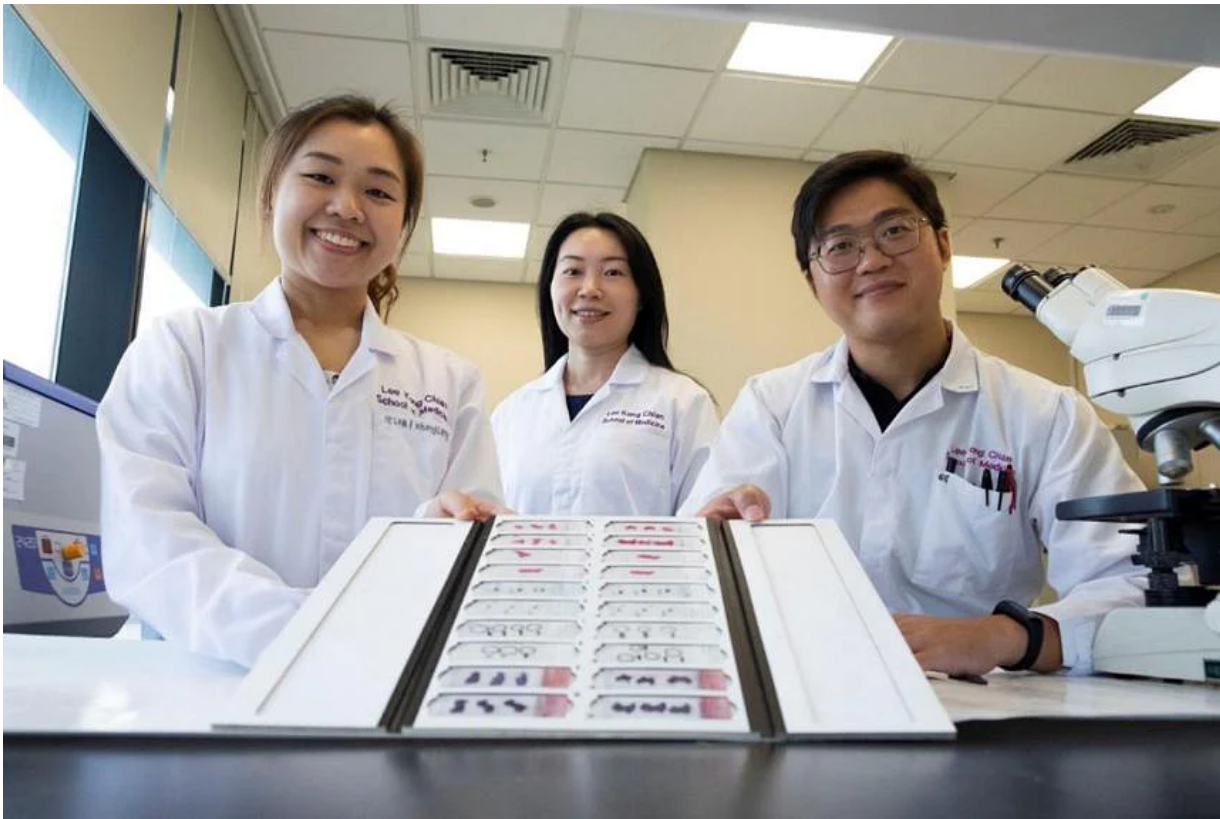


LIVER DISEASE, WHICH NON-DRINKERS SUFFER FROM, CAN LEAD TO CARDIOVASCULAR DISEASE

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SINGAPORE — Patients drink little to no alcohol and still develop a condition — called nonalcoholic fatty liver disease (NAFLD) — that can lead to serious cardiovascular complications.

The condition is attributed to a buildup of fats in liver cells and also leads to overproduction of a class of proteins that triggers inflammation and damage to blood vessels.

Up to 40 percent of the population in Southeast Asian countries, including Singapore, is estimated to have NAFLD, according to a press release from Nanyang Technological University (NTU) on Wednesday (May 25).

To investigate the cause and why it does more damage to cardiovascular health than just the liver, scientists here launched a study in 2018.

The team was led by Assistant Professor Christine Cheung from NTU's Lee Kong Chian School of Medicine (LKCMedicine) and consisted of researchers from NTU, the National University Health System and the Agency for Science, Technology and Research.

They published their findings in the scientific journal *Embo Reports* in April.

The team reconstructed blood vessel cells from samples donated by 99 NAFLD patients and 56 healthy individuals.

They found that the blood vessel cells of the NAFLD patients contained three times as many chemokines, a class of proteins, compared to the other group.

Chemokines are small protein molecules that are powerful attractants for immune cells and whose purpose is to divert such cells to sites of infection.

However, when there are abnormally high levels of immune cells in a blood vessel, it can harm a person.

Inflammation, blood clots, and obstruction of blood flow to vital organs can occur.

The paper's first author, NTU LKCMedicine Research Fellow Ng Chun-Yi, said, "Blood vessels are likely to be sensitive to the inflammatory mediators and abnormal lipid metabolism that underlie nonalcoholic fatty liver disease.

"We discovered that the blood vessel cells of a non-alcoholic fatty liver become more 'activated', making them more susceptible to vascular inflammation."

There is currently no cure for patients with NAFLD. However, early detection of the disease allows for faster action and can improve cardiovascular health.

Prof Cheung said: "The increasing prevalence of fatty liver disease worldwide is a cause for concern. One in three people in Singapore is likely to develop non-alcoholic fatty liver disease in the next 10 years.

"These patients are at increased risk of developing vascular diseases such as coronary artery disease and cerebrovascular disease. The good news is that liver disease is reversible in its early stages."

Most patients with NAFLD are also unaware that they have had the disease for years as they remain asymptomatic. Those who have NAFLD may experience symptoms such as fatigue, jaundice, and weight loss.

Source link
