

Volunteers wanted for Heart Failure Study

Investigating the link
between inflammation
and sympathetic nerve
activation in the
progression of
hypertensive heart
disease



For more information
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1. What is this study?

This study is looking at how activation of the immune system and sympathetic nervous system play a role in the progression of high blood pressure to heart failure.

2. Why is this study important?

Some people with high blood pressure develop cardiac hypertrophy (increase in heart size) and their heart undergoes changes in structure, resulting in poor heart function and heart failure. The immune system and sympathetic nervous system are activated in this process. It is not known which system is activated first.

This study **aims** to identify which system is activated first.

3. Who can take part?

- Men & women
- Aged 25-80 years old
- With normal blood pressure or high blood pressure
- Without major illness

4. What does taking part involve?

One visit to Bristol Royal Infirmary and two visits to the Clinical Research and Imaging Centre (CRIC), Bristol. The duration of the first CRIC visit will be up to 1.5 hours, and the second CRIC visit will be up to 2 hours and 15 minutes. The cardiac MRI will take up to 1 hour.

In the first visit, we will do screening tests to make sure you can safely take part. This involves:

- Medical history questionnaire
- ECG recording of your heart
- Blood pressure measurements
- Urine pregnancy test

We will also take a blood sample.

On the second visit, we will perform a cardiac MRI. On the last visit, we will measure the activity of the nerves that control your blood pressure using a technique called microneurography. You will also do some exercise and we will take blood before and after exercise.

5. What is a cardiac MRI?

Cardiac MRI (magnetic resonance imaging) is a non-invasive method of taking images of your heart using magnetic fields and radiofrequency pulses.

6. What is microneurography?

Microneurography allows us to record the activity of your nerves. We insert a small electrode (like an acupuncture needle) into a nerve in the leg. Another electrode inserted into the surface of the skin nearby. We will record your nerve activity at rest and whilst you complete the cold pressor response test.



7. What is the cold pressor response test?

The cold pressor test involves putting your hand (to the wrist) in ice cold water for 3 minutes. This will tell us how your nerve activity changes during a stress test.

8. What else is involved?

You will complete a ramped exercise tolerance test which involves cycling for up to 10 minutes. We will take a blood sample before microneurography and after exercise via a cannula (small tube).

We will record your heart rate, blood pressure and breathing throughout the study. We will also measure the gases you breathe in and out during the exercise test.

After the screening visit, you will take a blood pressure monitor home with you. This measures your blood pressure over 24 hours.



9. What are the benefits of taking part?

We will reimburse you £20 for your time, plus cover public transport costs up to £20 upon proof of receipt.

If you think you might be interested in taking part, please contact us for more information:

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