



**Victor Chang**  
Cardiac Research Institute

Autumn 2023

THE **BEAT**

# Chris's heart attack struck out of the blue

Could a simple test save lives?



## INSIDE THIS ISSUE

- Translating discovery into treatment for childhood heart disease
- COVID's impact on heart health
- New partnerships to drive heart research in Australia

Through heart surgery, Dr Victor Chang was able to save hundreds of lives. But he knew that research could save millions.



## A message from Professor Jason Kovacic, Executive Director

**Heart attacks are on the rise across Australia, our research is more vital than ever**

In the first eight months of 2022, there was a significant increase in the number of people who had fatal heart attacks.

We still don't fully understand why, but data from our Victor Chang Heart Health Check team is suggesting COVID could be playing a role (see page 4).

With more than 10,000 families losing their loved ones during this period, it has become clear that we need a national approach to turning the tide against heart disease.

It's why we've partnered with the Ingham Institute for Applied Medical Research in South Western Sydney (see page 7) and have recently joined the National Indigenous Genomics Network (see page 7).

And, of course, your partnership helps make it all possible.

Your support keeps our critical research and advocacy moving forward – including helping us make progress toward understanding if Vitamin B3 may be the answer to preventing heart defects in newborn children and raising awareness about a new marker of 'bad' cholesterol (see pages 5–6).

None of this is possible without your decision to partner with us.

I am so incredibly grateful for your vital support that will allow our discoveries to be translated into new treatments faster than ever before.

I hope you enjoy this issue.



**Professor Jason Kovacic**  
Executive Director



## APPEAL UPDATE



Thanks to your generous support, Prof Dunwoodie and her team are closer to translating discovery into treatment for heart defects



## You're helping turn discoveries into treatments

**Thanks to you, we are closer than ever to clinical trials that could help give more children a healthy start to life**

You may remember reading about little Phi last Christmas. At only two years old, she needed open heart surgery to fix a hole in her heart.

Professor Sally Dunwoodie's remarkable discovery of a potential cause for some heart defects, recurrent miscarriages, AND a treatment, has the potential to transform how pregnant women are cared for – and save children's lives.



Phi was born with a heart defect

The overwhelming support shown by people like you last Christmas is helping progress this ground-breaking research to clinical trials to validate if a vitamin B3 supplement could help prevent childhood heart disease (CHD) and recurrent miscarriages.

"When I come to work, I think about the impact of heart disease on countless families. And I think about our supporters because without you we couldn't do this research. Thank you so much," says Professor Dunwoodie.

Your support means the world to little Phi and her family too. While Phi is now doing well, many other children with CHD are not so lucky. Four will die every week from related causes.

“I know how incredibly lucky we are – not every family has a good outcome like us. I can't imagine what it would be like to lose a child. That's why this research is so important. Thank you to everyone who donated,” – Phi's mum Jackie.

Thank you for your ongoing support, we look forward to keeping you updated as this research progresses.





The Victor Chang Heart Health Check team are seeing firsthand the impact of COVID on heart health in Australia

## The COVID effect: heart health decline since early 2020

Living through the pandemic certainly changed our lifestyles. But what was the effect on our heart health?

During lockdown, we all spent far more time at home, many of us ate and drank more and exercised less.

The Victor Chang Heart Health Check team provide free heart check-ups in the community and see the impact first-hand. Since the start of the COVID pandemic, the number of people reporting abnormal cholesterol, blood pressure or blood sugar results has increased by a third. And that's hugely concerning.

### COVID'S IMPACT ON HEART HEALTH

These results show the COVID effect is real. "We hear in the community that COVID had a big effect on people's well-being and lifestyles. And the impact on heart health is a real worry," says Anastasia Dounas, Heart Health Program Manager.

### GETTING YOUR HEART BACK TO HEALTH

The good news is, there are a few simple things you can do to get back on track.

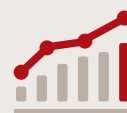
Visiting your GP is a great place to start.

“Heart Health Checks are vital in revealing if you are at risk of heart disease but can also help prevent it. Lifestyle changes or medications can make a huge difference to your risk factors, but you first need to be aware of them.”

– Clare Lennon,  
Heart Health Check Specialist

Increasing your exercise and following a healthy diet will also give your heart the best chance to be in top form.

