

WINNER
AWARD OF EXCELLENCE
APEX 2015

MAR
APR
2016
ISSUE
no. 62

Lifewise

5

SMART MOVES

Here's how to exercise on the job, and have fun as well

KEEPING TB AT BAY

CONTROLLING THE DISEASE IN MODERN-DAY SINGAPORE

On A Sugar Low



Make the switch to less-sweet beverages p22

more
than

skin-deep

WHEN SERVING
WITH A HEART

DR MARTIN CHIO >
SENIOR CONSULTANT,
HEAD OF THE DSC CLINIC,
NATIONAL SKIN CENTRE



Adding years of healthy life

WELLNESS > ALL YOU NEED TO UNDERSTAND SCHIZOPHRENIA p17

Adding Years of Healthy Life

Our vision of "Adding Years of Healthy Life" encompasses the fundamental challenge of promoting health, preventing illness and preserving quality of life.

A leader in public healthcare in Singapore, our mission is to provide patient-centred care through our integrated network of acute care hospitals, national specialty centres, primary healthcare polyclinics, specialist and business units. We are recognised both at home and globally for the quality of our medical expertise and facilities.

We are a Regional Health System (RHS) for Singapore – a prime mover in the patient-centric healthcare ecosystem with valued partners from the primary, acute and step-down care sectors, all working closely to deliver integrated healthcare services for our patients.

With more than 13,000 staff, we aim to provide care that is patient-centric, accessible, seamless, comprehensive, appropriate and cost-effective.

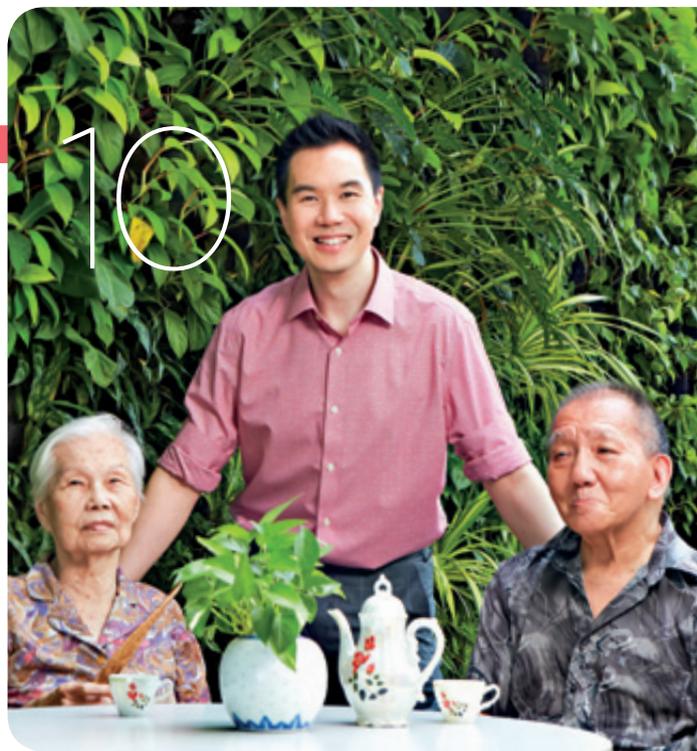
We are NHG. The National Healthcare Group.



CONTENTS

features

- 10 **COVER STORY**
THE DOCTOR IS ALWAYS IN
Dr Martin Chio's passion for serving extends beyond his day job at the National Skin Centre.
- 14 **SOMETHING IN THE AIR**
How Singapore is bringing tuberculosis under control.
- 17 **WHEN THE VOICES ARE NOT REAL**
Banishing misconceptions about schizophrenia.
- 20 **KNOW YOUR SPOTS**
When to be concerned about moles.



- 22 **ON A SUGAR LOW**
Refrain from sugary beverages for a healthier you.



CONTENTS

24 **IN PERSON**

Why diagnostics and surgery hold appeal for Ms Lim Soh Har and Asst Prof Chong Yew Lam, respectively.

26 **FIGHTING BACK AGAINST 'SUPERBUGS'**

Using computers and stewards to prevent antibiotic overuse in hospitals.

28 **FACING OLD AGE**

Getting past the fear of ageing.

30 **SICK FROM THE FRIDGE**

Tips for safe food storage in your refrigerator.

32 **WORKING FIT**

Exercises you can do in the office.



26



30



32

regulars

EDITOR'S NOTE	03
NEWSROOM	04
ASK THE EXPERTS	34
SPOTLIGHT/NHG NEWS	40
NHG DIRECTORY	48



ON THE COVER:
DR MARTIN CHIO,
SENIOR CONSULTANT,
HEAD OF THE DSC CLINIC,
NATIONAL SKIN CENTRE

PHOTOGRAPHER EALBERT HO
ART DIRECTION DON LEE
STYLING SHEH
HAIR & MAKEUP JANE LAU
CLOTHES BANANA REPUBLIC



NATIONAL HEALTHCARE GROUP

EDITORIAL

Wong Fong Tze, William Ng, Jason Chiew,
Praveen Nayago, Ng Si Jia, Nathalie Ng,
Sabrina Lim, Clara Poh, Clara Lim, Eugene Seng

LIFEWISE ADVISORY PANEL

A/Prof Lim Tock Han, A/Prof Thomas Lew,
A/Prof Chua Hong Choon,
A/Prof Chong Phui-Nah, Prof Roy Chan



EDITORIAL & DESIGN

Supervising Senior Editors

Agatha Koh Brazil,
Ronald Rajan
Fairoza Mansor,
Wanda Tan
Don Lee
Aik Chen
Ealbert Ho
Kelvin Chia
Chee Yan, Mark Lee

Senior Writers

Art Director
Chief Photographer
Executive Photographer
Senior Photographer
Photographers

CONTRIBUTORS

Jerena Ng, Chia Ee Khim, Elisabeth Lee, Tom Lock,
Frances Teng, Melvin Yong

BUSINESS DEVELOPMENT

Senior Business

Relationship Manager **Michele Kho**
mpbcust_pub@mediacorp.com.sg

For advertisement enquiries, please email:

felicianorfor@mediacorp.com.sg

For subscription enquiries, please email:

mpbsubhelp@mediacorp.com.sg

Every care has been taken in the production of this magazine, but National Healthcare Group (NHG), the publisher, editor and employees assume no responsibility for any errors, inaccuracies or omission arising thereof. Opinions expressed by contributors and advertisers are not necessarily those of NHG, the publisher or the editor.

The information produced is for reference and educational purposes only. As each person's medical condition is unique, you should not rely on the information contained in this magazine as a substitute for personal medical attention, diagnosis or hands-on treatment. If you are concerned about your health or that of your child, please consult your family physician or healthcare professional.

Copyright © is held by the publishers. All rights reserved. Reproduction in whole or in part without permission is prohibited. Printed in Singapore by KHL Printing, www.khlprint.com.sg. MCI (P) 055/11/2015.

Healthy body, healthy mind

NOT TOO LONG AGO, we were in the thick of festivities, and now, the first quarter of 2016 is drawing to a close. But as the cliché goes, 'It's better late than never', so why not re-visit those health resolutions? To get you going, flip to p32. "Working Fit" will help you squeeze in a little workout while at the office — perfect for when you hit that mid-afternoon slump!

Staying healthy means eating wisely too, and this extends to how you store and prepare the food you cook. "Sick from the Fridge" (p30), offers valuable pointers on how best to make use of that essential home appliance — the refrigerator. Find out how to keep food in optimum condition so that harmful food bacteria can't thrive.

But good health extends beyond the physical. We need to feed our minds and souls too, and Dr Martin Chio, who graces this issue's cover, is an appropriate 'Poster Boy' for this holistic approach. Besides back-to-back clinic hours at the National Skin Centre, Dr Chio (who also has a string of other responsibilities and commitments) still finds the time to volunteer monthly at Villa Francis, a facility for the destitute aged and sickly. Read about him in "The Doctor is Always In" on p10. Being a doctor for Dr Chio is a calling to serve others. He exercises regularly and stays healthy so as to attend to his patients better.

"Healthy body, healthy mind" is Dr Chio's mantra and taking a leaf from his book, we should aim to stimulate our minds by taking an active interest in things that may not directly benefit or affect us. Start then by learning more about schizophrenia, a condition that according to a recent 2015 Institute of Mental Health survey, ranks as the least-recognised mental disorder in Singapore. "When the voices aren't real" (p17), gives an insight into the condition and how it affects sufferers. "Something in the air" (p14) talks about the resurgence of tuberculosis in Singapore, and what the country is doing about it.

There are more insights to be gathered on other topics such as moles and the undesirable effects of too much sugar in our drinks as well in this issue of *Lifewise*. So happy reading, and stay healthy!

THE EDITORIAL TEAM



HYPERTENSION

GIVE GENEROUSLY, LIVE LONGER

Previous studies have shown that donating your time by volunteering can improve your health and that spending money on others can improve your happiness. Now, a small study from the University of British Columbia, Canada, has shown that being generous can also improve your health.

The researchers gave two groups of older participants diagnosed with high blood pressure some money to spend. One group could spend on themselves and the other group had to spend the money on others. While participants who were assigned to spend money on themselves did not show any change in blood pressure during the research, those who spent money on others experienced a significant reduction in their readings when they spent money on others. The magnitude of the reduction was comparable to the benefits from treatments such as medication and exercise.

“People seemed to benefit most from spending money on others they felt closest to,” said study author Ashley Whillans. More research is needed to replicate these results, but the study’s findings provide “some of the strongest evidence to date that daily decisions related to engaging in financial generosity can have causal benefits for physical health,” she said.

PSYCHOLOGY

Meet the Happiness Gene

In a new study published in the *Journal of Happiness Studies*, authors Michael Minkov of the Varna University of Management in Bulgaria and Michael Bond from the Hong Kong Polytechnic University claimed they have identified a happiness gene. Using data from the World Values Survey, a global research project investigating peoples’ values and beliefs, the researchers found that populations with the highest prevalence of the A allele (a variant form of a gene) in the fatty acid amid hydrolase gene variant rs324420 also claimed they were the happiest. The A allele is thought to help enhance sensory pleasure and reduce pain.

The A allele is more prevalent in some nations than others. Citizens who perceived themselves happiest include Ghana in West Africa and Latin American countries like Mexico and Colombia. The Arab nations of Iraq and Jordan and the East Asian nations of Hong Kong, China, Thailand and Taiwan, which had the lowest prevalence of the allele, were least likely to rate themselves happy.



THE A ALLELE
GENE IS THOUGHT
TO HELP ENHANCE
SENSORY
PLEASURE AND
REDUCE PAIN



➔ **IMH WORLD BIPOLAR DAY FORUM 2016**

The Institute of Mental Health will conduct a talk on Bipolar Disorder titled "Hope and Normalcy: A Celebration of Life with Bipolar Disorder". Experts will explain what Bipolar Disorder is, and where to get help. Other topics include the role of families and caregivers, and how to successfully negotiate the challenges of the disorder; Interpersonal and Social Rhythm Therapy; Art Therapy and Bipolar Disorder: Letting The Images Speak, and Mental Health Advocate Sharing.

DATE
Saturday, 12 March 2016

TIME
9am - Noon

VENUE
HPB Auditorium, Level 7
Health Promotion Board Building
3 Second Hospital Avenue,
Singapore 168937

REGISTRATION
Free admission. Register at <http://www.eventbrite.com/e/imh-world-bipolar-day-forum-hope-and-normalcy-a-celebration-of-life-with-bipolar-disorder-tickets-20911036473>
Or contact Gigi at Hui_Xin_TAI@imh.com.sg



HAEMATOLOGY

Plots That Clot Your Blood

A small study of movie-goers in the Netherlands has shown that acute fear can "curdle" your blood, according to the research published in the *BMJ* Christmas issue. In the study of 24 healthy volunteers, 14 were assigned to watch a horror movie which was then followed by a non-threatening educational movie, while the others watched the movies in reverse order.

The participants rated the fear they experienced after each of the 90-minute movies on a scale ranging from zero (no fear at all) to 10 (worst fear imaginable), while Leiden University researchers analysed their blood samples. It was found that "blood-curdling" movies really did thicken the blood, with a sharp increase in coagulant factor VIII levels after the horror movie. The researchers said that neither movie had any effects on the levels of other clot-forming proteins, and pointed out that while coagulation was triggered, no clots actually formed.

VIROLOGY

FIGHT THE FLU — WITH THE PILL

Oestrogen, a female sex hormone, has anti-viral effects against the influenza A virus it seems. In a research paper published in the *American Journal of Physiology — Lung Cellular and Molecular Physiology*, scientists from Johns Hopkins University in the United States have discovered that oestrogen stopped the virus from replicating in nasal cells — the prime target of the flu virus — taken from women, but not from men.

The results suggest that women on hormonal birth control or hormone-replacement therapy

could be better protected during the seasonal influenza epidemics, said the study's lead investigator Dr Sabra Klein. "But because oestrogen levels cycle in premenopausal women, it may be difficult to see this protective effect in the general population," she added. "We see clinical potential that therapeutic oestrogens that are used for treating infertility and menopause may also protect against the flu."



THERAPEUTIC OESTROGENS USED FOR TREATING INFERTILITY AND MENOPAUSE MAY ALSO PROTECT AGAINST THE FLU

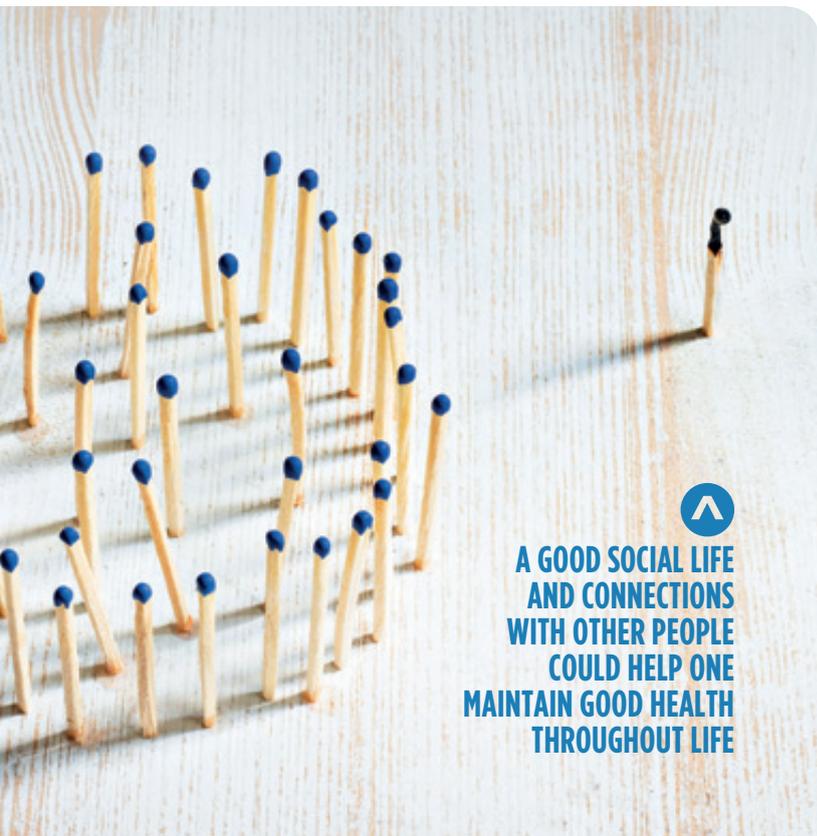
PSYCHOLOGY

LONELINESS CAN HARM YOUR HEALTH

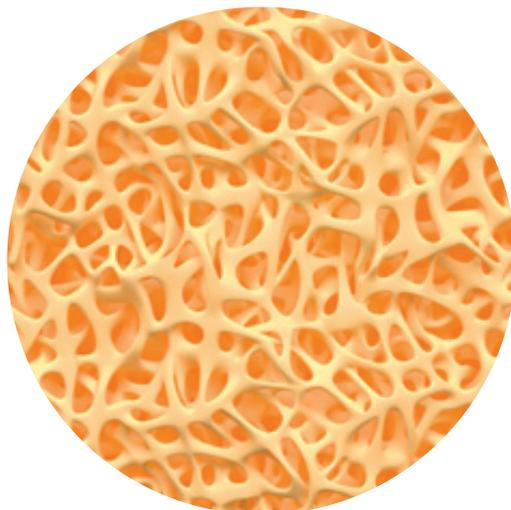
We all know this, but a new study has now established scientifically that loneliness — at any age — is bad for the health. It can be more detrimental to a person's well-being than poor diet or lack of exercise, say researchers from the University of North Carolina.

