

## Cardiology – Inherited Cardiac Conditions

### Introduction

Liverpool Heart and Chest Hospital's cardiology service is concerned with the diagnosis and treatment of all heart diseases.

As we offer a variety of surgical and interventional treatments, many patients are referred to LHCH by cardiologists from local district hospitals as well as from GPs.

Our services include:

- Adult Congenital Heart Disease
- Interventional Cardiology - treating the narrowing or blockages of the coronary arteries.
- Heart Rhythm Management - treating problems with the heart's electrical rhythm.
- Inherited Cardiac Conditions
- Percutaneous Coronary Intervention
- Sudden Cardiac Arrest

These areas are underpinned by our diagnostic cardiology service.

This guide is designed to provide an overview of **Inherited Cardiac Conditions**, however, you will find lots of helpful details about our surgical teams, cardiac disease, the types of surgery we provide, as well as useful patient information and resources concerning your stay in hospital, discharge home, frequently asked questions and much more on the Trust website, [www.lhch.nhs.uk/our-services](http://www.lhch.nhs.uk/our-services)

### Guidance for Patients

**Inherited Cardiovascular Conditions (ICC) are a group of genetic disorders that primarily affect the heart. They includes conditions such as cardiomyopathy, inherited electrical conditions called channelopathies and problems with the main blood vessel carrying blood from the heart, the aorta.**

**Some heart conditions can have no symptoms, but could still potentially be serious. For some families, the first sign of a problem is when someone dies suddenly with no obvious cause or explanation.**

It is important that patients with ICC disorders and their relatives are identified and seen by a cardiologist (heart doctor) with expertise in these conditions.

#### What causes an inherited heart condition?

Our DNA makes each of us unique. The genes within DNA are our code and give the body instructions on how to work. We inherit DNA from our parents.

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Inherited heart conditions are caused by a fault (or mutation) in one of more of our genes. If a parent has a faulty gene, there's a 50:50 chance you could inherit it. If you do, then there's also a 50:50 chance you could pass it on to each of your children. Most inherited cardiac conditions follow this pattern; there are rare exceptions when a particular faulty gene can only be passed on by a mother.

It's possible to have a faulty gene that can lead to a heart condition, yet not have any clear signs of symptoms of the condition itself. You can still pass the gene on to your children and it is very difficult to predict how it will affect them.

### What inherited heart conditions are there?

The most common inherited heart conditions are:

Cardiomyopathies, for example:

- Hypertrophic cardiomyopathy
- Dilated cardiomyopathy
- Arrhythmogenic (right) ventricular cardiomyopathy
- Non compaction cardiomyopathy
- Restrictive cardiomyopathy

Inherited heart rhythm disturbances, for example:

- Long QT syndrome (LQTS)
- Brugada syndrome
- Catecholaminergic polymorphic ventricular tachycardia (CPVT)
- Progressive cardiac conduction defect (PCCD)

### What treatments may be required?

Many patients with an ICC will not require specific treatment. Others will be prescribed medications to help treat symptoms such as breathlessness, dizziness or chest pain.

One of the main reasons for review in the ICC clinics is to look closely at the heart and assess the risk of sudden cardiac death. In most cases this risk is low and our patients can be reassured. In a small proportion of patients an increased risk of sudden cardiac death will be identified. These patients may require a special type of pacemaker that can correct life threatening abnormalities of the electricity in the heart – an Implantable Cardioverter Defibrillator (ICD).

Some people with hypertrophic cardiomyopathy may require minimally invasive operations such as Alcohol Septal Ablation (ASA) or radiofrequency ablation to treat symptoms of breathlessness.

We also provide surgical treatment of outflow tract obstruction and associated heart valve abnormalities.

Liverpool Heart and Chest Hospital is an innovative centre advancing research in septal reduction and provides support to many other centres nationally and internationally. We use advanced cardiac imaging and 3D printed personalised models to guide our surgical approach to cardiomyopathy care.

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## What should I do if my health is deteriorating?

**If you have any change in your symptoms or other concerns whilst waiting for surgery, please contact one of the contacts below.**

### **Urgent Health Advice**

For urgent health advice about physical or mental health, when it's not an emergency, please call 111 from any landline or mobile phone. You can also visit [www.nhs.uk](http://www.nhs.uk). The NHS 111 service is available 24 hours a day, seven days a week.

### **Life Threatening Emergencies**

For something life threatening – severe bleeding, breathing difficulties or chest pains – please dial 999.

### **GP surgeries are still open**

GP practice staff are also helping patients to manage their conditions at home while they wait for hospital appointments.

GP surgeries are still open and are working differently to how they did before the COVID-19 pandemic and GP practices continue to make best use of telephone, online and video consultations. Face-to-face appointments are still being given to those who need it.

When you phone or use an online form to contact your GP surgery to make an appointment, you will be asked some questions which are designed to help staff guide you to the most appropriate clinical person to help you with your condition. This could be a nurse, clinical pharmacist, physician's associate, GP or paramedic.

## **Contact Us**

Please contact the Hospital switch board on 0151 600 1616 for Appointment team or the Medical Secretaries