THE MAGAZINE FOR INTERNATIONAL HEALTHCARE & MEDICAL TOURISM

ISSUE 2 | 2023

GlobalHealth

ASIA-PACIFIC

S$ 10.90 (inc. GST)
₹300
THB 300
RM 21.50 (inc. GST)
DHS25 (Dubai)
US$15 (USA)
€ 12 (Europe)

ISSN 2223465-9 02
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Founders
Narender Panjwani & Thomas Masterson

Publisher & Managing Director Narender Panjwani
narender@ghapac.com

Chief Executive Officer and President
Varun Panjwani
varun@ghapac.com

Editor Gabriele Bettinazzi
gabriele@ghapac.com

Editorial Director (Aesthetics),
Branding and Communication Manager
Drishti Panjwani
drishti@ghapac.com

Copy editor Martin Murphy

Medical writer Zakwan Abidin

General Manager, Asia Pacific
SK WONG
sk@ghapac.com

Operations Manager
Zye Ramli
zyeramli@ghapac.com

Business Development & Account Manager
Rhainna
rhainna@ghapac.com

Sales and Project Manager
Sharlini VSR Nagarajan
sharlini@ghapac.com

Digital Marketing Manager karin@ghapac.com

Design Noel de Guzman/Artmazing!

Creative / Production Director
Harivarmaa Perumal (Hust)
hust@ghapac.com

Canada Office
Anjika Sabhani
anjika@ghapac.com

Kishor Sabhani
kishor@ghapac.com
900 Rice Road, Edmonton T6R 1A2, Alberta
Canada, Tel. 1-780-4999011

Dubai Office
Anil Dadlani
Anil@leouae.com
2207 Regal Tower, Business Bay, PO BOX 126161,
Dubai, UAE Tel. 97150-2149000

Malaysia Office
GHT Malaysia Sdn Bhd
Level 18, WeWork, Plaza Equatorial,
Jalan Sultan Ismail, 50250 Kuala Lumpur

Singapore Office Narender Panjwani
Narender@ghapac.com
15 Scotts Road, #04-08
Thong Teck Building (15 Scotts),
Room No. 12, Singapore 228218

Printed by: Times Offset (Malaysia) Sdn Bhd
(194695-W)

LETTER FROM THE EDITOR

Osteoporosis is one of the main health challenges affecting millions of people worldwide. What makes it so elusive is that it's hard to spot as it progresses slowly and without symptoms over several years. Patients usually only know they have it when bone deterioration reaches a point where they experience a bone break or fracture due to a traumatic event, like a fall or even a simple cough. To make matters worse, there's still no cure for it.

In this issue, we delve into the key risk factors for osteoporosis and what people can do to reduce its impact or prevent it. Screening and a healthy lifestyle are two of the most important preventative measures against bone deterioration.

In another feature, we report on the global cooperation agreement the World Health Organization is trying to hammer out with governments and the medical community so they can better prevent and cope with the next pandemic. Experts agree this is needed in the wake of the mismanagement of the COVID-19 crisis, where nations failed to collaborate in a way that could have helped better control the new infectious disease after it emerged at the end of 2019. The hope is that such an accord will facilitate data sharing and technology transfer and reduce the death toll of future pandemics.

We also report on the significant progress made in eradicating neglected tropical diseases (NTD) worldwide over the last decade. Though there's still a long way to go, many countries have eliminated at least one NTD, and the WHO plans to eradicate most of them by 2030.

Gabriele Bettinazzi
Editor
gabriele@ghapac.com

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HEALTH FYX

Global Health Asia-Pacific
is a publication of HealthFYX Pte Ltd.
15 Scotts Road, #04-08
Thong Teck Building (15 Scotts), Room No. 12,
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For circulation enquiries please contact
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24 JUNE
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INNOVATION, CURRENT TRENDS AND GROUNDBREAKING INITIATIVES IN THE HEALTHCARE INDUSTRY

The first ever **GlobalHealth Asia-Pacific Philippine Summit** will be held on the 24th of June 2023 at the Grand Hyatt Hotel. The summit will host prominent speakers from the APAC Region, covering topics from the current trends in the healthcare industry to groundbreaking initiatives and innovation in the Asia-Pacific region.

The summit will feature in-depth perspectives from thought leaders within healthcare on the most critical trends and issues covering accreditation and safety, artificial intelligence, innovation, digitalization, and medical tourism.

GlobalHealth Asia Pacific is a multidimensional healthcare company aimed at promoting medical tourism in the Asia-Pacific region. It is a regional player with several initiatives such as conferences and awards held in countries such as Singapore, Malaysia, Thailand, and Cambodia. Now entering the Philippine market, the organization aims to provide a quality approach to medical tourism in the country and elevate it to the global market.

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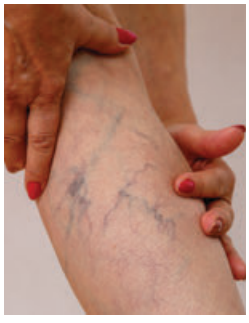

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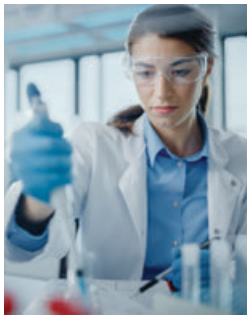

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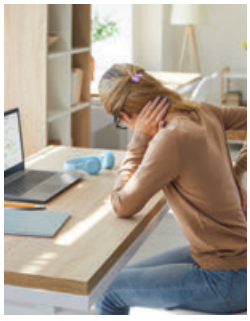

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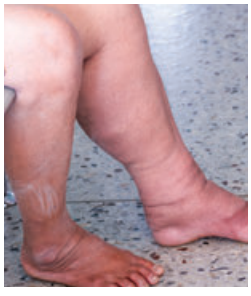

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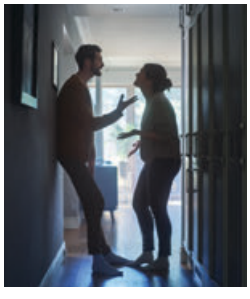

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Gleneagles Hospital
KUALA LUMPUR

Aging Spine.
Osteoporotic Spine Fracture the dilemma for Doctor and Patient.

Written by
Dr. Thuraikumar Kanniah
Consultant Orthopaedic & Trauma Surgery
Gleneagles Hospital Kuala Lumpur

The aging of the population worldwide appears to be a non-reversible phenomenon. Increase in life expectancy, due to the improvement of healthcare, combined with a drastic decrease in birth rates has led to this situation. This paradigm shift leads to back and neck pain are among the most frequently encountered complaints of older people.

Spine and Aging

The spine is a flexible, multisegmented column. Its functional is to maintain stability and an upright position as well as providing mobility at the segmental level. The spine comprises a static, changeless element – the vertebral bodies, the three- joint complex, consisting of the intervertebral disc and the two posterior facet joints. Changes with age and pathology may modify these structures. Aging of the spinal structures induces alterations at many levels:, the complexity and multiplicity of treatment, the rapid evolution of medical technology and the nature of patient's expectations in terms of quality of life have also resulted in an escalation in costs.

Aging of the bone

Pain and disability are the clinical expression of the aging spine.Decreases in bone mass are inevitable with age. The condition when bone mass drops to a critical level below which fracture risk is substantially higher is termed osteoporosis. Osteoporosis is a serious public health problem. The incidence of osteoporotic fractures increases with age. As life expectancy increases for a greater proportion of the world's population, the financial and human costs associated with osteoporotic fractures will multiply exponentially.

Vertebral fractures are the hallmark of osteoporosis and occur with a higher incidence earlier in life than any other type of osteoporotic fractures, including hip fractures. The importance of fragility fractures, of which vertebral fractures are the most common, was acknowledged by the World Health Organization classification cri teria for osteoporosis evaluation. The consequences of such osteoporotic vertebral fractures are diverse and include back pain, functional limitations and impairment of mood.Long-term effects of osteoporotic fractures include increased kyphosis, deconditioning, insomnia and depression. In addition to the increased morbidity, mortality may also increase after osteoporotic vertebral fractures. While physicians are aware of the risks of osteoporosis and fractures, the disease remains under diagnosed and undertreated. The prevalence of these fractures in women aged 50 or older has been estimated at 36%.

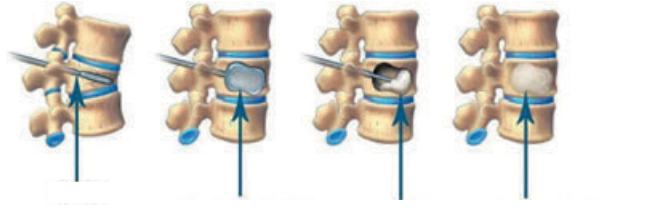
Effective medical treatments of osteoporosis have increasingly become available over the last decade. The selection of the appropriate drug for treatment of vertebral osteoporosis among a bisphosphonate (alendronate or risedronate), PTH, calcitonin or raloxifene will mainly depend on its efficacy, tolerability and safety profile together with the patient's willingness to comply with a long- term treatment.

Alternative to Conservative Management

Historically, the painful vertebral compression fracture has been treated medically. However, surgery is indicated in patients with instability or neurological deficit. The medical treatment of stable osteoporotic fractures without neurological involvement includes bed rest, orthotic management, narcotic analgesia, and time. Each of these modalities has side effects: bed rest over time results in loss of muscle mass, bone density and resultant deconditioning, braces are poorly tolerated, and narcotic medication can lead to mood or mental alteration. As a result, there has been a search for alternative ways to treat vertebral compression fractures. Percutaneous vertebroplasty and kyphoplasty has become a very popular, safe, and effective treatment for this condition.

Vertebroplasty and kyphoplasty is a minimally invasive technique consisting of percutaneous injection of biomaterial, into the pathologic fractured area, stabilizing the fracture and more importantly decreasing pain and improving function. It proved successful with these lesions, the indications also expanded to include osteoporotic compression fractures refractory to medical treatment. The experience with vertebroplasty for the treatment of osteoporotic fractures has shown 70–95% pain relief.

HOW IS VERTEBROPLASTY PERFOMED



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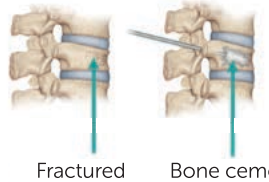

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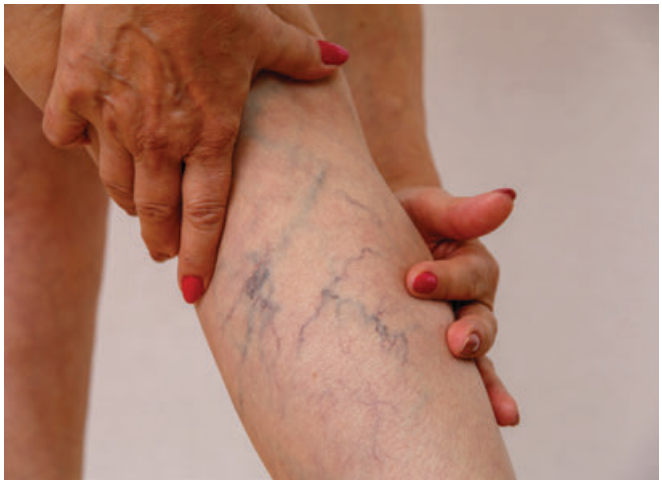
You Ask, They Answer



Q: What are varicose veins and their telltale signs?

A: They are enlarged veins that are typically visible just beneath the skin's surface in the legs. Size determines their type. Telangiectasia (spider veins) are small, thin, red or blue veins resembling spider webs, whereas varicose veins are larger, twisted, and protruding.

Patients with varicose veins may experience aching, heaviness, or discomfort in the legs. An itchy or burning sensation may be present, as well as muscle cramps or restless legs at night.

In more severe cases, the patient may develop eczema and thickening of the skin on the ankle, which may progress to skin ulceration.

Q: Should people with varicose veins always see a doctor?

A: Not all cases require treatment. If you do not have significant discomfort or symptoms, you may not have to see a doctor or receive treatment. Spider veins are mostly a cosmetic concern, not a severe medical condition.

However, if you experience aching, tired legs, swelling, itching, or night cramps, especially if these symptoms become frequent or severe, you should consult a doctor. In some cases, if the veins become inflamed and painful, developing redness, tenderness, and warmth around the affected area, you should seek medical attention as soon as possible.

Patients with large varicose veins, which are bulging, twisted, and ropey and protrude under the skin, should see a doctor. These can progress over time, becoming increasingly painful and unsightly. Left untreated, they may cause skin eczema, ulcers, or bleeding, requiring more extensive and invasive treatment later on. It is crucial to monitor and treat any symptoms or complications that may arise.

Q: What are the treatment options?

