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## LETTER FROM THE EDITOR

**A**chieving a higher state of well-being is one of the great obsessions of our times. More people are now willing to hit the gym, embrace the latest healthy eating fads, and even endure multiple medical procedures in pursuit of this holy grail. Healthcare providers, for their part, are upping the ante by offering a variety of examinations and treatments that promise to keep patients healthy and young.

Our cover story peeks into the array of tests and interventions available to give patients an idea of what to expect when checking in at a wellness clinic. We also sort out the risks from the benefits. While cancer and heart disease remain our major health threats, some of the wellness practices that promise a lot, from detoxification to hormone replacement therapy, are becoming widespread, although their benefits are not always clear-cut.

In one of our features, we discover that smartphones, often blamed for their addictive nature, can also act as stress-busters. While meditation is an established approach to relieving stress and anxiety, our ubiquitous devices are also host to a number of new apps that can lead to mood improvements and decreased levels of depression. Obviously, they are not a panacea and often work better in combination with clinical treatment, but they are an additional tool to help us fix our stressful lifestyles.

We also cover the inspiring story of Don Smith, an asthma patient who suddenly ditched his job and set out to invent a tiny inhaler that makes daily asthma treatment less cumbersome. He made the grade, and more. Not only can his device deliver asthma treatments, but his creation may now end up revolutionising the delivery of dry-powder medications, vaccinations, and nutrition, providing people in remote and poor areas with a convenient tool to prevent disease and avoid malnutrition.



**Gabriele Bettinazzi**  
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We get it. It's hard enough to balance work, healthy living, and maintaining a social life as it is... and things get even more stressful when you add "trying for a baby" into the mix.

But here's what you need to know about fertility: the higher your stress levels are, the lower your chances of getting pregnant.

Couples who put too much pressure on themselves end up in a counterproductive situation, and the increasing amounts of cortisol (stress hormones!) present in their bodies causes their fertility levels to plummet. Ironic, isn't it?

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- Workshop: 'Fertility Nutrition'
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- 1hr Meridian Detox Session
- 1-on-1 Consultation with Fertility Coach
- 1-night stay in Superior Room (Oasia Hotel Downtown)
- Breakfast Buffet



## 4D3N STAYCATION

Inclusive of:

- BeNatural Goodie Bag
- Couples Activity
- 1hr Fertility Yoga
- Workshop: 'Natural Fertility'
- Fertility-themed Lunch
- Workshop: 'Roadmap to Fertility'
- Workshop: 'Fertility Nutrition'
- 1hr Fertility Workout
- 2hr Meridian Detox Session
- Fertility Assessment: Blood test, semen analysis, ultrasound, medical consultation (at the Advanced Centre for Reproductive Medicine @ Gleneagles Hospital)
- 1-on-1 Consultation with Fertility Coach
- 1-night stay in Superior Room (Oasia Hotel Downtown)
- Breakfast Buffet

# You Ask, They Answer



**Q** : What are the telltale signs of an eating disorder like bulimia?

**A** : Common signs of bulimia include: bruised, red knuckles possibly with small cuts, frequent trips to the bathroom during or after eating, extended periods in the bathroom with the fan or shower running, broken blood vessels in the eyes, weight fluctuations, the smell of vomit, enlarged neck glands, and secretive eating.

**Q** : How does bulimia affect the body and the mind? Any advice for families or friends on how to help someone with bulimia?

**A** : Depression and isolation are often side effects of bulimia nervosa. The individual often is locked in an all-consuming battle with food and weight. This can take up all of their time and energy and leave them physically and emotionally depleted and exhausted.

Family and friends can help by encouraging them to seek treatment from a clinician, dietician, or physician to assess their health and develop a treatment plan. If confronting a loved one about your concerns for the first time, it is crucial to be respectful, ensure an appropriate time and environment for the discussion, and offer loving support without judgment.

**Q** : How can bulimia be treated? Do patients usually relapse or keep battling the condition for the rest of their life?

**A** : Bulimia can be treated through various levels of care: outpatient, intensive out patient, partial hospitalisation, inpatient, or residential care. This is a mind, body, and spirit disease that benefits from addressing nutrition, interpersonal relationship skills, underlying trauma, urgent health

concerns (such as electrolyte imbalance), and other factors. The treatment should be administered only by trained eating disorder treatment professionals.

Recovery is possible and happens! Relapse can occur, particularly at major life transition points, such as college, marriage, pregnancy, empty nest experience, or divorce, but it is not the end of the world if a relapse occurs. In these cases, the individual should immediately contact their treatment team or find a new team to work with to understand what caused the relapse and develop patterns of behaviour and thinking to get back into recovery.

**The profound emphasis by society and media upon weight and thinness is a large factor in why impressionable adolescents are vulnerable to developing eating disorders**

**Q** : Is bulimia more commonly diagnosed in females than males and more often during adolescence and early adulthood than at older ages? Can you explain why this is the case?

**A** : Bulimia is more common in females. Unfortunately, males are increasingly diagnosed with bulimia, too. The profound emphasis by society and media upon weight and thinness is a large factor in why impressionable adolescents are vulnerable to developing eating disorders. Parents, teachers, and coaches can help offset negative influences on teens by encouraging them to look within themselves at their internal values, character strengths, and relationships for meaning and value in their lives rather than their performance or image.



**Jacquelyn Ekern, MS, LPC**

President of Eating Disorder Hope & Addiction Hope  
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"...They will soar on wings like eagles; they will run and not grow weary, they will walk and not be faint."



**Q : How does hair loss differ between men and women and what are the common causes?**

**A :** Women's hair loss is often triggered by a variety of different medical conditions or lifestyle factors, ranging from thyroid problems and autoimmune disorders to a woman's choice of birth control. This makes diagnosing and treating women's hair loss much more complicated than men's.

In men, 95 percent of hair loss is attributed to androgenetic alopecia or genetic pattern baldness. It almost always follows a very specific and predictable hair loss, which begins with the follicles at the front of the hairline and gradually recedes. Eventually, the follicles produce thin hair until they stop producing viable hair entirely.

Androgenetic alopecia also occurs in women, but the pattern is much more diffuse and only very rarely involves the frontal hairline. Instead, general thinning usually occurs equally across the top of the scalp and in the crown area, affecting hair volume and making the scalp more visible. Although the root cause of pattern hair loss is the same, the distinct ways in which androgenetic alopecia typically manifests itself and how that impacts when hair loss is first noticed are perhaps the biggest differences between the sexes when it comes to hair loss.

**Q : How can an individual identify temporary versus chronic hair loss? When is it time to seek treatment?**

**A :** People naturally lose around 50 to 100 strands of hair per day, but losing hair in greater quantities could be a cause for concern. For some, particularly men, hair loss is caused by genetics and is permanent. Many other people, however, experience only temporary hair loss, which can be triggered by a variety of external factors, including physical or emotional stress, hormonal changes during or post pregnancy,

hypothyroidism, certain medications, chemotherapy, and mistreated hair from overuse of chemicals.

Seek medical advice as early as possible when you realise that the hair loss is in greater quantities or when the overall hair volume and density have reduced.

**Q : What are some natural remedies to help reduce or stop hair loss and encourage growth?**

**A :** A balanced diet of natural source foods is the best strategy to keep hair healthy since hair growth begins in the follicle, deep under the scalp. Incorporating the best sources of protein, like lean meat, quinoa, soy, whole grains, and various beans for vegetarians, can be beneficial. Several different vitamins and minerals play important roles as well, such as iron, omega-3 fatty acids, small amounts of vitamin D, vitamin E, and trace minerals like selenium, copper, and magnesium.

No herbal or natural remedy can regrow a full head of hair, but research has shown that some herbs may help strengthen hair, support scalp health, improve hair thickness, or stimulate the hair growth cycle, such as pumpkin seed extract, hibiscus, ginseng, Aloe vera, and fenugreek, to name a few.

**A balanced diet of natural source foods is the best strategy to keep hair healthy**

**Q : What are the most current and popular treatments for hair loss?**

**A :** There are many different treatments for hair loss, ranging from safe and convenient prescription medications to full hair transplantation surgery, but they all have one thing in common - the need for ongoing maintenance to prevent

further hair loss. There are two main types of hair loss treatment options, non-surgical, such as topical products, laser light therapy, and injecting platelets, and surgical hair transplant.

Non-surgical therapies may slow down or prevent further hair loss and stimulate regrowth from short-term dormant follicles, but they can do little for long-term inactive follicles. Using them at an earlier stage of hair loss will see more favourable results.

The only long-term solution to genetic or significant and permanent hair loss, which does not respond to previous therapies, is hair transplantation provided there is adequate healthy hair in donor sites.



**Dr Suksmagita Pratidina, Sp. KK**

Dermatovenerologist  
RS Pondok Indah -Pondok Indah and RS  
Pondok Indah - Bintaro Jaya



**Q** : What are the strengths and weaknesses of traditional hair removal methods, such as shaving and waxing, for larger areas of the body like legs, arms, and underarms? Which do you recommend?

**A** : When it comes to options for lasting or permanent hair removal, I would not recommend any of the traditional hair removal methods. First of all, they are not permanent. Second, traditional hair removal methods, such as shaving or waxing, can damage the surface of the hair follicle leading to infection, i.e., folliculitis. Lastly, waxing can also cause contact dermatitis. The waxing glue can also cause either irritation or an allergic reaction on the patient's skin.

**Q** : How does an individual's skin tone and hair colour affect the choices for the safest and most effective hair removal methods?

**A** : Those with a darker skin tone have a higher risk of experiencing post-inflammatory complications such as hyperpigmentation (when the skin gets darker) or hypopigmentation (when the skin gets fairer). This happens because pigment cells are situated between the superficial and middle layer of the skin, so any form of laser or intense pulse light that targets that area can potentially cause the above complications. The safest lasers for darker skin would be those that target the deeper layers of the skin where the hair follicle stem cells are situated. For example, the long pulsed 1064nm Nd:Yag laser.

Laser hair removal works by using the hair's colour pigments to absorb the laser light and produce heat. This heat surrounds the hair follicle stem cells and damages them, thus permanently removing the hair. This is why lasers don't work so well on white or blonde hair that does not have strong colour pigmentation.

**Traditional hair removal methods, such as shaving or waxing, can damage the surface of the hair follicle leading to infection**

**Q** : Most hair removal methods cause ingrown hair. Why does this happen and how it can be managed?

**A** : Damaging the tip of the hair and making it sharp is one of the potential causes of ingrown hair. It can be managed by not shaving too closely. Lasers will also be able to remove the hair and solve the problem.

**Q** : Laser treatments can permanently remove hair, but they can also affect skin colour. What are the safest laser methods to remove hair? Do they have serious side effects?

**A** : The safest laser to remove hair is undoubtedly the long pulsed 1064nm Nd:Yag laser.

A laser procedure is like cooking a beefsteak, representing the patient's skin, on a cooking stove, representing the laser. You must know when to stop cooking when you have reached a desired colour, according to the thickness of the beef and stove. Not all cooking stoves are the same and not all cooks, representing the dermatologists, are the same.

If you don't know how to use the laser machine well enough for a particular condition and skin type, then it can surely cause complications such as scarring and skin whitening. Otherwise, the proper use of laser machines makes the procedure safe.



**Dr Peter Ch'ng Wee Beng**

M.D. (UKM), MRCP (UK), Advanced Masters of Dermatology (UKM), Diploma in Aesthetic Medicine (USA), Consultant Dermatologist at Peter Ch'ng Clinic Skin & Laser Specialist, Singapore [www.peterchngskinspecialist.com](http://www.peterchngskinspecialist.com)

# Watchman implant guards over heart patients at risk of bleeding

*The first procedure in Singapore's private sector was carried out at Mount Elizabeth Novena Hospital and allowed patient to quickly come off powerful blood thinners*



Dr Paul Chiam is a cardiologist at Mount Elizabeth Hospitals, Singapore, subspecialising in interventional cardiology. He graduated on the Dean's list from the NUS Faculty of Medicine, and was awarded the Gold Medal in the postgraduate Master's of Medicine, NUS. Having performed the first transcatheter aortic valve replacement in Asia in 2009, he currently teaches the procedure across the region. He also lectures at the Yong Loo Lin School of Medicine, NUS, in his capacity as an adjunct associate professor

**A** surgical alternative to taking powerful blood thinners for patients with irregular heart rhythm and at high risk of bleeding has been carried out for the first time in a Singapore private hospital.

Cardiologist Dr Paul Chiam carried out a Watchman implant—a percutaneous technique of closing the left atrial appendage (LAA)—into Tang Chue Ngan, an atrial fibrillation (AF) patient, at Mount Elizabeth Hospitals. Tang had been experiencing symptoms (bleeding) caused by her use of a blood thinner.

The low-risk procedure required the patient to stay just one night in the hospital. Subsequently, she has reported a fast and smooth recovery.

## Watchman implant

Approved in 2015 by the US Food and Drug Administration, the Watchman is a one-time implant similar to a stent that is guided into the heart through a flexible catheter inserted into the femoral vein in the upper leg. After being introduced into the right atrium, it passes into the left atrium through a puncture hole, where it is released and left fixed to the heart.

“In AF, a relatively common irregular heart rhythm, clots can form in the heart, and 90 percent of these clots form in the LAA. These clots can then travel from the heart to the brain and cause a stroke,” said Dr Chiam.

“To reduce the chances of a stroke, we use powerful blood thinners like Warfarin. However, many patients, especially the elderly, are at increased risk of bleeding when taking these blood thinners or actually develop bleeding.”

These patients would be good candidates for the Watchman procedure to “seal off” the LAA, making a stroke less likely without the need for a powerful blood thinner.

Though there is a possibility the procedure could damage the LAA and cause bleeding around the heart, requiring urgent drainage, the Watchman implant carries a very low risk.

But because of the novelty of the procedure and a shortage of physicians in private practice with experience of structural heart interventions, it had not been carried out in Singapore's private hospitals until Dr Chiam's operation on Tang.

## Patient presents

Having received an open-heart valve replacement six years ago, the patient developed AF after the surgery and began oral anticoagulation. She experienced some transient minor strokes in the interim and was recently admitted to hospital for bleeding from the gut.

“Thus she was a suitable candidate for the Watchman procedure, as she experienced bleeding while on oral anticoagulation,” said Dr Chiam.

Disappointed with the treatment she received at the public hospital where she was initially admitted, Tang sought a second opinion from Dr Chiam after she was taken off her blood thinners.

“He patiently explained to me my cardiac condition, the blood thinning and its bleeding threats, and also the danger of future blood clots threats. He described the solution that would help to ease the bleeding,” she said.

## Back to normal life

The patient was released the day after the implant was performed under general anaesthesia in Mount Elizabeth's cardiac catheterisation suite. She was told to return a month later for a check-up, followed by a transesophageal echocardiogram 45 days after the procedure, at which point she could discontinue using the powerful blood thinner.

Delighted with the outcome, Tang is pleased to have been part of this pioneering surgery in a private hospital in Singapore.

She urged other patients in a similar position: “If you feel the advice by the doctor is beneficial, have confidence and take advantage of the treatment options. We have good medical care in Singapore.”





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# You Ask, They Answer



**Q**: Chronic constipation is characterised by difficult, infrequent, or perceived incomplete evacuation of the bowel. What are the most common causes of chronic constipation?

**A**: According to Singapore's 2012 population-based study involving 2,276 subjects, chronic constipation is prevalent in 25 percent of the general public, particularly among older people and women.

Causes of constipation vary. Some of the common causes include lack of sufficient fibre intake, lack of physical exercise, slow transit time, and medications, such as cough mixtures, anti-cramp medications, pain killers, iron supplements, cold medicines, blood pressure medications, and antidepressants.

When constipation is of recent onset or does not improve with simple medications, then we must consider some rare but treatable causes such as endocrine conditions like thyroid problems, diabetes, tumours, or neurological conditions, like stroke or Parkinson's disease.

**Q**: Many people just deal with constipation, often believing it's not a serious problem that requires medical attention. When do you recommend seeking treatment?

**A**: Constipation is a common problem. It can lead to physical discomfort, absence from work or school, and poor quality of life. But most of the time, constipation does not lead to any serious health complications. Many approved medications are effective in providing patients with healthy, normal, and regular bowel movements.

However, patients with alarming symptoms, such as those over 40 with recent onset of constipation and experiencing weight loss or blood in the stool, and those that are not responding to simple medical measures should consult a specialist.

**Q**: If left untreated, can persistent constipation lead to serious complications or increased risk of colon cancer?

**A**: Constipation itself is not life threatening. It does not lead to cancer. On the other hand, patients with colon cancer commonly experience acute onset of constipation. Chronic constipation can lead, however, to certain complications, such as severe abdominal pain, piles, hernia, and bloating, that should be managed actively.

**Q**: What are the various treatments for chronic constipation? When is surgery required?

**A**: Surgery is rarely required and is only recommended if all treatments for severe symptoms, slow transit, physical conditions, such as anal fissures or pelvic floor dysfunction, and secondary causes, such as medication, endocrine conditions, and cancer, fail.

Some treatment methods include lifestyle modifications, such as ensuring sufficient fluids, consuming an optimum amount of fiber, and staying physically active. A proper diet also helps people with constipation, for example by eating fibre-rich fruits, such as papayas, prunes and kiwis. People with constipation can also consume bulky agents, such as supplementary fibres, Prokinetic medications, which encourage the intestines and bowel to move faster, and osmotic medications that help keep the stool soft and moist, hence making them pass out faster, to name a few.

**Some treatment methods include lifestyle modifications, such as ensuring sufficient fluids, consuming an optimum amount of fiber, and staying physically active**



## Dr Desmond Wai

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# BeNatural Experience: Caiqun & Issac



## Preconception Care Programme: Our Satisfied Clients

Caiqun and Isaac underwent a month-long Preconception Care Programme together which was specially customized for them, courtesy of BeNatural.

The programme focused on topics such as their personal diets, stress levels, physical fitness and relationship with each other.

Read on to find out what the lovely couple had to say about their journey!

“

I learnt so much not just about fertility, but about living healthily in general.

All in all, I'd say that it was a great experience.

Apart from equipping Isaac and I with more knowledge about diet, exercise and fertility, the programme also helped to bring us closer and bond as a couple.

For subsequent couples who embark on the same programme, my advice would be to be as upfront and honest with Marie

and the other BeNatural professionals as possible.

The team is highly supportive, so feel free to share anything that's on your mind, and seek their advice.

”

Caiqun, 31,  
Administrative Manager

---

# BeNatural Experience: Caiqun & Issac



“

Speaking for both myself and Caiqun: we have so many takeaways from the Be Natural programme, and the best part is that with a bit of self-discipline, we can easily incorporate these takeaways into our daily routine.

For one thing, I'm definitely more conscious about my diet now. I'll make sure that I continue eating healthily even though I won't have any subsequent follow-ups with Vivianna, our nutritionist.

Caiqun and I will continue to exercise together at home using the routine that Sandy, our personal trainer, taught us... and I'll try my best to achieve more of a work-life balance, and make it a priority to take care of my body.

To the Be Natural team, it's been an absolute pleasure. Thank you so much!

”

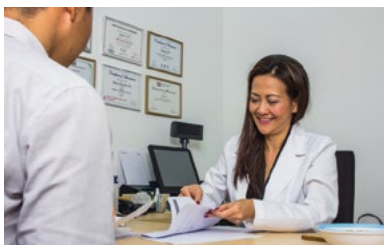
Isaac, 30,  
Technical Sales

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# Conception Journey Highlights

At BeNatural, we work with you to create a series of actionable steps that will put you on the path to natural conception.



## **MEDICAL ASSESSMENTS**

The first step for any couple trying to get pregnant is to get their blood tests, ultrasounds, and semen analysis tests out of the way. These standard procedures are crucial in order for you to gain clarity on where you stand; from there, you can then work towards getting pregnant.



## **DETOX DIET**

Your nutritionist will assess you in a face-to-face consultation. Using these results, as well as any medical test results (if applicable), your nutritionist will customize a detox diet that will help you cleanse your system. You'll be provided with sachets that you may mix with water, and consume over the next 10 days.



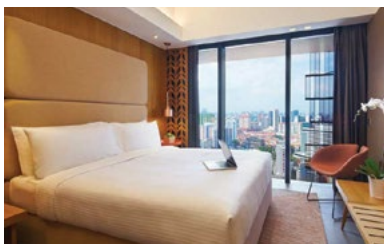
## **MERIDIAN DETOX**

Meridian Detox involves using an ultrasound device to stimulate blood flow to your reproductive organs via acupressure. This has a myriad of benefits, including hormonal regulation and balance, stimulating ovulation, and releasing toxins, congestion and inflammation.



## **FERTILITY WORKOUTS**

You'll get a customized fertility workout plan that's tailored to your specific needs – and mapped out to your menstrual cycle. Starting from your first day of menstruation, you'll embark on a day-to-day exercise regime with the objective of regulating your cycle, and optimizing your fertility potential.



## **COUPLES RETREAT / 'CONCEPTIONMOON'**

Studies show that 30% of infertility problems are caused by stress-related issues – so give yourself a day off, just for once. No work, no phones, no cooking and cleaning, and no mother-in-laws. Your only job is to let your hair down, and reconnect with your partner.

# Preconception Care

## The Importance Of Preconception Care

As a general rule of thumb, preconception care is applicable for all women who are hoping to get pregnant.

That having been said, women who have pre-existing conditions or “warning symptoms” are advised to make preconception care a priority; the same goes for women who are trying to conceive at a more advanced age.

## Preconception care and women’s fertility

First and foremost, if you’re experiencing physical symptoms such as painful or heavy periods, infrequent or irregular periods, painful intercourse, chronic pelvic pain, or discharge from your nipples, these could point to an underlying issue which is negatively impacting your fertility.

Be sure to look into preconception care, and get everything checked out.

On top of this, do note that women of a certain age are likely to experience difficulties getting pregnant.

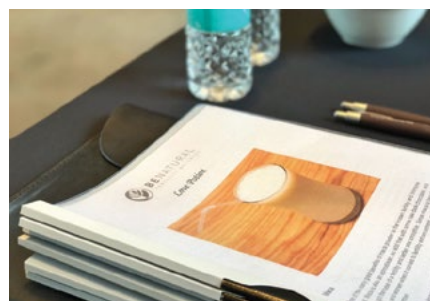
The consensus amongst experts and doctors around the globe is that there is an obvious drop-off in fertility between the ages of 29 and 35.

In addition to this, the longer you wait, the higher your chances of miscarriage are.

While women between 35-40 have an 18% risk of having a miscarriage, this number increases to 34% for women in their early 40s.

If you’re trying to get pregnant a little later on in life, preconception care becomes all the more important!

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## Safer use of tampons can help avoid toxic shock syndrome

*Women can ease their minds about tampon use and its association with a rare condition called toxic shock syndrome with simple preventive measures*



In 2012, fashion model Lauren Wasser lost her leg and nearly her life to toxic shock syndrome (TSS), a condition she contracted from using a tampon during her period. The case raised fears among women about tampon use, leading many to swear off the product entirely. Experts, however, deem tampons ‘safe’ despite the risks of TSS, provided appropriate preventive measures are taken and any early symptoms are addressed immediately.

TSS is a rare but potentially fatal condition, typically caused by toxins from the bacteria *Staphylococcus aureus* (staph). Normally living on the skin surface and in the female re-productive tract, this species of bacteria can cause an infection by releasing toxins when it breaches the skin and enters the blood system, usually from skin wounds, including surgery or even breastfeeding. From there, the infection multiplies and can lead to serious illness, from multisystem organ failure to decreased circulation, causing limb death, amputation, and even fatality.

The condition is often associated with tampons because the blood that accumulates in a tampon can be a source of infection and bacterial growth.

Some of the earliest warning signs of the condition are flu-like symptoms, including vomiting, high fever, diarrhea, and muscle pain or weakness, as well as a red, sunburn-like rash that can appear on the palms of the hands or soles of the feet.

“If you have one or two flu-like symptoms and happen to have your period, there’s no reason to panic. It’s the rash that’s key,” said Dr Gillian Dean, senior director of medical services at Planned Parenthood Federation of America to the *BBC*.

