

Journey to **DISCOVERY**

AUTUMN
2025



The vision at our heart

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Tracking
type 2 diabetes
in Australia

P10

*"I didn't think I
had a problem"*
– Justine's Story



How you help can end the obesity crisis



Healthy communities, healthy hearts



Meet Maureen, Community Philanthropist of the Year

Acknowledgement to Country

The Baker Institute acknowledges and pays respect to the Traditional Custodians and Elders of this nation, past and present, and the continuation of cultural, spiritual, and educational practices of Aboriginal and Torres Strait Islander people.

We're all in this together

As a valued supporter of the Baker Institute, you're helping empower a community to transform the lives of people living with diabetes and heart disease.

Welcome to our second edition for 2025. This season, we're embracing a theme at the heart of everything we do here at the Baker Heart and Diabetes Institute: *the power of community*.

As you know, our fight against diabetes and heart disease cannot be won alone. Our mission relies heavily on the support of donors like you. Each of you is part of a larger community dedicated to combating two of Australia's biggest killers. Without your commitment, we could not continue our groundbreaking research.

These diseases touch every corner of our society, and through this shared experience we are united. A community that is educated, aware and compassionate is better equipped to prevent, manage, and support those at risk and currently affected.

This edition highlights the incredible impact your support has already had. You'll meet some of the scientists behind the studies and hear from people whose lives are being transformed thanks to their work, and your generosity.

As I write this, we're on the cusp of expanding our global network of partnerships, further strengthening the Baker Institute's research and its real-world impacts.

Recently, we signed a Memorandum of Understanding with Oxford University and are planning a virtual symposium to explore new projects. This builds on our successful partnership with Cambridge, which has already propelled advancements in cardiometabolic disease screening, prevention and treatment. Our partnerships exemplify how the global scientific community can work together to tackle some of the world's most pressing health issues. These alliances both expand our research capabilities and our community of innovators, advocates and supporters.

I want to personally thank you for supporting our vision. With your continued contribution, we'll keep pushing the boundaries of discovery to ensure that one day, we can say with confidence that we have beaten these diseases — together.

Thank you once again for being an essential part of the Baker Institute community.



John Greenwood

Professor John Greenwood, Director & CEO, Baker Heart and Diabetes Institute



The power of community

Together we can transform lives and build healthier communities.

At the Baker Heart and Diabetes Institute, we believe that the strength of a community can change the world – especially when that community is united by a shared purpose.

As we step into a new season, we are proud to reflect on how the generosity of our donors and supporters continues to empower the pioneering work of our scientists, clinicians, and researchers. With your help, we're driving groundbreaking medical research that holds the potential to transform the future of heart health and diabetes care.

Beyond the laboratory and clinical settings, it's the collective

efforts of compassionate individuals – educators, advocates, and caregivers – that allow us to take the valuable insights into early intervention, care, treatment and bring them to people carrying the burden of these diseases in daily life.



By fostering awareness, sharing knowledge, and supporting those affected, we can make an enormous impact in the fight against heart disease, diabetes and related conditions. Together, we can help prevent these diseases from affecting others, now and in future generations, while offering hope to those already living with them.

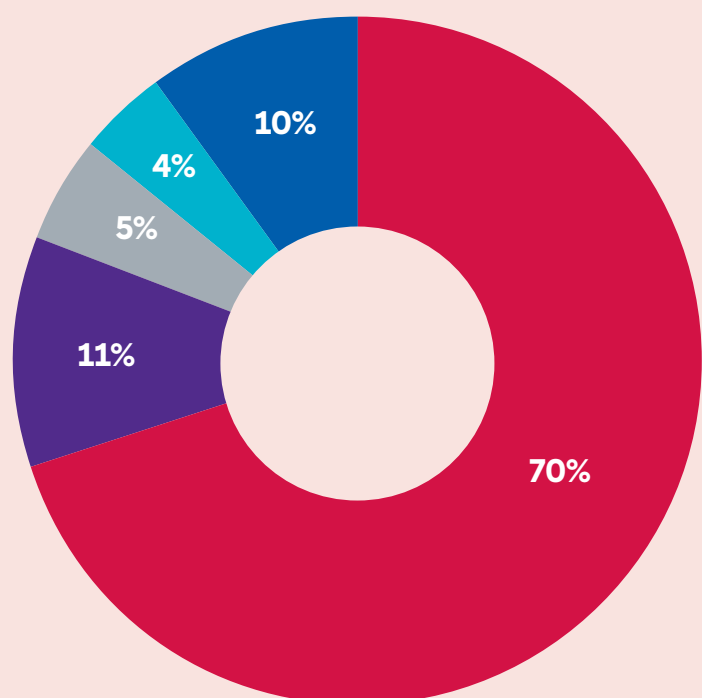
As we look ahead to the future, we remain committed to accelerating life-saving research and improving outcomes for all.

