilated aorta e.g. Bicuspid aortic valve

***No contact sports for patients on Warfarin

CLASSIFICATION OF EXERCISE

Exercise can be classified into:

- Aerobic activities - activities that work your heart and lungs. If you can carry on a conversation while you are exercising, you are at an aerobic level.
- Anaerobic activity - Anaerobic activity is usually of higher intensity and is thus more stressful to tissues and the cardiovascular system.
- Isokinetic exercises - when a muscle contracts through much of its full range of motion, such as the arm muscles when throwing a ball and the leg muscles when running.
- Isometric exercises - When the muscle is contracting without moving, such as when straining to lift a heavy weight or pushing a heavy piece of furniture. An increase in blood pressure, which stresses the heart and aorta, is greater with isometric exercise.
- Contact or non-contact depending on the risk collision the sport involves.

Most exercises and athletic activities involve combinations of isokinetic and isometric muscle work and aerobic and anaerobic energy use. Below is a table that classifies different sports accordingly

| | |
|--|--|
| High Contact: High intensity | Basketball, boxing, field hockey, football, martial arts, skiing (water), soccer |
| Limited Contact: High Intensity | Baseball, bicycling (intense), gymnastics, horseback riding, skating (ice & roller), softball, squash, volleyball |
| Non-Contact: High Intensity | Aerobic dancing (high impact), running (fast), weightlifting |
| Non-Contact: Moderate Intensity | Aerobic dancing (low impact), archery, badminton, bicycling (leisurely), jogging, swimming (leisurely), table tennis, tennis |
| Non-Contact: Low Intensity | Golf, bowling, riflery, walking |

DISCLAIMER

This information is given as a guide only and does not replace medical advice from your doctor. You should seek the advice of your doctor before starting any treatment or if you have any questions related to your health, physical fitness or medical condition.

National University Hospital
5 Lower Kent Ridge Road
Singapore 119074
Appointment line: 6772 5730
www.thi.nhg.com.sg

 A member of National Healthcare Group
Adding years of healthy life

A GUIDE TO SPORTS AND ADULT CONGENITAL HEART DISEASE ADULT CONGENITAL HEART DISEASE PROGRAMME



THE HEART INSTITUTE
NATIONAL HEALTHCARE GROUP

The Heart Institute @ Alexandra Hospital • National University Hospital
Tan Tock Seng Hospital • NHG Polyclinics