“Most of the time, when people are sick during their

period, it’s either because of their period, or it’s the cold they caught from their neighbour,” she said. “But if you’re using a tampon and feeling very ill and you notice that rash, you need to be seen in an ER or by a clinician immediately.”

Despite its dangers, TSS is eminently treatable. “In diagnosing and treating TSS, full recovery is not only possible, but probable,” Dean explained.

Since many people, both men and women, are ‘intermittent carriers’ of this specific staph strain, contracting TSS after using a tampon is merely a consequence of the bacteria found in the body, while tampon use in itself is not dangerous.

Nevertheless, there are a number of simple ways to avoid contracting TSS when using tampons.

“It’s about practising good hygiene and changing the tampons every four to eight hours. Women who have heavy flow will change them anyway as they might otherwise start leaking, but those who have lighter flow tend to leave them in longer or forget to change them, which is when there’s a risk of TSS,” said Dr Shilpa Nambiar Balakrishnan, Consultant in Obstetrics and Gynaecology at the Prince Court Medical Centre in Malaysia, to *Global Health and Travel*.

She also recommends using lower absorbency tampons as the super absorbency type can hold more blood, allowing them to be left in longer. Women should also avoid using tampons entirely when they have a vaginal infection during their period.

“I don’t think women should be afraid to use tampons, especially if it’s their preferred method of dealing with their period,” advised Dean.

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# INCREASING YOUR CHANCES OF CONCEPTION

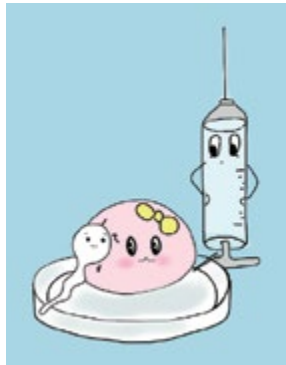
We caught up with Dr Navdeep Singh Pannu, Consultant Obstetrician, Gynaecologist & Fertility Specialist at TMC Fertility Centre Kota Damansara for a chat to hear his thoughts on increasing your chances of conception and the different fertility treatments available for couples.

## What is fertility treatment?

DN: There are multiple ways for a couple to conceive when it comes to fertility treatment. Fertility treatment options does not solely involve medications or surgery. It includes education and awareness as well.

## How can couples increase their chances of conception naturally?

DN: There are several methods of increasing your chances of conception and this includes natural options. Firstly, it is the frequency of intercourse. To increase your chances, you should have sex two to three times a week. For women, you should be aware of your fertile period, which is generally around the 14th day of your menstrual cycle. Identify your fertile period and you should have sex a few days before and a few days after that to increase your chances as well. Temperature monitoring and ovulation test kits are also available for you to monitor your fertile period.



## If the couple is unable to conceive naturally, what is the next step?

DN: If couples are unable to conceive naturally after trying for about 6-12 months, they will be advised to undergo a series of tests to help identify the cause of the problem. For the husband, a semen analysis test will be conducted to identify if there is a healthy sperm count. For the wife, the tests include a hormonal profiling and ultrasound scans. These tests can identify abnormalities in the womb and hormonal imbalance which can affect fertility.

## What's the next step if a problem has been identified?

DN: If a problem is identified, it depends on where the problem lies. If the man's sperm count is low or any abnormalities identified, treatment via oral medication or injections may be prescribed. The husband is also advised to practice a healthier lifestyle such as a healthy diet and quit smoking. If the patient is unable to ejaculate sperms, a surgical procedure can be conducted to extract the sperms from the testes. For the wife, hormonal imbalances can be treated with medication if there are abnormalities in the fallopian tubes, IVF or surgery will be recommended.

## What are the different fertility treatment options available?

DN: There are several treatment plans that couples can opt for, based on the fertility problem they face. The first is Intra Uterine Insemination (IUI). The eggs are monitored until it grows to an ideal size and an injection is given to ovulate the eggs.

Then, the husband's sperms will be injected into the womb. Having an average sperm quality and healthy fallopian tubes are prerequisites of this procedure.

The second option is In Vitro Fertilisation (IVF). During IVF, injections will be given to the woman to produce about 10 to 15 eggs. Once the eggs have reached its ideal size, an injection is given to mature the eggs and the eggs will then be harvested via a surgical procedure. Once harvested, there are two methods available to fertilise the eggs. The first method is to fertilise the egg by taking one egg and mixing it with sperm and the best sperm will be able to fertilise the egg. Another method is known as Intracytoplasmic Sperm Injection (ICSI) whereby the best sperm is selected and will be injected directly into the egg. In both methods, the embryo will be transferred into the womb via a flexible soft tube and a pregnancy test will be conducted two weeks later. As for the remaining eggs which were harvested, they can be stored frozen and used for future pregnancies.

## Will there be a test conducted before the embryo is inserted into the womb?

DN: Preimplantation Genetic Diagnosis (PGD) is a test conducted on the embryo before it is inserted into the womb, to identify any abnormalities in the embryo thus decreasing the chance of a miscarriage. A cell will be extracted from the embryo and will be subjected to chromosome testing. PGD is able to identify medical conditions such as Down Syndrome, thalassemia and other chromosome or genetic related conditions.

## What is your advice to patients seeking fertility treatments?

DN: My advice is to start early before it is too late. The best chances are when you are young, which is below the age of 35. Seek help if you're unable to conceive. Discuss with your doctor and set a realistic goal. The success rate for IVF fertility treatments is about 50-60% but as a doctor, I assure you that I will give you my 100%.



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**Dr Navdeep Singh Pannu**  
 Consultant Obstetrician, Gynaecologist & Fertility Specialist, TMC Fertility Centre Kota Damansara



## Choose natural forms of calcium rather than supplements to strengthen bones

*Calcium and vitamin D supplements may not help prevent bone loss and fractures, a new study suggests*



**T**he belief that calcium and vitamin D supplements can lead to improved bone health may be more myth than truth, according to a new study published in the *Journal of the American Medical Association*.

While many studies have shown that inadequate calcium can lead to low bone mass and high fracture rates while insufficient vitamin D prevents the body from effectively absorbing calcium, the big question is whether supplements are the most effective way to build up calcium in the body.

Researchers in China analysed data from 33 studies on the effects of calcium and vitamin D supplements, dating back to 2006. The study looked at more than 50,000 adults over the age of 50 who lived independently outside nursing homes. It found no correlation between taking supplements and the risk of hip fractures, a significant health and mobility complication for older people.

“Supplements were not associated with less risk for new fractures, regardless of the dose, the sex of the patient, their fracture history, calcium intake in their diet, or baseline vitamin D blood concentrations,” the researchers concluded in *Consumer’s Report*.

Previous studies have also questioned the effectiveness of calcium and vitamin D as a preventive method against bone fractures. The US Preventive Services Task Force in 2013, for example, suggested

older women stop taking supplements due to the lack of evidence showing they prevent fractures. Another study, published in the *British Medical Journal* in 2015, showed that daily calcium pill consumption was able to increase bone density by only one to two percent in people over 50, an amount insufficient to prevent fractures.

Other research, however, has shown some benefits. In one study involving 159 postmenopausal women, researchers found that osteoporosis incidences declined significantly for people who took calcium supplements, but remained the same for those who took only vitamin D.

Similarly, according to the 2012 recommendations from the U.S. Preventive Services Task Force, vitamin D can reduce the risk of falls in older people, helping prevent fractures. Although it’s unclear how vitamin D helps prevent falls, low levels of vitamin D have been associated with muscle weakness, so maintaining the right amount of vitamin D can restore muscle strength.

Despite such benefits, experts caution that calcium supplementation can be both wasteful and potentially dangerous.

“Calcium absorption through the gut is self-regulated and does not increase much with taking extra amounts. Any extra doses or supplementation are basically pissing money down the toilet,” quipped Dr Yong Chee Khuen, Consultant Orthopaedic Surgeon at the Prince Court Medical Centre in Malaysia, who was not part of any of the cited research, to *Global Health and Travel*. “On the contrary, if one consumes too many calcium supplements, there may be higher risk of heart issues, especially in post-menopausal women, and high risk of vascular calcification in patients with kidney disease.”

Since adults need at least 1,000 mg of calcium and 800 IU of vitamin D daily, which are achievable through diet, Dr Yong advises that, rather than long-term supplementation, people consider natural forms of calcium and vitamin D.

“Instead of fixating on only drinking milk for calcium, patients awaken to the idea of eating natural food when I ask what cows eat,” explained Dr Yong. “A healthy diet to obtain calcium should include green leafy vegetables for plant-source calcium and egg and meat for animal-source calcium, while we get adequate vitamin D in our skin just by judicious exposure to sunlight. In turn, calcium and vitamin D will be incorporated into our bones and muscles by regular exercise.”

He said that building bone density is like ‘saving for retirement’ since both are most effective when starting out young. Such habits as eating a natural diet, receiving sufficient sunlight, and doing regular exercise should therefore be encouraged at a young age and sustained life-long.

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## ZÉLL-V Wellness Hub

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**Z**ÉLL-V Wellness Hub is a leading rejuvenation centre strategically located in the heart of Kuala Lumpur within 5 minutes walking distance to Mid Valley Megamall and 10 minutes walking distance to KL Sentral.

Managing Director and founder of ZÉLL-V Wellness Hub Dato' Sharon Foong, has been enhancing lives with ZÉLL-V Cellular Therapy for over 10 years, helping tens of thousands of people achieve better health, vitality, beauty and quality of life through cellular rejuvenation and regeneration.

Her quest for optimum health has brought her to countries like Germany, Switzerland and New Zealand, where upon discussing with research teams there, she realised that optimum health cannot be achieved by one product, one technology or one medical technique alone. With this, Dato' Sharon Foong has established ZÉLL-V Wellness Hub, with the aim of helping people plan their health thoroughly, and offering them solutions that would ensure lifelong health and vitality.

Comprising 15 floors, ZÉLL-V Wellness Hub provides a series of comprehensive services with the aim of blending cutting-edge western medicine with eastern healing therapies to answer the timeless desire for your overall



wellness – body, mind and soul balance. These services include health screenings, cellular therapies, innovative holistic therapies, meditation, scalp and hair treatment, postnatal rejuvenation, talent development, child care, fine dining restaurant, etc.

### Strong Medical Support

A medical advisory board consisting of international and local medical doctors as well as scientists forms a strong core of support for ZÉLL-V Wellness Hub.

Our in-house specialists include ZÉLL-V Head of Medical Unit Prof Dr HK Yeo who is an immune-oncologist cum scientist, and V-Wellness Medical Director Dato' Dr Nor Shahidah Khairullah.

Globally, we are supported by medical specialists from various countries including Germany, Switzerland, USA, Indonesia and the Middle East, such as the president of the German Society for Thymus Therapy and founder of the German Medical Society for Chelation Therapy – Dr Helmut Brammer, and orthopaedic specialists Dr Harald Lehmann and Dr Yaroslav Vasilcisin, among others.

Every year, we hold a number of symposiums on current health issues and cellular therapy where internationally renowned doctors are invited to share their views and experience with the public.

Through positive word of mouth, ZÉLL-V Wellness Hub has drawn in a large number of customers from all over the world, including Canada, Europe, the Middle East, Indonesia, China, Vietnam, and Singapore. These people have enjoyed our top-notch facilities and services provided by our highly knowledgeable and experienced medical teams, which consists of medical doctors, research scientists, integrative consultants, chiropractors, nutritionists, medical aesthetics, international chefs, hypnotherapist, yogi, pharmacist, masseuse, and medical staff nurses.

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**Dato' Sharon Foong**  
Managing Director  
and founder of  
ZÉLL-V Wellness Hub

## Breastfeeding can lower risks of heart disease and stroke in mothers

*It not only benefits babies but could help women avoid strokes and heart disease later in life, according to new study*



In a study that followed nearly 300,000 middle-aged women for about a decade, researchers found that those who breastfed were nine percent less likely to develop heart disease and eight percent less at risk of suffering a stroke compared to those who did not.

The researchers, from the University of Oxford and the Chinese Academy of Medical Sciences, studied women with no history of cardiovascular disease. The women provided data on the number of children they had, whether they breastfed, and for how long.

The study, published in the *Journal of the American Heart Association*, also found that health benefits increased the longer the mothers breastfed. Those who breastfed for two years or more were 18 percent less likely to develop heart disease and had a 17 percent lower risk of stroke compared to mothers who never breastfed. Findings also showed that for every additional six months of breastfeeding per child there was a four percent lower risk of heart disease and a three percent lower risk of stroke.

“Although we cannot establish causal effects, the health benefits to the mother from breastfeeding may be explained by a faster “reset” of the mother’s metabolism after pregnancy. Pregnancy changes a woman’s metabolism dramatically as she stores fat to provide the energy necessary for her baby’s growth and for breastfeeding once the baby is born. Breastfeeding could eliminate the stored fat faster and more completely,” said co-author of the study, Dr Sanne Peters, a research fellow at the University of Oxford, in a release by the *American Heart Association*.

The average time that women breastfeed in China, about one year, is longer than that of women in the West who generally breastfeed for four to six months. This length of time is important because, according to a U.S. Nurses’ Health Study, only women who had a life-time of breastfeeding of two years or more had a

significantly lower risk of heart disease than those who never breastfed.

This does not mean that women who have problems breastfeeding are at higher risk of stroke or developing heart disease, according to Dr Shilpa Nambiar Balakrishnan, Consultant in Obstetrics and Gynaecology at the Prince Court Medical Centre in Malaysia.

“The studies are not conclusive, and there is certainly not enough evidence to clearly establish that relationship,” she told *Global Health and Travel*.

“Some women gain more than the appropriate amount of weight because of poor diet and reduced activity during pregnancy. This weight is not metabolised as efficiently without breastfeeding, and this is what is responsible for future risk,” she explained. “It’s more about weight and pre existing morbidity, such as obesity, and problems like hypertension and diabetes developing in pregnancy that increase the risk of stroke or heart disease in women rather than breastfeeding.”

The authors cautioned that the study still required more research to take account of other factors such as weight and blood sugar levels, blood pressure, cholesterol levels, and other health behaviours that could impact the risk of heart disease in women.

“The findings should encourage more widespread breastfeeding for the benefit of the mother as well as the child,” advised Dr Zhengming Chen, senior study author and professor of epidemiology at the University of Oxford in a release by the *American Heart Association*. “The study provides support for the World Health Organization’s recommendation that mothers should breastfeed their babies exclusively for their first six months of life.”

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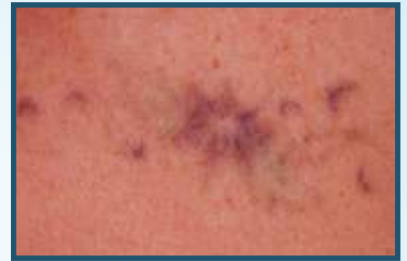


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## Air pollution can counteract exercise benefits

*The unhealthy effects of breathing polluted air can outweigh the benefits of daily walking, research suggests*



**A** recent study has found that the benefits of walking on polluted streets were almost negligible and doing so could be just as harmful as not walking at all in terms of heart and respiratory health.

Researchers led by teams at Imperial College London and Peking University in Beijing compared the health of 119 adults over 60 who walked along polluted urban streets to those who did the same in a park. Each participant was randomly assigned to walk for two hours or an average of five kilometres on London's Oxford Street, a major road and shopping district, or alternatively to walk in the fresh air and traffic-free spaces of Hyde Park. The groups were told to switch locations after a few weeks.

Before and during the experiments, the researchers studied air pollutant levels, lung function, and the heart health of the participants. 39 subjects had a mild form of chronic obstructive pulmonary disease (COPD), another 40 had stable ischaemic heart disease, while the rest had neither of these conditions.

The study, published in *The Lancet*, showed that while people who walked in Hyde Park exhibited improvements in lung capacity, reduced stiffness of the arteries, and less coughing, there was a rise in arterial stiffness and worsening of lung conditions in those who walked along Oxford Street. Even such short-term exposure to traffic pollution reduced the heart and respiratory benefits of physical activity, the researchers concluded.

"For many people, such as the elderly or those with chronic disease, the only exercise they very often can do is to walk," said lead researcher Dr Kian Fan

Chung of the National Heart and Lung Institute at Imperial College London to *CBS News*. "But our study suggests that we might advise these people to walk in green spaces, away from built-up areas and pollution from traffic, though this could be difficult for those living in inner cities."

While not ideal, Datuk Dr Kuljit Singh, Consultant ENT Surgeon at the Prince Court Medical Centre in Malaysia, who was not part of the research, suggested to *Global Health and Travel* that people who rely only on walking as a form of exercise but live in polluted cities, like in Malaysia or Indonesia, consider the option of protecting their lungs with a face mask of good quality.

He cautioned, however, that, "If the environment has high pollution, their nose will be able to pick up a bad smell. Immediately, check with the local media on the Air Pollution Index readings to see if the area is dangerous to walk in." He also recommended people seek medical advice if they have symptoms such as a persistent cough with wheezing.

Considering that walking has many other benefits, like lowering stress, building up muscles, and improving bone density, the authors suggest taking precautions rather than eliminating walks entirely.

Larger studies, however, especially involving a younger population, will be required before we can draw more solid conclusions about whether moderate levels of air pollution should raise serious concerns for all walkers.

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# Owning a dog can be good for your heart

*New study shows that living with man's best friend has health and heart benefits*

**A** new Swedish study has found that canine-owners are less likely to die from heart disease by 23 percent.

The large study, which followed 3.4 million people between the ages of 40 and 80 for over 12 years, found that dog ownership resulted in not only a reduction in death from heart disease but also a 20 percent lower risk of dying from any other cause.

The findings complement previous studies that have suggested dogs can relieve social isolation and depression, conditions associated with an increased risk of heart disease and early death.

"There's a growing belief that stress [from mental health conditions] is an additional risk factor to heart disease, and may be even more dangerous than some others. It can increase hormones like adrenaline and cortisol, and can impact your blood pressure and heart rate," explained Dr Nieca Goldberg, M.D., medical director for the Joan H. Tisch Centre for Women's Health at NYU's Langone Medical Centre, who was not part of the study, to the *American Heart Association*.

While living with dogs can relieve stress, the study also found that dog owners experienced higher levels of physical activity and have slightly lower cholesterol levels than those without dogs. But the most positive results of the study related to dog owners who lived alone.

"It seems that a dog can be a substitute for living with other people in terms of reducing the risk of dying," said Dr Tove Fall, an epidemiologist and the lead author of the study, to *The Guardian*. "Dogs encourage you to walk, they provide social support, and they make life more meaningful. If you have a dog,

you interact more with other people. If you do get ill and go into hospital and you have a dog, there's a huge motivation to try to get back home."

According to Dr Fall, the study recruited a wide range of subjects with different backgrounds, including education, various states of health and lifestyles, and those with and without dogs.

While a host of factors can reduce the risk of heart disease, the most important is physical activity, say experts, which may be why the study showed that those with certain types of breeds, like retrievers, pointers, and other active dogs, received the most health benefits from having to walk or run everyday compared to those who owned 'toy' dogs.

One broader conclusion from the study was that it was important to encourage dog owners and non-owners alike to get some form of exercise, from vigorous activity such as jogging, swimming, tennis, and aerobics to more moderate forms such as walking, golf, lifting weights, and yard work.

In one study published in *Circulation*, those who did vigorous exercise frequently saw a 20 percent reduction of heart disease risk, while moderate exercise reduced that risk by 10 percent. Another study, reported in *Health*, of more than 44,000 men found that those who 'walked briskly for at least 30 minutes each day were about 20 percent less likely to develop heart disease', while running at least an hour each week could reduce the risk by 40 percent.

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**"Dogs encourage you to walk, they provide social support, and they make life more meaningful"**

Dr Tove Fall  
Epidemiologist



## Mixing herbal remedies with conventional drugs can be risky

*The combination of herbal remedies and conventional drugs can prompt unwanted side effects and health problems, a study warns*



**R**esearch has shown that combining natural alternative supplements, such as St John's wort, ginseng, and ginkgo biloba, with conventional prescription drugs can put lives at risk.

The review, published in the *British Journal of Clinical Pharmacology*, included 49 previous case reports and two observational studies that detailed 15 cases of patients who had suffered serious adverse reactions after taking herbal medicines in conjunction with prescription drugs. After analysing the cases based on the pharmacological properties of the active ingredients, researchers concluded that herbal medicines had probably played a significant role in nearly 60 percent of the cases.

This is because such combinations can alter the conventional drugs' chemicals by either diluting them or making them more potent, triggering harmful, unwanted side effects or health problems.

One case report described how a 55-year-old man died of a seizure while swimming after taking ginkgo biloba supplements to improve cognitive function. The supplements, however, could have played a role in repressing the effects of his anti-seizure medication.

Other cases have shown that sage, flaxseed, green tea, and St John's wort can cause side effects when combined with other medications. For instance, they can reduce the effectiveness of certain drugs such as warfarin, statins, antihistamines, antidepressants, birth control, and HIV medications. According to recent studies, some of the active ingredients in herbal medicines can affect drug metabolism, resulting in a quicker breakdown of the medicines in the liver, which reduces their effectiveness.

Dr Catherine Ulbricht, an American pharmacist and author on herbal medicines, told the *Daily Mail* that patients needed to be more cautious about so-called natural remedies. "Natural does not equal safe. If something has a therapeutic action in a human body, this substance can also cause a reaction or an interaction," she said, pointing to garlic supplements which are taken to reduce blood pressure but can also interfere with anti-clotting medications as an example.

Her research also found that not only do herbal medicines have serious risks when taken with conventional drugs but mixing energy drinks or nutritional bars with medication can also cause dangerous side effects.

"Intake of herbal medicines and prescribed medications is a common practice, especially in patients with hypertension, diabetes, cancer, seizures, and depression," said Dr Charles Awortwe of the University of Stellenbosch in Tygerberg in South Africa and one of the researchers of the study to *Med News*.

"Assessment and subsequent mechanistic studies of herbs with clinically relevant herbal drug interactions must be publicised to alert both clinicians and patients about the need to avoid co-usage of certain herbal medicines with specific prescribed medications," he advised.

He also recommended that patients taking herbal remedies disclose it to their doctors. "A potential interaction and its consequences can be very detrimental to the health of the patient."

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# Welcome to the golden era of preventive medicine

*Health-conscious consumers and high-tech advancements are fuelling big transformations in healthcare, with both providers and patients making greater efforts to prevent diseases instead of just curing them*





**D**riven by a growing interest in eating clean food, perfecting the body, and achieving higher states of well-being, a relentless wellness revolution is sweeping the world, with the Asia-Pacific region trending as one of its major hotspots.

Chinese consumers are a key driver behind this movement, increasingly shunning processed foods in favour of healthy meals and transforming their holidays into opportunities to improve their well-being in a spa sanctuary or remote village far from the heavy pollution choking big cities.

In Singapore, gym goers are spending more of their time on sweat-inducing activities, with annual gym visits up by about half a million from 2011 to 2016, according to government statistics. Not to be outdone, a growing number of Indonesians is turning to medical websites or apps to get professional tips on how to boost their health, *Global Health and Travel* reported last year.

This search for “a combination of mental, emotional and physical well-being” has now become one of the emerging healthcare mega trends in the Asia-Pacific region, according to Rhenu Bhuller, partner and senior vice president of healthcare at Frost & Sullivan. The trend now extends to detox retreats, many of which employ holistic approaches to health using complimentary medicine, such as traditional Chinese medicine or Ayurveda, meditation, and better nutrition.

Research from the Global Wellness Institute sounds similar notes. Wellness tourism, or “travel associated with the pursuit of maintaining or enhancing one’s personal well-being,” is growing faster than global tourism. From 2013 to 2015, wellness tourism expenditures increased by 6.8 percent annually compared to just 3.4 percent for overall tourism, according to *Wellness Economy Monitor 2017*.

“Since 2013, Asia made the most gains in both the number of wellness trips and wellness tourism expenditures, continuing a trend that is propelled by a rising middle class, increasing intra-Asia tourism, and a growing consumer interest in wellness,” said the report.

Wellness practices, however, now extend beyond just eating habits, exercise, or fancy spas to an array of medical examinations and preventive therapies, such as screening tests aimed at detecting risk factors for chronic diseases and expanding lifespans.