Published in the *Proceedings of the National Academy of Sciences*, the study examined the size of its subjects' social network and the quality of these relationships. For adolescents, the size of their social network was more important than the quality of their relationships. In this group, loneliness correlated with the increased risk of inflammation, which in turn is associated with cell damage and a host of chronic conditions. For middle-aged subjects, the quality of social relationships mattered more than network size and adults with unfulfilling relationships were more likely to experience an increased risk of obesity.

These findings led Yang Claire Yang, co-author of the study, to suggest that a good social life and connections with other people could help one maintain good health throughout life.



A GOOD SOCIAL LIFE AND CONNECTIONS WITH OTHER PEOPLE COULD HELP ONE MAINTAIN GOOD HEALTH THROUGHOUT LIFE



OSTEOLOGY

Bone Repair? Just Inject

Researchers in France have created injectable foam that could help repair bones damaged by degenerative diseases, according to a study published in the journal *Acta Biomaterialia*. For many years, doctors have been using calcium phosphate cement (CPC); however the new formulation uses a special hydrogel that acts as a foaming agent, and creates air bubbles within the original mixture, which could be used on the elderly and those with brittle bones.

This new formula is macroporous as it has larger holes to better strengthen bones and could be helpful in repairing the spongy tissue that degenerates in those who suffer from osteoporosis. Lead researcher Pierre Weiss said, "We think this could be a good biomaterial, perhaps with active molecules, to act against osteoporosis locally. We need to determine the proof of concept in animal models."



◀
**THE MORE DRAMATIC
 THE CHANGE IN
 SLEEPING PATTERNS,
 THE GREATER THE
 EFFECT ON HEALTH**

POLYSOMNOGRAPHY

SLEEP LATE ON WEEKENDS? DON'T DO IT!

Sleeping in on the weekend might do you more harm than good. In a new study published in the *Journal of Clinical Endocrinology and Metabolism*, University of Pittsburgh researchers found that changing sleeping patterns within a short period of time resulted in “social jet lag”, a term describing the “difference between one’s naturally-preferred and socially-imposed sleep schedules”. Researchers looked at the blood samples of 447 healthy volunteers and their dietary and exercise habits, which correlated with changes in blood sugar and cholesterol levels. The more dramatic the change in sleeping patterns, the greater the effect on health. “Our study shows that even among healthy, working adults who experience a less extreme range of mismatches in their sleep schedule, social jetlag can contribute to metabolic problems,” lead author Patricia Wong said. “These metabolic changes can contribute to the development of obesity, diabetes and cardiovascular disease.”

PSYCHOTHERAPY

CRANKY GUT: MIND OVER MATTER

Psychotherapy can help relieve the symptoms of irritable bowel syndrome (IBS) such as diarrhoea, cramps, constipation and bloating. A study published in *Clinical Gastroenterology and Hepatology* states that data from 41 clinical trials showed that three-quarters of IBS patients who underwent psychotherapy had greater relief from their symptoms 12 months after the end of therapy — compared to the experience of an average member of the control group. The researchers used cognitive therapy, behavioural therapy, hypnotherapy and dynamic psychotherapy. “IBS is notoriously difficult to treat,” study lead author Kelsey T Laird said. “So the fact that these effects are just as strong six to 12 months later is very exciting — a significant effect, which did not decrease over time.”



CARDIOLOGY

Statins Help After Bypass Op

A new review of studies published in *The Annals of Thoracic Surgery* has found that patients who continue to take statins before and after coronary artery bypass surgery reduced the chances of complications and lowered the risk of death.

In an analysis of 21 studies, statin use was associated with a lower likelihood of irregular heart rhythms, a lower incidence of stroke and heart attacks, as well as a lower risk of post-operative kidney injury. While doctors are still not sure why statins have this effect, the hypothesis is that these may help control the inflammation that results from cardiac surgery.

“It’s important to be on a statin if you have coronary artery disease, and to continue with the medicine before and after surgery,” senior author Dr Islam Elgendy told the *New York Times*.



PSYCHOLOGY

RISKIER WITH A HELMET

A study by University of Bath's department of Psychology puts the spotlight on the effectiveness of safety advice, especially about the wearing of helmets for leisure activities such as cycling. In the study, published in *Psychological Science*, the sensation-seeking behaviour and risk-taking of 80 participants aged 17 to 56 years was taken using a computer simulation. They believed they were taking part in an eye-tracking experiment, and were tasked with inflating an on-screen animated balloon. Half wore bicycle helmets and half, baseball caps — all fitted with eye-tracking devices. Each inflation of the balloon let participants earn a fictional currency. They could “bank” their earnings anytime but if the balloon burst all earnings would be lost. Over 30 trials, the researchers tested each individual's desire to keep inflating the balloon and therefore their appetite for risk. Helmeted participants scored significantly higher in risk-taking and sensation-seeking. “The helmet could make zero difference to the outcome, but people wearing one seemed to take more risks in what was essentially a gambling task,” said Dr Ian Walker, the study's co-lead. In real-life, this could mean people using protective equipment might take risks beyond what the protective equipment is capable of, the study concluded.

NEUROPSYCHOLOGY

Stand Up, Study Smart

Researchers at Texas A&M Health Science Center School of Public Health have found that high school students who used standing desks performed better in cognitive tests, as stated in a study published in the *International Journal of Environmental Research and Public Health*. The freshman volunteers used standing desks for six months during the school year, and test results showed that the “continued use of standing desks was associated with significant improvements in executive function and working memory capabilities,” said researcher Ranjana Mehta.

The Texas team have now launched a larger two-year study to further investigate their findings. Standing desks have already been shown to improve health outcomes, so if they can also improve mental outcomes, then this could be a simple change for schools to implement, said the researchers.



TRADITIONAL CHINESE MEDICINE

NO POINT TO THIS

Acupuncture may ease menopause symptoms but a new study has showed that the ‘fake’ version produces similar results — after eight weeks, both types of acupuncture showed a 40 per cent improvement in the severity and frequency of hot flushes. The results lasted six months. The study by the University of Melbourne, published in the *Annals of Internal Medicine* journal, involved 327 Australian women over 40 who had at least seven moderate hot flushes a day. About half were given 10 sessions of traditional acupuncture while the others had their skin stimulated with blunt-tipped needles, which has a milder effect without penetrating the skin. “The study demonstrates that needling does not appear to make a difference,” lead author Dr Carolyn Ee said.



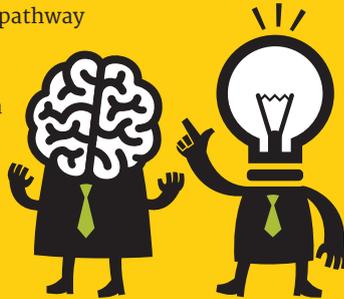
PHOTOS: ISTOCKPHOTO, SHUTTERSTOCK

SLOWING DOWN ALZHEIMER'S

Researchers in Southampton University have found a link between reducing inflammation in the brain and slowing down the onset of Alzheimer's, in a study published in the journal *Brain*.

By blocking CSF1R, a receptor responsible for regulating the immune cells in the brains of mice, the research team was able to prevent, to some degree, memory loss and behaviour problems associated with the disease. This discovery could help develop new treatments for the disease in humans.

"These findings are as close to evidence as we can get to show that this particular pathway is active in the development of Alzheimer's disease," lead researcher Diego Gomez-Nicola said. "The next step is to work closely with our partners in industry to find a safe and suitable drug that can be tested to see if it works in humans."



Making Insulin From Skin Cells

Scientists at the Gladstone Institutes and the University of California, San Francisco have turned human skin cells into pancreatic cells that produce insulin, according to a study published in *Nature Communications*. They used pharmaceutical chemicals to differentiate skin cells into endoderm progenitor cells, which could change into other specific target cells. These cells, similar to pluripotent stem cells (cells capable of developing into any cell type), are then transformed into pancreatic precursor cells, and then into fully-functioning pancreatic beta cells that can store and release insulin.

Already tested on mice, further investigations are necessary to ensure that this treatment can be used for diabetics.



LEARN ABOUT HEALTH WITH ADVICE FROM EXPERTS, AND INTRODUCE *LIFEWISE* TO YOUR FRIENDS.

Read *Lifewise* online!

VISIT www.nhg.com.sg FOR OUR FREE ARCHIVE OF PAST ISSUES, COPYRIGHTS OF THE NATIONAL HEALTHCARE GROUP.

'Like' our Facebook page to stay informed of the latest health news and features.



FACEBOOK.COM/
NATIONALHEALTHCAREGROUP

The Doctor is ALWAYS IN

BACK-TO-BACK CLINIC HOURS AT THE NATIONAL SKIN CENTRE ASIDE, DR MARTIN CHIO STILL FINDS THE TIME TO CARE FOR THE ELDERLY. HE TELLS *LIFEWISE* WHY HE VOLUNTEERS.

BY THERESA TAN

Dr Chio with Doreen and Brian, residents of Villa Francis.

Dr

MARTIN CHIO CAN EASILY

pass off for a fresh-faced 30-something, if not for the effortless yet firm way he is able to get those around him to do what is needed. In this instance, it is to take a group shot at Villa Francis where he is a regular volunteer. The nurses giggle as they gather around the 40-something doctor together with Sam, the home's administrator, and voila! the photo is taken.

Dr Chio is clearly well-loved by the staff of Villa Francis, a home set up to provide inpatient nursing care for the destitute poor and sick. Formerly the St Francis Home for the Aged, it moved from its former location in Mandai to its current quarters in Yishun, near Khoo Teck Phuat Hospital, in September 2013. Dr Chio has been volunteering at the home since 2009.

"I come every first Saturday of the month, and I start on the seventh floor and work my way down to the third floor. This is called 'right siting' of care — you bring the doctor to the patient instead of the patient to the doctor," he says, with a laugh. At each visit, he sees between 30 and 40 patients. The nurses would highlight various skin conditions the residents have — "things that are amenable to treatment and creams, and we've seen a few skin cancers," as Dr Chio says. Interestingly enough, what the elderly have a particular fear of is itching. "Pain they can tolerate, but an itch, they have to scratch," he discloses.

A senior consultant as well as Head of the Department of Sexually Transmitted Infections Control (DSC) Clinic at the National Skin Centre (NSC), Dr Chio has also upped the volunteer



For now, the “aunty killer” — as he sheepishly admits to being called — continues to volunteer because, “we were cared for by people older than us, so we should care for them”. The reward for Dr Chio in doing so is something intangible, and he describes it as a “fuzzy feeling in your heart”. He values the camaraderie with residents and staff of Villa Francis, the patients’ relatives, and other volunteers such as students from the nearby Northland Primary School, with whom the home is ‘twinned’. “We familiarise children with elderly care, while at the same time touching hearts,” he explains.

BRAINS CAN BE TRAINED WITH BOOKS, BUT VOLUNTEER WORK IS ‘HEART’ TRAINING.

DR MARTIN CHIO

Power Of Touch

On one occasion, Dr Chio was particularly moved by a certain patient at Villa Francis who wasn’t elderly, but who had HIV/AIDS.

“One of the amazing things about this home is that they take in HIV patients,” he says of Villa Francis. “This man could not be cared for at home, so they gave him a place here. He occasionally had skin issues but even when he didn’t, I would visit him to cheer him up.”

“The human touch has no cost,” says Dr Chio. “But it has amazing value. We, as healthcare workers, can touch lives. The man passed away a few years later. We showed him that he mattered.”

Villa Francis also offers rehabilitation for patients and a floor dedicated to dementia patients. But it is not only the patients whom Dr Chio feels for; he plans to do more for the mostly foreign staff in the coming years. Last year, he rallied the nurses at Villa Francis to create a poster on management of skin

Celebrating
SG50 with staff
of Villa Francis.

game. Junior doctors from NSC as well as medical students now accompany him to Villa Francis for hands-on experience and observation. He teaches them on-site, and they assist in writing up treatment forms and prescriptions. “It’s capacity-building for them,” Dr Chio explains. “Aristotle once said, ‘Educating the mind without educating the heart is no education at all.’ Brains can be trained with books, but volunteer work is ‘heart’ training.”

Dr Chio himself “inherited” this service to Villa Francis from Dr Lawrence Leong who was Emeritus Consultant at the NSC, and with whom he had worked with. There is a need to inculcate a spirit of volunteerism in new generations of healthcare workers, he says. “We can do something on our own, but when you can teach other people and get them involved, it’s better.”



conditions for the ILTC (Intermediate and Long Term Care) Quality Festival Competition, and their efforts won them a merit prize.

Serving others is very much part of Dr Chio's life. He has been volunteering since 2003, during the SARS crisis, and started with free clinics in Woodlands and Toa Payoh. These days, he volunteers at the Dover Park Hospice. He signed on for three extra years of reservist training, under the ROVERS scheme, after completing the compulsory years of service. In May 2012, Dr Chio received a Healthcare Humanity Award for his "dedication to the service of humanity and compassion to those in society who are unable to access medical care due to various issues".

Passion For Teaching

To hear him talk about his volunteer work, one might forget Dr Chio has a full-time job. A typical working week includes 10 sessions — nine sessions of clinic and one of academic time. Not only does Dr Chio see patients from 8am to 12 noon, and from 1pm to 5pm, his lunch time usually involves continuing medical education, lectures, tutorials, and meetings. "I also chair the NSC-JCI (Joint Commission International) Committee and a lot of time will be spent on that in 2016," he says. JCI is a hospital-accreditation body that looks into patient safety and quality care.

Dr Chio, who is Chairman of the Chapter of Dermatologists, College of Physicians, Academy of Medicine Singapore, has a clinical interest in skin cancers. "I have the privilege of doing this subspecialty," he says. "Skin cancers, if detected early, are curable."



Celebrating his birthday in July, together with Villa Francis residents born in the same month.

The son of a clinical biochemist mother and a chemist father, Dr Chio grew up in a hospital setting. "When I was five or six, I had episodes of throat infection, and I was amazed by the swab culture under the microscope. I spent a lot of time at the Pathology department at the Singapore General Hospital, where my mother worked."

His venture into dermatology was accidental. "During [medical] school, dermatology was two weeks of sitting in a dark lecture hall, watching slides being flashed: red rash, tumour, red rash..." he recalls, wryly. It was a specialty few then thought of doing. "Through a quirk of luck, someone swapped a posting with me in 1999. Like all things, there was a purpose. It was during the posting that I could see myself doing dermatology as a specialty."

As such, Dr Chio disagrees with the commonly-held notion that medical students should choose their residential specialty while in school — they don't yet know what they want to do at that stage, he says. "Be open," he suggests. "You don't really know what will knock on your door. I never thought I was going to be a dermatologist."

His passion extends to teaching new generations of medical students at the Yong Loo Lin School of Medicine (National University of Singapore), Duke-NUS Graduate Medical School, and the Lee Kong Chian School of Medicine (a collaboration between Nanyang Technological University, Imperial College UK; and the National Healthcare Group, the primary clinical training partner), among other institutions. His role as an educator has earned him many loyal patients and a long list of awards. Among these are the NSC Service Champion Superstar award (2014-2015) and the YLLSoM Dean's award for Teaching Excellence (2014-2015). He holds a number of research grants, including one from A*STAR for research into the effect of nanoparticles on cancer cells.



During a ward round with nurses at Villa Francis.

Dr Chio co-authored the 2nd edition of *Asian Skin Atlas*, a reference book of dermatology and venereology, published by NSC.



IN HIS OWN SKIN

Dr Chio's skin is fair, almost line- and pigment-free. Here's what he practises.

- 1 PROTECT YOUR SKIN**
Avoid unnecessary sun exposure. Carry an umbrella in the sun or wear a hat. Wear thick-weave clothing. Use sunscreen on exposed areas. Put on the correct amount of sunscreen (which should protect against UVA and UVB) 30 minutes before exposure, and reapply if needed.
- 2 MAINTAIN A HEALTHY DIET**
- 3 EXERCISE REGULARLY**
- 4 GIVE UP CIGARETTES/
DON'T SMOKE**
- 5 DRINK ADEQUATE WATER**
- 6 USE A GENTLE CLEANSER**
followed by moisturiser and sunscreen.
- 7 USE A GENTLE EXFOLIANT**
once a week if absolutely necessary; topical retinoids may also help.

