

Read more on page 02

Healing in time

Early holistic treatment
of chronic wounds could
minimise amputations



05

InFocus

New features improve user experience
for Medicine Ordering Service app



11

People

Redesigning T-cells to fight
complex blood cancers



14

HealthWatch

Tips to better manage
food allergies



Receive latest updates
via our free electronic
mailer. Scan the QR code
and subscribe now!

PUBLISHERS



CO-PUBLISHERS



PATIENTS. AT THE HEART OF ALL WE DO.®

CONTENT ADVISOR

Audrey Lau, Jennifer Wee

EDITORIAL TEAM

Lim Mui Khi, Domenica Tan,
Jenny Ang, Celine Sim



Read *Singapore Health*
online at
www.singhealth.com.sg/singaporehealth

Selected photos featured were taken prior to the COVID-19 pandemic. For all recent photo shoots, safe distancing measures were adhered to.

PUBLISHING AGENT

ThinkFarm Pte Ltd

Managing Director
Christopher Tay

Editor
Dang Hui Ling

Head, Creative
Sean Lee

Art Director
Lee Lily

Head, Client Relationship
Jessie Kek

For advertising enquiries,
please call 6831 1299 or email
advertise@thinkfarm.sg

All rights reserved. Copyright by Singapore Health Services Pte Ltd (registration no.: 200002698Z). Opinions expressed in *Singapore Health* are solely those of the writers and are not necessarily endorsed by SGH, SingHealth Group and/or Thinkfarm Pte Ltd (registration no.: 201226362G), and their related companies. They are not responsible or liable in any way for the contents of any of the advertisements, articles, photographs or illustrations contained in this publication. Editorial enquiries should be directed to the Editor, *Singapore Health*, 168 Jalan Bukit Merah, #13-01 Surbana One, Singapore 150168, or email: singaporehealth@singhealth.com.sg. Unsolicited material will not be returned unless accompanied by a self-addressed envelope and sufficient return postage. While every reasonable care will be taken by the Editor, no responsibility is assumed for the return of unsolicited material. ALL INFORMATION CORRECT AT TIME OF PRINTING. MCI (P) 040/07/2022. Printed in Singapore by Times Printers Pte Ltd (registration no.: 196700328H).

Healing in time

Early holistic treatment of chronic wounds could minimise the number of amputations in Singapore.

by Sol E Solomon

Early treatment of chronic wounds can make the difference between losing or saving a limb. Singapore's major lower limb amputation rate is 28.5 per 100,000 population, which is much higher than all the Organisation for Economic Co-operation and Development (OECD) countries, based on data published in 2015.

It is estimated that currently one in 20 Singaporeans is afflicted with chronic wound conditions. This is expected to increase with Singapore's ageing population and prevalence of diabetes. For better care for such patients, Changi General Hospital's (CGH) Wound Healing Centre (WHC) provides multidisciplinary early intervention and outpatient treatment of chronic wounds. The team comprises wound specialists with background in orthopaedics, vascular, plastic, reconstructive and aesthetic surgery, as well as wound care nurses.

A wound that does not heal within four to six weeks is classified as a chronic wound. "People with such wounds are advised to seek medical attention early. Studies have shown that preventive interventions, early diagnosis, timely treatment and continued care benefit the healing of chronic wounds, and help reduce amputation rates and severity of amputation," said Dr Derek Ho, Director of WHC, and Consultant, Department of Surgery (Vascular), CGH.

On the other hand, delayed wound healing can put the patients at higher risk of complications such as infections and gangrene. In serious cases, one may even need to undergo an amputation. About 200 amputations are done in CGH yearly due to diabetes or peripheral vascular diseases.

As most chronic wounds are caused by multiple factors, the underlying cause may not be obvious without further investigation.



A holistic multi-pronged approach therefore expedites the diagnosis and treatment process. The WHC is designed as a one-stop facility, where patients can undergo diagnostic tests, assessments and treatment all within the same day. This reduces the need for multiple visits to receive appropriate care.

Polyclinics, general practitioners, emergency departments and community hospitals can give patients a direct referral to the WHC and secure a consultation within two weeks. Currently, the centre provides an average of 1,000 wound-related consultations and procedures each month.

Global threat

Chronic wounds are an escalating problem worldwide. "Many countries are terming this as a silent epidemic because they affect a large fraction of population and numbers

... A wound care nurse educates a caregiver on the importance of good wound care management at home.





Studies have shown that preventive interventions, early diagnosis, timely treatment and continued care benefit the healing of chronic wounds, and help reduce amputation rates and severity of amputation

●●●
Dr Derek Ho

Director, Wound Healing Centre,
and Consultant, Department of
Surgery (Vascular),
Changi General Hospital

are expected to increase further,” said Ms Png Gek Kheng, Co-Director of WHC, and Chief Nurse, CGH.

“Patients with chronic wounds have a reduction in quality of life due to the burden of wound care and associated complications. Most people have the perception that it takes time for wounds to heal, and some seniors think that poor healing is a normal sign of ageing. Smaller and hidden wounds may also be ignored by patients until they present with an infection. However, such wounds may deteriorate or become infected rapidly, and may lead to severe consequences,” she added.

Multi-pronged approach

During the first consultation, the CGH care team will assess the wound and conduct tests, such as an ultrasound scan of the blood vessels to determine whether blood supply is obstructed. Based on the results from the diagnostic tests and the patient’s medical history, the wound specialist then recommends a treatment plan — be it for a diabetic foot, arterial or venous ulcer. Treatment is multidisciplinary. For example, CGH’s orthopaedic surgeons can look into corrective foot surgery for patients whose foot structure has been affected due to diabetic neuropathy. The condition affects the bones, joints and soft tissues of the foot or ankle, and causes an increased risk of pressure ulcers.

However, if the wound area is relatively huge with exposed bones, vessels or tendons, then the patient may need to undergo a reconstructive surgery by CGH plastic surgeons to close the wound. This is a procedure whereby the muscles, skin and blood vessels are transferred from one part of the patient’s body to another to cover the wound. These wounds can take up to three to six months to heal post-surgery.

●●●

Dr Derek Ho and Senior Nurse Clinician Cheng Shu Hua carrying out follow-up assessment and treatment of a patient.



●●●

Dr Kinjal Vidyut Mehta, Senior Consultant in CGH’s Orthopaedics Department, discusses a complex case with Dr Ho.

Changes in treatment methods

In the past, treatment for chronic wounds predominantly focused on the antimicrobial part of wound healing, where it was assumed that natural wound healing can occur by just clearing infections alone. However, medical professionals have learnt that this was not true, as there may be various underlying medical reasons why a wound is unable to heal properly.

Dr Derek Ho said, “Wound healing centres around the world are increasingly moving towards multidisciplinary treatment models. Over the years, wound treatment has expanded to include proper blood circulation, as good oxygenation and blood flow to the wound are needed for it to heal. The condition of the skin surrounding the wound, the patient’s overall health, nutrition, and the prevention of new wounds are also factors that are taken into consideration now.”



During this period, patients who require a more intensive wound care regime will have to travel regularly to the WHC for wound dressing change.

Patients whose wounds are not significantly infected can be managed as an outpatient case at the WHC. This way, the centre also helps avoid or reduce the need for hospitalisation. In fact, some of the geriatric patients from WHC may be managed in the community by CGH community nurses as part of continued care. At the same time, CGH is also working with community hospitals and nursing homes to identify patients with chronic wound symptoms for referral to the WHC. In future, elderly patients who visit CGH's Integrated Building for their outpatient appointments can also get a direct referral to WHC, if they have wounds at risk of becoming chronic.

"Having treated chronic wounds over the years, we understand the immense pain and emotional distress that these non-healing wounds can bring to patients and their caregivers. When such wounds are presented during the late stages, they become harder to treat and can take months or even years to heal. A holistic and coordinated care approach will shorten the runway for the healing process," said Ms Png.



Most people have the perception that it takes time for wounds to heal, and some seniors think that poor healing is a normal sign of ageing. Smaller and hidden wounds may also be ignored by patients until they present with an infection. However, such wounds may deteriorate or become infected rapidly, and may lead to severe consequences.

...

Ms Png Gek Kheng

Co-Director, Wound Healing Centre,
and Chief Nurse,
Changi General Hospital



...

(From left) Dr Derek Ho, Ms Png Gek Kheng and Dr Vincent Tay are part of the multidisciplinary care team at CGH's Wound Healing Centre.



...

A podiatrist removes dead and unhealthy tissue from a patient's wounds.

