

# Raffles HealthNews

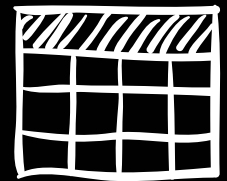
A PUBLICATION BY *RafflesMedicalGroup*

## DIABETES SPECIAL

### THE WAR WITH DIABETES

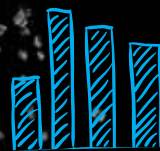
**SMART SELF  
MANAGEMENT  
TECH**

**Healthy  
Eating  
In & Out**



**PLAN YOUR WAY  
TO GOOD HEALTH  
AND FITNESS**

**Living with  
Diabetes**



**The Glycaemic  
Index (GI) Chart**



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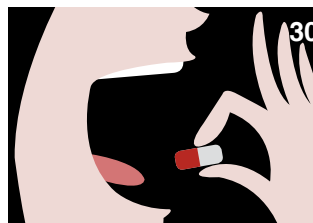
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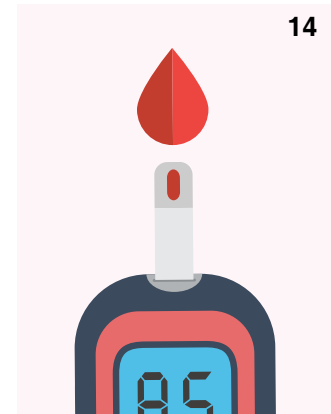
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Raffles HealthNews is published by Raffles Medical Group Ltd  
585 North Bridge Road, Raffles Hospital #11-00, Singapore 188770  
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Printed by XPOPRINT(ASIA) Pte Ltd

Issue 04 - November 2017

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# Hello Readers!

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Foot care tips to prevent feet problems and protect your feet.

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## Smart Self-Management Tech

Find out how you can gain control of your health condition with current tech devices.

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## Soothe the Frozen Shoulders

Recommended exercises to soothe frozen shoulders, a common condition in diabetic patients.

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Have you ever had second thoughts about reaching out for that after-dinner dessert, worried about the sugar level of that piece of cake? Well, although sugar level is linked to diabetes, it is more than that.

The rising numbers in diabetic patients had the Government declaring war with the disease in August last year. In Prime Minister Lee Hsien Loong's National Day Rally speech this year, he highlighted the seriousness of diabetes, and why we should be alerted, citing worrying figures (one out of nine Singaporeans are diabetic). This issue, we dissect and look into this health crisis on diabetes.

In our cover story, find out how to prevent diabetes and protect the younger generation from obesity, which will increase the risk of diabetes, when they grow up (pages 10 to 13). We also bring you a brand new Smart Health section, whereby we cover the latest technology in the medical industry. Take a look at the new drugs available for type 2 diabetics on pages 30 to 31.

If you are already diagnosed with diabetes, we tell you how you can still live your life to the fullest (pages 16 to 17) and what the complications of this chronic disease are (pages 14 to 15). One of the important aspects of controlling and preventing diabetes is exercise, if you are not sure how to start, take a look at our one-week exercise plan (pages 36 to 37).

To help you make better food choices, check out our Eat Well section, where we bring you a Glycaemic Index (GI) chart of our local favourites (page 23) and how you can make healthier choices dining at home and eating outside (pages 26 to 27). Check your knowledge on a diabetic's diet on pages 24 to 25, and you may be in for a surprise.

We hope that you will have a better understanding of diabetes after reading this issue. Let's get ready for the war and win it!

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**Dr Melvyn Wong**  
Family Physician & Consultant  
Raffles Medical





## New Doc on the Block



**Dr Vidya Ramasamy**  
Specialist in Paediatric Medicine  
& Consultant,  
Raffles Children's Centre

Dr Vidya graduated with MBBS from Dr.M.G.R. Medical University in India in 2000 and obtained her Master of Health Science from Edith Cowan University in Australia in 2004.

She subsequently graduated from Academy of Medicine in 2009 with Diploma in Paediatrics and Child Health. Dr Vidya also obtained MRCPCH (UK) in the year of 2010 and completed her paediatric training in KK Women's and Children's Hospital (KKH). She was accredited as a Specialist in Paediatric Medicine in Singapore in 2014. She further did her subspecialty training in Neonatology at KKH and was accredited as a Neonatologist in 2016.

She manages neonatal care, childhood vaccinations, developmental assessment, and common paediatric illnesses. Dr Vidya's main areas of interests are managing preterm neonates and their developmental follow-up post-discharge.

## Raffles Medical Extends Accessibility with New Clinics in Changi Airport

The new clinics in Changi Airport Terminal 4 and Transit 4 will offer a new MediConcierge service in line with the terminal's theme of "Fast And Seamless Travel at Changi". At the touch of a button on a tablet, patients will be able to receive medical advice from doctors and nurses real-time, get updates on health advisories, and make appointments for travel vaccinations and health screening services.

**Come and experience our MediConcierge service at Terminal 4 today.**



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#01-01 Passenger Terminal  
Building 4  
Contact: +65 6584 3133

**Transit 4 Clinic Address:**  
#02-88 Departure Hall  
Contact: +65 6584 2282

## HRM Asia Readers' Choice Awards

Raffles Medical Group emerged as the winner of the Best Corporate Healthcare Group category at the 'HRM Asia Readers' Choice Awards 2017' for the 4<sup>th</sup> consecutive year. This award celebrates the very best corporate service providers in the region. We would like to thank all of our clients for their continued support.



## Screen for Life with Raffles Medical

The Screen for Life (SFL) Programme by the Health Promotion Board (HPB) encourages eligible Singaporeans to go for recommended health screenings and have necessary follow-up at enhanced subsidised rates. Make an appointment with Raffles Medical CHAS clinics for your screening.

For more information, visit  
[www.rafflesmedical.com/screenforlife](http://www.rafflesmedical.com/screenforlife)



## Raffles Launches New Uniforms

You may have noticed that our staff are sporting a new look. In line with our corporate branding, the new uniforms are predominantly in green.

Green is a colour associated with life, safety and growth, and it is also pleasing to the eyes. For easy recognition, uniforms for these groups of staff are in two different

shades of green. Collar details will differentiate their designations. Staff can also match it with a standard dark green cardigan.

Here's how to distinguish between the uniforms so you may identify the right staff to assist you.

**Patient Service Assistant (PSA) /  
Patient Service Officer (PSO)  
Medical Technician /  
Pharmacy Technician**



**Clinic Coordinator /  
Nurse Coordinator**



**Enrolled Nurse**



**Nurse Clinician**



**Staff Nurse**



**Doctor / Nurse  
(operating theatre)**



**Doctor  
(non-surgical areas)**



**Nurse  
(non-surgical areas)**



## Why Prick When You Can Scan?

Prevention is better than cure. Screening is one of the most cost-effective, but often neglected, ways to manage diabetes. Screening is especially important if you are over 40 years old and / or have a family history of diabetes.

Raffles Flash Glucose Monitoring Package is designed to support and provide convenience to people who are at an increased risk of diabetes. This is an effective management of individual's glucose patterns while still able to go on freely with their lifestyle.

### Raffles Flash Glucose Monitoring Package at S\$655\*

- Consultation and Physical Examination by Specialist
- Freestyle Libre Flash Glucose Monitoring Reader
- Two sensor adhesive (for one month glucose monitoring)
- HbA1c Test
- Consultation with Dietitian / Nutritionist

*\*Price includes GST.*

The Flash Glucose Monitoring set can measure, analyse and evaluate 24-hour glucose readings. The system uses a sensor that is discreet, painless and replaces the need for traditional glucose finger pricks monitoring. The sensor is water-resistant up to one metre and can be worn while showering and exercising.



## Drops of Life

Every day, more than 350 units of blood are needed yet only 1.87 percent of Singapore's residential population are blood donors. In support of the blood donation drive, Raffles Hospital organised its annual blood donation drive on 20 September at the main lobby and saw a total of 111 participants.

Missed the opportunity to donate your blood? Share the gift of life today by making your way to the Bloodbank today. Visit <http://bit.ly/2izFPZh> to find out more.



## Fertility Centre Celebrates 10th Anniversary



In July 2017, Raffles Fertility Centre turned 10. In the course of the 10 years, the Centre has helped close to 600 couples achieve their dreams of becoming parents. About 150 of them chose to have their subsequent births with our Centre as well.

The first baby was a baby girl, conceived via ART SO-IUI and was born in February 2008, weighing 3240 grams. The first set of twins was twin girls conceived via IVF fresh cycle and was born in May 2008, weighing 1710 and 2250 grams. Both the first baby and first set of twins were delivered by Dr Thong Pao-Wen.

Dr Sheila Loh, Clinical Director of Raffles Fertility Centre shared: "I hope that we will continue to grow to help more couples achieve their dreams of starting a family."