**IN MEDICINE,
BEAUTY COMES FROM
HOW WE INTERACT
WITH PATIENTS.
THE HEART TRUMPS
ANYTHING EXTERNAL
AND AUGMENTED.**

DR MARTIN CHIO

Everything In Harmony

Dr Chio has two mantras: “Firstly, to maintain a healthy body, healthy mind: exercise, avoid illness, fewer MCs, [all the] better to attend to patient care.” Secondly, “To have a healthy mind, be happy: mental resilience, let go of what is not within your control”. A big believer in “keeping everything in harmony,” he says “beauty is only skin deep; inner happiness or peace is what makes a person glow. In medicine, beauty comes from how we interact with patients. The heart trumps anything external and augmented.”

People tend to focus on the physical aspects of health, but mental and emotional health is crucial. “The ability to interact, to impact someone positively is important. Social isolation

is detrimental to one's health,” says Dr Chio, who intends to be an active senior when he reaches 60, and will continue to work as long as he is able.

He hits the gym three times a week, doing mostly cardio exercises to maintain his trim frame. “I frequent the gym because I enjoy eating well,” he admits. He is a foodie, an enthusiastic photographer (he has many photo albums on Facebook), and an avid traveller. This year, he plans to journey to Marrakech in Morocco and Phuket in Thailand. Dr Chio has contributed over 20 travelogues to the Singapore Medical Association's newsletter.

“Work doesn't define you,” he states. “If you're passionate about what you do, carry on.” **LW**

SOMETHING in the air



24 MARCH IS WORLD TUBERCULOSIS (TB) DAY. HOW DOES SINGAPORE CONTROL THE SPREAD OF TB, A DISEASE THAT STILL AFFECTS MILLIONS WORLDWIDE?

BY **THERESA TAN** IN CONSULTATION WITH
PROFESSOR SONNY WANG
EMERITUS CONSULTANT AND DIRECTOR OF THE
TUBERCULOSIS CONTROL UNIT // TAN TOCK SENG HOSPITAL

In February 2015, Singapore's Minister for Manpower and Minister for Social and Family Development, Mr Tan Chuan-Jin, came down with a rare form of tuberculosis (TB) called pleural TB, which results in fluid being trapped between the lung and the rib cage.

The social media-savvy politician used Twitter and Facebook to keep the public abreast of his ailment, treatment and subsequent recovery. Mr Tan's social media postings emphasised the importance of his early diagnosis and treatment, and of completing the treatment.

The good news for Mr Tan and those in close contact with him early last year is that this form of TB is usually non-contagious because the bacteria that causes it is contained within the space between the lungs and the rib.

TB, caused by the bacteria *mycobacterium tuberculosis*, may affect the lungs (pulmonary tuberculosis) or other parts of the body (extrapulmonary tuberculosis) such as the brain, kidneys, lymph nodes, bones and joints. Mr Tan's case was uncommon. In most instances, TB is contagious and if untreated or not properly treated, can be fatal.

"TB is an airborne disease," says Professor Sonny Wang, Emeritus Consultant, and Director of the Tuberculosis Control Unit at Tan Tock Seng Hospital (TTSH). "A person can be infected by inhaling air with droplet nuclei [fine respiratory droplets] containing the TB germs. These droplet nuclei are generated by untreated or improperly-treated TB patients when they cough."

In Singapore, TB mostly affects males who are above 50 years, but Prof Wang emphasises that no gender or age is exempt. There are also certain groups of people who are more prone to developing active TB, such as diabetics and HIV-positive persons.

Mr Tan's TB experience brought public attention to the resurgence of TB in modern-day society. Common in Singapore in the 1960s (which saw 307 cases yearly per 100,000 residents), the spread of TB had come under control for the last three decades. From 1987 to 1998, the rate fell to between 47 and 59 per every

100,000. A 2010 report in *The Straits Times* stated that after the launch of the Singapore Tuberculosis Elimination Programme (STEP) by the Ministry of Health (MOH) in 1997, which saw 1,810 cases of TB, the numbers steadily dropped each year until 2007 which saw just 1,256 cases.

Stemming The Tide

But the trend broke in 2008 when the number of new cases spiked to 1,451. The past years have seen similar numbers with the highest recorded in 2012 (1,560 new cases). There were 1,420 new cases in 2013 and 1,454 in 2014. The chief cause of this resurgence, doctors believe, are improperly-treated patients and those who do not seek treatment early. In order to stem the tide of new cases, “the fundamental principles of TB control remain the same,” says Prof Wang. “Active TB cases must be diagnosed early, because untreated patients are infectious. Diagnosed patients must take their medicines regularly, otherwise they may continue to pose a threat to the community.”

Crowded and poorly-ventilated environments can facilitate the spread of TB. People with TB are most likely to spread it to those in close contact with them, like family members and co-workers. In December 2015, a nurse in a paediatric ward of a Singapore hospital was found to have active TB, potentially exposing nearly 180 children.

PATIENTS WHO ARE IRREGULAR WITH THE MEDICINES MAY CONTINUE TO POSE A THREAT TO THE COMMUNITY.

PROF SONNY WANG, DIRECTOR, TB CONTROL UNIT, TTSH

After screening, one baby was diagnosed with latent TB and given treatment.

The best way to protect young children from TB is through immunisation. Singapore’s vaccination policy calls for all children born in Singapore to receive one dose of the Bacillus Calmette–Guerin (BCG) vaccine at birth. This vaccine has been proven to protect against forms of TB such as TB meningitis (or TB of the brain covering).

Of this vaccine, Prof Wang says, “It is effective in protecting young children from TB, but is not as effective in adults.” This means that it is crucial for adults carrying the TB bacteria to seek treatment as early as possible to stem the development of the disease, and to prevent spreading the bacteria that causes it.

TB is preventable if precautionary measures are taken. Those infected should be treated before the disease becomes active. Those caring for TB patients must also exercise great caution to avoid situations such as that of the paediatric nurse’s.

Another key practice to stop the spread of TB is

for those affected to take their medicines regularly for their own cure and for the safety of others. Upon diagnosis, an initial two-week treatment will

THE BIGGEST PROBLEM

According to the World Health Organization, anti-TB drug resistance is a major public health problem. It could escalate worldwide, threatening all the progress that has been made in its treatment and control.

Multi-drug resistance to TB (MDR-TB) arises from the improper use of antibiotics in chemotherapy for drug-susceptible TB patients. This “improper use” includes failure to ensure that patients complete the whole course of treatment, and administration of improper

treatment regimens. MDR-TB does not respond to isoniazid and rifampicin, the two most powerful anti-TB drugs.

MDR-TB is difficult and expensive to treat – treatment options are limited, and many patients experience adverse effects from the drugs. In some cases, even more severe drug-resistant TB may develop – this is called extensively drug-resistant TB (XDR-TB) and has already been reported in 105 countries. The WHO 2014 figures for MDR-TB are 480,000, out

of which 9.7 per cent (around 47,000) are XDR-TB cases.

Patients suffering from MDR-TB and XDR-TB pose a serious threat to the community as they can easily spread these strains of bacteria to those in constant close contact with them.



stop the spread of the TB bacteria, but treatment must be completed for the patient to be completely cured. Treatment usually involves administering a combination of several different drugs for between six to nine months. This is because the TB bacteria take a long time to be eliminated.

The most serious complication is when TB infection recurs and the strains causing the disease are resistant to multiple anti-TB medications. “The best protection for the Singapore public is for all TB cases to be promptly diagnosed, and properly treated to completion,” says Prof Wang. “Proper treatment means that the patient must take all the TB medicines regularly as prescribed. If the patient is irregular with the treatment, he/she may become infectious again.”

“Treatment non-adherence may also lead to the development of drug-resistant germs and the spread of these germs within the Singapore community.”

Regular Screening

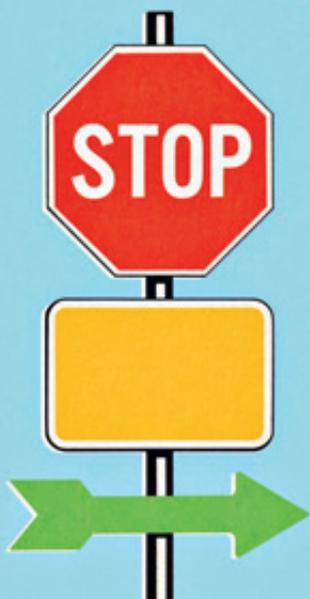
Anyone who has a cough that lasts longer than three weeks or displays any of the other symptoms (see below) should see a doctor right away. The doctor will order a chest X-ray or give a referral to a specialist for further investigations.

- Cough lasting longer than 3 weeks
- Coughing out blood
- Feeling tired all the time
- Fever and night sweats
- Loss of weight
- Chest pain

However, some people who are infected do not develop full-blown TB. They have a latent TB infection which means that the bacteria lie dormant in the person’s body, “frozen” by the immune system. While they do not have symptoms of TB and are not infectious, latent TB sufferers have a 10 per cent risk of developing TB. People with latent TB who have this risk include diabetics and those who are HIV-positive, those with a weak immune system due to drugs or illness such as cancer patients, and those with poor nutrition or are drug addicts. Such individuals and those exposed to TB sufferers should be alert to the symptoms of TB.

The good news, apart from the fact that new TB drugs are being researched, is that TB has a high cure rate of over 95 per cent if early diagnosis and proper treatment are given. TB, being a public health threat, is managed nationally through the TB Control Unit at TTSH, headed by Prof Wang. “The TB Control Unit administers MOH’s national TB control programme,” he explains. “The Unit runs the national TB registry, conducts TB contact investigations, and performs defaulter tracing and recall. The Unit treats around 2,000 TB cases per year.”

The national TB registry conducts STEP and serves as a national surveillance registry. It receives TB notification and data on treatment progress for every patient until an outcome is achieved. The registry also alerts doctors if patients default on treatment or do not respond as expected. [LW](#)



A Crucial STEP and DOT

The Singapore Tuberculosis Elimination Programme (STEP) was launched in 1997 because TB had remained between 49 and 56 per 100 000 resident population for the preceding 10 years. STEP involves the following key interventions: directly observed therapy (DOT) in public primary healthcare clinics; monitoring of treatment progress and outcome for all cases by means of a National Treatment Surveillance Registry; and preventive therapy for recently-infected close contacts of infectious TB cases.

DOT is the international standard of care. An infected person requires medication for between six to nine months, and the medication is known to be unpleasant — that’s why patients are tempted to stop treatment once they start feeling better.

“As treatment adherence of the TB patient is vital to ensure the safety of the Singapore public, TB patients are treated under MOH’s DOT programme,” explains Prof Wang. “The medicines are administered by the nurses under direct observation to ensure that every dose is taken. The patients attend a polyclinic near their home or workplace for DOT until treatment completion.” DOT is available at all polyclinics in Singapore.

OF ALL THE MISCONCEPTIONS about schizophrenia, probably the most prevalent one is that sufferers of this condition have a ‘split personality’. This, and other popularly-held beliefs that they can turn violent, are anti-social and cannot be treated, are just what they are — misconceptions.

In reality, schizophrenia is a chronic, disabling brain disorder associated with fragmented mental processes. “Persons with schizophrenia have trouble distinguishing what’s real from what’s not, and are unable to think logically. They may also have trouble relating to other people,” says Dr Sutapa Basu, Consultant in the Department of Early Psychosis Intervention at the Institute of Mental Health (IMH).

Sufferers often act oddly but that’s because they often suffer from hallucinations and delusions. “Much of their bizarre behaviour is usually due to their acting in response to something they think is real but which is only in their minds,” says Dr Basu. “Violence however is not an inherent feature of the condition. Unfortunately, this view is reinforced each time there are media reports of violent acts by purported mentally-ill persons.”

The exact cause of schizophrenia is still unknown but the illness is influenced by genes and environment as well as brain structure and chemistry. In other words, both internal and external factors play a role. It is believed that the genetic susceptibility is compounded by one or more environmental factors, such as physical trauma that occurs to the foetus during childbirth, oxygen deprivation, or some psychological or physical problem that occurs to the mother during pregnancy and which may affect the developing foetus. “Someone with a genetic predisposition has a higher chance of developing this illness, but not everyone does so. If factors in the environment are protective, then a person with strong inherent factors may not develop the illness,” says Dr Basu.

The reverse is also true; a person without any family history or inherent reasons may develop

WHEN THE VOICES ARE NOT REAL

SCHIZOPHRENIA IS A MAJOR PSYCHOTIC ILLNESS, YET MOST PEOPLE ARE UNFAMILIAR WITH THE SUBJECT. WHY IS THIS SO?

BY **TOM LOCK** IN CONSULTATION WITH
DR SUTAPA BASU CONSULTANT //
DEPARTMENT OF EARLY PSYCHOSIS INTERVENTION //
INSTITUTE OF MENTAL HEALTH



the illness, possibly due to external factors. These could be emotional stress such as the loss of a parent or loved one, or physical or sexual abuse in young children or young adults. Perceived ‘bad parenting’ does not make a person schizophrenic. However, “the stress of living in a fast-paced society such as Singapore can be a contributing factor,” she says.

Schizophrenia affects men and women equally, and occurs at similar rates in all ethnic groups around the world. On a worldwide basis, the condition affects about one per cent of the population. The condition can develop at any age, says Dr Basu, but symptoms such as hallucinations and delusions most commonly start between the ages 16 to 30. Men tend to develop schizophrenia slightly earlier than women; most males become ill between 16 and 25 years old, while most females develop symptoms several years later. The average age of onset is 18 in men and 25 in women. The incidence in women is noticeably higher in those aged 30 and above.

“A person with schizophrenia may present with ‘positive’ and/or ‘negative’ symptoms,” says Dr Basu. Other warning signs, especially in young people — known as prodromal signs — are a decline in functioning, withdrawal from family and social circles, decline in academic performance, becoming aloof and preoccupied with sleep, as well as mood changes.

POSITIVE SYMPTOMS

- **Hallucinations** (eg hearing voices, experiencing smells and tastes that do not exist). A sufferer may talk or smile to himself or herself repeatedly, and for no particular reason in response to hallucinations
- **Delusions** (eg of being persecuted or controlled, of having his/her mind being read, having false, unshakeable beliefs not amenable to logic or reason, and out of keeping with his or her social and cultural background). A patient may become suspicious of others and start to believe that food may be poisoned or people are trying to harm them
- **Bizarre or disorganised behaviour** that is not in keeping with their normal behaviour. Some persons with schizophrenia can also become aggressive in response to their hallucinations or delusions
- **Disorganised speech** that is difficult for others to understand

NEGATIVE SYMPTOMS

- **Poverty of speech** (reduced talking and taking a long time to answer)
- **Social withdrawal** (withdrawing from friends and family and losing interest in hobbies)
- **Emotional blunting** (not displaying any emotion, whether positive or negative)
- **Apathy** (lack of interest in their surroundings)
- **Attention impairment**
- **Lack of motivation and drive**

HER TRUER SELF **Sumaiyah Mohamed has accepted her condition for the better.**

Sumaiyah Mohamed was diagnosed with schizophrenia during her first year of university – and she has looked back many times since.

“I’ve come to see now that being diagnosed with the condition has helped me to find myself a bit, and I’ve become my truer self,” Ms Sumaiyah, an administrative officer, tells *Lifewise*. “I now accept the condition as part of who I am, and it has made me a more empathic person.”

Now 27, Ms Sumaiyah was diagnosed when she was 19, after she had completed her first semester at the National University of Singapore. “I was majoring in Psychology, ironically,” she says with a chuckle.

She had been under a lot of stress due to her studies and had gone through two spells of not sleeping for seven nights straight.

“By the end of the term, my family suspected something was amiss [although] they thought it was due to stress,” she relates. “By then I had moved out of the hostel and gone home. I was disorganised in my thoughts and actions, and refused to eat or wash. Obviously I was ill.”

Eventually, her parents took her to hospital “where I was screaming and was close to a breakdown”. Ms Sumaiyah was hospitalised, and put on medication for about four weeks before undergoing five rounds of electroconvulsive therapy. She

was discharged after two months and referred to the Institute of Mental Health for regular checkups.

Through daily medication, a visit to her doctor every three to four months and managing her stress levels, Ms Sumaiyah has not had a relapse, though that is always possible.

She seeks comfort from her religion, friends and especially from her family. “My husband knows about my condition and is trying to understand it better,” says Ms Sumaiyah who got married last November.

Career-wise, she would like to go into counselling or teaching. “I like to write and do volunteer work,” she says.

In Singapore, schizophrenia is the least 'recognised' of five mental disorders. A nationwide survey by the Institute of Mental Health called *Mind Matters: A Study of Mental Health Literacy*, released in October 2015, found that schizophrenia trailed behind dementia, alcohol abuse, major depressive disorder, and obsessive compulsive disorder.

Dr Basu attributes this to a lack of recognition and awareness of its symptoms and possibly also to the stigma commonly associated with the condition. "The key is to learn more about schizophrenia. With understanding comes acceptance," she says.