...
Ms Png Gek Kheng (left), CGH Chief Nurse and Co-Director of the WHC, discussing a patient's condition with a wound care nurse.



Types of chronic wounds

Pressure ulcers

Commonly called bed sores, pressure ulcers develop when there is prolonged pressure on the skin, resulting in localised damage to the skin and underlying tissue. They are usually located at bony resting sites such as the heel, sides of the ankles, the sacrum, elbows and even the ears. People at risk include those who are bed-bound or immobile.



Arterial ulcers

These typically result from poor blood supply for wound healing. This happens when the arteries, which are vessels carrying blood from the heart to the rest of the body, are narrowed or blocked. They usually start with a minor skin trauma and deteriorate rapidly, leading to enlargement and infection of the wound. Arterial ulcers tend to occur in the lower limbs, especially at the foot. People at risk include smokers, and those with high blood pressure, high cholesterol, diabetes and heart or kidney diseases.



Venous ulcers

These are caused by backflow of blood in the veins that carry blood from the legs back to the heart. Normally there is a unidirectional flow of blood in the veins due to valves that act as doors. When the valves are damaged, backflow happens and leads to increased pressure in the legs, which can cause prominent varicose veins, swelling, ulceration, darkening and itching of the skin at the shin. Risk factors include smoking, pregnancy, obesity and occupations that require long periods of standing.



Diabetic ulcers

Damaged nerve endings predispose diabetes patients to develop ulcers, particularly in the toes, spaces between the toes, and bony protrusions of the foot.



Ordering meds anytime, anywhere

The enhanced Medicine Ordering Service at Singapore General Hospital brings greater convenience and access to medications.

by Goh Bee Lian

Whenever Mr Christopher Foo's father visited Singapore General Hospital (SGH) for one of his many medical conditions, Mr Foo had to take at least half a day off work. However, after enhancements to the hospital's Medicine Ordering Service, those visits take far less time now.

"This service has made my life a lot easier. Once the doctor's consultation is done, I can send my dad home. The ordering of medication can be done online," said Mr Foo, pointing out that, before, they had to wait to pay the bill after seeing the doctor and then wait to collect and pay for his father's medications.

While the service has been available for some years, the latest changes improve the process greatly, said Ms Lim Ching Hui, Pharmacy Practice Manager, Pharmacy – Administration Department, SGH.

Accessed via either SingHealth's HealthBuddy or the HealthHub mobile apps, the service includes a list of the medications that the patient has been prescribed. It also records how much of each medication has been collected and the remaining amount that can be ordered. If all of the medication prescribed by the doctor has been collected, the patient will not be able to place any more orders.

"With the ability to check medication balance online, patients are empowered to manage their medication supply," said Ms Lim, adding that the service provides patients with the convenience of access to medications they need.

Previously, ordering medications through the app was more cumbersome and time-consuming. For instance, a photo of the paper prescription needed to be uploaded. Patients who do not track how much of their medications has been collected will have their request for a medication top-up turned down. They will be asked to see their doctor for a review to be given a fresh prescription. The ordering process, said Ms Lim, is now more seamless.

The enhanced app also allows patients to nominate their family members or caregivers to order medications, and have them delivered to a preferred address on their behalf. For patients who need help with medication



ordering, SGH is partnering social service agency, Montfort Care, under a pilot project.

"With this collaboration, our partners can contact us to resolve issues in a timely manner. We hope to spread this initiative to other community partners in time to come," said Dr Khee Giat Yeng, Senior Principal Clinical Pharmacist, SGH.

Through SGH's Tele-Pharmaceutical Care service, its pharmacists explain to patients by phone or video call on how to take their medications. Elderly patients, who often take many medications for a multitude of medical conditions, tend to forget these instructions when they reach home.



Mr Christopher Foo (above, with his father in sunglasses) finds the improved Medicine Ordering Service app easier to use when managing his father's medications, but suggests including photos of the medications to help older folks identify them.

A Montfort Care social worker helps a resident with her medications, reinforcing the instructions by SGH pharmacists. Social service agencies are a strong community partner for SGH, as they highlight the issues residents face, especially the elderly who live alone.

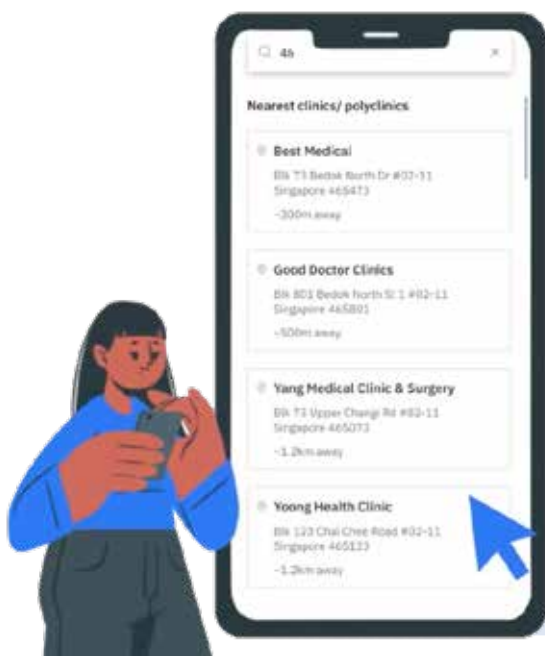
To ensure that patients understand how to take their medications, the Pharmacy Department calls them or arranges for a video consultation, if needed.

This service will be gradually rolled out to SingHealth Polyclinics and other institutions in coming years.

Get your shot

It will only take one minute to book recommended vaccines, thanks to a new hassle-free Health Appointment System.

by Annie Tan



... Dr Shawn Tan, a general practitioner whose clinic was among the first to sign up for the Health Appointment System, talks about the benefits of having more time to answer patients' questions regarding vaccination and to focus on preventive care.

Pneumonia is the third leading cause of death in Singapore, claiming more than 4,000 lives each year. Yet, only 14 percent of Singaporeans above the age of 65 have protected themselves with both doses of pneumococcal vaccines.

Pneumococcal vaccines are recommended under the National Adult Immunisation Schedule (NAIS). The NAIS provides guidance on vaccinations that adults should adopt to protect themselves against vaccine-preventable diseases such as influenza, pneumococcal disease, human papillomavirus (HPV) and hepatitis B.

Certain adults are at increased risk of complications or are susceptible to vaccine-preventable diseases, if they have not previously received the vaccination and are in contact with individuals who have the infection. Vaccinations recommended under the NAIS aim to prevent such infections among susceptible individuals and reduce complications, morbidity and mortality.

The Ministry of Health provides subsidies for specific brands of vaccines recommended in the National Childhood Immunisation Schedule (NCIS) and the NAIS at public hospitals, specialist outpatient clinics, polyclinics and Community Health Assist Scheme (CHAS) general practitioner (GP) clinics to improve affordability for vaccinations for Singaporeans.

A key factor in the low take-up rate was accessibility, according to a study by Open Government Products (OGP), a modern tech team within the Singapore Government that builds technology for the public good. Many feel that it is too tedious and time-consuming to get a vaccine, said Mr Kenneth Sng, product manager at OGP.

To make it easier for individuals, especially the elderly, to receive their vaccine, OGP has developed a new Health Appointment System (HAS), which directly connects patients to hundreds of CHAS GP clinics to simplify and accelerate the vaccination process.

For its initial launch, the Health Promotion Board has reached out to more than 600,000 eligible elderly people via a nationwide letter-sending campaign to invite them to take their CHAS-subsidised pneumococcal vaccines.

Launched in mid-August this year, this hassle-free system allows users to book an appointment for vaccination in just one minute. Patients simply have to scan a QR code to access the HAS, or visit www.book.health.gov.sg and indicate their postal code to be directed to their nearest CHAS GP clinics with available time slots. After the appointment is secured, wait-time at the clinic is reduced to less than 15 minutes for the patient.

"Previously, without HAS, you would also need to find out if the clinic is CHAS-accredited and if it provides subsidy for the vaccine," said Dr Shawn Tan, a GP at Loh & Loh Clinic and Surgery, whose clinic was among the first to sign up for the new HAS.

This system benefits clinics and patients alike by making it easy to schedule appointments, as clinics may also choose to offer vaccination during non-peak hours to ease the patient load while doctors have more time to answer patients' questions regarding vaccination.

