

Gambas accident

Delivery rider's widow: 'We had so many plans... it's hard to accept he's gone'

Samuel Devaraj

DASHED HOPES

When we went for our first check-up last year, we learnt that our baby did not have a heartbeat and Jason could not accept it... So after I became pregnant again, he was really very happy that our check-ups showed that our baby was going to be fine... But now he will not even have the chance to know if the baby is going to be a boy or girl.



MS JANEL TAY

Having gone through the pain of losing a baby in a miscarriage last October, Ms Janel Tay and her husband, Mr Jason Tan, were over the moon when they found out she was pregnant again.

But Mr Tan will not be around for the birth of his child – the 24-year-old died in an accident on Sunday.

Speaking to The Straits Times yesterday at her husband's wake in Woodlands, Ms Tay, also 24, said: "When we went for our first check-up last year, we learnt that our baby did not have a heartbeat and Jason could not accept it."

"So after I became pregnant again, he was really very happy that our check-ups showed that our baby was going to be fine."

Breaking down in tears, she added: "But now he will not even have the chance to know if the baby is going to be a boy or girl."

Mr Tan was pronounced dead at the scene by a paramedic in the accident involving a van and two motorcycles in Gambas Avenue.

The 36-year-old male van driver was arrested for careless driving causing death and police investigations are ongoing.

Ms Tay, who is more than three months pregnant, said she felt something was wrong when her



Ms Janel Tay and her husband, Mr Jason Tan. The couple were classmates in Primary 5, and continued keeping in touch. They eventually got together in 2016 and were married last month. Mr Tan, a delivery rider, died in an accident on Sunday. PHOTO: COURTESY OF JANEL TAY

husband did not send her text messages for two hours. He would often update her on what he was doing in between deliveries.

One of Mr Tan's friends later told her that Mr Tan might have met with an accident after he saw pictures of one being circulated on a Telegram chat. The friend took Ms Tay to the accident site.

Ms Tay said: "When I walked past the blue tent, I saw his belongings, like his slippers and his helmet, but I still refused to believe it was him because I had not seen him yet."

The couple were classmates in Primary 5, and continued keeping in touch. They eventually got to-

gether in 2016 and were married last month.

Ms Tay, who works in customer service, said her husband was always cheerful and never angry.

She is touched by the support from members of the public. She appreciates the messages and words of encouragement from strangers, as well as the donations that have poured in. Groups of delivery riders have turned up at the wake to pay their respects to Mr Tan.

A fund-raising campaign started by charity platform Ray of Hope on Tuesday has received about \$175,000 from about 3,000 donors as at 9.30pm yesterday.

Mr Tan's brother, property agent Jeremy Tan, 33, said that while the family has not decided what to do with the money, most of it would likely go to Ms Tay and her child, whom his family will look after.

Ms Tay said they had planned to start looking for their own home next year and to go on holidays abroad. "We had so many plans. We were hoping to go to Taiwan and so many places... It's hard to accept that he is gone. He was always so careful and would always tell me (before he left for work) that he would come back home safely."

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BREAKFAST TIMING
Day 12
7:12 PM

Severe symptoms more likely in those who took Sinovac jab

Wallace Woon

Recipients of the Sinovac-CoronaVac vaccine are five times more likely to experience severe Covid-19 symptoms when they are infected than those who had the Pfizer-BioNTech/Comirnaty vaccine.

Sinovac recipients are also more than twice as likely to be infected with Covid-19 than Pfizer vaccine recipients and almost six times more likely than those who took the Moderna vaccine.

These are the findings of a Singapore study which were published on Tuesday.

The study by infectious diseases experts looked at the difference in vaccine efficacy between mRNA vaccines, such as the Pfizer-BioNTech/Comirnaty and Moderna ones, and those which use an inactivated form of the Covid-19 virus. Examples of the latter include Sinovac-CoronaVac and Sinopharm.

Among the study's authors are National Centre for Infectious Diseases (NCID) executive director Leo Yee Sin, Associate Professor Benjamin Ong from the NUS Yong Loo Lin School of Medicine, Ministry of Health (MOH) senior assistant director Wycliffe Wei, NCID associate consultant Calvin Chiew, MOH Communicable Diseases Division director Vernon Lee, National University Health System junior resident M. Premikha and NCID Infectious Disease Research and Training Office director David Lye.

The study covered a seven-week period, from Oct 1, 2021 to Nov 21, 2021, and involved close to three million adults aged 20 years old and above who had received their first two doses of the Covid-19 vaccines.

Compared against people who opted for the Pfizer vaccine, Sinovac recipients were 2.37 times more likely to be infected with Covid-19, while those who were vaccinated with Sinopharm were 1.62 times more likely to be infected, the study found.

Those who got the Moderna vaccine were found to be 0.42 times, or less than half, as likely to show severe Covid-19 symptoms than Pfizer recipients, while those who had Sinopharm shots were 1.58 times more likely to experience severe symptoms.

Associate Professor Lye, in a post on Twitter yesterday, said: "Singapore study showed five times the risk of severe Covid-19 with Sinovac versus Pfizer. Thankfully, only 2 per cent vaccinated with Sinovac."

