

## Bradycardia in athletes

In this study we aim to assess the causes of slow heart rates in athletes. It is well known that athletes have slower heart rates than non-athletes. In general this is considered healthy and in fact people with slower heart rates live longer than people with faster heart rates. Having a slower heart rate however increases the risk of developing a heart rhythm disorder called atrial fibrillation which increases the risk of stroke and other medical conditions. Endurance athletes in particular have been shown to be at increased risk for atrial fibrillation

This study will help us understand why athletes have slower heart rates and will provide important insights into why athletes have an increased risk of atrial fibrillation.

### The study is being conducted by:

A team of researchers at the Baker Heart and Diabetes Institute lead by Associate Professor Andre La Gerche.



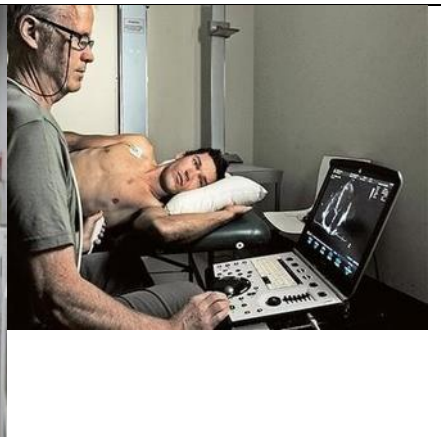
### Who can participate?

Endurance athlete (Aged 18–50)	Non-athlete (Aged 18–50)	Endurance athlete with previously diagnosed slow heart rate (Aged 18– 50)
<ul style="list-style-type: none"> <li>▪ Competing in endurance based activities: triathlon, cycling, rowing, canoeing, distance running, swimming</li> </ul>	<ul style="list-style-type: none"> <li>▪ Healthy participant who has not competed in endurance sport and does not perform greater than three hours of moderate intensity exercise per week</li> </ul>	<ul style="list-style-type: none"> <li>▪ Competing in endurance based activities: triathlon, cycling, rowing, canoeing, distance running, swimming</li> <li>▪ Found to have a resting heart rate less than 40</li> </ul>

## What is involved?

This study involves three visits for testing, baseline testing followed by two visits for repeat testing. All testing should be complete within two weeks. During repeat testing you will be administered medications under supervision. This will help the researchers determine what contributes to your heart rate. You will not need to take any medications before or after testing. Testing will be scheduled over 3 days and involve approximately 17h of your time.

- CMR (Cardiac Magnetic Resonance) imaging on two occasions
- Heart Ultrasound on three occasions
- VO2max testing on three occasions
- Blood samples, height, weight

<b>Exercise CMR</b> Cycling whilst lying in the MRI machine	<b>Exercise VO2max testing</b> Measuring breathing through mask whilst cycling	<b>Resting and exercise echocardiography</b> Ultrasound of the heart whilst lying at rest and following exercise
		
<b>60 minutes</b>	<b>30 minutes</b>	<b>40 minutes</b>

## How to proceed

If you are willing we would like the opportunity to discuss the study in more detail. You may contact us directly via email or phone.

You will receive compensation for your time at a rate of \$18/hour.

## STUDY AND CONTACT DETAILS

**HREC Project Number:** 138/17

**Research Project Title:**

The relative contributions of autonomic tone and  $I_f$  current activity to bradycardia in endurance athletes.

**Chief Researcher:** Associate Professor Andre La Gerche

**Clinical contact person:** Dr Darragh Flannery, Cardiologist/PhD Student

Email: [darragh.flannery@baker.edu.au](mailto:darragh.flannery@baker.edu.au)

Phone: 03 8532 1214