SING

A publication of Singapore National Eye Centre

Tomorrow's Eye Care, Today * www.snec.com.sg



Tomorrow's Eye Care, Today®





Editor's Note

Welcome to the first issue of the new SINGVISION magazine by SNEC. Revamped to include more content that is directly useful and relevant to our readers, our hope is that each issue proves to be one you'd want to keep for future reference.

Our Cover Story, Saving Our Sight, is all about the newly-launched VisionSave campaign. As Singapore faces off with a range of eye conditions among young and old, SINGVISION brings you the story and tells you what you need to know and how you can play a part in this national effort.

Also in the pages of this issue, you will learn about the SNEC patient experience and read about SNEC service improvements that directly impact you. Have some of your pressing eye health questions answered by our ophthalmologists, and take a visual tour of the eye, how it works, and where problems can arise.

Take inspiration from Patricia Poo, a particularly gutsy individual who refuses to let her life-long and serious vision challenges stop her from living a life of purpose and optimism.

Without healthy eyes with which to see and make sense of the world around us, life is particularly challenging. As the guardian of Singaporeans' sight, we aim to bring you the information that you need to keep your eyes - and the eyes of those you care about - healthy and functioning well.

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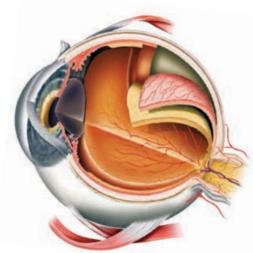
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convenient and targetted

As Singapore's population ages, this is needed more than ever.

hat do you do when you are faced with the harsh reality of national eye care needs? We are ageing and living longer, and as we do, we become prone to eye conditions such as diabetic retinopathy, glaucoma and age-related macular degeneration. As more enter this phase of life, there are more patients needing treatment for these potentially blinding conditions.

Enter the Primary Eyecare Clinic (PEC), created by SNEC to meet this pressing need for more accessible and affordable eye care for elderly patients. The first PEC opened its doors in 2013 at SNEC's Balestier Branch, and began by treating patients suffering from some of these conditions.

PEC's team of four trained optometrists and two eye-trained physicians see about 550 patients a month, and this provides costeffective, safe and accessible non-specialist follow-ups. This allows specialist ophthalmologists to attend to more complex cases.

How is this done?

Physicians and optometrists at the PEC are required to undergo six months of

The first PEC has managed more than 14,000 patients so far.

structured training conducted by specialist ophthalmologists at SNEC.

During the training, participants pick up clinical skills and learn how to interpret visual field charts, retinal photos and optical coherent tomogram (OCT) images.

At the end of the training, participants are tested and only those who meet all the evaluation criteria are allowed to practise at the PEC. They are re-evaluated yearly.

Patients with deteriorating eye conditions can be referred to SNEC for urgent attention, and may be scheduled for a review by specialist ophthalmologists at SNEC once every five years.

Cost-effective care

Apart from alleviating the need for patients to visit a tertiary care centre like SNEC, the PEC can potentially lower consultation costs for patients. This is because the PEC is staffed by well-trained non-specialists, and can be run at a lower cost as compared to their specialist counterparts – without compromising on the quality of care.

Future of PEC and ease of access

With shorter waiting times for appointments and consultations and patients having a good experience at the clinics, it is time to make the PEC more accessible to patients across Singapore.

In August 2015, the second PEC satellite clinic began operating at the Diabetes & Metabolism Centre (DMC) on the SGH campus. A one-stop service for patients with diabetes and metabolic conditions, the DMC combines clinical care in Endocrinology, Diabetes, Renal Medicine, Internal Medicine, Vascular Surgery, Peritoneal Dialysis, Podiatry and Vitreo-Retinal services organised around the needs of the patient.

In future, PEC will be able to serve patients who have undergone post-cataract operations, dry age-related macular degeneration and dry eyes, as it continues its work on finding new models of care and safe, effective and easily accessible primary eye care for elderly patients.



Your benefits

- Shorter waiting times for appointments and consultations
- Better access and more convenience with several PECs around Singapore
- Since PECs are part of the SNEC family, patients are reviewed by SNEC ophthalmologists
- If your condition requires it, you can be referred to an ophthalmologist on a fast-track basis

fast fact

A study conducted by SNEC showed that diabetic retinopathy and glaucoma care at the PEC was equivalent to that provided at SNEC outpatient clinics managed by ophthalmologists; and patient satisfaction was as good as that of SNEC outpatient clinics.