And with your continued support, we know we can make a lasting difference in the lives of those who need it most.

Where your donations go

The donations of our wonderful community of supporters help fund groundbreaking research into the prediction, prevention and treatment of heart disease and diabetes. 70% of every donation goes directly to funding our labs, medical research and community engagement programs, while 16% contributes to keeping the Institute operating, and 14% contributes to finance and growth activities.

- Research and laboratory expenditure
- Depreciation
- Administration
- Business development
- Building & infrastructure costs



Our four key pillars of research - and what the community can do to help

“Here at the Baker Institute, we’re making life-changing discoveries in treatment and prevention around four of Australia’s most pressing health issues - diabetes, obesity and metabolic health, heart attack and heart failure.

Our team of researchers have made incredible progress in each of these areas, but none of this is possible without our community of supporters.

I’m proud to be part of research efforts that focus on the issues that affect the lives of millions in our community. These challenges touch every family, and it’s our collective responsibility to come together, whether by supporting health education, offering

compassion and understanding to those impacted and driving vital research. Together, we can minimise the devastating impact of these diseases, end the discrimination and disadvantage that affect our most marginalised communities and create a healthier future for all.”



Professor John Greenwood
Director & CEO, Baker Heart and
Diabetes Institute



DIABETES

Type 2 diabetes is on the decline - but not for all communities

Over the past two decades, we’ve seen some promising data emerge: the incidence of type 2 diabetes in Australia is on the



decline. However, this positive trend isn’t experienced equally across all communities. While the overall rate of diagnoses has dropped, certain groups have not seen this same reduction.

In fact, for adults born in South and Southeast Asia, Africa, the Middle East and the Pacific Islands, the incidence of type 2 has been on the rise.

Genetic studies have shown these populations are burdened with an inherently higher risk of

developing diabetes. In combination with socio-economic disadvantage and possible gaps in healthcare access, these factors have made some communities particularly vulnerable to the growing diabetes crisis.

Our research into the causes behind this alarming trend will ensure that all Australians are equipped with the knowledge to better prevent and manage type 2 diabetes.

INTERVIEW

Professor Jonathan Shaw Deputy Director (Clinical and Population Health)



“In our diverse Australian communities, we need the right messaging to reach the right people.”

Professor Jonathan Shaw is an acclaimed epidemiologist and clinical researcher. He has co-authored over 500 peer-reviewed scientific papers, including his study on demographic changes on the incidence of type 2 diabetes in Australia, published last year in the *Medical Journal of Australia*.

His latest research could translate into greater advocacy and a more nuanced understanding among both the public and healthcare professionals around reducing the prevalence of type 2 diabetes in at-risk communities.

The weight of demographic change

Jonathan and his team’s study aimed to reveal the causes behind rising rates of diabetes in Australian adults who had immigrated from other regions, particularly developing nations. .

“The main issues are two-fold. The first is what we call epidemiological transition. As countries develop, gaining better education and greater wealth, population health improves. Back in 19th century Europe, diabetes was a disease of the rich. The belief was you were fatter because you were more prosperous,” explains Jonathan.

“We can see the earlier stages of this transition in developing countries today, where the better off are actually more likely to develop diabetes.

With immigration from these countries into Australia, the transition is more uneven. As people become more health aware and adjust their lifestyles, cases of type 2 go down. But, with groups who are more marginalised in the community, cases are continuing to rise”.

The genetic divide

Jonathan stresses there’s another factor affecting certain ethnic groups which is even more acute — genetics.

“Your inherited genes make you more at risk if you have South East Asian, African, Pacific Island or Indigenous Australian ancestry.

If you’re from, say, an Anglo-Irish background, the BMI (Body Mass Index) that makes you obese and at risk of type 2 diabetes is 30.

If you’re from one of those at-risk groups, you’re obese at BMI 25.”

Bridging the gap

Jonathan highlights that the overall declines in type 2 are likely the result of public health campaigns leading a proactive charge around prevention. However, he believes that the standard health messaging isn’t creating the same level of engagement among all members of the community, often due to barriers such as language and cultural differences.