Careful history-taking is necessary to diagnose schizophrenia as this illness can sometimes be confused with depression, bipolar disorder, borderline personality disorder and substance use (especially hallucinogen and alcohol use). In young people, subtle changes in behaviours can be confused with teenage rebellion and behaviour changes associated with adolescence.

"The illness can present with differing severity, and depending on the symptoms and response to medications. There are some individuals who can function well in terms of working, studying etc, and these may be with, or very rarely, without medications," says Dr Basu.

But as schizophrenia is often due to abnormal biochemical balances in the brain, and is a chronic illness, medication remains the main way to normalise these imbalances. These medications, known as antipsychotics or neuroleptics, can relieve symptoms such as hallucinations, delusions and thinking problems (irrelevant speech). They also help to reduce the chances of relapse.

Another effective form of treatment is psychotherapy, which helps the person make sense of his/her illness. Electroconvulsive therapy has also been used for some patients with good response. "Rehabilitation and counselling help the individual to function in society. Social skills training helps to build social relationships and independent living skills," she says. However, if there are risks of aggression and self-harm and the person is unwilling to start treatment, it is imperative that he/she be taken to a psychiatrist at a hospital/clinic.

An ambulance can be called, as well as the police who may help to bring in the patient for treatment if there are risks involved. **LW**

▶ FIND OUT MORE

Mental Health Helpline: 6389 2222

Singapore Association for Mental Health (SAMH) Helpline: 1800 283 7019

Silver Ribbon (Singapore): 6386 1928

Community Health Assessment Team (CHAT): 6493 6500 / 6501
SCAPE #05-05, 2 Orchard Link, Singapore 237978.

FOR CAREGIVERS:

Caregiver Alliance: cal.org.sg/about-mental-illness

Join support groups at www.samhealth.org.sg/caregiver-support



EVERYONE HAS at least one mole (naevus) but some people could have as many as 500 or even 600, although these are usually seen in Caucasians. It is unusual for Asians, who typically have less than 100, to have such a large number of moles. What is usual however, is for the average person to have anywhere from 10 to 40 moles on his or her body by adulthood.

Newer studies — which included only Caucasian patients — have suggested that more than 11 moles on the right arm indicates a higher-than-average risk of skin cancer or melanoma. People who have more than 11 moles on this arm were more likely to have more than 100 moles on their body in total, meaning they were at a higher risk of developing a melanoma. More than 100 moles indicates five times the normal risk. The study by King's College, and published in the *British Journal of Dermatology* in 2015, used data from 3,594 female twins in the United Kingdom. A repeated exercise

on about 400 men and women with melanoma gave researchers this quick way to assess the risk of skin cancer. As Caucasian patients with susceptibility for melanoma often have large number of moles, mole count is a very important clinical marker of increased melanoma risk. However, total body skin examinations with mole check are rarely performed in general practice as these are time-consuming. The ability to estimate total body mole count quickly by counting moles on one arm could be a very useful tool in assessing melanoma risk in primary care.

However, as it is not common for Asians to have more than 100 moles, one will have to be cautious in extending its applicability to our local population.

Know your SPOTS

MOLES ARE COMMON, BUT HOW DO YOU KNOW IF SUCH A GROWTH IS MELANOMA, THE MOST DANGEROUS TYPE OF SKIN CANCER?



BY **CHIA EE KHIM**
 IN CONSULTATION WITH
DR TAN WEE PING
 HEAD // SKIN CANCER CLINIC //
 NATIONAL SKIN CENTRE, AND
DR CHEN QIPING
 ASSOCIATE CONSULTANT //
 NATIONAL SKIN CENTRE

PHOTO: GETTY IMAGES



The Common Mole

Moles that develop at birth or within 6 months of life are known as congenital moles. The rest are acquired due to accumulated factors such as sun exposure, and most of these appear during the first 30 years of a person's life.

Moles can occur anywhere on the body — even the scalp — and are due to a collection of pigment-producing cells in the skin known as melanocytes. Moles vary greatly in appearance, from brown or black to lightly-pigmented or flesh-coloured. These benign growths are usually small, measuring less than five millimetres, and flat, when they first appear. With age, they can become raised and dome-shaped. But unless these spots happen to be of an embarrassing size and location, most people are inclined to leave them alone.

Danger Signs

Occasionally, however, a mole's change in appearance can become a cause for concern, says Dr Chen Qiping, Associate Consultant at the National Skin Centre (NSC), "especially if they develop an irregular border, change colour or suddenly increase in size". The good news is melanomas are still relatively rare in Singapore. The incidence rate of melanoma is 0.3-0.5 per 100,000 persons per year, and it accounts for <0.5 per cent of all skin cancers in Singapore. In contrast, in Australia, which has the highest melanoma rate in the world, one in 14 men and one in 24 women will be diagnosed with melanoma sometime in their life. Melanoma accounts for two per cent of all skin cancers in Australia.

The relatively lower rate of melanomas in Singapore is because the darker your skin type, the more melanin and natural protection you have against the sun's harmful UV rays. However, as melanomas are the most deadly of all skin cancers, due attention should be given to it. Dr Tan Wee Ping, Head of Skin Cancer Clinic at NSC recommends regular self-examination of your skin. "All areas of the skin should be inspected, including the hands and feet, genital areas and nails. One important point of note is that melanoma and other skin cancers are usually asymptomatic till very late stages. Some patients who present in late stages have told us that they had brushed off their skin growth as innocuous due to the lack of symptoms," she says. Dr Chen suggests using mirrors for areas that are hard to see and taking photos of your moles to keep track of their size and appearance.

"Any persistent new or changing mole or skin growth requires medical attention. Melanoma can occur anywhere on the skin. A local study has found that the most common type of melanoma in our local population is the acral lentiginous melanoma that occurs over the hands, feet or even under the nails," she says.

* DID YOU KNOW?

Some people are concerned about hair growing out of a mole but the hair is actually a good sign that your hair follicles are intact and healthy. You can snip away the unsightly hair, but do not pluck them as doing so can irritate the mole.

How to Spot Melanoma

Use the 'ABCDE' rule to look for the following signs in any mole or skin growth:

- ▶▶ **A** - Asymmetry in the colour or surface
- ▶▶ **B** - Borders that are irregular
- ▶▶ **C** - Colours that are variegated or unusual (for instance, a mixture of black and brown, blue, red, crusting or bleeding)
- ▶▶ **D** - Diameter greater than 6mm
- ▶▶ **E** - Evolving or changes in any of the following signs (shape, size or colour) or symptoms (bleeding, pain or itch)



The Risk Factors

- **Having more than 100 moles on your body**
- **Sunburns: Having had at least one sunburn increases your risk of melanoma**
- **Tanning, either naturally or artificially**
- **Family history: People who have two or more close relatives with melanoma**

What You Can Do To Prevent It

Since the main cause of skin cancers like melanoma is chronic or intense exposure to harmful UV rays, the most effective precaution you can take is to limit sun exposure. Dr Chen advises the following:

- ▶▶ Avoid peak sunlight hours from 10am to 4pm.
- ▶▶ Wear sun-protective clothing (long-sleeved shirts or tops, and pants). Use a wide-brimmed hat or umbrella as well as sunglasses to shield your skin and eyes from the sun's rays.
- ▶▶ Liberally apply broad-spectrum sunscreen with a sun protection factor (SPF) of at least 30 about half an hour before going outdoors. Reapply every two hours when outdoors or more frequently if in contact with water. **LW**





ON A SUGAR LOW

THE THEME FOR DIETITIANS' DAY* IN SINGAPORE IS "TOWARDS LESS SUGARY BEVERAGES" — IT'S TIME YOU KNEW WHAT'S REALLY IN YOUR DRINK.

BY **ELISABETH LEE** IN CONSULTATION WITH
MS CHOW LI MING DIETITIAN // NATIONAL HEALTHCARE GROUP POLYCLINICS

WHEN IT comes to processed drinks, those who are more health-conscious would typically choose the ones with less or no sugar. Sugar, however, can be a hard habit to break. But being aware of how much sugar is in a drink, and how consuming too much of it may adversely affect health, can strengthen the resolve to cut down on sugary beverages.

The Singapore Health Promotion Board recommends that the total sugar consumption for an adult should be less than 10 per cent of his or her total energy requirement. For the average adult, says National Healthcare Group Polyclinics (NHGP) dietitian Chow Li Ming, the daily allowance for added sugar is about 40–55g (or 10 teaspoons a day). Drinking a 330ml can of regular Coca-Cola (which contains about nine teaspoons of sugar) would put you close to this daily limit.

Sugar and Diabetes

There are no health benefits to consuming sugar. Sugar contains empty calories (energy) without much nutrients. "Sugar is essential to generate energy for the body to survive," says Ms Chow. "However, it is not necessary to include sugary food or drinks with added sugar in our diet. Carbohydrate-rich foods such as rice, noodles, bread, biscuits, fruits, milk, yoghurt and some starchy vegetables [that we eat] will be digested into sugar to provide energy."

Consumed in excess, added sugar can adversely affect your health. Some sources of sugar are more detrimental than others, perhaps none more so than sugary drinks. These include fizzy sodas, fruit drinks, juices, canned and packet drinks such as lemon tea or chrysanthemum tea and cordial, as well as sweetened teas and coffees.

"Sugar does not contribute to diabetes on its own. But there are studies that link drinking sugary drinks with diabetes," explains Ms Chow. What's more, consuming

THE FACTS ABOUT EATING SUGAR



Sugar (sucrose) is a carbohydrate found naturally in most plants but especially in sugarcane and sugar beets. Sucrose is actually two simpler sugars stuck together: fructose and glucose.

One of the problems with fructose is that it "fools" our brains into consuming more than what we need to, while not addressing our hunger pangs. Our brains regulate calorie intake — theoretically speaking, if you eat more of one food (like starchy potatoes for instance), you should automatically eat less of something else. However, sugary drinks contain mostly fructose, which does not lower the hunger hormone ghrelin in the same way as glucose, the main carbohydrate found in starchy foods. In addition, the consumption of liquid sugar is usually on top of total calorie intake. Sugary drinks don't make you feel full, so you end up not only eating the same amount of food as before, but with extra sugar calories on the side.

Sour Side To Artificial Sweeteners

Artificial sweeteners such as saccharin, acesulfame, aspartame, neotame, and sucralose have been approved as safe for consumption, but whether they are ultimately better is still being debated. One concern is that as taste buds can become accustomed to the extreme sweetness of

artificial sweeteners, less sweet foods such as fruit or vegetables become less appealing. Researchers theorise that the sweeteners stop the brain from associating sweetness with calories, and as a result, people end up consuming more, and not less, sweet food.

Participants in a Texan study who drank more than 21 diet drinks a week were twice as likely to become overweight or obese. Another study showed a link between daily consumption of diet drinks and an increased risk of metabolic syndrome and type 2 diabetes.

a lot of sugar can lead to tooth decay as it provides easily-digestible energy for bad bacteria in the mouth. The extra calories from eating sugar also contribute to weight gain, and being overweight increases the risk of developing diabetes. A recent study by the University of Texas has even linked refined sugar consumption to cancer. Tests in mice showed that consuming more fructose (sugar is made up of glucose and fructose) is linked to a higher cancer risk, according to research published in the journal *Cancer Research*.

Natural = Healthier?

A popular misconception is that natural sugars such as honey, brown sugar, or rock sugar are healthier. So does this mean that herbal drinks or teas that claim to be 'naturally brewed' are better? "Some ingredients used to brew health or herbal teas include fruits like *luo han guo* ("longevity" or monk fruit), water chestnut and red dates. While these ingredients contain natural sugars which contribute to the sweet taste, many of these drinks — although not all — have added sugar. Some of the sugars added to these drinks may include rock sugar, brown sugar, raw sugar or honey," says Ms Chow. "As all types of sugar carry about the same calories, consuming these drinks can contribute towards excess calories and weight gain as well."

Most yoghurt and fruit

drinks also contain added sugar for flavouring purposes. "Read food labels. The nutrition panel or ingredients list will tell you a drink's sugar content," says Ms Chow.

To kick the sugar habit, there are a few naturally sweet alternatives that you might want to try. These taste much sweeter than sugar so you can use much less to achieve the same level of sweetness. Try agave syrup (made from a type of cactus) or stevia (a herb extract that is 150–200 times sweeter than sugar) in your next cup of tea. These are generally recognised as safe by the US Food and Drug Administration (FDA).

Or you could consider using

artificial sweeteners. The FDA has approved five artificial sweeteners (aspartame, acesulfame potassium, neotame, saccharin and sucralose) but these bear their own set of concerns (see box). As such, there is no 'best' substitute for sugar, says Ms Chow. The best option is to consume less of it.

● **READ THE LABEL:** Check for sugar terms such as sucrose, fructose, maltose, dextrose, or fruit juice concentrate.

● **TRY SOMETHING ELSE:** Choose alternatives labelled as 'no added sugar', 'reduced sugar' or 'low sugar'. Or drink less of what you like — a smaller cup of coffee requires a smaller amount of sugar.

● **DRINK MORE WATER:** "Water quenches your thirst more effectively," says Ms Chow. "Add some lemon for a refreshing taste without the extra calories."

● **REDUCE FREQUENCY:** Cut down on the daily number of drinks with added sugar that you consume. **LW**

**National Healthcare Group Polyclinics celebrates Dietitians' Day with events for patients and their families at all nine polyclinics. Themed 'Better Beverage Choices for Today', each polyclinic will host one event on different days from 7–11 March 2016.*

WHAT ABOUT SPORTS AND ENERGY DRINKS?

Sport Drinks

+ Also called isotonic drinks, these replenish energy, water and electrolytes.

+ Contain water, carbohydrates and electrolytes such as sodium and potassium. May also contain other ingredients like vitamins or minerals.

+ Use glucose, glucose polymers, sucrose, and fructose as carbohydrate sources to improve absorption after an intensive workout.

+ There are about 80–90 calories in one serving of sport drinks (325ml).

+ Suitable for athletes who carry out endurance exercise. Not necessary for those who lead a sedentary lifestyle or who carry out low-intensity or short duration exercise. Consuming such drinks may lead to excess calories and weight.



Pick-me-up Drinks

+ Also known as energy drinks, these are different from sports drinks.

+ Are flavoured drinks that mainly contain caffeine and sugar and used to improve concentration, alertness and sports performance.

+ Contain a lot of sugar, up to 40 grams (equivalent of eight teaspoons) of sugar in one serving (250ml). Excessive or regular intake may lead to weight gain.

+ Drink with caution. Not for children, adolescents and pregnant women as they contain a large amount of caffeine.

+ Caffeine content vary between 80mg to 500mg per serving. Daily caffeine consumption of 400mg and below in a healthy adult is considered safe.

Best Foot Forward

EXECUTIVE DIRECTOR OF NHG DIAGNOSTICS MS LIM SOH HAR, IN HER 40s, IS DETERMINED TO CONTRIBUTE TO SINGAPORE'S HEALTHCARE LANDSCAPE. INTERVIEW FAIROZA MANSOR

MY YOUNGER BROTHER

passed away in February 2015 from brain cancer. It was

heartbreaking and extremely difficult for his wife and two young kids. And it would have been even more distressing if not for the various types of healthcare support my brother and family received. I had worked in healthcare for 18 years, but it was my brother's struggle with cancer that made me see starkly the importance of a holistic healthcare system. Such a system benefits not just the patient, but also his or her family, as well as the healthcare professionals involved.

Before returning to healthcare in 2011 to be a part of National Healthcare Group (NHG) Diagnostics, I was with the Singapore Botanic Gardens as its Head of Operations, for four years from 2007. I loved being there because I could brisk-walk as part of the job. Brisk-walking is my favourite physical activity.

My 18-year stint in healthcare includes working in institutions such as the Singapore General Hospital, National University Hospital and Institute of Mental Health, just to name a few. I joined NHG Diagnostics in September 2011. Its primary purpose is to provide healthcare services such as radiography and laboratory work to aid doctors in diagnosing a patient's condition. I meet with various partners to improve the capacity and capability of our healthcare system and its processes.

Recently, my 74 year-old mother, to whom I am the primary caregiver, complained of pain in her leg. Her mobility was affected and even getting out of the bed added to her pain. I could have called for a doctor, but because she has severe osteoporosis, I knew she had to have an X-ray. Therefore, I understand how

THE HEALTHCARE GARDEN

Working in the healthcare industry is akin to managing the operations of a large garden, says Ms Lim. As she puts it, "The doctors are the botanists. The Allied Health staff such as radiographers, medical technologists, and dietitians are the horticulturists and arborists, and the patients are the plants that need taking care of."

critical it is for NHG Diagnostics to see our plans for domiciliary radiography or home X-ray come true.

