

1 June 2018



Dear Valued Supporter

I operated on Stephen Jackson in 2004, he had an extremely large thoracic aortic aneurysm which had dissected out of the blue, one morning, on his way to work. He was just 36 years of age. No symptoms, no signs! Stephen's whole world fell apart that day. Luckily, when it happened, he was close by Royal Prince Alfred Hospital (RPAH) and he was on the operating table quick smart. His life was saved and he lives to tell the tale. We are very grateful to Stephen for sharing his story today.

There are still lots of questions to be answered. What are the causes and effects of aneurysm? Why do they form? How can we predict their expansion and rupture? The Baird Institute's aim is to answer all these questions and in addition, try to determine the role of genetics, blood flow and epigenetic factors (such as smoking and blood pressure) in the development of aortic aneurysms. We are doing research into the formation and rupture of aneurysms using Magnetic Resonance Imaging (MRI) as well as looking into how the aorta responds to blood pressure under exercise and stress.

Our establishment of an Aortic Tissue Bank and Database has allowed research into cardiac disease processes and surgical care, while one of our research fellows, Dr Andrew Sherrah, has published a pivotal paper in the Journal of American Cardiology (JACC) which identified the significant differences in disease processes that affect the Aorta and require surgery. Surgeons and researchers globally have used this analysis to examine their own results to ensure better patient outcomes.

Thoracic Aortic Aneurysm Disease (TAAD) is rapidly becoming one of the most common but silent killers in Western society. Forty percent of people with ascending aortic dissections die instantly, but up to 90% of the remaining patients can be saved with emergency surgery - if they can get to a hospital such as RPAH that provides advanced cardiac surgery.

The enormous importance of research in terms of understanding the genetic nature of aortic aneurysm and aortic disease, enables us to not only provide enhanced patient care, it also increases the likelihood of avoiding the passage of this disease to the next generation.

I hope you can help us today. Your generous gift is vital for the continuation of our research into heart and lung disease.

Professor Paul Bannon MB BS, FRACS, PhD
Chair, The Baird Institute



STEPHEN JACKSON'S STORY

May 11, 2004. I was almost there. A short walk up City Rd from our apartment in Chippendale to work in the Darlington part of the University of Sydney campus. Just after 8; hurrying just a little so as to finish a report due that week.

Needless to say, I never got there. Indeed, I never made it back to the apartment my spouse, Jennifer, and I rented. Meanwhile I was in Royal Prince Alfred Hospital recovering from emergency surgery.

As I passed the Chemistry Building on City Road I swallowed a hot rock. That is how it felt. Almost immediately, I felt like I was going to black out. Quick call to work: "Call 000, I'm having a heart attack", quick call to Jennifer, at that moment half way across the Bridge on her way to work: "I'm having a heart attack, I'm in front of the Chemistry Building." Then, flat on my back on a half wall, I lay unconscious.



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It was no heart attack but a massive aneurysm of my aorta right next to the aortic valve. The hot rock was my aorta dissecting, all the way down to my legs, and up the carotids. There was pain to be sure, but the surge of adrenaline, the thought, "I'm dying here," blotted that out. I was 36. No history of any heart problems. No history of shredding arteries. I was just walking to work.

After that there are only snippets I recall until post-surgery: Jennifer arriving, "Where is the ambulance?!", "Here is the ambulance," being told in emergency by an intern that it was no heart attack, and being told to call my mother because it was a 50/50 proposition going into theatre. That was rough!

The legend goes that Dr Bannon was on call and got off his surfboard that morning to come in and patch me up; to save my life. I reckon he did. Afterwards Dr Bannon said that another surgery was likely before I could leave the hospital. The dissection was very severe. The outlook was uncertain.

But I didn't need more surgery. Dr Bannon's Bentall repair was brilliant. But a dissected aorta does stretch. By late 2014, and after Jennifer had given birth to our beautiful twin girls, more lives Dr Bannon had enabled, it looked like a grapefruit was lodged in my abdominal aorta. This time, I was operated on in the US where we now live. The surgery didn't go as smoothly, and due to persistent infections post-surgery I needed a second operation to replace an infected aortic graft. Such is the gift of a connective tissue disorder! But I'm fine now. I drive to work.



I still do not know why this bizarre event occurred and that troubles me beyond the grief and loss that such an event throws your way. It is not normal to have a massive aortic aneurysm and dissection at age 36. Test for Marfans? Nope, not Marfans. Subsequent tests for the other known connective tissue disorders that have been isolated since 2004 have come back negative too. But, as every surgeon and specialist has said to me since Prof Bannon and his colleague, Prof Richmond Jeremy, first expressed their opinion, I have a connective tissue disorder, but it just hasn't been identified – yet!!!

May 11, 2004, constantly reminds me that life has no guarantees and it is best not to wait if you want to leave a meaningful legacy. Paul Bannon and the team at The Baird Institute are leaving a massive legacy - of research, training and care - that has changed lives and will continue to do so for a long time.

I was struck, when I saw Dr Bannon recently for the first time in a decade, by his humility. He voiced surprise when I expressed my amazement at his fund-raising work, his commitment to public health, surgical training and pure research. His work, and the work of his colleagues need our support. They are saving lives and giving life where there would have been none!