“We need a focus on more appropriate health messaging. That’s not to say this isn’t already happening, but there’s a clear, widening gap when it comes to diabetes.”



OBESITY AND METABOLIC HEALTH

How community help can end the obesity crisis

Australia has one of the highest rates of obesity in the world, with 14 million Australians affected. That's two in every three adults and one in four children.

Sadly, widespread stigma can prevent people seeking help for a condition among the leading causes of metabolic health complications and premature death.

Obesity isn't simply the consequence of poor self-control. Not all communities have the same access to the fresh food, education and medical care needed to reduce obesity rates.

Particularly in low-income, regional and remote areas, environmental factors can limit both affordable access to healthy food, and opportunities for

physical activity. Stigma only exacerbates the problem, when others react to obesity with blame and judgement, rather than supporting individuals to seek help, and pushing for community change that enables healthier lifestyles.

Not only do individuals suffer, but the broader community faces the burden of reduced productivity and strain on the healthcare system. Reducing these disparities is essential, and community engagement is key in changing perceptions and achieving better outcomes.

We all have a role to play in ending the obesity epidemic

Education and equity are at the heart of ending the obesity crisis. All of us can do our part by rejecting stigma, advocating for vulnerable communities and supporting organisations like the Baker Institute who are bringing treatment to at-risk groups Australia-wide.

Without vital funding for obesity research, we face a future with more chronic disease, early death and significant costs to healthcare, community development and wellbeing.

INTERVIEW

**Associate Professor
Erin Howden
Head of the
Cardiometabolic Health
and Exercise Physiology lab**



"It's amazing that we can take this treatment out of the clinic into the wider community."

The reality is clear: we need novel, far-reaching solutions for stemming the obesity epidemic and its related health complications. Erin's research seeks to enhance the prevention and treatment of cardiometabolic

diseases in at-risk groups like people with obesity.

Exercise as medicine

"We need multidisciplinary approaches to tackle these complex issues. My focus is on 'exercise as medicine'."

According to Erin, standard exercise guidelines can be overly generalised. *"Exercise as medicine targets specific conditions, with specific doses of exercise. We determine the individual's underlying physiology and fitness, so we can develop precise programs in a safe and structured way"*.

Erin says she's blessed to be able to develop these training programs thanks to the cutting-edge facilities at the Baker Institute.

"We have a wonderful gym here we

can use for research. What's even more amazing is that we can take this treatment to the wider community. We're conducting training through telehealth sessions, and we're also sending out equipment to people's homes".

Populations in regional and remote areas have a greater prevalence of obesity, so for Erin's work to be able to reach people far and wide is a step towards equality and improved health outcomes for all Australians. The obesity epidemic will only continue to grow unless we can band together as a community to stop at-risk individuals from falling through the cracks.

"When you donate to the Baker Institute, please know that your support will allow us to take more high-impact programs to those in need."

HEART ATTACK

Healthy Communities, Healthy Hearts

Supporting survivors and educating communities to prevent heart attacks.

For those who survive a heart attack or a serious cardiovascular event, the road to recovery can feel uncertain and isolating. But there is one powerful source of strength that can make all the difference: community.

Whether it's a support group of fellow survivors, the kindness of family and friends, or a broader network of healthcare professionals, having people beside you on the recovery journey is essential.

This year, heart attack will cause the deaths of one in 25 of all Australians, affecting thousands of families. Another 57,000

Australians will experience a heart attack and survive. Every nine minutes, one person is hospitalised due to heart attack.

These statistics, and the enormous pressure they place on our healthcare services, highlight an urgent need for greater community awareness around the risk factors, signs and symptoms of heart attack.

Myths around heart attack still persist in the community

Lifestyle factors such as diet, exercise, and stress management play crucial roles in prevention. Yet, persistent myths in the community around heart attack:

("I'm too young to worry about it", "heart disease runs in my family, so there's nothing I can do to prevent it") can prevent people from doing more to protect themselves.

At the Baker Institute, we're committed to fostering a sense of community through education, and outreach, so no one has to face heart attack and heart disease alone.

The strength of community — whether giving your time and support to those directly affected, or assisting research groups like the Baker Institute with vital funding — continues to be a driving force behind reducing the devastation caused by heart attack in Australia.