I join the NHG Diagnostics team when it conducts health screenings every other weekend as part of our community outreach programme. This means I am unable to brisk-walk or spend time with my family as much as before. However, my philosophy in life — to do my best, and make the best out of any given situation — has kept me going. Hopefully, this will get me further, especially in contributing to, and strengthening our healthcare system." **LW**

Ms Lim Soh Har is the Executive Director of NHG Diagnostics.



PHOTO: MARK LEE

THERE IS A LOT OF physics and engineering in urology, which feeds my interest in the two subjects. As a child, I liked building things and playing with electrical circuits. Performing surgery is not that different as I get to tinker with medical devices and machinery. What ultimately swung me towards medicine is its human element — physics and engineering careers are heavily technical, but being a doctor gives me a chance to touch people's lives.

It was a moment of great anticipation and joy for me when, in 2010, Tan Tock Seng Hospital bought its first surgical robot. Unlike traditional open surgeries requiring large incisions, robotic surgery enables surgeons to perform complex operations using minimally-invasive procedures. Almost all our prostate-cancer surgeries are now robot-assisted.

I LOVE BEING OUTDOORS,

whether jogging alone during my weekly runs alongside canals and on park connectors, or cycling with my children. The youngest is nine years old, but I have brought my three older kids to Forest Adventure five times so far, to tackle the high-wire treetop obstacle courses. I also look forward to annual father-son school camping trips with my two sons who attend my alma mater, Anglo-Chinese School.

I am not a fabulous cook by any means but when time permits, I enjoy cooking for my family. Some dishes that have gone down well with them are salt-baked fish and seafood bouillabaisse. Last year, I started growing basil, dill and rosemary on my balcony at home which I find therapeutic.

LESS PAIN, MORE GAIN

ROBOTIC SURGERY OFFERS BENEFITS TO PATIENTS AND SURGEONS:

- > Requires tiny instead of large incisions
- > Reduces bleeding and wound pain and quickens recovery
- > Makes operating safer and more ergonomic



Call Him 'Mr Tinkerer'

ASSISTANT PROFESSOR CHONG YEW LAM, 44, IS NOT JUST AN EXPERT KNIFE-WIELDER. INTERVIEW WANDA TAN

Like surgery, I find herb gardening to be another form of tinkering. But there is a major difference between the two: performing surgery requires a great deal of precision and planning, whereas gardening relies largely on intuition. There is no exact science to determine how much sunlight or water plants should receive. In that sense, tending to my herbs is relaxing and relieves work stress. **LW**

Adjunct Assistant Professor Chong Yew Lam is Divisional Chairman (Surgery), as well as Head and Senior Consultant of the Department of Urology at Tan Tock Seng Hospital. He also holds a Clinical Adjunct Assistant Professor role at the Yong Loo Lin School of Medicine, National University of Singapore.



Fighting back **'SUPERB**

ANTIBIOTICS ARE necessary to treat all sorts of bacterial infections such as pneumonia, as well as skin, urinary tract and intra-abdominal infections. But with hospitals prescribing them for longer than necessary or prescribing broad-spectrum instead of targeted antibiotics, the misuse or overuse of antibiotics — resulting in antimicrobial resistance — has become a global concern.

To promote optimal use of antibiotics, **antibiotic computerised decision support systems** (CDSSs) are now being implemented in hospitals worldwide. These IT-enabled systems contain complex algorithms that give advice to doctors on antibiotic prescriptions. Doctors also reap efficiency gains as the process is less labour-intensive compared to performing manual reviews.

In 2009, Tan Tock Seng Hospital (TTSH) launched an in-house antibiotic CDSS — called **Antibiotic Resistance Utilisation and Surveillance Control** (ARUSC) — in tandem with its electronic inpatient prescribing system. The latter furnishes doctors with electronic medical records such as patients' allergies, thus complementing the decision support provided by the ARUSC system.

However, Associate Professor David Lye Chien Boon, Senior Consultant at the Communicable

Disease Centre's Institute of Infectious Diseases and Epidemiology; and the Department of Infectious Diseases, TTSH, notes that response to the ARUSC system has been mixed. "Some doctors do not trust the computer programme, believing artificial intelligence is not superior to the human brain," he says.

Artificial vs Human Intelligence

To test TTSH-based physicians' acceptance of the CDSS, A/Prof Lye was involved in a study to determine their perceptions and

attitudes toward the ARUSC system. Their results, published in March 2015 in the *International Journal of Antimicrobial Agents*, revealed that the programme was especially useful for junior physicians. They accepted CDSS recommendations most of the time, while senior physicians acknowledged overriding recommendations for complex patients with multiple infections or allergies.

A/Prof Lye also took part in a TTSH-based study to evaluate the effectiveness of ARUSC-recommended antibiotics on



against UGS'

WITH DRUG-RESISTANT BACTERIAL STRAINS ON THE RISE, PROPER STEWARDSHIP AND COMPUTERISED DECISION SUPPORT TO REGULATE ANTIBIOTIC USE IN HOSPITALS ARE BECOMING EVER-MORE IMPORTANT.

BY **WANDA TAN** IN CONSULTATION WITH **ASSOCIATE PROFESSOR DAVID LYE CHIEN BOON** SENIOR CONSULTANT // INSTITUTE OF INFECTIOUS DISEASES AND EPIDEMIOLOGY // COMMUNICABLE DISEASE CENTRE // DEPARTMENT OF INFECTIOUS DISEASES // TAN TOCK SENG HOSPITAL

patients' clinical outcomes. Their findings, published in November 2015 in *Scientific Reports*, showed that human judgement does not necessarily lead to better outcomes. Indeed, acceptance of CDSS recommendations was associated with a lower mortality risk in patients aged 65 years or younger, while no increase in risk was observed in patients above 65 years old.

Antimicrobial Stewardship

Antibiotic CDSSs form part of a comprehensive antimicrobial stewardship programme (ASP) which, A/Prof Lye explains, "aims to optimise patient outcomes and improve antibiotic use". Other ASP components include developing and promoting guidelines for antibiotic use; reviewing physician practices, for example when they override the CDSS; and advising them on better use of antibiotics, such as de-escalation from broad-spectrum antibiotics like carbapenems to targeted antibiotics like penicillin.

Together with other researchers, A/Prof Lye conducted a study on the safety and clinical outcomes of ASP-guided carbapenem de-escalation

at TTSH. They compared patients who had received de-escalation of therapy with those who had not, in accordance with physicians' acceptance or rejection of the ASP recommendation, respectively. Their results were published in April 2015 in the *Journal of Antimicrobial Chemotherapy*.

Both sets of patients experienced a similar clinical success rate of about 89 per cent. Crucially, however, the de-escalated group of patients were less likely to have adverse side-effects such as diarrhoea, and also developed a lower incidence of carbapenem-resistant bacteria. Hence, as is the case with CDSSs, de-escalation of antibiotic therapy is not only safe and beneficial for patients but also effective in combatting antimicrobial resistance. **LW**

For issues of *Catalyst*, visit www.research.nhg.com.sg.

HOW DOES ARUSC WORK?

- Doctors can, at their own discretion, launch ARUSC to **seek guidance** on antibiotic prescriptions.
- ARUSC is **auto-triggered** or automatically pops up on the computer screen when doctors prescribe certain antibiotics, including carbapenems, to restrict their usage.
- Under certain circumstances, doctors can **override** ARUSC recommendations. This clause was included in the system to preserve professional autonomy.

CROSS-COUNTRIES ALARM

Carbapenems are often used as drugs of last resort to treat hospitalised patients whose infections are known or suspected to be caused by multidrug-resistant bacteria. As antibiotic overuse has increased, so has the emergence and worldwide spread of bacteria that produce carbapenem-destroying enzymes like KPC, OXA-48 and NDM-1.

Carbapenem-resistant infections are typically treated by prescribing another last-line antimicrobial agent, colistin. But in November 2015, researchers in China uncovered a bacterial strain carrying a colistin-resistant gene called MCR-1 in both animals and humans. MCR-1 has since been reported in other countries including the Netherlands, Canada and Malaysia, highlighting the urgent need for coordinated global action.

Facing OLD AGE

THE SOONER WE COME TO TERMS WITH AGEING, THE BETTER WE CAN COPE WITH BEING ELDERLY.

BY **MELVIN YONG**
IN CONSULTATION WITH
MS KAREN POH & MS NG HUIYI
SENIOR MEDICAL SOCIAL WORKERS //
TAN TOCK SENG HOSPITAL



MOST OF US would have heard this phrase bandied around at some time or other — “In Singapore, we can die but we cannot afford to fall ill”. Perhaps it was said half in jest, but to the elderly, such a notion can be no laughing matter.

“I often hear my elderly clients say that,” says Ms Karen Poh, a Senior Medical Worker (MSW) at Tan Tock Seng Hospital (TTSH). “Be it acute or chronic conditions, most elderly are fearful of falling ill.”

“When elderly people say they cannot afford to be sick, they are articulating their primary fear of what old age brings — the financial costs of medical expenses,” says Ms Poh. They also fear being a burden to loved ones. For some elderly, the thought of being sick itself can be fearful. “For example, seeing themselves getting frail and dependent, and having to take medications daily can be a burdensome feeling,” she elaborates.

But concerns about being a financial burden or unable to afford medical care are not the only fears elderly people harbour. So what do the elderly fear?

“This is a difficult question to answer though,” says Ms Ng Huiyi, who is also a Senior MSW at TTSH. “Fear is an unpleasant emotion or thought, and it is very personal.” There are many different perspectives from which this topic can be discussed, and Ms Ng uses the Asian perspective of birth, ageing, illness, and death (生, 老, 病, 死) as one.

“This is a commonly-known life process.

An elderly person may fear living, getting old, falling sick, or facing the death of one’s self or even death of others.

“The determinant factors of what they fear may be attributed to their life experiences, their social circumstances, and their world view,” she says.

Between 1965 and 2015, Singapore’s population grew from 1.9 million to 5.5 million. Despite an increase in population, the proportion of citizens aged 65 and above is increasing rapidly, as the population replacement rate slows. The size of this group of citizens has doubled from 220,000 in 2000 to 440,000 today, and is expected to increase to 900,000 by 2030 (19 per cent of the population).

What is it about ageing that fills most people with dread and anxiety? There are broad concerns:

Fear Of Living, And Of Living Alone

Waiting for the phone to ring just to hear your children’s voice but sometimes to no avail.

“An elderly person may be fearful of living if he/she has lost the sense of purpose towards living,” says Ms Poh. Studies have shown that loneliness can lead to a sharp decline in health. Feeling alone and isolated may even happen when your spouse or friends are still alive as loneliness can be pervasive if other people simply do not have time for you.

Using up retirement funds may also trigger

TOO MANY PEOPLE, WHEN THEY GET OLD, THINK THAT THEY HAVE TO LIVE BY THE CALENDAR.

JOHN GLENN (1921-PRESENT)

As the oldest person to board a US Space Shuttle at age 77, Senator John Glenn exemplifies the view that we shouldn't let age define us. The calendar is a useful way to know the date, but if you let yourself be hemmed in by your chronological age, you may lock yourself out of potentially valuable opportunities.

a fear of living. You may fear that your children may force you to sell your home or put you in a nursing home.

Another is the fear of the need for strangers to take care of you. This would make you uncomfortable and even distrustful, especially since these strangers are often paid staff. This can lead to you feeling neglected.

Fear of Not Being Able To Do Usual Things

No longer being able to sit behind the familiar steering wheel of the family car can be quite a shock.

As someone who used to be independent, being now unable to drive, or even to take a bus by yourself, can be a great blow to your self-esteem. The sense of losing your independence and freedom may also occur when told by your children or caregivers not to do certain things such as going for long walks, in case you have a fall.

As technology outpaces you, you may also fear using everyday gadgets such as the smartphone or a swipe card or even the television remote control. This would cause you to feel even more inadequate.

Fear of Falling Sick

You can't ignore the decline in body mass and you know you are at an increased risk of a heart attack and stroke.

Your body doesn't lie. You may be faced with the crippling realisation that at your age, you may never fully recover from whichever illness you are suffering from. There is also the fear that mishaps might occur more frequently and your rate of recovery slower. There is also the associated fear of being a physical burden.

Add to this the worry about escalating medical costs, and the mere thought of being sick can already be stressful and fearful for most.

Fear of Death

You wake up one day and realise that you are attending more funerals than birthday celebrations.

"Death is still a taboo topic to some elderly," says Ms Ng. "The fearful feeling could be associated to a sense of uncertainty about how dying is like, and what it is like after death, etc." As an elderly person, you may also be anxious about funeral arrangements and the costs related to the last rites.

The fear of death also applies to the loss of loved ones that would lead to a fear of being left alone. Some elderly are also concerned about being forgotten by friends and living relatives, and leaving behind a legacy after death.

"What the elderly fear is very subjective and individual," reiterates Ms Ng. But by understanding various fears and what triggers them can make it easier to anticipate them. It is also important to manage such fears correctly. Ms Poh says, "When a person is fearful of ageing, a common observation is when the person overly reacts in his own outward appearance and behaviours.

"An extreme example may be going for extensive cosmetic invasive interventions to maintain a youthful look, disregarding the potential health risks of doing so."

If we worry unnecessarily about ageing, we are inadvertently speeding the process. A change of mindset at individual and societal levels is essential. If society stops viewing seniors as a burden or a drain on resources, it would make ageing a little less intimidating or discouraging and help everyone accept their golden years. **LW**

If You Are Caregiver To An Elderly

- ▶ Try to understand what the person is afraid of by observing the person's behaviour. Follow up by listening and sharing the person's concerns. Clarify the fears by asking about them.
- ▶ Counsel the elderly if you can address and alleviate the concerns. Involve other family members when necessary.
- ▶ Contact professional help if you are unable to cope with your caregiving duties. The type of help required would depend on the type of concerns the elderly has.

YOU MAY APPROACH THE FOLLOWING HELPLINES FOR ASSISTANCE.

The Seniors Helpline	1800 555 5555
Singapore Silver Line	1800 650 6060
Dementia Helpline	6377 0700
AWWA Centre for Caregivers	6511 5318
Samaritans of Singapore (SOS)	1800 221 4444



SICK from the FRIDGE

A WELL-ORGANISED refrigerator isn't just for celebrity chefs. Keeping yours ordered and neat ensures that food stays fresh for longer and harmful bacteria doesn't breed. Two types of bacteria are commonly found in the refrigerator — pathogenic and spoilage bacteria. Pathogenic bacteria cause foodborne illness, but are hard to detect because they do not affect the taste, smell or appearance of food. "Such bacteria grow rapidly in the 'danger zone' temperature range of between five to 60°C," says Ms Janie Chua, senior dietitian at National Healthcare Group Polyclinics.

Spoilage bacteria, on the other hand, makes itself known because it causes food to deteriorate and develop a bad odour and taste. The quality of food stored for too long in the refrigerator — either in the

main cabinet or freezer — might deteriorate but [if you choose to consume it] will usually not make anyone sick, says Ms Chua. However, some bacteria such as *listeria monocytogenes* thrive in cold temperatures and if you eat food contaminated with this, you could contract Listeriosis, a serious infection.

Separate Food

Warm air rises, so separate cooked or ready-to-eat food and raw food. The former should be kept above raw or fresh food at all times. Keep fresh food such as meat, poultry and seafood in sealed containers or wrapped well to prevent raw juices from seeping out and contaminating other foods. Store all types of food in separate and appropriate containers. Make sure these are covered tightly.

+ KEEP IT CRISP

The crisper section is an enclosed environment so less moisture from food can escape. Fruits and vegetables should go into this.

