

## Interview with Professor James Tatoulis

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### Career Highlights of Professor James Tatoulis



Masters in Surgery (research into mitral repair)

Doctorate in Medicine (research comparing on-pump and off-pump coronary surgery)

Director of Cardiothoracic Surgery at the Royal Melbourne Hospital 1988.

Professor of Cardiothoracic Surgery at the University of Melbourne 2007.

Multiple International invitations as a guest lecturer, and faculty member.

Visiting Professor to the Hadassah Hospital in Jerusalem, Israel, and University of Virginia, Charlottesville, USA.

Honorary fellowship to the Royal College of Surgeons Thailand.

Honorary membership to the Society of Cardiothoracic Surgeons of Great Britain and Ireland and of the Hellenic Association of Cardiothoracic Surgery.

Chief Medical Advisor, National Heart Foundation of Australia

Chairman, Board of Cardiothoracic Surgery, RACS

Excellence in Surgery Award – Royal Australasian College of Surgeons.

Order of Australia, for services to medicine – particularly in the field of Cardiothoracic Surgery.

### 1. What motivated you to take up medicine and cardiac surgery in particular?

As a young person, I was always interested in both history and science.

Towards the end of high school, I was keen to become a physicist or astronomer, but in the final year of high school, my best friend convinced me that we both should do medicine together.

This was also highly encouraged by my parents.

I had a great time at University and enjoyed the medical course - especially Anatomy, Pathology and Surgery.

Following graduation (1972), I enjoyed each of the term rotations in the different specialties, including medical specialties such as Cardiology.

At that time (1975) the Royal Melbourne Hospital was planning to expand its Cardiac Surgery program, and I was approached to train in Cardiothoracic Surgery, which seemed a great idea at the time, but not knowing what it really encompassed! Hence after 3 years of rotating house medical officer jobs (1972-1975), and a year of general and vascular surgery (PGY4 - 1976) I embarked on Cardiothoracic training, which involved a further 5 years, including stints in Portland Oregon with Dr Albert Starr, Cleveland and at Duke University in the USA. I returned as a Consultant Cardiothoracic Surgeon to the Royal Melbourne Hospital and Epworth Hospital in November 1981.

### 2. What were the challenges you faced as a young cardiac surgeon in a specialty that was in its infancy,

### how do you think these challenges have changed in a modern scenario?

I do not think that challenges featured much in my thinking. As a young Cardiothoracic Surgeon I was always keen to operate and do my very best. Perhaps there was a degree of naivety but counteracted by genuine enthusiasm and commitment to the specialty.

I can only recall one really challenging situation early on in my career – operating on my first dissection as a young consultant recently returned from the USA. It was a dissected descending thoracic aortic aneurysm in a 17 year old boy with Marfan's, son of a Doctor (and had not been previously diagnosed).

I recall performing the surgery on a Sunday night feeling quite unsupported and a bit out of my depth.

Fortunately, all went well and the patient was still alive (though he had other surgeries) when last reviewed 34 years later.

The differences in the challenges from the early 1980s to now, are the expansion and sophistication of procedures. In the late 70's and early 80's there were fewer operations and these were fairly standard e.g. CABG with Saphenous Vein Grafts or with 1 Mammary plus SVG. Today even a "straight forward" CABG operation has many possible formats - 1, 2 or more arterial grafts, ITA x1 or 2, RA x1 or 2, on-pump, off-pump, sternotomy, left thoracotomy, MIDCAB, Hybrid, robot assisted - just to consider one procedure let alone the many approaches to the aortic and mitral valve, and the expansion of techniques in the surgery of the thoracic aorta.

I firmly believe that a young Cardiothoracic Surgeon should train in at least 3 different centres, to be exposed to the many variations of techniques and adopt those that they find comfortable and most effective for them.

### 3. Do you think a mentor is necessary for a young cardiac surgeon? Did you have a mentor who helped shape your career?

A mentor is important. I had two. Mr. George Westlake who was my Chief at the Royal Melbourne Hospital, and was responsible for most of my training. He was a gifted technical surgeon and I was able to learn how to operate well, and expeditiously.

My second mentor was Professor Brian Buxton who was a colleague 10 years my senior, also a superb technical surgeon. In addition, Prof Buxton impressed upon me the importance of strategic thinking, clinical research, data bases, collaboration and the importance of professional associations.

I think it is important for a young surgeon, irrespective of the specialty to have 1 or 2 seniors they can use as role models, ask for guidance, and discuss not only operative surgery, but all the other aspects that are important in a professional's life.