### KEY RESULTS



**47%**

of people tested had at least one result outside the healthy range – an increase from 33% before the pandemic



**15%**

had blood pressure outside the normal range



**32.4%**

had elevated cholesterol



**10.5%**

had higher-than-normal blood sugar levels



Our Heart Health Service is on the road now, providing free heart health check-ups. Find a location near you at: [victorchang.edu.au/heart-health-check/dates](http://victorchang.edu.au/heart-health-check/dates)





Professor Jason Kovacic and his team are leading research into atherosclerosis – a major cause of heart attacks

# How a simple test could prevent heart attacks

**With fatal heart attacks on the rise in Australia, leading cardiologists are urging doctors to offer a simple blood test that could save thousands of lives**

Chris was in great shape. It was his 60th birthday and he was enjoying the thrill of a surf when a pain in his chest knocked him off his board.

Chris was suffering a heart attack.



Wider testing of Lp(a) has the potential to prevent fatal heart attacks

He spent 15 long minutes tackling the waves to get back to the shore. Luckily, he survived.

Cardiovascular disease is Australia's number one killer – and the pandemic has undoubtedly increased the risk factors. In the first eight months of 2022, more than 10,200 Australians died from ischemic heart disease, 17% more than expected.

That's why leading cardiologists like the Institute's Professor Jason Kovacic are calling for GPs to start testing those at risk for a new marker of 'bad' cholesterol.

## WHAT IS Lp(a)?

Lipoprotein(a), or Lp(a), is a type of 'bad' cholesterol that is a significant risk factor for atherosclerosis – the hardening and narrowing of arteries in the heart caused by a

build-up of plaque and a major driver of heart disease.

Recent evidence has shown that people with elevated Lp(a) levels are 2-4 times more likely to develop this condition. It could be the answer to why seemingly healthy and active people like Chris experience heart attacks.

Yet Lp(a) is not routinely included in current blood tests for cholesterol.

**“It is very worrying that there could be tens of thousands of Australians with increased risk of developing heart disease who are completely oblivious to it. We could find these people with a simple blood test.”**

– Professor Jason Kovacic

Professor Kovacic and other cardiologists recommend the test for men under 55 and women under 60 with a personal or family history of heart attack, stroke,

**Tips to take care of your heart**  
and prevent heart disease



**7–9**  
hours of sleep  
per night



**Switch out**  
your salt for potassium  
enriched salt



angina, coronary stent or coronary bypass surgery, which can't be explained by other risk factors. As Lp(a) is strongly associated with a person's genetics, those with family members who have elevated levels of Lp(a) should also get tested.

"If we were able to diagnose people with high levels of Lp(a) far earlier in their lives, we could help prevent them from developing life-threatening complications," says Professor Kovacic.

With an increase in the number of Australians experiencing fatal heart attacks, early detection is more crucial than ever.

### ON THE OTHER SIDE OF A HEART ATTACK

While Chris was lucky to survive his heart attack, it took an enormous toll on him physically and mentally. After two years of intensive treatment, Chris's life is starkly different to before that day in the surf.

He's now retired and slowly letting go of the idea that he needs to work and support his family. Instead of doing hard, physical exercise, Chris does Qigong, Tai Chi and meditation. While he hasn't given up surfing, he avoids dangerous waves and always surfs with a mate.

After this near-fatal experience, Chris is much more aware of his mortality and his limits.

"Most men find it hard to accept they're not bulletproof – and even harder to take medications that slow you down, such as beta-blockers. I'm learning to accept my limitations and manage my risk factors," says Chris.

**"I have a damaged heart and a defibrillator as my insurance. Reducing stress, knowing the signs of any issues, and regularly taking my meds and tests are all keeping me alive."**  
– Chris Hewgill

Chris takes an active role in his health decisions, working with specialists and GPs and keeping a close eye on his test results.

"Atherosclerosis is still a concern for me, as even though I am strict with my diet, exercise and medication, I still have spikes in my readings," says Chris.

When he's not focused on his health, Chris is loving his new role as a grandfather.

"My life is simpler and more family-orientated now. I am a grandpa of three and find the new journey much more fulfilling than my stressful working life."



Chris had no symptoms, his heart attack struck out of the blue

### RESEARCH IS THE KEY TO SAVING LIVES

It's thanks to the generosity of people like you that researchers can make critical discoveries like Lp(a) – and potentially save the lives of people like Chris.

His experience has certainly put the vital role of research – and the supporters like you who make research possible – in a new light for Chris.