## Breast Cancer Awareness Month Screening Mammogram

### Raffles Hospital

**\$105** (Price inclusive of GST)

### Raffles Medical clinics at

1. Marina Bay Financial Centre
2. Shaw Centre
3. Raffles Holland V

**\$75** (Price inclusive of GST)

**For enquiries, please call 6311 1111**

\*We accept Singapore Cancer Society Pink card for screening of eligible ladies from 1st October 2017 to 31st January 2018.

Women aged below 50 years of age should speak to their doctor first before making an informed decision on mammogram screening. Please consult a doctor if you:

- Have breast implants and / or have been breastfeeding for the past six months
- Have symptoms such as breast lumps and nipple discharge
- Have a personal or family history of breast cancer



## Looking Good, Feeling Great With Raffles Hospital

Raffles Hospital and Channel NewsAsia co-organised a health seminar on staying healthy through the years on 21 October 2017. More than 500 participants attended the seminar "Looking Good, Feeling Great", and gained tips, insights and strategies on staying healthy in their golden years.

Specialists from Raffles Internal Medicine Centre, Raffles Counselling Centre, Raffles Heart Centre, Raffles Skin & Aesthetics, and Raffles Chinese Medicine covered topics revolving around general ailments, common mental conditions faced and tips on reducing risks, the health of our heart and brain, as well as skin issues faced by the ageing population. Physician Chew Hong Gian shared the TCM's perspective on natural ageing of the body and how our internal organs change as we age. He advised that the physiological changes of the body take place every seven years for the ladies and eight for the men.

Dr Teo Swee Guan also shared that the best exercise one can adopt in staying healthy is to walk and have a good pair of shoes. He advised that one should wait for 30 minutes after meals before proceeding to take their blood pressure.



From left to right: Dr Teo Swee Guan (Specialist in Cardiology), Channel NewsAsia presenter Ms Dawn Tan, Dr Nur Farhan (Specialist in Geriatric Medicine), Dr Chua Siew Eng (Specialist in Psychiatry), Mr Chew Hong Gian (TCM Physician) and Dr Chris Foo (Specialist in Dermatology).



Specialists taking questions from the audience.

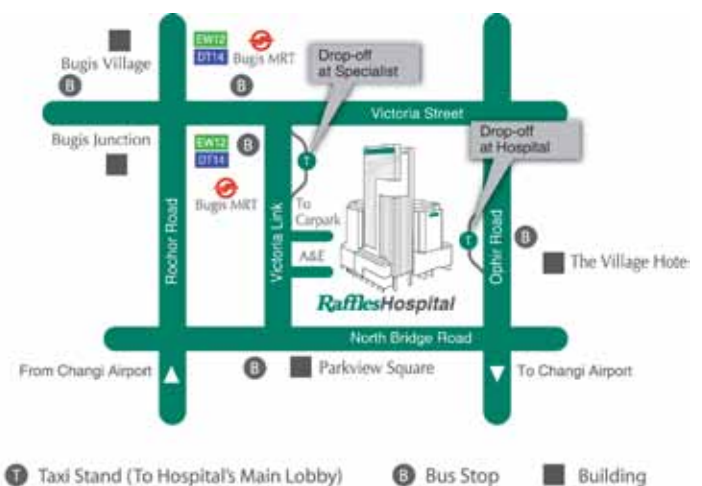
## International Champions Cup Singapore

Raffles Medical Group is proud to be the official supporter of the 2017 International Champions Cup Singapore featuring Chelsea, Bayern Munich and Inter Milan football clubs at the National Stadium from 25 to 29 July. Our staff were at hand to render medical assistance during the games.



## Raffles Hospital – Change in Car Park Direction

From 14 October 2017, the locations of vehicle entrance and exit points, and car park directions at the existing Raffles Hospital building will be changed due to the connection with the new building. The rear driveway entrance will similarly be affected after the change of vehicle directions. A traffic controller will be stationed at the entrance to help guide vehicles.



# The War with Diabetes

It is real. The number of diabetic patients in Singapore is increasing over the years. We bring you through the prevention measures that you can take to stay clear of diabetes. **By Queenie Ho**

## Are You At Risk?

Diabetes can affect anyone, but there are certain groups of people who may have a higher risk of developing type 2 diabetes. Dr Stanley Liew, Specialist in Endocrinology & Consultant, Raffles Diabetes & Endocrine Centre said: "If you have the following risk factors, you may want to take note and find out how to prevent developing type 2 diabetes."



**Have a parent or sibling with diabetes**



**Have a BMI of 23.0 kg/m<sup>2</sup> or higher**



**Lead an inactive (sedentary) lifestyle**



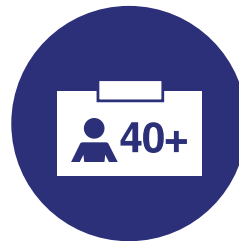
**Have high blood pressure**



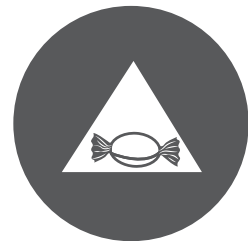
**Have abnormal blood cholesterol or lipid levels**



**Have a history of gestational diabetes**



**Are 40 years old and above**



**Have impaired glucose tolerance or impaired fasting glucose**

## Preventing Diabetes



### Get Up and Get Moving

Exercising helps to lose weight, lower blood sugar and boost your insulin sensitivity, keeping your blood sugar within a normal range. Stay fit by engaging in at least 150 minutes of physical activity weekly.



### Good vs Bad Fats

The types of fats in your diet can also affect the development of diabetes. Good fats found in liquid vegetable oils, nuts, and seeds can help ward off type 2 diabetes, while trans fats do the opposite.



### Swap Red Meat and Avoid Processed Meat

Go for healthier protein choices like nuts, low fat dairy, poultry, or fish. It lowers the risk of diabetes.



### Skip the Sugar

Beverages with added sugar increase the risk of diabetes. For the healthier choice, go for plain water, or coffee and tea without milk and sugar.



### Go for Whole Grains

Whole grains are rich in essential vitamins, minerals, and phytochemicals that may help reduce the risk of diabetes and maintain blood sugar levels.



### Stop Smoking

Smoking can increase a person's risk of developing diabetes and other health issues. Stop if you are smoking and do not start if you are not.

Dr Liew explained: "You can prevent type 2 diabetes. It is important that you make it a priority if you are at higher risk. Making a few simple changes in your lifestyle now may help you avoid the serious health complications of diabetes down the road. The key is to stay lean and active."

## What is Diabetes?

Diabetes is a long-term medical condition in which the blood glucose levels of a person remain higher than normal all the time. It occurs when the pancreas does not produce enough insulin or when insulin does not work properly. Insulin is a hormone that reduces the blood glucose levels. Chronic diabetes conditions include both type 1 and type 2 diabetes.

### type 1

#### Diabetes (Insulin-dependent Diabetes)

Persons with type 1 diabetes cannot control their blood sugar properly because their pancreas produces little or no insulin. The body's own immune system mistakenly destroys the insulin producing cells in the pancreas. They need insulin injections to control their blood sugars. It usually happens to young people, although it can also occur less commonly in older adults.

### type 2

#### Non-insulin Dependent Diabetes

About 90 per cent of all persons with diabetes belong to this group. They can produce insulin, but their body does not use it effectively. This type of diabetes can be controlled by diet, exercise and medicines. If these fail, insulin injections may be needed.



## Good Habits Start Young

A chubby child may be cute, but do you know that childhood obesity has become a global health challenge in the 21<sup>st</sup> century, particularly in developed countries? Obesity is the leading cause of metabolic and cardiovascular diseases, as well as their related complications, of which diabetes is one of them.

### 2010 National Health Statistics

Overweight / Severely Overweight	Primary School Students	1 in 8
	Secondary School Students	1 in 10

Studies show that obese children continue to be obese as adults. There are 43 per cent of obese children who grew to become obese adults, while 29 per cent were overweight as adults. Dr Christelle Tan, Specialist in Paediatric Medicine, Raffles Specialists - Holland V explains in detail on kids and obesity.

### Is My Child Obese?

Body Mass Index (BMI) is widely accepted to gauge if your child is overweight or obese. As BMI changes with age, a BMI-for-age percentile chart is used for children from six to 18 years old. This chart can be found in your child's health booklet.



PERCENTILE	WEIGHT STATUS (BOYS & GIRLS SIX TO 18 YEARS OLD)
≥97 <sup>th</sup> percentile	Severely Overweight
90 <sup>th</sup> to <97 <sup>th</sup> percentile	Overweight
5 <sup>th</sup> to <90 <sup>th</sup> percentile	Acceptable Weight
3 <sup>rd</sup> to <5 <sup>th</sup> percentile	Underweight
<3 <sup>rd</sup> percentile	Severely Underweight



## Why Should I Be Worried?

Obese kids are at risk of developing hypertension and increased insulin resistance leading to type 2 diabetes during the adolescent years. They can also develop obstructive sleep apnoea earlier.

