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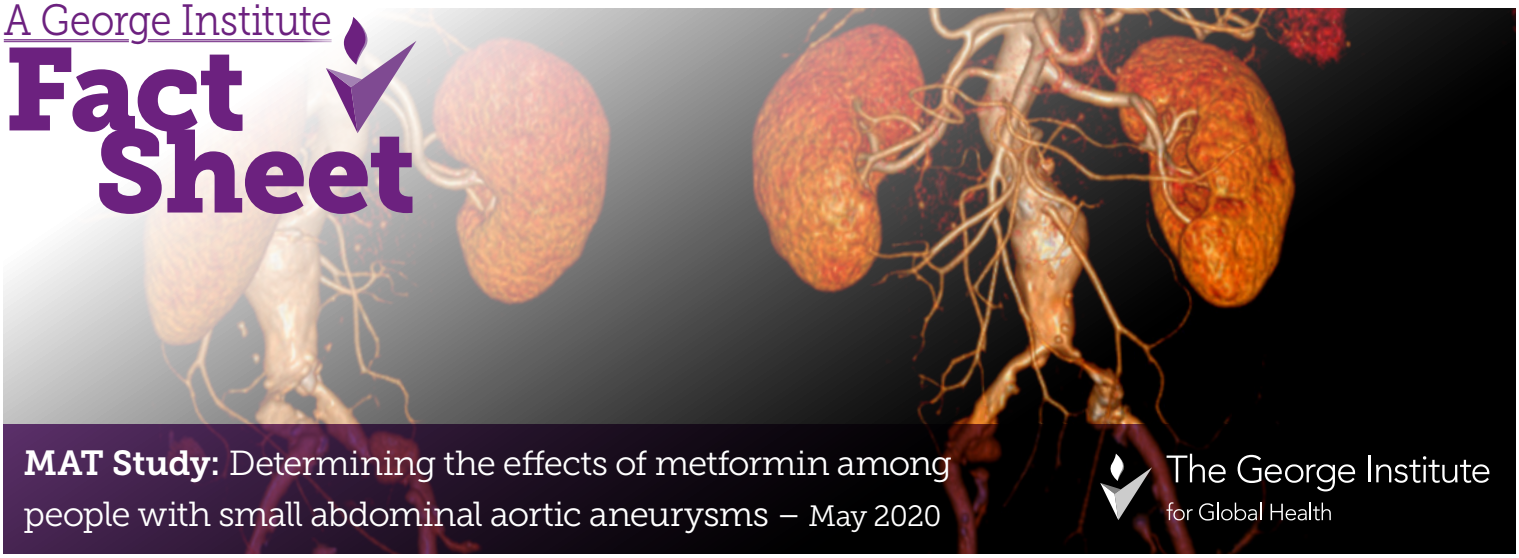
Fact Sheet



MAT Study: Determining the effects of metformin among people with small abdominal aortic aneurysms – May 2020

The George Institute for Global Health

Facts:

- AAA affects around 20 million people and causes ~200,000 deaths worldwide each year.
- The current practice of simply monitoring small AAAs is associated with reduced quality of life, and AAA repair carries significant risks of mortality (1-7%), as well as serious complications that occur during or around the time of an operation (up to 20%).
- A drug that inhibits AAA growth would reduce important AAA-associated events, including AAA repair and AAA mortality due to aneurysm rupture.

Project cycle:

2019-2025

Partners:

The George Institute, Australia
James Cook University, Australia

Supporters:

The George Institute for Global Health
National Health and Medical Research Council (NHMRC), Australia
James Cook University, Australia

Background:

- An abdominal aortic aneurysm (AAA) is an enlarged area in the lower part of the major vessel that supplies blood to the body. Most AAAs are detected when they are small, and affected patients are monitored by regular repeat imaging until their aneurysm expands to a size where surgical repair is required.
- The only current treatment is high-risk surgery. Numerous trials have been conducted in the last 20 years to try to identify an effective medical therapy for AAA, but all published trials to date have been unsuccessful.
- There is substantial epidemiological and pre-clinical evidence to suggest that a widely used, safe and low-cost drug called metformin may prevent serious AAA-related events such as ruptures, death or need for surgery, however a large-scale randomised control trial (RCT) is needed to test any such benefit reliably.

Aims:

- The primary aim of the Metformin Aneurysm Trial (MAT) is to assess whether metformin prevents the need for AAA repair by surgery, or death from AAA rupture.
- Secondary aims include assessing the effects of metformin on other major cardiovascular events and AAA growth, whether growth occurs after surgery, or if further surgery is required. Its effect on health-related quality of life will also be examined, as well as the cost-effectiveness and cost-utility of metformin treatment.

Methods:

- Sponsored by James Cook University, MAT is a multi-centre RCT with sites in Australia, New Zealand, Sweden and the UK.
- 1,954 AAA patients will be randomised to receive 1500mg of metformin daily or a placebo.
- Participants will be followed until 616 primary outcome events have been accrued.

Impact:

- If MAT determines that metformin prevents death and serious complications from AAA, it could be produced rapidly and made widely available.
- This low-cost intervention would particularly benefit hundreds of thousands of people with AAA that live in countries where surgery is not available or unaffordable.

Contact:
To find out more about this study, its principal investigators Prof Jonathan Golledge, Prof Bruce Neal, Dr Clare Arnott, Ms Helen Monaghan or The George Institute, please contact Tina Wall +61 410 411 983 or twall@georgeinstitute.org.au

The George Institute For Global Health:

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