



MCI (P) 048/05/2021

## Genetic testing – a personal choice

## 基因检测 – 个人选择



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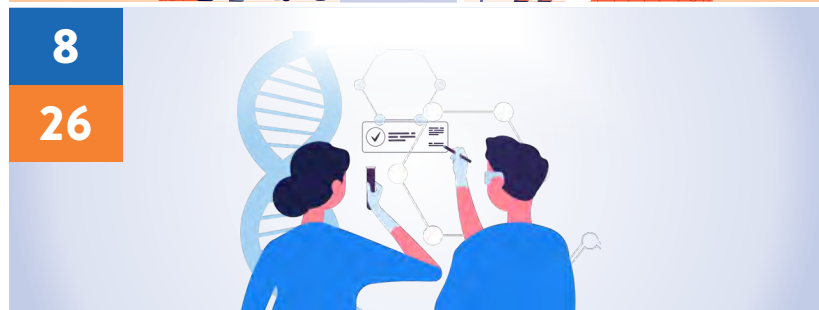
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National Neuroscience Institute

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In December 2021, **Brain Bank Singapore and NNI paid tribute to the more than 140 people who have registered to donate their brain for medical research** when they pass on. 'Trees of Hope' were set up at the specialist outpatient clinic at NNI@TTSH Campus and at the Singapore Botanic Gardens as part of NParks' Trees of the World 2021 project, decorated with butterflies and flowers made by staff. To find out more about Brain Bank Singapore and the impact brain donation has on the health of future generations, visit [www.brainbanksingapore.org](http://www.brainbanksingapore.org) or scan the QR code.



**A big 'thank you' to Be Kind SG and Autoimmune Diseases Singapore** for giving NNI staff customised self-care journals to remind them of the importance of self-care. The journals contain prompts curated by the two organisations and Tan Tock Seng Hospital, as well as artwork and messages of



appreciation from students, individuals and organisations to boost the morale of healthcare staff. Thanks also to **Sew Happy** for the 100 upcycled tote bags as appreciation gifts for our staff!





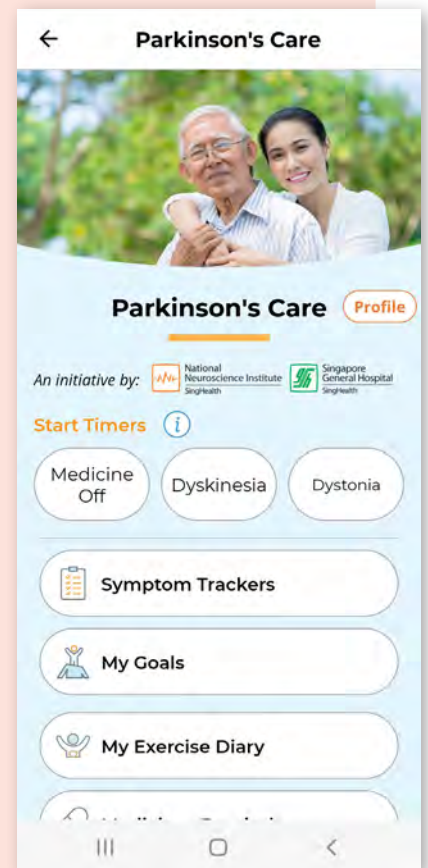
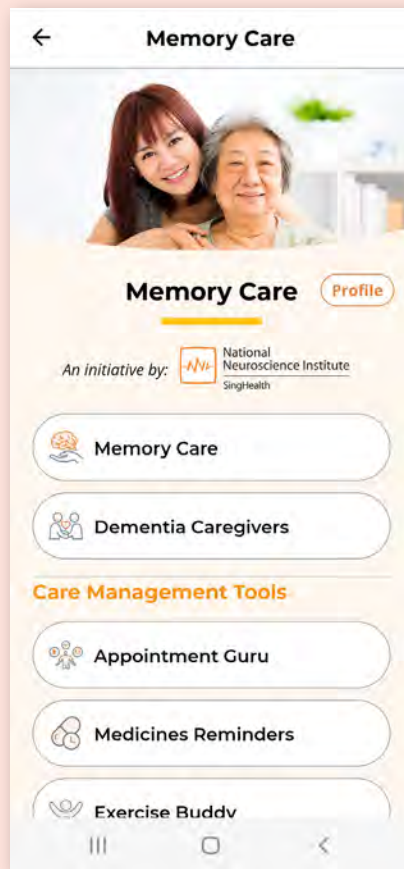
**NNI has two new apps on SingHealth's Health Buddy** to help patients and caregivers manage their conditions and provide easy access to reliable information. Both new apps include medication reminders, community resources and tools specifically designed for memory care and Parkinson's disease (PD).

**Memory Care** includes:

- **Memory checklist** to assess whether your forgetfulness is 'normal', or if you should see a doctor for further assessment
- **Well-being checklist** for caregivers, with a traffic light system to assess how they are coping and whether they need to seek help
- **Memory care tips and exercises** to protect and boost your memory

**Parkinson's Care** includes:

- **Symptom tracker** to help patients and caregivers monitor common complications of PD, so the healthcare team can adjust their treatment as the condition progresses. Symptoms tracked include:
  - ✓ When the effects of medication wear off
  - ✓ Falls
  - ✓ Body discomfort, e.g. aches, cramps
  - ✓ Bowel movements
  - ✓ Low blood pressure
  - ✓ Sleep
- **Videos and guides demonstrating exercises** useful for persons with PD, and an **exercise diary** for scheduling the exercises and setting reminders.



To download the SingHealth Health Buddy, scan the QR code

Seeing the doctor at the Specialist Outpatient Clinic at NNI@SGH Campus or NNI@TTSH Campus? **Skip the payment and pharmacy queues with Drop and Go!** Follow-up consultation bills can now be mailed to eligible patients so they do not need to wait to pay at the clinic, and free medication home delivery services are also available.

SCAN FOR DETAILS.



NNI@TTSH CAMPUS

SCAN FOR DETAILS.



NNI@SGH CAMPUS



Hi I'm Denni!  
Find out more  
about me on  
page 23.



# The three pillars of dementia care

Looking after someone with dementia can be challenging for caregivers, but knowledge, setting realistic expectations and routine can make it easier. Esther Chua, Nurse Clinician - Advanced Practice Nurse, Nursing, NNI, explains more.



**R**efusing to bathe or eat, screaming and not sleeping at night are common challenges faced by caregivers of persons with dementia. There are no quick fixes to prevent or stop such difficult behaviour, but getting to grips with the three pillars of dementia care and focusing on areas that can be controlled can reduce their frequency and caregiver stress.

## 1. Understand the disease

Dementia causes physical changes in the brain that limit the person's ability to think, plan, remember and communicate. This can be frustrating for the person with dementia, and their only means of sharing their likes and dislikes may be through shouting, screaming or lashing out. Sensitivity to noise and changes to taste and smell are common, so favourite foods may become flavourless, which can cause a person with dementia to lose interest and enjoyment in food. Such changes to the brain cannot be controlled, but caregivers can make adjustments to the environment and activities to reduce the risk of these changes causing challenging behaviour.

## 2. Lower expectations

Caregivers often remember their loved ones as they once were: independent, capable individuals who worked hard to support the family and/or kept everything running smoothly at home. This can make it difficult for them to accept that their loved ones cannot manage to do tasks that they were once good at, such as finding their way or remembering important dates. Basing expectations on a loved one's current abilities and preferences can help reduce frustration for both caregivers and the person with dementia.

## 3. Set a routine

Having a daily routine with engaging activities can help persons with dementia feel more secure, reduce agitation, and improve their sleep. It also allows caregivers to schedule time to take a break and recharge, which is important to prevent burnout. Establishing routines as soon as the person is diagnosed with dementia helps to reduce problems — such as refusal to bathe and being wide awake and active at night — as the condition progresses. For more about routines, see page 7.



## Linda Lim, Senior Nurse Clinician - Advanced Practice Nurse, Nursing, NNI, answers common questions about planning and keeping to routines for persons with dementia.



### Help! My father goes to bed at 9pm every night but he gets up at 2am and keeps waking me up asking for breakfast.

People with dementia often develop a sleep pattern that is not normal, so if your father goes to bed at 9pm, he will likely wake up while you are trying to sleep. The good news is that he is already in a routine, and good sleep can improve daytime function. You can try to gradually push his bedtime back until he goes to bed just before you

do. Keeping him actively engaged – through exercise or cognitive-stimulation activities – during the day and limiting naps to 20 minutes if they are needed will help him sleep better at night.