Obese kids are also more likely to become obese or overweight adults and will have a higher risk of developing many health problems during adulthood, especially heart disease, hypertension, type 2 diabetes and high cholesterol, all of which are associated with increased morbidity and mortality.

Obese adults have more problems with their joints as the excess weight leads to greater wear and tear. They may have difficulty walking and exercising, making it tougher for them to lose weight or stay healthy. In addition, obese children have higher risk of psychological problems such as depression and poor self-esteem. It is also a cause of school bullying too.

Obesity can result in obstructive sleep apnoea (OSA) whereby one's breathing is affected during sleep leading to periods when the brain receives less oxygen. This affects the quality of sleep and learning on the following day. Children with significant OSA suffer from disrupted sleep and feel tired in the day (day time sleepiness) that can affect their school work.



# How Can I Prevent besity?

## Maintain a healthy balanced diet

Reduce the amount of calorie dense foods like fast food, sweetened beverages etc.

Increase fibre in their diet, comprising fruits / vegetables

## Encourage physical activity and exercise

Cut down on sedentary activities like watching TV or electronic devices. Screen time should be limited to not more than two hours in a day or 14 hours in a week.

## Maintain a healthy weight range

For children not yet in puberty, do not aim to lose weight, but aim for no additional weight gain.

*Did you know?*

Children

**seven to 18 years old**

should have more than **60 minutes** of moderate to vigorous intensity physical activity at least *three times a week*.

## When Should I Bring My Child for Consultation?

**BMI**

**90<sup>th</sup> percentile (Overweight)**

**97<sup>th</sup> percentile (Severely Overweight)**

Your child should be seen by a doctor if he / she has any of the following:

Your child will need to be screened for related health complications.

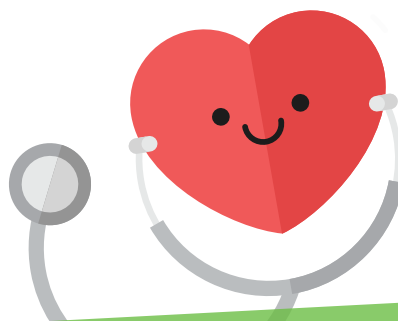
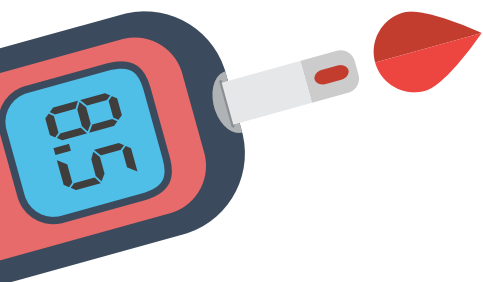
**!** *Parents should be vigilant and consult a doctor if they suspect their child is getting overweight so that intervention can take place early.* **!**

*Refer to page 12 for more information*

- Signs of insulin resistance eg pigmentation around skin folds
- High blood pressure
- Irregular menstruation suggestive of polycystic ovarian syndrome (PCOS)
- Family history of type 2 diabetes / heart disease / hypertension
- Signs of OSA - fatigue in the day, snoring at night
- Signs of diabetes - excessive drinking in the day and passing urine frequently at night
- If there is any concern that your child's weight gain is sudden or out of proportion to his / her diet.

# It Can Be

# Complicated



People with diabetes have to deal with both short- and long-term health complications that affect different parts of the body. Read to find out how diabetes is linked to these six health conditions and learn to recognise their symptoms to reduce the risks of getting them.

**By Joanna Lee**



## Heart Disease

Diabetes increases the 'stickiness' of the inner lining of the blood vessels and enhances cholesterol deposition. For the heart, additional glucose can increase the thickness of the heart muscles, thereby affecting its normal function. This increase is caused by poor circulation at the minute level that results in making more small blood vessels to grow and thickening the blood vessels. Both of these effects are detrimental to the heart's function.

### Symptoms

- Irregular heartbeat
- Pain in the chest
- Swelling of ankles
- Shortness of breath



Dr Alvin Ng, Specialist in Cardiology & Consultant, Raffles Heart Centre



## Nerve Damage (Neuropathy)

Having excess sugar in the blood can injure the walls of tiny blood vessels that nourish the nerves, especially in the legs. This prevents essential nutrients to reach the nerves, and nerve fibres can be damaged in the process. As such this causes tingling, numbness, burning or pain that usually starts at the tips of the toes or fingers and gradually spreads upwards. If left untreated, one could lose the ability to sense and feel in the affected limbs.

### Symptoms

- Burning or shooting pain
- Numbness
- Tingling or prickling feeling
- Loss of ability to feel



Dr N V Ramani, Specialist in Neurology & Consultant, Raffles Neuroscience Centre



## Foot Damage

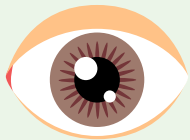
With nerve damage and poor blood circulation to the feet, diabetics can develop cuts and blisters that go unnoticed because of reduced sensation. If left untreated, these small open wounds can lead to serious infection that often heal poorly. In the worst case scenario, it can lead to foot or leg amputation. Therefore, it is advisable for diabetics to wear well-padded covered shoes.

### Symptoms

- Bruises
- Swelling
- Redness
- Cuts
- Sores
- Ulcers



Dr Victor Seah, Specialist in Orthopaedic Surgery & Consultant, Raffles Orthopaedic Centre



## Eye

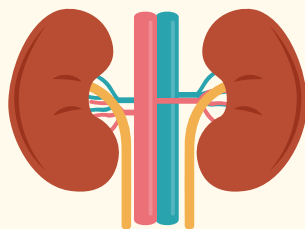
Diabetic retinopathy usually affects both eyes and occurs when high glucose levels in diabetes causes weakening of the retinal blood vessels. The walls of weakened vessels may start to bleed microscopically or become leaky; causing fluid to seep into the retina and interfering with its function. In later stages of diabetic retinopathy, growth of new retinal blood vessels begins to take place to bypass the damaged vessels. This may sound like a good idea, but the new vessels are leaky, fragile, and often misdirected, growing off the retina and into the vitreous (the clear gel that fills the space between the lens and the retina). As the vitreous shrinks with age, it pulls on these fragile vessels and can cause them to tear, resulting in a vitreous haemorrhage and sudden vision loss.

### Symptoms

- Spots or dark strings floating in your vision (floaters)
- Blurred vision
- Impaired coloured vision
- Dark or empty areas in your visual field
- Vision loss



Dr Michael Wong, Family Physician & Consultant, Raffles Medical



## Kidney Disease (Nephropathy)

Diabetes is the leading cause of kidney disease as it affects the blood vessels. The kidneys contain millions of tiny blood vessel clusters that help to filter waste from the blood. Nephropathy is a general term that refers to the deterioration of proper function in the kidneys. Therefore, diabetic nephropathy can lead to end-stage renal disease in some cases, and the increase in chronic kidney disease is also partly due to the rise in diabetes.

### Symptoms

- High blood pressure
- Swelling of the ankles, feet and hands – caused by water retention
- Fatigue as a result of low oxygen in blood
- Shortness of breath
- Nausea and vomiting
- Loss of appetite
- Itching
- Low haemoglobin or anaemia



Dr Ekachai Danpanich, Specialist in Renal Medicine & Consultant, Raffles Internal Medicine Centre



## Skin Problems

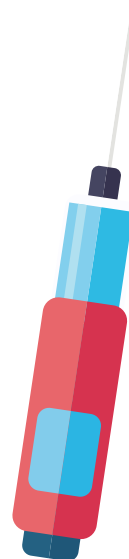
Diabetics suffer from hyperglycaemia and it weakens their immunity against fungal and bacterial skin infections. Some skin problems that they may face include cellulitis and fungal infections of the toe webs, groin and nails. Diabetics also tend to have dry skin on legs, elbows, feet and other areas of the body. If cracks occur, germs can enter through these areas to cause infection.

### Skin Care Tips

- Moisturise to keep your skin soft and moist
- Pay close attention to dry or red spots on your skin
- Keep a close eye on areas affected by neuropathy



Dr Chris Foo, Specialist in Dermatology & Consultant, Raffles Skin & Aesthetics



## How to Prevent Complications

While people with diabetes are at risk of complications, there are still ways to prevent them from happening. Here's how.

- Achieve good control of blood glucose levels
- Always eat a healthy and balanced diet
- Maintain a healthy weight (if one is overweight or obese)
- Have regular physical activity (at least 150 minutes of moderate exercise per week)





# Living with

Being diagnosed with diabetes doesn't mean the end of life. Dr Stanley Liew, Specialist in Endocrinology & Consultant, Raffles Diabetes & Endocrine Centre, shares how you can continue to live life to your fullest.

## Eating

A diabetic diet is just a healthy eating plan to help you better control your blood sugar. Your blood sugar levels can rise and dip with food intake. If you are always wondering what you can and cannot eat, we share quick tips to help you.

