SAGHA
South Asian Genes & Health in Australia

SAGHA Newsletter

Dear SAGHA participant,

We're excited to share some updates about the SAGHA study with you!
Thanks to your generous participation, we've made incredible progress in understanding heart disease risk factors in South Asian communities in Australia.

Here's a quick snapshot of what we achieved together:

- ✅ 216 people agreed to participate in the study.
- 📋 191 participants completed the online health questionnaire.
- 🩸 173 participants provided a blood sample.

Important findings from SAGHA so far

Type 2 diabetes

The average age at which Type 2 diabetes has been diagnosed in SAGHA participants is just 39. That's much younger than the general Australian population, where the average age of diagnosis is around 60.

This highlights the need for earlier Type 2 diabetes screening in Australians of South Asian ancestry. Currently, Medicare-funded screening is only available from the age of 40. But for many in the South Asian community, that might already be too late. Thanks to your data, we're building the case for more tailored screening guidelines that better reflect the risks faced by Australian South Asians.

Hypothyroidism

14% of SAGHA participants reported having hypothyroidism, a condition where the thyroid gland doesn't produce enough hormones. That's much higher than the general Australian population, where only about 0.5% report to have this condition. 78% of the SAGHA participants with hypothyroidism were women, which fits with what we know.

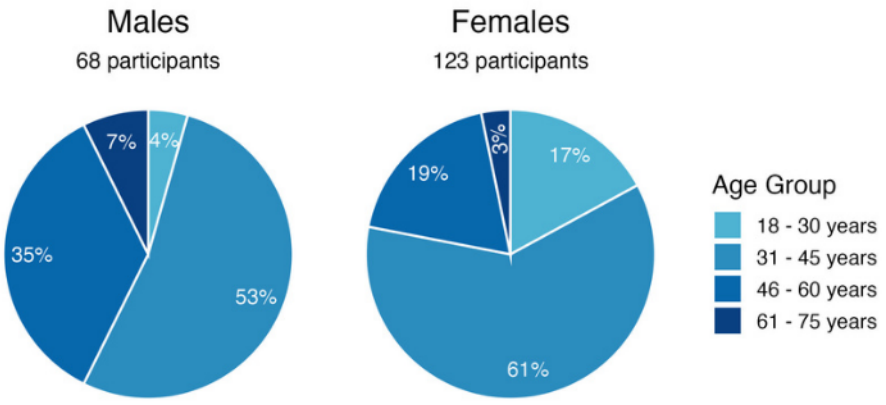
Hypothyroidism can be caused by immune system conditions or genetic factors. Iodine deficiency can also cause it, but that's rare in Australia as iodine is added to salt and bread to prevent deficiencies. Hypothyroidism can increase the risk of heart disease. Your data is helping shine a light on this important health issue in the Australian South Asian community.

The University Of Queensland AUSTRALIA Human Research Ethics Approval: 2022/HE001388

Overview of the SAGHA study cohort

Age and Gender of SAGHA participants

Even though heart disease is more common in men, it's still the leading cause of death for women around the world. One reason we know less about heart disease in women is that many studies have far fewer female participants. That's why it's so encouraging to see so many younger South Asian women taking part in the SAGHA study.



Different South Asian ethnicities of SAGHA participants

It is great to see representation from so many South Asian communities in the SAGHA study.

More than 20 different ethnic groups are reported!