### Our helper says my mother is difficult to handle while I'm at work and I don't know what to do.

If you have a routine for your mother on the weekends, ask your helper to follow it, as this will help your mother feel more secure. Boredom and loneliness can also cause persons with dementia to 'act up', so it is important to factor in activities that she likes, that keep her engaged, and provide her company, such as:

- Going for a walk with your helper after breakfast or each meal
- Helping with the housework, e.g. peeling onions or cutting fruit in the kitchen while your helper is cooking a meal, sorting laundry/pairing socks
- Scheduling an hour every morning and afternoon for activities your mother enjoys, such as:
  - Puzzles
  - Crafts
  - Cooking and baking
  - Knitting and crochet
  - Gardening
  - Photography
  - Karaoke/playing the piano
- You may want to consider enrolling your mother in a dementia day care programme so that she can socialise and have a wider choice of activities. For more information, contact the Agency for Integrated Care (AIC): Tel: 1800 650 6060 or visit AIC Link to speak to someone face-to-face. A list of AIC Link locations is available on the AIC website: <http://www.aic.sg>

### My mother likes to go for a walk every morning after breakfast and is grumpy if she misses it, but we have a doctor's appointment scheduled for 9am. What should I do?

Try to change the doctor's appointment to later in the morning or in the afternoon so that your mother can still go for her walk. If this is not possible, adjust your routine to make time for the morning walk. Rushing someone with dementia can cause them to feel anxious and agitated, which can lead to uncooperative behaviour. So, you and your mother may need to start your day one to two hours earlier than usual to allow time for routine activities before leaving the house, depending on how much time is needed to travel to the appointment.



# To test or not to test?

If you have been diagnosed with a rare neurological condition, would you want to know whether it could be passed on to your children? Neurologists heading NNI's Genetics Services Clinic explain how this new service provides holistic management of hereditary neurological conditions.

Dr Chen Zhiyong



Dr Kaavya Narasimhalu



**L**aunched in September 2020, the Genetic Services Clinic offers genetic testing to patients and even their family members, on top of the usual neuroscience care NNI provides to help them manage their condition. These genetic tests determine whether a patient's condition was likely caused by a faulty gene, the likelihood of the gene being passed on to their children, and whether healthy family members also carry the gene and are at risk of developing the disease.

## Who should get tested

Clinicians usually recommend that the extended family gets tested for the gene if more than one family member has been diagnosed with the same condition, because this is a sign of a genetic cause. This would include siblings and children of siblings, whether they are already showing symptoms or not. However, each patient and family member must decide

whether or not to proceed with testing, based on their own unique circumstances and priorities.

"We notice a difference in attitude towards genetic disease among younger and middle-aged patients compared with patients who are older. While generalisations cannot be made, younger and middle-aged patients usually decide to go ahead with genetic testing because knowing the results may affect their family planning decisions and help them better understand the disease, including how it will likely progress," observed Dr Chen Zhiyong, Consultant, Neurology, and the programme lead at NNI @ Tan Tock Seng Hospital campus.

## Why get tested

With advancement in technology, new treatments and options for reproduction are now available. Knowing whether you have the condition and whether it can be passed down to your children allow you to take

the necessary action and make plans that are best for you and your family.

"Ten to 15 years ago, knowing you had a genetic condition may not have changed anything. But today, we have more solutions to offer patients, and these solutions have become more accessible and affordable," shared Dr Kaavya Narasimhalu, Consultant, Neurology, and the programme lead at NNI @ Singapore General Hospital campus.







Levinia Lim  
Genetic Counsellor,  
Neurology, NNI

## What to expect from genetic counselling

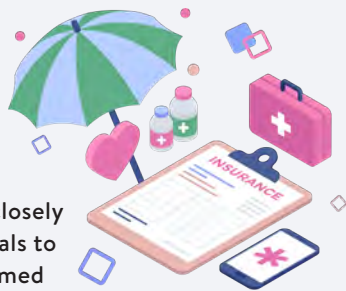
Before and after proceeding with genetic testing, patients undergo genetic counselling from either the clinician or genetic counsellor. Genetic counselling is a communication process that aims to help individuals and their families understand and come to terms with a potential or actual diagnosis of a genetic health condition and the impact it can have on their lives.

Here are some issues that are often discussed during genetic counselling:



**Medical implications** Your genetic counsellor will simplify complex information and analyse your family history for different kinds of diseases to assess the presence or chance of a genetic condition developing. He/she will also explain testing, management and treatment options so you are able to make informed decisions.

**Insurance** Before undergoing any clinical or genetic tests, it is usually recommended to first ensure you are sufficiently insured. The Ministry of Health (MOH) is working closely with healthcare professionals to come up with guidelines aimed at protecting the rights of individuals with genetic conditions. On 27 October 2021, MOH implemented new rules that prohibit insurers from asking for the results of predictive genetic tests except in very limited circumstances. This protects individuals from being excluded from insurance coverage for conditions detected during genetic testing. For more information, speak to your doctor or genetic counsellor.

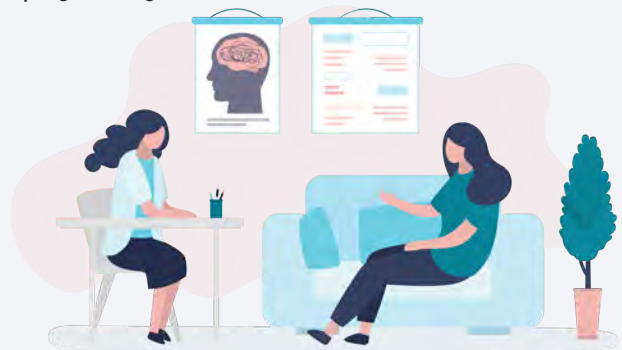


**Family** Genetic testing has implications on the individual, family members, and family planning. Your genetic counsellor can facilitate family discussions on the



next steps to ensure family goals are met, and to protect the wishes of all parties. This includes recommendations on who else in the family should get tested, non-disclosure of results if requested, and family planning options – such as preimplantation genetic diagnosis (PGD) to prevent the faulty gene from being passed down to the next generation.

**Mental well-being** For some, this process may bring about a surge of emotions, such as anxiety and even brief episodes of depression. If needed, you will be referred to a mental health specialist (e.g. psychiatrist or psychologist), who will then work together with you to seek closure, focusing on re-organising life and coping strategies.



# How knowing your genes can shape your life choices



Being diagnosed with a spinal cord disorder changed Ms Pamela Loh's life. Sessions at the NNI Genetics Clinic helped provide her with a clearer picture of how to manage life moving forward.

**T**hree years ago, Ms Pamela Loh\* suddenly felt an odd tingling sensation in the soles of her feet. After conducting her own research online, the 37-year-old marketing manager decided to consult an NNI neurologist, who suspected that Pamela had hereditary spastic paraparesis. This spinal cord disorder disrupts signals that the brain sends down the spinal cord to the muscles, resulting in muscle cramps, spasms and difficulty walking.

Things began to click in Pamela's head. Ever since she was a toddler learning to walk, she had always experienced issues with her gait. "My legs were weak and limp; I was always tripping and falling easily. This has followed me into adulthood," she shared.

## Confirming the diagnosis

At that time, Pamela and her husband

were exploring the idea of having children. Her neurologist referred her to Dr Kaavya Narasimhalu at the Genetics Clinic, NNI@SGH Campus, for genetic testing to confirm the diagnosis and discuss family planning issues. After discussing with her husband, Pamela decided to have the blood test.

The results confirmed that she carried the mutant gene for spastic paraparesis; if she became pregnant, there would be a 50% chance of her child inheriting that gene.

## Impact on family and family planning

Pamela shared her diagnosis with her immediate family members, all of whom decided to undergo genetic testing as well. Her brother's test came back positive, and they are now awaiting the results of his three-year-old daughter.

The next step for Pamela was to discuss the implications of her bearing a child. She was referred to NNI's partner hospital, KK Women's and Children's Hospital (KKH), where a clinical geneticist with experience in reproductive issues shared some options to minimise the chance of passing down the gene. These are:

- In-vitro fertilisation (IVF) to select eggs that do not carry the mutant gene
- Natural conception with subsequent placenta test to find out if the embryo carries the mutant gene

## Lifestyle changes needed

Besides worries about the well-being of her potential offspring, Pamela had more immediate concerns regarding her own health. The long-term effects of spastic paraparesis include worsening mobility and bladder issues, such as incontinence or urinary retention.