INTERVIEW

Professor Andrew Murphy Lab Head, Haematopoiesis and Leukocyte Biology



"We're looking at translational approaches to discover new medicines that will improve heart health and accelerate recovery after a heart attack."

Like so many Australians, Professor Andrew Murphy's life has been personally touched by heart disease. *"I've seen the impact in my own family. Recently, my father had stents put in due to coronary blockages".*

This connection helped fuel his

determination to uncover new methods of prevention. His research at the Baker Institute focuses on understanding how immune cells contribute to cardiovascular disease, the most common cause of heart attack.

Breakthrough research will lead to life-saving drugs

What we do know is that overproduction of lipids (fat-like substances in the blood and tissues) caused by high cholesterol can lower our body's defences against heart disease. The Professor's breakthroughs in measuring lipid levels in immune cells are precursors to identifying new drugs to prevent the acceleration from heart disease to heart attack.

He also acknowledges the role of community is equally important to

prevention. It's not just an individual's responsibility to adjust their lifestyle and reduce risk, it's about advocating for building communities that enable and encourage those lifestyle changes.

To the Baker Institute's community of supporters, Andrew's gratitude can't be overstated.

"Thank you for funding the work that right now is improving the health outcomes of real people".

He also has a message for those currently affected by heart attack and disease.

"Please know you are not alone. We're trying our best to reduce the anguish of families going through this, and I hope, within your lifetime, you'll see the benefit of the work we do, directly or for those around you."

HEART FAILURE

Heart failure and the strength of community care

At the Baker Institute, we are committed to advancing research and treatment that empowers both individuals and communities to manage and prevent heart failure more effectively.

Heart failure often leads to multiple hospitalisations and, unfortunately, has a high mortality rate — 50-75% within five years of diagnosis.

Helping heart failure patients stay healthier and out of hospital

One of the most promising strategies to reduce hospitalisation rates and improve long-term health outcomes is better care in the community. This approach is not only more cost-effective, but it also helps

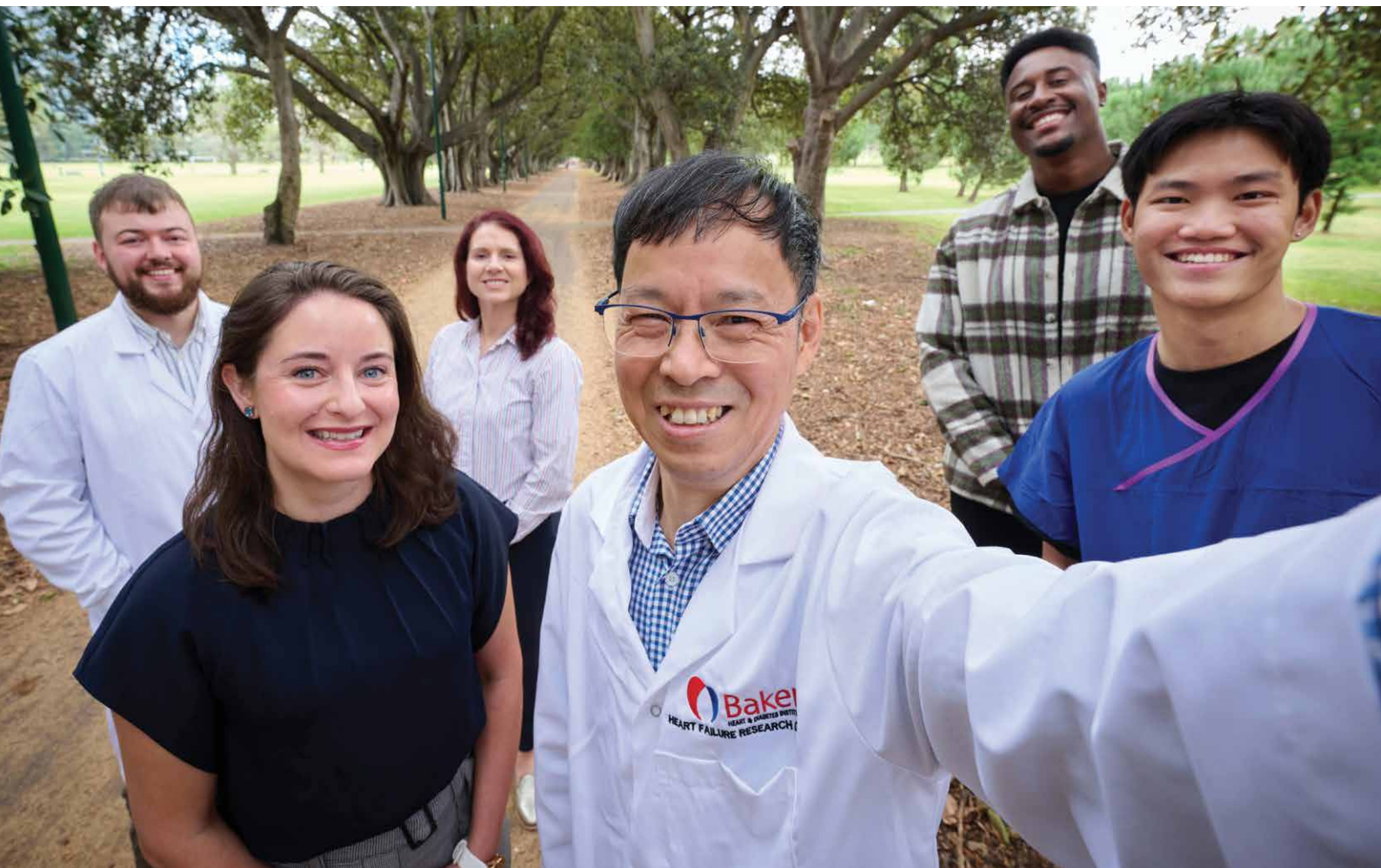
individuals stay healthier and out of the hospital.

