

Two IV Cannulas (Freddie) will be inserted into a vein, one is used to give the adrenaline and one is kept free in case it is needed. Local anaesthetic cream can be applied before inserting the cannulas to numb the area.



When the monitors and cannulas are in place, the doctor will begin to administer the adrenaline. The test lasts approximately 25 minutes.

Your child is closely monitored during this time and for the following 30 minutes.

After the test

In nearly all cases, your child can go home on the same day as the test. The doctor will discuss the results of the test before you go home. Your child will be given something to eat and drink. The IV cannulas will be removed, and follow up appointments will be arranged if required.

If you have any questions, please contact CDU on 01 409 6060, Mon-Fri 7am-7pm.

Remember: Ask your nurse if you are unsure about anything about your child's care.

Additional instructions

This information leaflet was created by the staff of the Cardiac Day Unit, CHI @ Crumlin.

Approved by Dr Prendiville

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**Information for Parents / Guardians of a child
Adrenaline Provocation Test**



Children's Health Ireland at Crumlin

Phone: 01 409 6100

Cardiac Day Unit

Phone 01 409 6060, Mon-Fri 7am-7pm

Why does my child need an adrenaline provocation test?

An adrenaline provocation test is generally carried out to diagnose Catecholaminergic Polymorphic Ventricular Tachycardia (CPVT). It can, on occasion, be used in the work up and diagnosis of a patient with Long QT syndrome.

What is an adrenaline provocation test?

CPVT (Catecholaminergic Polymorphic Ventricular Tachycardia) - is a condition where, typically under conditions of exercise or excitement, the heart can be provoked into either 'premature beats' (premature ventricular contractions), abnormally fast bursts of heart rhythm (non-sustained ventricular tachycardia) or, rarely, more malignant or dangerous fast heart rhythms (ventricular fibrillation) that can result in a collapse event. Most tragically of all are rare cases of sudden death attributed to CPVT.

An ECG and ECHO will appear normal at rest when done in the clinic, even with a diagnosis of CPVT. As the arrhythmia is triggered generally by sympathetic stimulation (exercise or emotion), this can be replicated in a hospital setting by the administration of an adrenaline infusion delivered intravenously (through a drip or cannula). This is done in a safe and controlled environment following a carefully designed protocol with the 'rescue' drugs ready to be given, if required (this is very rarely required).

An exercise stress test is reported to be able to detect CPVT 60% of the time and an adrenaline challenge can detect CPVT 80% of the time. Should a person be at risk of CPVT, it is thought much better to work this out in a hospital setting with appropriate staff and medicines ready rather than out-of-hospital and possibly without medical assistance close to hand. The adrenaline provocation test is done safely and without any dangerous heart rhythms in the vast majority of cases on our cardiac day ward.

Long QT syndrome is where the heart takes longer to 'recharge' between beats. Some people with this condition are at risk of having a dangerous heart rhythm (ventricular arrhythmia). Although ECG's are used to diagnose Long QT syndrome, rarely the ECG may be more challenging to interpret and an adrenaline provocation test will provoke the typical ECG changes to make the diagnosis.

Preparing for the adrenaline provocation test

A nurse from the Cardiac Day Unit, will phone you the evening before the procedure as to when your child should start fasting and to ask about medications. It is important that you adhere to these fasting times, giving drinks as advised to ensure that your child is not fasting unnecessarily. Your child may need to stop certain medications prior to admission and this will be discussed during this call.

Please inform us in advance if your child is unwell.

The day of admission

When you arrive to the hospital, check into the admissions department, located on the main corridor beside the shop. You will then be sent to the Cardiac Day Unit, located on the 3rd floor. Your child will be admitted to the Cardiac Day Unit and you will be asked to sign a consent form for the adrenaline provocation test.



The Test

You will be able to stay with your child for the entirety of the admission.

Your child will lie on a bed and an ECG machine and a cardiac defibrillator will be attached to their chest.