A: Treatment depends on the size and type of veins. For smaller spider veins, injection sclerotherapy may be the best option, which involves injecting a small amount of a specialised medicine directly into the affected veins to destroy their inner lining, causing them to collapse and be reabsorbed by the body. It's relatively quick and comfortable, taking only around 10-20 minutes per session. Patients may require several sessions spaced several weeks apart, and the treated veins will gradually fade over time.

For larger varicose veins, endovenous closure techniques are an excellent option as it's minimally-invasive, meaning no surgical incision, general anesthesia, or hospitalisation. It involves introducing a fine wire into the affected vein through a small puncture in the skin. The wire is then used to cauterise the vein with either laser or radiofrequency. Alternatively, physicians may use medical glue to seal the vein by introducing a small catheter directly into it.

Effective, quick, and hassle-free, these treatments allow most patients to return to daily activities the same day or one day later. Although risks and side effects are minimal, patients may experience some mild swelling, bruising, or redness around the treated area.

Q: Can people prevent varicose veins?

A: While not always be possible, simple lifestyle changes and preventative measures can potentially delay their onset.

- Regular exercise will strengthen veins and improve circulation, especially leg-focused exercises, such as walking and running.
- Observe your weight. Obesity can exert significant pressure on the legs and is known to result in spider veins.
- Avoid crossing your legs while seated.
- Raise your legs while sleeping or resting.
- Avoid sitting or standing for extended periods. When you must sit for an extended period, get up and take a periodic walk.
- Wear elastic support stockings whenever possible.
- Avoid restrictive clothing and heels.
- Consume a balanced diet rich in fibre and limit your sodium intake.

Dr John Tan

Dr John Tan is a vascular surgeon expert in the treatment of varicose veins and the director of The Vein Clinic & Surgery in Singapore.

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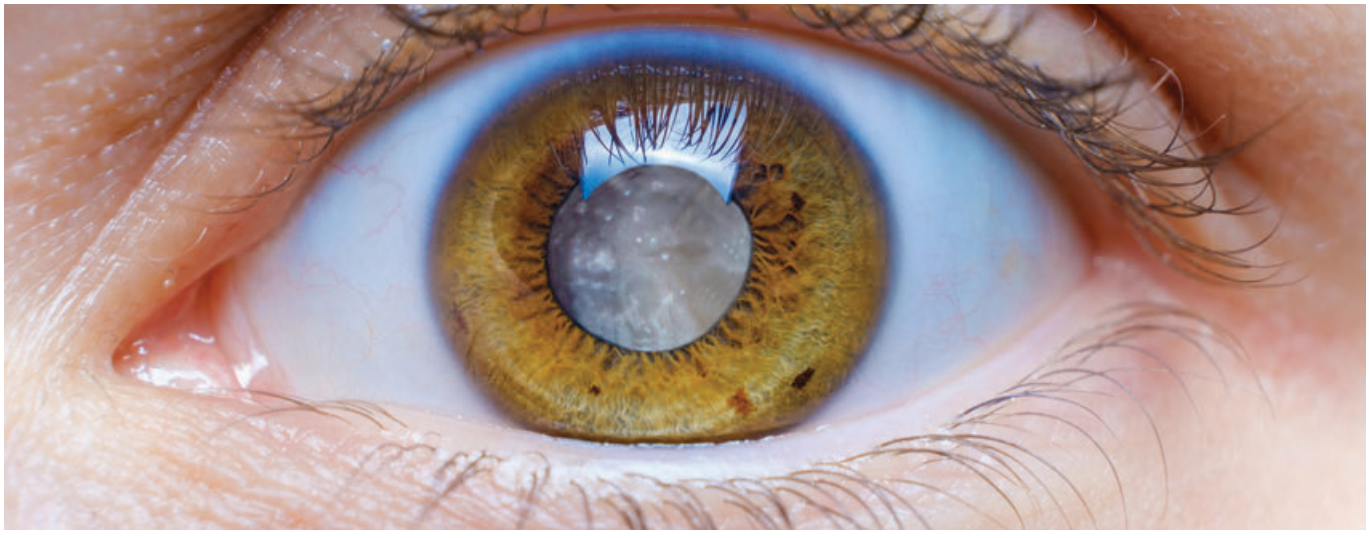
You Ask, They Answer



Q: What are cataracts and can people detect them early?

A: This is a condition that reduces the transparency of the crystalline lens within the eye. People can only notice the disease when it becomes visually significant. For example, when people cannot improve their vision to at least 6/9 or 6/12 with glasses, we consider that visually significant. These numbers refer to the condition of people who can only see objects at six metres away while individuals with normal vision are able to see them clearly nine or 12 metres away. Very early cataracts that are not visually significant are very common, but we tend to manage those with glasses if necessary. Refractive errors such as astigmatism, myopia, and hyperopia may occur with cataracts and should always be excluded in people with suspected cataracts in order to make an accurate diagnosis.

Q: Are there groups of people who are at a greater risk of cataracts, such as a patient's family members?

A: Older people who have prolonged exposure to sunlight and perhaps dehydration are at risk. Other groups include those with diabetes mellitus or exposure to radiation and drugs like topical corticosteroids. Rare cases such as congenital or juvenile cataracts may be genetic or due to metabolic disorders, but these are rare compared to senile age-related cataracts.

Q: Is surgery the only treatment option? What does it involve and how effective and risky is it?

A: The only definitive treatment is cataract surgery. This involves extraction of the lens, usually by an ultrasonic process called phacoemulsification and aspiration, and insertion of an intraocular lens. This is usually a day procedure and very effective. The main risk is endophthalmitis (about 0.07 percent or one in a thousand), an inflammation of the inner part of the eye which could be severe and blinding. There is a one in one hundred risk of other kinds of complications (light sensitivity, swelling, inflammation, damage to surrounding eye structures) which may require additional surgery or delayed recovery but usually have good outcomes.

Q: Can people prevent cataracts? How often should they see an eye specialist?

A: Pursuing good general health with a balanced diet and sufficient hydration while protecting the eyes from sunlight with sunglasses is the best prevention. People should see an eye specialist only if their vision cannot be corrected to be better than 6/12 with glasses prescribed by an optician or if their vision doesn't permit making a living, e.g., it's too glaring or blurry to drive safely. Some people choose to see a community optometrist once a year or every two years to check for progression, if any. This would be a sensible approach since cataracts are so common and don't change suddenly. Rarely, patients with medical conditions such as swollen or mature cataract, diabetic retinopathy which could not be managed properly, or dislocated cataracts also require cataract surgery but these cases would already be seen by eye specialists through other referral channels.

Professor Louis Tong

Professor Louis Tong is an eye specialist at the Singapore National Eye Centre.

Oncology and Nuclear Medicine

Demand for cancer care is increasing rapidly in Malaysia.

Our Oncology and Nuclear Medicine facility at Thomson Hospital Kota Damansara provides a comprehensive spectrum of cancer services, covering prevention, diagnosis, treatment, supportive treatment and palliative care. In addition to the full range of surgery, systemic therapy, radiotherapy and nuclear medicine, we also offer associated services such as lab tests, diagnostic imaging, nutrition, rehabilitation, pharmacy and psycho-social support.

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You Ask, They Answer

Q: Is coughing up blood always a sign of a serious condition?

Haemoptysis refers to the coughing up of blood from a lung source, below the vocal cords or glottis. To make the right diagnosis, it is important to first differentiate haemoptysis from mimickers, e.g., vomiting of blood from the gastrointestinal tract (haematemesis) or bleeding from the gums and nasal passages.

Haemoptysis can be a common symptom. In a study of patients in primary care, approximately one in 1,000 patients per year experienced it, but these cases tend to be mild.

On the other end of the spectrum, massive haemoptysis can be life-threatening. It is less common and occurs in 5-15 percent of patients presenting with the condition. Generally, bleeding rates more than 100 ml of blood (1/3 cup) over one hour or 500 ml in 24 hours are considered massive. Patients with lower cardiopulmonary reserves are at higher risk, even with lower bleeding rates (50 ml/hour).

Q: What are the common causes?

A: Haemoptysis has numerous causes as the bleeding can arise from different regions in the lung:

a. Tracheobronchial airways

b. Pulmonary parenchymal (lung tissue)

c. Pulmonary vessels

Common causes include acute bronchitis, pneumonia, tuberculosis, lung cancer, and chronic lung disease, such as chronic bronchitis and bronchiectasis.

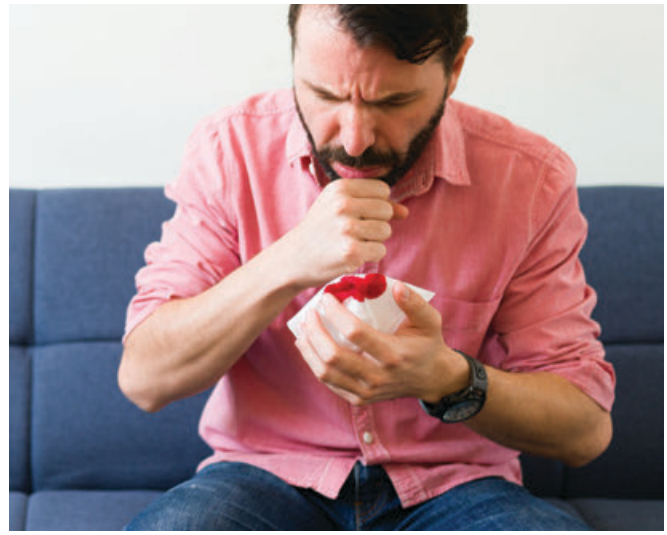
Less common causes include the presence of an aspergilloma (a fungal ball, within a chronic lung cavity), fungal infections in immunocompromised patients, and pulmonary embolism.

Q: Should people who cough up blood see a doctor or go to the Emergency Room (ER)?

A: They should see a doctor to determine the underlying cause for targeted treatment. Most cases are mild and self-limiting. However, if there are features and risk factors for an underlying cancer or chronic lung disease, further lung imaging and examination with scopes might be needed.

If the haemoptysis is massive, patients will have to proceed to the ER. Massive haemoptysis can be life-threatening because the windpipe can become obstructed, resulting in respiratory failure or cardiac arrest.

The patients who are at higher risk of asphyxiation from massive haemoptysis are usually older and have weaker physical and cardiorespiratory reserves due to underlying comorbid diseases, e.g., heart disease, cancer, or stroke.



Q: Are there treatments to reduce the risk of coughing up blood?

A: The treatments target the underlying causes, which are varied. In patients with chronic lung disease, e.g., bronchiectasis and chronic bronchitis, vaccinations and long-term macrolide therapy might prevent lung infections or infective exacerbations.

If patients are hospitalised, intravenous or nebulised tranexamic acid can be used to reduce bleeding; cough suppressants and antibiotics can reduce coughing.

In massive haemoptysis, emergency procedures might be required, such as intubation to secure the airway, a bronchoscopy, and the use of an endobronchial blocker to seal off the bleeding lung segment.

As the bleeding source is typically from hypertrophied bronchial arteries, bronchial arterial embolisation is often the definitive emergency treatment. An arteriogram is first performed to locate the bleeding bronchial artery which is then blocked off with various endovascular agents, e.g., a gelatin sponge, polyvinyl alcohol particles, microspheres, or even metallic coils, to stem the bleeding. The success rates range from 60-90 percent, but the risk of recurrent bleeding can be as high as 30-50 percent in patients with an aspergilloma or lung cancer, respectively.

Dr Lim Hui Fang

Dr Lim Hui Fang is a specialist in respiratory medicine and intensive care medicine at The Respiratory Practice, Farrer Park Hospital. She is also a visiting senior consultant at National University Hospital and Adjunct Assistant Professor at the National University of Singapore.