- Eat foods rich in nutrients and low in fat and calories.
- Stick to regular mealtimes.
- You should aim to keep your blood sugar levels at:
  - Before meals: 4 to 7 mmol/L
  - After meals: under 8.5 mmol/L (type 2) and 9 mmol/L (type 1)

\*Read in detail what some common food myths are for diabetics on page 24 in this issue.

## Working

Work brings with it stress, irregular meals and irregular hours. These can spike up your blood glucose levels. So while you are working hard, do these to maintain your health.

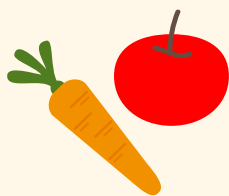
- Monitor your blood glucose levels regularly.
- Ensure you have regular mealtimes and snacks as well regular break time.
- Incorporate physical activity to unwind and stay fit.
- Get enough sleep and engage in relaxing activities whenever possible.

## Travelling

Planning well can make the difference between a stressful or enjoyable holiday especially for diabetics. If you control your diabetes well, travelling the world and enjoying the sights and foods are no issue at all.

- Speak to your doctor before your trip especially if you are travelling across different time zones.
- Bring along a list of your medications and their generic names signed off by your doctor.
- Get your doctor to write a letter on your medical supplies especially if you use insulin.
- Bring along ample medications and keep them in separate bags in case they get misplaced.
- Drink and eat normally.

## Lifestyle Changes for a Healthier You



Eat more **fruits and vegetables**, and less **sugar and salt**



Get **physically active** - aim for at least 150 min/week



Take **diabetes medication** as prescribed



# Diabetes

By Magdalene Lee



## Pregnant

High blood glucose can lead to birth defects of the heart, brain or spine. It can increase the chance of premature birth, miscarriage and stillborn. Your baby may be overweight, have breathing problems or low blood glucose right after birth.

- Work closely with your healthcare team including your endocrinologist, gynaecologist and dietitian to ensure your medical, nutritional and physical needs are well managed.
- Monitor your glucose levels closely and keep it at the recommended levels.
- Exercise to reach your target blood glucose levels.
- Eat right according to your dietitian's meal plan.



## Sick

When unwell, you may experience higher sugar levels than usual.

Here's what you should do to not worsen your condition:

- Check your glucose levels regularly.
- Eat as normally as possible.
- Opt for plain water rather than sugary drinks.
- Continue with your medication unless your doctor advised otherwise.

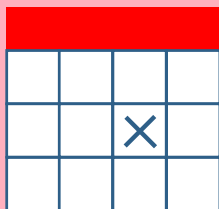


## Sleeping

If you are diabetic and experiencing poor sleep, you are not alone. Diabetics are at higher risk of sleep disorders including sleep apnoea, restless leg syndrome and insomnia. Poor sleep can further alter your hormonal balance, affecting food intake and weight.

Do these for better sleep:

- Get enough sleep. Aim for eight hours daily.
- Stick to a regular bed time.
- Look into your sleep hygiene factors. (Visit <https://tinyurl.com/makeoveryourroom> for more information)



Make and **keep to the appointments** with your health care team








Check **blood sugar** regularly



Know your ABCs:  
 - Regular **A1C** test  
 - **B**lood pressure below 140/90 mm Hg  
 - Control **C**holesterol  
 - Stop / don't start smoking



# Diabetes

Types of Diabetes	Type 1	Type 2
What	Occurs when the pancreas produces little or no insulin	Occurs when the body resists the effects of insulin or does not produce a sufficient amount of it
Statistics in Singapore	<b>1 in 9</b> Singaporeans has diabetes	 <b>3 in 10</b> Singaporeans over 60 years old have diabetes
Possible Symptoms	<div><p><b>Blurred vision</b></p><ul style="list-style-type: none"><li>• Affects ability to focus</li><li>• If left untreated, diabetes can cause new blood vessels to form in retina and damage established vessels.</li><li>• Can lead to vision loss and blindness.</li></ul></div>	<div><div><p><b>Fatigue</b></p><p>Factors contributing to fatigue include dehydration from increased urination and body's inability to function properly, since it's less able to use sugar for energy needs.</p></div><div><p><b>Weight loss</b></p><ul style="list-style-type: none"><li>• When sugar is lost through frequent urination, calories are lost too.</li><li>• At the same time, diabetes may keep the sugar from food to reach the cells — leading to constant hunger.</li><li>• The combined effect is potentially rapid weight loss, especially for type 1 diabetics.</li></ul></div></div>
Other Information	<div><p><b>Get Screened</b></p><ul style="list-style-type: none"><li>• At risk individuals, such as those with a family history of diabetes or who are overweight, should go for screening before 40 years old.</li><li>• Regular screening should be carried out every three years for people who had normal screening results.</li><li>• Regular health screening for diabetes is recommended once every three years for people who are 40 years or older.</li></ul></div> <div></div>	

# at a Glance

Think you know everything about diabetes? Dr Nitish Mishra, Specialist in Endocrinology & Consultant, Raffles Diabetes & Endocrine Centre, shares the basics of this disease.

By Jacqueline Lim

## Gestational Diabetes (GD)

Develops during pregnancy due to hormones change

 **2** in 5 pregnancies

## Secondary Diabetes

Occurs as a result of a disease or medical condition



### *Slow-healing sores or frequent infections*

- High levels of blood sugar may impair the body's natural healing process and ability to fight infections.
- For women, bladder and vaginal infections are especially common.



### *Excessive thirst and increased urination*

- If your kidneys can't keep up with filtering and absorbing excess sugar, it will be excreted into the urine.
- This triggers more frequent urination that may lead to dehydration. As you drink more fluids to quench your thirst, you'll urinate even more.



### *Tingling hands and feet*

- Excess sugar in your blood can lead to nerve damage
- Tingling and loss of sensation in hands and feet
- Burning pain in arms, hands, legs and feet

## *Complications of GD*

- High blood pressure and preeclampsia
- Increased risk of developing type 2 diabetes
- Bigger baby, which may lead to birth complications
- Early (pre-term) birth and respiratory distress syndrome for the baby
- Low blood sugar (hypoglycemia) for the baby

## *Prevention*

- Lose weight before pregnancy
- Exercise regularly
- Eat healthy

## *Medical conditions that can lead to secondary diabetes*

- Cystic fibrosis
- Haemochromatosis
- Chronic pancreatitis
- Polycystic ovary syndrome (PCOS)
- Cushing's syndrome
- Pancreatic
- Glucagonoma
- Pancreatectomy

# Protect Your Feet




By Jacqueline Lim


Courtesy of the Mayo Clinic News Network

The best strategy for preventing complications of diabetes – including foot ulcers – is proper diabetes management with a healthy diet, regular exercise, blood sugar monitoring and adherence to a prescribed medication regimen.

Proper foot care will help prevent problems with your feet and ensure prompt medical care when problems occur. Here are some tips for proper foot care.




**Inspect your feet daily.** Check your feet once a day for blisters, cuts, cracks, sores, redness, tenderness or swelling. If you have trouble reaching your feet, use a hand mirror to see the bottom of your feet. Place the mirror on the floor if it's too difficult to hold, or ask someone to help you.

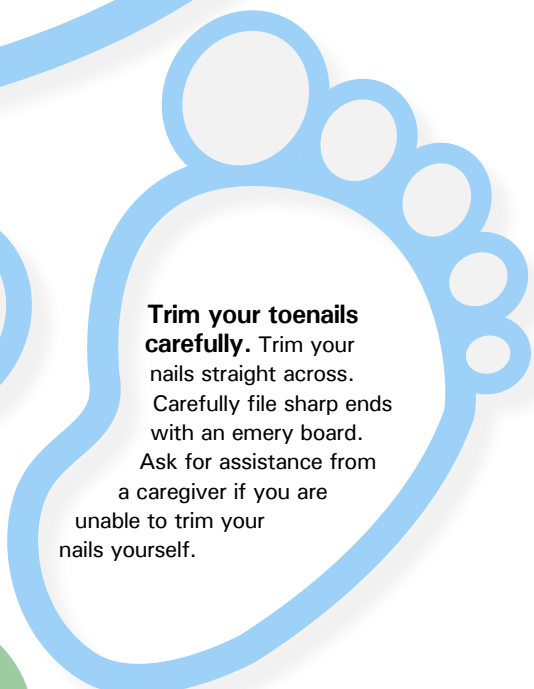


**Wash your feet daily.** Wash your feet in lukewarm (not hot) water once a day. Dry them gently, especially between the toes. Use a pumice stone to gently rub the skin where calluses easily form.

Sprinkle talcum powder or cornstarch between your toes to keep the skin dry. Use a moisturising cream or lotion on the top and bottom of your feet to keep the skin soft. Preventing cracks in dry skin helps keep bacteria from getting in.



**Don't remove calluses or other foot lesions yourself.** To avoid injury to your skin, don't use a nail file, nail clipper or scissors on calluses, corns, bunions or warts. Don't use chemical wart removers. See your doctor or a podiatrist for removal of any of these lesions.