The authors concluded, however, that even with the lower level of protection offered by inactivated whole-virus vaccines than the mRNA vaccines, both types of vaccine give sufficient protection against severe Covid-19 symptoms and that vaccination remains a key strategy against the pandemic.

MOH has said that as at Tuesday, over 96 per cent of the eligible population have completed their full regimen of vaccinations, while 72 per cent have received their booster shots.

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RISK OF SEVERE COVID-19

Singapore study showed five times the risk of severe Covid-19 with Sinovac versus Pfizer. Thankfully, only 2 per cent vaccinated with Sinovac.



ASSOCIATE PROFESSOR DAVID LYE, director of NCID Infectious Disease Research and Training Office.

12 tropical plants in Singapore remove toxic metals from soil

Pilot using findings of local research begins at industrial land in the north of island

How plants remove toxic heavy metals and metalloids from soil

Researchers from Nanyang Technological University and the National Parks Board have demonstrated that 12 plant species can remove toxic heavy metals and metalloids such as lead and arsenic from contaminated soil. The joint research team is currently testing the plants on plots of land around Singapore to determine their effectiveness in an urban setting.



NTU researchers presenting some plants found to have the ability to remove toxic metals and metalloids from contaminated soil. Source: NTU ST PHOTO: THADDEUS ANG STRAITS TIMES GRAPHICS



STEP 1: Scientists test soil for high concentration of toxic metals and metalloids.



STEP 2: Scatter seeds of plants that can absorb the metals or metalloids.



STEP 3: Plants grow and absorb metals or metalloids through their roots, storing them in their stems and leaves.



STEP 4: Scientists retest soil to see if metals or metalloids have been absorbed.



STEP 5: Plants that have absorbed metals or metalloids are harvested and disposed of.



STEP 6: Process may be repeated until all metals or metalloids are eliminated.

Ang Qing

Plants readily found in Singapore are now being tapped to clean the soil of toxic contaminants, with 12 tropical species identified to take on the job.

Since the start of the month, a pilot to remove heavy metals and metalloids using over 100 tropical plants has begun at industrial land in the north of Singapore.

The three-month pilot uses the findings from an islandwide study published in February by researchers from Nanyang Technological University (NTU) and the National Parks Board.

The study identified 12 plant species that can effectively extract metals and metalloids potentially toxic to humans.

Although the plant-based method has been deployed in some wetlands here, the study paves the way for a sustainable approach of using a palette of naturalised or native vegetation that

has minimal impact on ecosystems, said Professor Lam Yeng Ming, chair of NTU's School of Materials Science and Engineering, yesterday.

This is particularly relevant for a small nation like Singapore, where industrialised land may be repurposed to support new development plans, she noted.

Associate Professor Tan Swee Ngin, from the Academic Group of Natural Sciences and Science Education at NTU's National Institute of Education, said that during the study, such plots were found to contain higher levels of heavy metals and metalloids, which could affect the environment as well as the health of flora and fauna.

While elements such as cadmium, arsenic and lead occur naturally in soil, these can reach higher levels over a long time due to metal particles from air pollution, domestic sludge and synthetic products like pesticides and batteries.

The method proposed by the

study harnesses phytoremediation, which removes pollutants using plants that can absorb heavy metals through their roots.

Phytoremediation serves as a more environmentally friendly alternative compared with industrial methods like soil washing and acid leaching, said Prof Lam, adding that these approaches risk negatively affecting soil health and exposing humans, plants and animals to heavy metals.

The team is also working on recovering metals and metalloids from discarded plants, in a bid to contribute to the circular economy, she said.

Worldwide, phytoremediation has been used in countries such as the United States, Ukraine and Zambia. In 1996, for instance, wild grasses were used to remove radioactive waste near the Chernobyl power plant in Ukraine.

Prof Tan said that while the method has existed for decades, overseas studies tend to involve foreign plants, some of which

may not survive in Singapore's climate.

Through a field survey involving 46 tropical plant species tested with soil collected from nature parks and industrial sites, the team identified 12 plants, including an aquatic species. Among them is the cow grass (*Axonopus compressus*) native to South America that is commonly seen in gardens and parks.

It has the potential to accumulate multiple elements, including cadmium and antimony.

The method, however, can take between months and half a year, depending on the extent of pollution, said Prof Tan. To help improve plant growth and uptake of contaminants, the team is testing the incorporation of inorganic particles into these plants.

In the coming months, members of the public who wish to use the plants to cleanse soil can look forward to a pictorial guide released by the research team.

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Weather

SINGAPORE

23/33°C

THUNDERY SHOWERS



over many areas in the pre-dawn and early morning.

OUTLOOK

Friday & Saturday:
Morning thunderly showers

AIR QUALITY

PSI 52-71 (Moderate)
24-hour reading as at 6pm yesterday



Rise 7.01am
Set 7.10pm



Rise 5.18pm
Set 4.56am

TIDES

Today: 3.41am (0.9m), 9.52am (2.6m), 3.54pm (0.8m), 10pm (2.8m).
Tomorrow: 4.16am (0.5m), 10.39am (2.7m), 4.35pm (0.8m), 10.30pm (2.9m).