\* name has been changed to protect the patient's privacy

Pamela currently faces some level of uncertainty, as the disease's progression is not a fixed path.

While there is no cure, physiotherapy and exercise can help to improve muscle strength and relieve symptoms.

Pamela intends to take up yoga or Pilates together with her husband, and explore physiotherapy later this year.

“Although the results were not ideal, I am thankful that I decided to go for genetic testing. The silver

lining was that I finally had clarity on the cause of my walking issues. Knowing what is ‘wrong’ with my body allows me to take the right actions to minimise my symptoms,” said Pamela.

## Three examples of rare diseases seen at the Genetics Clinic



### Transthyretin (TTR) amyloidosis

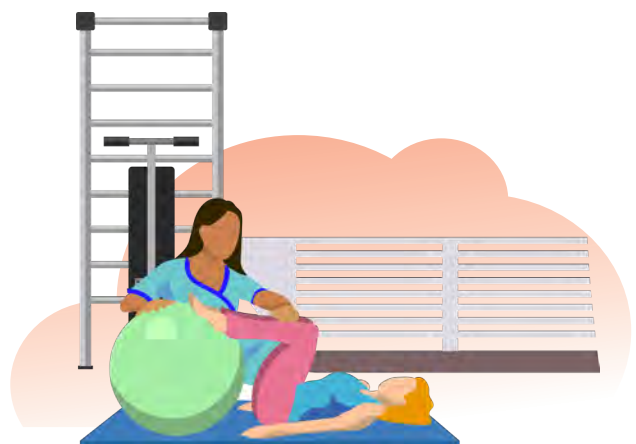
- A genetic mutation causes the liver to produce an abnormal protein called amyloid.
- Amyloid can build up in various organs, such as the heart, or in the nerves.
- This leads to organ failure or nerve problems.
- Previously, the only option was a liver transplant to stop the production of amyloid.
- New drugs are now available to stop the formation of amyloid.

### Young onset frontotemporal dementia

- This disease damages the lobes at the front and/or sides of the brain.
- It is more common in younger people with dementia than in older people.
- It results in changes in personality, behaviour and communication.
- Many drugs that aim to improve symptoms are currently on trial.

### Mitochondrial disease

- Mitochondria supply energy to cells.
- A genetic mutation results in mitochondria failing to produce enough energy for the body to function properly.
- The disease is usually passed down from mother to child.
- The disease can manifest differently, and symptoms can begin at any age.
- Symptoms include hearing loss at a young age, small stature, poor muscle development, and poor vision.
- Early detection is crucial – by the time patients suffer an attack and get diagnosed, their body would have already sustained some damage.
- Treatment includes vitamin supplements, physical exercise, and rehabilitation therapy.





# Why like that?

Understanding how NNI operates can make your clinic visits easier. Our Patient Service Associates answer eight questions commonly asked by patients and caregivers.

**Nur Hidayah Bte Azman**  
Patient Service Associate,  
Neuroscience Outpatient Clinic



## 1 Why do call centre staff ask for my NRIC number?

When you call us about an appointment or for medication refills, we need to make sure we access the correct patient details. Using your NRIC is the best way to do this because other patients may have the same name or birth date as you do.

**Tip:** State your NRIC number at the start of the call as this makes it easier for our staff to provide help.



## 2 Why can't I choose the date and time of my appointment?

Our doctors have set clinic days and sessions (mornings and/or afternoons) because they see patients at various hospitals. We will try to book your appointment on your preferred day and time based on the doctor's availability, but you may have to wait longer for an appointment. All first appointments are screened by our doctors; if they advise that your case is urgent, we will give you the earliest available slot. Our urgent slots are limited, so changing them is difficult.

## 3 I was told a doctor's memo would take a week or longer. Why is that so?

Memos can only be signed by the specialist who has treated the patient. Many of our doctors work at other hospitals across Singapore, and some are at NNI@TTSH Campus just one day a week; therefore, this is the only time they are able to sign memos.



## 4 Why can't my medicine be delivered the same day?

Public hospitals across Singapore provide free medication delivery from Mondays to Saturdays, except public holidays, but there are limited slots each day due to the availability of delivery services. It can take up to two weeks to get a delivery slot, so please check your medication supplies regularly and order refills early.

**Tip:** If you need medication refills urgently, we can arrange for you to collect the medication from the pharmacy, or for express delivery service (charged at \$8) if available.





**Pak Foong Peng Jennifer**  
Senior Patient Service Associate,  
Neuroscience Outpatient Clinic

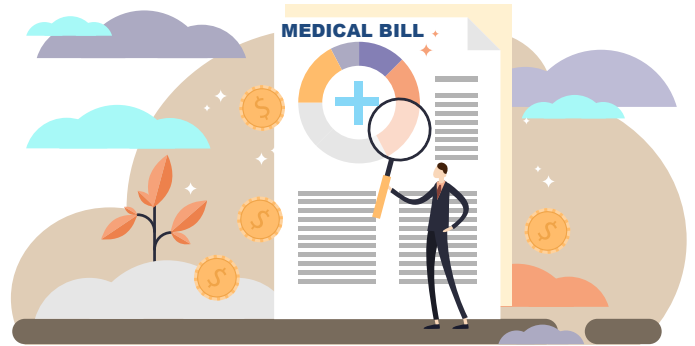
### 5 Why won't the doctor see me if I'm late?

Some of our doctors need to go to the wards, operating theatre, or attend meetings at the end of their clinic. If you know you are going to be more than 30 minutes late, please call us so we can check whether the doctor can wait for you. If this is not possible, we will rearrange your appointment to avoid you making a wasted journey.



### 6 Why does my helper have to wait outside the clinic?

Many of our patients are elderly and at risk of serious complications if they catch COVID-19. To prevent overcrowding and reduce this risk, only one accompanying person is allowed to enter the clinic with the patient, based on current MOH guidelines. Other family members and helpers must wait outside the clinic; if they need to assist the patient – e.g. to use the toilet – they need to swap places so there is only one accompanying person with the patient at all times.



### 7 Why can't the staff check my MediSave balance and deductions?

The billing system will immediately alert our staff if a MediSave claim is unsuccessful; for example, if there is not enough balance in the MediSave account or if the annual withdrawal limit has already been reached. These are the only details our staff can see – they cannot access your MediSave balance or details of previous deductions.

**Tip:** Contact the Central Provident Fund (CPF) Board to check your MediSave balance/usage:  
[www.cpf.gov.sg](http://www.cpf.gov.sg) (log in with SingPass)  
Tel: 1800 227 1188 (8am–5.30pm, Mon–Fri except PH)  
Visit a CPF Service Centre (by appointment only)



### 8 Why can't my medication charges be included in my clinic bill?

Medication billing is done separately by the pharmacy, because it is the only service with access to medication charges. To save time waiting to collect and pay for medication, ask our staff if you can use the free medication delivery service. You will be billed once the medication has been delivered. Payment can be made online, or at AXS/SAM machines and post offices.



Need more advice?  
Scan the QR code for  
our contact details.

# Life with hydrocephalus

When Dolly Leow noticed that she had become more forgetful, often losing her phone and car keys, her first suspicion was dementia.

There were other worrying signs, too. Dolly had trouble concentrating when reading, and was unable to walk in a straight line; when she walked, she felt as if someone was pushing her, making it difficult to control her momentum.

At the urging of her friend, who worried that she would one day suffer a severe fall, Dolly consulted a specialist at NNI. After a psychological test, magnetic resonance imaging (MRI) scan, and lumbar puncture, she was diagnosed with normal pressure hydrocephalus

(NPH), a condition that causes excess fluid to build up in the brain.

Dolly underwent shunt surgery to control fluid levels in her brain. Four months later — with the wonderful and loving support of her husband, and meticulous care from the clinical nurses — she was living life to the fullest again.

“I am glad I made the monumental decision to go for treatment and didn’t brush my symptoms off as just old-age problems. I urge everyone to listen to your body and take the

initiative to get checked if you notice something amiss,” she said. “It took a while to adjust to living with the shunt, but improvements in my walking, memory and concentration were rather instantaneous. It was like a new lease of life for me. Now, I hardly even notice that I have a shunt.”

Life has not slowed down for Dolly since her surgery. At 67 years old, she is still actively working with children — imparting literacy skills, sharing her love for reading, and telling stories.