Quality care @ ALEXANDRA

SNEC's new satellite clinic is set in the tranquil green landscape and colonial architecture of Alexandra Hospital, perfect for healing and recuperation. The new clinic offers high-quality, comprehensive eye care for those living in nearby areas like Queenstown, Bukit Merah and Henderson.

True to SNEC's commitment to providing accessible eye care to the community, the clinic is well-equipped to provide a comprehensive range of services. Cataract surgery patients will have it done at Alexandra Hospital, with SNEC doctors providing care and consultations, while complex eye conditions may be referred to SNEC Main Centre at SGH Campus for advanced subspecialty care.

CLINICS ENHANCED

Clinics A & B in SNEC have been relocated to Level 6 and improved with a range of enhanced services designed to provide age-friendly features and a seamless patient experience:

- Self-registration counters to reduce waiting time
- Dedicated evaluation, treatment, consult and optometry rooms
- Shorter waiting times to see doctors
- More space for easy access to medical equipment during procedures
- Minimised patient movement with shared waiting area for eye evaluation test, treatment and consult rooms
- Enhanced layout and flow to reduce need for walking/movement for patients
- Stable link-chairs with armrests to help elderly with poor balance
- TV with educational videos

A & B

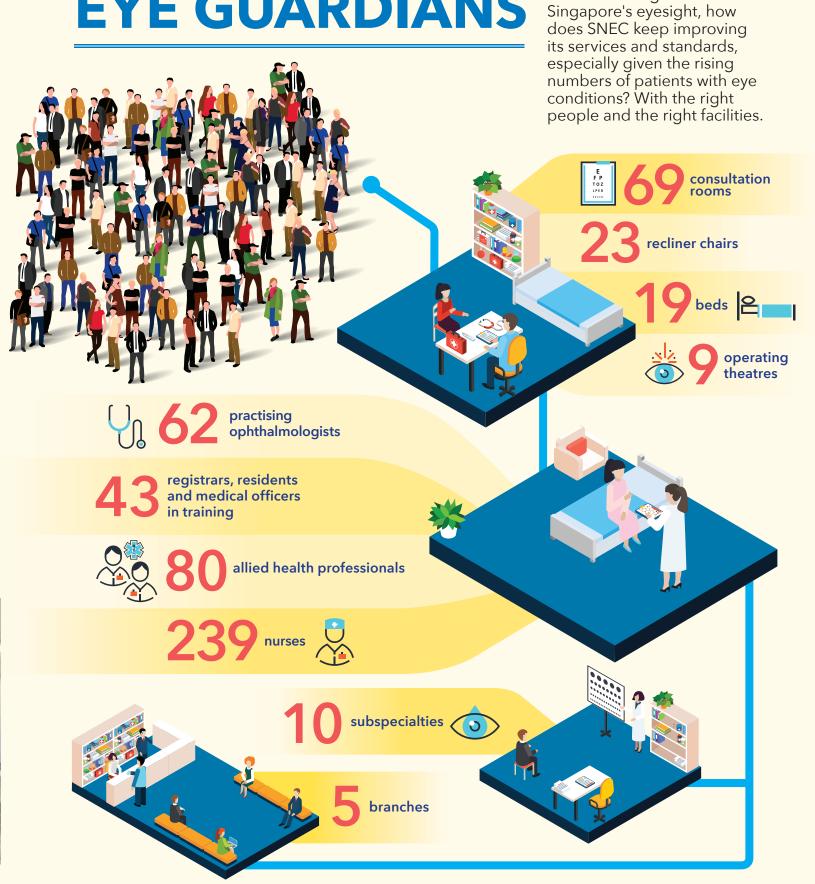
Clinic A offers eye care for cataract patients and treats most age-related eye diseases, unexpected vision changes and eye injuries.