These services now form a growing segment of the booming wellness market and comprise a wide range of tests from simple blood sugars monitoring to more complex cancer diagnostics. “We call it preventive healthcare because you are taking steps to prevent future medical conditions,” said Bhuller.

To cater to the needs of increasingly health-conscious patients, hospitals are now embracing the idea of offering holistic services to complement their more traditional therapeutic services.

“If you look at the management of diabetes as an example, we have seen more recognition and action on healthcare providers working with patients beyond just prescribing medications,” she explained, pointing to nutritional, workout and even mental health programmes for diabetic patients that complement pharmacological treatment.

#### **Preventive medicine: the new wave in healthcare**

In a sign that healthcare providers have warmed to the idea of incorporating holistic services into their traditional mainstream medical operations, some of the biggest hospitals in Southeast Asia are now offering a wide range of screening packages, while others have set up comprehensive wellness centres, promising head-to-toe intervention to keep both mental and physical health in check.

Malaysian hospitals are prime examples, as a number of top-ranked facilities have begun to cement their reputations in preventive medicine, Josef

**“If you look at the management of diabetes as an example, we have seen more recognition and action on healthcare providers working with patients beyond just prescribing medications,” she explained, pointing to nutritional, workout and even mental health programmes for diabetic patients that complement pharmacological treatment**

Rhenu Bhuller  
Senior vice president  
of healthcare  
Frost & Sullivan





Doctor checking the blood pressure of a patient

Woodman, CEO of Patients Beyond Borders, told *Global Health and Travel*.

“Many of the big hospitals like Prince Court, KPJ Healthcare, Sunway, and Ramsay Sime Darby offer health screening options for which Malaysia is well known,” he said, pointing to the growing trend of Indonesians travelling to Malaysia for medical check-ups.

Sunway, for instance, has set up a wellness centre where patients get screened based on their individual

needs. “We offer a wide range of male and female packages for different age groups as well as heart and stroke packages,” Christine Leong, Head of Sunway’s Wellness Centre, told *Global Health and Travel*.

With heart disease being the biggest killer worldwide, it’s no surprise that most of the wellness examinations in the region focus on detecting cardiac risk factors.

“Hypertension or high blood pressure, diabetes and cholesterol are the main health risks people tend to dismiss because they may not have any symptoms,” said Leong.

Despite the risks, many Malaysians still balk at the idea of regular screening, with the result that “more than one half of adults with diabetes in Malaysia are undiagnosed,” according to the report *Malaysia Health Systems Research*.

While many Malaysians avoid screening, Leong notes that there’s also a growing awareness of the importance of prevention through medical check-ups given that more companies now include screening in their health benefits. Malaysian women are also becoming more receptive to the importance of physical exams and encouraging their male relatives to do the same.

Elderly patients can also benefit from screening, for example by undergoing an assessment of brain function by a clinical psychologist who will ask questions that train the mind and pick up any memory

**“Hypertension or high blood pressure, diabetes and cholesterol are the main health risks people tend to dismiss because they may not have any symptoms”**

Christine Leong  
Head of Wellness Centre, Sunway

or speech problems that may be early signs of dementia.

But Malaysia is not the only country in the region promoting its wellness services. Two of the biggest players in Thailand's healthcare scene, Bangkok Dusit Medical Services and Bumrungrad, have upped the ante with full-fledged wellness centres that promise to help patients shape a healthier and more youthful life.

"We specialise in the prevention of diseases, which is key to living a long life in good health," Dr Terry Grossman, international medical director of Bumrungrad's Vitallife Wellness Centre, told *Global Health and Travel*.

Part of this involves finding the biological age of patients to determine their general state of health. Chronological age doesn't tell the whole story of how old we are, explained Dr Grossman, as people in their 40s following healthy lifestyles may have biological parameters typical of their younger peers, while unhealthy habits like smoking and drinking can lead the body to age faster, thus becoming more susceptible to a host of chronic diseases.

To determine biological age, Vitallife conducts an array of tests that can gauge the risk of heart disease and diabetes by measuring, for example, cholesterol buildup in the arteries. "If we find out you just have a tiny bit of cholesterol buildup in your arteries, we can take an aggressive therapeutic approach with medications, supplements, diet, and lifestyle changes to turn this around to make sure it doesn't get worse," he said.

Vitallife also offers different screening options for cancer, where risk is strongly associated with age. "We're looking at several things that make cancer screening more accurate and comfortable for the patients," Dr Grossman said.



One example is stool testing for colon cancer, a non-invasive method to detect the presence of blood or cancer-like DNA in the feces. The results can provide insights into whether a more invasive colonoscopy – where a thin tube with a camera is put in the colon through the anus – is recommended to rule out or diagnose cancer.

Vitallife is also looking into the use of liquid biopsy, a promising approach to detecting cancer through blood analysis. The technique is already used in many hospitals worldwide to check the progression of tumours but is not yet refined enough to diagnose early-stage cancer. Doctors hope that liquid biopsy will be able to do so in the near future.

"I think the most exciting and real quantum leap is when we will be able to do a blood test for screening patients for several types of cancer," said Dr Grossman.

Hormone measurement is another key parameter that is used to assess the ageing process and minimise its effects. "One of the key ways that we age is related to the declining level of hormones. Young people have high and old people have low levels of hormones," he explained. "By restoring hormones to more youthful levels, people can have a more youthful life."

In women going through menopause, oestrogen and progesterone decline, often leading to a variety of symptoms from hot flashes and sleep problems to mood changes and night sweats. Hormone replacement therapy is usually effective at relieving these symptoms. And in men, the use of testosterone can help build muscle and improve mental concentration and sex drive.

**"I think the most exciting and real quantum leap is when we will be able to do a blood test for screening patients for several types of cancer"**

Dr Terry Grossman  
International  
Medical Director  
Vitallife Wellness Centre  
Bumrungrad



Sauna helps eliminate toxins

Purifying the body of harmful substances is another way to achieve higher levels of health, said Dr Grossman. “We live in a toxic world, and it’s impossible to completely avoid exposure to toxins, such as mercury found in contaminated fish or lead that comes from water pipes, but there are things we can do to remove them, such as going to the sauna, exercising, increasing sweating, and taking supplements.”

Chelation therapy is an alternative, though more radical, option for removing heavy metals like mercury and lead from the body. Patients are administered a medication called ethylenediaminetetraacetic acid (EDTA) that binds to the metals in the body and flushes them out with urination.

While they’re effective for specific conditions, mainstream experts, however, advise against relying on chelation and hormone therapy as anti-ageing treatments for preventing disease.

Part of the problem is that anti-ageing doctors often try to

convince people that aging is their fault, saying that, “If you listen to us, we can fix the problem,” said Dr S. Jay Olshansky, a research associate at the Center on Ageing at the University of Chicago, to CNN. In his view, there is no therapy that can reverse or slow down the ageing process.

### Chelation therapy: promising treatment or quackery?

While chelation is an established treatment for heavy metal poisoning, there is yet no conclusive evidence it confers benefits to patients with other conditions like heart disease. But this hasn’t stopped its advocates from supporting its use, resulting in heated debate within the medical community.

One such supporter is Dr Grossman who recalled one of his patients who was in need of a heart transplant but who miraculously recovered once he started her on chelation and supplements, including vitamin C and magnesium.

“Her cardiologist had told her, ‘I don’t know what’s happening, but you no longer need a new heart,’” said Dr Grossman, highlighting that the cardiologist didn’t believe chelation or supplements played any role in her recovery and that instead it was due to the standard cardiac treatment she was undergoing.

**“I was amazed and thought maybe there’s a different type of medicine I know nothing about and which is not taught in medical schools, so I got very interested in nutritional and complementary medicine”**

Dr Terry Grossman  
International  
Medical Director  
Vitalife Wellness Centre  
Bumrungrad



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“I was amazed and thought maybe there’s a different type of medicine I know nothing about and which is not taught in medical schools, so I got very interested in nutritional and complementary medicine,” recounted Dr Grossman.

Naysayers, on the other hand, are very much unimpressed. When sold as a wellness approach, chelation therapy is a “synonym for quackery,” Dr Steven Nissen, chairman of cardiovascular medicine at the Cleveland Clinic, told *Global Health and Travel*.

He cautioned that chelation involved powerful substances that could put a patient’s life at risk if not administered by board-certified doctors and therefore strongly recommended against its use.

In contrast, Dr Grossman didn’t see any serious risks associated with the therapy. “I have administered about 125,000 intravenous chelation therapies, and no one has ever had any serious side effects,” he said. “Minor side effects could be low blood sugar and low blood pressure, but in a clinic where people know what they are doing these side effects are easy to treat.”

One study supporting the potential use of chelation in treating heart disease is the Trial to Assess Chelation Therapy (TACT), sponsored by the National Heart, Lung and Blood Institute and the National Center for Complementary and Alternative Medicine in the US.

It showed that chelation could benefit heart disease patients, in particular those with diabetes, decreasing the risk of cardiovascular events by 41 percent. A burning sensation in the spot where the medication is injected was cited as the most common side effect, while fever, vomiting, nausea and headache occurred but were rare. In even rarer circumstances, patients suffered from heart failure, a sudden drop in blood pressure, or abnormally low calcium levels.

Several limitations in the study, however, had some experts questioning its validity. Writing in *The Journal of the American Medical Association* after the findings were released in 2013, Dr Nissen said, “Unfortunately, the efforts of these investigators fell short of the minimum level of quality necessary to adequately answer the question they sought to investigate.”



Chelation have its pros and cons

**“There are conditions that require hormone supplementation in young people, but fortunately they are rare. Outside these very specific situations, there is no indication to prescribe hormones to young healthy individuals. Let’s not forget that the main anti-ageing interventions have simply got to do with lifestyle. No hormone or other product is going to keep you young if you don’t exercise, eat healthy, and manage your stress. For too long have hormones been mistakenly considered as a ‘fountain of youth’”**

Dr Nikolaos Samaras  
Geriatrician  
Générale-Beaulieu Clinic

Some major points of concern about the study included the credibility of the research sites, complementary and alternative medicine centres offering unproven therapies such as chelation for treating autism, and the unblinding of the study sponsors who knew which groups of patients were receiving chelation versus placebo, potentially compromising the accuracy of the results. Others who are sceptical about chelation, however, believe this research is the right way to go. Dr Marc Pfeffer, a cardiologist at the Harvard-affiliated Brigham and Women’s Hospital, told STAT that this research is important because many people are using chelation “without the evidence.”

A second study on diabetics who have survived a heart attack is ongoing to determine whether the results of the TACT can be confirmed. This should shed more light on chelation’s efficacy and side effects in the treatment of heart

disease but, considering the scant evidence available, is unlikely to put the issue to rest.

### Replenishing hormones: the benefits and the risks

Despite conflicting evidence, there’s a general consensus that hormone replacement therapy is beneficial for certain categories of patients, especially women who suffer from intense menopausal symptoms.

Unlike ageing men, women approaching the age of 50 experience “an almost complete shutdown of sex hormone production” that can lead to severe symptoms getting in the way of their daily activities, Dr Nikolaos Samaras, a geriatrician at Générale-Beaulieu Clinic in Geneva, explained to *Global Health and Travel*.

Since hormones help ease these symptoms, women are usually recommended to start taking oestrogen, sometimes in combination with progesterone. “The aim must always be to use the lowest doses possible in order to restore physiological levels,” he said, while cautioning that excessive doses that don’t match a patient’s physiological level based on age could cause unpredictable risks.

Some of these were documented in a large-scale study, The Women’s Health Initiative, which showed that menopausal hormones can increase the risk of several serious conditions, including blood clots and breast cancer. As a result of this and other studies

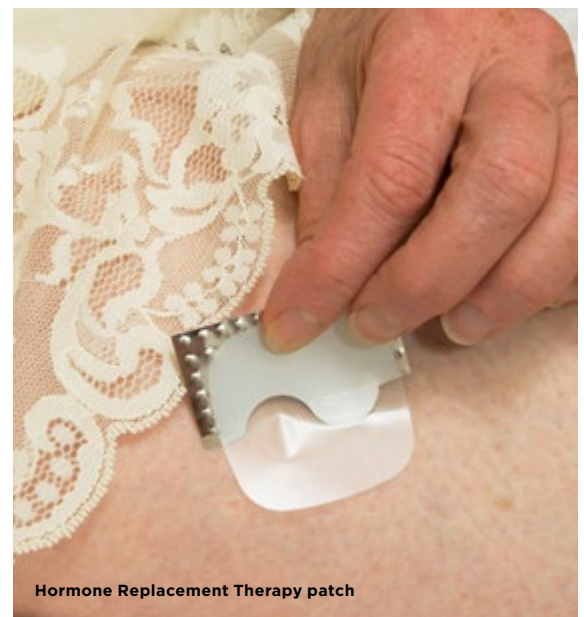
as well as guidance from the US Food and Drug Administration (FDA), doctors typically advise that hormone replacement therapy is not for every woman and should be used for the shortest time possible.

But some in the medical profession may have interpreted the results of The Women’s Health Initiative study too broadly, says one of its authors. According to a *New York Times* interview with Dr JoAnn E. Mason, one of the study’s principal investigators, the results of her research were not applicable to the “common use of H.R.T [hormone replacement therapy] for women in their 50s and for those experiencing earlier menopause as a result of medical treatment.” Participants in her study, in fact, were women in their 60s and 70s who had already been in menopause for about a decade.

Nevertheless, experts will agree that seeking the advice of a general practitioner or an endocrinologist is the best course of action before starting hormone replacement therapy.

In certain circumstances, ageing men can also benefit from hormone therapy, even though they do not face the magnitude of symptoms associated with female menopause.

“The fall in testosterone levels is progressive and presents with great disparities in ageing men,” said Dr Samaras. “Overall, age-related testosterone decrease corresponds to about a 20 to 30 percent decrease of testosterone levels from the age of 20 to the age of 80. This means that around 20 percent of healthy men over 60 have low levels of testosterone. Low levels of testosterone, however, are not always related to clinical symptoms, which are encountered in 3.2



Hormone Replacement Therapy patch



Testosterone test

percent of men aged 60 to 69 and 5.1 percent of men aged 70 to 79.”

Common symptoms associated with falling testosterone levels in men include low libido, erectile dysfunction, worsening moods, and memory loss, as well as fewer muscles and an increase in the amount of fat.

“Testosterone treatment in men has positive effects on body composition and sexual and mental health, but only patients who have a testosterone deficiency and show symptoms should be treated,” he said.

Testosterone therapy, however, also comes with a set of risks that include stimulation of noncancerous growths of the prostate and existing prostate cancers, decreased sperm production, and clots potentially disrupting blood flow to the lungs, according to the Mayo Clinic.

The bottom line is only a hormone deficiency justifies the replenishment of hormonal supplies, which is not advisable for those who just want to feel younger.

“There are conditions that require hormone supplementation in young people, but fortunately they are rare,” explained Dr Samaras. “Outside these very specific situations, there is no indication to prescribe hormones to young healthy individuals. Let’s not forget that the main anti-ageing interventions

have simply got to do with lifestyle. No hormone or other product is going to keep you young if you don’t exercise, eat healthy, and manage your stress. For too long have hormones been mistakenly considered as a ‘fountain of youth.’”

#### Select preventive medicines with great care

There’s no doubt that preventive medicine offers wellness enthusiasts new and more powerful tools to boost their health. One shining example is genetic testing, which already gives patients strong clues about their risk of developing cancer, especially in the breast, potentially saving lives through early treatment. However, a great deal of thought is needed when it comes to medical interventions that are not yet established and whose potential risks are still unknown.

“These kinds of offbeat therapies often have the lure of promising a lot, but I think people have to be very careful because in the absence of good scientific clinical trials you can’t jump to the conclusion that these therapies are going to be beneficial,” warns Dr Nissen.

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# Wellness

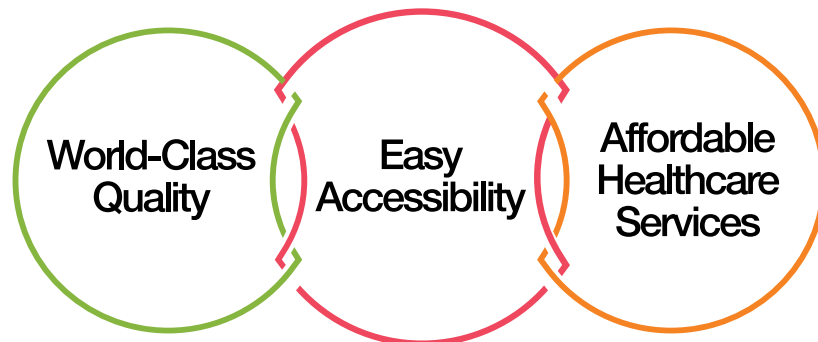
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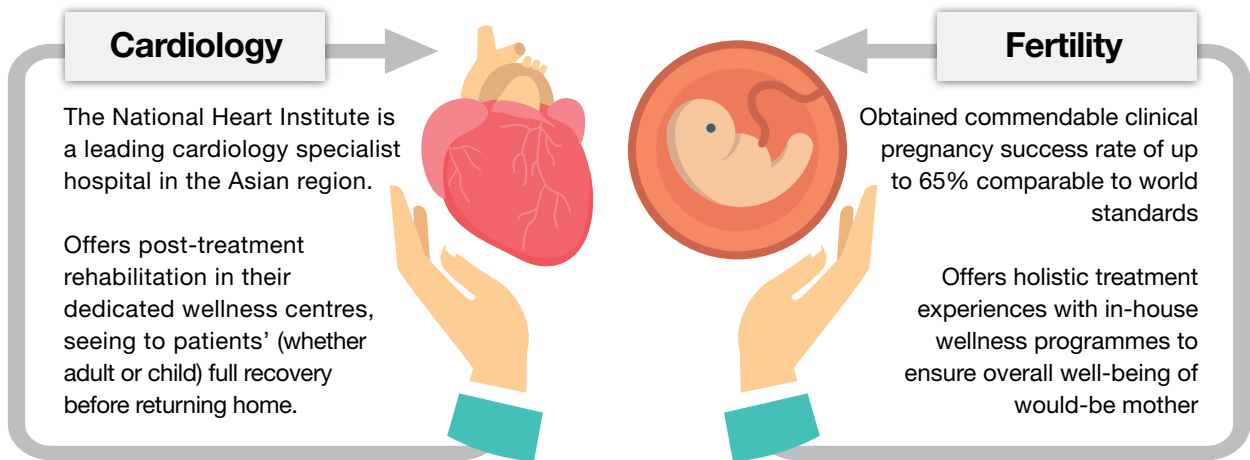
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- Cluster of The Year (2017)



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- Best Healthcare in The World (2015 - 2017)

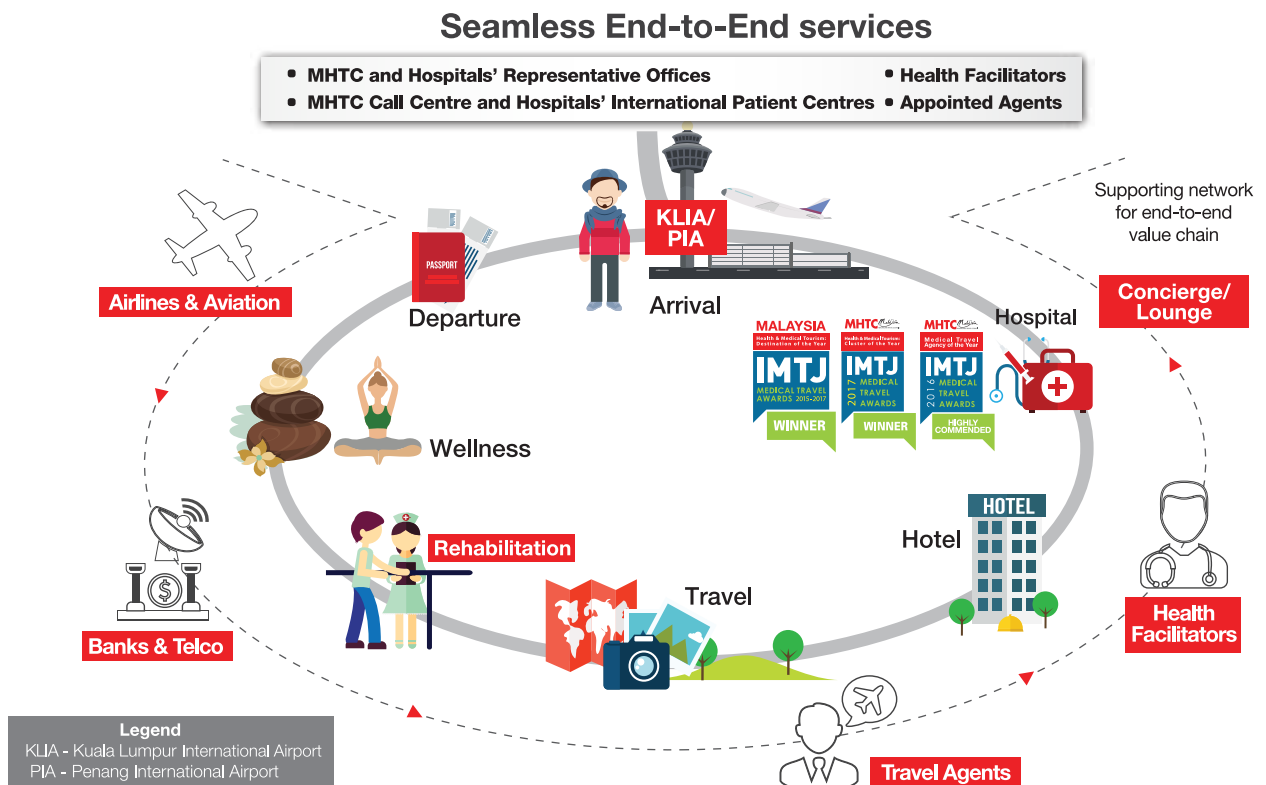
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## Radiation therapy can treat deadly heart rhythm

*An experimental non-invasive radiation therapy gives hope to patients with life-threatening irregular heart rhythm*

**D**octors at the Washington University School of Medicine in St. Louis have developed a non-invasive approach to treating ventricular tachycardia, a condition where the heart beats more than 100 times per minute, placing patients at risk of sudden cardiac death.

Lead authors of the study, Dr Phillip S. Cuculich, a heart rhythm expert, and Dr Clifford G. Robinson, a radiation oncologist at the university, used a combination of various heart-mapping techniques, allowing the doctors to pinpoint the location of the heart beat irregularity, together with a highly focused and intense radioactive beam aimed directly at the heart. The radiation treatment takes only 10 to 15 minutes.

The experiment, published in *The New England Journal of Medicine*, was carried out on five patients that had not responded to conventional treatments, including medication and an invasive procedure called catheter ablation that threads a catheter through a vein into the heart and selectively burns the damaged tissue. The procedure is considered too risky for many patients with other medical problems, and the irregularity often returns after a period of time.

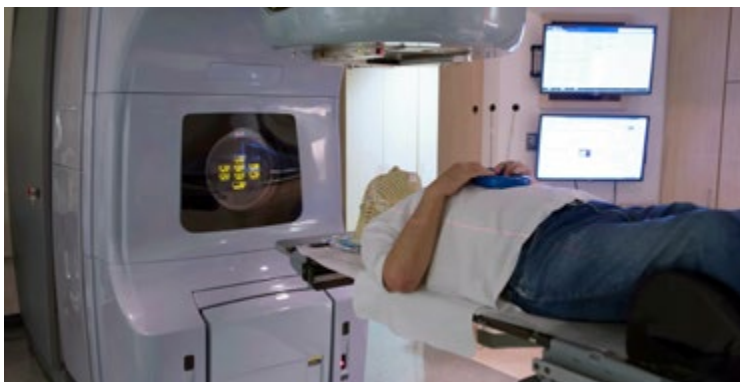
The five patients in the study had suffered more than 6,500 episodes of tachycardia collectively before the treatment. While it requires at least six weeks for the therapy to take full effect and for the patients' hearts to recover, the patients collectively had just four episodes of tachycardia, and two did not have any at all over the course of the following year.

"This is a game changer," said Dr Melvin Scheinman, a professor of medicine at the University of California in San Francisco and past president of the Heart Rhythm Society, to the *New York Times*.