"I have often had to forgo advising patients on the benefits of vaccination because they came during a busy period for a separate issue such as a rash or flu. They ended up not taking the NAIS vaccines or delaying them unnecessarily. I am glad

that we can now allocate time to focus on preventive care," said Dr Tan.

To date, more than 600 CHAS GP clinics — which is more than half of all CHAS GP clinics in Singapore — have enrolled in the new HAS. OGP hopes to onboard more clinics progressively.

During this pilot phase, only pneumococcal vaccines are available. If the pilot is successful, the goal is to eventually include all NAIS and NCIS vaccines, including the HPV vaccine for women under the age of 26 to reduce their risk of cervical cancer.

"Each year, approximately 309 women in Singapore are diagnosed with cervical cancer. It is the second leading cause of cancer deaths among women in their 30s here. If taken before the age of 17, HPV vaccines can reduce the chances of developing cervical cancer by almost 90 per cent. If the HAS can raise HPV vaccination rates, we would save hundreds of lives each year," said Mr Sng.



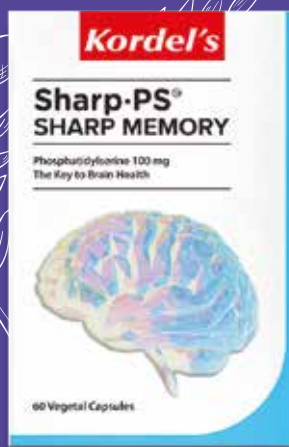
... A study shows that the low take-up rate of pneumococcal vaccines is due to accessibility, says Mr Kenneth Sng, product manager at Open Government Products, which developed the new HAS.

AGE.

Kordel's

BRAIN BOOSTING BENEFITS

- Mental sharpness
- Good brain health
- Boost memory and sharp thinking



BRAIN BOOSTER

Clinically proven Sharp-PS™ phosphatidylserine derived from soy lecithin.

WELLNESS BENEFITS

- High antibacterial activities
- Revitalizes energy level
- Maintains youthfulness and good health

HEALTH GOODNESS

A superior combination of pure goodness for collagen production and to support healthy immune system.



WELL.



Visit www.kordels.com.sg for more information

Bio-Oil®

100% Natural Formula for clear and healthy skin

- All-Natural ingredients
- Clinically proven
- Gentle on face
- Suitable for sensitive skin
- Non-comedogenic



Scars
Acne
scars
Uneven
skin tone

Natural oils • Natural beauty • Natural choice

Singapore study develops new treatment for advanced liver cancer

This new treatment safely combines an immunotherapy drug with radiation therapy, a boon for advanced liver cancer patients who have limited treatment options.

by Desmond Ng

Combining radiation and an immunotherapy drug can safely and effectively treat a common but advanced liver cancer, according to results of a study by Singapore General Hospital (SGH) and National Cancer Centre Singapore (NCCS) researchers.

The study involved patients with advanced hepatocellular carcinoma, which is the third and fourth most common cause of cancer deaths among men and women in Singapore respectively. A large proportion of patients are diagnosed at a stage when their cancer can no longer be removed by surgery and treatment

options are limited. This highlights an urgent need to find new ways to improve survival for patients with this disease.

Forty patients between the ages of 23 and 79 years were given immunotherapy drug nivolumab and yttrium-90 resin microspheres radioembolisation (Y90-RE), a form of internal radiation therapy. Nivolumab was given intravenously 21 days after Y90-RE was administered, and then every two weeks after. The treatment was halted when severe toxicities developed or progressed.

The study found that the participants had an overall response rate of 30.6 per cent, which rose to 43.5 per cent for those with cancer limited

only to the liver. The combination therapy was also found to be safe and tolerable, the study said.

“The findings of this study augur well for advanced liver cancer patients who are faced with limited treatment options. If the efficacy of this new combination treatment is further shown in studies from other countries, it would benefit not only those in Singapore, but the region as well, given that liver cancer is a huge problem in this part of the world,” said Clinical Associate Professor David Ng, Head and Senior Consultant, Department of Nuclear Medicine and Molecular Imaging, SGH.

Clinical Associate Professor David Tai, Senior Consultant, Division of Medical Oncology, NCCS, and the Principal Investigator of the study, said, “The team’s next step is to validate these findings in a larger cohort of patients with advanced liver cancer with no distant spread.”

The findings of the study were published in *The Lancet Gastroenterology and Hepatology* last October.



... The combination treatment could benefit patients in Singapore and across the region who currently face limited treatment options, says Clinical Associate Professor David Ng.



SGH surgery standards recognised

Singapore General Hospital is among the world leaders in achieving meritorious outcomes for surgical patient care.

by Desmond Ng



... Taking part in the NSQIP allows SGH to measure and improve outcomes for patients via robust data, says Associate Professor Tan Hiang Khoon.

Singapore General Hospital’s (SGH) improvements to its surgical quality standards have been

recognised by the American College of Surgeons under its renowned National Surgical Quality Improvement Program (ACS NSQIP). This places SGH among the world’s top hospitals for surgical treatments and care.

Just 90 out of 706 hospitals worldwide made the 2020 list of meritorious hospitals, after various data, such as the outcomes of inpatient and outpatient surgical procedures, were analysed.

“We wanted to have a methodology that uses robust, actionable data to measure and improve the quality of our patient care. Taking part in the NSQIP is an important way to safeguard the well-being of our patients,” said Associate Professor Tan Hiang Khoon, Deputy Chief Executive Officer (Future Health System), SGH, and former Chairman, Division of Surgery and Surgical Oncology, SGH.

The NSQIP uses evidence-based measures developed by surgeons to evaluate clinical data from patients’ medical charts 30 days after surgery. The hospitals were assessed and commended based on their composite score in eight clinical areas, including mortality, unplanned intubation and surgical site infection.



Studies have found that hospitals under the NSQIP can prevent 250 to 500 complications every year. SGH, which was assessed and recognised under the ‘high risk’ category, had submitted data for high-risk cases for three consecutive years, from 2018 to 2020.

SGH performs about 10,000 day and inpatient surgeries each year. The high volume of procedures gives its surgeons the opportunity to continuously hone their skills, resulting in better outcomes for patients.

How do clinical trials work?

Clinical trials are a crucial part of the process to develop novel life-saving treatments, with safeguards in place to protect trial volunteers.

by Eveline Gan

The development of groundbreaking vaccines and treatments during the COVID-19 outbreak has thrust clinical trials into the spotlight. However, clinical studies have played a critical role in modern medicine long before the pandemic.

Clinical trials are an essential step in the process of discovery of new life-saving treatments.

“A clinical trial is a research study where a new treatment, which can be a drug, vaccine or even a novel therapy, is evaluated in human subjects before it is used in clinical practice,” said Dr Matthew Ng, Clinical and Scientific Director, SingHealth Investigational Medicine Unit (IMU), a dedicated early-phase clinical research unit.

While some clinical trials provide access to promising investigational therapies and hope to patients who may not be responding well to existing standard treatments, other studies are non-interventional, such as those that collect data to understand disease patterns, Dr Ng said.

Professor Lo Yew Long, Group Director, Research (Research Integrity, Compliance & Ethics), SingHealth, who is the former Chairman of SingHealth Centralised Institutional Review Board (CIRB), said, “Clinical trials also add to incremental knowledge in understanding, monitoring and diagnosing medical conditions. They are informative and are meant to benefit society.”

The SingHealth CIRB currently oversees 2,500 active research studies, of which about 300 are ongoing clinical trials. It is an independent ethics committee responsible for approving, monitoring and reviewing biomedical and behavioural research involving humans for institutions under its oversight.

At SingHealth IMU, there are about 50 ongoing early-phase clinical trials in various therapeutic areas such as oncology, endocrinology, infectious diseases and renal medicine.

Among them is a clinical trial to evaluate the safety and immune response of a novel mRNA vaccine targeting several COVID-19 variants. According to Dr Ng, there are also

ongoing trials in the field of oncology that are looking at newer types of immunotherapy.

Different phases of trials

Prof Lo explained that clinical trials are conducted in a few phases, some of which can take as long as several years before they are used in clinical practice.

In early-phase clinical trials, new treatments are studied for the first time in humans. The later phases aim to confirm the findings in a larger group of volunteers over a longer period of time.

The duration of each clinical trial varies, depending on several factors. “For healthy volunteer trials that involve vaccines or new drugs that are at the dose-determining and safety stage, it could be as short as six to seven months, which was the case with COVID-19 vaccine trials,” said Ms Sue Tee, Administration and Operations Director, SingHealth IMU.