"It is not until you experience a near-death heart event, that your eyes are opened to the number of men and women who die an early, preventable death. My family supports Victor Chang Cardiac Research Institute research, as it is personal for them – as I'm sure it is for most Australians. Thank you for your ongoing support."



Chris is grateful to be here for his family – and to you for supporting heart research



**30–45**  
minutes of exercise  
5 days a week



**Eat oily fish**  
2–3 times per week



Ask your GP for a  
**heart health check**



# Improving health outcomes for First Nations peoples

**Bringing the benefits of genomic medicine to Aboriginal and Torres Strait Islander peoples**

Genomics – the study of people's genes – enables personalised, targeted ways to prevent and treat a range of health conditions, including heart disease, cancer and diabetes. But until now, First Nations peoples have largely been left out of this vital area of medical research.

That's set to change with the establishment of the new National Indigenous Genomics Network, which the Institute is a proud partner of.

"Australia is on the cusp of a new era in personalised medicine that will bring deeper insights into the architecture of rare diseases among children and common diseases like heart disease,

diabetes and cancer," says Professor Alex Brown, Head of Indigenous Genomics at Telethon Kids Institute, who is leading the collaborative project.

"This network will establish the foundations on which Indigenous Australians can equitably benefit from the health-promoting, preventative, diagnostic and curative potential of genomics."

Today First Nations peoples are three times more likely to suffer major coronary events than other Australians and 1.5 times more likely to die. This Federal Government funded network hopes to learn more about this disparity and deliver personalised medicines in the future.



Professor Jason Kovacic

**"We are proud to be part of a project that will bring the benefits of genomic medicine to Aboriginal and Torres Strait Islander peoples. This incredibly important project has so much promise to improve health outcomes for a community with disproportionate rates of heart disease."**

– Professor Jason Kovacic

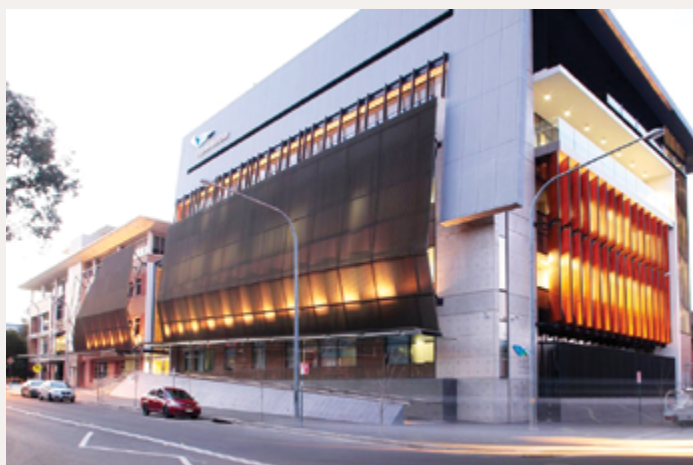
## NEWS

# Partnership to improve heart health in Australia

**Heart disease takes the life of one Australian every 12 minutes**

As one of our supporters, you'll know that this is a statistic we are determined to change for the better.

So, you'll be pleased to discover that we've just joined forces with another research powerhouse – the Ingham Institute for Applied Medical Research based in South Western Sydney, which is renowned globally for its expertise in clinical trials and driving research into cancer and diabetes.



Collaboration is key to delivering research that will ease the suffering of heart disease

This new partnership will bring together hundreds of the brightest scientific minds, all committed to delivering new treatments and cures for the world's biggest killer faster than ever before.

We also hope it will improve health policy and heart health – for both the diverse communities in South Western Sydney and across the country.

**"This partnership will improve patient outcomes for those suffering from cardiovascular disease."**

– Professor Jason Kovacic

The teams will develop a shared vision and new research portfolio and work together through shared facilities and resources, including our Innovation Centre and Ingham's Biobank.

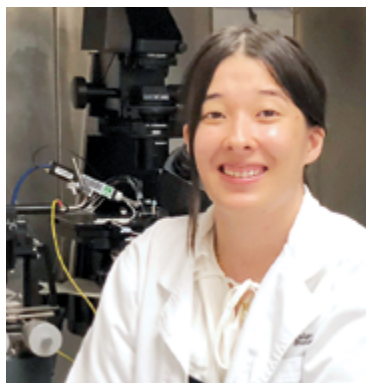


## From patient to researcher: meet Teagan Er

Diagnosed with heart valve disease as a child, Teagan Er has always been fascinated by how the body works. In 2021, she realised her dream of becoming a scientist – and has been making her mark in the industry ever since

Teagan has undoubtedly had to face some unique challenges in her life. She was diagnosed with selective mutism and heart valve disease as a child.