The doctors carrying out the study stressed that the treatment was used in very ill patients who had run out of options. More research and monitoring for long-term side effects of radiation therapy are still required before doctors can consider this approach a standard treatment.

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## Early heart disease risk increases with male-pattern baldness and premature greying

*New findings show that these two conditions put men under 40 at a fivefold risk of heart disease, a higher risk factor than obesity*

**A** study of more than 2,000 young men in India showed that those who were prematurely bald or grey had a higher risk of coronary artery disease (CAD) than men with a full head of hair.

The European Society of Cardiology's study, which compared clinical history, heart examination results, and hair condition in 790 men with CAD under the age of 40 with 1,270 age-matched healthy men, found that male-pattern baldness was associated with a 5.6 times greater risk of CAD while premature greying was associated with a 5.3 times greater risk. Obesity was associated with a 4.1 times greater risk.

"The possible reason could be the process of biological ageing, which may be faster in certain patients and may be reflected in hair changes," said Dr Kamal Sharma, the principal investigator in the study, to the *BBC*.

"Men with premature greying should receive extra monitoring for CAD and advice on lifestyle changes, such as a healthy diet, exercise, and stress management," said lead study author Dr Dhammdeep Humane of the UN Mehta Institute of Cardiology and Research Centre in Ahmedabad to the *BBC*.

Professor Marco Roffi, head of the Interventional Cardiology Unit at the Geneva University Hospital in Switzerland, told the *BBC* that the "assessment of risk factors is critical in the prevention and management of cardiovascular disease."

"Classical risk factors, such as diabetes, a family history of coronary disease, smoking, a sedentary lifestyle, high cholesterol levels, and high blood pressure, are responsible for the vast majority of cardiovascular disease," he explained. "It remains to be determined whether potential new risk factors, like the ones described, may improve cardiovascular risk assessment."

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## Binge TV watching may increase risk of blood clots

*Time spent watching television increases the risk of blood clots, suggests a large study*

**T**he risk of blood clots increases by 70 percent in people who reported watching TV more often compared to those who seldom or never watched it, according to preliminary research presented at the American Heart Association (AHA) Scientific Sessions 2017 in Anaheim, California.

“Watching TV itself isn’t likely bad, but we tend to snack and sit still for prolonged periods while watching,” said Dr Mary Cushman, co-author of the study and professor of medicine at the Larner College of Medicine at the University of Vermont in Burlington, to *Science Daily*.

The Atherosclerosis Risk in Communities Study, which followed more than 15,000 participants aged 45 to 64 over a decade, found that the risk of developing a venous thromboembolism or VTE, a dangerous blood clot that can obstruct blood flow, was 1.7 times higher in those who reported watching TV “very often” compared with those who did it “never or seldom.”

Even people who met recommended guidelines for

physical activity but who watched TV frequently had a 1.8 times increased risk of VTE compared to those who were infrequent watchers.

“Think about how you can make the best use of your time to live a fuller and healthier life. You could put a treadmill or stationary bike in front of your TV and move while watching. Or you could delay watching TV by 30 minutes while you take a walk. If you must see your favorite show, tape it while you are out walking so you can watch it later, skipping the ads,” said Dr Cushman, who is also the director of the Thrombosis and Hemostasis Programme at the University of Vermont Medical Centre, to *Science Daily*.

Although the researchers found obesity to be more common in those participants who watched more TV, the study revealed that it only accounted for 25 percent of the higher risk of VTE.

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## Your neighbourhood could determine your risk of heart failure

*Neighbourhood-level socioeconomic factors play a key role in the risk of developing heart failure, new study suggests*

According to new research published in *Circulation: Cardiovascular Quality and Outcomes*, people who live in deprived areas are five percent more likely to develop heart failure than those from wealthier neighbourhoods.

Researchers gathered data on more than 27,000 participants, aged 40 to 79, who were part of the Southern Community Cohort Study that looked at adults across 12 states in the southeastern US between 2002 and 2009. They then divided the subjects into three groups, ranging from those who lived in the least-deprived neighbourhoods to those living in the most deprived areas.

After a follow-up of more than five years, 4,300 participants were diagnosed with heart failure, with those living in more socioeconomically deprived areas at the highest risk for heart failure.

Researchers concluded that a person's place of residence accounted for 4.8 percent of their heart failure risk.

"There is existing evidence suggesting strong, independent associations between personal socioeconomic status, like education, income level and occupation, and risks of heart failure and many other chronic diseases," said Dr Loren Lipworth, one

of the study's authors and an associate professor of epidemiology at the Vanderbilt University Medical Centre in Nashville, Tennessee, to *American Heart Association*.

"But what this study adds is evidence suggesting that characteristics of your place of residence actually also play a significant role in influencing the risk of heart failure over and above the role of your own individual socioeconomic characteristics," she said.

Since the study focused primarily on low-income, middle-aged adults, applying its generalised findings to other groups will be limited. Nonetheless, researchers hope the results can shed some light on the correlation between neighbourhood-socioeconomic factors and heart failure risks.

"Public policy professionals need to pay attention to the neighborhood, not just the individuals, because your place of residence does predict your risk of heart failure," said Dr Elvis Akwo, one of the authors of the study and a research fellow at the Medical Centre to *Science Daily*. "Improved community-level resources may ultimately reduce the risk of heart failure in these communities."

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## E-cigarettes could raise risks of cancer and heart disease

*Nicotine in e-cigarettes could damage DNA and increase the risk of cancer and heart disease, a new study on mice warns*

**W**hile e-cigarettes, or vaping, have been promoted as safer than smoking, they could still put users at higher risk of cancer and heart disease, according to new research.

The study, conducted at the New York University School of Medicine, exposed 10 male mice to e-cigarette vapor containing 10 milligrams of nicotine, comparable to what humans typically inhale, for three hours a day, five days a week for 12 weeks.

The findings, published in the *Proceedings of the National Academy of Science*, found that the mice exposed to e-cigarette vapor experienced DNA damage in their heart, lungs, and bladder compared to a control group

of mice that inhaled clean air. This is because nicotine can be converted into a carcinogen no matter how it is transmitted, increasing the risk of cancer and heart disease.

"Nicotine is not as innocent as conventional wisdom thinks," said lead study author Moon-shong Tang, a professor of environmental medicine and pathology at the NYU School of Medicine, to *Bloomberg*. "It's not clear whether conventional cigarettes or e-cigarettes would be more harmful."

Some researchers, however, criticised the study as irrelevant to humans.

"This study shows nothing at all about the dangers of vaping," said Peter Hajek, director of the Tobacco

Dependence Research Unit at Queen Mary University of London, to *The Guardian*. "It doesn't show that vaping causes cancer."

The latest study may show more definitive results after additional animal testing is conducted over the next year, while similar research on humans could take at least a decade.

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## Gut bacteria could help influence response to cancer therapy

*A new study links gut bacteria to the effectiveness of immunotherapy drugs*

**T**wo studies, published in the journal *Science*, have shown that gut microbiome — the community of bacteria, viruses, and other bugs living in the digestive tracts — helps determine whether tumours shrink when treated with immunotherapy drugs.

One paper found that a gut rich with ‘good bacteria’ microbiome could boost the power of the treatments, while the second paper found that certain immunotherapies were less effective in patients who were taking antibiotics that depleted the gut of this bacteria.

The first study from the University of Texas MD Anderson Cancer Center, which involved analysing the microbiome of 112 patients with advanced melanoma, found that two types of gut bacteria, *Faecalibacterium* and *Clostridiales*, responded well to immunotherapy drugs compared to other types of bacteria.

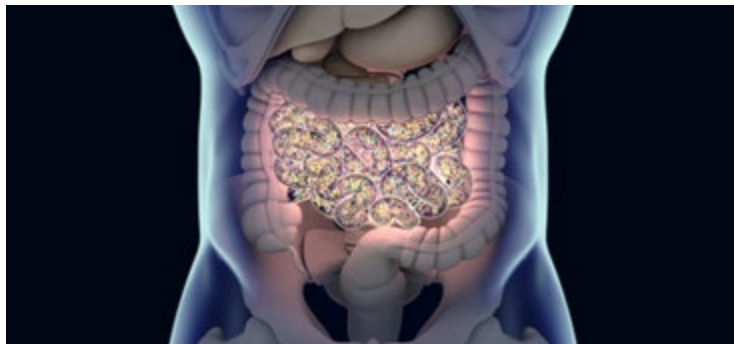
Additionally, those who responded to immunotherapy had a far greater density of killer T cells, which are largely responsible for fighting cancer, thanks to these bacteria.

The second study, conducted at the Gustave Roussy Cancer Campus in Paris, showed that, out of 249 patients with lung or kidney cancer, those who had taken antibiotics previously for various reasons had damaged their microbiome and were more likely to experience tumour growth while on immunotherapy. It also found that a gut bacterium called *Akkermansia muciniphila* was linked to strengthening of the immune system while on therapy, leading to stronger survival rates.

“Should we be profiling the gut microbiome in cancer patients going into immunotherapy?” asked Dr Jennifer Wargo, one of the lead researchers at MD Anderson Cancer Center to *STAT*. “And should we also be limiting, or closely monitoring, the antibiotic use in these patients?”

Her response was that it’s vital to have the right mixture of microbiome to determine its effectiveness. “When it comes to optimising cancer therapy, treatments will have to be heavily personalised, based on what a patient’s gut microbiome looks like already. This won’t be a ‘one bug, one drug’ approach.”

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## A new device could slow the growth of deadly brain tumours

*A cap that zaps tumours with an electric field may improve the survival outcome of patients with brain cancer*

**P**atients with glioblastoma, a deadly form of brain cancer, can buy a few more months of life using a new cancer treatment that employs a bathing-cap-like device to create electric fields in the brain, according to new research reported in, the *Journal of the American Medical Association*. The device works by interfering with cancer cell division in the brain.

The five-year clinical trial involved 695 patients who had all undergone the standard treatment for glioblastoma, including surgery, radiation, and the chemotherapy temozolomide. The results showed that 466 patients who continued to receive chemotherapy had an average time of four months before their brain tumours returned or spread, while the 229 patients who also received the electric-field therapy, called Optune and manufactured by Novocure, had an average time of about six months.

The study concluded that survival rates jumped from 16 months among patients in the chemo-only group to almost 21 months for those also using Optune. In the first two years, Optune seemed to increase patient survival rates from 31 percent to 43 percent, while at five years, survival rates more than doubled from five percent to 13 percent when chemotherapy was combined with Optune.

“This doesn’t mean we should declare victory against glioblastoma, but it’s one step toward improving patients’ quality of life and length of life,” said lead researcher Dr Roger Stupp of the Northwestern University Feinberg School of Medicine to *STAT*.

This was the first study since 2004, when chemotherapy temozolomide was first introduced for glioblastoma, that showed improvement in survival, he said.

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## Single blood test can detect eight of the most common cancers

*Using DNA and biomarkers, a blood test could spot cancers, including five types for which there is currently no screening test*

In a major medical advancement, researchers have developed a single blood test that can screen for eight common cancer types and help identify their location.

The new test, called CancerSEEK, is sensitive to both 'mutated DNA that floats freely in the blood and cancer-related proteins'. When tested in more than 1,000 patients, it showed a positive result about 70 percent of the time across eight of the most common cancers.

"The use of a combination of selected biomarkers for early detection has the potential to change the way we screen for cancer, and it is based on the same rationale for using combinations of

drugs to treat cancers," said Dr Nickolas Papadopoulos, professor of oncology at Johns Hopkins University and senior author of the paper, to *The Guardian*.

The findings, published in *Science*, could let doctors know early on whether a patient has ovarian, liver, stomach, pancreas, oesophageal, colorectal, lung or breast cancer. The average overall sensitivity for detecting cancer was 70 percent, ranging from the highest point of 98 percent for ovarian cancer to the lowest at 33 percent for breast cancer. In five of the cancers covered by the test that currently have no screening method - ovarian, liver, stomach, pancreatic and oesophageal cancers - sensitivity ranged from 69 to 98 percent.

About 800 healthy volunteers who had not been diagnosed with cancer were also tested, resulting in only seven false-positive results.

While the current test does not spot every type of cancer, it detects many cancers that would usually fall under the radar screen. Based on these results, researchers are positive that CancerSEEK could be used for routine early cancer screening tests in the future.

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## A life without pain

Research on the rare genes causing pain insensitivity offers insights into improving pain treatment

**W**ithout potent medications or therapy, an Italian family has managed to keep physical aches at bay their entire life, enduring both minor and serious injuries, like burns and bone fractures, completely free of pain.

Unsurprisingly, their secret lies in their hereditary traits, in this case a rare mutation of the ZFH2 gene, according to a study by researchers at University College London (UCL).

“By identifying this mutation and clarifying that it contributes to the family’s pain insensitivity, we have opened up a whole new route to drug discovery for pain relief,” Professor Anna Maria Aloisi of the University of Siena, co-author of the study, said in a press release put out by UCL.

For such patients, researchers need to find a way to disrupt the genetic pathway of pain so as to minimise it without switching it off completely because the total lack of pain may present with an additional series of health risks.

“Acute pain is necessary as a survival mechanism” to prevent injuries from getting worse, said Dr Sabu James, consultant in chronic pain medicine at University Hospital Monklands in Scotland. “If you can’t feel pain at all, you may not realise that you have appendicitis, and as a consequence, the infection spreads into septicaemia [blood poisoning] and you may end up critically ill and possibly losing your life.”

Developing a better treatment for pain could not be more timely.

Worldwide, one person in three lives with some kind of constant pain, according to the BBC World Service. The worsening opioid epidemic in the US, which kills more than 175 people a day according to the President’s Commission on Combating Drug

Addiction and the Opioid Crisis, reminds us that overuse of opioids, the mainstay of pain treatment, can easily lead to deadly addiction.

Having a new and effective medication that can relieve pain by acting on its genetic component would be a step forward to improving pain management, said Dr James. Unravelling the genetics of pain, however, will be challenging and, at best, will provide only one piece of a much more complicated puzzle.

“Numerous other ‘pain responsive genes’ have been discovered by various groups around the world, and each of them has added to the ever growing evidence of the complex jigsaw of chronic pain,” Dr James said in an interview with *Global Health and Travel*.

In this line of research, one challenge is that there’s no single gene responsible for either acute or chronic pain, which are caused by multiple gene interactions and influenced by psycho-social factors.

Several studies, for instance, have shown that anxiety and depression are strongly intertwined with pain. Although the relationship seems to go both ways, with chronic pain increasing the risk of anxiety and depression, people in an anxious or depressed state of mind are more susceptible to pain than those without such psychological problems.

“Although there’s no magic wand, chronic pain is best managed by a holistic approach that includes appropriate interventions from a pain physician and psychologist,” said Dr James. “Exercise, giving up smoking, and losing weight may also help patients relieve their pain.”

➔ [BBC.CO.UK](http://BBC.CO.UK)  
➔ [UCL.AC.UK](http://UCL.AC.UK)

**“Although there’s no magic wand, chronic pain is best managed by a holistic approach that includes appropriate interventions from a pain physician and psychologist”**

Dr Sabu James  
University  
Hospital  
Monklands

## STI incidences could dramatically decline with antibiotics

*Taking antibiotics within 24 hours of unprotected sex could significantly reduce some sexually transmitted infections (STI), but experts worry about their overuse*



**A** strategy to dramatically lower the spread of some sexually transmitted infections involves instructing people to take antibiotics within 24 hours after unprotected sex, a new study published by the journal *Lancet Infectious Diseases* suggests.

The strategy, however, raises concerns about the growing overuse of antibiotics and the expanding threat of antibiotic resistance.

In the study, 232 men were randomly assigned to one of two groups. One group was prescribed two pills of antibiotics, known as doxycycline, after each encounter of unprotected sex. They were told not to take more than six pills a week and preferably between 24 hours to maximum 72 hours after intercourse. This resulted in an average use of about

6.8 pills per month. The subjects were then tested regularly for STIs for about nine months.

The results showed an overall reduction of STIs by 47 percent, with a 70 percent reduction in chlamydia infections and a 73 percent reduction in syphilis.

"I don't want this strategy to be used widely in any person, clearly," said Dr Jean-Michel Molina, head of infectious diseases at Saint-Louis Hospital in Paris and the lead author of the study, to STAT. "But if you can select a group with a high incidence rate of syphilis or chlamydia, and you want to try to reduce the rate of syphilis quite quickly in this group of people, you may think that this strategy could be used for a couple of months."

Experts, however, including Dr Brad Spellberg, an infectious diseases specialist and chief medical officer at the Los Angeles County-University of Southern California Medical Center who was not part of the study, warn that "using doxycycline this way could drive the bacteria that cause the infections to develop resistance to the drug." This concern was borne out in the study's results, as the strategy was not able to reduce the incidence of gonorrhea, which is an STI that has demonstrated increasing drug resistance to many antibiotics.

"The most effective way to reduce drug resistance is to use antibiotics appropriately, but in some countries, antibiotics can be bought over the counter without the need for a doctor's prescription, which fuels the development of drug resistance," said Dr Wong Sin Yew, Infectious Disease Physician at Gleneagles Medical Centre in Singapore, who was not part of the study, to *Global Health and Travel*.

Overuse of antibiotics can also cause the 'good' bacteria in the gastro-intestinal tract to develop drug resistance, leading to a number of other health issues.

The authors noted, however, that the length of the study was short, which makes the long-term benefits unclear. Additional investigation is still required to provide a better understanding of the potential consequences and risks of the long-term use of antibiotics this way and its overall impact on sexual intercourse.

"Others have criticised this form of research as it may promote unsafe sex, which is why the results of such research on a select patient population should not be generalised to the whole population," advises Dr Wong.

He said that, instead of antibiotics, "the use of male and female condoms will assist in the prevention of the spread of STIs as they serve as a 'barrier' to infected body fluids," noting that education on safe sex is paramount to fighting STIs.

But the authors hope that this strategy, when used short-term along with other approaches, could help the fight against STIs.

➔ STATNEWS.COM



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# FDA approves gene therapy for a rare form of childhood blindness

*The one-time treatment involves injecting a healthy version of the mutated gene that causes the blindness into the retina*

Scientists have made a major advancement in the field of genetic medicine with the approval of the first gene therapy for an inherited eye disease. The new treatment improves the sight of patients with a rare form of childhood blindness, called retinal dystrophy.

Although more than 200 types of faulty genes can cause retinal dystrophy, the therapy, called Luxturna and made by Spark Therapeutics Inc., has been approved for children and adults who have the inherited condition due to a particular mutated RPE65 gene. The faulty gene is responsible for severe visual impairment starting from infancy that then progresses to the gradual loss of peripheral and central vision and eventually to blindness.

The one-time treatment is injected with a microscopic needle into the eye to deliver healthy versions of the gene to the retina. In order to be a candidate for the new therapy, patients need to first be tested to determine whether the cause of their blindness is indeed a mutation of the RPE65 gene.

The study measured changes in the vision of 31 patients based on their ability to navigate an obstacle course in low light. The group who received the therapy had significant improvements in completing the course compared to a control group.

The treatment's long-term effectiveness, however, remains unclear. William Hauswirth, an ophthalmology professor at the University of Florida College of Medicine who worked on developing the therapy, noted that one study found that most patients' vision regresses to what it was before therapy after about six years, while patients that were enrolled in the key study had not seen any deterioration in their vision for as long as four years. Some reported risks of the treatment include cataracts, elevated eye pressure, retinal tears and holes, and inflammation.

Despite the mixed results, the CEO of Spark Therapeutics, Jeffrey Marrazzo, said to CBS news, "All the data we have today suggests it's long-lasting, if not lifelong."

Dr Cosmos O Mangunsong, an Ophthalmologist Vitreoretina specialist at the Jakarta Eye Center, who was not part of the research, told *Global Health and Travel* that, "While this condition is caused by a specific inherited gene, there are good chances that an offspring with this mutated gene could grow up having healthy eyesight. In fact, some people with RPE65-related diseases could have healthy parents and siblings. This is because there are many other factors involved beside one specific mutation of one

gene that causes the condition."

He recommends parents do a genetic test of their offspring to detect whether an RPE65 mutation exists. If it does, it's best to first see whether any symptoms arise before seeking treatment. Dr Mangunsong believes early detection might help the condition's progress.

"Today's approval marks another first in the field of gene therapy, both in how the therapy works and in expanding the use of gene therapy beyond the treatment of cancer to the treatment of vision loss. This milestone reinforces the potential of this breakthrough approach in treating a wide range of challenging diseases," FDA Commissioner Scott Gottlieb, M.D., said in a statement.

➔ [EDITION.CNN.COM](http://EDITION.CNN.COM)

➔ [CBSNEWS.COM](http://CBSNEWS.COM)



# F.A.Q



In this section, we'll address the most Frequently Asked Questions about Preconception Care.

## **Will shedding weight help me conceive?**

If you're overweight or obese, losing weight can definitely bump up your fertility.

For men, reducing excessive fat deposits helps increase testosterone and sperm levels, while reducing the chances of erectile dysfunction.

For women, the exact mechanism of how obesity affects fertility isn't clear, but several studies have produced conclusive results showing that obesity does indeed result in lower fertility.

## **How can men work on their fertility?**

Research indicates that sperm counts of men have fallen by more than 50% in the last 40 years, and this global decline in male fertility is pretty worrying.

To boost their sperm count, men should avoid processed foods and increase their intake of walnuts (they contain omega-3 fatty that boosts blood flow to the genital region) and oysters (these are load-

ed with zinc, which increases sperm and testosterone production).

## **Are there any fertility tests that I can take?**

BeNatural offers a fertility assessment which includes Basal Body Temperature (BBT) Charting, a Female Hormone Assay Blood Test, and a Customised Fertility Action Plan.

To book an appointment with our in-house fertility coach, visit [www.benatural.com.sg/fertility-assessment](http://www.benatural.com.sg/fertility-assessment).

## **Is it dangerous to get pregnant when you have diabetes?**

If you have diabetes, and you're thinking of getting pregnant, be sure to discuss this with your doctor.

If you're on medication to help you control your glucose levels, your doctor may either tell you to proceed as per normal, or suggest that you switch to alternative medication.

## **Why is it important for women to consume folic acid before getting pregnant?**

According to research, consuming 400 micrograms (mcg) of folic acid per day for at least one month before conceiving is crucial in minimizing the chance of your baby being born with neural-tube defects.

Don't wait until you realise you're pregnant before starting on your folic acid supplements, because you'll be missing out on its benefits!



## **Meet our Fertility Coach, Ms. Marie Otsuka**

M.A.N. R.N. B.S.N. SBN E.N.  
Certificate in Initiatives on Fertility Experts on ART Singapore

# Meet The BeNatural Team

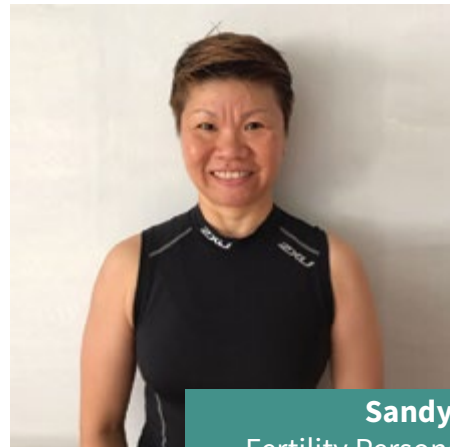


**Marie Otsuka**  
Fertility Coach

**Rachel**  
Chief Marketing Consultant



**Taylor**  
Meridian Detox Specialist



**Sandy**  
Fertility Personal Trainer



**Adrian**  
BeNatural C.E.O



**Faye**  
Fertility Yoga Instructor

## 'Final answer' that antidepressants work raises further questions

*A landmark study points to the effectiveness of antidepressant drugs but might rely more on quantity than quality of research*



**A** group of researchers believes that the age-old question of whether antidepressants actually work has finally been put to rest after a large-scale international study found that the 21 most commonly used drugs were all more effective at reducing symptoms of acute depression than placebos.

The study, published in *The Lancet* in February, analysed data from 522 trials involving 116,477 people. Lead researcher Dr Andrea Cipriani of Oxford University called it "the final answer to a long-standing controversy about whether antidepressants work for depression."

