

# Brian Fowell Buxton (15/04/1940–20/05/2022)—Outstanding Achievements and Personal Memories



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Received 24 August 2022; accepted 25 August 2022; online published-ahead-of-print 13 September 2022

Brian F. Buxton, one of Australia's greatest cardiac surgeons, died in May 2022, aged 82 years. In June 2022, a memorial celebration of Brian's life was held in Melbourne, Australia, attended by 550 colleagues and friends from many walks of life—not only “medical people” but also friends involved in Brian's sailing and hiking activities. This Special Article includes an introduction from Professor Jayme Bennetts, President of the Australian and New Zealand Society of Cardiac and Thoracic Surgeons (ANZSCTS), an abridged version of a memorial address by Professor James Tatoulis and contributions from two other long-term professional colleagues and personal friends of Buxton, Professor Jaishankar Raman and Professor Franklin Rosenfeldt, founding editor of *Heart, Lung and Circulation*. Buxton was an outstanding and pioneering surgeon, clinical leader, and good friend to many. The Brian F. Buxton Cardiac and Thoracic Aortic Surgery Unit in Melbourne, Australia, is now so named in honour of his outstanding achievements and as a legacy. Vale Brian F. Buxton.

## Keywords

Obituary • Cardiac surgery • Cardiothoracic • Pioneer • Australia

## Appreciation of the Life and Contribution of Brian Buxton

We are saddened to inform of the recent passing of Professor Brian Buxton. We take this opportunity to acknowledge the life and achievements of one of the most influential cardiac surgeons in our region and internationally.

Brian was a generous and accomplished clinical leader who made remarkable contributions as Director of Cardiac

Surgery at Austin Health and across Epworth Hospital, the Royal Melbourne Hospital, and the Repatriation Hospital. He had a research focus to his practice leading change through these endeavours and developed a range of innovations that improved patient care around the world.

Brian was a founding member of the Australasian Society of Cardiac and Thoracic Surgeons (ASCTS), now known as ANZSCTS and foundation President, chairing the first meeting of the Society in Hobart on 26 October 1990. He was

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also a leader for the establishment of a Cardiac Surgery Registry, which has now grown to become the ANZSCTS Adult Cardiac Surgery Database; and, establishing what has become the *Heart Lung and Circulation Journal*, with Frank Rosenfeldt as the foundation Editor-in-Chief.

One of Brian Buxton's greatest legacies will be the training he provided to cardiac surgeons across Australia and New Zealand, as well as fellowship opportunities to numerous surgeons across countries including Indonesia, Japan, Thailand, and India. He shaped the future of cardiac surgery in these countries with his vision and teaching. Thanks to his mentorship and teaching there are outstanding cardiac surgeons across much of Asia, many European centres, Scandinavia, and the UK.

Brian exemplified excellence in clinical academia. He supported a range of talented colleagues and led world class research in the care of cardiac surgical patients. He received many accolades during his lifetime. He was made a member of the Order of Australia and was awarded the rarely bestowed "Excellence in Surgery" award by the Royal Australasian College of Surgeons (RACS) in 2004.

We have lost a great mentor and role model for Cardiothoracic Surgery in our region. His considerable legacy continues to impact us all in day-to-day practice.

May he rest in peace.

*Professor Jayme Bennetts*

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## The Surgeon's Surgeon

Brian Fowell Buxton (Figure 1) was a great cardiac surgeon. He was able to effortlessly perform complex operations with exquisite skill that others found challenging. He was a Surgeon's Surgeon. The finest coronary artery surgeon Australia has or is ever likely to produce. Moreover, over the past three decades, Brian was among most prominent coronary artery surgeons in the world. There are very few cardiac surgeons in the world who do not know his name and of his contributions. He was respected, admired, and held in the greatest esteem by all in cardiac surgery. Through his endeavours, the city of Melbourne in Australia became a beacon on the world stage for coronary artery surgery.

Brian graduated in Medicine with honours from the University of Melbourne in 1962 at 22 years of age, and well ahead of his time—which would be the theme of Brian's life! His early medical career in the 1960s was at the Royal Melbourne Hospital, predominantly in general surgery in a time before the advent of surgical specialties. He was focussed, committed to surgical training, and obtained his fellowship of the RACS in 1967 at the tender age of 27.