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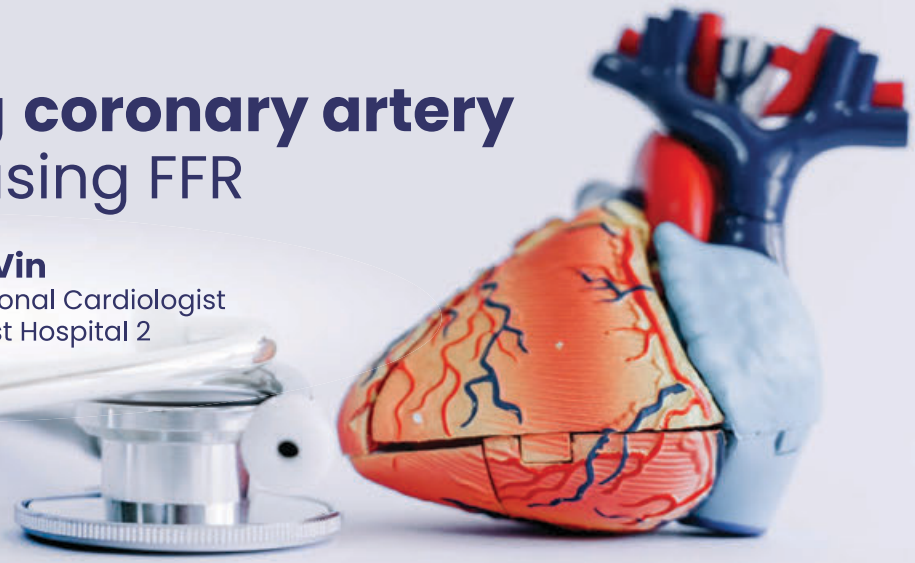
Assessing **coronary artery disease** using FFR

By **Dr. Lee Zhen-Vin**
Consultant Interventional Cardiologist
Damansara Specialist Hospital 2



Coronary artery disease implies the presence of narrowing or blockages within the arteries that supply oxygen and nutrients to the heart muscles. At present, a coronary angiogram remains the gold standard for the assessment of coronary artery disease. While it may be an invasive procedure, the overall risk of major complications associated with a coronary angiogram remains very low.

A fractional flow reserve (FFR) is an assessment performed as an extension to a coronary angiogram to determine the significance of a particular blockage. The significance of a blockage would depend on the location of the blockage within an artery. If the blockage is at the beginning of the artery, it would lead to more problems as opposed to it being at the end of the artery.

Think of the artery as a water hose with numerous connections to other water sprinklers in the middle of the hose. If there is a blockage at the beginning of the hose, then the effect would be more detrimental as compared to the presence of a blockage at the end of the hose.

Blockages of a similar degree may also confer different consequences if they are present in different arteries as some arteries are larger and are more important compared to the rest.

The FFR assessment is performed using a wire known as a pressure wire. On the wire, there is a pressure sensor located close to its tip to measure the pressure within the artery itself. Pressure will first be measured at the beginning of the artery and once this is done, the pressure wire will then be passed across the blockage to remeasure the pressure after the administration of a medication to ensure that blood flow through the artery is maximal. The FFR is a ratio whereby the pressure after the blockage is divided by the pressure at the beginning of the artery.

Theoretically, blood flow is proportional to pressure. Hence, if there is presence of a severe blockage leading to a reduction of blood flow, the pressure after the blockage will also be reduced. This would yield an abnormal FFR reading. An FFR value of less than or equal to 0.80 is considered abnormal and a coronary angioplasty is required. In contemporary practice, the ultimate step of a coronary angioplasty would involve the implantation of a stent.

A blockage with an FFR value of more than 0.80 can be left alone without the need for coronary angioplasty and treatment with appropriate medications would suffice. The FFR is particularly helpful when dealing with scenarios whereby blockages are present within multiple arteries or when multiple blockages are present at different segments within the same artery.

An FFR can be used to accurately determine which blockages require angioplasty and which do not. This leads to an overall reduction in the number of implanted stents as well as the length of the stent(s), both of which are factors known to impact the overall rate of stent failure.

Studies have also shown that the FFR is a very cost-effective modality and its use has been shown to reduce the combined rate of death, non-fatal heart attack and the need for a repeat coronary angioplasty. In summary, the FFR is pivotal in the facilitation of decision-making and its use allows judicious coronary angioplasty to be performed.
Dr. Lee is part of a team of skilled Cardiology Specialists in DSH2's Cardiac & Respiratory Centre of Excellence which provides diagnosis and treatment covering conditions such as coronary artery disease, heart failure, arrhythmia and valvular heart disease.

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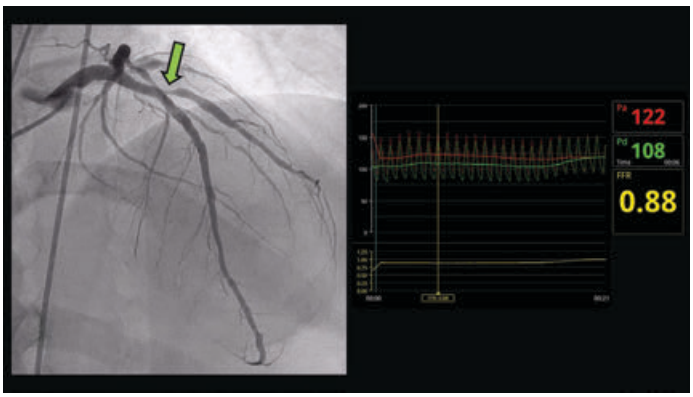

Although there appeared to be a significant blockage in the first diagonal artery on the coronary angiogram (green arrow), the FFR value was 0.88 (not significant) and angioplasty was not performed.

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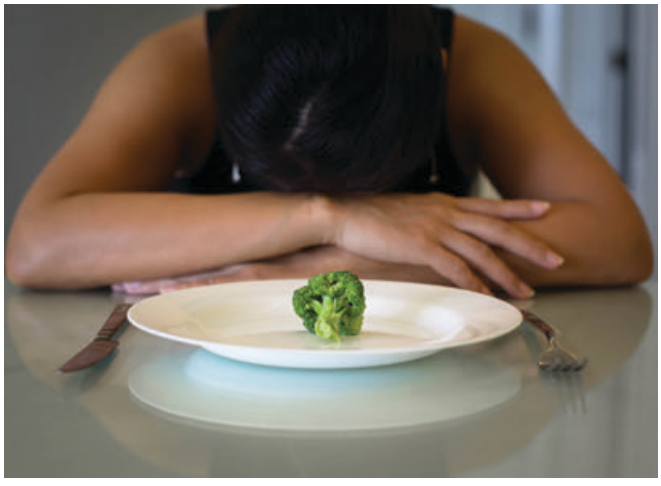
You Ask, They Answer



Q: In which cases do swallowing problems turn into a medical condition?

A: Swallowing problems are of medical concern when they become persistent and progressive. One should consider seeking medical attention early especially when there are accompanying symptoms of pain during swallowing, regurgitation, vomiting, or coughing or when there is a presence of blood-stained phlegm, change in voice, shortness of breath, or weight loss.

Q: How are swallowing problems managed?

A: Investigations and treatment options will depend on the cause.

Swallowing is a complex and coordinated process. There are three stages in swallowing: oral, pharyngeal, and oesophageal. Damage to any of the muscles and nerves involved in swallowing can lead to dysfunction in one of these stages.

For example, in the case of problems with tongue innervation affecting tongue movement, issues forming a proper bolus and problems with moving the bolus towards the oropharynx may arise.

If there is a dysfunction in the pharyngeal phase, food may penetrate the vocal folds and enter the airway resulting in pneumonia.

During the oesophageal phase, stomach contents can be regurgitated into the oesophagus if the lower oesophageal sphincter does not stay contracted. This can cause inflammation of the oesophagus, leading to heartburn and reflux.

For patients with swallowing problems due to an underlying neurological, neurodegenerative, or muscular disorder, a comprehensive team of physicians, neurologists, speech therapists, and dietitians will be involved in managing these problems.

Swallowing assessments such as a videoflouroscopy or fibreoptic endoscopic evaluation of swallowing are common investigations performed to evaluate oropharyngeal dysphagia. These investigations will determine if one is able to safely consume food orally by testing swallowing with a range of food and fluid consistencies.

If a patient is deemed at risk of aspiration (food going into the airway), nasogastric tube feeding or a percutaneous endoscopic gastrostomy may be suggested. Swallowing exercises of the throat and neck may be introduced as well to aid swallowing. The use of endoscopic botulinum toxin injections may be suitable for some.

A large group of patients that I see typically describe their swallowing problems as sensing a foreign body in the throat or similarly feeling a lump when they swallow. This sensation is medically known as globus pharyngeus. The sensation commonly occurs due to acid reflux, pharyngitis, post-nasal drip, or having enlarged tonsils. A subset of patients may benefit from speech therapy or a course of proton pump inhibitors.

For patients with post-nasal drip, treatment options will involve a trial of antihistamines, intranasal steroidal sprays, and nasal douche. Allergy testing may be introduced for those who report symptoms of itchy, runny nose or with a background of atopy (relating to e.g., eczema, asthma). Nasal procedures may be suitable for some with persistent, recurrent symptoms despite the use of medications and allergen avoidance.

Q: Are there eating habits or lifestyle choices that ease the symptoms?

A: Acid reflux is a common condition and is medically termed laryngopharyngeal reflux if symptoms occur only in the throat. Contributing factors include a stressful lifestyle, anxiety, smoking, or a diet high in caffeine, alcohol, and spices.

General medical advice that can help ease globus is to avoid the above risk factors, ensure adequate hydration, rest, and maintain a healthy body weight within an appropriate BMI range.

Lastly, dysphagia may be a symptom of underlying head and neck malignancy. Smoking, betel nut chewing, alcohol consumption, and human papillomavirus (HPV) type 16 infection are known risk factors. Early medical attention impacts survival and prognosis.

Dr Soon Sue Rene

Dr Soon Sue Rene is an ENT surgeon at Adult & Child ENT Specialists, Farrer Park Hospital. She is one of very few in Singapore with certified fellowship training in paediatric and adult ENT conditions.

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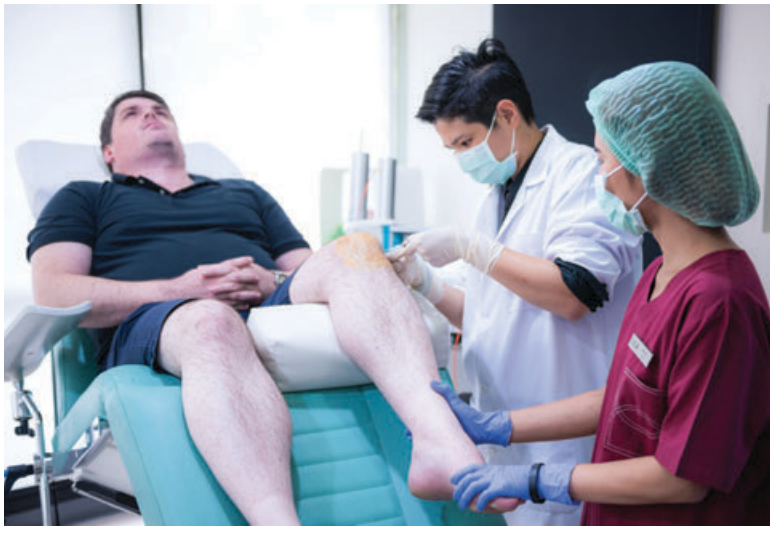
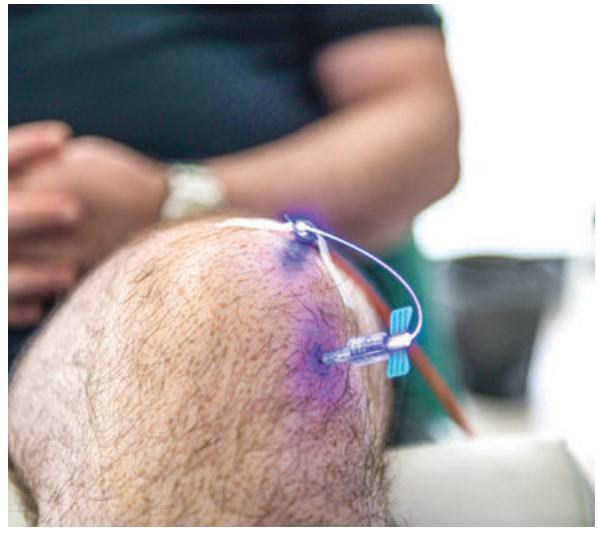
New Modern Medicine using Stem Cells for Osteoarthritis





IntellihealthPlus Clinic

Osteoarthritis (OA) is a common joint disorder that affects millions of people worldwide. According to the World Health Organization (WHO), OA is the most common joint disorder globally, affecting around 10% of men and 18% of women over the age of 60. It is estimated that around 302 million people worldwide have OA .While OA can affect people of all ages, it is more common in older adults. The prevalence of OA increases with age, with the highest rates observed in those over the age of 65.

Osteoarthritis (OA) is a degenerative joint disease characterized by the breakdown of cartilage in joints, leading to pain, stiffness, and limited mobility. Although there are various treatment options available, including surgical, non-pharmacological and pharmacological interventions, there is currently no cure for OA. However, recent advances in regenerative medicine have shown that umbilical cord mesenchymal stem cells (UC-MSCs) have potent therapeutic actions for treating OA.

Research into Stem cell therapy for osteoarthritis has been studied for a number of decades, which lead to the first clinical trials investigating the safety and efficacy of MSCs for OA being initiated in the early 2010s.