**Trim your toenails carefully.** Trim your nails straight across. Carefully file sharp ends with an emery board. Ask for assistance from a caregiver if you are unable to trim your nails yourself.



**Don't go barefoot, even around the house.** This is to prevent injury to your feet.

**Wear clean, dry socks.** Wear socks made of fibres that pull sweat away from your skin, such as cotton and special acrylic fibres – not nylon. Avoid socks with tight elastic bands that reduce circulation or socks with seams that could irritate your skin.

**Buy shoes that fit properly.** Buy comfortable shoes that provide support and cushioning for the heel, arch and ball of the foot. Avoid tight-fitting shoes and high heels or narrow shoes that crowd your toes.

If one foot is bigger than the other, buy shoes in the larger size. Your doctor may recommend specially designed orthopedic shoes that fit the exact shape of your feet, cushion your feet and evenly distribute weight on your feet.

**Schedule regular foot checkups.** Your doctor or podiatrist can inspect your feet for early signs of nerve damage, poor circulation or other foot problems. Schedule foot exams at least once a year or more often if recommended by your doctor.

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Raffles Medical Group collaborates with Mayo Clinic as a member of the Mayo Clinic Care Network



We speak to Dr Ganesan Naidu, Specialist in Orthopaedic Surgery & Consultant, Raffles Orthopaedic Centre, to understand more on infections due to the lack of proper foot care.

### Wound Healing

*Here are some effective ways to help with wound healing process:*

- Use appropriate footwear
- Use daily saline or a wet-to-damp dressing for optimal healing
- Undergo debridement (medical removal of dead or infected tissue from site) as and when necessary, to improve healing potential of healthy tissue

### Recurrent Infections

Did you know that the severity of foot infections for persons with diabetes mellitus is much higher as compared to those without the condition?

Due to a compromised vascular supply, foot infections are commonly more severe and take longer to heal among this group of the population.

*Some typical diabetic foot infections include:*

- Inflammation of subcutaneous connective tissue (cellulitis)
- Deep skin and soft tissue infections
- Infection of the bone that develops secondary to a wound or open injury to bone and surrounding tissue (acute or chronic osteomyelitis)

# Raffles Essential & Enhanced packages are now available online!



1

Visit  
[www.raffleshealth.com](http://www.raffleshealth.com)



2

Select package



3

Make your appointment  
(24-hour Call Centre)



4

Cashless check-out after  
completion of screening

*Prices are inclusive of GST. Terms and conditions apply.*



Scan to select your  
package now!

# The Glycaemic Index (GI) Chart

The Glycaemic Index (GI) chart can be a useful tool in understanding the alternatives available when choosing carbohydrates. Ms Kesslyn How, Nutritionist, Raffles Diabetes & Endocrine Centre, shares how our favourite local dishes rank. **By Jacqueline Lim**

## Choose more of these

### Low (0-55) Slow increase in blood sugar level

#### Starchy staples

Wholemeal pasta (boiled), rolled oats, oat bran, muesli, pearly barley



#### Whole fruit

Apple, peach, pear, orange, kiwi, grapefruit, prune, berry, mango



#### Vegetables

Green leafy vegetable, broccoli, tomato, onion, mushroom, carrot, pea, corn, mushroom, chilli



#### Beans and nuts

Legume, chickpea, lentil, kidney bean, red bean, green bean, soy bean, baked bean, cashew nut, almond, peanut



#### Dairy products

Milk (low fat), yoghurt (low fat), cheese



#### Snacks

Corn chip (plain), popcorn (plain), peanut, snickers bar, dried dates



#### Beverage

Water



### Medium (56-69) Moderate increase in blood sugar level

#### Common local dishes

Ketupat, meesua, udon



#### Starchy staples

Brown rice, basmati rice, wholemeal bread, rye bread, pita bread, quick oats, couscous, pasta



#### Whole fruit

Banana, grape, papaya, lychee



#### Vegetables

Yam



#### Dairy products

Ice-cream



#### Snacks

Raisin



#### Beverages

Fruit juice, table sugar



## Consume less of these

### High (>70) Rapid increase in blood sugar level

#### Common local dishes

Chicken rice (rice only), ban mian (noodles only), lor mee, nasi lemak (with fried egg only), chee cheong fun



#### Starchy staples

White rice, white bread, noodles, bagel, corn flakes, puffed rice, instant oats



#### Whole fruit

Melon, pineapple



#### Vegetables

Potato (baked, boiled or mashed), pumpkin, sweet potato



#### Snacks

Pretzel, rice cake, cracker, dates



#### Beverages

Honey, soft drink



**Data adapted from the Health Promotion Board (HPB)**

*Note: GI ranking only applies to individual food items. Various factors may influence the GI including portion size and food pairing.*

*You should not solely depend on the GI value when choosing healthier options as portion size and the nutritional content of the food are just as important.*

# The Diabetic Diet

By Magdalene Lee



## The Diabetic Quiz

How much do you know about a diabetic diet? Test yourself here!

Diabetics **CANNOT** consume:

Sweets / chocolates True / False

Tea / coffee True / False

Frozen / canned food True / False

Rice, bread, pasta True / False

Fruits True / False

Alcohol True / False

Fruit juice True / False

Fatty foods True / False

## The REAL Diabetic Diet

Ms Bibi Chia, Principal Dietitian, Raffles Diabetes & Endocrine Centre, debunks the myths surrounding the diabetic diet.



### Sweets and Chocolates

As a diabetic, you can still enjoy small amounts of sweets, chocolates and even desserts every now and then.

### Fruits

Fruits come with fibre and are loaded with vitamins which are essential for a healthy diet. Just keep the portion to a handful or two serves a day.





## Alcohol

For diabetics with good control of their glucose levels, drinking in moderation is fine. That means two drinks for the men and one for the ladies.



## Tea and Coffee

Studies have showed that compounds in coffee may aid in the body's metabolism of sugar to help prevent diabetes. Drinking black, green or oolong tea without milk can significantly improve insulin activity. The effects don't last so drink a cup every few hours to maintain the benefit. And go light on the sugar!



## Frozen and Canned Food

Fresh produce is not the only food you can take. Frozen and canned food without added sugars and sodium may contain more nutrients than fresh produce that may have travelled further and longer to reach you. So don't rule them out.



## Rice, Bread and Pasta

Go ahead and dig in! However, control your portion size and choose healthier alternatives such as whole meal and whole grain options as they come with fibre. Other than a lower effect on your blood sugar levels, whole grains move slower through your digestive tract, allowing you to feel fuller longer.



## Fruit Juice

Don't avoid 100 per cent fruit juice but you do need to make sure you limit to 120ml. It's easy to down too much juice. Juices are high in calories and carbohydrates and it may cause your blood sugar levels to spike as it's more easily digested.

## Fatty Foods

We all need a small amount of fats in our diet. Fat can delay stomach emptying and slow the increase of blood glucose. That said, limit your intake of saturated and trans fats to lower your cardiovascular health risks.



“

A diabetic diet is not all bland and boring. Instead, a healthy all-rounded diet that is low in refined carbohydrates is probably the best diet for a diabetic patient. So go ahead and indulge (in small quantities, every now and then)! Aim for a healthy weight and make sure you work with your doctor to monitor your condition closely.

”

# Healthy Eating

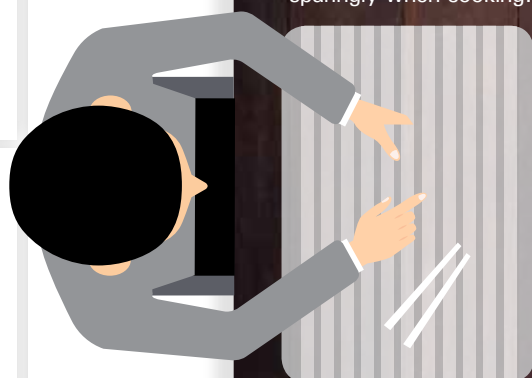
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## Dining in



### Cooking Oil

Fat is an essential dietary source of energy for our body and one of the channels of consumption is the oil that is used to cook our food. Avoid coconut oil and palm oil as these are high in saturated fats which can increase your bad cholesterol and put you at a higher risk of cardiovascular diseases. Use oil sparingly when cooking.



### Eggs

We love having them scrambled, poached or as sunny side ups, but have them boiled or poached as a healthier option because they use less oil. Consume a fully cooked egg in order to obtain the maximum amount of protein. There is no harm in choosing fortified eggs but it is not necessary. Beneficial nutrients like Omega 3 fatty acids can be obtained from other food sources such as chia seeds, canola oil and fish. The key is to eat a balanced diet and pick foods from all food groups.



### Bread & Spreads

High fibre, soft meal, white bread, butter, kaya, peanut butter and the list goes on. Before deciding, look at the ingredients and nutritional information panel. The top three ingredients tell us what is mainly contained in the food. For bread, ensure that the first ingredient listed is whole grain or whole wheat. As for spreads, choose one with no trans fat and minimum saturated fat content. Pick one with a Healthier Choice Symbol (HCS).