Dolly at National Library Board's 398.2 Storytelling Festival



Dolly and her husband, Benedict, have two dogs, Munchkin and Mushu, whom she brings for walks daily



# Hydrocephalus: A rare but treatable cause of dementia

NNI sees 150–200 new cases of normal pressure hydrocephalus (NPH) every year. Dr Nicole Keong, Consultant, Neurosurgery, NNI, and Tan Bee Ling, Assistant Nurse Clinician - Advanced Practice Nurse, Nursing, NNI, share more about the condition.



Dr Nicole Keong

Our brain and spinal cord are surrounded by a clear liquid called cerebrospinal fluid (CSF), which cushions them from injury while bringing nutrients to and removing waste products from the brain. CSF is constantly being produced by the brain and absorbed into the bloodstream.

In people with NPH, CSF circulation becomes disrupted, resulting in excessive amounts of CSF building up in the brain's ventricles. Ventricles are hollow cavities located deep within the brain. Excess CSF in these fluid-filled cavities causes the ventricles to enlarge.

Correct diagnosis of NPH is essential to ensure appropriate management.

However, it is difficult to diagnose NPH due to the way scans are currently taken to check for enlarged ventricles in the brain. A joint study by NNI and Singapore General Hospital (SGH) led by Dr Keong may have found a new method that will hopefully simplify and improve diagnosis.

## Causes

The cause of hydrocephalus is usually unknown but could develop due to:

- Injury or trauma to the head or brain
- Infection
- Bleeding
- Tumour

## Signs & symptoms

- Problems with thinking and memory
- Balancing and/or walking issues that can result in falls and head injuries
- Inability to control bladder

Not all symptoms occur at the same time. Sometimes, only one or two are present.



Tan Bee Ling

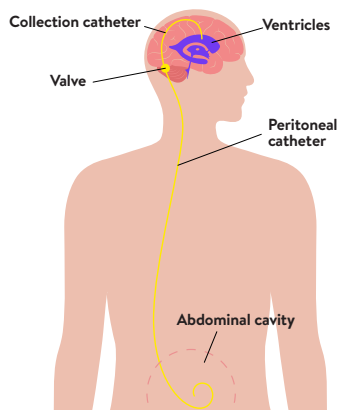
## TREATING NPH

NPH is an uncommon condition in the elderly, but symptoms may improve with shunt surgery. This involves inserting a permanent tube (shunt) into the enlarged ventricle to drain excess CSF. The shunt is placed under the skin and extends down the chest to the abdomen, where the excess fluid is absorbed. Patients, who will be on long-term monitoring after this procedure, can continue with their daily activities.

Catheter is inserted into the ventricle to drain excess fluid

Valve can be adjusted to increase or reduce the amount of CSF drained from the ventricles

The excess CSF is absorbed into the abdominal cavity



## What to take note of with a shunt

- Inform your healthcare professional you have a programmable shunt inserted before any scheduled MRI scans.
- Do not place any magnetic devices near the shunt, e.g. lying on magnetic pillow.
- Do not perform neck massages or acupuncture on the side of the shunt insertion.
- Inform your healthcare professional of your shunt insertion before any abdominal surgery or abdominal procedures.
- Always bring the shunt wallet card with you, especially for all medical appointments, so that the information can be updated after every shunt setting.

## Possible complications

- Decrease in attention
- Drowsiness
- Balancing problems
- Nausea and vomiting
- Headaches
- Giddiness
- Fever
- Redness, tenderness, pain or swelling of the skin along the shunt
- Vision impairments

If you experience a sudden worsening of these symptoms, proceed to the nearest Emergency Department. If the symptoms develop slowly over a few days to weeks, contact *NNI's Neuroscience Outpatient Clinic* at 6330 6363, Monday–Friday, 8am–5.30pm.

# When is a headache a migraine?

All migraines are headaches, but not all headaches are migraines. Dr Nancy Dang, Associate Consultant, Neurology, NNI, explains the different types of headaches and the unique features of migraines.

Dr Nancy Dang



**A** headache refers to pain in any region of the head. This complaint is very common –

around half to three quarters of adults in the world are reported to have suffered a headache in the past year.

There are several types and causes of headache; however, the most common are:

- **Tension headache** This is the most common type of headache, and has no other symptoms. Pain usually ranges from mild to moderate, and is often described as feeling like a tight band pressing on the forehead and around the head.
- **Cluster headache** A cluster headache always occurs on the same side of the head, usually over the eye or temporal region, accompanied by droopy eyelid, redness of the eye, tearing, nasal congestion, and/or restlessness or agitation.
- **Migraine** Migraine affects up to 12% of the general population, and is more common in women than men. The pain is usually moderate to severe, and has distinctive features not seen in other types of headaches.



## Distinctive features of migraines

A migraine typically lasts from four hours to three days, and goes through four phases:



- **Prodrome** Yawning, irritability and mood disturbance are frequently reported one to two days before the onset of headache.
- **Aura** About 25% of people with migraine experience aura, which is most often visual symptoms such as zig-zag lines, and sparkling or shimmering spots. Other aura symptoms can affect the sensory feeling, speech or limbs, which may cause difficulty speaking clearly or tingling in the face or hands. Aura symptoms usually develop gradually over a few minutes, and last less than one hour.
- **Headache** This is often on one side of the head. Pain can be moderate to severe, and is often described as throbbing. It is usually accompanied by other symptoms, such as nausea, vomiting and/or sensitivity to light or sound. Many people with migraine prefer to rest in a dark and quiet room during the headache attack.
- **Postdrome** Tiredness and lack of concentration after the headache has gone. This can last for one to two days.

## Preventing migraines

Every person is unique, but there are some common factors that can trigger a migraine. These include:



It is important to recognise headache triggers and avoid them as much as possible to reduce headache attacks. Keeping a headache diary and tracking when headaches occur, the type and intensity of pain, and what you were doing and eating before the headache attack can help

identify triggers and make it easier to describe your symptoms should you need to see a doctor.

Various headache diary apps are currently available on smartphones, which can make it more convenient for people to track their headaches.

## When to see a doctor

Most of the time, headaches and migraines are not harmful, and can be treated successfully with rest, painkillers, and lifestyle changes to avoid triggers. However, additional medication is sometimes needed to reduce headache attacks, and further investigations may be needed to check whether they are a symptom of another condition.



It is advisable to see your family doctor if your headaches:

- Happen frequently; e.g. at least once a week.
- Affect your normal daily activities or productivity, such as being unable to work or look after your family.
- Become more frequent or change; for example, more intense or different kind of pain compared to usual headache attacks.
- If you are over 50 years old and start having headaches.

Headaches can also be a symptom of other serious underlying conditions, such as a brain tumour, infections of the central nervous system, and increased pressure or bleeding in the brain. Seek medical attention as soon as possible if you have any of the following symptoms with a headache:



- Fever and chills
- Weakness or numbness in the hands, arms or legs
- Speech or swallowing difficulties
- Sudden onset of intense pain – known as a ‘thunderclap headache’
- Headache changes with intensity when the person changes position; e.g. lying down then sitting upright
- Blurry vision or pulsing ringing sound in the ears





# Celebrating 60 years in medicine

At 83 years old, Dr Charles Seah has performed a few thousand surgeries and trained generations of young doctors. This veteran is well-known among his colleagues for his precise surgical skills, tenacity and wicked sense of humour.

**T**hreaded a needle may be a challenge for many people in their 80s, but for Dr Charles Seah, it is the least of his abilities! Procedures that require extreme precision, such as cerebral bypass surgeries and tracheostomies, are all in a day's work for this octogenarian.

Dr Charles Seah, Senior Registrar, Neurosurgery, NNI, has built quite the career in medicine across six decades. In 2001, he provided much needed support to the newly established neurosurgery department at Changi General Hospital (CGH), one of NNI's partner hospitals. He has also trained many of Singapore's current neurosurgeons, including Professor Ng Wai Hoe, Chief Executive Officer, CGH, and Senior Consultant, Neurosurgery, NNI; and Associate Professor Ang Beng Ti, Head and Senior Consultant, Neurosurgery, NNI@SGH Campus.

"It's important to invest in the next generation and to give them



Dr Seah (right) operating on a patient with Dr Justin Ker, Associate Consultant, Neurosurgery, NNI

opportunities," remarked Dr Seah, whose style of teaching has certainly left an impression on his mentees. "I was trained by German doctors, who were very strict and precise, so this is how I teach now," Dr Seah laughed, sharing that his mentees

would jokingly lament about him hitting their hands when they made a mistake.

Dr Seah currently covers emergency cases at Sengkang General Hospital (SKH), another partner hospital of NNI, treating patients with conditions such as subdural haematoma (build-up of blood on the surface of the brain) and haemorrhagic stroke.