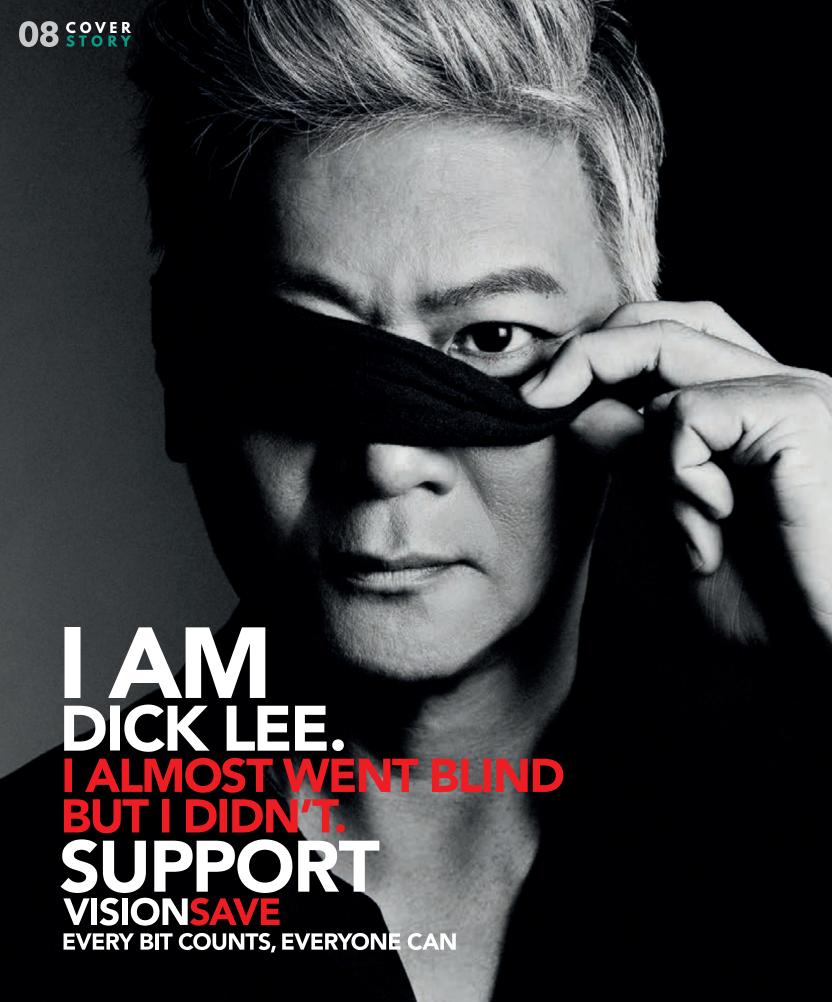
Clinic B manages abnormalities of the eyelids, the lacrimal (tear) system and the orbit (structures around the eye).



Tasked to safeguard and treat

EYE GUARDIANS





As my eyes are extremely weak, I have learned to appreciate every sunrise and sunset and prepare myself for the possibility of blindness.

Saving our Sight

Dick Lee, the uniquely-Singaporean musician and Singapore Idol judge, talks about a time when he nearly went blind, and why he volunteered to be the face of VisionSave.

B lack spots floating across his field of vision were the first sign that something was wrong.

It was the morning after Dick Lee's 21st birthday party, where he had danced the night away. "I danced the Pogo, which involves jumping violently up and down, all night, and it probably dislodged my retinas!" explains Singapore music icon, Dick Lee.

At the time, Lee was already suffering from myopia and had been wearing glasses since he was three.

The black spots were not at all a good sign and he quickly consulted the late Professor Arthur Lim, who diagnosed a torn right retina and a detached left one. He was rushed to an emergency operation.

Thankfully, most of his vision was saved. He lost some

VisionSave What You Need to Know

A campaign which aims to

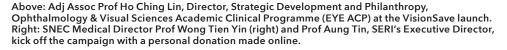
- Save vision and prevent avoidable blindness
- Salvage vision for those already experiencing some level of vision loss
- Protect the vision of people at risk of sight loss

It will do this by providing

- Financial assistance for sight-saving, complex, cutting-edge and novel therapies/surgeries
- Public education/community outreach
- Medical education
- Research and innovation
- Infrastructure/capacity-building

www.visionsave.sg/donate





weak, I have learned to appreciate every sunrise and sunset and prepare myself for the possibility of blindness.