One of the earliest studies published in the Journal of Translational Medicine evaluated the safety and efficacy of intra-articular injection of UC-MSCs in patients with knee OA. The study found that UC-MSCs improved pain, stiffness, and function in the treated knee. Additionally, the study observed no adverse effects related to UC-MSC treatment.

This has led to hundreds of completed clinical trials using MSCs for OA around the world, and currently over 1 million stem cell transplants have been performed worldwide for a range of conditions.

Umbilical Cord Mesenchymal stem cells (UC-MSCs) have been shown to have several mechanisms of action that can help alleviate the symptoms of osteoarthritis (OA). Here are some ways in which UC-MSCs can help with OA:

Anti-inflammatory effects: UC-MSCs have anti-inflammatory properties that can help reduce inflammation in the affected joint. OA is characterized by chronic inflammation, which can cause pain and further damage to the joint. UC-MSCs can help reduce inflammation by suppressing the activity of immune cells that produce inflammatory cytokines.

Adult Chondrogenesis: UC-MSCs have the ability to stimulate chondrogenesis, which leads to cartilage and extracellular matrix formation. Cartilage is essential for healthy joint function, and OA is characterized by the breakdown and loss of cartilage..

Paracrine effects: UC-MSCs secrete a variety of growth factors and cytokines that can stimulate tissue repair and regeneration. These growth factors can promote the growth of new blood vessels, stimulate the growth of new tissue, and reduce inflammation in the affected joint.

Immunosuppressive effects: UC-MSCs have the ability to modulate the immune system, which can help reduce the inflammatory response in the affected joint. By suppressing the activity of immune cells, UC-MSCs can help prevent further damage to the joint and promote tissue repair.

Overall, the therapeutic effects of UC-MSCs in OA are due to their ability to promote tissue regeneration, reduce inflammation, and modulate the immune system.



IntellihealthPlus Clinic

UC-MSCs have proven to be a valuable treatment option for patients with OA, particularly those who have not responded to other forms of treatment.

Purified Umbilical cord mesenchymal stem cells (UC-MSCs) are considered "immune privileged," meaning they have properties that allow them to avoid being rejected by the recipient's immune system. This is an important feature of UC-MSCs, as it removes the risk of adverse reactions to the treatment and allows for allogeneic (from a different donor) use of the cells.

There are several reasons why UC-MSCs are classed immune privileged:

- **Low expression of immune system molecules**: UC-MSCs have low levels of molecules on their surface that are recognized by the immune system, such as major histocompatibility complex (MHC) class I and II molecules. This allows them not to be recognized as foreign by the immune system and less likely to be attacked by immune cells.
- **Anti-inflammatory properties**: UC-MSCs have been shown to have potent anti-inflammatory properties, which can help to reduce immune responses and inflammation in the body. This further removes the risk of rejection by the immune system.
- **Ability to regulate immune responses**: UC-MSCs have the ability to regulate immune responses, by modulating the activity of immune cells such as T cells, B cells, and natural killer cells. This prevents the immune system from attacking the transplanted cells.
- **Induction of immune tolerance**: UC-MSCs have been shown to induce immune tolerance, which is the ability of the immune system to tolerate the presence of foreign cells without attacking them. This is thought to occur through the suppression of immune responses and the activation of immune regulatory cells.

IntellihealthPlus Clinic

At Intellihealth+ Clinic by StemCells21 in Bangkok, Thailand, stem cell therapy has been used to treat OA for over 10 years. The main focus of current OA treatments are the UC-MSC, but there is also a combined range of supportive therapies given to support the beneficial actions of the stem cell treatment. Generally when treating OA, UC-MSCs are injected into the target joints via intra-articular route with imaging guidance when required, and combined with intravenous infusions, this combination gives localised and systemic benefits to the patient.

Each patient is an individual and requires a personalised treatment approach to target the specifics of their arthritis, and any underlying conditions they may have. During the consultation stage, the physicians will review the patient's medical history and related diagnostics such as MRIs or other imaging, then create a customised treatment program for the patient.

Our team at IntelliHealth+ by StemCells21 has treated thousands of patients suffering from chronic degenerative disease, and patients wish to focus on longevity. Our facility includes 2 medical centres, and our FDA registered Bio-Pharma laboratories where all stem cells are produced by our scientific production team.

If you are suffering from Osteoarthritis, any other degenerative disease, or wishing to undergo our longevity treatment program, contact us for arranging a free consultation.

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You should exercise even when you're pregnant

See a doctor to discuss how to reap the benefits of exercise

Exercise on a regular basis is a powerful contributor to human health and can be done safely even during pregnancy, thus getting your body fit for giving birth and making it easier to cope with or prevent weight gain, unless you are experiencing complications.

Women should aim for about 150 minutes of workout per week, the UK National Health System (NHS) recommends. Even brief 10-minute sessions are beneficial, especially because women don't need to push too hard as exercise doesn't need to be strenuous to be helpful.

For those who don't work out regularly, a good starting point is brisk walking. The advice is to engage in it for about 10 minutes every day and slowly reach 150 minutes weekly. Walking is also convenient as it can be done anywhere and fit into one's daily schedule.

When it comes to intensity, a good way to make sure you're not overdoing it is to be able to hold a conversation while exercising: those who can't do it should probably reduce the intensity of their workout.

"Much of what a pregnant person can and should do to stay healthy during their pregnancy will vary from person to person, but the most important thing to remember is to listen to your body's cues and not push yourself too hard," Dr Salena Zanotti, an obstetrician and gynaecologist at the Cleveland Clinic, said on its website, adding that how hard people should work out depends on their physical ability, but they should never "go full-force."

Other workouts suitable for pregnant women include low impact aerobics like swimming and elliptical training. Pelvic floor exercises are also beneficial because they help strengthen muscles that come under strain during pregnancy and labour, while prenatal yoga can make women more relaxed with stretching and breathing techniques (hot yoga isn't recommended though).

Women who normally run, jog, or play racquet sports can usually continue doing so in pregnancy, but it's better to ask an ob-gyn if those activities are safe as that may change from person to person.

The benefits of regular exercise during pregnancy include reduced back pain and constipation as well as decreased risk for gestational diabetes, preeclampsia (high blood pressure), and cesarean birth, according to The American College of Obstetricians and Gynecologists. The practice also strengthens both the heart and the blood vessels while helping women to lose weight after giving birth.

Women should also drink plenty of water before, during, and after exercise and avoid working out when it's too hot or humid.

However, some exercise types are dangerous during pregnancy and should be avoided. These include those that put women at risk of injury, like contact sports (soccer, basketball, ice hockey) snow/water skiing, surfing, and horseback riding.

"During your pregnancy, your center of balance changes, particularly as your belly expands in the later months," explained Dr Zanotti. "That can put you at a greater risk for falls, so you'll want to stay away from exercises that require balance."

As is often the case, though, pregnant women should consult an ob-gyn to figure out the safest workout regime for their specific needs.

"During your pregnancy, your center of balance changes, particularly as your belly expands in the later months."

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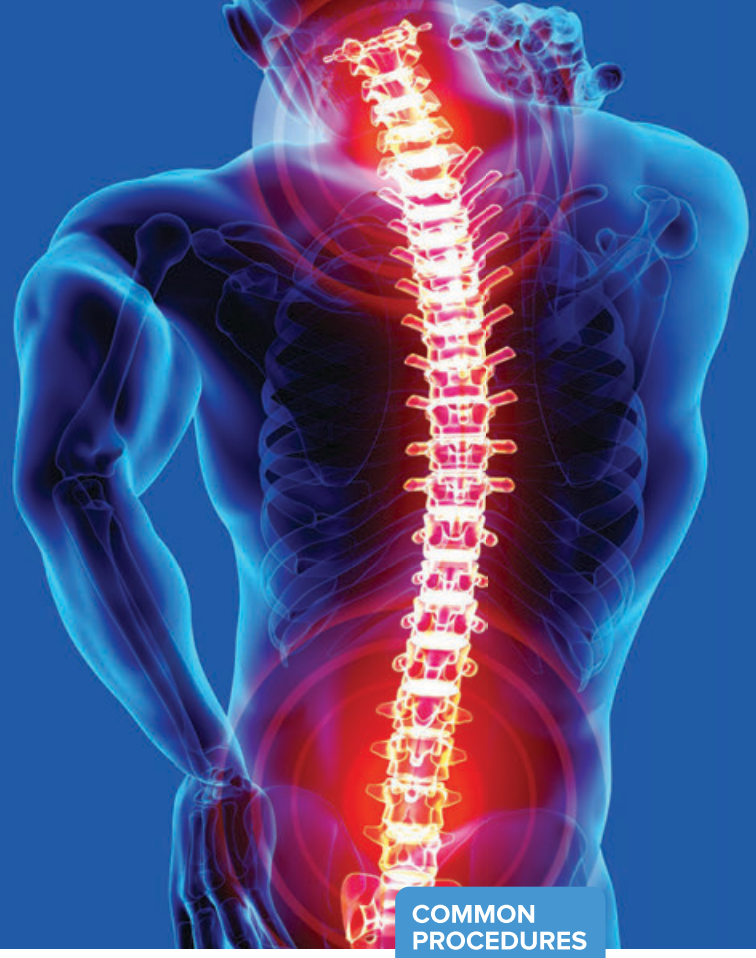
BACK PAIN

– Role of Interventional Pain and Spine Management Specialist



"Pain is inevitable, but suffering is optional
Don't let your Spine get on your nerves"

DR. JOHN A/L ALPHONSE DECRUZ
Consultant Orthopaedic and Trauma Surgeon Interventional Pain and Spine Specialist Parkcity Medical Centre

Back pain is a broad definition which covers pain from Cervical (neck) region to mainly (lower back) Lumbar region. It is a major health and socio-economic problem throughout the world.

The impact on overall cost of healthcare is staggering when considering the disabling influence of Back pain on the working population.

"Our first task is to rule out Red Flags in Back pain"

RED FLAGS

Unexplained weight loss, History of cancer/ Metastases, Fever Sudden neurological detoriation, Trauma, Intravenous Drug Users and Prolonged Steroid use

Common causes for low back pain are as follows:

- *Non specific* – Mechanical or Functional Injury (95%)
- Muscle strain, ligamentous sprain, Prolapsed Intervertebral Discs, Facet joint arthritis Degenerative spine, spinal stenosis – *age related*
- *Others* less than 5%

"Not all disc prolapses are the only cause of the back pain and therefore treatment should not only aim at the Disc"

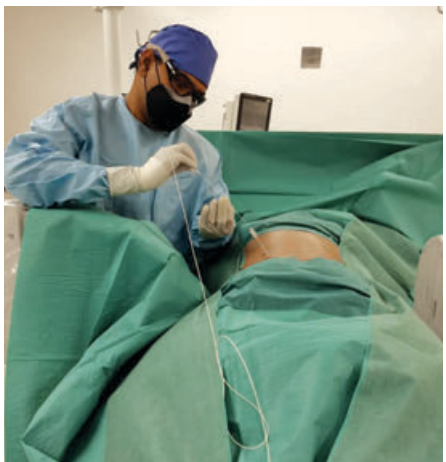
COMMON SOURCE OF PAIN GENERATOR

- Internal Disc Derangement (IDD), Discogenic – Herniation
- Facet Joint Syndrome, Sacroilitis (SIJ) and Spinal stenosis

TREATMENT OPTIONS AVAILABLE

Rest, cold/hot packs, braces, Physical exercise, yoga and stretching, Analgesics like Paracetamol and NSAIDs, Muscle relaxants, Adjuvant analgesics - Gabapentin or pregabalin (anticonvulsants), amytriptyline (TCA), Opioids and Physiotherapy

Interventional pain management is a medical subspecialty which treats pain with minimally invasive interventions such as facet joint injections, nerve blocks (interrupting the flow of pain signals along specific nervous system pathways), neuroaugmentation, vertebroplasty, kyphoplasty, nucleoplasty, endoscopic discectomy, and implantable drug delivery systems



COMMON PROCEDURES DONE

NERVE BLOCKS
Pain signals travel down nerves to the brain. Nerve blocks are used to interrupt these signals to provide pain relief.

TARGETED INJECTIONS
Some common types of injections are Epidural Steroid Injections, Epidurolysis – delivery of sterois and removing epidural scarring through the caudal approach, Facet Joint Injections/facet block by medial branch nerve block

INTERVERTEBRAL DISC RELATED PROCEDURES
Annuloplasty to treat internal disc derangement (IDD), Nucleoplasty – Laser or RF

RADIOFREQUENCY ABLATION
Commonly used for facet joint SI joint arthritis. This technique uses a radio wave to produce an electrical current, which is then used to heat an area of nerve tissue.

ENDOSCOPIC SPINE SURGERY

Healthy cooking styles

Steaming and boiling are among the healthiest methods

Eating nutritious foods is definitely a key component of a healthy lifestyle, but another important part of the equation is how to cook them as this can also have an impact on our health.