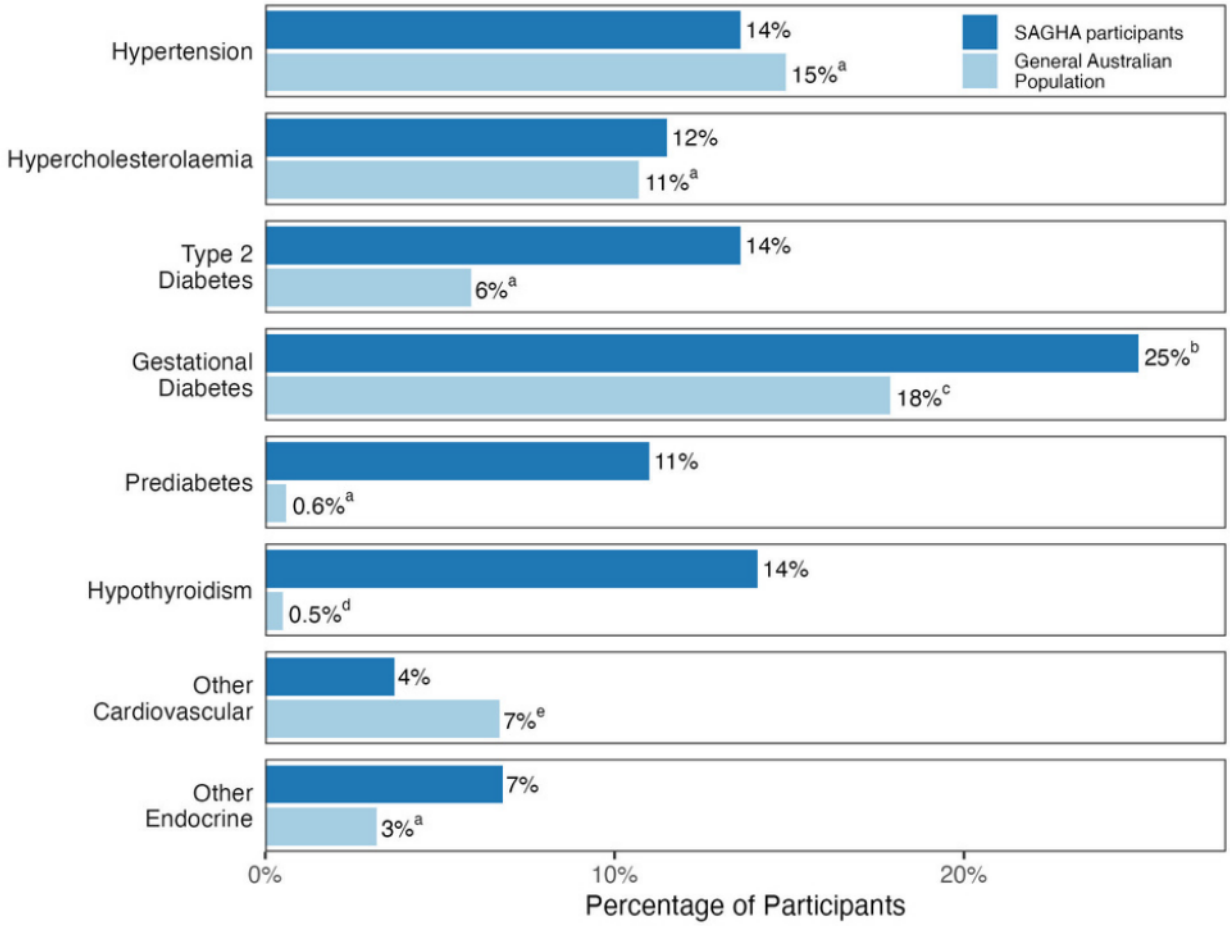
Some of the ethnic groups that SAGHA participants reported belonging to.

SAGHA participants self-reported the following cardiovascular & endocrine conditions

- **Hypertension** (high blood pressure): 14%
- **Hypercholesterolaemia** (high cholesterol): 12%
- **Type 2 Diabetes**: 14%
- **Prediabetes**: 11%
- **Gestational Diabetes**: 25%
  (of women who have been pregnant)

Other conditions such as heart valve disease, coronary artery disease and Marfan syndrome were each reported in <1% of participants. See Glossary for explanation.