"I had my first cataract operation when I was in my early 40s, and the second in my early 50s, so anything could happen!"

He feels a sense of responsibility for educating the public about the importance of preserving vision, hence his volunteering as Ambassador for **VisionSave**, an initiative driven by SNEC and SERI (Singapore Eye Research Institute). "VisionSave is a great initiative to raise funds for further research, and as its ambassador, I hope to encourage everyone to donate to this worthy cause."



You can play a part by making a corporate, personal or anonymous donation to the VisionSave campaign at

www.visionsave.sg/donate

Every contribution regardless of size counts in the fight against blindness.

lower peripheral vision in his left eye, but his right eye was saved using laser treatment. A plomb - a device that keeps the retina in position - was used to secure his left retina. Since then, he has had occasional detachments that were successfully rectified.

This experience sealed Lee's gratitude for the gift of sight.

"It has made me treasure my sight, and I'm also very careful not to do anything which might cause any tears to happen again," he says. "Losing my sight would greatly compromise my quality of life, although as a musician, loss of hearing would be the greater tragedy."

Lee is keenly aware that his close brush with darkness was a sign that he must not take his vision for granted. "As my eyes are extremely VisionSave may hold the key to developing new therapies and treatments as it will fund cutting-edge research as well as therapies and surgeries for sight-threatening eye problems.

It will also educate the public on the eye diseases that can lead to blindness so that people can take measures to prevent the onset or worsening of such diseases.

SNEC Medical Director Professor Wong Tien Yin describes the situation as "a perfect storm. We are living longer, and with that comes more health challenges, and higher expectations."

He also pointed out some sobering facts: one person in the world goes blind every five seconds; 80% of young Singaporeans have myopia; 10% of older Singaporeans have diabetes, which is the most common cause of vision loss in working-age adults. "We need new solutions."

The campaign is critically needed, given these realities. Says SNEC's Adjunct Associate Professor Ho Ching Lin, who is driving the recently launched campaign: "When we wake up every morning, the first thing we do is to open two of our greatest gifts - our eyes. For some, however, the gift of sight is something that permanently evades them.

"On a daily basis, we may get frustrated by many things we can see - such as bad traffic, inconsiderate behaviour or something as trivial as a stain on our crisp white shirts."

SNEC Medical Director Prof Wong Tien Yin (holding the glasses) showing VisionSave Ambassador Dick Lee the set of special glasses used to simulate some eye conditions in their advanced stages, and giving an insight into how a person's vision might be affected by these conditions.



SINGAPORE'S MOST COMMON

CONDITIONS

MYOPIA

Singapore has one of the highest rates of myopia in the world. Six out of 10 Singaporean children are myopic by 12, compared with two in 10 in the US and just under two in Australia. Eight out of 10 in Singapore are short-sighted by 18.

DIABETIC RETINOPATHY (DR)

This is the most common complication of diabetes. One in three Singaporeans with diabetes has it, while 10 in every 100 Singaporeans have severe vision-threatening levels of DR. Most patients are unaware they have the disease and are at risk of vision loss.

GLAUCOMA

This is one of the leading causes of irreversible blindness worldwide and accounts for 40% of blindness in Singapore.

AGE-RELATED MACULAR DEGENERATION (AMD)

This is the most common cause of blindness among the elderly in Singapore.

When we wake up every morning, the first thing we do is to open two of our greatest gifts — our eyes. For some, however, the gift of sight is something that permanently evades them... But imagine waking up not being able to see what the time is on the clock, the headlines in the daily newspaper, the food being served on our plate, the colour of our own clothes, or the way to the bathroom and out of the door.

Adj Assoc Prof Ho Ching Lin, Director, Strategic Development and Philanthropy, Ophthalmology & Visual Sciences Academic Clinical Programme (EYE ACP)

"But imagine waking up not being able to see what the time is on the clock, the headlines on the daily newspaper, the food being served on our plate, the colour of our own clothes, or the way to the bathroom and out of the door."

Looking Ahead

Vision disorder ranks No. 1 among the 10 leading causes of diseases among Singaporean males aged 65 and above, and No. 2 among Singaporean females of the same age range. With an ageing population, diverse age-related eye diseases will proliferate, impacting on Singapore's healthcare facilities, people and resources.