"We found the most commonly prescribed antidepressants work for moderate to severe depression, and I think this is very good news for patients and

clinicians," Dr Cipriani told the BBC.

However, Dr Walter Brown, Professor of Psychiatry and Human Behaviour at Brown University, wasn't so sure. "The authors purport to say that this puts the issue to rest. I don't think it really does that," he told *Global Health and Travel*.

"The thing that's different about this study is that it's the largest. On those grounds alone, the authors seem to be saying that because there's so much data, they have the answer. But it depends on how good the data are that they're analysing."

While the claim that antidepressants do work in treating depression is not new, controversy has always surrounded the degree and extent of their effectiveness. For example, doctors don't even know yet how they work and which patients they work best in. But most psychiatric experts believe that antidepressants are to some extent effective and work better than placebos in some patients.

Even those who most ardently question the value of antidepressants acknowledge that they work in people with the most severe kinds of depression, meaning that the *Lancet* study revealed little that was startling or new, Dr Brown said.

"If the antidepressants really didn't work, the regulatory agencies would not have approved them for marketing," he said. "I know the media has gotten very excited with this study, but there's nothing startling in it. It wasn't a bad thing doing this study, but it doesn't provide us with any new information."

The new study does contrast, however, with one done by Dr Irving Kirsch of Harvard University in 2008 that showed antidepressants were not much better than placebos, at least in mild to moderate depression.

Detractors have long argued that it's difficult to conduct reliable clinical studies into the drugs used for depression given that only about 10 percent of depressed people would meet the criteria for entry into such studies since screening typically excludes patients with complicating medical conditions, such as alcoholism, diabetes, heart disease, and high levels of anxiety.

"The kinds of people who are research subjects in clinical trials are not the same people who are treated in clinics and doctors' offices. They're a very different population. So it's very difficult to accurately generalise from the results of a clinical trial to actual clinical practice. That's something that the authors of this paper don't discuss," said Dr Brown.

"One very striking thing is that people who appear to be suicidal are not allowed, but those are the people treated all the time for their depression at clinics and doctors' offices," he explained, adding that one needed to be cautious about how much to depend on the results of a clinical trial for actual use in clinical practice.

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➔ [THELANCET.COM](http://THELANCET.COM)



## Switzerland to attract more medical tourists

*Switzerland's tourism board hopes to attract more medical tourists from the Gulf region*

**W**hile 70 million tourists visit Switzerland every year, not many are currently medical tourists. But the head of Switzerland Tourism wants to change that as the country sees strong potential in its medical tourism industry, especially in attracting patients from the UAE.

"At the moment, medical tourism is less than 10 percent [of total visits to Switzerland]. That's why we see so much potential and opportunity to grow," said Martin Nydeggar, chief executive officer of Switzerland Tourism to *Gulf News*.

He said that Switzerland already experiences high demand from the UAE and the Gulf region, which is why they have been chosen as potential source markets for medical and wellness services, ranging from specialised spa treatments to advanced surgery. This comes amidst an increase in overnight stays from visitors from the UAE to 340,000, up four percent in 2017.

"On the supply side, we see that a lot of hotels are building and investing in that infrastructure, so new hotels come up and not only provide classic services, but also additional services such as medical services," he said.

Despite Germany being its top competitor for medical tourism, Switzerland Tourism hopes to take advantage of the country's greater popularity over Germany to attract medical tourists.

"We're trying to bring together the combination of Swiss assets with Swiss medical facilities," said Nydeggar.

➔ [GULFNEWS.COM](http://GULFNEWS.COM)

**"On the supply side, we see that a lot of hotels are building and investing in that infrastructure, so new hotels come up and not only provide classic services, but also additional services such as medical services"**

Martin Nydeggar  
Chief Executive Officer  
Switzerland Tourism



## Adelaide becomes new hot spot for Chinese medical tourists

The city expects to see a rise in Chinese medical tourists seeking a range of treatments

**M**ore Chinese visitors are now traveling to Adelaide in South Australia for a range of medical services, from IVF to cancer treatment.

“With their growing wealth and middle and upper class income, the Chinese are taking a lot more notice of their health,” said Van Vlassis, chief operating officer of Medical Care Australia (MCA) to *The Advertiser*. MCA is the company responsible for offering packages to medical tourists that combine medical treatment services with tourist opportunities and accommodations in South Australia.

Some of the services range from simple health checks to more complex cardiac surgery by local doctors in private hospitals.

Vlassis said there had been “a lot of interest” from Chinese medical tourists due to the city’s growing reputation for quality health services, especially for IVF procedures. The growing number of medical tourists,

however, would not affect the quality of health care for South Australians, he said.

“Whether it be a first opinion, second opinion, genetic review medical investigation or procedural care, MCA can facilitate the services necessary to anyone around the world using world class Australian medical assistance and care,” read an MCA brochure.

“In conjunction with your medical care, MCA can provide an array of unforgettable tourism experiences, whether it be experiencing a private tasting at Penfolds winery or guiding you through Australia’s mesmerising nature and outdoors. We make it our mission to provide you the most comfortable and unforgettable medical travel.”

➔ [ADELAIDENOW.COM.AU](http://ADELAIDENOW.COM.AU)

**“In conjunction with your medical care, MCA can provide an array of unforgettable tourism experiences, whether it be experiencing a private tasting at Penfolds winery or guiding you through Australia’s mesmerising nature and outdoors”**

Van Vlassis  
Chief operating officer  
Medical Care Australia



## UAE to establish region's first proton centre for cancer treatment in 2018

The Abu Dhabi Proton Centre (ADPC) will be the first to offer a revolutionary cancer treatment in the Middle East, Africa and the Asia region

**T**he Abu Dhabi Proton Centre (ADPC), in cooperation with British company Proton, and in partnership with Al-Sayer Group in Kuwait and Al Fardan Group of the UAE, will be the first centre to offer the advanced proton beam therapy treatment for cancer.

The centre will open this year at a cost of US\$60 million in the Al-Bahia area of Abu Dhabi as part of the existing Gulf International Cancer Centre (GICC). It will be situated on an area provided by SBK Holding LLC, the Holding Company of His Highness Sheikh Dr Sultan Bin Khalifa Bin Zayed Al Nahyan, advisor to the President of the United Arab Emirates.

"We plan to revolutionise cancer treatment in the UAE. Currently, there are no centres that offer proton beam therapy in the Middle East, so we are proud that Proton Partners will be the first to be bringing it to the UAE," said Mike Moran, chief executive of Proton Partners International, in a press release.

Proton beam therapy has the advantage of being able to target hard-to-reach cancers and has proven effective in lowering side effects compared to traditional radiation treatment. It also has the ability to destroy only cancerous cells, sparing the surrounding organ. Recovery is also quicker with minimum side effects.

"Studies have shown that at least 10 percent of patients who receive traditional radiotherapy would be treated more effectively with protons," said Professor Karol Sikora, chief medical officer of Proton Partners International, in the same press release.

"By offering a variety of cancer therapies, this centre will deliver a fully comprehensive level of cancer care, tailored to fit the different needs of each patient."

➔ [IMTJ.COM](http://IMTJ.COM)

➔ [PROTON-INT.COM](http://PROTON-INT.COM)

## A medical vacation in Mauritius

Mauritius offers medical care in an island paradise

**O**f the one million tourists that travel to Mauritius every year, a popular holiday island off the southeast coast of Africa, roughly 18,000 are medical tourists looking to take advantage of the nation's growing medical sector and developing infrastructure catering to medical tourists.

"Most of the hospitals have been doing investment in terms of equipment. They are also delivering in terms of specialty," said Atma Narasiah of the Mauritius Board of Investment to CNN.

One healthcare centre that has successfully combined the country's attractions - its scenic beauty, luxury and tranquility - with delivering quality medical care is Centre de Chirurgie Esthetique.

"The concept is being created to take care of people, to pamper them, till they feel well," said Gérard Guidi, founder of Centre de Chirurgie Esthetique to CNN.

He adds that the medical centre caters to a select group of people - travelers who seek medical care in the midst of pleasure.

The number of patients that visit Centre de Chirurgie Esthetique has grown dramatically to over 2500 patients in 16 years, 85 percent of whom are foreigners.

"We are also trying to attract investors from abroad to come and set up specialty hospitals, for example for treatment of cancer," said Narasiah to CNN.

The government also hopes to attract medical tourists from countries like India, China, and the US by offering visas on arrival.

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## Eastern traditions take supplements mainstream in liver treatment

*Asian trust in age-old natural remedies trumps the West's need for evidence, leading doctors in the region to prescribe supplements*



Milk thistle

**W**ith few medicines developed to treat liver problems, doctors in Asia regularly turn to supplements and natural remedies for a range of liver conditions, from fatty liver and hepatitis to cirrhosis, unlike many of their counterparts in the West.

While some of the treatments that have been used in Asia for generations might not be readily available in Europe and the US, a more fundamental reason they are shunned is that Western doctors tend to want to see well-published evidence before reaching for the prescription pad.

Doctors in Asia, however, are more inclined, and perhaps less restricted, in considering the natural remedies their grandparents probably used.

In contrast, Western physicians are often tied down by what the evidence says when it comes to age-old supplements, says Dr Prabhjot Singh Sidhu, consultant gastroenterologist and hepatologist at Ara Damansara Medical Centre in Kuala Lumpur. They want evidence to show that a treatment works so they can justify prescribing it, rather than looking back

at what was used by our ancestors, though he does agree that the specifics of those remedies can be difficult to tease out.

“Let’s be honest, evidence-based medicine is an excellent practice that places priority on patient safety. That’s how I was trained, practice now and will continue to practice,” he said. “But just because the published evidence isn’t there, it doesn’t mean that it doesn’t work—it just means that we haven’t studied it well enough yet. When dealing with a critically ill patient, should we forego these remedies simply because someone hasn’t done the work?”

Dr Sidhu stresses that he is not advocating throwing out the text books in favour of herbs and spices but simply wants physicians to keep them in mind when treating liver patients. Moreover, these remedies are already widely available in health stores and, like it or not, many people are already on them.

“After working in the UK and coming back here, I see all these supplements that people are using and it worried me,” he said. “By ‘using’ I actually mean dishing them out like it’s going out of fashion. What are



these things? Almost every other person I speak to is on one or knows someone taking a liver supplement.”

According to Dr Sidhu, in England, steroids are available for patients with alcoholic hepatitis and N-acetylcysteine drips are used for paracetamol overdose (e.g., Panadol). But apart from treatments for viral hepatitis (infection of the liver) and primary biliary cholangitis (an autoimmune disease of the liver), there is not much else by way of evidence-based drugs.

“Otherwise you treat the source of the disease, not the liver itself. In Malaysia, doctors are more likely to prescribe supplements at the early stages of liver conditions, whether medicines are available or not,” he explained.

The best known of these goes by the brand name Heptral, which at Dr Sidhu’s hospital is classified as a drug, but elsewhere is mostly considered a dietary supplement. It contains ademethionine, a component that the body needs to make glutathione, an antioxidant in the liver that is often lacking in patients with chronic liver disease.

Another popular natural supplement is milk thistle, a herb that has been used for thousands of years to treat liver disorders, though it is never prescribed in the West. Classed as a supplement and available at health food stores, it is an antioxidant and an anti-inflammatory that prevents free radical formation, helps regulate liver cell walls, and stabilises membranes while helping liver regeneration.

Tulsi, also known as holy basil, is another commonly prescribed supplement in Asia. Some studies show that tulsi, combined with silymarin from the milk thistle seed, can protect the liver from damage caused by drugs and alcohol. In the UK, tulsi is never prescribed, according to Dr Sidhu.

Another popular supplement, the long pepper, a Chinese herb used in traditional medicine, has been shown in research papers to have antioxidant properties that help control free radicals. It is widely available over the counter.

But the most heavily used supplement is coffee, which can protect against liver cancer and is associated with lower levels of liver enzymes since it acts as a hepatoprotective agent. Studies have shown links between its use and the slowing of the



progression of alcoholic cirrhosis and hepatitis C.

“The interesting thing is that no one actually prescribes coffee or takes it for their liver. We just enjoy having it and fortunately it has benefits,” said Dr Sidhu.

But some physicians, such as Dr Steve Ryder, a consultant hepatologist in Nottingham, take a more circumspect view of natural remedies. He is adamant that evidence needs to be found before a supplement can be prescribed or even recommended.

“From a UK perspective, prescribing is very, very tightly controlled,” he stressed. “There are a lot of medicines freely available in many other countries that are not found in the UK. And that, I think, sets the framework for a doctor’s ability and willingness to prescribe outside particular areas.

“As with all these things, there is going to be a cultural element to it, a training element to it, and a regulatory element as well. As a hepatologist, I have occasionally seen the downside of some herbal remedies, like acute liver failure, so they are not necessarily risk-free substances.”

While in Malaysia not all doctors will automatically prescribe natural remedies, they are still worth considering once the limited medicinal options available to treat the liver directly have been exhausted, Dr Sidhu said.

“I trained in the West, so I like evidence to say that this is why we do these things and here are the hard facts. Again, I’m not pro-supplements and certainly have my reservations about them,” he said. “I have seen patients suffer from significant liver impairment from taking unspecified herbal remedies, with some even ending up on the liver transplant list.

“But what about the patient who is desperate for something, anything, that might help? Should we tell him that there are supplements, though the evidence is not strong? There are many things we don’t know about fully, and with that there is risk. But at least we have some evidence of their safety. I think the jury is still out.”

**“I have occasionally seen the downside of some herbal remedies, like acute liver failure, so they are not necessarily risk-free substances”**

Dr Steve Ryder  
Consultant hepatologist

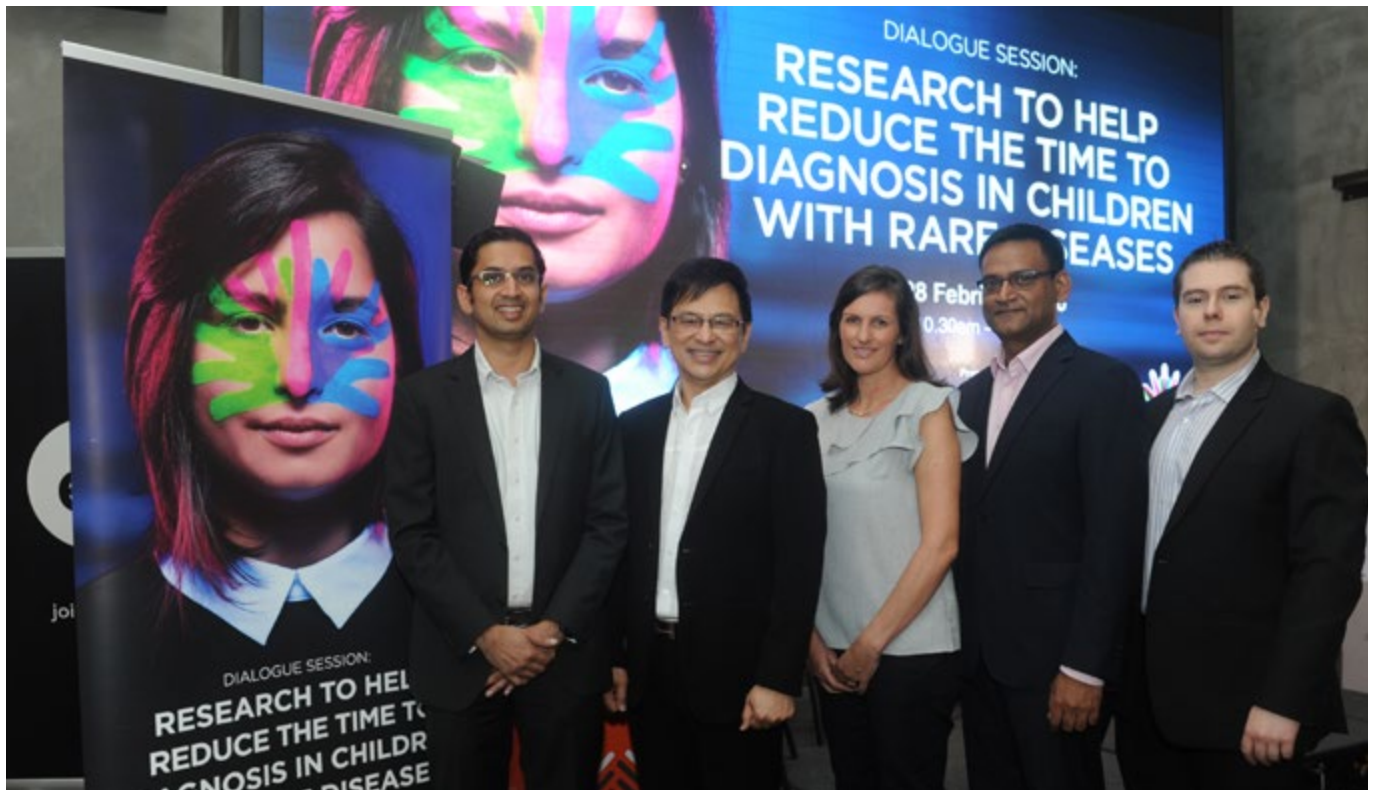


Holy basil

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➔ NUH.NHS.UK

# Collaboration helps speed up diagnosis in children with rare diseases

*Rare Disease Day event explores ways for healthcare and technology to work together*



Speakers from L-R: Dr Saumya Shekhar Jamuar, Dr Timothy Low, Yasmin Bylstra, Vivek Puthucode with the session's moderator Joseph Mocanu

**C**linical experts gathered in Singapore on February 28 to mark this year's Rare Disease Day, an annual observance to raise international awareness of the many conditions under that banner.

At an event hosted by SGIInnovate, a science and research-based "venture catalyst," and the regional office of global rare diseases biotech company Shire, speakers from public health, research, and technology assessed ways the rare diseases community could work together to reduce the time needed to diagnosis such diseases in children.

They also explored the roles technology could play in helping address diagnostic challenges and improving care and outcomes for patients living with rare diseases.

"With more than half of rare diseases starting in childhood, I see the search for answers that parents go through when their child's rare disease remains undiagnosed

or when diagnosis is delayed for many years," said Dr Saumya Shekhar Jamuar, Consultant, Genetics Service, KK Women's and Children's Hospital.

"Yet things have been improving and the use of advanced genetic technologies such as next generation sequencing have enabled us to increase our diagnostic yield to 30 percent. The goal of reducing the time for diagnosis in children with rare diseases is especially timely on Rare Disease Day, and I'm excited to see breakthrough innovations in this area enabled by research and technology," said Dr Jamuar.

As most rare diseases are genetic in nature, genetic counselling can play a crucial role in supporting patients and their families as they seek diagnosis. Indeed, one size does not fit all when it comes to rare diseases, said senior genetic counsellor Yasmin Bylstra, of SingHealth Duke-NUS Institute of Precision Medicine (PRISM).

"Accordingly, the role of genetics also goes beyond diagnosis by influencing a more personalised

**"The goal of reducing the time for diagnosis in children with rare diseases is especially timely on Rare Disease Day, and I'm excited to see breakthrough innovations in this area enabled by research and technology"**

Dr Saumya Shekhar Jamuar  
Consultant

approach to treatment,” she said, adding that it is her hope that greater collaboration in Asia to speed up early intervention will provide better outcomes.

Event host Shire Singapore acknowledged its “responsibility” to find ways to innovate and improve care for patients living with rare diseases, starting with their diagnosis. Its “Global Commission” partnership with Microsoft is a “great leap forward in terms of being smarter at patient finding,” said Dr Timothy Low, Shire’s head of Asia-Pacific medical affairs.

“It is also our priority to bring more Asian representation to our global R&D strategy and look at sub-types of rare diseases that are more prevalent in Asia. This requires continuous collaborations,” said Dr

Low, who is also a member of the Farrer Park Hospital board of directors.

The Global Commission is seen as a model for collaboration between the technology and healthcare industries in tackling rare diseases. By applying new technology, including artificial intelligence and algorithms, it can find answers for the urgent and unmet needs of the rare disease community.

“We foresee a future where patients and their families are better supported in their journey of obtaining a timely diagnosis, especially here in Asia,” said Vivek Puthucode, Microsoft Asia-Pacific’s general Manager for the public sector, a partner in the collaboration, in concluding remarks.

## Q&A with Peter Fang

Head of Asia-Pacific, Shire

**In November 2016, you said you were aiming to double Asia-Pacific sales by 2020. Which are the key countries, what is your strategy, and are you on course to achieve this?**

Shire currently has 10 offices across 16 countries in the region. Our strategy is clear: accelerate regulatory registration timelines, work with clinicians to increase the understanding of rare diseases, and collaborate with payers and policymakers to commit and find solutions for our medicines that are sustainable for patients. We also invest in services necessary to support patient outcomes throughout their journey. We are almost two years in post integration with Baxalta, and have become a global leading biotech company focused on rare diseases. I believe that we are on course to deliver our promise to double our sales in the region by 2020.

**Why has it taken so long to focus on this market, and what potential do you see in it?**

First of all, the definition of rare disease varies from country to country. Hence, there is not really a homogenous framework or disease landscape across the region. It is generally less developed in the Asia-Pacific region because of the small patient population for a specific rare disease, yet there are huge unmet needs for the estimated 100 million people living with rare diseases. Globally, Shire has over 40 clinical trials currently underway in 45 countries and over 17,000 patients enrolled across various phases of clinical development – three-quarters of which is focused on rare

diseases. The potential to make a deep impact for patients to access new innovative products is far reaching. We also want to make sure that there is Asian representation to our international commercial strategy.

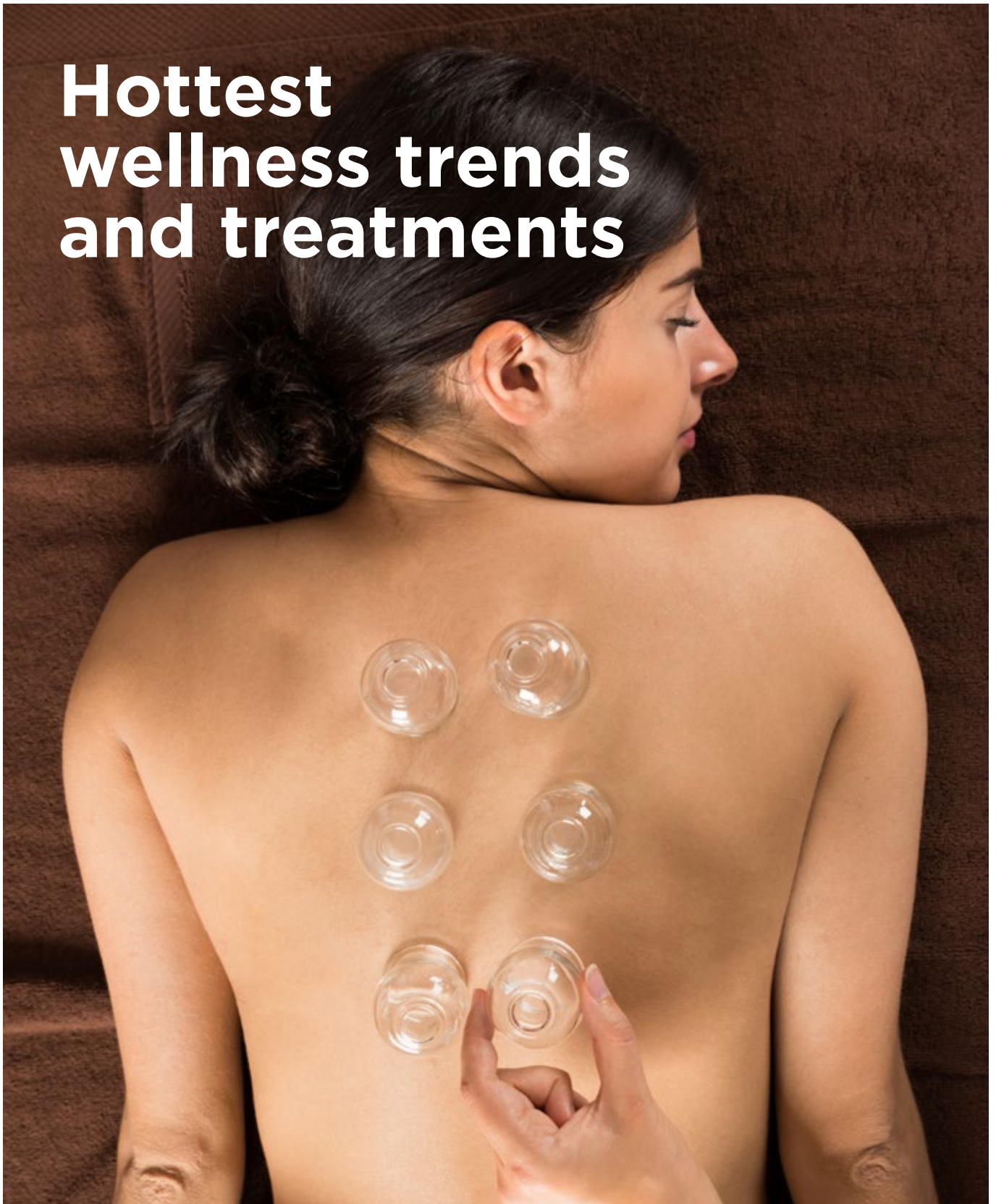
**How competitive is the market in this part of the world, and how does Shire have an edge?**

Shire is unique when it comes to walking the patient journey – starting from diagnosis where it takes an average of 5-7 years, up to eight specialist’s visits to obtain a correct diagnosis. We can only imagine that it takes much longer, even decades, in this part of the world. And then there is treatment and access – where we bring in our expertise in therapeutic areas like Hemophilia (a rare bleeding disorder), Hereditary Angioedema (HAE) (episodic attack of swelling), and Fabry Disease (alpha-galactosidase A enzyme deficiency), along with tailor-made patient assistance and access programmes and solutions like apps to suit every local market. I have been with the company for 16 years, and I see Shire continuing to innovate with new advances for the patient. It is really an exciting time, and collaboration will be key for us to push through a challenging environment. By partnering, I mean across the industry, with healthcare professionals, academia, policy makers, payers and media, we can create an ecosystem where patients can unify and feel supported. That’s what the Global Commission is about, and we are fortunate to embark on this journey with Microsoft to use technology to speed up patient finding and connect them to the right standard of care.