Suspensions of connective tissue disorders often only become apparent when a person suddenly dies. I was very lucky. For all those who never make it to hospital, for those who keep requiring surgery without a positive diagnosis, and especially for the dream of identifying those at risk before the 'swallowing the hot rock' moment, please support the work of Prof Bannon and his colleagues at The Baird Institute.

WHAT IS AN AORTIC ANEURYSM

The aorta is the main blood vessel that carries blood from the heart to the rest of the body. It starts at the chest and runs down into the abdomen where it branches into various arteries which carry blood to the lower parts of the body. The upper part of the aorta is called the **Thoracic Aorta** because it is located in the chest (thorax), while the lower part of the aorta is called the **Abdominal Aorta**. Sometimes a section of the aorta may weaken and stretch causing a bulge (aneurysm) in the blood vessel wall.

Stretching of the aorta may also lead to a sudden tearing of the layers in the aortic wall causing blood to flow in between the layers of the blood vessel wall (an aortic dissection). This can lead to aortic rupture or decreased blood flow to organs.

There is so much more to understand about thoracic aortic aneurysms. Frighteningly someone has to die in a family before we discover that other family members could also be at risk. The majority of those people who have a dissection, die – Stephen was one of the lucky ones, mainly because he was so close to the hospital when it happened.

At The Baird Institute we are very interested in gaining a greater understanding of the non-syndromal aortic aneurysms due to the fact that we are unable to test for these type of aneurysms because there is no gene attached to them. This demonstrates the great importance of screening the family members of people with known aortic problems. With one of the studies carried out by a researcher from The Baird Institute, it was found that of 600 patients with aortic aneurysms, more than one third had family members with similar conditions that they didn't even know they had. We are hoping that as a result of this study there will be a worldwide increase in the amount of screening that is done. Much more research is needed; it is our wish to stop this disease passing to the next generation!

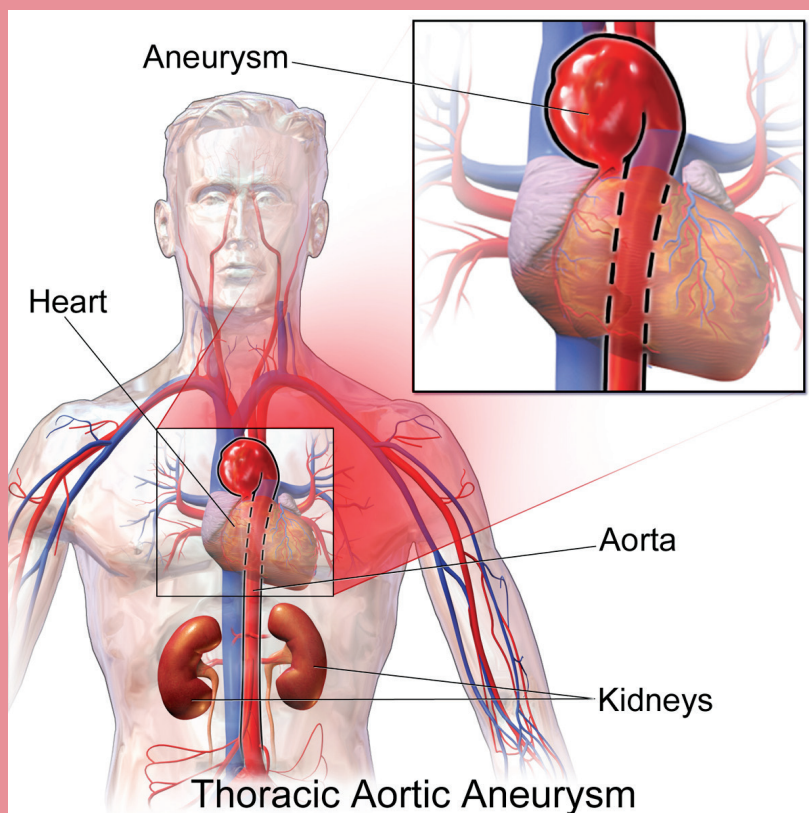


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YOUR GENEROUS GIFT IS VITAL FOR THE CONTINUATION OF OUR RESEARCH

The Baird Institute receives no government funding. To do our work we rely heavily on the generosity of our supporters, many of whom are current or former patients of the surgeons associated with **The Baird Institute**. Our goal is to give people a second chance to live a full and healthy life. Few gifts are more precious than that!

Please support us today. Your support will save lives.

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On occasion we will send you email updates about our work, while your date of birth helps us to distinguish donors with the same name

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☐ Single donation Amount

and/or

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☐ \$50 ☐ \$100 ☐ \$200 ☐ \$ _____

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* A **regular** tax-deductible donation of \$20 or more **per month** entitles you to become a **Partner in Research**. Your regular gift will ensure that we have the necessary funds available to help ordinary people as they battle unexpected, life threatening diseases of the heart and lungs. As a **Partner in Research**, you will receive Baird Institute newsletters and invitations to special events. For more information, contact Catherine on 02 9550 2350

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