### 4. Do you think you need to have the typical "surgeons personality" to be successful, what do you think are the attributes that make a good cardiac surgeon?

Personality and accepted behaviour have changed dramatically over my professional lifetime. Gone are the days of the Authoritarian Surgeon. It is important that one functions as part of the team, albeit as its leader. In that role the surgeon needs to recognize and acknowledge the significant contributions of all. Successful cardiac surgery could not be performed without a good assistant, an excellent scrub nurse, a diligent cardiac anaesthetist and importantly the perfusionist, who has the great responsibility of keeping the patient alive whilst the cardiac surgery is being performed.

Although all this is self evident, it is also commonly taken for granted. Hence recognition of the roles of each of these members of the team, both at the end of a particular operation, and at Unit or Department events is absolutely essential. A little bit of acknowledgement goes a long way!

At the outset of your career you should "build" your own team with individuals that you like and respect and create a sense of loyalty towards each other.

### 5. You have an active training program, what motivates you to remain active in the teaching field?

I have worked in the public, university teaching hospital system continuously for 46 years – the first 10 years as a house medical officer / registrar, and subsequently as a consultant. I have always enjoyed teaching, both at a clinical and an operative/ technical level. I believe teaching, and interacting with enthusiastic, motivated and highly intelligent young doctors is stimulating. It is immensely rewarding to see young doctors develop their knowledge and technical skills.

From a personal point of view, it helps keep one young and in touch with the younger generation's thoughts and aspirations and gain an insight into their world.

### 6. You are an active researcher with numerous publications in major journals and books, why do you think research is important for a young cardiac surgeon?

I believe that curiosity is one of the most important human characteristics. It is essential for the advancement of knowledge, irrespective of the field. It also makes a person a much more interesting human.

I despair when I note intelligent people around me show no interest in things or events beyond their day to day commitments. There is just so much we do not know, even in our field, hence further exploration in this and other areas is just such an obvious thing to do.

### 7. Do you believe that there is gender bias in surgery in general and cardiac surgery in particular, how do you think this situation can be changed?

I do not believe that currently there is an intended gender bias in the selection of young doctors entering surgery in general and cardiac surgery in particular.

With respect to cardiac surgery it is certainly a demanding specialty in the training phase and during one's career.

The training is rigorous, lengthy and it is difficult to interrupt. A career as a consultant involves performing long and sometimes high-risk surgeries, being readily available for emergencies, to resolve unexpected complications at any hour, to travel to satellite referral centres, and spending time at overseas institutions and meetings. All these components of the career are truly demanding and feature significantly in the considerations for choosing a career, both for young men and women.

I have a daughter, who is a lawyer, and I am extremely conscious of ensuring equality of opportunity.

At one point in time I employed 50% of the female cardiac surgeons in Australia!!!

The reality is that even in today's modern (even western) society, social gender roles are still well defined. For a female cardiac surgeon to succeed, she needs totally reliable support, especially at home, so that she can concentrate on surgery, the patients, and postoperative matters without being compromised especially in the unpredictable availability to deal with unexpected demands.

### 8. Most young residents speak of quality of life and work life balance; do you think this is easily achieved in cardiac surgery? Were you able to achieve this balance? Were your family supportive of the time demands of the specialty?

Although being a Cardiac Surgeon, defines who we are for 30 or more years, it is important to have an interesting and fulfilling life outside of the hospital setting. I think it is definitely possible to achieve this, it is just a matter of wanting to and planning.

I always had my daughter's school events (school sports, swimming carnivals, Father's Day breakfast, speech days etc. placed in my diary months in advance, and my wife, secretary and I ensured that the times for these were "quarantined". These events can never be repeated – seeing your child win a race, or be given an award, or acknowledged in some way, especially in front of others and peers will only happen occasionally. If you are not there to witness it, it is a moment forever lost.

I planned vacations around the time of my daughter's school holidays. There is no reason why any surgeon cannot do this to ensure enough family time and enjoy moments which cannot otherwise be recaptured. The secret of the success is forethought and planning. It is much easier to do nothing than to actually do something! There is no doubt that being a cardiac surgeon is demanding in terms of time and especially in dealing with the often unexpected demands (acute dissections, postoperative bleeding). However, these can be offset by good planning for family time (as mentioned above) and having a great understanding and trust with your colleagues so that your patients are well looked after when you are absent.