Says Adj Assoc Prof Ho, who is SNEC's Director, Strategic Development and Philanthropy, Ophthalmology & Visual Sciences Academic Clinical Programme (EYE ACP), "The VisionSave campaign

represents the commitment both SNEC and SERI have made to save the sight and improve the lives of patients suffering from eye disease. The donations garnered will translate into innovation and medicine that will ensure the best and most optimal outcome for every patient.

"Not a day goes by that we are not busy attending to our patients, and saving sight, salvaging failing vision and preventing avoidable blindness with whatever resources we have in hand.

"My deepest wish is for the VisionSave Campaign to be a great success so that we can leverage on it to fulfil our ultimate aim which is to save sight and improve the quality of life of our patients. That is what the campaign is about - a direct response to better address the needs of our patients."



Did You Know?

Singaporean adults has diabetes and is at risk of losing vision due to the disease.

of blindness is preventable or treatable.

of blindness in Singapore is caused by glaucoma.

and more of global blindness due to corneal diseases is in Asia.

80%

of young Singaporeans have myopia, and extreme myopia can lead to blindness. of the world's population

of the world's population is in Asia and has the highest incidence of blindness. 19%

indicates the proportion of elderly in Singapore's population by 2030, triggering an escalation of age-related eye diseases.

Seeing is Believing

he eye, a not-quitesymmetrical globe measuring about 2.5cm in diameter, is our visual gateway to the world. Within it, a set of delicate components work together in a complex dance that involves the play of light, parts that function like camera lenses and projectors, and the transmission of electrical impulses from eye to brain where they are interpreted as images - and all of this takes place within milliseconds! These and more are what make sight happen in a healthy eye. Here's a guide to some parts of the eye and the problems that can

arise in them.

CORNEA

The cornea is the transparent window located at the front of the eye. Five layers of tissue provide a barrier against infection. Most importantly, it admits and bends light into the eye.

Cornea problems include refractive errors, infections, injuries and loss of clarity.

LENS

Located just behind the pupil, the lens helps us focus from near to far objects by changing its shape. As a person ages, this becomes more difficult.

Our lenses become cloudy as we age, resulting in cataracts.

RETINA

Light is transmitted from this layer of sensitive tissue to the brain.

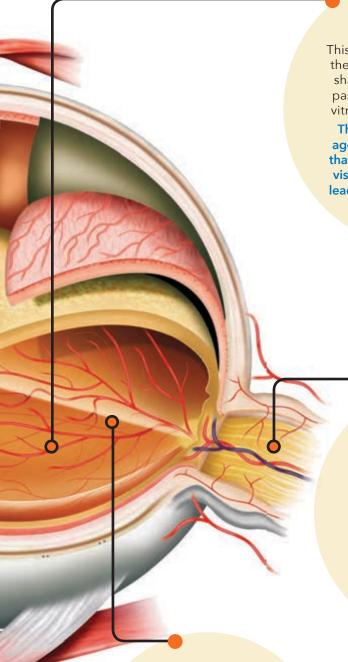
Diseases here can affect your central vision and cause sight loss. The three main retinal diseases are diabetic retinopathy, age-related macular degeneration and retinal detachments.



CONJUNCTIVA

This layer keeps the eye moist and covers the inner eyelid.

Infections here are known as "Pink Eye" or conjunctivitis. They can be infective or allergic.



VITREOUS

This gel-like fluid in the middle of the eye helps maintain the eye's shape and absorb shock. Light passes through the transparent vitreous on its way to the retina.

The vitreous deteriorates with age, resulting in floaters – spots that appear to float in the field of vision. Sometimes this may also lead to retina tear or detachment in a minority of cases.

OPTIC NERVE

This is the nerve that carries visual information from the retina to the brain via electrical impulses.

In the population, about 2% have glaucoma. Glaucoma affects the optic nerve because of pressure that builds up in the eye. This compresses the optic nerve and causes cell death.

6/6 Vision?

Have you ever wondered why perfect vision is referred to as 6/6 vision?

The first number represents the distance (in metres) from which your eye can see objects clearly; the second number refers to the distance from which a "normal" eye can see the same object with equal clarity. So 6/6 means perfect vision.

The larger the bottom number gets, the worse the vision.