Peter Fang

# Hottest wellness trends and treatments



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## Relieving pain with Chinese cupping therapy

Michael Phelps, winner of 23 gold medals and one of the world's most decorated Olympic swimmers, created a splash when he was photographed with large, red bruises along his shoulders and back. Unknown to most people, this was the work of an ancient healing therapy, called cupping, a popular Traditional Chinese Medicine (TCM) practice.

Not surprisingly, cupping therapy employs the use of specialised heated cups. During therapy, a certified expert lights up an alcohol-soaked cotton ball and swirls it inside the cup before quickly plopping it onto the skin. The fire burns up the oxygen in the cup, creating a vacuum so that when the cup is placed on the skin, it makes the skin rise to the surface. The number of cups used and the duration vary depending on patient needs but typically start from three minutes.

"Cupping is considered a type of 'reverse massage' - instead of pressure being applied to the body like a massage, there is a negative or reverse pressure applied to the body," explained Matthew Maneggia, Licensed Acupuncturist and Owner of Connecticut Family Acupuncture, to *Global Health and Travel*. "The



treatment is best used for pain symptoms and more specifically for pain related to tight, knotted muscles that are in spasm."

The suction process from cupping causes the blood vessels to expand, encouraging more blood circulation and enabling the body to flush out toxins from a problem area. Cupping induces a strong anti-inflammatory reaction locally, effectively "waking up" the body to an area that isn't functioning as well as it should.

Cupping generally has no risks other than leaving reddish-purple bruises on the body that disappear in a matter of days. Maneggia cautions, however, that patients may experience some short-term discomfort or pain from the strong vacuum pressure on the skin, so patients that are too weak or on blood-thinning medication should avoid the treatment.

"Short-term discomfort is usually followed by long-term improvement," he said.

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## Flawless skin with 24K gold facials



"It was said that Cleopatra slept with a pure gold mask every night, believing it was the secret to flawless skin, and gold was regarded as the key to youth in ancient Chinese medicine," said Louise Cogan, the Australian founder of Cocoon Medical Spa, Bali's largest and most advanced cosmetic and wellness centre, to *Global Health and Travel*.

A winner of numerous awards, including "Best Medical Spa in the World" at the IMTJ Awards in

London in 2015, the clinic's philosophy is based on a holistic approach that combines the best anti-ageing and wellness results-based treatments, technologies, and products for improving skin health and quality for long term results. Cocoon's treatments are equal to those found in any major Western capital but at a fraction of the price.

"Gold is a natural way to firm, tone and produce youthful, radiant, healthy skin," explained Cogan. "This way, you won't need a lot of injectable treatments like Botox or fillers."

Twenty-four-carat (24K) gold facials are designed to improve skin elasticity, reverse cell damage, improve blood circulation, and increase the regeneration of natural collagen. The gold used in the clinic's facials can also lighten the skin's complexion and prevent premature ageing. Gold also fights free radicals in the skin, helping prevent and remove fine lines and wrinkles. It also strengthens skin elasticity by preventing the appearance of sagging skin.

"When gold is applied to the skin, cell growth quickly accelerates, which is good for skin rejuvenation. Gold can also aid in reducing inflammation, which, in time, will slow melanin secretion and reduce age spots," said Cogan. She recommends having gold facials once to twice a month.

A 24K gold Facial carries no risks or downtime and is suitable for all ages and skin types.

➔ [COCOONMEDICALSPA.COM](http://COCOONMEDICALSPA.COM)

## Health benefits of a home sauna



Saunas have been used for generations to improve health, vitality, and well-being across the world. But traditional saunas can be expensive, bulky, and inconvenient when located at a distance from your home.

Not to worry. For those who really want their saunas, a new technology in the form of portable near infrared light (NIR) saunas may be the answer.

"NIR saunas have become a sensation as they have all the proven clinical heat benefits of a traditional sauna with the very important addition of near infrared light therapy, on top being accessible at home," explained Dr Todd Lizon, founder and CEO of Lifestyle Integration

and NIR Sauna, to *Global Health and Travel*.

NIR Sauna provides a host of 'heat' benefits including: detoxification, better diabetes control, prevention of mental illnesses such as depression, Alzheimer's, and dementia, improved cardiovascular health, increased weight loss, infection control, anti-ageing, and enhanced endurance.

The infrared light therapy from NIR Saunas provides the added benefits of reducing pain and inflammation from soft tissue and sports injuries, arthritis, and bursitis. It also helps with dermatological conditions, such as skin wounds, ulcers, and eczema, as well as offering anti-ageing properties.

Typically, an individual will sit about 40 to 60 cm away from the red near infrared heat lamps, followed by a rotation to target the back, for about 15 to 45 minutes. After a quick shower, users should rehydrate for 15 to 20 minutes and allow the body to rest.

"Humans are designed to be exposed to near infrared light from the sun on a daily basis for proper functioning cells and bodies," said Dr Lizon. "I recommend close to daily saunas – either in the early morning or closer to bedtime - if a person is of robust enough health and can ensure proper hydration and replenishment of their electrolytes."

He cautions, however, that pregnant women, patients with certain cardiovascular conditions, and children should not take a sauna.

→ [NIRSAUNA.COM.AU](http://NIRSAUNA.COM.AU)

## Community-focused power cycling

Riding the wave of indoor cycling that has been sweeping the West and parts of Asia is ANTHEM, a boutique indoor cycling studio in Singapore that offers a total body workout and power-based training in a community-focused environment.

"Aside from the 'community aspect' of indoor cycling, this sport has become a lot more popular in Southeast Asian countries because they are not accustomed to the idea of cycling on the roads, mainly due to the dangers it brings, like traffic," said Hann Sern Young, partner of ANTHEM, to *Global Health and Travel*. "It allows riders to focus on themselves and their workout instead of having to deal with external factors outdoors."

He says that indoor cycling also provides entertainment and is weather proof, which allows consistency.

The name ANTHEM came about because each workout session - six classes per day lasting about 45 to 60 minutes - is designed to flow with the rhythm of the music determined by an instructor's vibe, which complements riders looking to push themselves to the pulsing beat in the cycling studio.



"An anthem represents a unifying voice and consistency, which is an underlying notion that the riders share. Anthem, or indoor cycling, is a great escape and time-off for individuals looking to get fit in the process," said Young.

The indoor venue packs its 25 riders close together in a large space and tracks the progress of each rider with a performance IQ that encourages riders to push their limits further with every class.

Along with an indoor cycling studio, ANTHEM has a functional training room that combines unique elements of cycling, rowing, weights and high intensity interval training (HIIT) as well.

→ [ANTHEM.SG](http://ANTHEM.SG)

## Sense-stimulating yoga

From the therapeutic realms of yoga and meditation comes WOOM, one of the world's first multisensory studios specialising in sound therapy.

"It is a fully body, mind, and spirit experience," said co-founder Elian Zach-Shemesh to *Global Health and Travel*.

She explains that WOOM essentially believes in "journeying through sound" with sound-centric programmes that last for 60 minutes to 2.5 hours, and are available for beginners to experts. Each of WOOM's nine experiences, such as Super WOOM, WOOM Rest, and WOOM Spatial Sound, offers a form of audio component that produces a stimulating, sense-enhancing environment for the practice of yoga and meditation. Among the building blocks of the WOOM experience are vocal meditation, use of overtone-emitting instruments, including traditional sounds of gongs, Himalayan singing bowls, tuning forks, bells, and chimes, among others, and a 3D sound system playing curated playlist ranging from tribal beats to pop music.

WOOM CENTER is the first of its kind to offer an immersive sound and visual projections system that creates a fully immersive experience.

Aside from touch, visual, and auditory senses, the WOOM experience includes elements of the remaining senses that are stimulated by distributing blindfolds



at the start of the session to facilitate uninhibited vocalising, misting students with the centre's signature essential oil blend, and ending the sessions with a complimentary fresh elixir shot.

"WOOM is a sensory journey that awakens the physical and 'subtle' bodies – the subconscious self. We provide sensory stimulating environment for the traditional yoga practice, allowing participants to focus on something other than the chatter of their overthinking monkey mind, and the noise of their hectic and busy lives," said Zach-Shemesh.

"Benefits vary from person to person, depending on what is needed for each participant – from physical fitness, calming the mind, or awakening the spirit, you name it."

➔ [WOOMCENTER.COM](http://WOOMCENTER.COM)

## Placenta facials the new fountain of youth



Looking for the hottest new beauty treatment, one that even A-list celebrities Victoria Beckham, Kim Kardashian, and Harry Styles have embraced?

Search no further. Using stem cells from a sheep's placenta and umbilical cord, placenta facials may be

the new fountain of youth. Known to have powerful anti-ageing and nutritive properties, they are also rich in proteins and amino acids, growth factors, and antioxidants, which are the life force of cells. They also possess a number of anti-inflammatory benefits and can treat various skin conditions, such as acne, rosacea, psoriasis, and eczema.

"The stem cell serum used is the closest to human DNA and helps rebuild and brighten the skin," said Dr Simal Soin, a respected cosmetic dermatologist in India and owner of AAYNA, a clinic that offers the finest cosmetic dermatology and anti-ageing treatments using the latest skincare technology and innovations in the world, to *Global Health and Travel*.

She explained that a single treatment can make the skin look noticeably rejuvenated, lifted, hydrated, and supple with a healthy, youthful glow.

The facial includes a thorough cleansing followed by surface exfoliation before the application of a hydrating mask. The placenta serum is then infused with the help of a healing red light and then topped off with a layer of stem cell-rich moisturising cream for the eye and the face.

"The stem cell facial is hypo-allergic and no adverse effects have been reported by its use," said Dr Soin. "It is safe for any skin type."

➔ [AAYNACLINIC.COM](http://AAYNACLINIC.COM)

### Are oats a safe and effective alternative to drugs for reducing cholesterol?

*While oats can lower LDL cholesterol with no side effects, statins have a bigger impact on reducing the overall risk of heart disease*



**S**hould you be stat-in or stat-out? That's the perennial question facing patients at risk of a host of medical conditions caused by high cholesterol.

Endorsed by vast numbers of physicians for their ability to lower cholesterol levels while also censured by others who compare their use to wielding a sledgehammer to crack open a walnut, statins court controversy.

Their detractors point to their well-documented side effects. The most common include headache, nausea and vomiting, nose bleeds, diarrhoea, rashes and muscle pain, alongside increased risk of type 2 diabetes. In rare cases, they can cause liver failure

or rhabdomyolysis, a rapid break down of damaged skeletal muscle.

Yet they have been found to successfully reduce cardiovascular disease and mortality in those at risk. Their efficacy has led to statins being among the most widely prescribed types of drugs, to the extent that the US Preventative Services Task Force in 2016 advised everyone over the age of 40 to take them.

"People with no signs, symptoms, or history of cardiovascular disease can still be at risk for having a heart attack or stroke," said task force member Dr Douglas K. Owens at the time. "Fortunately, for certain people at increased risk, statins can be very effective at preventing these events."



Despite the official advice, many patients remain wary of the potential consequences of using statins. But they wonder what could replace such an effective drug.

The answer could be found in most kitchen cabinets across the Western world. As a natural cholesterol buster, oats, which contain high levels beta glucan, are seen by many nutritionists as a match for statins and with no known side effects. Indeed, beta glucan is one of the few natural substances that are accompanied by health claims on product packaging. In the gut, oat beta glucan works by forming a thick gel that binds to cholesterol, preventing it from being absorbed into the body.

Studies have shown that three grammes of beta glucan a day—the equivalent of a 70 gramme bowl of porridge oats—can reduce levels of harmful low-density lipoprotein (LDL) cholesterol by around seven per cent. But is this enough and can it match the efficacy of statins? It depends on who's giving the advice.

"I believe that if everyone started the day with porridge, it would have a significant impact on public health," Chris Seal, professor of food and human nutrition at Newcastle University, told the *Daily Mail* recently.

And it's no secret that wholegrains containing beta glucan can protect against heart disease. In clinical

trials, this effect has been seen within four weeks of starting to take oat-based products.

"Oat beta glucan can lower both total and the more harmful LDL cholesterol levels. This appears to be a dose-response effect—in other words the higher the intake of oat beta glucan the greater the reduction in total and LDL cholesterol," said a statement from Heart UK, which advises on reducing cholesterol levels.

And a 14-year study by Harvard University, published in 2015, which looked at the health of 100,000 subjects, found that those who ate the most wholegrains were best protected against heart disease. The researchers even went so far as to say that life expectancy could be extended by their regular consumption.

While it's known that beta glucans can reduce cholesterol production in the liver, what is less clear is whether their consumption also results in the same level of decrease in cardiovascular disease events achieved with statins, questioned Aloysa Hourigan, an accredited practising dietitian who works with Nutrition Australia.

"With regard to whether beta glucans can be as effective as statins in reducing cholesterol and in reducing the risk of cardiac events, more research is needed, and people should talk further to their medical practitioner before exploring those options," she told *Global Health and Travel*.

This is because statins have been shown to have additional benefits in decreasing the risk of cardiac events by also helping stabilise the existing fatty plaque on the blood vessel walls, explained Hourigan, while there is no clear evidence to say that this also occurs with beta glucans. Physicians tend to believe that the effects of lowering cholesterol with beta glucans is modest when compared to statins.

"In coronary heart disease, trials with statins have shown that the larger reductions in cholesterol have in the long-term reduced heart attack and death rates, so it is internationally accepted in the medical community to use statins as standard therapy," said Dr Yap Lok Bin, a Malaysian consultant cardiologist.

"However, there is a population who are not keen on statins because of side effects, so these dietary measures and alternative treatments are indeed a viable alternative, but with the understanding that the effect will be much milder, which also means that the benefit will be less."

**"People with no signs, symptoms, or history of cardiovascular disease can still be at risk for having a heart attack or stroke. Fortunately, for certain people at increased risk, statins can be very effective at preventing these events"**

Dr Douglas K. Owens  
US Preventative  
Services Task Force



Statin tablets

- ➔ [NUTRITIONAUSTRALIA.ORG](http://NUTRITIONAUSTRALIA.ORG)
- ➔ [IJN.COM.MY](http://IJN.COM.MY)
- ➔ [DAILYMAIL.COM](http://DAILYMAIL.COM)



## Inventor gives breath of life to credit card-sized inhaler

*Single-dose puffer could revolutionise global delivery of dry-powder medications, vaccinations, and nutrition*

**F**ed up with carting around a cumbersome inhaler for most of his life, Don Smith quit his job and resolved to invent a device to replace it that would make a difference for himself and millions of other asthma sufferers.

Less than a year later, the Englishman has patented and trademarked the 1nhaler, a powder puffer that can be slipped into a wallet. His invention, he says, will be liberating.

“The inhaler I use now contains 200 doses of

Salbutamol, though I only ever need one. It’s an awkward thing to carry, especially when I go out running, or am out in the evening, so I designed the 1nhaler to suit my lifestyle,” he told *Global Health and Travel*.

Credit card-sized and containing a single dose of an immediately acting dry-powder agent, Smith’s 1nhaler is the first of its kind. The Edinburgh-based inventor, armed with grant funding from Scottish Enterprise, is now seeking partners to build a

prototype and engage in clinical testing.

"I want the world to know about it, but everyone's looking to copy good ideas," he said. Though Smith cannot go into detail about how the gadget works, it appears devilishly simple. By squeezing its sides and puffing on it, like a traditional inhaler, the powder is delivered straight to the lungs. At a time when pharmaceutical companies are busy exploring new methods of drug delivery, the 1nhaler could have many other applications beyond asthma.

"The idea of dry-powder pharmacology is really interesting, because if you think about the way your lungs take in an active pharmacological ingredient (API), it takes about three minutes for a drug to get into your circulatory system via your lungs," Smith explained.

By comparison, a pill will take up to 20 minutes to be digested, which is not ideal for an allergy sufferer who is sneezing and having a terrible time in a field of pollen. Moreover, drugs that require an immediate outcome, like Viagra, would benefit particularly from being offered in inhaled doses.

"This is the fascinating thing. What we're seeing is a dry-powder revolution," Smith declared.

The inventor doesn't see the 1nhaler's single-dose format as a limitation for asthmatics like himself, whom he initially designed it for. But, Dr Richard Budd, a respiratory physician at Australia's Top End Health Service, who was asked by *Global Health and Travel* to review the premise behind the invention, believes it's important to make this distinction.

"One can see a use for a non-cumbersome device like the 1nhaler for those individuals who only intermittently use their inhalers for symptom relief. However, I believe that people who have to use their medications on a daily basis and multiple times within the day would not find the single-use credit card device of much use, as they would have to have multiple cards each day.

"As a hospital-based respiratory specialist, the majority of my patients fit into this category and so the credit card device will not revolutionise their therapy. However those individuals with well-controlled respiratory disease that do not require daily medications may find this device less cumbersome than carrying an inhaler every day," Dr Budd said.

While not for everyone, the 1nhaler would still be suitable for individuals with mild disease, which is around eight percent of asthmatics in its home market, according to British Lung Foundation data.

A single-dose device such as the 1nhaler could also be used to administer vaccines as dry-powders for measles, polio, and influenza. The format would be more stable compared to doses traditionally contained in wet mist liquids and would not need to be temperature-controlled. These would also be easier to distribute and would not require medical supervision to administer.

"Because of the size and cost-efficiency of the



The clunky version

device, I could deliver huge amounts of vaccinations and inoculations to very remote locations where people would otherwise not be able to get hold of them.

"Humanitarian groups could even deliver a multitude of different dietary and nutritional supplements to the malnourished through dry powders. Natural health products can all be available in this way. The other great thing is medical-grade cannabis has become available as a dry powder, so people with cystic fibrosis, for example, can breathe it and have that therapeutic effect immediately," Smith said.

But the inventor wasn't thinking about all these applications when he quit his job as a creative director at a digital design and marketing agency last April. At the time, he was just keen to begin inventing new products. Alongside the 1nhaler, he's also working on projects involving energy, the environment, and "hopefully a bit of interstellar travel, if I can manage it."

Though he has no medical background, Smith has immersed himself in pharmacological circles since starting work on the 1nhaler. He's attended several global conventions and made friends with some of the world's leading dry-powder pharmacologists to get his head around the subject.

He's also spent much of his time educating himself on how clinical trials are conducted around in-vivo testing.

**"Because of the size and cost-efficiency of the device, I could deliver huge amounts of vaccinations and inoculations to very remote locations where people would otherwise not be able to get hold of them"**

Don Smith  
Inventor



Don Smith

“You invent about what you know, and I’ve made it my mission to understand that world and validate that product myself with the right people.

“I understand the inhaler world because I’ve used one all my life. I know the impracticalities, the difficulties, the misuse, so it’s smart to invent something you fundamentally understand, not just the technology but the experience behind the technology,” Smith said.

The irony is that now that he’s joined an industry well known for rarely being in a hurry, Smith finds himself becoming impatient. Faced with six or seven years of development, testing, and all the many other steps in the launch process, he wants to cut the queue and take his product to market as soon as possible, even within the next year.

Once he has data to show that the 1nhaler deposits the active pharmaceutical ingredients correctly into the lungs, he’ll be ready to begin production, even if that means looking eastwards rather than selling his

invention to a big pharma company in, say, America, where it could spend years undergoing testing by the FDA there. As a category B device—meaning that a pharmacological agent is embedded within it—the inhaler would need approval from the American regulator.

“Otherwise, I could go to China and work with a Chinese pharma organisation, or to India, and we could get it straight out to people in regions where they are doing vaccinations. My instincts say that’s what I want to do. I don’t want to play games, I just want to get it out in the world.

“As an inventor, I think I’ve found a better way to deliver these drugs, and that’s really important to me. After all, what’s an inventor when his inventions never see the light of day?” Smith proclaimed.

➔ [B100M.COM](http://B100M.COM)

**“As an inventor, I think I’ve found a better way to deliver these drugs, and that’s really important to me”**

Don Smith  
Inventor

# A passion for traditional Singapore shophouses



View of the CBD and Chinatown shophouses in Singapore, which are sought after by rich overseas investors

**T**ucked away amid the supersized exclusive Good Class Bungalows of Ridout Road in Singapore is a little clearing with two blocks of low-rise flats fronting a lawn. Built by the Singapore Improvement Trust (SIT), now the Housing and Development Board (HDB), the flats originally housed the young British professional architects and others who come to Singapore beginning in the 1920s to help solve overcrowding in the British colony's shophouses and squatter settlements. Their work eventually led to the creation of Singapore's enviable and affordable public housing programme.

For Julian Davison, an anthropologist and architectural historian who also happens to live in one of the flats, the area holds nostalgic memories as his father, who worked for SIT as a young architect in the early 1950s, had also lived in the flats. Davison is author of books such as *Singapore Shophouses* and *Black and White – The Singapore House 1989-1941*. He's also written a book on Singapore's oldest architectural practice, Swan & Maclaren, whose origins date back to the late 1800s.

Davison is now working on a book on the history of Singapore told through its architecture. It will be not just about the buildings, but who built them and why they were built then.

"If you look at the way the city grows, it's always in response to some major historical event," he says. Davison hopes to complete the book by 2019, the 200th anniversary of the founding of Singapore by Sir Stamford Raffles.

According to Davison, "Singapore was a sea of shophouses" in the 1950s. Even in the 1900s, the representation of the city was through them. "Given their ubiquity, it's not surprising that they've become a Singapore icon," he says.

Given their historical importance, the shophouses were gazetted by Singapore's Urban Redevelopment Authority (URA) for conservation in areas such as Boat Quay, Chinatown, and Little India. Those in Chinatown,

particularly in the vicinity of the Central Business District (CBD), have also gained the attention of overseas investors over the past 12 years, including hedge funds, private equity firms, and family offices, according to Simon Monteiro, the associate director of heritage buildings at Savills (Singapore).

"It's about wealth preservation," he says. "Given the global market uncertainty elsewhere, Singapore looks attractive by comparison. They want to put their wealth in assets that will hold their value and they can pass on to the next generation."

One reason prices have soared is that there are restrictions on buying such assets, Monteiro explains. For example, of the 8,900 conservation shophouses in Singapore, only 3,000 to 3,500 units are zoned for full commercial use. Foreigners are allowed to buy only such shophouses.