"Research shows that certain cooking methods may change the makeup of our food in ways that could potentially harm our health," Dr Donald Hensrud, associate professor of nutrition and preventive medicine at the Mayo Clinic College of Medicine, told *Health*.

For example, some research suggests consuming excessive amounts of meat cooked at high temperature could increase cancer risk due to the formation of the chemicals heterocyclic amines (HCAs) and polycyclic aromatic hydrocarbons (PAHs). "Grilling meat forms HCAs and PAHs that may cause changes to DNA in the body that might lead to cancer," Dr Paolo Boffetta, associate director of the Tisch Cancer Institute at the Icahn School of Medicine at Mount Sinai, told *Health*.

Similarly, deep frying or cooking meat or fish to well-done or browned can produce potential carcinogens on foods. For instance, French fries and potato chips, as well as bread roasted too dark, can carry acrylamide, a substance considered a probable contributor to cancer.

This doesn't mean you should never enjoy some fried foods but should be mindful of the risks and avoid excessive amounts. "There's a lot we still don't fully understand, but we do know that some methods are better to use regularly and some are better saved for special occasions," said Dr Hensrud.

Some alternative cooking methods that avoid the production of such cancer-linked chemicals and can then provide healthier meals include steaming and boiling, which achieve that by using lower temperatures. In addition, they lead to healthier foods by cutting out extra fat because they don't require the use of oils or butter.

When it comes to cooking vegetables, the best approach is steaming because it keeps them as nutritious as possible. "Boiling can cause water-soluble nutrients — like vitamins B and C — to leach out into the water, but they're retained with steaming," Lauren Slayton, founder of the nutrition consulting centre Foodtrainers, told *Health*. One way to avoid losing those nutrients as much as possible is to drink the cooking liquid that contains them.

Short microwaving is another method that may help retain important nutrients like flavonoids (compounds associated with reduced risk of heart disease) as demonstrated by one study done on broccoli cooked for one minute. "Under the cooking conditions used in this study, microwaving appeared to be a better way to preserve flavonoids than steaming," study authors wrote in *Heliyon*.

However, it isn't clear why microwaving is able to retain more nutrients or whether this would apply to vegetables other than broccoli. "Though in general microwaving is a preferred method, the optimum time will be different for different vegetables," lead researcher Dr Xianli Wu, a scientist at the Beltsville Human Nutrition Research Center at the US Department of Agriculture, told the BBC. "When considering commonly used domestic cooking methods, microwaving is a preferred cooking method, at least for many plant foods, but probably not for every plant food."

"Boiling can cause water-soluble nutrients — like vitamins B and C — to leach out into the water, but they're retained with steaming."

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Health literacy empowers communities

It can improve individual well-being while reducing communal inequities

A basic understanding of the many causes driving health problems is paramount to improve the wellbeing of individuals as well as entire communities — a form of knowledge often referred to as health literacy and an important objective pursued by the World Health Organization (WHO).

"We stress that health literacy is an important factor in ensuring significant health outcomes and in this regard, call for the development of appropriate action plans to promote health literacy," reads the United Nations ECOSOC Ministerial Declaration of 2009.

One key benefit of improved health literacy is empowering individuals to understand how their lifestyles and choices can either increase the risk for certain conditions or contribute to their prevention. For example, smoking is associated with a higher risk for a host of conditions, including cancer and heart disease, two of the biggest killers worldwide, but many people are still unaware of such a strong link. The WHO says that warnings on packages can play an important role in raising awareness about the detrimental consequences of smoking, in particular the severity and magnitude of health harms. Such images are also effective among people with low literacy and the young and have already worked in Canada where a study found that people who read and discussed health warnings on cigarette boxes were more likely to stop or reduce their habit three months later.

Comprehensive sexual and reproductive health information can nudge people to better protect themselves during sex, thus reducing the risk of getting sexually transmitted diseases (STD) like HIV. This form of health literacy can also help girls delay pregnancy and stay in school, thus reducing gender gaps in education and improving future economic opportunities. One prime example was a radio serial drama in Nigeria that aimed to educate women about sexual and reproductive health. It led to an increase in female listeners reporting condom use during intercourse, an effective way to prevent STDs.

Individuals are not the only beneficiaries, as strong health literacy can also make communities aware of their health needs, thus pushing authorities

to implement measures strengthening public health. "Meeting the health literacy needs of the most disadvantaged and marginalized societies will particularly accelerate progress in reducing inequities in health and beyond," according to the WHO.

In turn, higher health literacy can also reduce health costs. In the US alone, it could lead to 993,000 fewer hospital visits a year, according to United Health Group, while resulting in US$25.4 billion potential savings in health spending.

"People who have higher levels of health literacy have better health outcomes because they know where to go, they join screening programmes, they know when to act in a timely manner," said Kristine Sørensen, founder of the Global Health Literacy Academy, according to the report *Health literacy around the world* by The Economist Intelligence Unit.

The WHO recommends governments provide comprehensive health information that doesn't focus only on individual lifestyles but also highlights social, economic, and environmental determinants to health. For instance, around two billion people lack safe drinking water and 3.6 billion people use sanitation services that leave human waste untreated, according to the WHO. This leads to at least 1.4 million deaths every year from preventable causes associated with unsafe water and poor sanitation.

"People who have higher levels of health literacy have better health outcomes because they know where to go, they join screening programmes, they know when to act in a timely manner."

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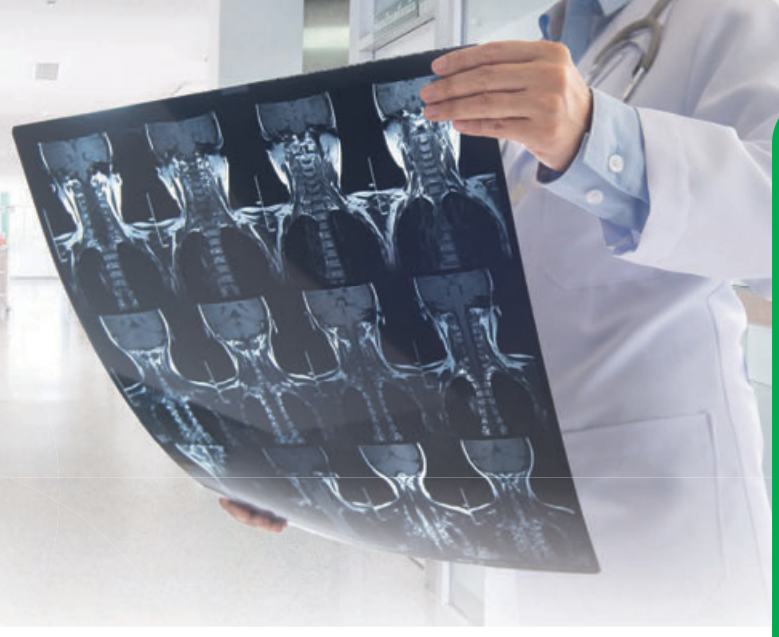

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Hands That Treat Hearts That Heal

Apr 2023

Garlic is good for your health but no magic bullet

The legendary plant is just one part of the healthy diet equation

In European mythology it was used to keep vampires at bay. Today, it's often touted for its protection against several health conditions including heart disease and the common cold, but while garlic is no miracle food, it should still be part of a healthy diet to reap the general benefits of eating clean.

"There is a lot of folklore as to the beneficial health effects of garlic in the diet," Dr Alan Slusarenko, a professor of plant physiology at RWTH Aachen University in Germany, told CNN. "However, we have no data from controlled clinical trials."

Some studies did show that garlic consumption could help lower blood cholesterol, blood pressure, and blood sugar levels, which, if too high, can increase the risk for heart disease and diabetes. But "typically, those effects are observed when quite high supplemental doses of garlic powder are given," Dr Kristina Petersen, assistant professor in the department of nutritional sciences at Texas Tech University, told the American Heart Association News, meaning the couple of cloves people usually use for their dishes will have a much lower effect than a supplement.

"I wouldn't recommend somebody take a garlic supplement," she added. "There might be some situations where it might be indicated, but this should be done in consultation with a physician."

In rare cases, garlic supplements can cause headaches, fatigue, appetite loss, muscle aches, dizziness, and asthma attacks or skin rashes, according to the Cleveland Clinic.

Similarly, a 2014 review concluded that there was insufficient evidence to back up the notion that garlic can prevent the common cold, though one single trial suggested that it could. Another review looking at 83 human trials highlighted that garlic is "a promising candidate for preventing and treating different health conditions," but more research is needed to gather stronger evidence. For instance, the review found that credible data show a potential association between garlic intake and a reduced risk of several cancers including colon, prostate, and ovary malignancies, but the trials are too few and the number of people involved too small to draw any solid conclusion.

Regardless, eating garlic in normal amounts is a healthy choice, Dr Petersen said. "I eat quite a bit of garlic. It's great in salads, but also on vegetables. If you're baking vegetables in the oven, it really brings out the flavor." She added that this could be the "real health benefit" of garlic as it helps people eat more vegetables by making them tastier.

"I think it's a versatile food, and it definitely has a place in healthy dietary patterns," she said. "And while it may not have really significant health benefits per se, it has a place as part of healthy mixed diets."

Indeed, garlic is often part of the Mediterranean diet, which is associated with a lower risk for cardiovascular disease and many other chronic conditions like diabetes and cancer. But the same benefits can be gained from any diet with a significant amount of vegetables.

Garlic is often part of the Mediterranean diet, which is associated with a lower risk for cardiovascular disease and many other chronic conditions like diabetes and cancer.

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Orthopaedic

Orthopedic medicine is a field of healthcare that focuses on treating conditions related to the musculoskeletal system. This system includes bones, joints, muscles, tendons, and ligaments, and it plays an essential role in our overall health and mobility.

Knee and Hip Joint Replacements

One of the most common orthopedic surgeries is a knee or hip joint replacement. This surgical procedure involves replacing a damaged or diseased joint with an artificial joint, or prosthesis. Joint replacements offer the best chance for a return to pain-free mobility, especially in cases of severe osteoarthritis, which is a type of arthritis caused by the breakdown of cartilage.

You may be a candidate for joint replacement if you experience pain that limits your normal daily activities, inability to sleep because of the pain, inability to walk and care for yourself, or if you have not experienced improvement with other treatments.

Other reasons for replacing the hip joint are fractures in the thigh bone or hip joint tumors. While knee and hip joint replacements are usually done in people aged 60 and older, younger people who have a joint replaced may put extra stress on the artificial joint, which can cause it to wear out. In such cases, part or all of the joint may need to be replaced again.

Sports Injury

While exercise is good for our health, poor training and warm-up practices or improper gear can lead to all sorts of injuries. The most common sports injuries include sprains and strains, knee injuries, swollen muscles, Achilles tendon, shin bone, fractures, and dislocations. Treatment often begins with the RICE method to relieve pain, reduce swelling, and speed up recovery, but surgery such as ligamentous reconstructive surgery and meniscus cartilage surgery may also be necessary.

What is Osteoporosis?

Osteoporosis is a condition that weakens bones and increases the risk of fractures. It is more common in older adults, particularly women who have gone through menopause, with one in three women and one in five men affected by it.

Five Steps to Healthy Bones and Fracture-Free Future

- Exercise regularly to build strong bones and muscles, especially weight-bearing and resistance training.
- Eat a diet rich in calcium, vitamin D, and protein to keep bones healthy.
- Avoid negative lifestyle habits such as smoking and excessive alcohol consumption, which can contribute to bone loss.
- Identify risk factors such as age, gender, family history, and medical conditions, and take steps to manage them.
- Get tested and treated if needed with medications, supplements, and lifestyle changes.

In conclusion, orthopedic medicine plays an essential role in keeping our musculoskeletal system healthy and mobile. Whether it's through joint replacements, sports injury treatments, or preventing osteoporosis, taking care of our bones, joints, muscles, tendons, and ligaments is crucial for a healthy and active life.

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ISLAND HOSPITAL

Island Hospital shines as a finalist for Malaysia's **Flagship Medical Tourism Hospital** Programme

Island Hospital's commitment to providing top-notch healthcare services has earned it a place as a finalist for Malaysia's prestigious Flagship Medical Tourism Hospital Programme.

This programme, spearheaded by the Malaysia Healthcare Travel Council (MHTC) in 2022, aims to establish new standards in global healthcare travel by collaborating with international bodies IQVIA and Joint Commission International (JCI) – aimed at positioning Malaysia as a world-renowned icon for healthcare travel.