Whilst at the Royal Melbourne, Brian was part of a Mobile Army Surgical Hospital ("M\*A\*S\*H") team of surgical and nursing volunteers that went to Vietnam. (For those familiar with the iconic movie or TV series, Brian was definitely "chest cutter" status). Soon thereafter, with his young family, Brian left for further training in Scotland via locum surgical appointments in Kuwait and Zambia. In Glasgow, in 1970, as



**Figure 1** Brian F. Buxton.

well as training in general surgery, he also undertook a Master of Surgery in gastric physiology, soon discovering that stomach surgery was not for him. It was the time of opening of frontiers in surgery, especially cardiac surgery.

Coronary bypass surgery was just emerging, and the first successful heart valve replacements had only recently been performed. It was enthralling and inspiring medicine, coupled with unlimited potential. Brian was captivated and wanted to be part of it and the future it offered. He audaciously called on the legendary Denton Cooley, one of the two most famous cardiac surgeons in the world at that time, organised a position for himself at the Texas Heart Institute in Houston, Texas, USA, and never looked back.

The early 1970s were heady days. There was an explosion in innovations in cardiac surgery: coronary bypasses, valve replacement, heart transplants and artificial hearts. Angioplasty, stents, and statins had not yet been invented. The only cardiac drug was digitalis; computed tomography (CT) scans were still 5 years into the future and cardiac ultrasound was often a set of almost incomprehensible squiggly lines. Houston, Texas, was the Centre of the Cardiac Surgery Universe, and Brian was there!

In those formative years, Brian modelled himself on his mentor Cooley and his operating techniques. He considered staying in the USA, but instead opted for positions in cardiovascular surgery in Melbourne, Australia, at the Austin, Repatriation General and Royal Melbourne Hospitals. His career path included appointments as head of cardiac surgery at the Austin in 1979, establishment of Cardiac Surgery at Epworth Hospital, Richmond, in 1981, and a professorial appointment at the University of Melbourne in 1990. Brian was a fellow of many cardiothoracic organisations, nationally and internationally.

The most significant recognitions of his many achievements were an Order of Australia (AO, Figure 2), the annual



**Figure 2** Buxton received an Order of Australia Medal.

solitary Excellence in Surgery Award from the RACS, The J. Maxwell Chamberlain Memorial Award from the Society of Thoracic Surgeons (STS) of America and the Lifetime Achievement Recognition Award from the International Society for Coronary Artery Surgery (ISCAS). He was also one of the first Australians to be elected a fellow of the American Association for Thoracic Surgery (AATS).

Brian's personal qualities were inextricably linked with his surgical career. He was charismatic, smart, curious, driven, constantly in pursuit of excellence and improvement, incredibly well-read, affable, disarmingly charming, warm, and generous. However, his greatest qualities were more far reaching.

At a deeper, more profound level who was Brian Buxton? How did he obtain his deserved stature? What made Brian special? What were his accomplishments?

He was a visionary. Brian's philosophy was to think positively. The question was never "Why?" but rather, "Why not?". He constructed the University of Melbourne Cardiac Surgery Database in 1979 with John McNeil, with now over 30,000 patients—an institutional database only second to the Cleveland clinic, 20 years ahead of the Australasian Cardiac Surgery database, and the source of over 100 publications. This was followed by establishing, with colleagues, the ANZSCTS Victorian and National Database. He also championed arterial grafting from its outset in 1981. Brian established The Department of Cardiac Surgery at the Austin hospital and supervised the building of the cardiac surgery operating rooms there. Despite opposition from the cardiac surgery establishment in Melbourne at the time, Brian established cardiac surgery at Epworth Hospital with Dr Graeme Sloman, Peter Wilson (manager), Dr Jack Cade and Dr George Westlake. Within 10 years, over 1,100 cardiac

operations were being performed at Epworth with superb results. Brian founded the Australian and New Zealand Society of Cardiothoracic Surgeons with Professor Frank Rosenfeldt, was its inaugural president, and helped create the *Heart Lung and Circulation* journal, with Rosenfeldt, founding editor.

Brian Buxton was a surgical pioneer and innovator in arterial grafting including bilateral internal mammary, inferior epigastric, radial, and ulnar artery grafts.

Brian was magnanimous in his help, support, and encouragement of young surgeons around him. He saw them as colleagues and flagbearers, not as competition. Thus, he trained over 50 young cardiac surgeons from Australia, New Zealand, and many other parts of the world.