“An oncology trial, for example, could last an average of seven to 10 years, and those involving large participant numbers could take more than 10 years,” she added.

Safeguards in place

The perception that patients are being ‘guinea pigs’ when they take part in a trial is becoming less common in Singapore, said Dr Ng.

“The younger generation is more open to clinical trials. With information available online, some have even approached us seeking trials suitable for them,” he explained.

Regardless of the type of clinical trial and the phase, safeguards are in place to protect trial participants’ welfare. All clinical trials in Singapore are regulated by the Health Sciences Authority.

Before commencing, clinical trials are reviewed and approved by an Institutional Review Board (IRB), said Prof Lo. “There is a team of staff who looks at the compliance of the investigators, who have the duty to report any observations and side effects to the authorities and the IRB. Regular audits are carried out to ensure that compliance, side effects or unexpected events are reported in a timely manner.”

Informed consent

All trial volunteers are given an informed consent form, which states the benefits and risks of participating in the trial.

“The informed consent form tells the patients the purpose of the trial, their suitability, and what is required of them during trial. For example, how much blood will be taken, and how many scans and follow-ups are needed,” Dr Ng said.

“Importantly, it also informs participants that they have the right to withdraw from the study at any point, and it will not prejudice subsequent medical care.”

While participants can withdraw from a clinical trial at any time, the experts highlight that it is important for participants to carefully consider their reasons for taking part and whether they can remain committed prior to enrolling in a trial, especially as some trials can take a long time to complete.



...
(From left)
Dr Matthew Ng,
Clinical and Scientific
Director, SingHealth
Investigational
Medicine Unit (IMU);
Professor Lo Yew
Long, Group Director,
Research (Research
Integrity, Compliance
& Ethics), SingHealth;
and Ms Sue Tee,
Administration and
Operations Director,
SingHealth IMU.



Playing musical chairs is one solution

Mr Joe Tham derives satisfaction from solving problems presented by design challenges.

by Goh Bee Lian

Mr Joe Tham often plays musical chairs at work. In planning the renovation of a ward, clinic or other facility, the Project Manager at Singapore General Hospital's (SGH) Facilities Development Department has to consider how and where to move patients temporarily.

"We don't have a lot of space at SGH, so we need to do some musical chairs," said Mr Tham.

Patients can be admitted to another ward when, for instance, the renal ward is being renovated, but it is not possible to close the renal ward's dialysis centre without a backup as patients need to undergo dialysis every day.

"We first decant the ICA (intensive care area, a part of the renal ward) and the renal ward to build a dialysis centre in its place. Once the new centre is completed, the old one will be decommissioned, and the space is then used to build the new ICA and renal ward," said Mr Tham.

Moving patients to different wards is just part of the work that goes into designing, building and renovating healthcare spaces in SGH. It suits Mr Tham to a T, however, as he describes himself as being a hands-on person who has had a passion for architecture and design since young. He studied architecture, then specialised in interior design. Before joining SGH 14 years ago, he was a project manager in commercial projects and office buildings.

Mr Tham is one of 23 architects, quantity surveyors, project managers, civil and mechanical engineers, interior designers, and administrative staff in his department. Each team in the department is responsible for different areas in the hospital — wards, outpatient clinics, operating theatres, scan rooms and intensive care units. Team members, however, can choose to be rotated to different areas to enhance their skills and knowledge.

When planning projects, the team holds regular meetings with users to understand their requirements. Specialists from other disciplines, such as housekeeping, nursing, facilities maintenance engineering,

environmental services and infection control, are also represented at these meetings to help highlight needs and limitations, and brainstorm solutions.

Depending on the level of complexity, projects can take years to materialise. For example, the renal ward that Mr Tham's team is working on took three years of planning and approvals alone. Other considerations include building and safety regulations, age- and handicap-friendly design elements, as well as corporate designs.

"What I like most about my job is solving problems. When we are faced with a challenge and we manage to get new ideas and come up with solutions, it really brings me satisfaction," said Mr Tham, adding that to him, good design incorporates answers to difficult problems.



Mr Tham's association with SGH goes back to his childhood. His family lived in the Outram area, and his grandmother ran a *wanton* noodle stall nearby that was frequented by SGH nurses and doctors.

The father of a 16-year-old daughter enjoys hiking, running and cycling. He finds hiking a great way to spend quality time with his wife, who works in another hospital, and they go to places like MacRitchie Reservoir Park to keep fit and healthy.

Mr Tham is better known among colleagues as a cyclist who took part in the epic 13.5-hour SGH Bicentennial 200km Ride in March 2021 to raise money for the SGH Needy Patients Fund. Riding 200km in a day was extremely tough, as the fickle weather alternated between drizzles, sunny skies and heavy downpours throughout that day. Nonetheless, he found the experience very meaningful, and is participating in a 201km ride later this year for the same cause.



Mr Tham fell in love with cycling as a result of another hobby: photography. He took up cycling to go to out-of-the-way places. In 2021, he participated in the SGH Bicentennial 200km Ride to raise funds for needy patients.

What I like most about my job is solving problems. When we are faced with a challenge and we manage to get new ideas and come up with solutions, it really brings me satisfaction.

Mr Joe Tham
Project Manager,
Facilities Development Department,
Singapore General Hospital

The teams in Mr Joe Tham's department focus on different areas, such as wards, outpatient clinics, operating theatres, scan rooms and intensive care units. Team members can choose to be rotated to a different focus area to enhance their skills and understanding of the hospital's needs.

PHOTOS: MR JOE THAM

The face of CAR T-cell therapy

Chimeric antigen receptor (CAR) T-cell therapy modifies patients' immune cells to find and destroy cancer cells.

by Goh Bee Lian

Mention chimeric antigen receptor (CAR) T-cell therapy, and Assistant Professor Francesca Lim perks up perceptibly.

Describing it as her favourite topic and how “the stars aligned” to lead her to specialise in this relatively new field of cancer treatment, the Senior Consultant at Singapore General Hospital’s (SGH) Department of Haematology admitted, though, that the subject initially did not interest her.

However, a two-year study trip to the University of Texas MD Anderson Cancer Center opened her eyes to the potential of this form of immunotherapy, where the patient’s T-cells are engineered to fight and overcome specific cancer cells such as very advanced leukaemia and lymphomas.

“At the time, we were just beginning to understand cell therapy in Singapore. Witnessing how CAR T-cell therapy was being explained to patients, I found that very new and fascinating,” said Asst Prof Lim.

Upon her return, Asst Prof Lim was entrusted with setting up the CAR T-cell clinical programme for treating some cancers at SGH.

T-cells, also known as the body’s ‘fighter’ cells because they help fight against infections and cancers, are collected from a patient’s blood through a process called leukopheresis. They are then sent to a special manufacturing facility to be modified to express a special receptor, known as the CAR, on their surface, which will recognise the cancer target (the antigen) and attack the cancer cells. “These modified cancer-fighting CAR cells are grown in the laboratory and given to patients by infusion,” said Asst Prof Lim.

She credits her colleagues, and in particular, her department seniors, for inspiring her to choose the specialty.

“Having rotated through gastroenterology and cardiology, somehow, I enjoyed my haematology posting the most. Part of it was

because of the doctors whom I interacted with,” she said, naming Professor William Hwang (former Head of Department and current Chief Executive Officer of National Cancer Centre Singapore), and Senior Consultants, Dr Ang Ai Leen and Dr Linn Yeh Ching. “The discipline, the focus on the patient, and the dedication that they had in caring for the patients really impressed me,” she added.

Asst Prof Lim also draws strength from her patients. “They want to know about their disease and they want to take charge,” she said.

While it has been available in Singapore for some time, CAR T-cell therapy only received approval for commercial use from both the United States’ Food and Drug Administration and Singapore’s Health Sciences Authority in March 2021.

Although promising, CAR-T cell therapy is still considered an alternative method of treatment that requires many more years of trials, Asst Prof Lim stressed. The therapy carries a hefty price tag and stringent criteria, including cancer type (relapsed/refractory acute B-cell lymphoblastic leukaemia and diffuse large B-cell lymphoma).

Patients must also have undergone standard treatments before they can be considered for CAR T-cell therapy. So far, only a handful of patients have been treated with compassionate academic CARs, clinical trials and commercial CAR products.

Nevertheless, Asst Prof Lim hopes for greater awareness of CAR therapy and its potential to treat complex blood cancers. Her department organises outreach activities to raise awareness among general practitioners so that they can direct patients to specialist centres.