### Rice

Mm, a staple food source for many but also said to be a culprit in causing diabetes. Choose whole grain (eg brown rice, quinoa) and / or lower glycemic index (GI) (eg basmati rice) options

where possible. The key to calorie intake and controlling blood sugar levels lies in moderating the serving size of your rice.

### Poultry

When it comes to poultry, we tend to choose our favourite cuts.

Choose leaner cuts of poultry. If you prefer thigh fillets, remove any visible skin or fats.



### Preparation Matters!

Consider these healthier cooking methods at home without compromising the taste of your food.

- Steaming
- Stewing
- Baking
- Roasting
- Poaching
- Grilling
- Stir frying



# Eating Out

With diabetes on the rise and us living in a food paradise, is making our daily meals a healthier choice almost mission impossible? Well, everything is possible. We get Ms Kesslyn How, Nutritionist, Raffles Diabetes & Endocrine Centre, to help us make healthier food options – in and out of your home. **By Ashley Tuen**

## Yong Tau Foo

Reduce your sugar and salt intake by using less sweet sauce, chili and leaving out the soup. To reduce your intake of fats and oils, limit the number of fried items.



## Roti Prata

Dip your prata in curry instead of drenching it. Fish curry may be healthier compared to mutton, beef or chicken. Reduce the consumption of extra calories by not adding sugar. Choose healthier carbohydrate options such as chapatti and thosai.



## Chicken Rice

Opt for healthier cuts such as chicken breast, and remove any visible skin and fats. Go easy on the chili and dark soy sauce. To make it a balanced meal, order a vegetable dish on the side. If available, opt for brown rice.



## Prawn Noodles

Ask for a smaller portion of noodles and leave the soup behind.

## Chicken Chop

Remove any visible skin and fats. Moderate your salt intake by requesting for the sauce / gravy to be separated. Choose healthier sides such as garden veggies instead of coleslaw; baked potatoes instead of fries or wedges.



**Eating Out**

# Sweet Nurse *of* Mine

In her seven years working in Raffles Hospital, Senior Staff Nurse Nursabrina Binte Abdul Sukor has always been chirpy and bright. We speak to her to find out what drives her to excel in her work.

**By Magdalene Lee**

## **Nursabrina Binte Abdul Sukor**

Senior Staff Nurse

Raffles Diabetes & Endocrine Centre

Likes: Swimming, dancing, watching movies and shopping





### What's a typical day like for you?

I wake up in the morning at 6am to get ready for work and have a quick breakfast with my hubby. Once I reach the clinic at 8am, it is a whirlwind of activities as I support the doctors with procedures, conduct tests and measurements on my patients. I also counsel my patients on medication, diet, and other lifestyle changes they need to adopt.

After work, I will go out and buy some groceries before going home to have dinner with my family. I unwind each night with some television time.

### What do you enjoy most about your work as a nurse?

I enjoy nursing because it is a profession that never stops giving. I learn new things everyday from interacting with my doctors and patients. In addition, the opportunity for growth is almost unlimited.

But the greatest happiness comes from the feel good factor that I get when I see my patients' health condition improving. It brings me immense pride and joy when my patients tell me they followed my advice and got better.

### What's your biggest challenge as a diabetes nurse?

Working with elderly diabetic patients is challenging as they are sometimes incompetent of taking care of themselves. They are also at higher risk of multiple health issues.

I always worry for my elderly patients who fall and develop an infection. Their recovery process is crucial to their well-being as some patients who don't manage their condition properly may face becoming bedridden or risk amputation. It is devastating to see their condition worsen as it remarkably affects their standard of living.

### What are your best tips for diabetic patients and their caregivers?

1. Eat wisely, you are IRREPLACEABLE!
2. Put on your headphones and dance your stress away!



### Can you share four things everyone should do to maintain a healthy lifestyle?

1. Exercise regularly
2. Don't forget your vegetables
3. Go for a low-carb diet
4. Cut down on your sugary desserts

### You've met a lot of diabetic patients. Any particularly memorable ones?

I'm always very inspired by my patients who worked very hard to lose weight as they are obese and diabetic. Some of them took meal replacements, some went on a no-carb diet, others reduced their meat intake and ate more vegetables. After their success, they became the ones teaching us how to lose weight and sharing tips on what worked for them.

I had a patient who was partially deaf. Her husband was very nice and sweet especially to his wife, and he accompanied her for every appointment to make sure she understood her health condition. Then one day, their son came instead. It turned out that the husband was so busy caring for his wife, he failed to take notice of his own health. As such, he had a sudden cardiac arrest and passed on. I was so shocked to hear the news that I couldn't hold back my tears.



### 7 surprising facts I've learnt from my work

1. Patients are our greatest motivators.
2. Everybody is a nurse, one way or another.
3. Nurses are the ultimate multi-taskers.
4. Cutting sugar out from your life is not as tough as it seems.
5. Best way to prevent diabetes is skip fad diets and just make healthier choices.
6. Losing weight is about discipline and integrity.
7. Weight loss can help manage and delay diabetes - reduce your portion size.

# The Next Phase

New advancement in drug therapies for type 2 diabetes

As the number of type 2 diabetic patients all over the world continue to rise, new drug therapies have also advanced to reduce side effects and improve the effectiveness in helping patients to better control their blood glucose levels. Let's take a look at the more commonly prescribed drugs, as well as new ones that are available today. **By Joanna Lee**

Drug Name	When it is Prescribed	Side Effects	Note
<b>Metformin</b> Also called: Glucophage - more commonly known as in Singapore	<ul style="list-style-type: none"> <li>First line of medication for type 2 diabetes</li> <li>Makes body cells more sensitive to insulin</li> </ul>	Diarrhoea and nausea but wears off over time	Not for patients who have kidney problems
<b>Sulphonylureas</b> Examples: Glipizide and Gliclazide	<ul style="list-style-type: none"> <li>Used in tandem with Metformin if glucose control still does not improve</li> <li>Helps body to secrete more insulin</li> </ul>	<ul style="list-style-type: none"> <li>Hypoglycaemia</li> <li>Weight gain</li> <li>Some may develop allergic reaction during first six to eight weeks of initial treatment</li> </ul>	Not ideal for people who are overweight or obese
<b>Thiazolidinediones</b> Also called: Glitazones Examples: Avandia and Actos	<ul style="list-style-type: none"> <li>Prescribed when other drugs like metformin and sulphonylureas do not lower blood glucose level successfully</li> <li>Helps lower blood pressure and improve lipid metabolism</li> </ul>	<ul style="list-style-type: none"> <li>Weight gain</li> <li>Water retention</li> <li>Increase risk of heart failure</li> <li>Bone fractures</li> </ul>	Not the first choice of treatment due to side effects

## Newer Class of Drugs

*"The two newer classes of type 2 diabetes medicines are SGLT2 inhibitors and DPP4 inhibitors. Unlike the older drugs, they do not cause weight gain and have very low risk of hypoglycaemia. Also, they appear to have superior cardiovascular outcomes," said Dr Stanley Liew, Specialist in Endocrinology & Consultant, Raffles Diabetes & Endocrine Centre.*

Drug Name	How it Works	What's New	Side Effects
<b>SGLT2 Inhibitors (Sodium-glucose co-transporter-2 inhibitors)</b> Also called: Gliflozins Examples: Canagliflozin (Invokana), Dapagliflozin (Farxiga), Empagliflozin (Jardiance)	<ul style="list-style-type: none"> <li>SGLT2 inhibitors prevent the kidney from reabsorbing excess glucose into the blood, and excess glucose is then passed out as urine.</li> </ul>	<ul style="list-style-type: none"> <li>Do not cause weight gain</li> <li>Have very low risk of hypoglycaemia</li> </ul>	<ul style="list-style-type: none"> <li>May include genital and urinary tract infections because the drug causes more glucose to be passed out in urine</li> <li>Increased urination and hypotension</li> </ul>
<b>DPP4 Inhibitors (Dipeptidyl peptidase-4)</b> Also called: Gliptins Examples: Sitagliptin (Januvia), Saxagliptin (Onglyza), Vildagliptin (Galvus) and Linagliptin (Tradjenta)	<ul style="list-style-type: none"> <li>They block the action of DPP-4, a type of enzyme that destroys incretins - a group of gastrointestinal hormones.</li> <li>By protecting incretins, which help stimulate the production of insulin, blood glucose levels can be properly regulated.</li> </ul>	<ul style="list-style-type: none"> <li>Do not cause weight gain</li> <li>Have very low risk of hypoglycaemia</li> </ul>	<ul style="list-style-type: none"> <li>Flu-like symptoms (eg headache, sore throat and runny nose)</li> <li>Very rare skin reactions</li> </ul>

*"Lifestyle change - a healthy diet paired with regular exercise, will always be prescribed by your medical doctor as the first line of treatment for type 2 diabetes. However, if you find that your initial glucose control shows severe elevation, drug therapy will then be initiated," said Dr Melvyn Wong, Family Physician & Consultant, Raffles Medical.*



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# SMART SELF MANAGEMENT TECH

These days, monitoring blood glucose levels has become more painless, convenient and accurate. As medical innovation advances, more tech devices are available to help diabetic patients gain better control of their health condition. Dr Nitish Mishra, Specialist in Endocrinology & Consultant, Raffles Diabetes & Endocrine Centre, shares the pros and cons of two main types of such devices. **By Joanna Lee**

## GLUCOSE MONITORS

There are more improved glucose monitors that can be worn on the body to monitor your blood sugar levels without getting your finger pricked. They can be worn on such as back of the arm to measure blood glucose levels at close intervals throughout the day without any interaction. User can receive real time data via a supporting app on the mobile phone.