Teagan reflects on how far she has come. Starting her early years in a language centre and struggling to communicate with others, Teagan is now thriving as a research assistant at The Ben Beale Laboratory in Cardiovascular Health based at our hub at The University of Western Australia.



Meet Teagan Er, rising star based at our WA hub

Each day, Teagan is driven by the curiosity to understand how illnesses develop and her own experiences with heart disease. Currently, she's involved in a collaborative chronic fatigue syndrome (CFS) research project with Griffith University in Queensland and research into hypertrophic cardiomyopathy (HCM) led by Professor Livia Hool, which causes thickening of the heart muscle and can lead to heart failure.

“Everyone seems to know someone that is affected by heart disease. I find it especially interesting because I have cardiovascular disease myself and in my family. So, for me, it is really rewarding to be in this field of research.” – Teagan Er

Teagan's latest goals are to complete a PhD and present at a conference in the next couple of years. And she can't wait to see her name on a published research paper soon.

## Free Will service as thanks for your support

Have you been meaning to create or update your Will?

As a gesture of our thanks for generously supporting heart research at the Institute, we are pleased to offer you the opportunity to create your Will for free.

We've partnered with Safewill, whose quick and easy-to-use service will allow you to prepare a bespoke and legally binding Will in just 20 minutes.

After you have looked after the ones you love, perhaps you might consider how impactful a gift in your Will could be to heart research at the Institute.

It could help people like Jayden, who urgently needed a heart transplant when he was just 46.

“Thank you are the two words I have for people like you. I am living breathing proof of what your donations can achieve!”

– Jayden Cummins



For more information visit [safewill.com/victorchang](https://safewill.com/victorchang)

Or for a confidential conversation, please contact Laura Svatos, Gifts in Wills Officer on (02) 9295 8749 or [bequests@victorchang.edu.au](mailto:bequests@victorchang.edu.au)

## I would like to support heart research



Please accept my gift of: \$ \_\_\_\_\_

### MY DETAILS:

Title: \_\_\_\_\_ First name: \_\_\_\_\_

Surname: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_, Pcode: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

### PAYMENT DETAILS:

Please debit my: ☐ Visa ☐ MasterCard ☐ Amex

Card number:

Expiry date:   -

Name on card: \_\_\_\_\_

Signature: \_\_\_\_\_

**OR Please find enclosed my:** ☐ Cheque ☐ Money Order  
(payable to Victor Chang Cardiac Research Institute)



## UPCOMING EVENTS

### Soirée by the Sea

Join us for an unforgettable day to raise funds for research into Australia's biggest killer

**Date:** Saturday, 20 May 2023

Our annual fundraising event is back for its seventh year, this time held at Bondi's iconic Icebergs Dining Room and Bar.

Tickets are now available for our signature event, where guests can indulge in an afternoon of beautiful Italian cuisine and cocktails whilst raising funds to power world-class research into heart disease.

Our scientists have made transformative discoveries in heart disease over the last 30 years.



But we're just at the tip of the iceberg.

You can help us deepen our understanding and support heart research by attending the chicest fundraising event of the year overlooking the Pacific Ocean.

**Tickets now on sale until Thursday 4 May.**



### School Science Awards

**Do you know a budding young scientist?**

**Nominations:** Open 3 May and close 15 June 2023

Every year, the Institute celebrates gifted Year 11 students in NSW and WA in science, technology, engineering and mathematics

(STEM). The awards aim to promote careers in STEM as a viable and exciting option for young Australians.

Students are nominated for their determination and commitment to science, including Biology, Physics, Chemistry or other related subjects, with award ceremonies held throughout August.



### Women against heart disease

Did you know heart disease kills more than twice as many women as breast cancer? You can be part of an important conversation to find out why and deliver a better future.

**Sydney date:**

Thursday 21 September 2023  
The Establishment, Sydney

**Perth date:**

Friday 15 September 2023  
Venue TBC

Save the date for our annual Women Against Heart Disease lunch! Get together with like-minded women, hear first-hand experiences, and learn from world-leading scientists about progress in health outcomes for women and heart disease. And for the first time, in 2023, this event will also take place in Western Australia.

For ticket sales or more information on all 2023 events, head to [victorchang.edu.au/events](https://victorchang.edu.au/events)