#### 9. What do you think should be the changes in training keeping in mind the rapid progress of percutaneous techniques?

Imaging techniques and ingenious technological advances will continue to occur. Most aortic valve surgery and a high proportion of mitral pathology will be addressed by percutaneous techniques. Hence, young cardiac surgeons must incorporate these techniques into their training and early practice. They must ensure access to hybrid operating rooms, and convince hospital administrators that more such rooms will be required in the future. Young surgeons will need to form collegial partnerships with cardiologists, and vascular surgeons, to train in and develop wire, catheter and endovascular skills, and to be able to work cooperatively together in the future.

A significant dilemma which will arise will be the nature of open cases in the future.

The open cases will be extremely complex high-risk cases which cannot be addressed by trans catheter techniques – infective endocarditis with Aortic root or Mitral annular abscess, extensive reoperations such as 1 or 2 valve replacements plus coronary artery bypass grafts, complex ascending thoracic and transverse arch pathology. Such surgery will be extremely challenging for young surgeons who do not get to perform a high volume of routine, simpler cardiac surgeries.

The role of coronary surgery must not be forgotten! Coronary surgery still forms the bulk of cardiac surgery, and will progressively form a greater proportion of traditional Cardiac surgical procedures. The constantly emerging evidence of the superiority of coronary surgery, particularly where multiple arterial grafts are used – over stenting (except for primary angioplasty for acute myocardial infarction) will progressively cement the place of coronary surgery.

However it is possible the nature of coronary surgery will change with the aging population.

I would predict that it will evolve in 2 ways – a greater use of multiple arterial grafts, and also hybrid procedures where a surgical LIMA/LAD is performed, supplemented by stents to significant right coronary circumflex lesions if required.

#### 10. Where do you see cardiac surgery in 20 years?

Routine aortic and mitral procedures will be predominantly performed by percutaneous trans catheter techniques, as will simple congenital structural heart disease corrections. Traditional "open" cardiac surgery will be predominantly confined to the much more complex high-risk operations, and a will present a challenge to the surgeons of the era. They must foresee all this, and train and adjust their skills accordingly.

With respect to percutaneous trans catheter procedures – I do not think that the "label" of who does such procedures, whether they be interventional cardiologists, or cardiac surgeons is important. What is important is that the proceduralist is well trained and extremely competent and obtains the best possible results for the patients, irrespective of their "title".

#### 11. When you retire from the field what would you like to be remembered for, your greatest achievement? Your legacy?

Hopefully I would like to be remembered for 4 main achievements.

1. For establishing and building one of the most successful and respected departments in Cardiothoracic Surgery in Australia. From 3 surgeons to 11, from 200 cases to over 1500 per year (1100 Cardiac, 400 Major Thoracic) and for constantly introducing our new concepts and innovations in Cardiothoracic Surgery, including Intraoperative Trans Esophageal Echo, Implantable Defibrillators, Arrhythmia surgery, Mitral repair, off-pump CABG, MIDCAB, Sutureless valves, smaller incision access, percutaneous techniques and robotic thoracic surgery.
2. In helping develop, and champion the role of multiple arterial grafting, especially bilateral internal thoracic artery, and radial artery grafting throughout the world. Melbourne, and in particular the Royal Melbourne Hospital (as well as the Cleveland Clinic) are recognized as pioneers in and advocating for multi arterial coronary grafting and in promoting the enhanced long term benefits these techniques can achieve for patients.
3. My Academic Involvement.

I was able to be a busy clinical surgeon (at times up to 15 open hearts per week) but simultaneously able to achieve a Masters degree, and a Doctorate in the University of Melbourne by research. I have published over 180 articles as author or co-author, and presented numerous abstracts, and been an invited faculty member at numerous national and international meetings. During this time my

interaction with senior medical and research students and young doctors has also been a highlight.

4. As a mentor in the training of over 60 Cardiothoracic Surgeons from Australia, New Zealand, Europe, North and South America, Japan, Thailand, and Indonesia.

Perhaps the most rewarding group of all to mentor, has been that from India- over 30, all of whom, almost without exception have gone on to become incredibly successful cardiac surgeons, and leaders in their field when they returned home.

#### Abbreviations

CABG – Coronary Artery Bypass Graft

SVG – Saphenous Vein Graft

ITA – Internal Thoracic Artery

RA – Radial Artery

MIDCAB - Minimally Invasive Direct Coronary Artery Bypass

LIMA - Left Internal Mammary Artery

LAD - Left Anterior Descending Artery