



Tang Wern Ee

Family Physician, Senior Consultant
Director, Clinical Research Unit and Information
Management & Analytics, NHGP
Associate Professor, Lee Kong Chian School of Medicine,
NTU

Research/Innovation Interests:

- Chronic Disease Management
- Respiratory
- Health Literacy

Email: wern_ee_tang@nhgp.com.sg

Biography

A/Prof Tang Wern Ee is a Family Physician, Senior Consultant, Director of the Clinical Research Unit and Information Management & Analytics, as well as the Chief Data Officer at the National Healthcare Group Polyclinics. She is also Assistant Dean, Family Medicine at the Lee Kong Chian School of Medicine. She completed her basic medical education and Masters in Medicine (Family Medicine) at the National University of Singapore and her Masters in Health Professions Education at the MGH Institute of Health Professions (Boston). She is also a Fellow of the College of Family Physicians, Singapore. She has special interests in chronic disease management, health literacy and health services research in primary care.

Selected Publications

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- Malhotra R, Bautista MAC, Tan NC, **Tang WE**, Tay S, Tan ASL, Pouliot A, Saffari SE, Chei CL, Vaillancourt R. Bilingual Text With or Without Pictograms Improves Elderly Singaporeans' Understanding of Prescription Medication Labels. *Gerontologist*. 2019 Mar 14;59(2):378-390. doi: 10.1093/geront/gnx169. PMID: 29190378.
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- Mary Lee, Khoo HS, Krishnasamy C, Loo ME, Wong SKW, Cheng SC, Bei E, Tan SY, Xie P, Lee ES, **Tang WE**. Experiences of living with overweight/obesity and early type 2 diabetes in Singapore – A qualitative interview study. *BMJ Open*. 2024 May 7;14(5):e079082. doi: 10.1136/bmjopen-2023-079082.
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Notable Research/Innovation Awards & Grants from Past 5 Years

Name of Awards & Grants	Year Obtained
Nanyang Awards 2021 – Nanyang Education Award (School Award)	2021
National Healthcare Group–Tanoto Foundation Reversing Diabetes Programme	2022
NMRC Open Fund - Large Collaborative Grant for 'The Academic Respiratory Initiative for Pulmonary Health (TARIPH)'	2024

Translating Research/Innovation Into Healthcare

- [‘Don’t skip the asthma inhaler just because you feel fine’](#) featured in The Straits Times on 9 May 2025
- ‘Lose the weight – and the diabetes: S’pore healthcare group’s latest battle plan in war against disease’ featured in The Straits Times on 6 Aug 2022

New programme aims to reverse patients' diabetes by helping them lose weight

Salma Khalik
Senior Health Correspondent

Diabetes can be reversed, even in people who have had it for several years.

A study in Britain has proven that, and now, Singapore's National Healthcare Group (NHG) hopes to show it can also work for Asians.

Its Diabetes Reversal Programme aims to enable at least some diabetes here to become free of a disease that can lead to blindness, kidney failure and even death.

The trigger to reversing diabetes is to significantly reduce the weight of people who are overweight or obese, the target being a 10 per cent cut or a 15kg reduction over a period of six months.

Associate Professor Lim Su Chi, a senior consultant at Khoo Teck Puat Hospital (KTPH) and a principal investigator of the NHG programme, said: "Weight loss is the strongest link to remission. More than half of diabetes here are over-

weight or obese."

The British study, called the Diabetes Remission Clinical Trial, had found that the majority who were able to achieve the target weight loss were no longer diabetic.

Those who remained diabetic after losing over 15kg had achieved better control of their sugar levels.

The study, conducted between 2017 and 2019, involved putting 149 participants on a low-calorie diet. Its findings were published in The Lancet in 2018 and 2019.

At the end of the first year of the study, 46 per cent were no longer diabetic. However, not all were able to maintain this, with only 36 per cent staying free of diabetes at the end of the second year.

Associate Professor Tang Wern Ee, senior consultant at NHG Poly-clinics (NHGP) and the programme's lead investigator, said that is still a very good outcome, as it means that more than one in three were free of the disease.