For example, 6/18 vision means you can only see at 6m what a normal healthy eye can see at 18m. In many countries, 6/60 is the yardstick for legal blindness.

MACULA

The centre of the retina is the macula. It enables us to see colours and details in the centre of our vision such as the print on this page.

When it's damaged, we can't see fine details. Symptoms include impaired central vision and distorted images.

What's wrong with my eyes, doc?

My eyes are red and itchy. I've also noticed a white patch appearing on my cornea over the past two days. What's going on?

You may have a corneal ulcer. Other symptoms of a corneal ulcer include blurry or hazy vision, sensitivity to light and tearing. Seek immediate medical attention as corneal ulcer can result in scarring and poor vision. Your eye doctor will prescribe treatment depending on the cause of the ulcer. Ulcers due to infections will require antibiotic eye drops to prevent them from spreading to the rest of the cornea. Conversely, some ulcers are due to inflammation and will require corticosteroid eye drops to reduce swelling and inflammation.

I love water sports like wakeboarding and scuba diving. Is it okay to wear contact lenses?

Water, including tap water, swimming pool water and sea water, is home to many dangerous microbes. Swimming with contact lenses can result in eye redness, irritation and even potentially sight-threatening infections. 'Soft' contact lenses, for instance, can absorb chemicals and bacteria, increasing the risk of infection.

If you must wear contact lenses for any kind of water sport, wear well-fitting swimming goggles or a diving mask. If you dive, it is recommended that you use 'soft' lenses for greater comfort. Gas bubbles can form between the cornea and 'hard' or rigid gaspermeable lenses, causing eye pain and blurred vision.



If water gets in your eyes when doing any kind of water sports, remove, clean and disinfect your contact lenses as soon as possible. Consider using daily disposable lenses that can be worn and thrown away after a single use; this reduces the risk of contamination but does not eliminate it completely.

Dr Khor Wei Boon, Consultant Corneal & External Eye Disease Department Singapore National Eye Centre Are there any long-term side effects to using antiallergy eye drops to treat my itchy eyes?



There are several types of anti-allergy eye drops used to relieve itchy, watery and red eyes.

Anti-histamine eye drops

block histamine, a chemical your body makes in response to an allergy trigger, and can quickly ease symptoms for a few hours.

Anti-inflammatory eye drops

fall into two groups: Nonsteroidal anti-inflammatory drugs (NSAIDs) and corticosteroids. Some reduce inflammation, while others block nerve endings.

Corticosteroid eye drops

are used for severe, longterm eye allergy symptoms and must be prescribed by an ophthalmologist and monitored for side-effects such as cataracts, glaucoma and eye infection.

Decongestant allergy eye drops narrow blood vessels in
the eye and reduce redness

for a short time. They do not treat eye allergies and should not be used if you have glaucoma. They can also cause "rebound" redness if you use them for a prolonged period of time.

Another type is mast cell stabiliser eye drops which prevent the release of histamine and other chemicals made by your body during an allergic reaction. They are usually used for preventing symptoms of allergy and can be safely used without much side effects.

As with any medication, follow the instructions on the label. Do not use overthe-counter eye drops for more than two to three days. If your allergies do not resolve in several days, see a doctor to diagnose any underlying illness. If you have a pre-existing illness or eye condition, consult your doctor before using eye drops.

I stare at the computer screen for long hours at work and my eyes feel tired at the end of the day. What can I do?

You can easily revive tired eyes with lubricant eye drops or by taking breaks from the computer screen and looking into the distance.

Most importantly, eye strain can be prevented or reduced by adjusting your work habits or environment. Ensure your computer screen is between

50 and 65cm away from your eyes and a little below eye level. Use a filter over the screen to reduce glare and adjust lighting to eliminate reflections. Take 'eye breaks' every 30 minutes, where you look into the far distance for 30 seconds. If you work in an air-conditioned environment, you can consider using humidifiers to improve the air quality and avoid the air-con draft from directly blowing onto your workspace.

Eye strain usually doesn't have serious or long-term consequences, but in some cases, it can be an indication of an underlying eye condition that may need treatment. If you still feel eye fatigue despite these simple interventions, see an eye doctor for a comprehensive eye exam to ensure that your glasses or contact lens prescription is up to date and adequate for computer use, as well as to exclude any underlying eye disease.