Asst Prof Lim comes from a family of doctors. Her father is a cardiologist, her two sisters are oncologists, and her brother is a medical officer. She met her husband, a surgeon in another public hospital, in medical school in the UK. She was posted to several local hospitals before joining SGH.

“I’ve received my 10-year award, so I’m sure it has been a long time!” she quipped.

Like her own family, Asst Prof Lim has a large family by modern standards. She and her husband spend time with their four children, aged between one and 10, visiting parks, watching films and having meals. With support from her parents and in-laws, she gets to spend some me time relaxing in a cafe with a good book.

“I like to read about people’s life stories, biographies and books on life lessons. They teach me about peace, forgiveness and being focused. I think such stories bring me back to reality and core values — to what is important,” said Dr Lim.

Having rotated through gastroenterology and cardiology, somehow, I enjoyed my haematology posting the most. Part of it was because of the doctors whom I interacted with.

Assistant Professor Francesca Lim
Senior Consultant,
Department of Haematology,
Singapore General Hospital

PHOTO: VERNON WONG



Assistant Professor Francesca Lim (in blue) and her lab team — (from left) Senior Medical Lab Scientist Gina Gan, Medical Lab Technologist Ho Ren How and Senior Medical Lab Manager Heng Kee Khiang — process patients’ blood T-cells at the Haematology Stem Cell Therapy laboratory. The cells are then sent to a manufacturing facility for modification into CAR T-cells.

Mr Tan Chee Mun, who became SGH’s and Singapore’s first patient to receive commercial CAR T-cell therapy, is surrounded by his care team, (from left) Associate Professor Aloysius Ho, Assistant Nurse Clinician Rohani Salleh, Asst Prof Francesca Lim, Mr Tan’s wife, Mdm Tay Li Li, Assistant Nurse Clinician and Apheresis Nurse Jessica Teo, and Senior Clinician Transplant Manager Lee Jing Jing.

Life-saving skills to know

Learning to perform Cardiopulmonary Resuscitation and use the Automated External Defibrillator can help save a life.

Information provided by Dr Catherine Chan, Clinical Assistant Professor, SingHealth Community Hospitals



What is Cardiopulmonary Resuscitation (CPR)?

A series of actions, including chest compressions and mouth-to-mouth rescue breathing, required to restart the heart and get the blood flowing again as soon as possible.



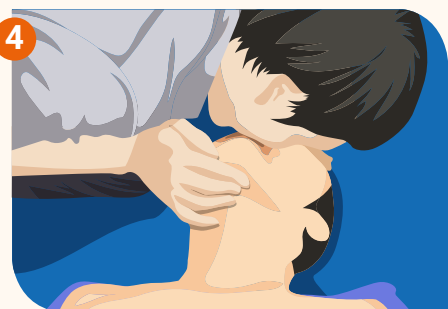
Step 1: Lace the fingers of both hands together



Step 2: Push hard and fast on the centre of the person's chest



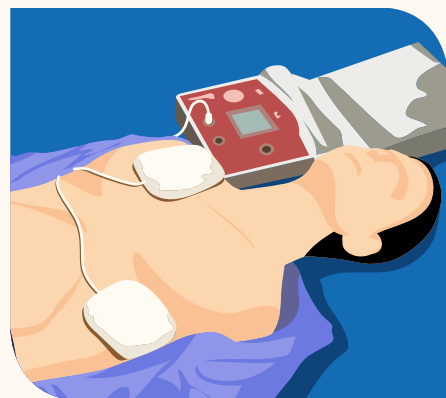
Step 3: Tilt the person's head back and lift the chin to open the airway



Step 4: Give mouth-to-mouth rescue breaths

What is Automated External Defibrillator (AED)?

A device that delivers electrical shocks to treat ventricular fibrillation (VF), an irregular and chaotic electrical cardiac rhythm, allowing the heart to restore its function.



CPR should be administered when...

a person suffers from cardiac arrest, and is found to be unresponsive with no spontaneous heartbeat and breathing. Common causes of cardiac arrest include heart attack, choking, severe trauma, drowning and stroke.

AED should be used after...

CPR has been initiated. Another available responder should fetch the AED and administer the device as soon as possible. Locations of nearby AEDs can be identified using the myResponder app.

It is important to first ascertain that the scene is safe for use of an AED. Remember to avoid the following: metal surface, water, flammable gas and oxygen.

The myResponder app is a life-saving initiative by the Singapore Civil Defence Force (SCDF). Volunteers are notified via the app by SCDF's 995 Operations Centre of any cardiac arrest case within 400 metres of their location. It will also highlight nearby AEDs that may be available.

Should I wait for first responders to arrive instead of performing CPR?

Time is of the essence when treating a person who is having a cardiac arrest. Immediate application of CPR and AED can increase the survival rate by more than 20 per cent. If the blood does not flow to the brain within four to six minutes, it could result in brain death.

Even if proper CPR is done, there are inherent risks, such as rib fractures, which are unavoidable. However, the advantages of starting CPR and AED early outweigh the risk of harm for a person who has suffered cardiac arrest.

Pick up a life-saving skill

You don't have to be trained or certified to perform CPR or use an AED, but undergoing a course on how to carry out these procedures will increase your confidence levels in an emergency situation.

Visit Singapore Heart Foundation's website (www.myheart.org.sg) for a list of courses available for general learners. There is also a 'Virtual Restart A Heart Programme', which is a first-responder programme designed to give laypersons quick and simple training in life-saving skills that are required during a cardiac emergency.

Survival rate due to help of bystander CPR

2018 – 25.9%

2019 – 26.2%

Bystander AED application rate

2018 – 3.3%

2019 – 10.5%

Bystander CPR rate

Consistently high at 60%

Statistics are extracted from
Out-Of-Hospital Cardiac Arrest Data Report 2019.

Things to note for young children and the elderly

The location of landmark for chest compressions, and the depth of CPR for infant, children and adult are different. Infants up to one year of age and children between one and eight years old rarely collapse due to a heart problem. It is usually secondary to major trauma or respiratory illness, or other causes like choking.

AEDs can be safely used on children above one year old. It is recommended that paediatric pads, if available, are used for children aged between one and eight years old. The elderly are more frail and more prone to possible injuries like rib fractures.





Tough to swallow

When swallowing is difficult, everyday food and drinks can pose a hazard.

by Goh Bee Lian

Most people swallow without thinking about how it is done. This is because swallowing involves a series of complex actions that coordinates automatically and precisely with breathing.

That automatic response can go out of sync for someone who has swallowing difficulties (dysphagia), such as chewing or controlling the foods or liquids in their mouths. When that happens, choking can result, and the foods or liquids then go into the airways or lungs — instead of the stomach — which can lead to aspiration pneumonia, a form of lung infection.

“Severe pneumonia and choking can be fatal,” said Ms Lee Yan Shan, Principal Speech Therapist, Speech Therapy Department, Singapore General Hospital (SGH). In Singapore, pneumonia is the second leading cause of death after cancer. This count includes all sorts of pneumonia, including aspiration pneumonia.

Fear of choking or having food stuck in their throats often leads people with swallowing difficulties to restrict what they eat or drink. However, this can put them at risk of dehydration and malnutrition. At the same time, they may also avoid eating with family and friends, leading to social isolation and depression, Ms Lee added.

Swallowing rehabilitation is one way of managing swallowing difficulties. This involves teaching patients to chew and swallow more slowly, swallow more often to ensure food and liquids go down the throat safely, use different spoon sizes to eat

different amounts, and to cough periodically to expel potential aspiration, said Ms Lee.

Not all dysphagia patients display coughing or other signs indicating that food or liquid is going into the lungs. “No coughing does not mean that there is no problem because for some people, their cough response is very delayed or poor,” she said, pointing out that some patients, such as those with advanced Parkinson’s disease or dementia, can experience what is known as silent aspiration.

To make eating and drinking safer and easier, food can be modified by cutting into smaller pieces or softened by cooking longer. To slow the passage of liquids down the mouth and throat, thickening powders can be added to liquids.

What exactly is finely minced?



Finely minced can mean a smooth puree at one hospital, and small, finely chopped pieces of food at another. A standard definition is important, as patients with varying degrees of dysphagia need different food consistencies to eat safely and easily.

To avoid confusion, a Ministry of Health workgroup consisting of healthcare professionals from various institutions worked on adopting a standard set of diet and fluid terminologies under the International Dysphagia Diet Standardisation Initiative (IDDSI) framework.