Diabetes is a major problem here, with more than 400,000 people living with it. If nothing is done, the number is projected to surpass one million by 2050 and



Leading the Diabetes Reversal Programme are (from left) Associate Professor Lim Su Chi, senior consultant at Khoo Teck Puat Hospital; Ms Pauline Xie, National Healthcare Group Polyclinics' (NHGP) principal dietitian and Associate Professor Tang Wern Ee, senior consultant at NHGP. ST PHOTO: ALPHONSUS CHERN

The trigger to reversing diabetes is to significantly reduce the weight of people who are overweight or obese, the target being a 10 per cent cut or a 15kg reduction over a period of six months.

Diabetics are unable to use up the sugar in their blood. This can damage blood vessels and reduce oxygen to the heart and brain. Two major contributory factors are obesity and insufficient exercise.

Prof Tang said her team would like to see Singapore moving away from just treating the disease to getting more to become non-diabetic.

The programme will recruit 100 participants aged 21 to 60 with a body mass index (BMI) of between 27 and 45 who have had diabetes for less than six years and do not have complications from it. A normal BMI for Asians is 18.5 to 22.9.

Half of the participants will be in a control group who will continue to be cared for by their doctor. The other half will stop their medication and be put on a very low-calorie liquid diet for three months, or less, should they achieve the target weight loss earlier.

"The first five days on the liquid diet can be very difficult. They will feel hungry and very tired," said Ms Pauline Xie, NHGP's principal dietitian, who is part of the study team. By day six though, the body starts to burn its stored fat, which will energise them, she added.

After three months, even if they have yet to meet the weight loss target, they will be reintroduced to food, starting with one meal a day, and still on a low-calorie intake.

The study is funded by a \$2.6 million grant from the Tanoto Foundation and \$1 million from the NHG Fund. The money will be used to pay for the Optifast liquid diet, which retails at \$5 a portion, equipment and manpower for the trial.

Mr Hafiz Abdul Aziz, 36, is keen to be on the programme as he finds it difficult to lose weight on his own. The data engineer, who has a BMI of 32, found out he had diabetes in February.

"It was quite scary," he said. He is now eating less – he has a banana and a slice of bread for breakfast instead of his usual large plate of nasi lemak, or rice with black beef soup.

He added: "Thinking long term, I don't want to have my legs cut off or have my kidneys fail."

The study will take three years in all, and recruitment is in progress. Diabetics who fit the profile and wish to volunteer can find details at <https://for.sg/dmtrial>

salma@sph.com.sg

- [‘Local study lowers blood sugar levels with lifestyle changes’](#) featured in Lianhe Zaobao on 5 Aug 2022
- [‘Two agencies launch diabetes reversal program to change patients' eating habits to lower blood sugar levels’](#) featured in Lianhe Zaobao on 7 Aug 2022
- ‘Diabetes reversal programme helps patients lower blood sugar levels through changing lifestyle behaviours’ featured in Shin Min Daily News on 7 Aug 2022

逆转糖尿病计划助病患 通过生活饮食降血糖

国立健保集团与陈江和基金会合作推出逆转糖尿病计划，研究通过改变病患的生活和饮食习惯，不靠药物降低血糖水平。

为期三年的计划包括针对100名肥胖糖尿病病患的临床研究，当中50人在首三个月会通过代餐将卡路里摄入量控制在800，接下来三个月逐步恢复健康饮食，之后再分两个六个月的阶段继续维持健康饮食，另50人则作为参照组对比效果。研究人员希望病患能降低体重，让血糖在12个月至18个月后改善至健康水平。

研究将在今年第四季招募参与者，条件包括年龄介于21岁至60岁、患病不超过六年、没有其他并发症也没在注射胰岛素，以及身体质量指数（BMI）介于27



▲糖尿病病患阿马尔有意参加逆转糖尿病计划。（张思庆摄）至45。

《联合早报》报道，到了2050年，本地预计将有100万名成年人受到第二型糖尿病困扰，2017年的一项英国研究则发现，近半数糖尿病患者可通过体重管理让血糖降回健康水平。