Dr Tan Yar Li, Consultant Glaucoma Department Singapore National Eye Centre



Despite these limits, Patricia displays a can't-be-beaten spirit and does not consider herself less fortunate. In her work as a receptionist at Seng Kang Family Service Centre under the AMKFSC Community Services for the past four years, she says, "I have encountered many people who are worse off."

Every day brings choices, and hers is to look on the bright side and to live in the present. She inspires many, and won a SingHealth Inspirational Patient and Caregiver award this year.

Fall seven times, stand up eight

Beneath her bubbly disposition and hearty laugh lies great depth of character. Patricia's optimism and independence stem from a positive attitude and a family that is not over-protective. "My brothers say: 'Do it yourself'," she laughs.

A self-professed roller coaster fiend, Patricia appreciates her parents for never setting limits for her. "They let me try whatever I want. Nowadays, parents don't want their children to suffer or get injured, but it's okay to fall; you just have to pick yourself up."

Being educated in mainstream schools taught her to speak up and ask for help. She was a Braille transcriber before she took on her current job. Patricia walks to work everyday and uses public transport to go out with Don't think of yourself as someone with special needs. You may think that you can't do something, but you can. If you have the passion, go ahead and try because you never know what the outcome will be.

friends. Like any other working adult, Patricia's free time is spent browsing Facebook and watching dramas.

On Tuesdays and on weekends, she puts on different shoes and joins friends at Runninghour, a cooperative that integrates people with special needs into the running lifestyle. Patricia has always enjoyed running because it can be done solo. Health issues forced her to stop in 2009 but she resumed when a visually impaired friend introduced her to Runninghour in 2013. Since then, she has participated in numerous marathons.

"Running makes me happy. When I run, all my worries melt away," says Patricia, who is a Runninghour committee member.

Beyond duty

Patricia has been an SNEC patient since 2007, and is grateful to her doctors Professor Donald Tan and Dr David Goh, and the nursing team. On Dr Goh's recommendation, Patricia has undergone two Transscleral Cyclophotocoagulation (TCP)

laser procedures for her glaucoma, and now takes one less type of medication. She adds, "Eye drops are expensive and I have to use different types, but Dr Goh helps to advise me on medicine that is subsidised."

Since the medicine causes drowsiness and appetite loss, he tells her in advance so that she is prepared, and grants her enough medical leave to ensure she is well-rested before returning to work.

Courage is a choice

While Patricia radiates optimism, she faces fear and dark moments. Her fear of getting scalded keeps her away from the stove, while the fear of total blindness has kept her from a corneal transplant for her left eye.

Patricia voices a message to other challenged individuals. "Don't think of yourself as having special needs. You may think that you can't do something, but you can. If you have a passion for something, go ahead and try because you never know what the outcome will be."

Running is more than a way to keep fit. For a visually challenged person like . Patricia, running (with running buddy Chan Jan Siang) gives a sense of uncommon freedom and the opportunity to feel one's abilities being stretched.

SNEC provides eye treatment for the full spectrum of eye conditions:

- General Cataract & Comprehensive Ophthalmology
- Cataract Subspecialty
- Corneal & External Eye Disease
- Glaucoma
- Neuro-Ophthalmology
- Ocular Inflammation & Immunology
- Oculoplastic
- Paediatric Ophthalmology
 & Adult Strabismus
- Refractive Surgery
- Medical Retina
- Surgical Retina

Where we are

11 Third Hospital Avenue Singapore 168751 www.snec.com.sg

Opening Hours

8:30am to 5:30pm, Monday to Fridays No clinic sessions on Saturdays, Sundays and Public Holidays

Visit us www.snec.com.sg

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Email: appointments@snec.com.sg



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Tel: 6835 1188 Fax: 6835 1009

Changi General Hospital (Clinic S & T)

2 Simei Street 3 Singapore 529889 Tel: 6850 1450/6850 1470 Fax: 6784 8718/6544 0087

KK Women's & Children's Hospital (Clinic E)

100 Bukit Timah Road Singapore 229899 Tel: 6394 1930/6394 1931

Fax: 6394 1929

GP Hotline

Hotline: 6322 9399

A dedicated line for GPs attending to patients with eye conditions.