As the IDDSI framework is progressively being adopted across Singapore, food companies catering to healthcare institutions and companies producing and selling dysphagia-friendly foods will have to adhere to the same standards, said Ms Lee Yan Shan, Principal Speech Therapist, Speech Therapy Department, Singapore General Hospital.

What causes swallowing difficulties?

Dysphagia is often a symptom of an underlying medical issue:

- Neurological diseases, such as stroke, Parkinson’s disease, dementia and multiple sclerosis, may affect how the brain controls swallowing reflexes and muscle movements.
- Congenital and developmental issues, such as cerebral palsy, cleft lip and palate, can affect the anatomy, cognition and feeding posture of the person.
- Muscular disorders, such as muscular dystrophy and myasthenia gravis.
- Reduced respiratory function, such as chronic obstructive pulmonary disease (COPD), can affect the coordination between breathing and swallowing.
- Some medications can cause dry mouth, changes in muscle coordination and other side effects.
- Cancer in the head, neck or digestive tract can cause anatomical changes, especially after surgery or treatment.
- Ageing weakens muscles or impairs muscle coordination.

Go to page 16 for a pureed Shepherd’s Pie recipe for dysphagia patients with swallowing difficulties.

The forbidden food

Common among children, food allergies can be better managed with these tips.

by Annie Tan



Eggs, cow's milk, peanuts, shellfish, wheat, soy and fish — these common foods are found in many dishes and store-bought products. However, they are also the most common food allergens.

Every week, KK Women's and Children's Hospital (KKH) treats infants with allergic reactions after being introduced to eggs for the first time. Indeed, food allergies affect up to five per cent of children in Singapore and are usually diagnosed in early childhood before two years of age.

"A food allergy happens when the immune system mistakenly treats harmless proteins in certain foods as a threat," said Dr Chong Kok Wee, Head and Consultant, Allergy Service, Department of Paediatrics, KKH.

In most cases, the body develops an immediate reaction when antibodies are activated and chemicals such as histamine are released. Most of these reactions tend to be mild to moderate, with symptoms such as itchy rashes known as hives, itch in the mouth, facial swelling, acute vomiting, abdominal pain, or diarrhoea.

KKH also sees an average of two to three cases of severe reactions each week, said Dr Chong. Known as anaphylaxis, this allergic reaction may cause narrowing of the airways, leading to wheezing and shortness of breath. It may also cause a drop in blood pressure, leading to unconsciousness. Anaphylaxis should be promptly treated with intramuscular adrenaline and the patient should be conveyed to a hospital for further monitoring.

Key factors

In general, infants with moderate to severe eczema are more likely to develop food allergies.

"The development of food allergies is likely the result of complex interplay

between genetic and environmental factors in early life," Dr Chong said.

The general shift to an urbanised lifestyle, for instance, is associated with development of food allergy. Improved hygiene may result in insufficient exposure to microbial, which is necessary to strengthen the gastrointestinal tract and immune function.

Another key factor is when and how common allergens are introduced. If common food allergens are introduced to a child's diet early, this may reduce the risk of allergies to these foods. In fact, there is no need to delay the introduction of common allergens such as eggs or peanuts.

Also, a more proactive approach to introduce common allergens early may be justified in high-risk children (who have a history of egg allergy and/or severe eczema), as a means to prevent peanut allergy.

However, if common food allergens are introduced via the skin, such as product application, this may instead increase allergic sensitisation. This is known as the dual-allergen exposure hypothesis, which suggests that early exposure to food proteins absorbed by the skin through disrupted skin barriers (as seen in eczema) leads to allergic sensitisation to the food.

Contrastingly, early exposure to food proteins via the oral route induces tolerance by the immune system. Earlier studies had proven this association between the application of peanut oil on the skin and an increased risk of developing peanut allergy. Nowadays, there is also an increase in cases of coconut and oat allergies in children who had reported usage of emollients containing these food proteins in them.



Patients who suspect a food allergy should see a doctor for diagnosis based on standard allergy tests, instead of doing unvalidated allergy tests that can be found online, says Dr Chong Kok Wee.

Managing food allergies

Patients who suspect a food allergy should see a doctor, who will make a diagnosis based on the history of immediate allergic reaction to a specific food, as well as a skin prick test or allergen-specific immunoglobulin E test.

In difficult-to-diagnose cases, doctors may conduct a medically supervised feeding of the food under controlled settings in an allergy clinic, said Dr Chong. It is also important to note that there are several unvalidated allergy tests that can be found online. These are not only inaccurate, but may also lead to unnecessary food restrictions that will impact a child's nutritional status, psychosocial and emotional well-being. Therefore, it is important that tests are done within a professional medical setting.

If a food allergy has been diagnosed, the best approach is to avoid the allergen altogether. Children who are allergic to nutritious food such as cow's milk, egg and wheat will be advised by dietitians on how to ensure adequate nutrition and optimal growth.

In some cases, avoiding allergens can be tricky. "Many may not be aware of 'hidden' ingredients within store-bought products. For example, bread usually contains milk, wheat is found in soya sauce, and eggs are used in medications such as lysozyme-containing syrups," said Dr Chong, adding that patients should read food labels carefully.

Dining out may also increase the risk of accidental exposure, since food sold in hawker centres, food courts and restaurants do not come with an ingredient list. "Patients should be careful of cross-contamination of food that are sold or prepared in areas containing the allergen, as well as in places where common utensils are used for serving, such as at buffet lines. They are also advised to clean the surfaces of tables and chairs thoroughly before use," Dr Chong said.

For some patients, even inhalation of the food allergen may trigger a reaction like rashes and runny nose, though severe allergic reactions are rare. To manage food allergies safely, patients are taught to recognise and treat symptoms promptly with adrenaline auto-injectors, such as an EpiPen.

Food oral immunotherapy (OIT), in which the allergen is consumed in gradually increasing amounts under medical supervision, also shows potential for improving tolerance. Trials for OIT* are ongoing, including a 'Pancake Oral Immunotherapy for Egg Allergy in Inducing Tolerance' trial currently conducted by KKH for children aged two to 15.

While OIT is currently not part of the standard treatment options, the good news is that certain food allergies may resolve on their own. "Up to 80 per cent of children may outgrow allergies to egg and milk. Peanut or shellfish allergies, however, tend to persist into adulthood," said Dr Chong.

*To find out more about this trial, visit www.kkh.com.sg/POET or email Poet.Study@kkh.com.sg.



Caring for your feet

The key to managing foot conditions is to maintain good foot care.

“Good foot hygiene protects the feet from potential sources of infection. Wash the feet and dry the area between the toes thoroughly. Remember to change socks every day, and remove dirt or debris from shoes,” Ms Leow said.

Corns and calluses can be managed by regularly using a foot file, and applying an emollient to affected areas to soften the skin and alleviate foot pain.

It is also important to choose the right footwear. Ms Leow encourages individuals to choose comfortable and properly fitted shoes. A good pair of shoes should leave enough room for the widest part of your foot and the depth of your longest toe.

“When we walk, our feet spread out and expand by up to one centimetre in each direction, so pick a shoe that is longer than your feet by about the width of your thumb,” she added.

Mind your feet

COVID-19 pandemic reveals that sedentary lifestyles lead to more foot problems

by Elena Owyong

Even as Singapore moves towards living with endemic COVID-19, the problems resulting from the pandemic are still being experienced by many. One such concern is the sedentary lifestyle adopted by many in Singapore during the pandemic.

Podiatrists in Sengkang General Hospital (SKH) are seeing a surge in the number of patients with foot issues. “The ‘circuit breaker’ caused gyms, workplaces and schools to close temporarily or have restricted capacity. This led to people decreasing their physical activities and having a more sedentary lifestyle,” said Ms Kimberley Leow, Podiatrist, Podiatry Department, SKH.

Engaging in regular physical activity is vital to maintaining foot health, which enables individuals to perform their daily activities optimally.

As individuals stay home for longer periods, they also spend more time walking barefoot. Experts believe that poor foot health is closely associated with the increase in the duration a person spends barefoot.

With the easing of restrictions, individuals keen to return to their exercise regimen may also suffer from injuries when they suddenly increase the amount or intensity of their physical activities.

A study conducted by SKH also revealed that more elderly patients aged between 61 and 80 years sought podiatric treatment after the ‘circuit breaker’ period. Before that, podiatrists treated more patients in their late 40s.

As people age, their feet and ankles undergo physiological changes. For instance, an individual may have reduced joint mobility or lose the fat pads that cushion their soles and heels. These changes affect the way their feet function, said Ms Leow.