Brian was an academic and researcher, authoring over 350 publications including many book chapters and a classic textbook on coronary surgery. He gave hundreds of presentations at national and international meetings. He designed and conducted the world's largest and longest randomised trial in coronary graft patency and outcomes, the Radial Artery Patency and Clinical Outcomes (RAPCO) Trial, to compare the long-term patency of the radial artery with the saphenous vein. In his "spare time", he supervised 10 PhD students, especially in coronary graft physiology and pharmacology. Brian was the finest of technical coronary surgeons—ambidextrous, light of touch, unhurried, efficient, calm, and assured, with equanimity under pressure. Brian operated with grace and beauty: an elegance of surgery tempered by a frugality of movement; it was a joy to watch him operate.

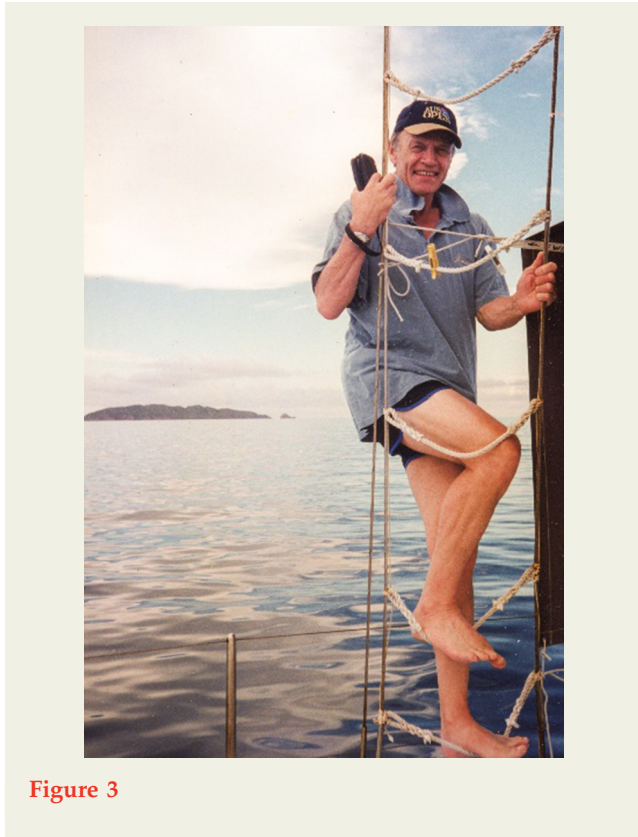
Brian was a skilled communicator, able to speak to colleagues, friends, and patients easily and naturally. He was direct, relaxed, and charming. His interactions and conversations with all were personal, never distant nor generic. He made significant contributions to, and was admired, revered, and treated with gravitas within professional associations, particularly those of Singapore, Indonesia, China, and Thailand where he enjoyed operating.

Although in his element in the operating theatre, Brian loved the outdoors.

He was an adventurer. He explored the deserts of Australia and of America, including Death Valley, travelled to Antarctica, walked Kokoda, loved sailing (Figure 3), was an avid reader and collector of books by and of Australian explorers, and was fascinated by history.

Brian wanted to exit from the pinnacle of the cardiac and coronary world stage at the peak of his powers. It takes great courage for a gifted surgeon to do this, but that had already defined him for over 40 years prior to his retirement.

Brian Buxton has left a prodigious medical legacy, unrivalled in our specialty in Australia, and unique, even internationally. Over 20,000 lives saved, prolonged, or improved with the extended benefits to the families of those patients over generations. His hundreds of publications and presentations on techniques and knowledge to the cardiac community that have profoundly influenced the practice of, and the results in coronary surgery. Perhaps the most



**Figure 3**

profound legacy, is that of the young surgeons he mentored and trained, now all leaders in their countries including Australia—all using their skills to operate, heal and teach others, an effect that will multiply and last generations. His teaching and techniques remain with us as we conduct our professional lives. What a wonderful way to be remembered!

We carry a part of Brian's spirit with us, subconsciously coming to the fore at times—operating, visiting the Austin or Epworth, seeing an arterial coronary graft angiogram, talking to a colleague, a patient, to the Buxton family, or when simply reminiscing.

He will always be part of us as he has touched us in some unassailable way. Farewell friend, colleague, mentor, visionary, pioneer, builder, academic, and master surgeon.

*Professor James (Jim) Tatoulis*

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## An Inspiration for Trainees

I first met Brian Buxton in 1990, as I was being shunted from one centre to another in search of an elusive training slot in cardiothoracic surgery. He cut through many layers of obstructive red tape, smoothing over many training potholes that seemed like impassable chasms to us as trainees from diverse backgrounds. What struck us all was his empathy, humanity, encouraging attitude, and a willingness to explore new ideas.