His career began in 1961, when the then 23-year-old Indonesian flew to Germany to study medicine. He specialised in general surgery, including vascular procedures and orthopaedic surgery. After 20 years, Dr Seah joined his brother in Singapore so that they could better care for their ailing mother.

Dr Seah joined Tan Tock Seng Hospital (TTSH) in 1981 as a Medical Officer despite his already extensive experience because his Bachelor's degree from Germany was not recognised



Gardening is one of many hobbies that keep Dr Seah busy outside of work; he grows his own starfruit and passion fruit

Dr Seah's strong work ethic, charisma and willingness to connect with people have won him the respect and affection of his colleagues:

“Charles has always maintained unwavering professionalism and dedication to the job. He's always willing to teach and share what he knows. What is even more worthy of respect is that he is disciplined in maintaining a healthy body and mind. He is truly an example to us all!”

— Dr Chen Min Wei, Associate Consultant, Neurosurgery, NNI

“Even as head of service, I am also inspired by Charles. He has a very keen sense of humour, which makes working with him more fun.”

— Dr Colum Nolan, Head of Neurosurgery, SKH, and Senior Consultant, Neurosurgery, NNI

“I have many fond memories of Charles, and truly respect his work ethic. My first encounter with him was when I was a medical student and heard a loud, gruff voice berating some doctors in a ward. I next met him when I became a neurosurgical trainee and saw how fiercely loyal to the department he was. When I became a consultant, he was assigned to my team; often, patients would assume he was the consultant and I, the registrar.”

— Assoc Prof Ang Beng Ti, Head and Senior Consultant, Neurosurgery, NNI@SGH Campus

“Uncle Charles is always the first to reach the hospital and the last to leave. He's always keen to teach the juniors, and he taught me my first burr hole procedure! He is a much-treasured grandfather of our NNI family, and we all want to know his secret to anti-aging!”

— Dr Wan Kai Rui, Associate Consultant, Neurosurgery, NNI

“Uncle Charlie has an amazing work ethic that would put many of us to shame. My early memories of working with him were of him taking me through trauma craniotomies, sometimes straddling from late at night into the wee hours of the morning! On the exterior, he is strict and hot-tempered, but underneath lies a soft and kind demeanour. He has taught many generations of neurosurgeons, and neurosurgery has certainly been enriched by his wisdom and experience.”

— Prof Ng Wai Hoe, CEO, CGH, and Senior Consultant, Neurosurgery, NNI



Dr Seah (left) and Dr Wan in the Operating Theatre (photo taken in 2017)

in Singapore. Fortunately, under the mentorship of Neurosurgery pioneers Dr Tham Cheok Fai and Dr Gopal Baratham, Dr Seah's value to the department did not go unnoticed. He taught neurosurgeons how to perform a carotid endarterectomy, a procedure to

remove fatty deposits that have built up in the carotid arteries in the neck. “Dr Tham fought to have me promoted,” recalled Dr Seah. “He was always kind to me and a good friend. Our colleagues would often joke that I'm his pet.”

Dr Seah retired in 2007, but missed the

adrenaline of emergency cases; two years later, he was back in action at NNI!

“I'm the sort of person who can't sit still, and needs to always be working. This is why I enjoy working in neurosurgery — everything is so dynamic and fast-moving. It keeps me healthy and sharp,” said Dr Seah.



# A passionate and vibrant leader in stroke care

Fu Liqing, Nurse Clinician, Nursing, NNI, received the Nurses' Merit Award 2021 for her outstanding performance and contributions to nursing.

**L**iqing's dream of becoming a nurse began when she was just a child. "I was a Red Cross cadet in primary and secondary school. The sense of satisfaction after I had helped or cared for people inspired me to be a nurse," she recounted.

Today, Liqing plays a pivotal role in improving stroke care, from the emergency department to community. Every minute matters in the treatment of stroke. Liqing strives to ensure patients receive the treatment they need in the shortest time possible. Her most recent project reduced waiting times for transthoracic echocardiogram, a heart monitoring test, in the acute stroke unit.

Recognising the importance of teamwork, Liqing mentors and delegates duties to her teammates, empowering them and helping to develop their skills. "As a committed and passionate nurse leader, Liqing has easily gained the respect of her junior nurses. We can always rely on her to infuse energy into her team," remarked her supervisor, Dr Ng Wai May, Deputy Director and Advanced Practice Nurse, Nursing, NNI.

Liqing also ensures that patients continue to receive the care they need when they are out of the hospital, working closely with Ang Mo Kio Thye Hua Kwan Community Hospital and Tan Tock Seng Hospital's rehabilitation department. In her own time, Liqing also volunteers with the Singapore National Stroke Association to raise awareness about stroke prevention and management.

Her impact on stroke care extends beyond Singapore. In 2015 and 2017, she volunteered with a group of allied health professionals in Myanmar and Vietnam, where Liqing and her team inspired nurses to take on roles usually performed by doctors, such as patient assessment.

With so many commitments, Liqing channels her passion for nursing and stroke care to keep going, quoting Oprah Winfrey, "Passion is energy. Feel the power that comes from focusing on what excites you."



Liqing teaching Burmese nurses about stroke assessment in 2017



# The pursuit of better neuroscience care

Five NNI clinicians and researchers have received the National Medical Research Council (NMRC) awards for their innovative and impactful research. Read on to find out more about their projects and how they benefit patient care.

“Currently, there is no specific test to diagnose Parkinson’s disease (PD), so I’m studying specific microRNAs and immune markers to see if they can be used as biomarkers to determine if a person has PD or is likely to develop it. This will speed up diagnosis so patients can get faster access to treatment to help them manage their condition.”



**Clinician Scientist Award – Investigator**  
**Dr Chao Yinxia**  
Junior Principal Investigator, Research

“Alzheimer’s disease (AD) and vascular dementia (VaD) are the two most common types of dementia. However, research to identify associated risk genes, which increase the chance of developing these dementias, are usually conducted on Caucasians. As Asians may have different risk genes of AD and VaD from Caucasians, my study aims to identify those risk genes that are unique in Singapore. This will help us better understand the biological disease processes of AD and VaD in our population to more accurately identify those at higher risk of developing AD and VaD, allowing for early treatment.”



**NMRC Research Training Fellowship**  
**Dr Ng Kok Pin**  
Consultant, Neurology

“The key to unlocking the mystery behind some autoimmune diseases could lie in our gut. New evidence suggests that an imbalance of the bacteria in our gut can lead to inflammation in the blood and in the brain through various processes. My research focuses on the link between gut health and brain inflammatory conditions such as multiple sclerosis and neuromyelitis optica spectrum disorder, and if targeting specific gut bacteria or their biochemical products can improve patient outcomes.”



**Transition Award**  
**Dr Yeo Tianrong**  
Consultant, Neurology

“Within the brains of people with Parkinson’s disease (PD) are the abnormal accumulation of a protein called  $\alpha$ -synuclein. My research has identified a few genes that regulate the accumulation of this protein, and I aim to further investigate these genes to hopefully identify new drug targets in the treatment and prevention of PD.”



**Open Fund - Young Individual Research Grant**  
**Dr Xiao Bin**  
Senior Research Fellow, Research

“Essential tremor, the uncontrollable shaking of the hands, is one of the most common brain disorders. We know which specific regions of the brain are abnormal in essential tremor, but not why. I’m studying whether these changes in the brain can be measured using magnetic resonance imaging (MRI); if they can, then this could lead to more accurate diagnosis and discovery of genetic or imaging targets for new treatments.”



**Open Fund - Young Individual Research Grant**  
**Dr Thomas Welton**  
Senior Research Fellow, Research

# Celebrating our National Day Award recipients

Congratulations to all NNI staff on receiving the National Day Awards 2021. Thank you for your dedication in caring for the nation and for advancing neuroscience care for a better tomorrow.