Older individuals are not only unable to engage in the same level of activities as they did when they were younger, they are also at a higher risk of developing foot pain.

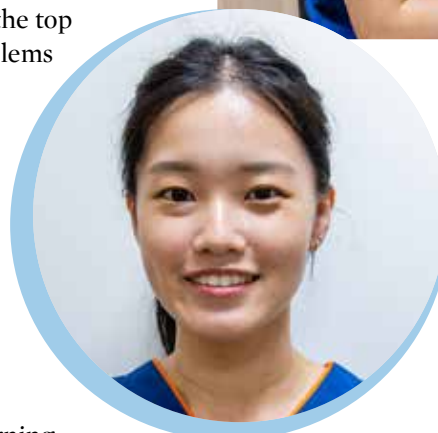
Common foot conditions

The study also observed that the top three most common foot problems during the pandemic were plantar fasciopathy, corns and calluses, and bunions.

Plantar fasciopathy is a condition where individuals feel pain at the bottom of their heel when they stand after sitting for prolonged periods. The pain also usually occurs when individuals take their first few steps in the morning.

The second most treated condition is corns and calluses. Calluses are thick and rough patches of skin, while corns are smaller and deeper patches of rough skin with a central nucleus or a raised bump.

Bunions are bulging bumps on the inner side of the big toe joint, causing swelling or soreness around the affected toe. A person with bunions may also have corns or calluses on the base of their big toe joint due to the friction caused by rubbing against footwear, or on the first and second toes, where the toes rub against each other.



Those with persistent foot pain can consider seeing a podiatrist like Ms Kimberley Leow (above) for medically prescribed devices worn in shoes known as custom foot orthotics.

Shoes should also provide good heel support, such as a cushioned heel cup that is stable enough to prevent vertical or horizontal heel movement. When trying shoes, ensure that the midsoles do not twist in the middle.

To protect the feet, avoid wearing worn-out shoes as they may lack basic cushioning or support, thus increasing the impact and stress on the legs and joints. Individuals who exercise should also ensure that they stretch properly before their workouts and throughout the day to avert injury and muscle stiffness. Wearing house sandals with good support at home can prevent straining of feet.

Those with persistent foot pain or discomfort can consider seeing a podiatrist for custom foot orthotics. These are medically prescribed devices worn in shoes. Ms Leow explained that orthotics help correct the foot's alignment, redistributing excess pressure from painful areas evenly across the feet.

PREPARATION
TIME
20
minutes

45
minutes

COOKING TIME

Ingredients

- 400g lean beef, minced
- 3 tsp margarine
- 4 cloves garlic, minced
- 80g onion, diced
- ½ tsp dried rosemary
- 1 bay leaf
- 40g red capsicum, diced
- 40g green capsicum, diced
- 2 dsp tomato purée
- 400ml water
- ¼ tsp salt
- ¼ tsp pepper

To prepare mashed potatoes

- 720g potato, peeled and quartered
- 2 tsp margarine
- 60ml skimmed milk
- ¼ tsp salt
- pinch of nutmeg powder (optional)

Method

- 1 Preheat oven to 180°C.
- 2 Melt margarine in a pan over medium heat. Add garlic, onion, rosemary and bay leaf. Sauté until fragrant.
- 3 Add beef, red capsicum and green capsicum. Sauté for 1 min.
- 4 Add tomato purée and stir well.
- 5 Add water and bring to a boil. Reduce to low heat and simmer for 5 min.
- 6 Season with salt and pepper.
- 7 Remove from heat and spread on a baking dish. Leave to cool.
- 8 To prepare mashed potatoes, boil potato until soft. Then, remove from heat and drain. Mash potato through a potato ricer or with a fork until smooth.
- 9 Mix in margarine, milk, salt and, if desired, nutmeg powder. Put into a piping bag and pipe to cover minced beef.
- 10 Bake in oven for 20 min. Remove and serve hot.

Shepherd's Pie

4 servings 



Estimated nutrient content (per serving)

Energy	342kcal
Carbohydrate	37g
Protein	26g
Fat	10g
Sodium	396mg
Cholesterol	62mg

Pureed Diet

Take one serving of Shepherd's Pie. Separate meat filling (approximately 100g) from potatoes. Put meat filling into a blender. Add 30-50ml of water, and blend until required consistency or as directed by your speech therapist.

The outer layer of the pie may be crusty and hard. Mashed potato may be blended slightly if chunky bits are present.

schülke -+

WE'RE ON A MISSION TO RESCUE YOUR DRY AND ITCHY SKIN

- ▀ Conditions
- ▀ Relieves
- ▀ Protects



octenisan® wash lotion

Your Gentle Antimicrobial Wash for
Dermatological Conditions



Made in Germany



Hypoallergenic
(Colour & Fragrance Free)



Mild & Gentle
Whole Body Wash



Suitable for
sensitive skin



Enriched with Moisturiser
(Allantoin & Glycerin)

Like us on
Facebook

Scan QR code for
more product
information



Schulke & Mayr (Asia) Pte Ltd

This product is available in the pharmacy of SGH, CGH, SKH, NHC, TTSH, NTFH, NSC, NUH, KTPH, Singhealth Pharmacare, selected Watsons outlets and online merchants.

Available pack size: 100ml, 150ml and 500ml

Can acupuncture help me lose weight?



Q I am a woman in my 20s and would like to lose some weight. I am healthy and do not have any long-term medical condition. Can acupuncture help me lose weight and keep it down? How does acupuncture work? Is it effective as a way of losing a modest amount of weight?

A Acupuncture can be an effective alternative treatment to help control weight, but it should be combined with changes in lifestyle and diet to enhance and maintain its effectiveness.

In a study titled 'Acupuncture versus sham acupuncture for simple obesity: a systematic review and meta-analysis', published in 2020 in the British Medical Association's peer-reviewed *The BMJ*, acupuncture was found to have positive effects in lowering body mass index, body weight and body fat mass percentage.

The results of the study also suggest that acupuncture is an effective therapy for obesity rather than merely having a placebo effect. Other research has shown that acupuncture regulates the endocrine system, promotes digestion and suppresses appetite.

According to traditional Chinese medicine (TCM), weight gain or obesity is related to what it considers 'phlegm' and 'dampness' stagnation in the body. Overconsumption of sweet and greasy food, and a lack of physical activity can impede the function of the spleen over time. In TCM, acupuncture strengthens the spleen's function and treats any underlying constitutional imbalances.

Patients can undergo manual acupuncture, electro-acupuncture, auricular acupuncture, or auricular acupressure, where small herbal seeds of a plant, known as vaccaria, are pasted on the acupuncture points on the ear. Treatment is tailored to a person's medical condition, and not on how overweight he is. Acupuncture should be avoided for pregnant women and those with tumours and bleeding disorders.

A 10-session course typically starts with biweekly sessions. If the patient does not show much weight loss after one or two courses of acupuncture, he would be advised to stop treatment and seek alternatives.

Acupuncture carries little risk when administered by qualified practitioners. Some patients may experience dizziness, brief aching or tingling sensations around needling sites, and slight bleeding or bruising after the acupuncture needles are removed. A doctor's referral is needed to book an appointment at the SGH Acupuncture Services.

...
Ms Jeraldine Seah, Senior Acupuncturist, Acupuncture Service Centre, Department of Pain Medicine, Singapore General Hospital

Question & Answer

HealthXchange.sg

Pain in the joints

Q Is it true that joint pain will affect all elderly people? For those already experiencing joint pain, can the condition improve with the right diet or exercise?

A Osteoarthritis is one of the most common causes of joint pain in elderly people. It is usually a result of wear and tear. Other causes include rheumatoid arthritis, gout and lupus.

For joint pains caused by osteoarthritis, a combination of aerobic and strengthening exercises is useful. For those who are overweight and experiencing knee pain, a 10 per cent body weight loss may help manage the pain. However, there is currently limited evidence regarding the types of diet that can reverse the condition of joint issues.