"Foreign investors and corporate entities are not allowed to buy shophouses zoned for commercial use on the first level and residential use on the upper floors or those that are zoned for residential use," he explains.

This is why prices today for a 99-year leasehold two-storey conservation shophouse in the CBD range from \$2,000 to \$2,500 per square foot (psf), while those with a 999-year leasehold or freehold tenure are commanding prices of \$2,800 to \$3,000 psf. Corner units are getting even higher premiums.

"This group of ultra-rich foreign investors are interested in conservation shophouses because, to them, it's like collecting art – buying a piece of history – and they appreciate the architecture and the story behind it," says Monteiro.

Monteiro and Davison are now collaborating on establishing the provenance of Singapore's heritage buildings. "The second and third generations of owners will appreciate the stories behind them, the characters that were once associated with the property," says Davison.



"This group of ultra-rich foreign investors are interested in conservation shophouses because to them, it's like buying a piece of history"

Simon Monteiro

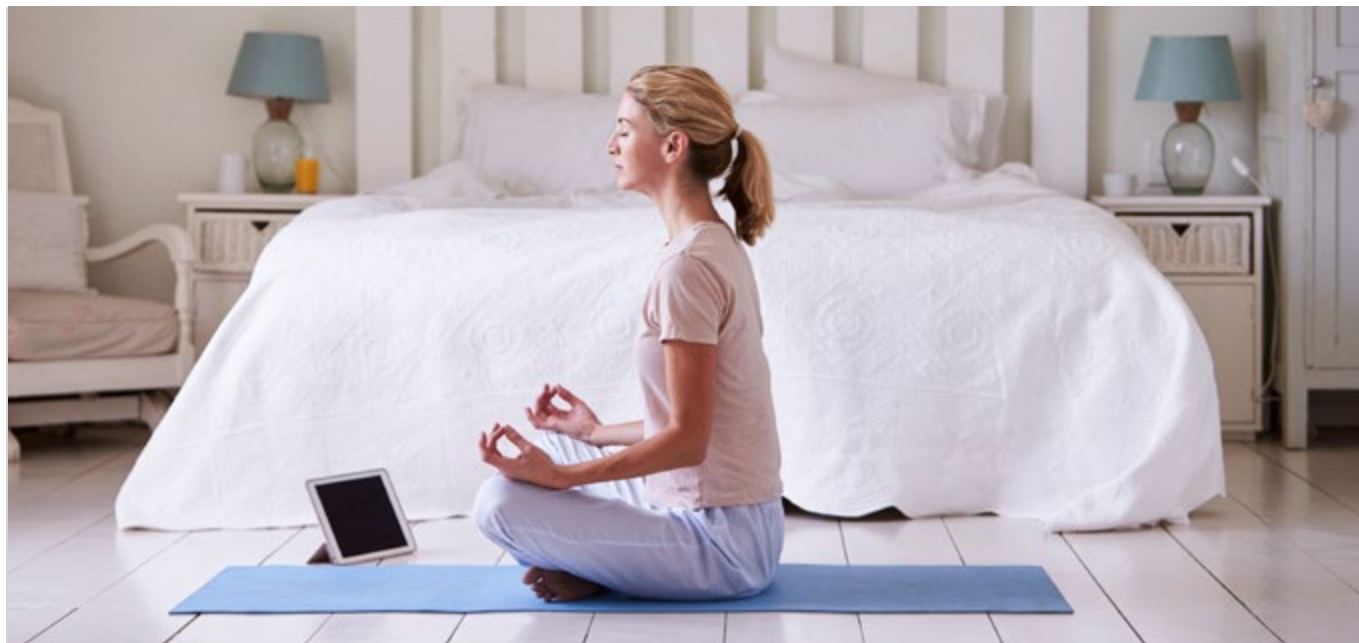


Julian Davison, an anthropologist and architectural historian, is working on a book on the history of Singapore told through its architecture

PICTURES: SAMUEL ISAAC CHUA/THE EDGE SINGAPORE

## Meditation's health benefits get a modern twist

*Technology can help patients meditate in tandem with clinical treatment*



**A**t was only recently that doctors became convinced of the power of meditation to treat conditions associated with stress and anxiety. Though the practice had been used for centuries to focus the mind on the present by clearing it of negative thoughts, meditation had been too closely associated with religion and spiritualism for academics to take it seriously. What's more, there had been very little good, quantifiable evidence showing its health benefits that stood up to scientific rigour.

"Meditation was always looked down on because it had this Hinduism touch to it, this Buddhism touch to it. So it was always viewed from a cultural perspective until scientists started measuring it," Paul Jambunathan, a consultant clinical psychologist and senior lecturer at Monash University Malaysia, told *Global Health and Travel*.

"However, now we have begun to look at the evidence behind it and to measure it psychophysiological. Mindfulness has tremendous values scientifically. All the evidence supports that it has multi-systemic positive effects. All systems in the body benefit from being mindful, including the state called happiness."

The benefits of mindfulness—a practice that is achieved by focusing on the present and letting extraneous thoughts and fears pass—can extend as far as one's DNA, which doctors believe can repair itself better through regular meditation. Studies show the

results can enhance the immune system and even be passed down to one's progeny.

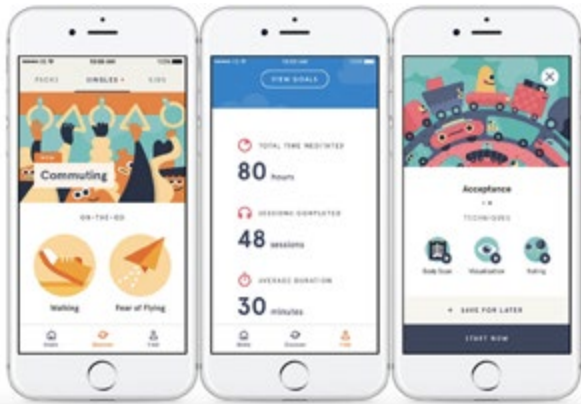
Paul, whose clinical practice has an interest in psychoneuroimmunology—or the effect stress can have on the body's ability to fight off opportunistic bacteria, viruses, and cancer—is convinced of the benefits of mindfulness as part of a multidisciplinary approach to treatment.

"Mindfulness has taken a prominent place now that doctors believe in the biopsychosocial model of health, not just the biological model of health. Now, even in the top universities, the medical curriculums have lectures and tutorials on mindfulness," Paul said.

Clinical hypnotherapist Thanam Selva, who practices in Malaysia and Vietnam, firmly believes that wellbeing is internally focused and can be unlocked through mindfulness.

"Sickness and ill health stem from how you have been perceiving things and reacting to them, so you get yourself into a state where you are stressed or emotionally unhealthy," she said.

"As a result of your constant state of anxieties fears and frustrations, you get yourself into a state of illness. Wellbeing focuses on the inner self being in harmony with the bodily manifestations, a result of meditation practice or quiet introspection. So your perceptions can be reversed and your emotions are more in balance as you begin to look at yourself as stress-free and calm," said Selva, adding that, in that way, "going



Headspace



The Mindfulness App

into yourself” through meditation is a key to correcting the things that inhibit calmness.

“Thereafter you are able to remain in a state whereby you choose your reaction. You don’t just burst out in anger or get frustrated easily. Your perceptions become far more clear to you and the space you occupy in life in relation to others becomes clear to you,” she explained. With a lot of practice your interactions will stem from the calm disposition in which you find yourself.

David Packman, founder of The Fifth Direction, a Melbourne meditation studio, is convinced that meditation played a role in treating his myeloproliferative neoplasm after he was diagnosed in 2011.

“I had dabbled with meditation previously, but I found that as part of piecing myself back together from this rare blood cancer, meditation became a very central part of my daily practice. It’s gone from being a healthful tool after a cancer diagnosis to my passion and purpose,” he said.

“First and foremost it was about the mindset—to treat the mindset that comes with a chronic diagnosis, to get my head right. Since that time, I think it has a role to play in treating the disease itself.”

His views are shared by such organisations as the Leukaemia Foundation in Australia, which organises courses on the benefits of meditation as an accompaniment to clinical treatment for patients.

Paul, Selva and Packman each train their clients in the techniques of mindfulness and meditation, although they acknowledge that getting patients to start is not always easy. In those cases, technology can be a solution.

In recent years, a number of smartphone apps have been developed to help with meditation, with some even citing clinical research to entice new users. Headspace, which claims to be a leader in this segment, has been used as the basis for a number of published academic studies into the value of meditation apps as an accompaniment to clinical treatment.

One controlled study by Northeastern University suggested that using Headspace could increase

compassion among its users, while another found those who practiced meditation through the app experienced a moderate improvement in mood and a marginal decrease in depression.

A Dutch team from the University of Twente found data to suggest that online “mindfulness-based interventions” had the “potential to contribute to improving mental health outcomes, particularly stress” and a “small but significant beneficial impact on depression, anxiety, well-being and mind-fulness.”

Martin Wikfalk, founder and chief executive of Sweden-based The Mindfulness App, which offers around 300 meditation courses, said researchers had conducted minor studies into his app’s ability to reduce stress, with positive results.

“When we developed it in 2010, we felt if we could find this place of tranquility on a device, we could reach out to so many people,” he told *Global Health and Travel*.


“We have psychologists who recommend our app to their patients. It has been seen to be beneficial for them.”

Paul, who puts himself in a mindful state before seeing clients or delivering lectures, says he suggests to his patients that they look for apps that will get them into a relaxed state of mind, although he stresses that these have their limitations.

“I can definitely see that many of these apps are very good at getting you into a mindful state, into a relaxed mode where your clarity is better and you would be able to work things out.

“However, your problem hasn’t gone away. Now you need to solve the problem, that’s where the therapist is useful. The apps aren’t going to talk back. There’s no interaction value. And your problems are going to be, 99 percent of the time, of an interactive nature. They can’t be the be all and end all, but they certainly have a part to play,” said Paul.

- ➔ MONASH.EDU
- ➔ T5D.COM.AU
- ➔ UTWENTE.NL
- ➔ THEMINDFULNESSAPP.COM



## Understanding the risks of obstructive sleep apnoea

*Although common and treatable, obstructive sleep apnoea (OSA) is a potentially fatal sleep disorder that often remains unrecognised and undiagnosed*

**W**hile more than 100 million people worldwide suffer from some form of obstructive sleep apnoea (OSA), the World Health Organization estimates that about 80 percent of them are undiagnosed.

OSA, a common and treatable chronic sleep disorder, causes people to stop breathing during sleep due to over-relaxation of the muscles around the upper airway (throat muscle).

“In patients with OSA, the degree in which the upper airway muscle relaxes tends to be much more than the normal physiological response of sleep. This causes the airways to have a higher tendency to collapse, leading to a complete or partial closure of the upper airways,” explained Dr Muventhiran Ruthranesan, Consultant Respiratory Physician at the Pantai Hospital in Melaka, to *Global Health and Travel*.

Such cyclical occurrences during sleep, which cause the oxygen level in the blood to drop, can last from 10 seconds to a minute or longer before the brain registers the lack of oxygen, after which it rouses the individual to resume breathing. As a result, patients with OSA tend to exhibit certain symptoms that can manifest night or day.

Nighttime symptoms include loud and frequent snoring, choking or gasping during sleep, and brief periods of breathing cessation.

“Since most patients are unaware of the symptoms during sleep, important nighttime symptoms can be

identified by asking the spouse or bed partner of the individual,” advised Dr Muventhiran.

Other nocturnal symptoms involve frequent waking during sleep and multiple episodes of urination in the middle of the night, leading to poor quality of sleep. This, in turn, produces a number of daytime symptoms such as early morning headaches, poor concentration, decreased productivity, irritability, and sleepiness.

### **Dangers of undiagnosed OSA**

“The importance of recognising and treating OSA rests in the fact that the presence of untreated OSA increases your risk of heart problems and strokes,” said Dr Muventhiran.

The prevalence of OSA in patients with heart failure can reach up to 76 percent, he said, while the disorder can also cause or contribute to other heart conditions such as early heart attack, abnormal heart rhythm (cardiac arrhythmias), angina pectoris (chest pain from blocked blood vessels supplying the heart) and sudden cardiac deaths.

The disorder is also associated with high blood pressure (hypertension) and is present in about 40 to 60 percent of such patients and up to 83 percent in patients with drug resistant hypertension. “This makes OSA one of the most underrecognised causes of secondary hypertension,” noted Dr Muvethiran.

OSA is also present in 50 percent of diabetic patients, while males with severe forms of the disorder



tend to be at higher risk of developing erectile dysfunction.

Aside from having adverse neurological effects on inductive and deductive reasoning, attention, vigilance, learning, and memory, OSA can also trigger depression.

“Looking at the immense effect untreated OSA has on the health of an individual, it is still a wonder why this disease is still underrecognised by both doctors and patients,” questioned Dr Muventhiran.

### Who is at risk of OSA?

The incidence of OSA is higher in certain types of population subgroups, with one of the most common being overweight or obese middle-aged patients. “An individual who is overweight has a higher risk of developing OSA due to excess fat tissue around the airways, which makes it narrower to start with, resulting in a higher risk of closure during sleep,” explained Dr Muventhiran.

OSA also appears predominantly in men, based on several studies showing that the male to female ratio for OSA is in the range of 2:1 or 3:1.

“Though the possible mechanisms underlying the differences in the prevalence of OSA in men and women are not fully understood, sex differences in the structure and physiological behaviour of the upper airway and in the pattern of fat deposition have been proposed to account for a higher male risk of OSA,” said Dr Muventhiran who also notes that the occurrence of OSA in females is increasing and higher than what previous studies have suggested.

“It’s likely that women with OSA are under-diagnosed due to circumstances related to their role in the family and social lifestyle,” he explained. “Also, women tend to present more with insomnia and depression than with the traditional symptoms of snoring and daytime sleepiness. Women also tend to be less forthcoming in admitting to be snoring as well.”

Ethnicity may also play a significant role in OSA. According to Dr Muventhiran, this is mostly attributed to the size of the upper airway, which is smaller in certain ethnic groups, for example in Asians, Latin Americans, and African-Americans, making them more prone to developing the condition.

While more common in old age, OSA can also occur in children, typically in those from two to eight years of age, when enlarged adenoid glands and tonsils develop.

### Getting treated

To diagnose OSA and its severity, patients should undergo a sleep study that can record the frequency of breath pauses and level of decreased oxygenation.

Based on the results, treatment typically requires a multidisciplinary approach. This is because the disease is just a single aspect of a predisposing condition that can be caused by multiple factors, from obesity and airway anatomy to excessive relaxation of



PAP mask

upper airway muscles.

“The ultimate aim of treatment is to maintain the airway patent (open airway) during sleep and thereby ensure adequate oxygenation throughout the night,” said Dr Muventhiran.

The gold standard for OSA treatment worldwide is the Positive Airway Pressure (PAP) device, which allows the airway to remain open during sleep. According to a 2003 study, patients treated for OSA with the PAP showed a 37 percent reduction in risk for heart disease and a 56 percent reduction in risk for stroke.

But PAP is not for everyone. “The main problem with PAP devices is for the patients to be compliant to these devices, which requires a period of acclimatisation to the devices,” he said.

Patients who are unable to tolerate the PAP are prescribed a Maxillary or Mandibular Advancement Device, which is less effective but serves to open the airway by moving the lower jaw forward. Doctors might also suggest bariatric surgery for the upper airway, a complimentary approach to help compliance with the device.

Lifestyle changes such as weight loss, decreasing alcohol and caffeine consumption, and quitting smoking might also be recommended.

“The amount of weight reduction has to be significant to have an impact on OSA as it can help reduce the pressure needed to maintain the upper airway patent,” said Dr Muventhiran.

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**“Looking at the immense effect untreated OSA has on the health of an individual, it is still a wonder why this disease is still underrecognised by both doctors and patients”**

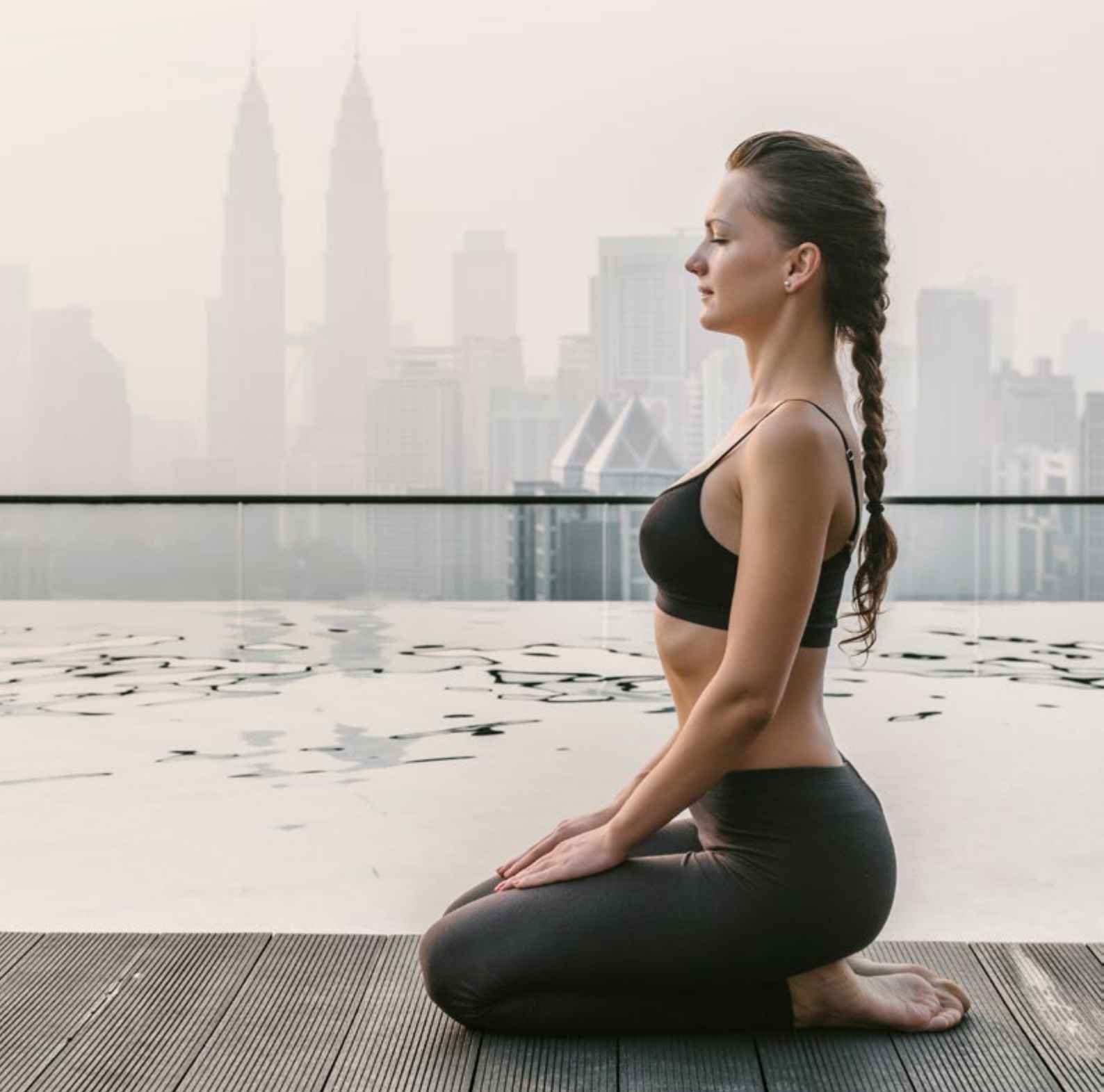


Dr Muventhiran Ruthranesan  
Consultant Respiratory Physician, Pantai Hospital, Melaka

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# Warm greetings from Malaysia Healthcare

*Sherene Azli talks about the positives of seeking care in Malaysia*



**W**ith the first quarter of 2018 almost in our rear view mirror, like clockwork it's time once again to pen my thoughts for *Global Health and Travel*.

We began the quarter on another upbeat note, with Malaysia being recognised by International Living as Asia's top retirement destination in 2018. The index, which takes into consideration such criteria as healthcare, cost of living, and climate, ranked Malaysia fifth globally.

### **Serving up a complete end-to-end healthcare experience**

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Malaysia Healthcare also advocates that good health and quality of life comes from prevention and early detection of diseases through regular and appropriate health screening. The modern lifestyle that is mostly sedentary is giving rise to ergonomic-related problems, while urban weekend warriors who want to keep fit risk injuries when they over-exert themselves doing weekend sports activities. Many private hospitals in Malaysia are offering wellness programmes to help understand patients' current health status. Accurate diagnosis and management can be promptly instituted to prevent diseases from developing, resulting in improved health and quality of life.



### **Malaysia for healthy living**

Quoting Ceasar Marcus Aurelis, a Roman Emperor from 160-180 AD, *"Life is not merely being alive, but being well."*

How apt, especially with our modern lifestyle. Taking Ceasar's words to heart, the Ministry of Health Malaysia, MoH, is leading the charge for Malaysians to lead a healthy lifestyle by trumpeting a campaign for "Healthy Living" or *"Gaya Hidup Sihat"*. This is an approach to delivering healthcare that considers multiple influences on a person's health.

To support this ambition, Malaysia Healthcare is gearing up to host Malaysia Year of Health in 2020, which is aligned with the country's tourism campaign, Visit Malaysia Year (VMY), set to make a return in 2020, organised by the Ministry of Tourism and Culture. VMY 2020 will be Malaysia's fifth edition and is expected to welcome 36 million tourists, generating an estimated MYR168 billion in tourist revenues. Health will be one of the themes for VMY 2020, with the aim of enhancing the country's position as the regional leader and global destination for healthcare.

Malaysia Year of Health will be a catalyst to ensure that by 2020 the industry will be growing by 20-30 percent and earning MYR2.8 billion in hospital revenues with an estimated economic impact of MYR10 billion, taking into account the multiplier effect of 2.24 (Multiplier effect estimated in The Global Wellness Tourism Report 2014 by the Stanford Research Institute reflects expenditure on miscellaneous non-medical-related expenses, such as transportation, accommodation and tourism activities).

Though it's only the first quarter, I believe that we have much in store for 2018. As we inch closer towards 2020, Malaysia Healthcare will be moving full steam ahead to achieve our aspiration of becoming the leading global healthcare destination while encouraging everyone to live a life of health and wellness.

**Most of Malaysia's private healthcare facilities offer rehabilitation programmes and packages to facilitate the process of recovery from injury, illness, or disease.**



*Sherene Azli was appointed CEO of the Malaysia Healthcare Travel Council in 2015. She has 16 years of experience in strategic business development.*

# Managing your health and maintaining a healthy weight

*Sudi Narasimhan explores the linkages between obesity, diet and wellness, as part of a series of articles exploring this topic*

**A**s the global obesity epidemic continues to sweep both the developed and developing world, people everywhere are desperate for answers. Several decades in the making, we are now more aware of the problem than ever, but recommendations on how to address it are too often varied, divergent, and changing. It has been my personal passion to learn as much as I can in this area to better manage my own health over the course of my lifetime.