## PUBLIC ADMINISTRATION MEDAL (BRONZE)



**Assoc Prof Ang Beng Ti**  
Head and Senior Consultant,  
Neurosurgery,  
NNI@SGH Campus



**Assoc Prof Deidre Anne De Silva**  
Head and Senior Consultant,  
Neurology,  
NNI@SGH Campus



**Assoc Prof Josiah Chai**  
Head and Senior Consultant,  
Neurology,  
NNI@TTSH Campus

## COMMENDATION MEDAL

**Desmond Peter Khoo**  
Deputy Director, Operations

**Lee Sock Gek**  
Deputy Director, Finance

## EFFICIENCY MEDAL

**Chan Wai Yee**  
Nurse Clinician, Nursing

**James Tan**  
Senior Principal Radiographer, Neuroradiology

**Janis Tye**  
Senior Nurse Clinician - Advanced Practice  
Nurse, Nursing

## THE LONG SERVICE MEDAL

**Prof Louis Tan**  
Director of Research and  
Senior Consultant, Neurology

**Dr Rajinder Singh**  
Senior Consultant, Neurology



**Dr Adeline Ng**  
Deputy Director  
(Clinical Research) and  
Senior Consultant,  
Neurology

## SINGHEALTH EXCELLENCE AWARDS 2021 DISTINGUISHED YOUNG RESEARCHER AWARD

Dr Adeline Ng has developed and pioneered research into niche areas of dementia and neurodegenerative disorders for improved clinical diagnosis. These include the discovery of novel genetic loci as potential pathogenic causes for rarer forms of neurogenetic disorders and Young Onset Dementia, and biomarker analyses using novel methods to study low levels of target proteins in blood and cerebrospinal fluid in persons with dementia and Parkinson's disease.

## GCEO EXCELLENCE AWARD 2021 OUTSTANDING EDUCATOR

Dr Jai Prashanth Rao is a strong believer in the importance of effective education across healthcare professionals, from medical students to specialist trainees. He is currently Director of the SingHealth Neurosurgery Residency Programme and is in charge of nationalising the programme in partnership with the National University Health System. Dr Jai is currently studying interprofessional collaborative practice (IPCP) in NNI, and is applying his learning by redesigning the Traumatic Brain Injury programme to advance patient care.

**Dr Jai Prashanth Rao**  
Senior Consultant,  
Neurosurgery





# Meet Denni, our NNI Fund ambassador!

Denni is a young neuron who is passionate about science and making new discoveries to improve the lives of others.

## 向您介绍丹尼(Denni)，我们 国立脑神经医学院保健基金的大使！

丹尼是一个年轻的神经元，他对科学充满热忱，也热衷于通过新科研发现改善他人的生活。

### Fun Fact!



### 趣闻趣事!

Denni's name is a combination of 'Dendrite', which is the branched extension of a neuron, and 'NNI'.

丹尼的英文名Denni是“Dendrite”也就是神经元的延伸部分，以及“NNI”国立脑神经医学院的缩写这两组词汇的结合体。

Denni bumped into a friend at the mall.  
丹尼在购物中心碰见朋友。

Hi, how are you?  
Hi! 你最近还好吗?

Hi Denni, I'm well but my friend's dementia is getting worse.  
Hi 丹尼, 我还好! 但我的朋友痴呆症越来越糟糕。



Oh dear, that sounds tough for him and his family.  
哎哟, 这对他和家人来说一定不容易。

He's only 45 and he had to leave his job because he couldn't cope.  
他才45岁而已但不得不辞职, 因为他应付不过来。



Hey maybe NNI Fund can help!  
或许国立脑神经医学院保健基金可以有所帮助!

Really? Tell me more.  
真的吗? 能怎么帮呢?



NNI Fund supports patient care, innovative research and advanced medical education.  
国立脑神经医学院保健基金有助于患者护理, 研究以及医学教育。

That sounds great!  
那太棒了!



This is what you can do to help too!  
您也可以帮助!

“Be a Neuro Hero”  
“做脑神经英雄”

Like & share NNI Fund Facebook page.  
在我们的面簿专页点赞和分享。  
[facebook.com/nnifund](https://www.facebook.com/nnifund)

Learn more about neurological conditions.  
多了解脑神经疾病。

Donate to support.  
慷慨解囊, 做出善款。







# 失智症护理的三大支柱

照顾失智症患者对看护者来说是一项巨大的挑战，不过如果能具备相关的护理知识、设定务实的期望和生活习惯，这有助让看护工作变得较轻松。国立脑神经医学院护理部高级临床专科护士蔡爱玲为您进一步说明讲解。



**失**智症患者不肯洗澡或吃饭、发脾气大声嚷嚷和晚上不肯睡觉，这些都是大多失智症患者的看护者经常面临的挑战。要预防或遏制这种行为没有快速简易的妙方，不过看护者若能掌握失智症护理的三大支柱，并把重点放在可以控制的问题，这将有助减少患者出现这些行为的频率，同时还可减轻看护者的压力。

## 1. 理解失智症

失智症导致人类的大脑出现变化，限制了患者思考、规划、记忆和交流的能力。对失智症患者来说，这是一种令人感到沮丧的过程，而他们只能通过大声喊叫、尖叫或发脾气来表达他们的喜恶。不少患者也会对噪音敏感，而且味觉和嗅觉会产生变化，所以他们以往最喜欢的食物可能变得清淡无味，这可能导致失智症患者对食物失去兴趣，不再享受用餐的过程。这些大脑内出现的变化无法控制，但看护者可以对他们的生活环境和进行的活动作出调整，以减少这些变化引发具挑战性行为的

## 2. 降低期望

看护者很多时候都记得亲人过去的模样：个性独立又具备能力，含辛茹苦地工作以维持家计/或把整个家打理得井井有条。看护者可能因此难以接受亲人无法像以往那样做他们曾经擅长的事，如认路回家或记住重要的日子。看护者若能根据亲人当前的能力和喜好调整对他们的期望，这将有助减少看护者和失智症患者的挫败感。

## 3. 设定日常生活规律

给失智症患者设定日常生活规律，安排一些互动性活动，有助加强失智症患者的安全感、避免他们出现躁动不安的行为，而且还可以改善他们的睡眠。看护者还能借此安排时间让自己休息和充电，避免看护者出现倦怠现象。看护者不妨在失智症患者被诊断出患病之时，就立即为他们建立日常生活规律，这有助避免患者因病情逐步恶化而出现行为上的问题——例如拒绝洗澡和日夜颠倒，到了半夜还依然清醒和活跃。更多有关如何建立日常生活规律的信息，请参阅第7页。



## 国立脑神经医学院护理部高级临床专科护士林丽云回答一些关于如何为失智症患者设计和维持日常生活规律的常见问题。



**求助! 我父亲每天晚上9点睡觉, 不过他会在凌晨2点就醒来, 然后把我叫醒, 要求吃早餐。**

失智症患者往往会有不正常的睡眠规律, 所以如果您父亲习惯晚上9点睡觉, 他很可能在您想睡觉的时候醒来。好消息是, 他已经形成了生活规律, 而如果能确保他维持良好的睡眠习惯, 这将有助改善他在白天的功能。您可以尝试将他的睡觉

时间逐步往后推, 直到他在您刚要就寝之前入睡。让他在白天积极地参与运动或认知刺激活动, 如有需要也可把他白天小睡的时长限制在20分钟以内, 这将有助于他在晚上睡得更好。



**我的帮佣说我母亲在我上班时出现很难应付的行为, 我不知道该怎么办。**

如果您为母亲制定周末生活规律, 那就请您的帮佣遵守这个规律, 因为这将有助让您的母亲感到更有安全感。失智症患者有时会在感觉无聊和孤单时“发作”, 所以安排一些她喜欢的活动很重要, 在陪伴她的同时还能让她跟看护者有些互动, 比如:

- 吃了早餐后或用餐后与您的帮佣一起去散步
- 让她帮助做些家务, 例如, 当您的帮佣在做饭时, 让她也留在厨房里剥洋葱或切水果、整理衣服/配对袜子。
- 每天上午和下午安排一个小时的时间, 进行您母亲喜欢的活动, 例如:
  - 拼图
  - 制作手工
  - 烹饪和烘焙
  - 针织和钩织
  - 园艺
  - 摄影
  - 唱卡拉OK/弹钢琴
- 您也可以考虑安排您的母亲到失智症日间护理中心, 让她有机会与他人社交, 而且她在中心还有更多的活动选择。欲了解更多有关失智症日间护理中心的详情, 请联系护联中心 (AIC)。询问电话: 1800 650 6060或到访护联资讯站 (AIC Link) 与工作人员面谈。护联资讯站地址列表可到护联中心网站上查找: <http://www.aic.sg>

**我母亲喜欢每天早上吃完早餐后去散步, 如果错过了就会很暴躁, 但是我们预约复诊的时间刚好是上午9点。我应该怎么办?**

建议您尝试把复诊的时间改在上午早些时候或下午的时段, 这样您母亲就依然可以照常去散步。如果无法更改预约复诊的时间, 那您可以尝试调整您的生活规律, 提早起床以确保出门复诊前有时间出外晨运。催赶失智症患者会导致他们感到焦虑和烦躁, 这可能会导致他们出现不愿配合的行为。建议您和您的母亲比平时提早一到两个小时起身, 计算好前往诊所复诊所需的时间, 以便预留充足的时间进行日常活动。