Endorsed by the Government of Malaysia and the Ministry of Health, the programme seeks to deliver exceptional end-to-end patient experiences anchored on medical and service excellence best practices, as well as international branding. The programme is an integral part of the five-year Malaysia Healthcare Travel Industry blueprint, which aims to provide the Best Malaysia Healthcare Travel Experience by 2025. Island Hospital's recognition as a finalist in this programme is a testament to their dedication to providing high-quality healthcare services that meet international standards.

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No. 308 Macalister Road, 10450 Penang, Malaysia.
For information: **T:** +604 238 3388 **F:** +604 226 7989 **E:** info@islandhospital.com
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Cancer increases heart disease risk

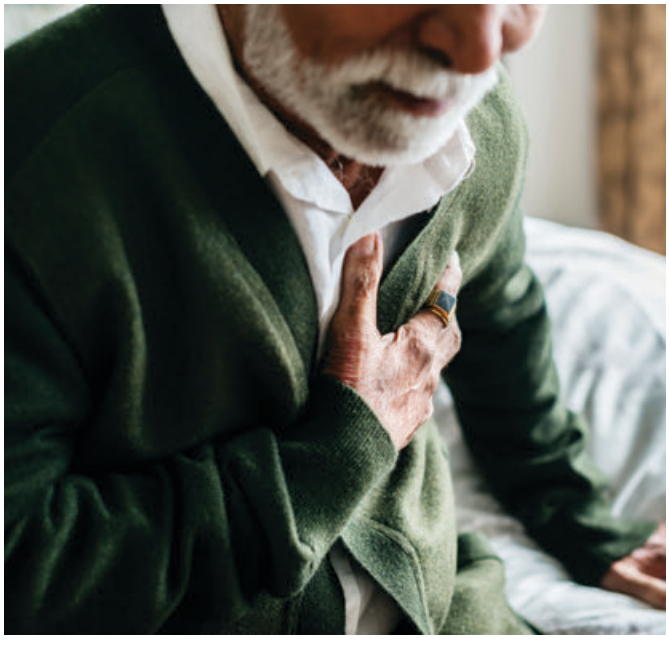
Survivors face higher chances in the long-term, but early diagnosis is possible

People who survive cancer are at a higher risk of developing heart damage over the years, but diagnostic scans could help detect the problem early, in-depth research suggests.

Previous studies had already shown that cancer survivors were at risk of stroke and heart failure in the first year after diagnosis. The new study investigated the long-term risk these patients faced while also analysing their cardiovascular imaging in the hopes of spotting damage before symptoms appeared.

Researchers at Queen Mary University of London sifted through health data of 18,714 people with a previous diagnosis of lung, breast, prostate, blood, womb, or bowel cancer and compared it with similar data from cancer-free individuals. Tracking their health over 12 years, the authors found that one third of people in the cancer group developed cardiovascular conditions while just one fourth in the other pool of participants did. The greatest risk was observed in lung or blood cancer survivors, half of whom had a heart problem like ischaemic heart disease, abnormal heart rhythm, and heart failure.

"This study adds to existing knowledge about the impact of some cancer treatments on cardiovascular disease in cancer survivors," said Martin Ledwick, the head information nurse at Cancer Research UK, according to the *Guardian*. "It may help to inform strategies for how some cancer survivors need to be monitored long-term, especially in situations where they have been discharged from cancer follow-up to the care of their GPs."



First two myocarditis deaths likely linked to COVID vaccine in Singapore

Still, the risk of COVID infection is higher than the risks from vaccination, but people who get the jab are advised to avoid strenuous activities for two weeks

The Singapore Ministry of Health (MOH) has determined that the death of two people who succumbed to myocarditis in 2021 were "likely to be related" to the COVID-19 vaccines produce by Moderna and Pfizer/BioNTech, with their families receiving S$225,000 compensation each.

One known risk of the two vaccines is myocarditis, or inflammation of the heart muscle, but MOH says cases are rare, with a rate of 0.1 per 100,000 doses for the bivalent vaccine and 1.1 for monovalent vaccines. To put this into perspective, more than 17 million doses of COVID-19 vaccine have been administered in Singapore with just two deaths related to them.

"Available data suggests that the majority of cases of myocarditis following vaccination are generally mild and respond to treatment. COVID-19 infection is also known to be associated with myocarditis, several times higher than the incidence after vaccination," according to MOH.

The statement added that, as a precautionary measure, people who get vaccinated should avoid strenuous physical activities for two weeks after vaccination in order to reduce the risk of myocarditis.

It's also worth noting that the risk of developing myocarditis from COVID-19 infection is higher than the chances of developing it from vaccination.

"Most people (95%) who develop myocarditis after receiving a COVID-19 mRNA vaccine have only mild symptoms that go away within a few days. Vaccine-linked myocarditis is less likely to cause lingering heart problems than myocarditis due to COVID-19 illness," Dr Jerome Fleg, a programme officer with the National Heart, Lung, and Blood Institute's Division of Cardiovascular Sciences in the US, said on the website of the National Institutes of Health.

Planning early birth could prevent dangerous condition in pregnancy

It could usher in the first effective method of cutting the risk of preeclampsia at term

The majority of preeclampsia cases near the end of pregnancy could be avoided by delivering the baby in the final weeks before coming to full term, according to new research.

Characterised by high blood pressure, preeclampsia is a potentially life-threatening condition that can affect pregnant women, especially when their due date draws near, and also jeopardise the baby's well-being. Women who develop it are more likely to have heart problems in their lifetime compared to those who don't have the condition.

While taking aspirin is effective at preventing most preeclampsia cases before 37 weeks of pregnancy, there's no preventative measure to cut its risk at term (37-42 weeks of pregnancy), which is also the time associated with more complications compared to early preeclampsia.

By analysing the health records of almost 90,000 pregnancies, researchers in the UK found that scheduling birth from 37 weeks for women at high preeclampsia risk and from 40 weeks for those at lower risk could more than halve the cases of the condition.

"Timed birth is achievable in many hospitals or health centers," lead study author Dr Laura A. Magee, professor of women's health at King's College in London, said in a news release. "Our proposed approach to prevent at-term preeclampsia has huge potential for global good in maternity care."

To further highlight the benefits of scheduling births before they come to full term, she added that "being at higher risk of at-term preeclampsia was associated with earlier spontaneous onset of labor, so women at the highest risk were already less likely to deliver close to their due date."

Heart shape could point to cardiovascular risk

A useful diagnostic metric, it could serve as an important warning sign

People with a round heart seem to be more likely to develop heart failure and atrial fibrillation than those with longer organs, according to a recent study.

Researchers from the Smidt Heart Institute at Cedars-Sinai in the US used deep learning and imaging to analyse cardiac magnetic resonance imaging (MRI) records of 38,897 healthy individuals from the UK Biobank. Their findings show that the genetics of people with round hearts is linked to two of the most common cardiovascular problems worldwide.

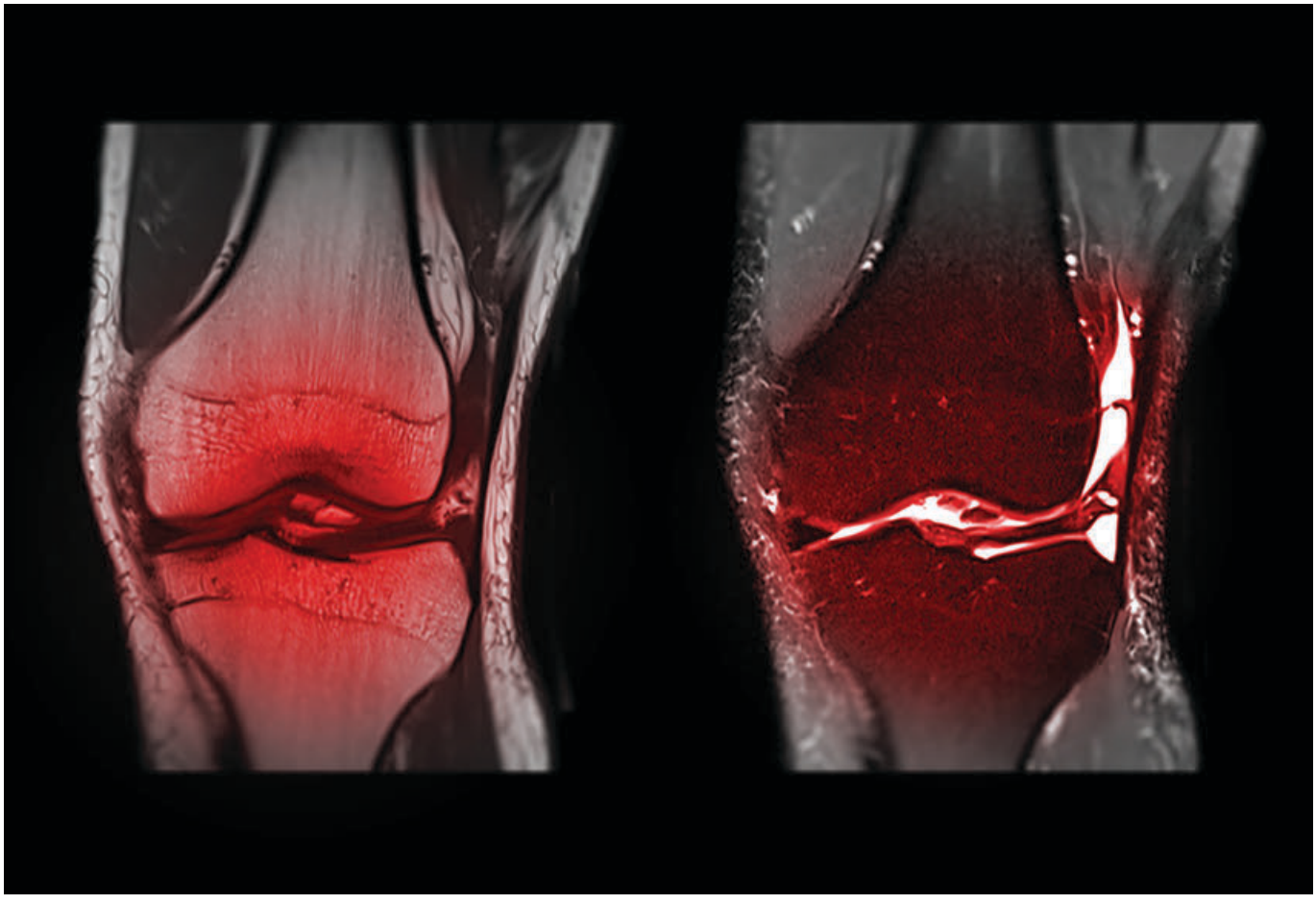
"We found that individuals with spherical hearts were 31 percent more likely to develop atrial fibrillation and 24 percent more likely to develop cardiomyopathy, a type of heart muscle disease," study leader Dr David Ouyang, a cardiologist in the Smidt Heart Institute and a researcher in the Division of Artificial Intelligence in Medicine, said in a press release.

Typically, heart shapes change over time and tend to become rounder, especially in the wake of a major cardiac event like a heart attack. "A change in the heart's shape may be a first sign of disease," Dr Christine M. Albert, chair of the Department of Cardiology at the Smidt Heart Institute and a study author, said in the press release. "Understanding how a heart changes when faced with illness — coupled with now having more reliable and intuitive imaging to support this knowledge — is a critical step in prevention for two life-altering diseases."

Atrial fibrillation is the most common form of irregular heart rhythm in the world, with one estimate putting the number of cases at almost 60 million in 2019. It increases the risk of having a stroke and can be fatal. Cardiomyopathy is less common and often undiagnosed, and therefore treatment may be delayed.

Anterior Cruciate Ligament (Injury & Management)

Dr. Gandhi Nathan Solayar MBChBBAO(Hons), BA, MRCSI, Dip Sports & Ex Med, Dip SICOT, MCh, AM, FRCSI (Tr&Orth)
Consultant Orthopaedic Surgeon (Sports & Joint Replacement Surgery)
Ara Damansara Medical Centre



You are running with the ball after side-stepping the last defender. Only the goalkeeper between you and the goal you are about to score. You cut to the right and before you are able to kick, your other leg slides beneath you and you hear an awful "pop" coming from your left leg. You fall to the ground clutching an immensely painful knee which as you wait, starts to swell. Your teammates help you up while you limp off the futsal court, unable to walk on your injured leg. As a helpful fan brings you an ice pack to soothe your aching knee, you hear your coach say "Sorry bro, I think you have torn your ACL". Your heart sinks.