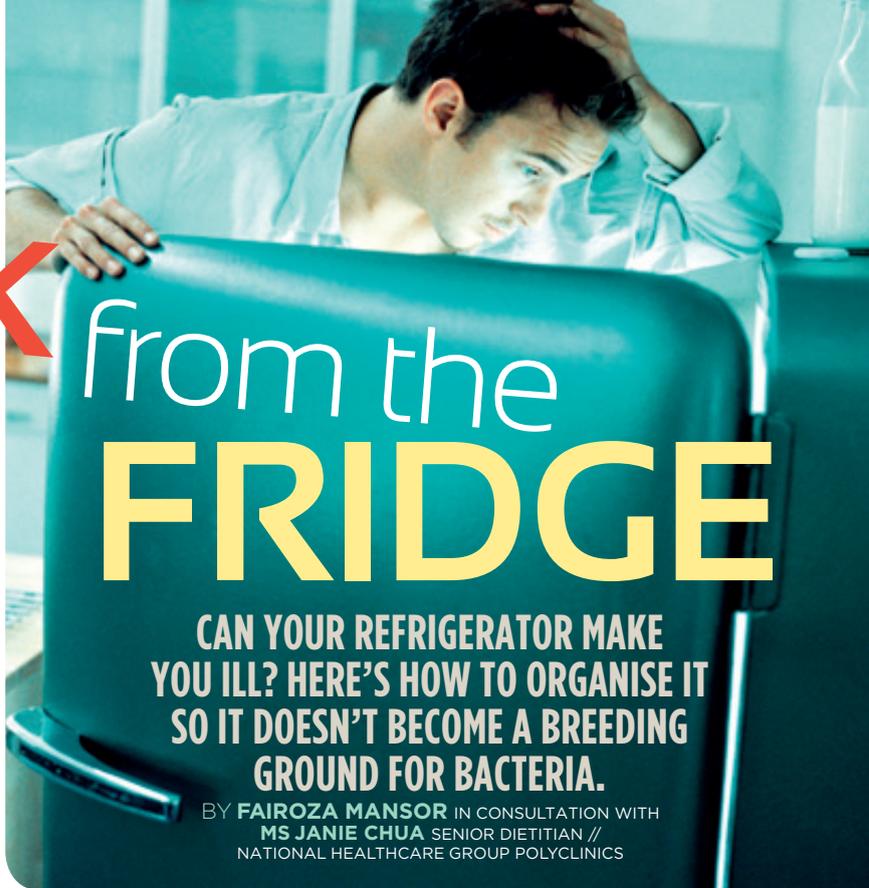
Freezing And Defrosting

Thawing food in the refrigerator's main cabinet or the chiller section will keep it within a safe temperature range until needed. Food should be thawed on the lowest shelf in these areas, and always below ready-to-eat food to prevent cross-contamination. Place the food on a tray or in a container.

Food in the freezer sometimes show signs of freezer burn — dry, grayish-brown and leathery spots— generally caused by food not being securely wrapped in airtight packaging. It occurs when air reaches the food, and then dries its surface. "Freezer burn does not make food unsafe," says Ms Chua, "but cut away such portions either before or after cooking the food. Heavily freezer-burnt foods may have to be discarded for quality reasons."

+ PUSH, THEN SEAL

When freezing food in plastic bags, push all the air out before sealing to prevent freezer burn.



PHOTOS: GETTY IMAGES, SHUTTERSTOCK

TO CHILL OR NOT TO CHILL

EGGS

Store eggs in the refrigerator to prevent salmonella presence in them from growing. You can store eggs in the storage bin of the refrigerator door, but the temperature here fluctuates more because the door gets opened frequently. If eggs are stored at room temperature, heed the “use-by” date as indicated on the packaging or by three to five weeks of purchase.

FRUITS

Some fruits do not ripen once harvested while others continue to ripen because they give off ethylene gas. Fruits that continue to ripen should be refrigerated to slow down their deterioration. Fruits that give off high levels of ethylene, such as tomatoes and apples, can cause vegetables and other fruits stored with them to spoil.

CANNED FOOD

Once a can is opened, the contents become perishable and should be cooked or refrigerated. Unused portions of canned food may be refrigerated in the tin but to preserve optimum quality and flavour, they should ideally be transferred to a glass or plastic storage container. Leftovers should be consumed after three to four days of refrigeration.



Clear And Clean

Throw out perishable food that should no longer be eaten. As a rough guide, cooked leftovers that are more than four days old as well as raw meats beyond one to two days of their purchase should be binned. Discard any expired food products. Food should not be consumed after stated expiry dates. Label food containers or bags; include the date of purchase or when these were cooked or prepared. Follow the “first-in first-out” principle so that older items are used first.

Clean the inside surfaces of the refrigerator regularly — including removable shelves and drawers — with a clean sponge or cloth and warm, soapy water. Follow with a cloth rinsed in clean water, and then dry with a clean cloth. Clean the exterior with a soft cloth and mild liquid dishwashing detergent or cleansers for appliance use.

REMEMBER THE GRILL

Keep this free of dust and lint so that air flows easily to the condenser and condenser coil for better energy efficiency. To clean the coil, use a brush to remove dirt, dust and lint. **LW**

Set The Dial Right

The optimal temperature of a refrigerator is between 0°C and 4°C, and this should be consistent throughout the unit so that any area is safe for storing food.

DANGER ZONE

Food spoilage micro-organisms grow rapidly in food when stored at temperatures between 5°C and 60°C. This is known as the temperature danger zone. Food should be stored outside this danger zone.



FRIDGE FOLLIES

Don't

- ✗ Put hot food into the refrigerator as this raises the temperature, and encourages bacteria to grow rapidly. Let the food cool down but pop it into the fridge within two hours.
- ✗ Overload the refrigerator with too much food. If you do, cool air cannot circulate freely to keep food properly chilled.
- ✗ Leave the door open for too long. The temperature of storage bins in the door fluctuate more than the temperature in the cabinet, so food or beverages stored here might be affected.



LONG HOURS AT WORK can make it difficult for one to keep fit, but there are ways to squeeze in a mini-workout while at the office. Most of these exercises work on strength-training which has been shown to improve bone, joint and skeletal muscle strength. They also improve power, mass, age-related sarcopenia (muscle loss) and endurance, says Mr Mathew Tay, a physiotherapist with the National Healthcare Group Polyclinics.

Vary the sequence of the exercises to prevent your body from adapting (which reduces the effectiveness of the exercises) as well as alternating between weighted and non-weighted exercises to allow for muscle recovery.

You can consider standing up to perform exercises too, as people in deskbound jobs are at risk of developing back pain due to the stress on the body from prolonged sitting. The best time to exercise is at least an hour after a meal, so these exercises will also get you out of the mid-afternoon, post-lunch slump. They do not give you the intensity of a daily 30-minute moderate intensity aerobic exercise (such as brisk walking) as recommended by the Health Promotion Board.

“One should also consider the intensity of exercise rather than the mere clocking of minutes,” says Mr Tay. “But any physical activity is better than none so it may still be beneficial to accumulate short workouts to achieve the daily requirement.” If you are trying out exercises for the first time, consider practising the movements while waiting for your body’s response to these exercises. Mr Tay says you may expect to have some muscular soreness within a day or two, although some may experience a delayed onset of muscular soreness.

Here, Mr Tay and Ms Ng Jia Jia, Health Promotion Consultant from the Health Promotion & Preventive Care Division, demonstrate five easy exercises you can try.

ALTERNATE HIGH LEG LIFTS

Lift your knee up in front as your arms go down. Aim for as high as you can go. Inhale as your leg goes up, exhale on the way down. Alternate the leg and hand moving up and down. As a variation, use a filled water bottle to perform upper body strengthening exercises like biceps curls at the same time.



TABLE EDGE PUSH-UPS

Place your hands on the edge of the desk, shoulder width apart, legs out behind you. Push off to straighten your elbows. Repeat 10 times.

Arm-strengthening can also come in the form of bicep curls or shoulder presses in a seated position. Perform 10 repetitions and three sets of each strengthening exercise. A stable table can often provide a better platform than a roller chair. Look out for dangers like falling objects.



Working
FIT

CHAINED TO YOUR DESK? HERE ARE FIVE EASY EXERCISES YOU CAN DO IN THE OFFICE TO KEEP IN SHAPE.

BY **FRANCES TENG** IN CONSULTATION WITH **MR MATHIEW TAY** PHYSIOTHERAPIST // NATIONAL HEALTHCARE GROUP POLYCLINICS

KNEE PULL-INS

Office chairs aren't the most suitable as they may be unstable due to their rollers. But given the right amount of control, you should still be able to safely execute some exercises such as Knee Pull-Ins.

Sit on the chair and stretch your legs out straight and angle slightly towards the ground. Hold the sides of the chair or place your hands flat on the seat for stability. Incline to an almost 45-degree angle towards the back of the chair. Pull up your knees towards yourself and push your upper body towards the knees. Exhale while you're performing this movement.

Straighten your legs again and move back to the initial/starting position. Inhale while you complete this part. Pause for a while and then continue with the remaining repetitions. Do 10 repetitions.



You Can Also Try...

STAIRS

Climbing the stairs is a simple yet beneficial workout. Be sure to gradually increase the amount of stairs, as over-exertion may result in injury of the knee and its supporting muscles.

Tip!

DO THIS WHILE ON A LONG BUSINESS CALL OR WAITING AT THE PHOTOCOPIER

CALF RAISES

Raise your heels off the floor and then slowly lower them.

Keep a pair of flat shoes to do the calf raises exercise in. For a safer workout, do not exercise in high heels, and avoid slippery surfaces or a cluttered environment.



DESK SQUATS

Start by standing with feet together (and the desk chair pushed out of the way). Bend your knees slightly such that your thighs are almost parallel to the ground, as if sitting on a chair. As you bend, raise your arms straight up or towards the computer screen. Keep your knees together and aligned. Hold for 15 seconds and release. Repeat for four to six repetitions.



Q&A

ASK
THE
EXPERTS

* YOUR MEDICAL QUESTIONS ANSWERED



Q1

Up, Up And Away

My 75 year-old father has hypertension and diabetes, and is on medication for both conditions. Other than that, he is a cheerful and energetic man who goes on morning walks most days. Our family is planning a holiday to Europe, but we are worried if the long flight would pose a health risk for him. Please advise.

Patients with long-term chronic conditions can still enjoy overseas travel with long flights. They should ensure that their conditions are well-controlled before the journey. Put a short summary of your father's condition and his medications in his hand-carry luggage. During flights, select meals and drinks that are healthy and unlikely to grossly elevate his blood sugar. For flights involving change in time zones, medication timing adjustment may be required as advised by a doctor.

DR DARREN SEAH FAMILY PHYSICIAN // CONSULTANT //
HEAD OF FAMILY MEDICINE DEVELOPMENT DEPARTMENT //
NATIONAL HEALTHCARE GROUP POLYCLINICS

Q2

A Tingling Hand

For the past couple of years, I have been getting pins and needles in my right palm and fingers when I hold on to something for a while (such as grocery bags, cellphone, etc). I sometimes rest my head on the same palm during sleep, and in the morning I get the same sensation again. It does take a while for my hand to feel normal again. A GP said vitamin B supplements might help to lessen the frequency of these 'attacks'. Are the pins and needles a symptom of something more serious?

Your symptoms are suggestive of carpal tunnel syndrome, a condition where a nerve supplying the hand — called the Median Nerve — is squeezed. This nerve travels from the forearm to the palm of the hand. At the wrist, it travels through a tunnel formed by the bones of the wrist, and a band of ligaments. Many tendons also run through the tunnel and the tunnel can become a bit tight, so the Median Nerve gets squeezed.

There may be different ways that the nerve can be squeezed in the tunnel such as the thickening of tendons going through the tunnel; thickening of the surrounding soft tissues; or positions of the hand that make the tunnel narrower.

The symptoms include pain and tingling or even numbness of the thumb, index, middle and ring fingers. These symptoms might worsen in the

middle of the night while you are asleep. They can also be brought on by certain postures of the hand, such as while holding a steering wheel, a book to read, or using the phone or a computer mouse.

Usually both hands are affected but only one hand may have symptoms first in the early stages. When the condition worsens, symptoms might become increasingly prolonged or even permanent. There might be numbness or clumsiness of the fingers, or weakness and wasting away of muscles in the hand.

Simple things can be done to help reduce these symptoms — avoid bending your hands when using the mouse, driving or doing hand work. Some therapists might fashion a splint to keep the hand in a neutral position. You should try to avoid placing pressure on the nerve at the tunnel, which means not resting the base of your palm especially when at the computer.

Doctors may give anti-inflammatory painkillers to reduce both pain and inflammatory swellings of the tissues. They might also give B complex vitamins for nerves. Surgery may be needed to relieve the pressure on the nerve.

Consult your doctor to check if it is indeed carpal tunnel syndrome as there are other causes of such hand symptoms. There may be more serious conditions causing the carpal tunnel syndrome, and some of these can be treated to relieve the pressure on the nerve. The doctor would be able to assess and advise on the next steps as appropriate.

DR GEORGE CHUA

FAMILY PHYSICIAN, PRINCIPAL STAFF // YISHUN POLYCLINIC // NATIONAL HEALTHCARE GROUP POLYCLINICS



Q3

When My Toe ‘Locks’

While sitting with my feet propped up, I noticed my big toe had curled inwards. There was no pain but I had to hold the toe down for a few seconds before it finally straightened. Should I be concerned? Is this indicative of a serious condition?

The phenomenon is a spontaneous spasm of the big toe associated with ‘locking’ of the joint. In the past, patients use to refer to this as rheumatism. However, it is now understood better to be ‘stenosing tenosynovitis’. A similar phenomenon is more commonly seen in the fingers and is referred to as ‘trigger finger’.

In the big toe, the tendons that assist with upward and downward motion run within long hollow tubes referred to as tendon sheaths. With increasing wear and tear (or sometimes with trauma), the tendon sheath can develop a nodular swelling that ‘catches’ the tendon as it glides through the tendon sheath. The patient typically experiences a ‘catching’ or triggering of the big toe which lasts for a few seconds before it becomes nimble again.

This is not a condition for concern as it is fairly common and often self-limiting. If the phenomenon does however become more frequent or if there is pain associated with the triggering, then the tendon may be getting damaged. In this event, do consult your doctor.

ADJUNCT ASSISTANT PROFESSOR GOWREESON THEVENDRAN

CONSULTANT & HEAD OF FOOT & ANKLE SURGERY SERVICE // DEPARTMENT OF ORTHOPAEDIC SURGERY // TAN TOCK SENG HOSPITAL



PHOTOS: SHUTTERSTOCK

Q4

Psoriasis Peeves

I had psoriasis when I was younger. It went away on its own, but recurred about four years ago. I have gone to the doctor but the problem persists. I was told that certain essential oils would help. Are there alternative therapies I can try?

Psoriasis is a chronic inflammatory skin disorder. Though there may be periods where the disease remains quiescent like what happened in your case, it often relapses in many individuals at different points in their life. Common triggers for psoriasis include stress, smoking, skin trauma (such as by scratching), and upper respiratory tract infections. As psoriasis often shows up as dry scaly red plaques, essential oils can help by moisturising the skin to reduce flaking. As there have been occasional reports of allergies to essential oils, it would be safer to use bland fragrance-free moisturisers instead.

Apart from moisturising, it is important to suppress the inflammation and rapid growth of skin cells in psoriasis so that the rash will subside. In terms of topical therapy, treatment options include topical steroids, calcineurin inhibitors, vitamin D analogues and coal tar cream. Individuals with moderate-

to-severe psoriasis may benefit from second-line treatment such as ultraviolet light phototherapy, or oral medications such as methotrexate, ciclosporin or acitretin. In recent years, biologic agents that are administered by injection have been progressively developed and these may be useful for patients with severe psoriasis not responding to conventional therapies.

It would be advisable to consult your family doctor or a dermatologist, who will be able to confirm your diagnosis, assess its severity and discuss an appropriate treatment regime for your condition.

DR EUGENE TAN

CONSULTANT // NATIONAL SKIN CENTRE



Q5

Snore. Stop. Snore. Stop

My husband has sleep apnea and was advised to lose weight to control the condition. He is about 10kg overweight. What will happen if he doesn't lose the weight? Will the sleep apnea worsen? What are the treatments for this condition?

Sleep apnea is a dangerous and growing problem in Singapore, and it is inextricably related to the growing numbers of obese people. To put it simply, sleep apnea is a disorder in which one's airway becomes obstructed while asleep, causing loud snoring (in its most benign form) to a complete cessation of breathing — leading to low blood oxygen levels during sleep. In other words, vital organs like the heart, brain and kidneys will have diminished oxygen supply during sleep. Episodes of apnea (lack of breathing) throughout sleep cause frequent nighttime awakening (though the patient is often unaware) and hence broken, choppy, non-restorative sleep. This is called sleep fragmentation. The problem is usually first noticed by the patient's spouse or partner, who is disturbed by the patient's



loud snoring and/or apneic episodes. The chronic lack of oxygenation to the heart will lead to a three-fold increase in cardiac events such as heart attack, stroke and hypertension.

Those with the disorder and sleep fragmentation often complain of morning headaches, constant fatigue, listlessness and moodiness. They can fall asleep almost anywhere — watching television, a movie, or more seriously, while driving. This is called excessive daytime sleepiness.