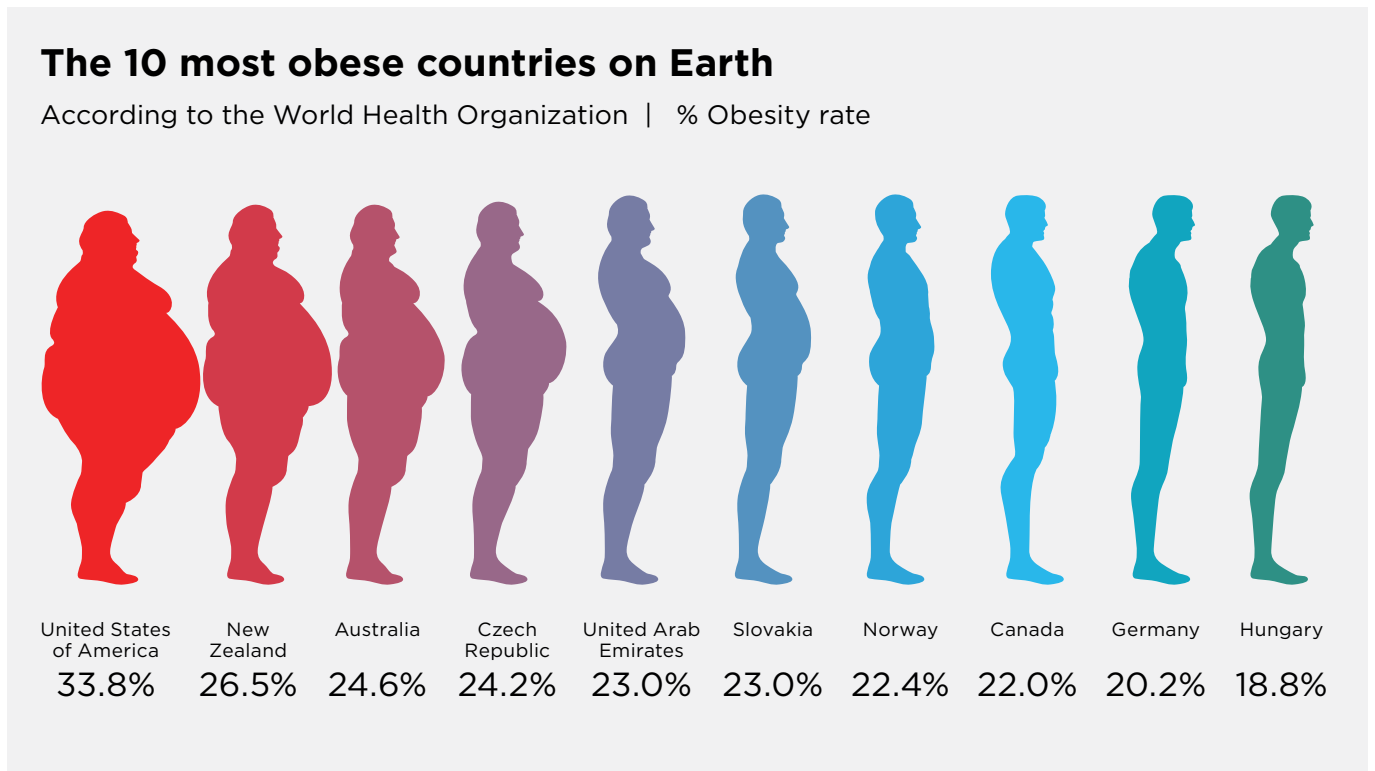
It might be helpful to first define what is meant by “obese.” Body type classification is normally done using BMI or body mass index. A dimensionless number, BMI is a ratio of weight (in kg) divided by height (in metres) squared. A BMI less than 18.5 is considered underweight, a range of 18.5 – 25 is

considered normal weight, 25 - 30 is classified as overweight, while 30 – 40 is considered obese. A BMI above 40 is classified as morbidly obese and significantly increases a number of associated health risks.

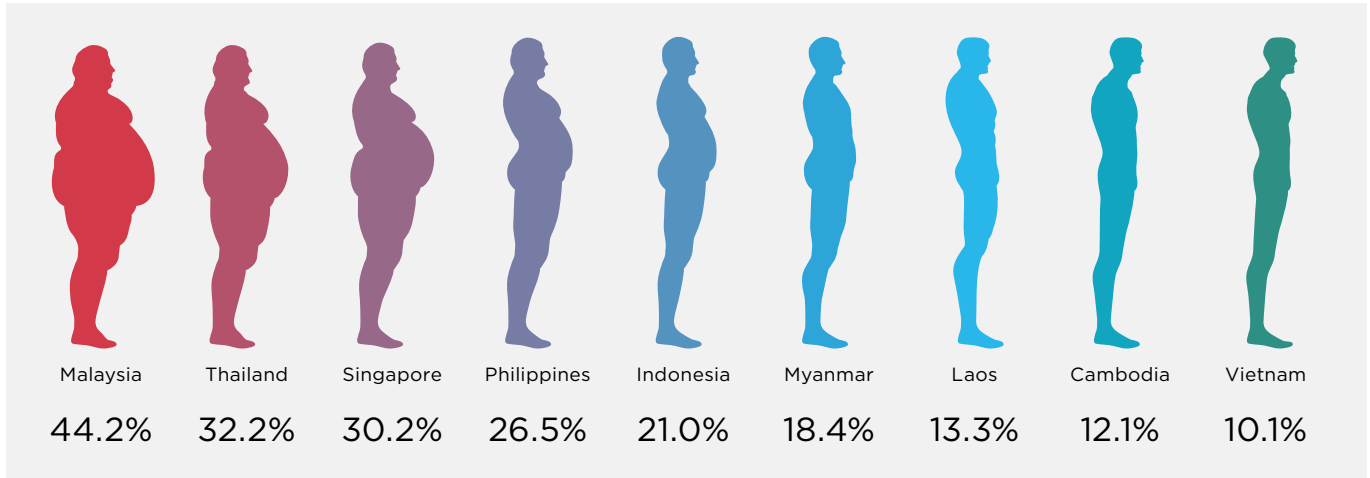
As can be observed from Figure 1, the US leads the world in obesity with more than a third of the population being classified in this category. New Zealand, Australia, the U.A.E., and many European countries, however, are not far behind.

People living in East and Southeast Asian countries have historically been generally smaller and slimmer than their Western counterparts but have been catching up in recent years. Figure 2 shows that Malaysia, Thailand and Singapore have a growing percentage of residents classified as overweight, with

**Figure 1: Countries with the greatest number of obese residents, with the percentage of people listed with BMI levels over 30.**



**Figure 2: Asian countries showing the number of overweight residents, with the percentage of people listed with BMI levels over 25.**



a BMI greater than 25. These societies are also quickly ageing as the median age increases and population growth slows, a combination that raises medical costs for the entire population.

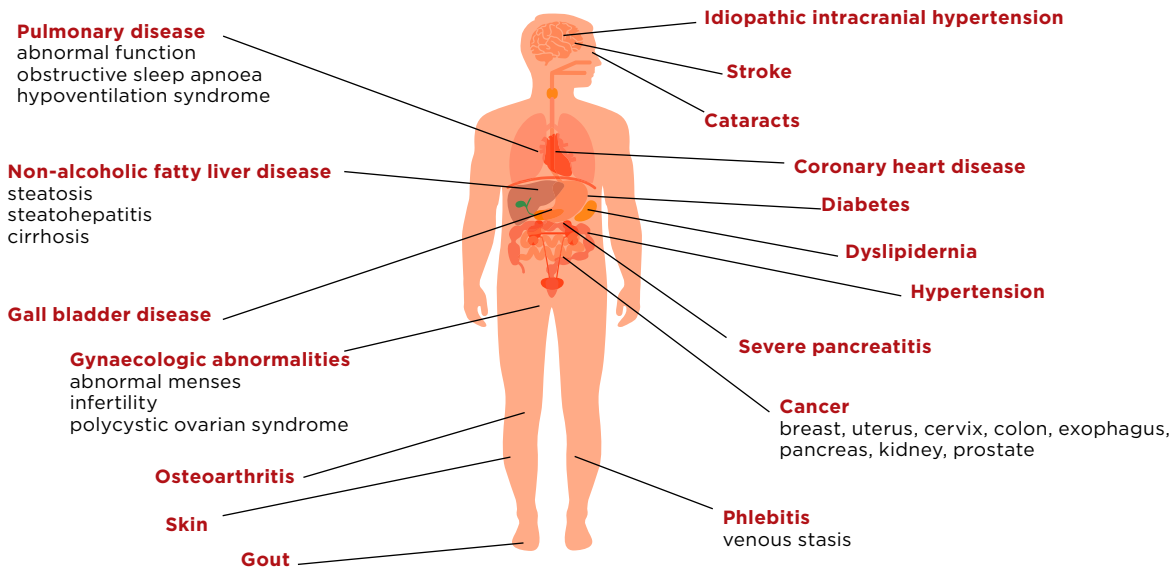
The main causes of death today are heart disease and cancer, although this can vary across countries. Risks for many diseases increase with the addition of extra weight and tend to heighten as we get older. This not only affects our health but also our

quality of life, as carrying extra weight is correlated with osteoarthritis, sleep apnoea, and impaired liver function. In general, we tend to feel more uncomfortable and are slower to heal and recover from injury or stress.

In some cases, being overweight can cause diseases that significantly shorten our life, such as cancer. In others, we are able to manage the disease as a chronic condition but need to take higher doses

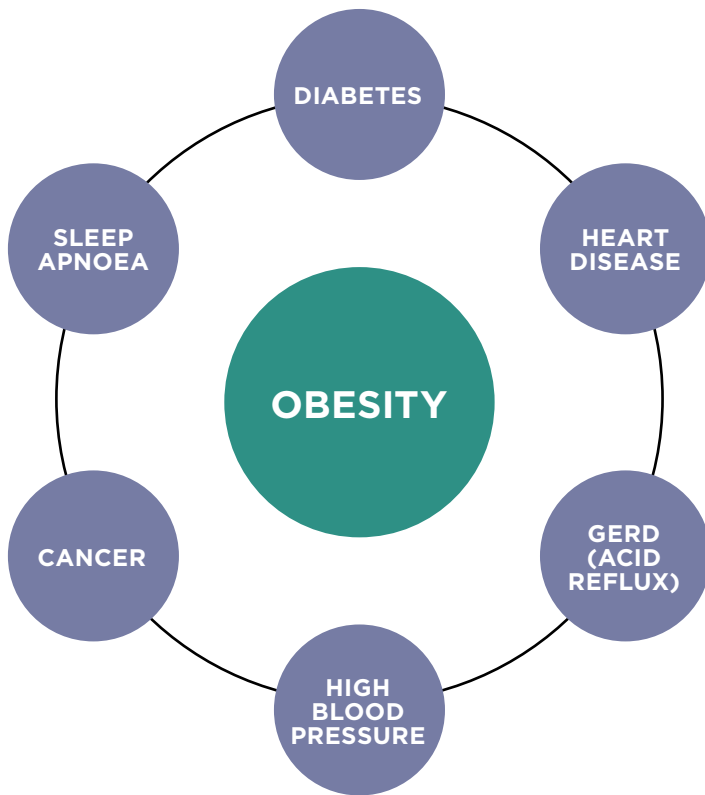
**Figure 3: Increased weight is correlated with different health problems.**

### Medical complications of obesity



SOURCES: EASIRCIRCLE.BLOGSPOT.AE/2014/06/WHAT-CAUSES-OBESITY.HTML  
WWW.ASYOJAGE.COM/19\_MEDICAL\_COMPLICATIONS\_OF\_OBESITY.HTML

Figure 4: Obesity is linked or correlated with many diseases that impact our quality of life.



of different medications over the remainder of our life. Quality of life often suffers in the process as many medications have potent side effects, and the underlying root cause of the disease is not always addressed.

**The role of diet in weight management**

Gaining or losing weight is simply driven by the number of calories that are consumed relative to the number of calories that are burned over the course of the day. So it is only logical to prescribe that the best way to lose weight is to consume fewer calories than your body needs. That is fairly obvious, but the reality is that this is far easier said than done.

Consider how difficult the challenge is to count every calorie ingested compared to the daily required level of energy consumption. Even overeating by 30 kilocalories (a few crisps) each day would result in a 900 Kcal surplus over one month or more than 10,000 Kcal each year. This would equate to a weight gain of 1.5 kg of body fat each year or 15 kg over a decade. And that is just from a negligible level of overeating each day. Clearly there is more to it than just counting calories.

**The role of hunger**

It turns out that our bodies are quite effective at maintaining a given weight. This is sometimes referred to as a “set point” where the body fights to sustain a given weight whether a person overeats or under eats on a given day.

Our body’s hunger mechanism is a trigger for signaling a meal or the motivation to seek out food. It is also linked to our habits. Sometimes we may eat when we actually feel thirsty, bored or stressed, as opposed to being genuinely hungry. Interestingly enough, some of the foods we consume can make us hungrier soon after eating. We may not pay attention to this and continue eating them without realising they are signaling us to feel increased hunger. How many times do we look back on our day and think that we hardly ate at all and wonder why we aren’t able to shed the extra weight that we are carrying?

**The dual energy pathway**

Our bodies and cells are extremely adaptable to the many different conditions found on planet Earth. We are able to survive and even thrive in tropical climates where fruits are abundant year round. Yet we are also able to survive in polar climates where growing seasons are extremely short and the population’s survival is linked to the success of animal husbandry or hunting as the main source of food.

This is because our cells are able to use two sources of energy for food. The first pathway is glycolysis, which comes from the burning of glucose. All carbohydrates that are consumed are broken down into glucose by the liver and stomach, which is then released into the blood stream to be used by our brain and muscles. We are able to store nearly 1000 Kcal or 250 grammes of glucose (each gramme of carbohydrate is 4 Kcal) in our muscles and liver to be used for energy. Once these stores are full then excess glucose in the blood is sequestered by insulin produced in our pancreas, and this excess glucose is turned into fatty adipose tissue for later storage.

The other energy pathway available to us is ketosis, or the burning of ketones from fat cells through a process known as beta-oxidation. Our muscles, organs, and brain are able to use ketones as a source of fuel and burn the fat that is stored in our bodies and from what is ingested.

To achieve ketosis, our carbohydrate stores need to be depleted. Biochemically, our cells cannot initiate the beta-oxidation process as long as there is elevated insulin caused by ingested glucose levels that are present in our blood stream. The required hormones and enzymes needed to open up the cell walls to admit the fatty acids are only triggered by caloric deprivation plus the absence of insulin.

The trouble is, as we gain more weight from chronically eating carbohydrates combined with fats and proteins, we become more inundated by hunger

SOURCE: [HTTPS://FEMURCO.COM/ABOUT-OBESITY/](https://femurco.com/about-obesity/)

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signals that demand that we eat more often. Thus we are not able to get into the ketosis state of burning fats and, as a result, continue to gain weight and thus propagate the glycolysis cycle. Most people weigh their lowest when they are in young adulthood, just finishing high school or in college. Then they find out that, as they age, small amounts of weight are gained regularly and over time, which cannot be shed easily. Diets can create a temporary loss of weight but require tremendous will power and are not sustainable, as even short 'binges' caused by the body's hunger mechanism can put all the weight back on as the body reverts to its most recent set point.

### The ketogenic diet

One way to stimulate ketosis is with the ketogenic diet, a popular diet similar to the Atkins Diet but with emphasis on eating more fats in addition to restricting carbohydrates. On the ketogenic diet, carbohydrates are typically restricted to less than 50 per day, or less than 200 Kcal.

A common myth is that a low carbohydrate diet means a high protein diet, but this is not accurate. Protein, like carbohydrates, contains 4 Kcal per gramme, but there is a limit to the amount of protein we can process on a daily basis. Taking more than 200 grammes of protein (this is only 800 Kcal) can cause kidney and liver failure and is accompanied by exhaustion, vomiting, and diarrhea. While protein levels can be moderate, the bulk of calories on a ketogenic or Atkins diet comes from fats.

Many people find the ketogenic diet to be abundant and comfortable but may balk at its restrictions on food choices. For starters, foods containing sugars, honey, or sweeteners need to be eliminated. Fruits low in calories, like dragon fruit or small portions of apple, can be eaten, while higher calorie fruits like bananas, grapes, dates, and figs should be avoided. Vegetables cannot be of the starchy variety, so potatoes, pumpkin, and corn need to be eliminated, as do items like milk and yogurt that contain too much sugar from lactose and galactose. Complex carbohydrates such as rice, pasta, bread, cakes, crackers, and biscuits need to be strictly avoided.

The ketogenic diet, however, is abundant in animal fat (butter, cream, cheese, fatty meats) and non-starchy vegetables as this is needed for fiber. Nuts can also be eaten but need to be unsweetened. Unsaturated vegetable oils, besides olive oil, should be avoided as they contain too much Omega-6 fatty acids and not much Omega-3 fatty acids. Coconut oil is a saturated fat and can be consumed.

The benefit of the ketogenic diet is that it makes you feel fuller and less hungry, while being able to eat as much as you want to feel satiated and still be able to lose weight. However, to get into the ketosis state takes a few days of carbohydrate deprivation, during which people are often uncomfortable, tired,

and irritable. These feelings pass once the ketosis state takes effect, but for many individuals, periodic carbohydrate cravings will still occur. In following this diet, one needs to maintain a strict regime since adding carbohydrates will normally result in a rapid weight gain and a return of feelings of hunger.

### Intermittent fasting

Intermittent fasting or IF has grown in popularity over the past few years. The design of the diet is to eat all the daily caloric requirements in an 8-12 hour window and abstain from eating the remainder of the day. There is less restriction on the dietary make-up of what type of calories are consumed. Some versions of IF involve eating only 500-800 Kcal twice a week, while eating as much as desired the remaining five days. The diet works because it also forces the body into ketosis simply by depleting the carbohydrate stores in the muscles and liver a few hours before the daily meal is taken, requiring the body to get energy from burning fat.

The main drawback is that the initial IF period is accompanied by tiredness, irritability, and difficulty concentrating. However, with several days of practice, the body gets used to the IF routine, and the level of difficulty becomes more manageable.

At the end of the day, all of these different diets are worth exploring to see if they can help manage your weight. In future articles, I'll be writing more about other ways to shed pounds and maintain a healthy weight as well as other key areas that relate to maintaining health. Our bodies are fascinatingly complex pieces of machinery, so it's important to learn about the key mechanisms needed for staying in optimum health and aging more gracefully with a higher quality of life.



*Sudi Narasimhan is a seasoned healthcare executive, working in senior leadership roles in marketing, business development, operations, management and administration. He is a keen health enthusiast with a focus on exercise, nutrition, and the use of science to improve wellness and longevity. He is also the former senior director of Bumrungrad International Hospital in Bangkok.*



## Hospital fire safety: We need to do more

*Catastrophic hospital fires are largely preventable but this requires an all-hands approach by hospital management and staff at all stages, from hospital design and fire safety plans to regular maintenance of equipment*

**L**ike other large facilities, hospitals around the world are not immune to the ravages of fires. Devastating in any situation, fires occurring in hospitals can be even more calamitous given the nature of the healthcare setting. A single blaze, usually from a preventable cause, can lead to the unfortunate deaths of scores of patients and hospital staff, usually from excessive smoke inhalation. But a few recent examples illustrate just how easily preventable these tragedies can be.

On January 26 this year, a fire with toxic fumes swept through the Sejong Hospital in Miryang, South Korea, killing more than 40 patients and healthcare

workers. This was the worst fire disaster in the country in more than a decade. While preliminary investigations point to defective wiring in the ceiling of a pantry, other fingers have pointed at cheap, flammable construction materials, inadequate fire blocking doors, illegal additions of rooms, and staff shortages. More disturbing is that the facility did not have a sprinkler system as it had been deemed unnecessary under fire-prevention regulations.

Exactly five years after India's most crippling fire took place at the AMRI Hospital in South Kolkata in December 2011 where 93 patients and staff were killed, a similar catastrophic incident occurred on the evening of 18 October 2016 in the SUM Hospital in Bhubaneswar, killing more than 20 patients and leaving more than a hundred injured and requiring transfer to nearby hospitals for treatment.

The 2011 AMRI Hospital fire had started in the upper basement parking facility that had been used to store flammable material. An investigation showed that there was sufficient evidence of negligence on the part of the staff for their delay in calling the fire brigade and not being able to tell fire fighters the location of emergency exits. Staircases, fire alarms, and smoke



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detectors were also not working at the time of the blaze.

The 2016 SUM Hospital fire is suspected to have started in the Dialysis Ward located on the first floor at around 7:30 pm, possibly due to an electrical short circuit. From there, it rapidly spread to the Intensive Care Unit and then to other medical wards.

Following both incidents, authorities swiftly arrested hospital directors and staff. At the time of writing, 16 accused are standing trial for culpable homicide not amounting to murder, a charge which, if proven, can see them jailed for up to 10 years in the case of the AMRI Hospital fire.

Regrettably, most of these unfortunate incidents were preventable. So what are the lessons learned from them and how can we improve the safety of our healthcare institutions?

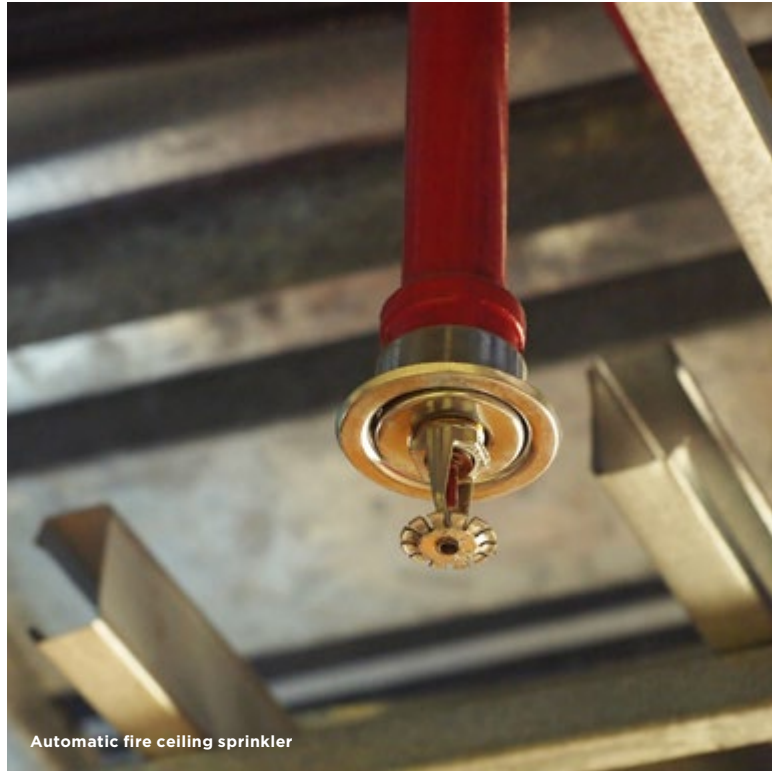
Firstly, it's important to recognise that ventilated, immobile, and elderly patients are the most defenceless when such tragedies occur. Medical gas systems, used to support life in normal circumstances, become exceedingly hazardous and turn into flammable risks when fires rip through critical care areas and general wards.

Every step of hospital management -- from design and construction to fire safety planning, staff training and regular drills -- requires meticulous care to ensure patient and staff safety, protection of property, and the continuance of operations.

Hospitals are not commercial buildings, which makes designing a hospital fire safety plan extremely complicated. At any given time, there can be hundreds or thousands of patients confined to beds and wheelchairs who can't effectively move around by themselves. Hospital fire safety plans have to be carefully designed to ensure that all patients, as well as medical and other hospital staff, are able to evacuate quickly and safely in the event of a fire. More importantly, the functionality of smoke detectors, alarms, sprinklers, and other fire suppression systems needs to be constantly checked and maintained.

Overworked sockets, cables, kitchen facilities with open flames, smoking, and less frequently, specialised medical and surgical equipment are all potential fire hazards in many healthcare facilities. And while these are the most likely causes of hospital fires, compressed oxygen tanks, surgical clothing, and flammable sterilising and disinfecting liquids also provide the perfect fuel for the spread of fire and toxic fumes.

In addition, many older hospital buildings especially do not have fire suppression equipment, such as sprinklers. Entrances to some buildings are narrow and normally blocked by cars, making it difficult for fire fighting vehicles to gain access during an emergency. It is therefore even more important for older institutions to pay close attention to eliminating such hazards by clearing emergency access points and exits and holding regular drills.



Automatic fire ceiling sprinkler

While ensuring a safe work environment is each and every staff member's responsibility, hospital management needs to continuously provide the governance, leadership, and direction for all operational activities on a day-to-day basis, including the protection of hospital staff and vulnerable patients from potential hazards and harm.

Finally, in addition to enhanced legislative measures, hospital managers also need to design robust hospital fire safety plans and regularly test their systems through training, maintenance, and drills if potential disasters are to be avoided and effectively mitigated.



*Dr Vincent Chia is a healthcare consultant and CEO of Asian Healthcare Solutions, a Singapore-based consultancy firm that advises healthcare investors and providers on how to improve care delivery and clinical outcomes. He is also the former CEO of Gleneagles Hospital in Singapore.*



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