The ACL or anterior cruciate ligament is a vital structure within the knee which plays an important role to stabilize, protect and allow us to perform our daily activities. It is a common injury in the sporting population affecting approximately one out of 3500 people in the population. In Malaysia, this would account for over 9000 ACL injuries annually. It is common in contact sports (football, rugby) and sports that involve jumping (basketball, volleyball). It usually occurs when the knee is subjected to high torsional forces which occur when you suddenly turn while running with your foot planted to the ground (commonly seen in footballers) or from an

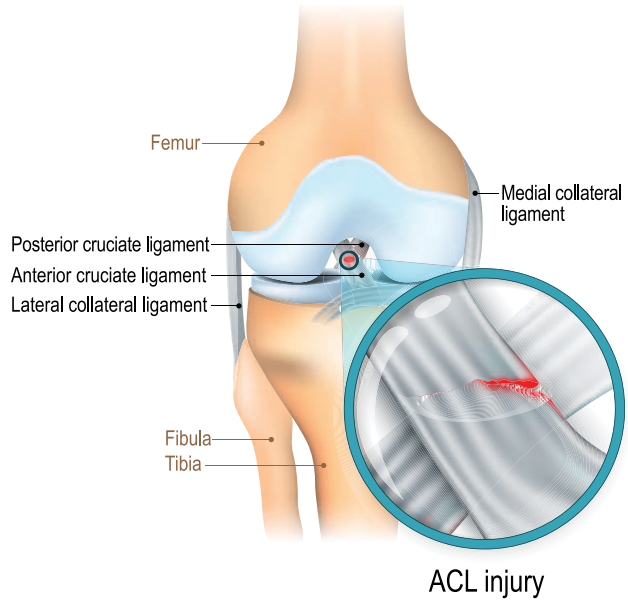
awkward landing resulting in similar forces into your knee after a jump.

In the classic ACL injury, the person may hear a loud "pop" sound from the knee followed by pain, swelling and difficulty weight bearing. While most of these symptoms settle if left untreated, with a reduction in the swelling after 2-3 weeks, the patient will still experience instability of the knee. Symptoms of "instability" are when the knee feels like it is 'giving-way' or buckling whilst changing direction during walking or running. Some patients describe this feeling as being unable to 'trust' the knee. Some also describe a sensation of the knee 'locking' or 'jamming' when trying to flex and extend the joint which is usually followed closely with pain and discomfort. Over a longer period of time, the instability may give rise to other problems such as meniscal tears. The menisci are specialized structures in the knee which help with load bearing and distribution of forces. The accelerated wear of the cartilage can manifest as early-onset arthritis.

Management of an ACL injury must be implemented immediately. Measures to reduce pain and swelling are the main goals of early treatment which consists of rest, ice packs, compression and elevation of the limb (commonly summarized via the mnemonic R.I.C.E). The gold standard of care requires early presentation to a doctor or medical trained professional to confirm the diagnosis and important associated injuries. Apart from routine history and clinical examination, these days, MRI scans are the main diagnostic tool for confirming ACL and other commonly related injuries (i.e. cartilage and/or meniscus). With this information, the orthopaedic surgeon may advise either for conservative (minor strains/incomplete tears) or surgical management (ACL tears with other corresponding injuries).

In my practice, the patient is counselled thoroughly about the whole process of ACL surgery and emphasis on post-operative recovery. ACL surgery in my hands is performed via minimally invasive arthroscopic instrumentation using a small portion of the patient's hamstring tendons as the replacement graft for their torn Anterior Cruciate Ligament. The operation takes about 60 – 90 minutes depending on the complexity of the case and a knee brace is applied for a period of six weeks. In my ACL protocol, I allow my patients to walk on the operated leg on the day of surgery with the aid of a crutch and most patients are discharged back home within 24 hours.

Post-operative rehabilitation and exercises start immediately after surgery. The patient are educated on the appropriate exercises to do with the help of physiotherapy with clear goals following certain time intervals. In simple terms, the aim is to achieve full range of movement (first six weeks) followed by muscle strength (3 months) and in the end, functional return to the patient's pre-injury status (between 6 – 9 months). Patients are reviewed at regular intervals in both clinic and physiotherapy to ensure smooth progress post-operatively and to identify problems early should these arise.



Anterior cruciate ligament injury

Overall, ACL reconstructive surgery is an excellent option following injury with large studies reporting success rates between 86 – 97%. The patient plays a crucial role and emphasis on complying strictly to post-operative do's and don'ts is just as important as the operation to reconstruct the ACL in my opinion. A good patient, having a good operation, done by a good surgeon for good reasons gives a good outcome. Thank you.

Dr Gandhi Nathan Solayar

MD Anderson Cancer Center helps Indonesia reduce disease burden

The centre's specialists will support the country in its fight against cancer

The world-renowned oncology institution at the University of Texas has launched a collaboration with the Indonesian Ministry of Health to share best practices in cancer education, prevention, and treatment.

MD Anderson will assist the country develop national cancer control guidelines and strategies while supporting training and capacity building through the telementoring system Project ECHO, which uses videoconferencing technology to connect primary care providers in rural and underserved areas with specialist doctors.

This will allow MD Anderson experts to collaborate with the 144 government hospitals scattered across Indonesia's 17,000 islands, with Dharmais National Cancer Center in West Jakarta supervising cancer services at the country's hospitals. Indonesia is the largest archipelago in the world, spanning some 5,000 kilometres from east to west.

"MD Anderson is committed to addressing cancer disparities and inequities worldwide in pursuit of our mission through strong local and global alliances and innovative collaborations, including those with WHO, Mozambique and now Indonesia," Dr Welela Tereffe, chief medical executive at MD Anderson, said in a press release.

Cancer is the fourth leading cause of death in the country, according to the World Health Organization (WHO), with most cases diagnosed at an advanced stage because of poor education on prevention, an insufficient number of oncologists, and geographical challenges.

The agreement is part of MD Anderson's efforts to reduce the burden of cancer worldwide.

"It is vital for us to build relationships in countries where we can work collaboratively to improve the quality of cancer care and to lessen the impact of cancer on individuals and families worldwide," said Dr Peter WT Pisters, president of MD Anderson. "MD Anderson's mission to end cancer has no borders, and we know that working closely with others who share our goal will bring us closer to Making Cancer History®."

Alcohol might increase risk of stomach cancer in East Asians

A genetic mutation makes it hard to digest alcohol

East Asians who struggle to tolerate alcohol may face a higher risk of a hard-to-treat stomach cancer if they consume alcoholic drinks, according to a new study led by researchers in Japan.

The findings are based on genomic analysis of cells from almost 1,500 patients with stomach cancer in Japan, China, South Korea, Singapore, and the US. East Asians are more likely to have a genetic mutation making it harder to metabolise (or digest) alcohol than people of other ancestries. The scientists identified a link between this mutation and the risk of diffuse stomach cancer, a rare but aggressive form of the malignancy.

"What we can say at this point is that people with low alcohol tolerance are advised to avoid drinking excessively," said Dr Tatsuhiro Shibata, lead author and researcher at the National Cancer Center Research Institute in Japan, according to *The Japan Times*.

He added that more research was needed to gauge the risk in people without cancer since the study focused on patients with the disease.

The researchers also identified 75 genes that are believed to contribute to cancer growth which can now be tested as potential targets for new drugs.

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Viral DNA in humans can be harnessed against cancer

It can be used as a target for the immune system to eliminate cancer cells

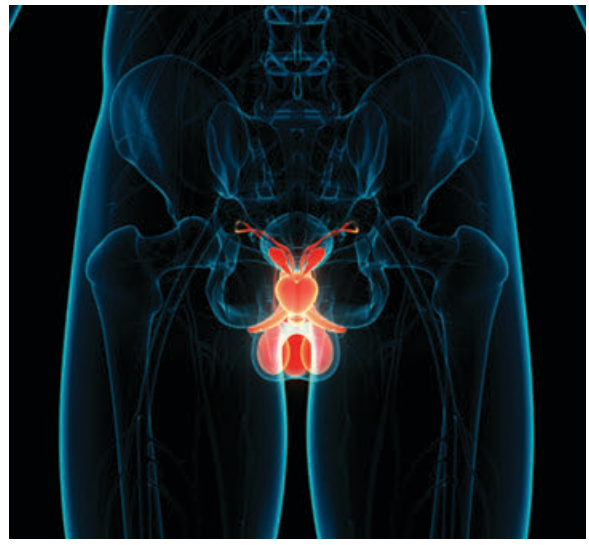
Bits of viruses that sit dormant in our DNA may be reactivated to help the immune system get rid of cancer cells, a new study published in *Nature* has concluded.

Researchers at the Francis Crick Institute aimed to understand differences in immunotherapy efficacy against lung cancer by analysing immune cells activity in mice with the malignancy as well as in tumour samples from patients with the disease. They found that B cells support immune response to lung cancer by using antibodies to recognise proteins produced by ancient viral DNA that is inactive in most healthy tissues but can be woken up by cancers.

"Our work highlights an important role for antibody responses and also how these responses might be boosted with immunotherapy," Dr Katey Enfield, study author and postdoctoral training fellow at the Crick, said in a press release. "Our study also helps to explain the mechanism by which the presence of B cells in tumours improves patient response to immunotherapy."

Checkpoint inhibitors are a type of immunotherapy that may help some patients with lung cancer live longer by acting on the proteins that stop the immune system from attacking cancer cells. However, many patients don't respond to the treatment and researchers are trying to figure out why this is the case and how more people could benefit from the revolutionary therapy.

"This work opens up a number of new opportunities for improving patient responses to immunotherapy, a crucial step in helping more people survive lung cancer," Dr Julian Downward, Associate Research Director and head of the Oncogene Biology Laboratory at the Crick, said in the press release. "We now know that areas of B cell expansion can help us predict a positive response to checkpoint inhibition and with more research, we could work to boost B cell activity in a targeted way for the patients less likely to respond."



Monitoring as good as treatment for localised prostate cancer

Patients have the same survival chances without treatment side effects

Men with early-stage prostate cancer who were just monitored survived as long as those who received radiotherapy or surgery, according to a large study presented at the European Association of Urology Congress.

Researchers from the Universities of Oxford and Bristol followed 1,643 patients with prostate cancer who received active monitoring (involving regular tests to check on the cancer), prostate surgery, or radiotherapy for an average of 15 years. Their analysis showed that about 97 percent of the men survived 15 years after diagnosis regardless of the care they received.

Though participants on active monitoring were more likely to see their cancer progress or spread than those who received treatment, they reported a quality of life (physical and mental health) similar to the others. For those under treatment, however, the side effects on urinary and sexual functions lasted for up to 12 years, more than previously thought. Surgery and radiotherapy for prostate cancer can also lead to erectile dysfunction, incontinence, or difficulty passing urine.

The research demonstrates treatment decisions for low and intermediate risk localised prostate cancer shouldn't be rushed, according to lead investigator Professor Freddie Hamdy from the Nuffield Department of Surgical Sciences at Oxford.

"It's clear that, unlike many other cancers, a diagnosis of prostate cancer should not be a cause for panic or rushed decision making," he said in a press release. "Patients and clinicians can and should take their time to weigh up the benefits and possible harms of different treatments in the knowledge that this will not adversely affect their survival."

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India widens access to tuberculosis drug

Rejection of patent extension is good news for patients

TB is the top global killer among infectious diseases, and the Indian government plans to eliminate it by 2025.

Health authorities in India have rejected Johnson & Jonhson's application to extend the patent on the essential tuberculosis (TB) medication bedaquiline, paving the way for the production of cheaper generic versions that will make treatment more accessible and financially viable.

Bedaquiline is a tablet that plays an important therapeutic role against TB as it can be used to treat those cases that have proved resistant to other medications. Its patent will expire in July, despite Johnson & Johnson's efforts to extend it until 2027.

The NGO Médecins Sans Frontières (MSF) hailed the patent rejection as a crucial step towards easing access to the lifesaving drug and reducing the burden of the disease.

"This is a seminal decision taken by one of the countries in the world most affected by TB. It is high time that we have alternate manufacturers supplying bedaquiline at lower prices, especially as the scale-up of the all-oral, shorter, six-month drug-resistant TB regimens by TB programmes is being planned around the world," Leena Menghaney, Global IP Advisor, MSF Access Campaign, said in a press release.

In 2021, about 1.4 million people died of TB, with about 82 percent occurring in the WHO African and Southeast Asia regions, according to the Global Tuberculosis Report 2022. India alone accounted for 36 percent of the deaths in those regions.

The case to stop the patent renewal was started by two patients with TB to help more people avoid the potentially debilitating side effects from other TB treatments. "My fellow TB survivor Phumeza Tisile from South Africa and I filed a patent challenge against J&J in 2019, because we wanted to ensure that the safer, oral and more efficacious drug bedaquiline was available to all people who need it and to make sure that no one ever has to endure side effects like we did, such as permanent hearing loss due to toxic injected drugs," Nandita Venkatesan, one of the petitioners, said in a press release.

Pharmaceutical companies in the country have already started working on generic versions of the drug, and one of them should be available in August, according to the *Guardian*, which quotes some estimates suggesting the monthly cost could be cut by about 80 percent, from US$46 per patient to US$8.