# 验还是不验？

如果您被诊断出患有罕见的神经系统疾病，您会不会想知道疾病是否会遗传给您的孩子？领导国立脑神经医学院遗传学服务诊所的脑神经内科医生向大家介绍，这项新服务能够如何帮助人们全方位应对遗传性神经系统疾病。



陈智勇医生



卡瓦亚·娜拉西姆哈鲁医生

**成** 立于2020年9月的遗传学服务诊所，可以为患者甚至其家人提供基因检测。这是国立脑神经医学院为患者提供脑神经科护理以外的另一项服务，以帮助他们应对病况。这些基因检测可用以确定：患者的病情是否是一个有缺陷的基因所导致、患者将基因传给他们的孩子的可能性，以及健康的家庭成员是否也带有该基因并存在患上这个疾病的风险。

## 谁应该接受检测

如果有一名或多名家庭成员被诊断出患有同样的疾病，医生通常会建议患者的大家庭成员接受基因检测，因为这显示疾病可能跟遗传因素有关。所谓的大家庭成员就包括患者的兄弟姐妹以及他们的孩子，无论他们是否已经出现患病的症状。不过当然，每一名患者和其家庭成员可以根据他们自

己的情况和优先考量来决定是否要接受测试。

据陈国立脑神经医学院（陈笃生医院院区）脑神经内科顾问医生兼神经病学项目负责人陈智勇观察：“我们注意到年轻和中年患者对遗传病的态度，跟年长患者有所不同。虽然不能一概而论，但是我们发现年轻和中年患者通常会选择接受基因检测，因为他们认为检测结果可能会影响他们的生育计划，也有助于他们进一步了解这种疾病，以及疾病的病程发展。”

## 为什么要接受检测

随着医学科技不断进步，大家现在有了更多新的治疗方法和不同的生育方式。要是知道自己患有疾病，而病况会遗传给自己的孩子，您可以采取必要的行动以做出对您和您的家人最有利的安排。

国立脑神经医学院（新加坡中央医

院院区）脑神经内科顾问医生兼神经病学项目负责人卡瓦亚·娜拉西姆哈鲁（Dr Kaavya Narasimhalu）指出：“换做是在10到15年前，患者即使知道自己患有遗传性疾病也不太可能作出什么改变。不过现在，我们可以给患者提供更多不同医疗方案，而且还可以让他们更轻易获得以及负担得起这些医疗方案。”







林乐敏  
国立脑神经医学院  
神经内科  
遗传咨询师

## 遗传咨询过程

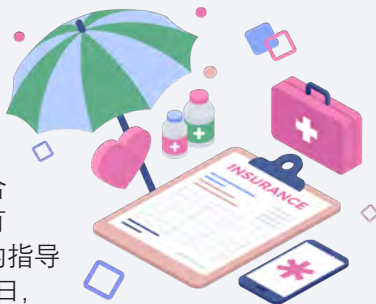
无论在进行基因检测之前和之后，患者都必须接受医生或遗传咨询师的遗传咨询。遗传咨询的目的是要帮助患者和其家人理解并接受可能患有或已经患上遗传病况的诊断结果，以及病况可能对他们的生活产生的影响。

以下是在遗传咨询中经常讨论的一些问题：



**遗传性病况说明** 您的遗传咨询师会为您简化复杂的医学信息，并详细分析您的家族病史，以评估您的家族中是否有遗传性疾病以及出现遗传性疾病的概率。他/她还将向您讲解分析可供您选择的检测、应对和治疗方案，帮助您做出知情的决定。

**保险** 在接受任何临床或基因检测之前，建议您首先确保自己已投保足够的医疗保险。卫生部正在与医疗保健专业人员密切合作，制定旨在保障患有遗传疾病者个人权利的指导方针。2021年10月27日，卫生部推出了新规定，禁止保险公司要求投保人提供预测性基因检测的结果，只有在非常有限的特定情况下才允许业者这么做。这有助于避免任何人因基因检测发现的疾病而被保险业者拒保。欲了解更多详情，请向您的医生或遗传咨询师查询。



**家庭** 基因检测对个人、其家庭成员和生育计划都会产生影响。您的遗传咨询师可以协助引导您与家人讨论下一步该采取的行动，以确保您与配偶能实现组织家庭的人生目标，同时也确保各方的意愿获得尊重。这包括建议家中还有哪些家庭成员应该接受检测、遵照家庭成员的意愿不透露检测结果，以及为那些计划生育的家庭成员提供植入前遗传学诊断等检测选择，以防止有缺陷的基因传给下一代。



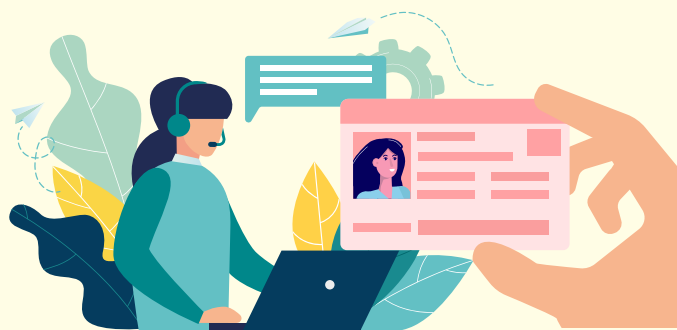
**心理健康** 对一些人来说，这整个过程可能会导致患者感到十分焦虑，甚至可能引起短暂的抑郁症。如果有需要，您可能会被转介到精神科医生或心理学家等心理健康专家处就诊，他们会帮助您应对这些情绪问题，帮助引导您把重点放在重新安排生活和制定应对病况的策略。



# 为什么会这样？

了解国立脑神经医学院如何运作将有助让前来求诊的您带来更大的方便。我们的病人服务助理在此为病人和看护者常问的8道问题提供解答。

努尔·希达亚·布特·阿兹曼  
病患服务助理  
脑神经科门诊部



## 1 为什么诊所专线的工作人员会要求我提供身份证号码？

当您拨电给预约看诊或填补药物时，我们在查找您的资料时，必须确定我们找出的是正确的病人资料。使用您的身份证号码进行查核最为准确，因为其他病人可能与您有相同的名字或出生日期。

**贴士：**请在通话开始时就向工作人员说明您的身份证号码，这有助我们的工作人员更快地为您提供所需的服务。



## 2 为什么我不能选择预约看诊的日期和时间？

我们的医生都有固定的门诊日和时段（上午和/或下午），因为他们需要到不同的医院看诊。我们会根据医生的时间，尽量在您选择的日期和时间为您预约看诊，但您可能需要等待更长的时间才能获得您想要的预约日期和时间。所有的首次预约都由我们的医生进行筛选；如果他们认为您的病况紧急，我们会给您安排最早的看诊名额。由于我们的紧急名额有限，所以我们很难为患者改期，敬请谅解。

## 3 要索取医生签发的证明需要一个星期或更长的时间。为什么会这样？

医生证明只能由病患的主治医生签发。我们大多数的医生都在新加坡的各大医院看诊，有些医生每周只有一天在国立脑神经医学院（陈笃生医院院区）值班；因此，他们只有这天才能够为病患签发医生证明。



## 4 为什么我的药物不能在看诊后当天送到我家？

新加坡各大公共医院都有为病患提供免费送药的服务，我们会在星期一至星期六提供配送药物服务，公共假期除外，不过由于每天的配送名额有限，因此我们恐怕无法在病患看诊当天就把药物送到府上。病患一般需要等上两个星期的时间才能获得送药时段，所以请务必定期检查您的药物供应是否充足，尽可能尽早订购填补药物。