### PROS

This type of device is reasonably accurate and revolutionary for type 1 diabetic patients. It reduces the apprehension and anxiety levels for patients who need to monitor their glucose levels more frequently.

### CONS

It is unsuitable for the majority of type 2 diabetic patients as they do not need to monitor their glucose levels on a frequent and regular basis.

## INSULIN PUMPS

Injecting insulin multiple times daily can be deterring and inconvenient to most diabetic patients. Insulin pumps allow users to attach a cannula sturdily under the skin once and be connected to a cartridge of insulin that is delivered to the user for two to three days before the need to change the cannula for hygiene purpose.



### PROS

- Insulin pumps are excellent for those type 1 diabetic patients who have busy and unpredictable schedules. Users can conveniently adjust the dosage more accurately based on continuous blood glucose monitoring to tweak their basal rates.
- Such devices allow users to influence their blood glucose values on an hourly basis as compared to traditional injections that are usually of an interval of four to eight hours. They can significantly reduce hypoglycemic episodes.

### CONS

- Users need to operate the pump and calculate meal time doses based on their carbohydrate content and blood glucose levels.
- It may be obvious that they are diabetic if they wish to be discreet about it.
- They may feel uncomfortable having something attached.

# SOOTHE THE FROZEN SHOULDER

By Ashley Tuen

Frozen shoulder (adhesive capsulitis) is a condition that causes pain and stiffness in your shoulder joint. Common symptoms include swelling, pain and stiffness.

## Who?

- A person with prolonged period of shoulder immobility due to an injury also makes one vulnerable to inflammation.
- Those with conditions such as diabetes, heart disease and stroke are at greater risk of getting this.
- Often developed in individuals above 40 years old with no reason.
- More likely to occur in women.

## What?

Common issues include being unable to reach above shoulder height, reach out to your side and back, and sleep on your side.

## How?

Stretching exercises are usually the basis to treating frozen shoulder, allowing you to regain the lost of motion. We consult Mr Lim Hun Teck, Chief Physiotherapist, Raffles Rehabilitation Centre, on exercises that you can do to relieve shoulder pain.

## Note

You should stretch to the point of tension but not feel pain.

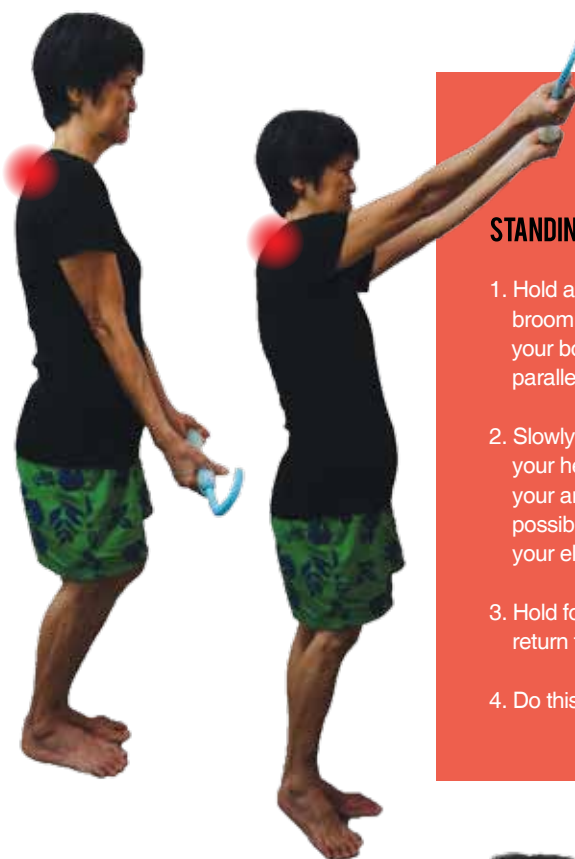
## Tip

Warm up your shoulder before the exercises by taking a warm shower for 10 to 15 minutes. Alternatively, place a warm towel over your shoulder.

## TRY THE FOLLOWING EXERCISES



\*The right shoulder is depicted as the affected shoulder.



### STANDING FLEXION CANE

1. Hold a light pole (or a broom stick) in front of your body at shoulder level, parallel to the ground.
2. Slowly raise the pole above your head while keeping your arms straight. If possible, do not bend your elbows.
3. Hold for five seconds and return to position.
4. Do this for 10 to 20 times.

### WALL CLIMB

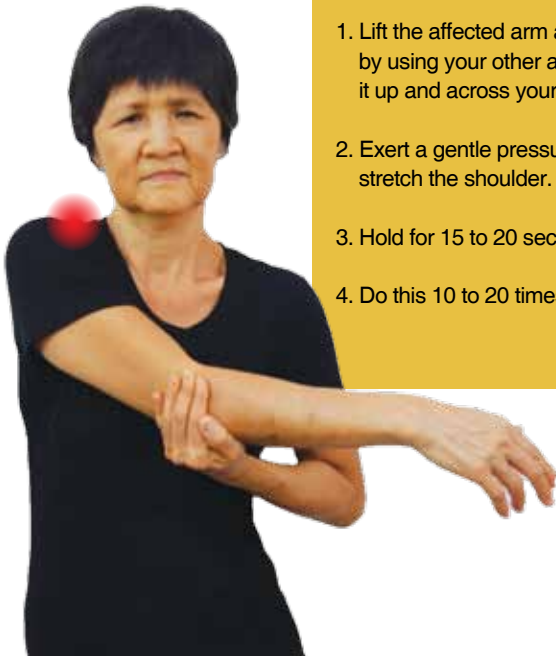
1. Face a wall and with the fingertips of your affected arm, reach out and touch the wall starting at waist level.
2. With your elbow slightly bent, slowly walk your fingers up the wall as far as you can.
3. Hold for 15 to 30 seconds before returning the arm to the starting position.
4. Repeat 10 times.

**Note:** Do not overstretch by elevating the shoulder.



### SHOULDER CROSS BODY STRETCH

1. Lift the affected arm at the elbow by using your other arm. Bring it up and across your body.
2. Exert a gentle pressure to stretch the shoulder.
3. Hold for 15 to 20 seconds.
4. Do this 10 to 20 times a day.



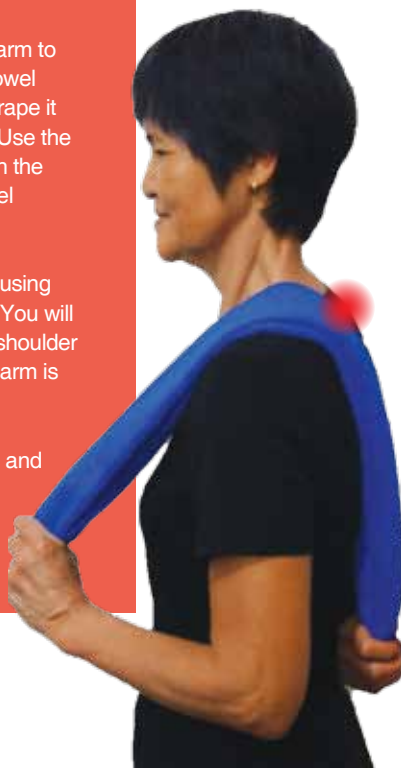
### STANDING PENDULUM

1. Place the arm of your unaffected shoulder on a table and lean forward with the affected arm hanging by the side of your body.
2. Swing the affected arm in small circles (less than eight inches in diameter).
3. Perform 10 turns in each direction.



### TOWEL STRETCH

1. Use the unaffected arm to hold an end of the towel in front of you and drape it over your shoulder. Use the affected arm to catch the other end of the towel behind you.
2. Pull down the towel using the unaffected arm. You will feel a stretch in the shoulder joint as the affected arm is pulled upwards.
3. Hold for 10 seconds and slowly release.
4. Do this 10 times.



### EXTENSION CANE

1. Standing shoulder width apart, hold a cane or an umbrella behind your body with palms facing up.
2. Extend the cane upwards slowly until you feel a stretch in your shoulders.
3. Hold for five to 10 seconds and return to starting position.
4. Do this for 10 to 20 times.