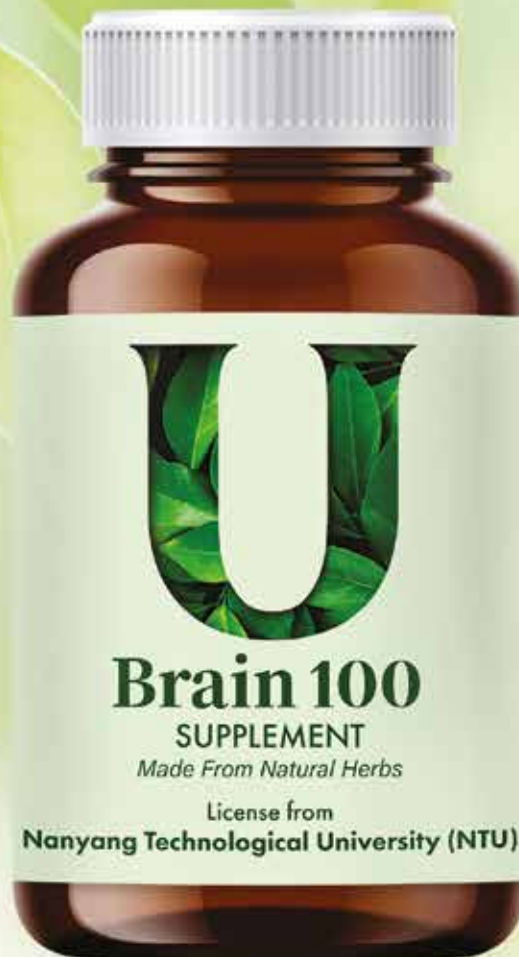


...
Dr Alexis Ang Guat Cheng, Consultant, Department of Geriatric Medicine, Changi General Hospital

**Suffering from
Parkinson's?
Dementia?
Mental Stress?
Forgetfulness?**



The Biolabs



Scientific Breakthrough

Our Research Collaboration With Nanyang Technological University (NTU) Has Led To The Development Of Natural Herbal Supplements To Support Healthy Brain Functions.

Made from 100% Natural Herbs

The Best Way To Stay Healthy Is By Staying Mentally Healthy



... that there is a feature on SingHealth's Health Buddy app that helps identify early warning signs of dementia and caregiver burnout?

The 'Memory Care' feature contains checklists to monitor possible signs of cognitive decline and caregiver stress, and provides the user with relevant information and advice.

Developed by the National Neuroscience Institute and SingHealth, this tool, which was launched on World Alzheimer's Day 2021, seeks to empower patients and caregivers to manage the condition more effectively.



Scan the QR code to download the Health Buddy app:



... that Singapore General Hospital (SGH) operates some wards at Outram Community Hospital (OCH)? With the additional beds at OCH, more SGH patients can receive acute inpatient care in wards 9A, 10A-C and 11A-C located on levels 9, 10 and 11 respectively. The naming of the wards differs from the main SGH complex, where the wards go by block number and level. For instance, ward 43 refers to the ward at Block 4 level 3.

Wards 9A, 11B and 11C are general wards, while patients who undergo elective or scheduled surgery, such as for total knee and hip replacements and mastectomies, are admitted to ward 10A. It is a short-stay ward that provides targeted care to patients requiring brief hospitalisation and discharge within 24 hours for recuperation at home.

Meanwhile, ward 11A is for SGH's rehabilitation medicine patients, who were previously housed at Bright Vision Hospital.



SCHOOL OF HEALTH AND NURSING EMPOWER YOUR FUTURE



**DEDICATED NURSING
PRACTICUM LAB**



**DIRECT PATHWAY TO
POSTGRADUATE LEVEL**



**INDUSTRY-RELEVANT
CURRICULUM**

**MASTER OF PUBLIC HEALTH
MASTER OF SCIENCE HEALTHCARE MANAGEMENT**
AWARDED BY NORTHUMBRIA UNIVERSITY, UK

MASTER OF BUSINESS ADMINISTRATION (HEALTH MANAGEMENT) (E-LEARNING)
(EQUIVALENT ACADEMIC STANDARD TO ON-CAMPUS DELIVERY)
BACHELOR OF SCIENCE NURSING (TOP-UP)
(ACCREDITED BY SINGAPORE NURSING BOARD)
AWARDED BY EDINBURGH NAPIER UNIVERSITY, UK

BACHELOR OF SCIENCE (HONS) HEALTHCARE MANAGEMENT (TOP-UP)
AWARDED BY TEESIDE UNIVERSITY, UK

BACHELOR OF SCIENCE (HONS) IN NUTRITION SCIENCE
AWARDED BY UNIVERSITY OF ROEHAMPTON, UK

**MDIS-ENU NURSING
SCHOLARSHIP**

THE MDIS-ENU JOINT SCHOLARSHIP WORTH S\$2,000* IS NOW AVAILABLE FOR THE BACHELOR OF SCIENCE NURSING (TOP-UP), SEPTEMBER 2022 INTAKE. *TERMS AND CONDITIONS APPLY

ENQUIRE NOW!



SCAN TO REGISTER

UNIVERSITY PARTNERS:



Management Development
Institute of Singapore
Reg. No. 201001793H
20 May 2019 to 19 May 2022



6247 9111



etc@mdis.edu.sg



mdis.edu.sg

MDIS



For Cough: Prospan® Bring Joy back into Your Life



- > Dissolves mucus
- > Relaxes airways
- > Relieves cough



- alcohol-free • sugar-free • no colourings
- pleasant taste • non-drowsy

*If you experience respiratory symptoms, please consult doctor.
For infants and young children, please consult doctor.*

MAHP2100105

Distributor: Pharmline Marketing Pte Ltd
Tel: 6286 0291

The #1 phyto-cough expectorant medicine worldwide[†]

[†] IQVIA, Global Market Insights, Category 'RSC (Expectorants)', MA1 12/2019 (units)



GLUCOSAMINE: Not effective or not the right BRAND of glucosamine?

Before buying a glucosamine brand,
ask yourself these questions:

1. How many clinical studies have proven that the brand works for painful joint conditions?
2. How many clinical studies have shown that the brand does not work?
3. How many long term, large-scale studies were conducted using the brand to prove its safety for long-term use?

For Viartril-S:

1. There are more than 100 clinical studies and all the studies have proven that Viartril-S works for painful joint condition.
2. No clinical studies have shown that Viartril-S does not work.
3. There are long-term studies using Viartril-S involving over 7000 patients proving its safety for long-term use. These include one 2-year, one 2.5-year & two 3-year studies with an 8-year follow-up study which has also shown that Viartril-S reduces the risk of Total Knee Replacement surgery by 57%.

*What about the glucosamine
brand that you are taking?*

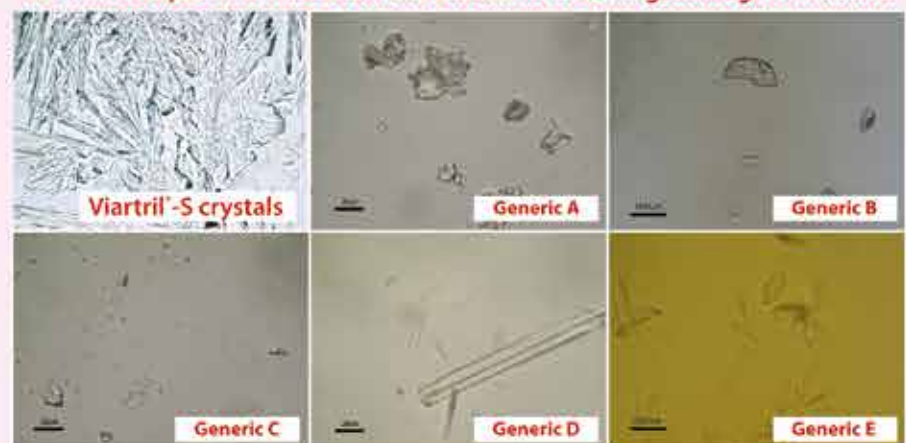


The Patented Prescription-Grade Crystalline Glucosamine Sulphate for Joint Health^{1,2}

In Singapore, glucosamine products are sold to public without the need for registration & approval by HSA. This means that even simple checks on purity are not required. So, the safety and efficacy of a brand can only be confirmed by lab & clinical studies.



The microscopic structure of Viartril-S is different from generic glucosamine:



1. Goto-Ogino et al. JAMA. 2018;320(13):1544-1551. 2. Odeh-Burstein et al. Seminars in Arthritis and Rheumatism 44(2014): 255-263. 3. Briviere G. Arthro RD. Rejuvene 21. Seminars in Arthritis and Rheumatism 2018 Feb 43(4):Suppl:172-173.



The glucosamine brand used in
all successful clinical trials³

LIKE US ON FACEBOOK!



facebook.com/viartrilsingapore/

Distributor: Pharmline Marketing Pte Ltd
Tel: 6286 0291 Website: www.pharmline.com.sg