One of Brian Buxton's greatest legacies will be the International Fellowship Program he offered to numerous young

cardiac surgeons from Asian countries including Indonesia, Japan, China, Hong Kong, Thailand, and India. He shaped the future of cardiac surgery in these countries with his vision and teaching.

Over his career, Brian was responsible for training some 50 young cardiac surgeons. Thanks to his mentorship and teaching there are outstanding Austin-trained cardiac surgeons across not only much of Asia, but also in many European centres, Scandinavia, and the UK.

As part of teaching and training, he paid great attention to overseas trainees, making them feel valued and welcome. Two important concepts he worked on were: expansion of the concept of paid overseas trainees and fellows in public and private cardiac surgery units; and fostering an environment that helped research careers for budding surgeons—both locally and internationally.

In my case, Brian was an accessible and wonderful mentor. I finished training at the Austin, becoming a consultant cardiac surgeon in 1997. Despite a heavy clinical workload, he encouraged me to pursue a PhD in heart failure management. Our involvement in the large animal model of atrial fibrillation and heart failure on campus facilitated the launch of radio-frequency ablation as a surgical treatment for atrial fibrillation and ventricular containment in heart failure treatment.

Brian's open-minded fostering of new ideas helped launch many programs that are now used worldwide. For two decades (from 1992 to 2002), I bore witness to his promotion of surgical innovation, including:

- Multi-arterial grafting with special emphasis initially on bilateral internal mammary artery grafting
- Developing the radial artery as a desirable second arterial graft, enabled by the RAPCO trials and a large volume of clinical experience
- Hospital in the Home (HITH), as a means of following up cardiac surgery patients from remote areas
- Outcomes tracking in cardiac surgery, morphing into a longitudinal database and the ANZCTS database
- Fast track recovery in cardiac surgery using a cardiac surgery recovery unit
- Non-transplant surgery for heart failure including coronary artery bypass graft (CABG), left ventricular reconstruction, extra-cardiac mitral valve stabilisation, and ventricular containment
- Extra-corporeal membrane oxygenation (ECMO) for mechanical cardiac support in adult patients and its effectiveness in older patients, and,
- Continuous Venovenous Haemofiltration (CVVH) in post-cardiac surgery patients to prevent and treat acute kidney injury.

Prof Buxton continued to operate internationally until 2008, and I had the distinct honour of operating with him at an international coronary artery surgery symposium that year. A well-attended Festschrift was held in Melbourne in June 2009 to commemorate Brian's upcoming retirement [1]. Even after retirement, Brian remained for many years closely involved with Austin Health and colleagues around the

world until health challenges limited his capacity to engage with colleagues, friends, and family.

Brian instilled the ethos of respect for everybody in a team and fostered these values, of which his trainees are proud, at both Austin Health and the Epworth Hospital. We feel a deep sense of responsibility to continue this legacy. It is fitting, therefore, that the cardiothoracic surgery department at the Austin Hospital is now named The Brian F. Buxton Department of Cardiac & Thoracic Aortic Surgery.

Professor Jaishankar (Jai) Raman

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## A Giant in Cardiothoracic Surgery

I personally considered Brian Buxton a close colleague and soulmate in professional innovations, including the establishment of The Australasian Society of Cardiac and Thoracic Surgeons (ASCTS), now called the Australian and New Zealand Society of Cardiac and Thoracic Surgeons (ANZSCTS), the *Heart Lung and Circulation Journal*, and the Australian national Cardiac Surgery Database.

The ASCTS was established as Brian's initiative to supersede the previous organisation of cardiac surgeons, the Cardiothoracic Section of RACS. The meeting to establish the ASCTS was held in 1990 with Brian as its first president, and from 1991, the ASCTS began to hold annual clinical meetings to replace those organised by the Cardiothoracic Section of the RACS.

Brian's next innovation was the journal that became *Heart Lung and Circulation*. Walking into the meeting to establish the ASCTS, I said to Brian, "The new society should have a magazine". Brian's immediate response was, "No, we need to have a journal". This seemed an impossible dream but as time went on, we did establish an Australasian journal of cardiothoracic surgery. *The Australasian Journal of Cardiac and Thoracic Surgery* has evolved to become *Heart Lung and Circulation*, with the discipline of cardiology and others included. From a humble beginning of one self-published issue in the first year to a series of publishers, we now have a journal of international status published monthly by Elsevier. It is fitting that an image of Brian Buxton features on the front cover of this October 2022 edition of *Heart Lung and Circulation* (Figure 4).