The power of community support cannot be overstated. A coordinated effort between healthcare providers, patients, and their families ensures that patients receive continuous care, whether through medication management, exercise programs, or rehabilitation. For many, connecting to a support group or accessing educational workshops and consultation at one of our specialist clinics is crucial to their physical and mental wellbeing.

Effectively managing heart failure requires an integrated system where community-based support plays a central role. Telehealth is a critical part of this model,

allowing us to extend care to those who face barriers to physically attending clinics. We are proud to offer cutting-edge technology and consultations to ensure people in all corners of Australia have access to the care they need.

By fostering a compassionate and well-informed community, we can improve health outcomes for those living with heart failure, reducing hospitalisations and enhancing quality of life. Together, with the support of our dedicated donors and partners, we are making a tangible difference in the lives of Australians affected by heart failure — and ultimately, changing the trajectory of their health for the better.





INTERVIEW

Professor Judy de Haan Head of the Cardiovascular Inflammation and Redox Biology laboratory



“Medical research leads to life-saving advancements every day. Yet, our work is never done. I’m always finding new and interesting things about the way the body works. Just wanting to learn has always been my driving force.”

Professor Judy de Haan is at the forefront of groundbreaking research, focusing on the links between diabetes and heart failure.

With diabetes increasing the risk of developing and dying from cardiovascular problems, Professor de Haan and her team

are working to understand the underlying causes and develop targeted treatments.

Today’s research is tomorrow’s treatment

One major area of her research involves the role of oxidative stress and inflammation in heart-related complications. She discovered that a lack of a natural antioxidant enzyme called glutathione peroxidase 1 contributes to cardiovascular problems in people with diabetes.

This has led to the development of drugs that mimic the enzyme’s effects, potentially reversing these complications.

Another area of Professor de Haan’s research involves investigating the pathways leading to inflammation following a heart attack, which can further weaken heart muscles, resulting in heart failure. Her team is looking into a particular anti-inflammatory molecule naturally occurring in the body.

Early studies show promising results, fast-forwarding the trialling of drugs with the potential to repair heart tissue and improve function after an ischemic event (when the heart is deprived of oxygen).

Her ultimate goal is to develop precise treatments that target the conditions leading to secondary heart failure in patients with metabolic diseases like diabetes – something no existing drug currently does.

According to Professor de Haan, the research behind the drugs that are currently being trialed “are really shifting the dial significantly when it comes to understanding the disease process.”

“The contribution of our supporters is more critical than ever, the research breakthroughs we’ve made are resulting in new drugs on the verge of coming to market. Thanks to that support, we’re starting to see real returns.”



Justine's Story

"I didn't think I had a problem."

I don't remember the cardiac arrest itself. In fact, I've lost almost a month's worth of memory, time before the event and time after the event.



Before July 2020, my life as a single parent was extremely busy, but as a Personal Trainer, the idea of having sudden cardiac arrest, at my age, never entered my mind.

