

# CARDIAC SCREENING INFORMATION

# Introduction

The 1996 American Heart Association consensus panel recommendations stated that pre participation cardiovascular screening for young competitive athletes is justifiable and compelling on ethical, legal and medical grounds.

The sudden death of a young athlete is a tragic event that has devastating effects on families and communities. These deaths are usually due to unsuspected heart disease. Unfortunately many heart conditions are still not detected by routine screening measures. The goal of screening is to detect an abnormal medical cardiac condition that could harm or kill the athlete when they exert themselves. It is for this reason that Dr. Clarke along with his clinical colleague Dr. Kindler, Specialist in Cardiology and Cardiac MRI and Dr. Gerard King, Specialist in Cardiac Echocardiography, have proposed a screening programme to help in the detection of sudden cardiac death in players for the GAA and also, through collaborative efforts with a group in Boston, to further our knowledge and understanding of the various contributors to sudden death in young people.

This screening programme will be held on site and include a questionnaire, a resting electrocardiogram (ECG) and an echocardiogram. The fee will include the interpretation of all tests and a written report.

The total cost of this will be 150.00 euro

By carrying out these tests we hope to help in the detection of Sudden Cardiac Death (SADS) in our athletes but also to further our research efforts with our colleagues in Boston to gain a further insight into the causes of these tragic events.

The tests will be carried out by Dr. Clarke's highly experienced team. We recommend that individuals aged 14 years or older involved in high intensity, highly competitive sports have a cardiac investigation. Treatment and prevention of complications is possible in most people once cardiovascular disease is identified.

# **Professional Profiles**

Dr. John Clarke, M.D., Ph.D., F.R.C.P.I Consultant Cardiologist

Dr. Clarke is a UCD graduate who trained in the Hammersmith Hospital in London and at Stanford University in California. Together with Dr. Gerard King, the practice has been actively involved in research into the effects of exercise on cardiac performance and remodelling.

### Who will perform the tests?

### Karen Coen, Senior Cardiac Physiologist

Karen trained in the cardiology department of the Mater Misercordiae Hospital in Dublin. She gained paediatric experience while working in Crumlin Children's Hospital. She is currently a BLS instructor for the Irish Heart Foundation and an associate member of The Society for Cardiology Science and Technology. Karen has been a valued part of the team in Aut Even Hospital since 2007.

### Dr. Gerard King, PhD Chief Cardiac Clinical Physiologist

Dr. Gerard King is regarded as a leader in the field of

Cardiac Echocardiography internationally. Gerard is a renowned specialist in Cardiac Echocardiography and has published extensively on the subject in peer reviewed medical journals. He was recently invited by a prestigious American Cardiology Journal to write the editorial in relation to the effects of exercise on the performance of the heart chambers. This was done together with his co-workers from Massachusetts General Hospital in Boston.

# **Initial Step**

- Once a booking is made with our screening team, our process commences with the distribution of cardiac screening information questionnaire and consent to the club. This normally happens about 2-3 weeks before the agreed screening date. The will be able to answer any questions that you might have regarding the process at this stage.
- 2. A copy of the questionnaire is given to each participant to be screened and must be completed thoroughly and returned prior to or on the day of screening. This should be co-ordinated by a nominated representative at your club.
- 3. The completed questionnaire is then reviewed by our team who prescribe the tests to be carried out for each patient.
- 4. The date for screening and schedule is then communicated to your nominated representative.



### The Process:

- Each patient will be greeted and registered by the Secretary when they arrive.
- Blood Pressure readings will be taken and recorded.
- The patient is then asked to lie on a bed for an ECG (Electrocardiogram). This measures the electrical pathways and activity of the heart. Small sticky pads are applied to the chest, arms and legs and are connected to an ECG machine which records the heart rhythm.
- An onsite ECHO (Echocardiogram) will be performed. This records moving images of the heart showing its structure and blood flow.

In the event that any abnormalities are detected you will have the option to be seen by our Consultant Cardiologist who will decide the appropriate next step as per protocol.

# Screening Protocol 1st Line Screening Health Questionaire/Resting ECG/ECHO (If abnormal ECG or ECHO proceed to next step) 2nd Line Screening Physical Presentation CONSULTATION WITH DR CLARKE 3rd line screening EST/Holter monitor/Event Monitor as indicated Further Diagnosis Consultant will decide the appropriate next step

# The Tests Involved:

### **Resting ECG**

This allows the doctor to assess the rhythm of the heart and give an idea as to whether there are any defects in the electrical conduction of the heart. It also provides information on heart muscle disease and is useful in the overall assessment and diagnosis of congenital cardiac heart disease. The test takes approximately five minutes and is performed by the Cardiac Physiologist.

### Screening Echocardiogram

This allows the doctor to actually see what your heart looks like as it is working. It is possible using ultrasound waves to pick up the motion of the heart and the valves. These structures can be clearly seen as in a photograph. We can therefore get a good idea if the heart is normal. In particular an ECHO will pick up any sign of HOCM, a specific cause of Sudden Cardiac Death Syndrome. The procedure lasts 15 to 20 minutes and involves no discomfort.

Total time involved: 30 minutes

Cost of tests: €150



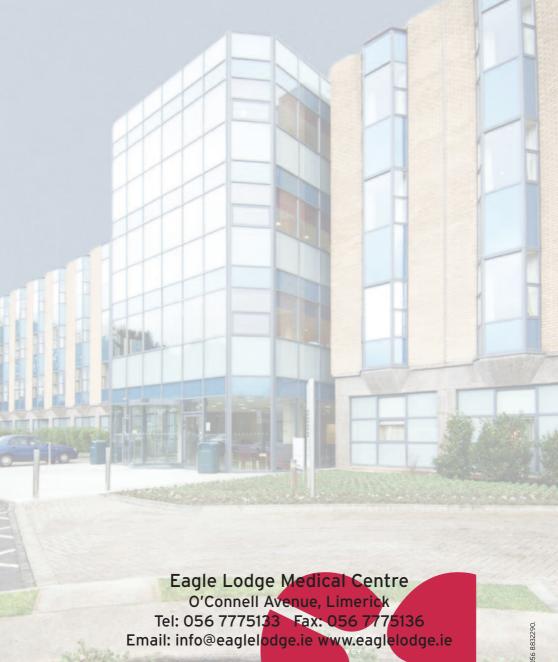




# **Cardiac Screening Questionnaire**

This questionnaire must be completed prior to screening and presented on the day of appointment.

		YES	NO
1.	Has anyone in your family under the age of 40 years died suddenly and unexpectedly due to a heart problem or for which no cause was found. (This includes drowning or sudden infant death syndrome)?		
2.	Do you or does anyone in your family have abnormal heart rhythms, cardiomyopathy or problems with the heart muscle such as Wolf Parkinson white syndrome, long QT syndrome, Marfan syndrome or other?		
3.	Have you or a family member ever lost consciousness or blacked out for no apparent reason especially during or after exercise?		
4.	Do you have a history of a heart murmur or other heart related problems?		
5.	Have you ever experienced chest pain, chest discomfort, shortness of breath, dizziness or lightheadedness during or after exercise?		
6.	Have you ever had an unexplained, noticeable change in exercise tolerance where you became tired for no reason?		
7.	Have you ever had palpitations of the heart, heart racing without reason or irregular heartbeat?		
8.	Have you ever, or do you currently suffer from Asthma, breathing problems or seizures such as epilepsy?		
9.	Do you have, or have you ever had, high blood pressure, high cholesterol or a heart related infection?		
10.	Do you take any drugs or medication? (Including recreati YES please specify	onal dru	gs) If



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