The Australasian Cardiac Surgery Database was yet another of Brian's innovations. In 1979, he constructed the University of Melbourne Cardiac Surgery database with Professor John McNeil, head of the Department of Epidemiology and Preventive Medicine at the Alfred Hospital, Melbourne. However, thinking beyond that, Brian proposed, through the ASCTS, a national Cardiac Surgery database. Next, we approached the Victorian Department of Health and were eventually able to persuade it to fund a Victorian Database with six Victorian Units. Over time, with colleagues, the Victorian Database was expanded to a national one—The Australian and New Zealand Society of Cardiac and Thoracic Surgeons Database. This regional database

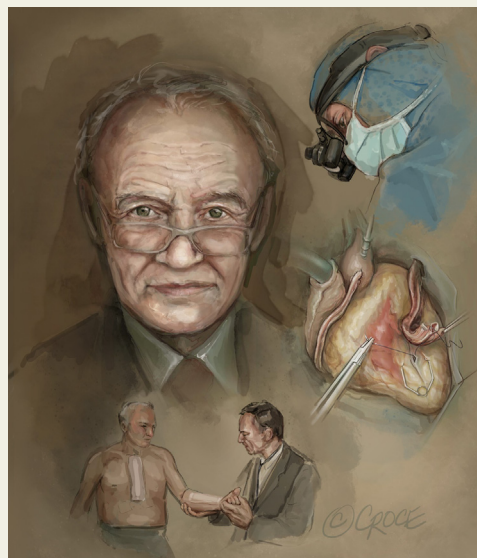


Figure 4 Multi-modal Portrait of Brian F. Buxton. © Beth Croce.

currently includes over 170,000 records from 58 cardiac surgery units throughout Australia and New Zealand, and by 2021 had generated over 90 papers published in peer-reviewed journals.

During these pioneering endeavours, we frequently encountered strong opposition from the surgical establishment. I was told by one of my senior colleagues that setting up the ASCTS would be "disrespectful to the College of Surgeons". When the idea of an Australasian journal of cardiac surgery was put forward, we were told it was not needed—"there is already an Australian surgery journal, the *Australian and New Zealand Journal of Surgery*". Also, "There is not enough innovation in Australia to justify such a publication" and, "There are too many journals already". The idea of a national cardiac surgery database also faced pushbacks and, initially, was not taken up by many hospitals. Brian's response, when asked "Why do these things?", was always, "Why Not?"

As well as all the surgical innovations in coronary bypass surgery that Brian introduced involving venous and various arterial bypass conduits, he was also involved in basic science research to investigate the relevant vascular physiology and the prevention of spasm in coronary bypass grafts. This research was carried out in the pharmacology laboratory at the Baker Institute, with Professor James Angus and Dr Guo Wei He, resulting in multiple publications as to how bypass conduits should be managed during harvesting, implantation, and recovery, based on the principles of basic pharmacology.

It is a fact of life that, as time goes on, the names of great figures in cardiac surgery such as John W. Kirklin (USA), Sir Brian Barratt-Boyes (New Zealand) and Donald Ross (South Africa) are either not known or soon forgotten, especially by young cardiac surgeons and trainees. It is therefore fitting that, to preserve Brian Buxton's remembrance, the Austin

Hospital in Victoria, Australia, has recently announced that the cardiothoracic unit at the Austin Hospital will henceforth be known as, The Brian F. Buxton Cardiac and Thoracic Aortic Surgery Unit.

In conclusion, I would like to quote from Stephen Grellet, a prominent American Quaker who wrote in 1800, "I shall pass through this world but once. Any good, therefore, that I can do, or any kindness that I can show to any human being, let me do it now. Let me not defer or neglect it, for I shall not pass this way again". Brian Buxton was someone who never let any opportunity pass to do a good thing or show kindness to a trainee, colleague, or patient. When shall we see his like again.

*Professor Franklin Rosenfeldt*

Editor's note: Expanded versions of several of these contributions are available as Supplementary Files.

## Appendices

Supplementary data associated with this article can be found, in the online version, at <https://doi.org/10.1016/j.hlc.2022.08.007>.

## Reference

- [1] Wilson M, Rosenfeldt F. Festschrift Cardiothoracic Surgery Scientific Meeting Honouring Professor Brian Buxton. *FRACS, AM. Heart Lung Circ.* 2011;20:143–4.