Obstructive sleep apnea is much more common in obese individuals — when the airway of an obese individual becomes obstructed by large tonsils, an enlarged tongue and increased fat in the neck. They press on the airway thus decreasing its size. A person's neck circumference is a good predictor of sleep apnea. Obese men with a neck circumference of 43cm or greater, and women with a neck circumference of 42cm or greater are more likely to have sleep apnea.

Sleep apnea as well as the resultant poor sleep quality tend to cause sufferers to eat more, thus increasing the weight. There seems to be a relationship between hunger and satiety hormones and sleep deprivation, though the exact nature of this relationship is unclear. Also, individuals with sleep apnea often have elevated blood pressure, fasting glucose, and high cholesterol, all of which can be made worse with sleep deprivation.

It's a vicious cycle. Obesity can lead to sleep apnea, which by itself then causes derangements of hormones that control eating habits — leading to more weight gain, worsened blood pressure, glucose intolerance, worsened apnea, and the cycle goes on and on.

Sufferers should talk to their doctor. Often a sleep study can be performed at a sleep lab where basically, a patient spends the night sleeping under observation with oxygen saturation monitors and apnea monitors in place to observe sleep structure and determine whether he or she does in fact have the disorder.

DR CHONG YAW KHIAN
SENIOR CONSULTANT // ENT DEPARTMENT //
TAN TOCK SENG HOSPITAL

DIMINISHED SEX LIFE

I am a 45 year-old man whose sexual desire and performance have dropped. How do drugs like Viagra actually work, and what are the side-effects (if any) of taking them? How would I even know if such drugs can help me? Would a health screening be required before I can be prescribed Viagra?

Medications like Viagra (sildenafil) belong to the group of medications known as phosphodiesterase type 5 inhibitors (PDE5i) which cause increased blood flow into the penis, to improve the hardness of a man's erection.

Common side-effects of such medications include a feeling of warmth over the upper body, headaches and a blocked nose. Uncommon side-effects include visual disturbances such as change in the perception of colours.

PDE5i need to be prescribed by a doctor. Men who are on medications which contain nitrates (for chest pains, for example) should not take PDE5i as there can be a profound drop in the man's blood pressure, resulting in stroke and other serious cardiac events. Men who are on follow-up visits with their cardiologists should check with these specialists if they can be on PDE5i.

Most men with erectile dysfunction (ED) will benefit from PDE5i as the most common cause of this condition is vasculogenic (due to blood flow issues). However, PDE5i will not be able to improve libido (sexual desire). In your case, I would recommend you seek medical attention from a urologist with an interest in Andrology and Sexual Medicine. There is a high chance you may suffer from testosterone deficiency. This can be treated to put you back in action again.

DR RONNY TAN
CONSULTANT // DEPARTMENT OF UROLOGY //
TAN TOCK SENG HOSPITAL



GLAUCOMA



EARLY DIAGNOSIS AND TREATMENT GO A LONG WAY IN TREATING THIS EYE CONDITION.

BY **DR LEONARD YIP**

SENIOR CONSULTANT // HEAD OF GLAUCOMA SERVICE // NATIONAL HEALTHCARE GROUP (NHG) EYE INSTITUTE@TAN TOCK SENG HOSPITAL

WHAT IS GLAUCOMA?

Glaucoma is a group of diseases that damages the eye's optic nerve and can lead to irreversible vision loss and blindness. The optic nerve is the part of the eye that carries images that the eye sees to the brain. If the nerve is damaged, blind spots will appear in our vision. With severe damage, blindness would occur.

Glaucoma is usually, but not always, associated with elevated pressure in the eye, caused by the drainage system — the trabecular meshwork — not functioning properly. The increased pressure damages the optic nerve, which is sensitive to abnormal eye pressures. There is a good likelihood that you will develop glaucoma over time (months to years) if you have increased eye pressure but this is not an absolute certainty.

Glaucoma can sometimes occur even if the eye pressure is normal. In **Normal Tension Glaucoma**, other factors such as poor blood circulation to the optic nerve may play a bigger role in nerve damage than the eye pressure.

In general though, the risk of developing glaucoma with normal eye pressure is low. Glaucoma can affect one or both eyes.

WHO DOES IT AFFECT?

People with diabetes, or who are severely short-sighted, are at greater risk of glaucoma.

Glaucoma affects either sex equally and across all races in Singapore, with age being an important risk factor. The prevalence of glaucoma roughly doubles for each decade over the age of 40, from about one per cent at age 40.

WHAT ARE THE SYMPTOMS?

- ▶▶ Symptoms usually surface late in the disease.
- ▶▶ These may include blurring of vision, narrowing of the field of vision, or sudden loss of vision.
- ▶▶ In rare cases, seeing haloes around lights, eye pain, headaches, nausea and vomiting may herald a form of acute glaucoma.

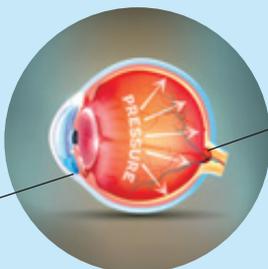


HOW IS IT TREATED?

Glaucoma is detected by specialised eye tests such as eye pressure measurement, visual field testing and examination of the optic nerve, usually done by an ophthalmologist.

An eye examination is recommended once every two to four years from age 40 to 60, and once every one to two years for those aged 60 and older. If you have a parent or sibling with glaucoma, an eye check is recommended every one to two years from the time you hit 40.

Treatments for glaucoma include anti-glaucoma eyedrops, lasers and surgery. **LW**



DRAINAGE CANAL BLOCKED
Too much fluid stays in the eye which increases pressure

HIGH PRESSURE
damages optic nerve

+ IS THERE A CURE?

Glaucoma cannot be cured but treatment can slow or halt further vision loss. Patient education is therefore the key. At **NHG Eye Institute@TTSH**, a trained glaucoma nurse clinician will educate patients on managing the condition.

MIND MATTERS FAMILY MATTERS

27 - 28 MAY 2016
MAX ATRIA @ SINGAPORE EXPO



Singapore
Mental Health
Conference

Themed **Mind Matters Family Matters**, the Singapore Mental Health Conference 2016 features both international and local speakers who will discuss the recovery and care of persons with mental health issues.

For enquiries, please email smhc@imh.com.sg.

CONFERENCE HIGHLIGHTS

- Mindfulness for life and wellness
- Dementia: Psychosocial aspects and caregiving
- Mental health literacy study findings
- Emerging role of caregivers
- Next phase in primary care: Managing mental health patients
- Wellness and resilience: A family-centred approach
- Arts in mental health recovery
- Youth mental health



www.smhc.com.sg

Co-organisers

Institute of Mental Health

Agency for Integrated Care

Health Promotion Board

National Council of Social Service



OPTIMIZING CARE ALONG LIFE TRAJECTORY

26 - 27 May 2016
MAX Atria @ Singapore Expo

The 3rd Asian Congress on ADHD

in conjunction with Singapore Mental Health Conference

www.adhdcongress.com.sg

PROGRAMME HIGHLIGHTS

- Advances in ADHD research, assessment and interventions
- Community & educational resources in supporting ADHD
- Caregiver support for ADHD
- Relationship between screen time and ADHD

Please email adhdcongress@imh.com.sg for any queries.

Organiser

Institute of Mental Health

Organising Partners

Health Promotion Board
Ministry of Education
Ministry of Social and Family Development

KK Women's and Children's Hospital
National University Hospital
Society for the Promotion of ADHD Research and Knowledge

Supporters

College of Psychiatrists
Singapore Psychiatric Association

Spotlight

CORPORATE NEWS + EVENTS + FORUMS

FIT-TING IN

KEEPING PHYSICALLY ACTIVE CAN BE A LOT OF FUN, AS STAFF FROM NHG AND NHG POLYCLINICS FOUND OUT FOR THEMSELVES.

The Tao Payoh Sports Hall was the venue for the National Healthcare Group (NHG)'s annual Active Day on 15 January 2016. More than 250 NHG staff attended the event, heeding the opening remarks made by Mr Linus Tham, Group Chief Operating Officer of NHG, who encouraged them to make healthy lifestyle choices at the workplace.

"For a start, let's try to achieve the recommended 10,000 steps daily to improve our cardiovascular health. Instead of taking lifts, choose to climb the stairs," he urged. "Health is Wealth", so let us get active, keep well and live healthy!"

Activities included a 2km walk, a mass Zumba session and a K-pop Dancerobics workout. Exercise stations were also set up for staff to test their fitness and coordination by engaging in mini squash, performing core strength exercises or playing with the *kendama* (a traditional Japanese wooden toy similar to a yo-yo).



(Above) More than 250 staff from NHG HQ participated in mass Zumba, KPOP, Dancerobic workouts and a 2km walk.

Mrs Olivia Tay (left), Group Chief Human Resource Officer, NHG; and Mr Linus Tham (right), Group Chief Operating Officer, NHG, walking the talk.

Ang Mo Kio Polyclinic received the CEO Challenge Trophy from CEO of NHGP, A/Prof Chong Phui-Nah (third from left).



Staff warming up to a good beat at NHGP Active Day's mass workout.



FRIENDLY RIVALRY

One week later, on 23 January 2016, National Healthcare Group Polyclinics (NHGP) held its own Active Day at Hougang Stadium. Colleagues from NHG Diagnostics and NHG Pharmacy also took part, bringing the total number of participants to more than 700.

After a mass Zumba warm-up, staff from various polyclinics vied for points to win the CEO Challenge Trophy. Clad in specially-designed striped T-shirts, they took part in a series of competitive games including a 2km-walk fitness assessment and inter-polyclinic Human Foosball matches. Fringe activities included Captain's Ball, Frisbee, *Chapteh* Volley and Powerball.

Together with the points earned from attending aerobics classes in the lead-up to Active Day, Ang Mo Kio Polyclinic emerged as the champion for the third year running. Coming in second was Clementi Polyclinic, while Hougang and Woodlands Polyclinics tied for third.

The event not only encouraged staff to lead a healthy lifestyle but also fostered team-bonding and camaraderie.

BRINGING CHEER TO THE ELDERLY

THE NATIONAL HEALTHCARE GROUP CELEBRATES THE YEAR OF THE MONKEY BY REACHING OUT TO THE AGED IN ITS ANNUAL CORPORATE SOCIAL RESPONSIBILITY PROGRAMME.



Sharing the Lunar New Year joy with elderly residents.

On 19 January, more than 30 National Healthcare Group (NHG) and Lee Kong Chian School of Medicine (LKC Medicine) staff visited 210 patients at the Ren Ci Nursing Home and presented them with oranges. They also entertained the patients with classic Lunar New Year songs.

The next day, more NHG staff took disabled elderly residents from the Society for the Aged Sick (SAS) to Chinatown to enjoy the festivities. That same day, NHG volunteers and 60 NUS undergraduates gave out oranges and serenaded the society's 400 residents. For NUS undergrad Miss Chua Ching Yee, it was especially meaningful to visit the patients during the festive season.

She believes that this reminds them that they have not been forgotten and there are people who care for them. "Many of them were happy to see us and enjoyed our company. This is what really makes the project worthwhile," she said.

This year's undertaking is the fourth collaboration between NHG and NUS medical students in its annual Corporate Social Responsibility (CSR) programme. "As a Regional Health System for Singapore, NHG started its CSR programmes in 2013 to reinforce its community outreach.

We focus on promoting wellness to beneficiaries, as well as fostering close collaboration with community partners," said Ms Wong Fong Tze, NHG's Group Chief Corporate Communications Officer. Part of this initiative involved working with various partners such as students from the Yong Loo Lin School of Medicine and LKC Medicine to bring joy to the elderly during festive occasions.

In 2015, NHG expanded its reach to include regular visits to SAS, where they befriended residents and provided support for their therapy sessions. NHG has also donated gifts and basic necessities to various nursing homes and welfare organisations over the years.



National Healthcare Group staff taking handicapped elderly residents of the Society for the Aged Sick for a tour of Chinatown.

Staff of the National Healthcare Group and its institutions and Lee Kong Chian School of Medicine at Ren Ci Nursing Home.



SHARING A HAPPY MEAL

THE NATIONAL HEALTHCARE GROUP (NHG) AND MEMBERS OF THE PRESS HAD A FRUITFUL TIME AT NHG'S LUNAR NEW YEAR MEDIA LUNCH 2016.



Dr Eugene Fidelis Soh (extreme left), CEO, TTSH with Ms Tan Lek Hwa (front, left), Vice President of English Current Affairs, Mediacorp, and Prof Leo Yee Sin (extreme right), Director, Institute of Infectious Diseases and Epidemiology, TTSH.



THE NEW MODEL

Here's a look at the National Healthcare Group's new sustainable healthcare model:

- ▶ To change how healthcare is delivered — from an episodic to an integrated care model — in view of a fast-ageing population, more people with chronic illnesses, changing support structures, higher expectations, manpower constraints and rising costs
- ▶ To create a sustainable healthcare approach that promotes the principles of public health — healthy behaviour, appropriate acute care, and to age and die well
- ▶ To collaborate with community partners via RHS to expand to pre-emptive care, rehabilitation and active maintenance; and to ensure seamless integration in care delivery

As part of the Lunar New Year celebrations, the National Healthcare Group (NHG) invited members of the media to lunch on 1 February 2016. It was hosted by Professor Philip Choo, Group CEO of NHG. At the event, senior management, clinicians and nursing heads of NHG's various institutions shared NHG's role as a Regional Health System (RHS) for Singapore with the media. RHS is aimed at bolstering both private and public healthcare partnerships across different settings — tertiary, primary and community — to bring about integrated care to the population.

Before lunch, Mr Teow Kiok Liang, Deputy Director at NHG's Health Services and Outcomes Research (HSOR), gave a demonstration of Chinese calligraphy. He was followed by Prof Choo, who shared insights on "Creating a Sustainable Healthcare Model" (see box story). A video, *Beyond Hospital Walls*, produced by Group Corporate Communications, was also screened to give guests a better understanding of NHG's new healthcare model.

Guests tucked into a *lohei* lunch and thereafter spent a rewarding time with NHG management exchanging information and knowledge.

Organised by Group Corporate Communications, NHG Group CEO, Prof Philip Choo (extreme right), together with Senior Management, clinicians and nursing heads from NHG institutions, hosted a media lunch.



(Above, from left) NHGP family physicians Dr Valerie Teo and Dr Darren Seah, with Ms Debra Soon, Head, Family (English) & Premier, TV Operations, Mediacorp, Prof Chee Yam Cheng, President of NHG College and Ms Chan Soo Chung, Executive Director, NHG Pharmacy.

Ms Salma Khalik (centre), Senior Health Correspondent, *The Straits Times* with A/Prof Chua Hong Choon (left), CEO of IMH and A/Prof Lim Poh Lian, Head, Department of Infectious Diseases, TTSH.

FOCUS ON OCCUPATIONAL THERAPY

IMPROVING FUNCTIONS AT WORK AND PREVENTING INJURIES WERE THE FOCUS OF OCCUPATIONAL THERAPISTS' DAY AT TAN TOCK SENG HOSPITAL AND INSTITUTE OF MENTAL HEALTH.



Occupational Therapists from TTSH celebrated OT Day with an event on 12 January titled *Work Fit: Let's Do Our Bit!*

Both Tan Tock Seng Hospital (TTSH) and the Institute of Mental Health (IMH) marked Occupational Therapists' Day with meaningful events to show the public how to maintain and improve their work functions and prevent work injuries.

TTSH commemorated the day with an event on 12 January titled *Work Fit: Let's Do Our Bit!* at its atrium. Employers and healthcare workers learnt how to facilitate the return to work of injured staff and patients through interactive information booths. They also gained a better understanding of the role of Occupational Therapists (OT) in helping workers maximise their function at work.

The public also learnt how to set up an ergonomic workstation, prevent eye strain, lift heavy objects safely, and reduce stress and relax.

The event also marked the launch of TTSH OTs' first publication — *7 Principles of Successful Strategies for Return To Work — A Guide for Occupational Therapists in Singapore*, written in collaboration with the Singapore Association of Occupational Therapists.

In addition, TTSH's OTs gave complimentary talks and lectures to non-profit organisations, and reached out to more than 270 people, teaching them methods on improving function at work and preventing work injuries.

Meanwhile, IMH celebrated its OT Day on 15 January 2016 with the theme **E.N.G.A.G.E** (Empowering iNdividuals to Grow & Achieve Goals through Engagement) for OTs and invited guests. Participants kickstarted the activities with a person making *prata* on-site to demonstrate the effort and skill required in this seemingly simple food preparation. This was followed by a dance performance by VSOP

(Very Special Outstanding Performers) that showcased the dexterity needed to execute some fluid movements.