**Note:** For beginners, start slow and increase the number of repetitions as you progress.





# Plan Your Way to

By Dr Melvyn Wong

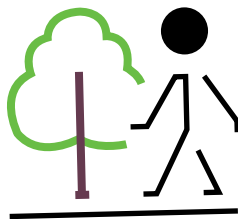
As a general rule, 30 minutes of activity a day will help you lose weight and be healthier. The principle behind it is not so much the actual activity that you do but the consistency of doing it.

So what would be a good one week programme to start off with that requires minimal equipment and money spent?

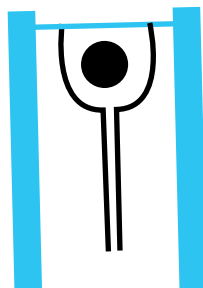
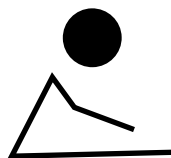
We have here a one week exercise plan that incorporates both cardio and strength training, and can be completed in the comfort of your own home and your neighbourhood.

Ready, get set and let's go!

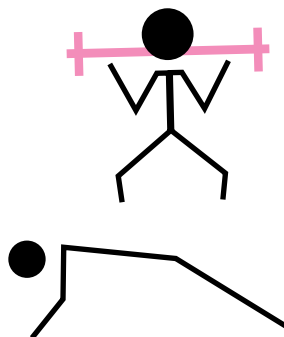
## MONDAY



### 30 MINUTES OF CARDIO EXERCISES



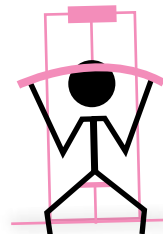
## TUESDAY



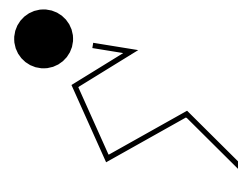
### 30 UPPER BODY STRENGTH TRAINING

Do 10 reps each for the following exercises:  
Push Ups, Resistance Band Cable Rows, Shoulder Presses, Lateral Pull Down

Do three sets with one minute break in between sets



## WEDNESDAY



### 30 MINUTES OF CARDIO EXERCISES



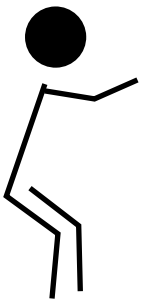




# Good Health and Fitness

The most important thing to remember is to stay motivated and be consistent. If you exercise 30 minutes daily, you are already well ahead of the rest. Aim to break a sweat every exercise day.

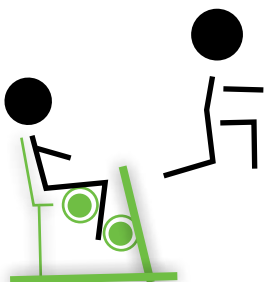
## THURSDAY



### 30 LOWER BODY STRENGTH TRAINING

Do 10 reps each for the following exercises:  
Lunges, Squats, Leg Extensions

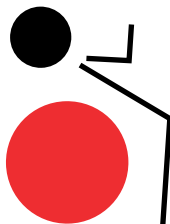
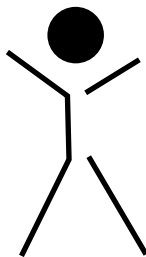
Do three sets with one minute break in between sets



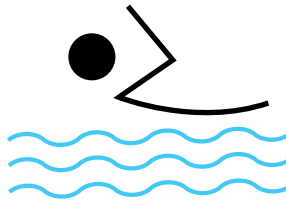
## FRIDAY



### 30 MINUTES OF CARDIO EXERCISES



## SATURDAY



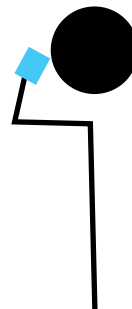
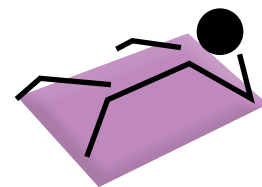
### 30 MINUTES OF FREE EXERCISES



## SUNDAY



TAKE A BREAK AND GET READY TO REPEAT THE PLAN ON MONDAY!



## Ask the Experts

**Q:** What are some common symptoms of pre-diabetes? How regularly do we need to check for it?

**A:** In prediabetes, blood sugar levels are higher than normal, but not high enough to be diagnosed as diabetes. Prediabetes often refers to impaired fasting glucose or impaired glucose tolerance depending on the blood test used. Prediabetes can only be detected by blood test as it usually has no symptoms. Those who are at risk of getting diabetes (eg age above 40 years, have family members with diabetes, have high blood pressure and high blood cholesterol) should be screened for diabetes once every three years. If prediabetes is detected, then screening blood test for diabetes should be performed annually.



**Dr Stanley Liew**

Specialist in Endocrinology & Consultant  
Raffles Diabetes & Endocrine

**Q:** What are some of the common misconceptions about diabetes? What are some of the less common signs of diabetes?

**A:** A common misconception is that once you are diagnosed with diabetes, you cannot do anything about it. In fact, I have seen many patients benefit from weight loss and achieve better sugar control. Some also think that eating sugar causes diabetes but in fact, risk factors for diabetes include family history and weight. Aside from frequent urination, thirst and fatigue, some of the less common symptoms include dry mouth, blurry vision and longer healing time for bruises and cuts.



**Ms Bibi Chia**

Principal Dietitian  
Raffles Diabetes & Endocrine Centre

**Q:** What kind of children is at risk of diabetes?

**A:** There are two main types of diabetes. Type 1 diabetes used to be known as childhood diabetes because many patients are diagnosed from young. The incidence, however, remains stably low in our population. Type 2 diabetes used to be more common in adulthood but is increasingly being diagnosed in children due to the increased incidence of obesity.



Risk factors for both types of diabetes include a family history of diabetes. While type 1 diabetes is generally associated with a genetic predisposition while type 2 diabetes tend to be associated with more modifiable lifestyle factors like obesity and a sedentary lifestyle. In Singapore, studies show that the Indian and Malay ethnic groups tend to have a higher risk of diabetes.

**Dr Christelle Tan**

Specialist in Paediatrics & Consultant  
Raffles Specialists - Holland V

**Q:** Can diabetes be reversed or prevented by embarking on the right diet?

**A:** Yes, type 2 diabetes can be reversed and prevented in some patients. Type 2 diabetes can be reversed after a substantial weight loss that usually happens after a persistent low or very low calorie diet for months and significant lifestyle changes. It is important to remember that the reversal will not happen in all patients and should be done under the supervision of your diabetes team.



There is ample evidence that prevention or delaying the onset of diabetes can be achieved by many. Majority of the research shows that losing five to seven per cent of your body weight, engaging in regular physical activity and an appropriate diet can prevent or delay the onset of type 2 diabetes by many years.

**Dr Nitish Mishra**

Specialist in Endocrinology & Consultant  
Raffles Diabetes & Endocrine Centre

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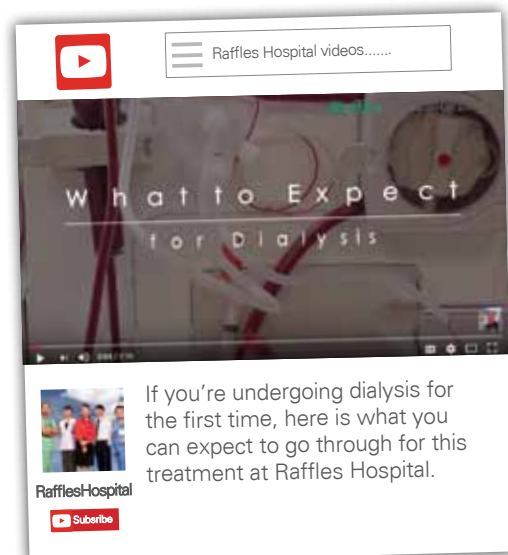
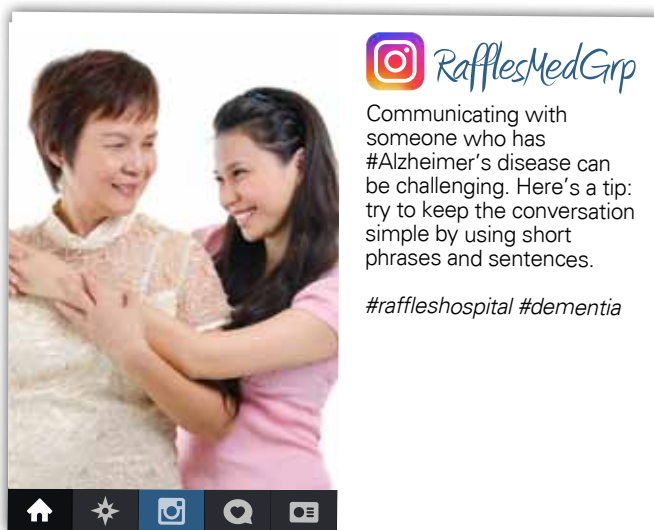
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