

Project title: Three-dimensional derived indices of left ventricular structure and mechanics in veteran ultra-endurance athletes

Location:

School of Sport and Exercise Sciences, Liverpool John Moore University

Investigators:

Dr David Oxborough, Alexandro D'Amico, Alex Stephenson

You are being invited to participate in a research project. However, before you give consent to participate in this study, it is important that you completely understand why this research is being completed and what will be required of you. Please ensure that you take time to read through this information sheet. If there are any areas that are not clear, or that you would like more information on, feel free to contact the researchers who will be happy to provide this information for you.

What is the purpose of the study?

Background:

During ultra-endurance events your body is pushed to its limits. Therefore, it is of great importance to assess cardiac health to assure athlete safety, especially considering the rise in popularity of these ultra-endurance events. Existing data suggest that the effects of prolonged strenuous exercise may be deleterious on left ventricular structure and mechanics. However, these effects are temporal and usually return to normal values during recovery. This study, is concerned with the chronic effects of ultra-endurance athletes competing over several years. The aim of this study is to use 3D Doppler and Strain Echography to determine the size and mechanics of the left ventricle in veteran ultra-endurance athletes.

Who can take part?

You are likely to be eligible for this study if you fulfil the following criteria.

- Male aged 35-65 or Female aged 35-65
- Ultra-endurance athlete: 5 or more events completed in the last 10 years
- Control group: Less than 2 hours structured exercise per week
- Non-smokers
- Free from cardiovascular disease, diabetes, renal disease
- Refrain from caffeine, alcohol and any sporting competitions 24 hours prior to testing.

Do I have to take part?

No. Taking part in this study is entirely voluntary. If you would like to participate you will be given this information sheet to keep and be asked to sign a consent form. You are still free to withdraw at any time and without giving a reason. A decision to withdraw will not affect your rights, or any future treatment or service you receive.

Benefits of taking part:

Participants will get a cardiac health screening which involves a number of laboratory tests including a resting ECG and echocardiogram, which are completed by extremely experienced physicians in the area and will receive any results upon completion on the study

What will happen to me if I take part?

If you agree to taking part in this study you will be asked to attend the lab on one occasion. The visit will be no longer than 45minutes.

Procedures: On the day of the visit will undertake a health questionnaire, 12 lead ECG and a transthoracic echocardiogram. Anthropometric measurements (height, weight and blood pressure) will also be taken during this time.

Initially we will take a measurement of your height and your weight and blood pressure.

Next you will have a tracing of your heart (a 12-lead electrocardiogram (ECG)). The ECG test involves you lying down quietly and it takes approximately 10 minutes. Small stickers (which we call electrodes) are placed at strategic points on your chest, arms and legs. Flexible leads that extend from the ECG machine are then attached to these stickers. The electrical rhythm of your heart is recorded and printed out.

Finally, you will lie down quietly to have an echocardiogram. An echocardiogram is very similar to the ultrasound scan that is used for a pregnant woman to check the health of her baby. In this study, an echocardiogram will be used to measure the dimensions of the heart and the flow of blood in and out of the heart. The echocardiogram will take up to 45 minutes. Finally, you will be required to fill in a health questionnaire which will take approximately 10 minutes.

The ECG and Echocardiogram are tests to check for problems with your heart. The ECG and Echocardiogram tests , and the health questionnaire, that are used in this study will be taken as part of your routine pre-participation cardiac screening. The experimental part of this work involves the researcher doing further analysis which are novel and essentially considered to be the extra element for our research. All investigations in this study will help in defining normal indices for athletes and to improve the ability to diagnose any conditions such as a cardiomyopathy. In view of this, there is a very small chance this test will pick up an unexpected finding. Should this occur our study cardiologist will contact you to arrange a suitable course of action.

Where will I complete the study?

All sessions will take place in the laboratory of the School of Sport and Exercise Sciences at Liverpool John Moore University (Tom Reilly Building, Byrom street campus).

Confidentiality:

All data and samples will be labelled with a code, not with your name. Only the research team which is in contact with you has access to the link between the code. The results of this study are expected to be published in a scientific journal, but names of participants will never be published.

Rights:

It is your choice whether or not you wish to take part in this study. If you wish to take part in this study, you will be given this information sheet to read and be asked to sign a consent form. You are reminded that if you decide to take part in the study, you are still free to withdraw at any time without provision of reason. Requests for a copy of the results attained will be honoured following study completion and publication in a scientific journal.

What happens if something goes wrong on the day of the trials?

All procedures have been included within Liverpool John Moores University Liability Insurances and if you are harmed in any way by taking part in this research project your normal rights apply and you may have grounds for legal action.

Complaints procedure:

If you have any complaints regarding the way you have been treated or anything else relating to the study you can write to Dr Dave Harriss who is independent from the research team and will investigate the matter fully.

Dr Dave Harriss
Fourth Floor, Kingsway House
Hatton Gardens
Liverpool
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T: 0151 9046236
E: D.Harriss@ljmu.ac.uk

What happens now?

You will be asked to complete an informed consent form to confirm that you are happy to participate in this study. You will be asked to keep a copy of this information sheet and the signed consent forms.

Thanks for your time. If you have any further questions or want to participate in the study please contact Alex D'Amico

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If you would like an independent source of information and advice on the study please contact Dr Dave Harriss (see above for contact details)