Dr Tan Bing Leet, Head of Occupational Therapy at IMH spoke on how OT has contributed to mental health service delivery as a whole, and how the OT Department is aligned with IMH's strategic thrusts:

- Clinical services: Increasing functioning in school through sensory-based interventions, enabling independence through technology, enhancing the employability of clients through job-site training, and improving symptom management through specialised services such as Art Therapy
- Mental Health OT education: Through undergraduate Mental Health modules, and Postgraduate/Continuing Education and Training (CET) courses, clinical placements
- Research in Occupational Therapy: OT practice framework and recovery model, and efficacy of OT interventions (Sensory Integration, Re-motivation Process, Vocational Training, Art Therapy etc).



A memorable celebration of Occupational Therapists' Day at the Institute of Mental Health.

FOR A CAUSE THAT MATTERS

THE NATIONAL HEALTHCARE GROUP RAISES FUNDS FOR CHARITY THROUGH AN ANNUAL CARNIVAL.

On 21 January 2016, staff of the National Healthcare Group (NHG's) Corporate office, NHG Diagnostics and NHG Pharmacy took part in the annual NHG HQ Charity Carnival. The event, part of NHG's Social Corporate Responsibility initiative, included a new component — a charity auction where NHG Staff Chiefs and Heads of Business Units donated items to be auctioned off.

Another special feature of this year's carnival was the NHG '4P7R Trees' — a new culture — building initiative by the NHG HQ Culture Building Committee. NHG Staff Chiefs and Senior Management, together with staff, recognised colleagues who exemplified NHG's **4P7R*** behaviours by acknowledging their excellent behaviours on heart-shaped leaves. These colleagues had made a difference to patient-centred care; applied systems-thinking to improve the status quo; participated actively in learning for self and of others; and engaged with one another to build a cohesive family at the workplace. The leaves were pasted on a large 4P7R Regional Health System



(RHS) mural designed by Group Corporate Communications. Staff also improved their understanding of the 4P7R through fun activities at the Games Booths.

NHG Group CEO, Senior Management and Heads of Business Units led by example as they pasted their "heart(s)" onto the 4P7R RHS mural.

The unit that raised the biggest sum for charity was also lauded at the Carnival. Group Corporate Development and Operations was crowned Champion Fundraising Department. In all, NHG staff raised \$9,576 from the sale of snacks, foods and handicrafts as well as donations through ticket sales for the Charity Game Booths.

Proceeds from the Charity Carnival went to Peace Connect, the NHG HQ Charity of Choice 2016 as voted by staff. Peace Connect is an inter-generational activity, support and care centre that caters to the needs of elderly residents of Kampong Glam.



Staff of NHG Corporate Office and Business Units collectively raised \$9,576 from the sales of snacks, local foods, and handicrafts at NHG Annual Charity Carnival 2016.



***4P7R** represents a collective mindset and proactive culture NHG has adopted to further raise standards in transforming population health towards NHG's role of being a Regional Health System for Singapore.

THE 4 PRINCIPLES ARE: Patient-centred Care; Systems Thinking; Learning Organisation; Staff Engagement.

THE 7 RULES ARE: ① Healthcare originates from what patients need and value ② We care and protect patients and ourselves ③ We work with guidelines and standard processes ④ We solve the problem or take responsibility for handing over to the next step ⑤ We give ideas, learn, develop, improve continuously and share results ⑥ As a system with partners, it is the system's results that count ⑦ We feedback to the step before.





National Healthcare Group facilitators (front row, third and fourth from right) Ms Yvonne Ng and Ms Selvia Kosim, with the Hamad Medical Corporation's Programme Coordinators.

EXTENDING ITS EDUCATION ARM

THE NATIONAL HEALTHCARE GROUP EDUCATION UNIT REACHED OUT TO QATAR'S HAMAD MEDICAL CORPORATION (HMC) WITH ITS INAUGURAL PROFESSIONAL DEVELOPMENT PROGRAMME.

The National Healthcare Group (NHG) recently scored another first, as its Education Office worked with Qatar's Hamad Medical Corporation (HMC) to conduct workshops for HMC's Medical Residency Programme Directors (PDs) and Programme Coordinators (PCs). The inaugural Continuing Professional Development Programme (CPDP) held at Qatar's Millennium Hotel Doha and HMC Medical Education Centre from 8 to 11 November 2015 aimed to train HMC's faculty in preparation for their new fellowship programmes in Cardiology, Renal Medicine, Geriatric Medicine, etc.

Ms Michelle Teo, one of the five workshop facilitators and Institutional Coordinator of NHG Residency explained that Singapore's cultural proximity as well as being the first Asian country to receive ACGME-I (Accreditation Council for Graduate Medical Education International) accreditation made NHG a well-placed institution to model and learn from.

The four-day workshop focused on curriculum structure and design, assessment, evaluation and quality education.

"Our aim is to teach systems and pedagogy, thus providing the required

foundation for the participants to adopt and adapt to their needs," said Ms Yvonne Ng, CPDP's main coordinator and Senior Director at NHG Education.

The workshop — attended by more than 250 PDs and PCs — was the biggest that NHG workshop facilitators have conducted so far. Associate Professor Nicholas Chew, NHG Chief Education Officer noted that both HMC medical education leadership and the NHG facilitators were surprised by the turnout, and honoured by the overwhelming response received.

Our aim is to teach systems and pedagogy, thus providing the required foundation for the HMC participants to adopt and adapt it to their needs.

MS YVONNE NG, SENIOR DIRECTOR, NHG EDUCATION, CPDP WORKSHOP COORDINATOR



(Above) The NHG facilitators: from left, A/Prof Wong Teck Yee, Ms Michelle Teo, Ms Selvia Kosim, A/Prof Nicholas Chew and Ms Yvonne Ng. (Left) More than 200 Programme Directors and Coordinators attended the four-day workshop.

A VERY SPECIAL GARDEN PARTY

THE INSTITUTE OF MENTAL HEALTH CELEBRATED ITS INAUGURAL ANNUAL PSYCHIATRY RESIDENCY DAY AT GARDENS BY THE BAY.

To kickstart its Inaugural Annual Psychiatry Residency Day on 30 January 2016, the Psychiatry team at the Institute of Mental Health (IMH) treated its patients to a day out at Gardens by the Bay. Led by event Programme Director, Dr Sim Kang, it was organised by a team of Psychiatry Residents and supported by IMH CEO, A/Prof Chua Hong Choon, IMH Chairman Medical Board (CMB), A/Prof Daniel Fung, Associate Programme Directors, and Sister Catherine Chua.

The special occasion with 31 patients gave 25 doctors from the NHG Psychiatry Residency Programme and nine nurses an opportunity to give back to the community, as well as to bond and promote cohesiveness among themselves. Dr Zheng Shu Shan, a Year 3 Psychiatry Resident, shared how one patient tried to convey appreciation by showing utmost attention and cooperation during the trip. She related how the patient would persistently make her way to the front to follow the ‘leader’ so that others would do the same. “It wasn’t about her [the patient]. It was about what she was trying to do for others. I was surprised and touched,” said Dr Zheng.

In all, it was a meaningful outing as IMH staff and patients got to spend time together and appreciate the sights and sounds in the Gardens’ conservatories.

Once pairs were formed between patients and Psychiatry Residents, they wasted no time getting to know each other.



Dr Zheng Shu Shan (above, right) with her buddy.



Psychiatry Residents at the outing.



IMH CEO Dr Chua Hong Choon (above) and IMH CMB Dr Daniel Fung (right), lent their support for the event.



Interacting with their respective buddies (above and below).



Programme Director Dr Sim Kang (left) briefed Psychiatry Residents before the buddies set off.



Arriving at the destination (left).



One-stop Imaging & Laboratory Services



IMAGING

X-ray
 Mammography
 Screening
 Ultrasound
 Computed
 Tomography (CT)

LABORATORY

Laboratory Testing
 Phlebotomy
 Electrocardiography
 (ECG)
 Spirometry

MOBILE RADIOGRAPHY SERVICES

X-ray
 Mammography
 Bone Mineral
 Densitometry
 Ultrasound

MEDICAL COURIER

Lab Specimens
 Drugs
 Medical Reports
 and Films

PROFESSIONAL SERVICES

Teleradiology Reporting
 Management of
 Radiology & Laboratory
 Clinics
 Healthcare Consultancy
 Services

Accessible,
 Cost Effective,
 Seamless, Timely
 and Accurate.

National Healthcare Group Diagnostics [NHG Diagnostics] is a business division of the National Healthcare Group. We are the leading provider in primary healthcare for one-stop imaging and laboratory services. NHG Diagnostics supports polyclinics, community hospitals, nursing homes, General Practitioners and the community via our extensive network in Singapore as well as Indonesia and Vietnam.

Our services are available in static and mobile centres. The mobile services include general X-ray, mammogram, ultrasound, bone mineral densitometry, and medical courier. Besides teleradiology service, laboratory and radiology management, we also offer professional consultancy services for setting up imaging centres and clinical laboratories.



BreastScreen
 Singapore

Singapore
 HEALTHAward



DIRECTORY

AN EASY GUIDE FOR YOU TO CONTACT OR LOCATE US

NATIONAL HEALTHCARE GROUP CORPORATE OFFICE

3 Fusionopolis Link
#03-08, Nexus @ one-north
Singapore 138543
Tel: 6496-6000 / Fax: 6496-6870
www.nhg.com.sg

The National Healthcare Group (NHG) is a leader in public healthcare in Singapore, providing care through our integrated network of nine primary care polyclinics, acute care hospital, national specialty centres and business divisions. NHG's vision of "Adding Years of Healthy Life" is more than just about helping the sick. It encompasses the more difficult but more rewarding task of preventing illness and preserving health and quality of life. As the Regional Health System (RHS) for Central Singapore, it is vital for NHG to partner and collaborate with other stakeholders, community advisers, volunteer welfare organisations and others in this Care Network together with our patients, their families and caregivers to deliver integrated healthcare services and programmes that help in "Adding Years of Healthy Life" to all concerned.

TAN TOCK SENG HOSPITAL

11 Jalan Tan Tock Seng
Tel: 6256-6011 / Fax: 6252-7282
www.ttsh.com.sg

The second largest acute care general hospital in Singapore with specialty centres in Endoscopy, Foot Care & Limb Design, Rehabilitation Medicine and Communicable Diseases. It covers 27 clinical specialties, including cardiology, geriatric medicine, infectious diseases, rheumatology, allergy and immunology, diagnostic radiology, emergency medicine, gastroenterology, otorhinolaryngology, orthopaedic surgery, ophthalmology and general surgery.

INSTITUTE OF MENTAL HEALTH

Buangkok Green Medical Park,
10 Buangkok View
Singapore 539747
Tel: 6389-2000 / Fax: 6385-1050
www.imh.com.sg

Specialist mental health services are provided to meet the special needs of children and adolescents, adults and the elderly. There are sub-

specialty clinics such as the Neuro-Behavioural Clinic, Psychogeriatric Clinic, Mood Disorder Unit and an Addiction Medicine Department. The treatment at IMH integrates evidence-based therapies, supported by the departments of Clinical Psychology, Nursing, Occupational Therapy and Medical Social Work, to provide holistic care for patients. IMH also provides a 24-hour Psychiatric Emergency Service.

NATIONAL SKIN CENTRE

1 Mandalay Road
Tel: 6253-4455 / Fax: 6253-3225
www.nsc.com.sg

The centre has a team of trained dermatologists to treat patients with various skin problems. To serve patients better, there are sub-specialty clinics for the different skin disorders and laser surgeries.

NATIONAL HEALTHCARE GROUP POLYCLINICS

Contact centre: 6355-3000
www.nhgp.com.sg

National Healthcare Group Polyclinics (NHGP) forms NHG's primary healthcare arm. NHGP's nine polyclinics serve a significant proportion of the population in the central, northern and western parts of Singapore. NHGP's one-stop health centres provide treatment for acute medical conditions, management of chronic diseases, women-and-child health services and dental care. NHGP also enhances the field of family medicine through research and teaching. NHGP has also been awarded the prestigious Joint Commission International (JCI) accreditation under the Primary Care Standards. Through the Family Medicine Academy and the NHG Family Medicine Residency Programme, NHGP plays an integral role in the delivery of primary care training at medical undergraduate and post-graduate levels.

ANG MO KIO POLYCLINIC
Blk 723 Ang Mo Kio Ave 8
#01-4136 Fax: 6458-5664

BUKIT BATOK POLYCLINIC
50 Bukit Batok West Ave 3
Fax: 6566-2208

CHOA CHU KANG POLYCLINIC
2 Teck Whye Crescent
Fax: 6765-0851

CLEMENTI POLYCLINIC
Blk 451 Clementi Ave 3
#02-307 Fax: 6775-7594

HOUGANG POLYCLINIC
89 Hougang Ave 4
Fax: 6386-3783

JURONG POLYCLINIC
190 Jurong East Ave 1
Fax: 6562-0244

TOA PAYOH POLYCLINIC
2003 Toa Payoh Lor 8
Fax: 6259-4731

WOODLANDS POLYCLINIC
10 Woodlands St 31
Fax: 6367-4964

YISHUN POLYCLINIC
30A Yishun Central 1
Fax: 6852-1637

NHG COLLEGE

Tel: 6340-2351 / Fax: 6340-3275
college.nhg.com.sg

NHG College plays an instrumental role in facilitating continuous learning and development of our workforce, as well as driving leadership development and systems improvement in NHG. It collaborates with renowned institutions and industry partners to build the collective capabilities of NHG leaders, educators, healthcare professionals and staff in managing the health of the population in the central region.

NHG DIAGNOSTICS

Call centre: 6275-6443
(6-ASK-NHGD) /
Fax: 6496-6625
www.diagnostics.nhg.com.sg

National Healthcare Group Diagnostics (NHG Diagnostics) is a business division of NHG. It is the leading provider in primary healthcare for one-stop imaging and laboratory services that is accessible, cost effective, seamless, timely and accurate. NHG Diagnostics supports polyclinics, community hospitals, nursing homes, general practitioners and the community at large via its extensive network locally and regionally. Its services are available in static and mobile centres. Mobile services include general X-ray, mammogram, ultrasound, bone mineral densitometry, health screening and medical courier. It also provides tele-radiology service, laboratory and radiology management, and professional consultancy services in setting up of imaging centres and clinical laboratories.

NHG PHARMACY

Tel: 6340-2300
Fill your prescription online:
www.pharmacy.nhg.com.sg

NHG Pharmacy manages the dispensary and retail pharmacies at all nine NHG Polyclinics. Services include Smoking Cessation Clinics, pharmacist-led Anti-Coagulation Clinics and Hypertension-Diabetes-Lipidemia Clinics, where pharmacists monitor and help patients optimise their medication. Patients may also consult our pharmacists for treatment of minor ailments or for travel or nutritional advice. NHG Pharmacy also provides comprehensive medication management services to Intermediate Long Term Care facilities (ILTCs) such as nursing homes. Under the ConviDose™ programme, medication is conveniently packed into individual sachets for patients according to the stipulated quantity and time the pills need to be consumed.

PRIMARY CARE ACADEMY

Tel: 6496-6682 / Fax: 6496-6669
www.pca.sg

The Primary Care Academy (PCA), a member of NHG, was set up to meet the professional training needs of primary healthcare professionals in Singapore and the region. PCA aims to be a platform for sharing of expertise and capacity building among community healthcare leaders and practitioners in and around ASEAN.

JOHNS HOPKINS SINGAPORE INTERNATIONAL MEDICAL CENTRE

11 Jalan Tan Tock Seng
Tel: 6880-2222 / Fax: 6880-2233
www.imc.jhmi.edu

Johns Hopkins Singapore International Medical Centre (JHSIMC) is a licensed 30-bed medical oncology facility located in Singapore, a joint venture between the NHG and Johns Hopkins Medicine International (JHMI). It is the only fully-branded Johns Hopkins facility outside the United States, providing inpatient and outpatient medical oncology care, medical intensive care, laboratory services, hospital and retail pharmacy, general internal medicine and health screenings.

Health is Wealth. Keep Healthy. Stay Well.



Adding years of healthy life



Tan Tock Seng
HOSPITAL



INSTITUTE
of MENTAL
HEALTH



National Healthcare Group
POLYCLINICS



NATIONAL
SKIN
CENTRE

www.nhg.com.sg

 facebook.com/nationalhealthcaregroup

NHG IS A REGIONAL HEALTH SYSTEM FOR SINGAPORE



Adding years of healthy life