**贴士：**如果您急需填补药物，我们可以安排您到药房取药，若真的迫切需要快递服务，我们也可以为您安排，不过每趟收费8元。

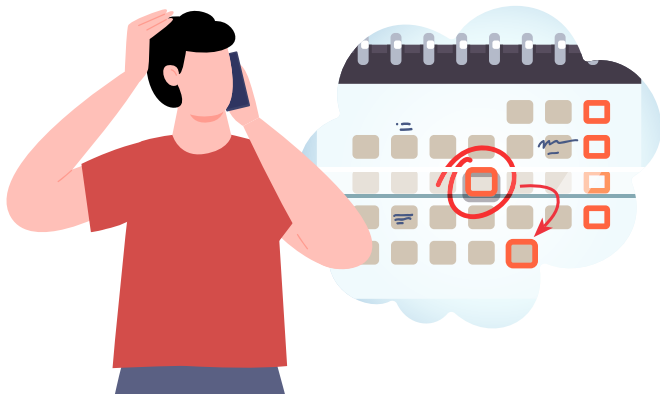




白凤萍  
高级病患服务助理  
脑神经科门诊部

## 5 要是我迟到，为什么医生不给我看诊？

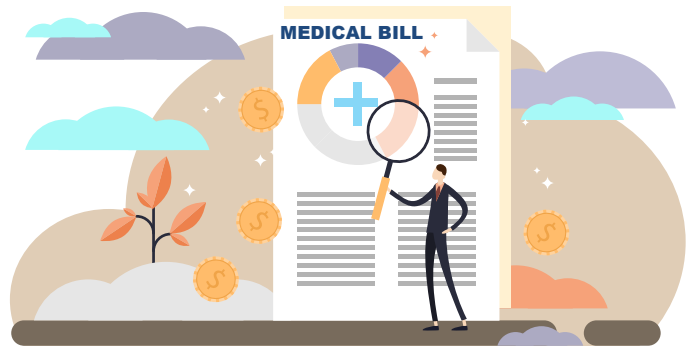
我们的医生需要去病房巡视病患、到手术室动手术，或者在门诊结束后出席会议。如果您预计自己会迟到超过30分钟，请拨电通知我们，以便我们查看医生是否有时间可以等您来看诊。如果医生没法等候，我们会给您另行安排预约看诊的日期和时间，以免您白跑一趟。



## 6 为什么我的帮佣只能在诊所外等候？

我们的病患当中有不少老年人，他们感染了冠状病毒后出现严重并发症的风险较高。为了降低冠病毒传播的风险，我们避免让太多人在诊所内等候。根据卫生部目前的指导方针，

我们只能让每名病患在一名看护者的陪同下进入诊所，其他家人和帮佣必须在诊所外等候；如果他们需要协助病患，如扶助病患上厕所，他们就必须跟陪同病患的看护者交换位置，以便遵守任何时候都只能有一个看护者陪同病人的规定。



## 7 为什么诊所的工作人员不能代我查看我的公积金保健储蓄余额和扣款情况？

如果您申请使用保健储蓄付款不成功，例如，如果保健储蓄户头内没有足够的余额，或者已经达到年度提款顶限，我们的付款系统就会立即通知我们的工作人员。但是我们的工作人员只可以看到这些细节，他们没有权限查看您的保健储蓄余额或之前的扣款细节。

**贴士：**您可以通过以下方式联系中央公积金局，查询您的保健储蓄余额/使用情况。

网站：[www.cpf.gov.sg](http://www.cpf.gov.sg)（请用电子政府密码SingPass登录）

拨电：1800 227 1188（星期一至星期五上午8时至下午5时30分，公共假期除外）

亲自前往公积金局服务中心（只有有预约者）



## 8 为什么我的药费不能跟看诊的账单一并计算？

药费是由药房分开处理，因为只有药房才知道药费多少。为了节省等待取药和付款的时间，请向我们的工作人员询问您是否可以使用免费的药物配送服务。一旦药物送达，您就会接获药费的账单。您可以选择上网付款，也可以使用AXS/SAM自助机转账或亲自到邮政局付款。



还有更多疑问？  
扫描QR维码，查看  
与我们联系的方式。



# 怎么样的头痛才算是偏头痛？

所有的偏头疼都是头痛，但不是所有的头痛都属于偏头疼。国立脑神经医学院脑神经内科助理顾问医生党佼佼为大家讲解不同类型的头痛和偏头痛的特点。



党佼佼医生

**头**痛指的是头部任何部位感觉疼痛的状况，这种状况非常普遍。据报道，世界上大约有一半到四分之三的成年人在过去一年曾感觉头痛。

道，世界上大约有一半到四分之三的成年人在过去一年曾感觉头痛。

头痛分几种类型和原因，但最常见的是

- **紧张性头痛** 这是最常见的头痛类型，而且通常没有其他症状。疼痛程度可以从轻度到中度不等，患者通常形容头部像是有一条紧箍圈绑着额头和头部周围。
- **集束性头痛** 集束性头痛总是发生在头部的同一侧，通常在眼睛或颞部上方，伴有眼睑下垂、眼睛发红、流泪、鼻塞和/或不安或烦躁。
- **偏头痛** 估计有多达12%的普通人有偏头痛的问题，而且有偏头痛的女性比男性更常见。偏头痛的疼痛程度通常介于中度到重度，具有其他类型头痛所没有的独有特征。



## 偏头痛的独有特征

偏头痛通常持续4小时至3天，分四个阶段：



- **前驱症状** 在头痛发作前1至2天，患者会经常打哈欠、烦躁和感觉情绪不安。
- **先兆症状** 大约25%的偏头痛患者会出现先兆症状，最常见的是视力障碍，如看见之字形线条、闪光或光点。其他先兆症状会影响感觉、语言或肢体，这可能包括说话不清楚，或是面部或手部有针刺的感觉。先兆症状通常在几分钟内慢慢加强，通常持续不超过一个小时。
- **前驱症状** 在头痛发作前1至2天，患者会经常打哈欠、烦躁和感觉情绪不安。
- **头痛症状** 通常是在头部的一侧感觉疼痛。疼痛可以介于中度到重度，经常被形容为“抽痛”。它通常伴有其他症状，如恶心、呕吐和/或对光线或声音敏感。许多偏头痛患者在头痛发作时喜欢在黑暗和安静的房间里休息。
- **前驱症状** 在头痛发作前1至2天，患者会经常打哈欠、烦躁和感觉情绪不安。
- **后期症状** 偏头痛发作后会感觉疲倦和注意力不集中。这可能持续一天到两天。

## 预防偏头痛

每个人的情况都有所不同，但有一些共同的因素会引发偏头痛。这些因素包括：



正确辨认出诱发头痛的原因，并且尽可能避开这些导因有助减少头痛发作的频率。建议您保存一份头痛日记，记录下头痛发生的时间、疼痛的类型和强度，以及头痛发作前您在做些什么和吃些什么，这些信息有助识

别头痛的诱因，并在您需要看医生就医的时候描述您的症状。

目前，智能手机上可以找到各种头痛日记的应用程序，方便人们追踪记录他们头痛发作的次数和情况。

### 何时看医生

很多时候，头痛和偏头痛是无害的，患者可以通过改变生活方式避免头痛发作，或是多加休息和吃止痛药来缓解头痛。然而，有时患者需要额外的药物来减少头痛发作的频率，并且可能需要做进一步的检查，以检查这是否是其他疾病引发的症状。



如果您的头痛属于以下类型，建议您去看您的家庭医生就医：

- 经常发生；例如，每周至少一次
- 影响您的日常活动或工作效率，如无法工作或照顾家人
- 变得更加频密或出现变化；例如，与平时的头痛发作相比，疼痛更加强烈或有所不同
- 如果您的年龄超过50岁并开始出现头痛问题。

头痛也可能是脑瘤、中枢神经系统受感染和脑内压力增加或出血等严重潜在疾病的症状。如果您在头痛的同时出现以下症状，请尽快就医：



- 发烧又发冷
- 手、胳膊或腿部感觉无力或麻痹
- 说话或吞咽困难
- 突然出现的剧烈疼痛，也就是俗称“雷鸣般的头痛”
- 当患者转换身体姿势时，头痛会加强，例如原本躺着然后坐直
- 视线模糊或耳鸣



# Bringing care closer to you

Living with dementia, stroke, and other brain and nerve conditions is challenging.

That's why we bring care closer to you.

NNI specialists are based at six hospitals across Singapore, making it easier for you and your loved ones to receive treatment.



National  
Neuroscience Institute  
SingHealth

Find out more about NNI online:

 [www.nni.com.sg](http://www.nni.com.sg)  [nni.sg](https://www.facebook.com/nni.sg)  [nni.sg](https://www.instagram.com/nni.sg)  National Neuroscience Institute

## Contact information

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Email: [appointments@sgh.com.sg](mailto:appointments@sgh.com.sg)

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Children's Hospital  
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Singapore 229899  
Appt Tel: (65) 6294 4050

### NNI @ KTPH

Khoo Teck Puat Hospital  
90 Yishun Central  
Singapore 768828  
Appt Tel: (65) 6555 8828

### NNI @ SKH

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