Everything I know about that morning comes from others' recollections. We were in the midst of Melbourne lockdowns, so my kids were homeschooling, while I was in my bedroom planning a workout video. It was my son's 16th birthday and my daughter wanted something special for lunch, so she decided to ask me what I thought.

When she discovered me unresponsive on the bedroom floor, she and my son rushed to call 000. The operator talked them through how to perform CPR and my son performed chest

compressions for seven minutes until paramedics arrived.

As soon as the compressions stopped, so did my pulse. Within the first 25 minutes, I was defibrillated eight times. **By the time my pulse started stabilising, I'd technically been dead for 86 minutes.**

Hospital results showed an enlarged left ventricle, consistent with Takosubo Cardiomyopathy, a condition that causes the heart muscles to weaken suddenly.

We know sudden cardiac arrest is often due to blockages caused by plaque build-up in the arteries. By contrast, we don't know the exact cause of Takosubo, except that it can be triggered by periods of extreme stress.

I was in an induced coma for four days, before undergoing surgery to receive an Implantable Cardioverter Defibrillator — a pacemaker that can also deliver an energy shock to restore an abnormal heartbeat. I spent a total of two weeks in hospital.

If my children hadn't been home and acted quickly, I would be dead.

To this day, I sometimes feel guilt about the trauma I put them through, even though it wasn't deliberate.

I have family with heart issues, including my sister, so I thought I knew about heart health, but I assumed I would be safe.

Looking back, there were signs that something wasn't right. I'd noticed a jump in my heart rate and feeling puffed after training, but I attributed that to an asthma flareup, and the intensity of my workouts.

Luckily, I made a full recovery, and as soon as I could, my research started. I first visited the Baker Institute to donate a sample of my blood for research, and a year later attended a workshop with other heart patients.

We need a combination of better community awareness and cutting-edge research from groups like the Baker Institute. With their research, I believe we'll soon see improved testing that can pick up on the warning signs — like the ones I didn't — and reduce so many preventable deaths.

Justine Phillips

Sudden Cardiac Arrest Survivor, CPR and First Aid Trainer and Assessor, Founder of Heart Matters Australia



"The Baker Institute helped inspire my advocacy work, which includes greater community access to AEDs (automatic external defibrillators). CPR alone can't save a person's life. Access to an AED within the first three minutes increases survival by up to 70%. AEDs should be as numerous as fire extinguishers, and training on their use commonplace."

DONOR PROFILE

Maureen Stevenson

“Charities supported me to continue through tough times. I just felt it was important to help them continue too.”

Maureen Stevenson isn't a medical professional, but her contribution to medical research has made a difference to countless lives.

Maureen's philanthropy journey began over 30 years ago, donating to charities in NSW and later, supporting local causes in her new home state of Queensland. As time progressed, Maureen's generosity extended to charities and non-profits working nationwide, with a special focus on medical research and training, education and community wellbeing.

Maureen has been a valued supporter of the Baker Institute since 2017, contributing an impressive \$10,000 annually.

Maureen's commitment to the Baker Institute stems from her personal experience with family members who have since passed

away from their conditions, and she understands the profound impact of chronic illness on families.

Her own breast cancer diagnosis further fueled her passion for medical research, leading her to support breast cancer initiatives and now, the critical work at the Baker Institute.

In recognition of her philanthropic work, Maureen was named the **2023 Community Philanthropist of the Year at the Queensland Philanthropy Awards**.

Well-known in medical research circles for her energy and enthusiasm, despite being in her 80s, her giving spirit extends beyond financial contributions. She is known for attending charity events, facilitating connections between organisations, and for leaving a legacy that will last for



generations to come.

Maureen's vision and selfless support have had a transformative effect on some of Australia's most pressing health issues, ensuring a brighter future for generations to come.

Her story is a testament to the power of compassion and the impact one person can make on an entire community.

Uniting for hope, health and healing

As we continue our work against diabetes and heart disease, the power of community stands as a beacon of hope.

Community serves as a lifeline to individuals who often find navigating the journey of chronic illness an isolating and overwhelming experience. Through peer support, education and the advocacy of community-funded organisations like the Baker Institute, we can empower

individuals to reclaim control over their lives.

Together, we're creating a future where better health outcomes are within reach for communities across Australia and around the world.

Thank you for standing with us, for being a part of something bigger, and for making a lasting difference. Your contribution truly matters.

To all our supporters, thank you for proving that the power of community can change lives.