Cardiovascular and Endocrine conditions in SAGHA participants compared to the general Australian population



[a] *From the National Health Survey 2022.*
[b] *We calculated this as the number of women reporting gestational diabetes divided by the number of women reporting biological children.*
[c] *Number of women who gave birth in an Australian hospital in 2021-2022 who were diagnosed with gestational diabetes (compared to all women who gave birth in an Australian hospital in 2021-2022). Reported by the AIHW, using 2021-2022 data from the National Hospital Morbidity Database.*
[d] *Percentage of Australians with Overt (clinical) Hypothyroidism. Sub-clinical hypothyroidism is more common, with roughly 5% of Australians being diagnosed. From: Walsh, J.P. (2016), Managing thyroid disease in general practice. Medical Journal of Australia, 205: 179-184. https://doi.org/10.5694/mja16.00545*
[e] *Heart, stroke and vascular diseases, from the National Health Survey 2022.*

Return of AusCVDRisk Results

If you agreed to receive your AusCVDRisk results and were eligible, you should have received your report by email. A few important things to keep in mind:

- These results are part of a research study and not a medical diagnosis. It's important to talk to your GP to get a full check-up and understand your heart health properly.
- Your risk can change over time, so regular health check-ups are recommended.

Focus Group Findings

We've finished analysing the focus group discussions from the start of the SAGHA study. A scientific paper based on these findings is currently under review, and you can freely access it here.

Genetic Data Analysis Update

We're now generating genetic data to identify genetic changes in your DNA (genetic variants) that are linked to Familial Hypercholesterolemia, a condition where a person has very high cholesterol and is at high risk of getting a heart attack at a much younger age.

We had first planned to use array technology, which captures ~700,000 genetic variants. Thanks to additional funding, we're now using whole genome sequencing, which covers nearly all 3.2 billion positions in our DNA. This allows for a more thorough and inclusive analysis, especially for South Asian-specific variants.

We understand that many of you are keen to get these results. However, whole genome sequencing takes longer to analyse. We expect to start sharing findings at the end of 2025 through to the beginning of 2026.

New Funding for SAGHA research

We're thrilled to share that SAGHA has received new funding from the Australian Medical Research Future Fund to support our work for the next two years! With this support, we'll be able to:

- Dive deeper into genetic data
- Create tailored advice on heart disease risk for South Asians living in Australia
- Keep working toward better tools and guidelines to help prevent heart disease in the future

SAGHA Team Updates

Hellos and Goodbyes

Our wonderful genetic counsellor, Vaishnavi Nathan, went on maternity leave at the end of 2024. She welcomed a beautiful baby girl, Aadhya, and is enjoying some well-deserved family time.

We also say a heartfelt farewell and thank you to Rajini Shankar for her valuable contributions as part of the SAGHA community advisory group. We warmly welcome Reema Naresh, who brings lived experience from the Fiji Indian diaspora and a strong background in community engagement and health promotion.

Awards

We're proud to share that the SAGHA team won The University of Queensland Research Culture Award for Advancing Inclusive Research Environments! This award celebrates not only the importance of the SAGHA study in promoting health equity, but also conducting research with integrity, inclusivity, and collaboration. This achievement wouldn't be possible without your support.

A big thank you to everyone involved!

We're so grateful to all the SAGHA participants and to our amazing community advisory group (Maleeha Waqar, Sarat Maharaj, Nahid Choudhury, Vrunda Sane, Rajini Shankar, and Reema Naresh) for being part of this important journey.

We would also like to thanks the team of the Human Studies Unit who have supported this project in the collection, receipt and processing of the biological samples.

Your involvement is helping shape the future of heart health for Australian South Asians.

Warm regards,
Dr Sonia Shah and **The SAGHA Study Team**

Glossary

Coronary artery disease - blockage of blood vessels.

Heart valve disease - where the heart's valves don't open or close properly, which can change how blood flows through the heart to the rest of the body.

Marfan syndrome – a genetic condition affecting the connective tissue, which supports and holds organs and other structures in place is weak.

Prediabetes - a condition where your blood sugar is higher than normal but not yet high enough to be diagnosed as type 2 diabetes.