TB is the top global killer among infectious diseases, and the Indian government plans to eliminate it by 2025, beating the target date set by the WHO End TB Strategy that aims to reduce global incidence by 80 percent and deaths by 90 percent by 2030.

To achieve the goal, the Indian government has undertaken a number of initiatives, such as enhanced awareness about TB, especially in villages, stepped up preventive treatment across the country, a new programme to support family caregivers with tools for counselling, and capacity building, while also providing cash incentives to patients in order to improve nutrition. Undernutrition is a key risk factor for the condition and caused 2.2 million new TB cases in 2021, according to the WHO.

Wearable technology could interfere with heart devices

Experts call for more research to reduce potential risks for patients

Fitness wearables are often hailed as revolutionary for their ability to track people's health in real time and over long stretches, but one concern is that some could also disrupt cardiac implantable electronic devices (CIED), as shown by a recent study published in *Heart Rhythm*.

Perhaps the most popular fitness wearable globally, smart watches have generated the highest level of electrical interference with the functioning of lifesaving CIEDs.

"Our results indicate that these consumer electronic devices could interfere in patients with CIEDs," wrote the study authors. "The present findings do not recommend the use of these devices in this population due to potential interference."

CIEDs include pacemakers and implantable cardioverter defibrillators (ICD) and mostly use electric pulses to keep the heart beat normal in people with conditions affecting heart rhythm. Wearables based on bioimpedance sensing technology, like smart watches and rings, also make use of small electric currents to measure many different parameters like body fat, muscle mass, blood pressure, breathing, and heart rates.

Lead researcher Dr Benjamin Sanchez of the University of Utah told the *Guardian* the findings didn't translate into clear risks to patients wearing the tracking devices, although the wearables could lead to pacing interruptions or shocks to the heart, with more research needed to gauge the actual risk.

For instance, pacemakers send electrical impulses to the heart when it's beating too slowly, but their electrical currents may send the wrong input that it's beating normally, disrupting the ability of the devices to fix the rhythm. "We have patients who depend on pacemakers to live," Dr Benjamin Steinberg, study author and associate professor of medicine at Utah University, said in a press release. "If the pacemaker gets confused by interference, it could stop working during the duration that it is confused. If that interference is for a prolonged time, the patient could pass out or worse."

Professor James Leiper, associate medical director at the British Heart Foundation told the *Guardian*: "As more people wear smartwatches and other devices with body-monitoring technology, it is important to understand any potential interference they may cause with lifesaving medical devices like ICDs and pacemakers."

Over the last years, wearables have been gaining popularity among fitness buffs to improve health while also being tested as a diagnostic tool by researchers.

A study published last year, for example, showed that smartwatches could help diagnose a weak heart pump (a form of heart disease) outside of the clinical setting by allowing people to record their electrocardiogram (ECG) data wherever they were and upload them to an AI-powered system to process.

"Currently, we diagnose ventricular dysfunction — a weak heart pump — through an echocardiogram, CT scan or an MRI, but these are expensive, time consuming and at times inaccessible. The ability to diagnose a weak heart pump remotely, from an ECG that a person records using a consumer device, such as a smartwatch, allows a timely identification of this potentially life-threatening disease at massive scale," Dr Paul Friedman, chair of the Department of Cardiovascular Medicine at the Mayo Clinic and senior author of the study, said in a press release.

Pacemakers send electrical impulses to the heart when it's beating too slowly, but their electrical currents may send the wrong input that it's beating normally

Antiviral drug may prevent long COVID

Pill is already prescribed to reduce chances of developing severe COVID

The drug Paxlovid used to treat early COVID-19 infection has shown promise in cutting the risk for the long-term health problems associated with it, according to a study published in *JAMA Internal Medicine*.

Commonly known as long COVID, the poorly understood condition can lead to hundreds of different symptoms including extreme fatigue, shortness of breath, and cognitive dysfunction in 10 to 20 percent of those infected with COVID-19. These can be so debilitating that people struggle to work or go about their daily business.

Researchers sifted through the data of 246,076 people with COVID-19 who either had not been prescribed Paxlovid (or other drugs) or had received it within five days of testing positive for the virus, as recommended by the guidelines. The analysis suggested that Paxlovid cut the risk of developing long COVID by 26 percent over the following six months while also reducing the risk of death by 47 percent and hospitalisation by 24 percent.

"Our study suggests Paxlovid is an effective weapon against COVID-19's potential for debilitating and life-threatening effects on the body."

"Long COVID-19 has become an urgent public health problem that poses wide-ranging concerns — from decreased life expectancy rates, to burdened health-care and employment systems, to weakened economies on local levels, in the U.S. and abroad," senior author Dr Ziyad Al-Aly, a Washington University clinical epidemiologist and an expert in the long-term effects of COVID-19, said in a press release. "Our study suggests Paxlovid is an effective weapon against COVID-19's potential for debilitating and life-threatening effects on the body."

Such positive effects have been observed in those who are both unvaccinated and vaccinated against COVID-19. The same goes for people who recovered from COVID-19 and were subsequently reinfected one or more times.

Paxlovid has been approved for mild or moderate COVID-19 cases that are at risk of progressing to a more severe stage, such as people older than 49 or those older than 11 with serious conditions like heart, kidney, and lung diseases, as well as diabetes and cancer. It works by preventing the virus from replicating, thus limiting its presence in the body.

"All hypotheses of long COVID point to SARS-CoV-2 as the initiating agent," Dr Al-Aly said. "Our research reinforces such theories. It stands to reason that an antiviral drug — one that suppresses viral replication — may reduce the risk of long COVID.

"This gives me hope that antivirals may hold the key to preventing long COVID-19," he added. "More research is needed to determine whether antiviral drugs other than Paxlovid are also effective at preventing long COVID."

Though the prognosis of patients with long COVID has significantly improved since the pandemic broke out, with most patients able to recover after undergoing rehab programmes for three to 12 months, there's still a minority who will need more time to recover and, if other similar post-viral conditions like chronic fatigue syndrome are any indication, some might have to struggle with long COVID for years without a definitive cure on the horizon.

Air pollution makes almost entire earth unsafe

New research maps scale of the public health problem

Only 0.18 percent of the land on the planet and 0.001 percent of the global population can boast levels of particulate matter (PM2.5), or particle pollution, below the safety standards set by the World Health Organization, according to a study at Monash University claiming to be the world's first on the issue.

Researchers used satellite-based meteorological and air pollution detectors and machine learning methods to quantify PM2.5 levels worldwide, providing an outline of how concentrations have changed in the last decades. The analysis found that while daily levels have dropped in Europe and North America in the two decades to 2019, they've increased in Southern Asia, Australia, New Zealand, Latin America, and the Caribbean.

In explaining the importance of the study, its author Yuming Guo, professor at the Monash University School of Public Health and Preventive Medicine, said "it provides a deep understanding of the current state of outdoor air pollution and its impacts on human health. With this information, policymakers, public health officials, and researchers can better assess the short-term and long-term health effects of air pollution and develop air pollution mitigation strategies," according to a press release.

It also showed that by 2019 more than 70 percent of days still had PM2.5 concentrations higher than 15 μg/m³, the safe limit set by the WHO but a threshold that is still arguable, said Professor Guo. The recording was even worse in southern and eastern Asia, with more than 90 percent of days having concentrations higher than the safe limit.

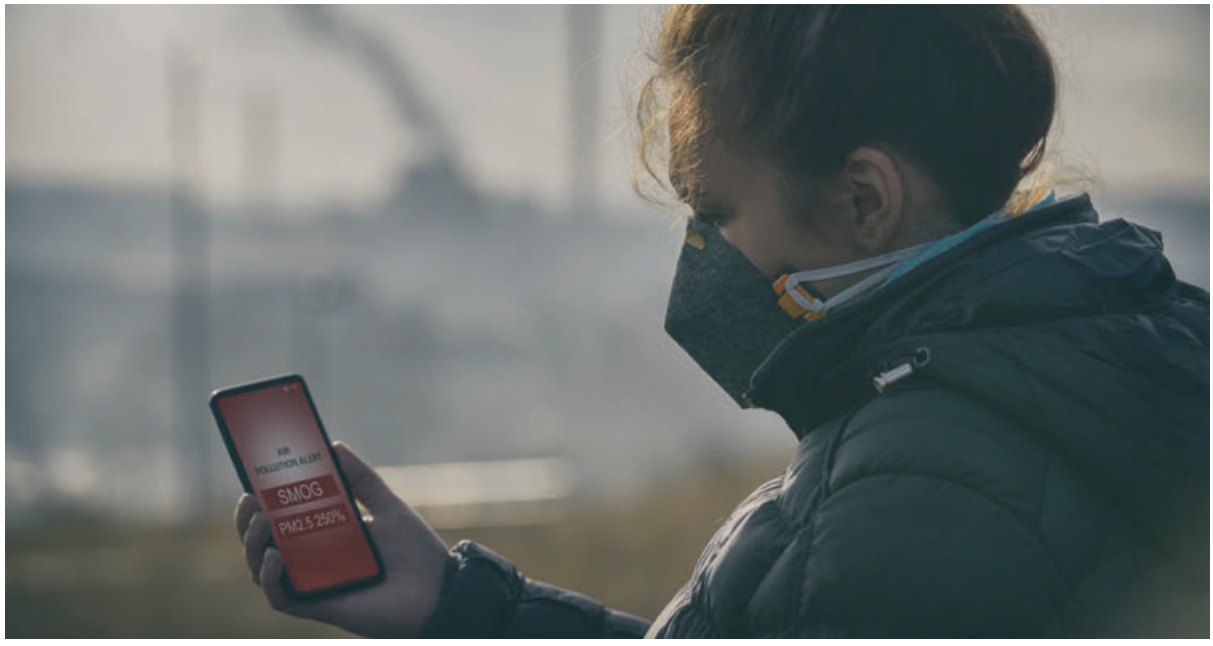
Globally, the yearly PM2.5 average from 2000 to 2019 was 32.8 μg/m³, or more than double the WHO safety recommendation. The lowest concentrations were recorded in Australia and New Zealand (8.5 μg/m³,), other regions in Oceania (12.6 μg/m³), and southern America (15.6 μg/m³).

Unsafe PM2.5 levels followed seasonal patterns, such as "Northeast China and North India during their winter months (December, January, and February), whereas eastern areas in northern America had high PM2.5 in its summer months (June, July, and August)," Professor Guo said in a press release. "We also recorded relatively high PM2.5 air pollution in August and September in South America and from June to September in sub-Saharan Africa."

Air pollution has dramatic detrimental effects on human health, with outdoor particulate matter playing a role in the development of common deadly conditions including strokes, heart disease, lung cancer, and acute and chronic respiratory diseases.

"Additionally, 2.4 billion people are exposed to dangerous levels of household air pollution, while using polluting open fires or simple stoves for cooking fuelled by kerosene, biomass (wood, animal dung and crop waste) and coal," according to the WHO, which estimates outdoor and household air pollution is associated with about seven million premature deaths every year.

Outdoor and household air pollution is associated with about seven million premature deaths every year.



KL Wellness City promises total care in the heart of Kuala Lumpur

CREDIT: KL WELLNESS CITY

KL Wellness City is the first healthcare project in Southeast Asia that aims to offer comprehensive medical care of the highest quality while fostering a healthy lifestyle that could prevent several common diseases.

Currently in development in the easy-to-reach area of Bukit Jalil in Kuala Lumpur, the vision behind KL Wellness City involves the creation of an integrated and interconnected health ecosystem where people can pursue their wellness goals while having a host of facilities at their disposal, including a high-tech hospital, medical suites, serviced apartments, fitness and recreational areas as well as restaurants and a shopping mall, explained KL Wellness City managing director Dato' Dr Colin Lee.

Uniqueness of KL Wellness City

Central to the whole city is The International Tertiary Hospital, which will be equipped with world-class medical technology and staffed by a workforce well versed in all the medical specialities and sub-specialities. This means the hospital will provide quaternary care services, or some of the most advanced treatments that are only available in a few highly specialised centres, such as bone marrow transplantation and stem cell-based treatment.

The healthcare team at KL Wellness City will also have at its disposal the most advanced medical equipment on the market. Dr Colin stated that the staggering amount of RM250 million is allocated for equipment procurement, an investment that will give specialists the chance to make use of advanced technology in various areas including genomics and precision medicine.

For example, to illustrate the vision of the cutting-edge technologies, one cutting-edge procedure that will be available at the hospital is the saviour sibling programme, which involves helping parents conceive a healthy child through in-vitro fertilisation to use the newborn's stem cells from the umbilical cord to cure an older sibling of life-threatening conditions such as

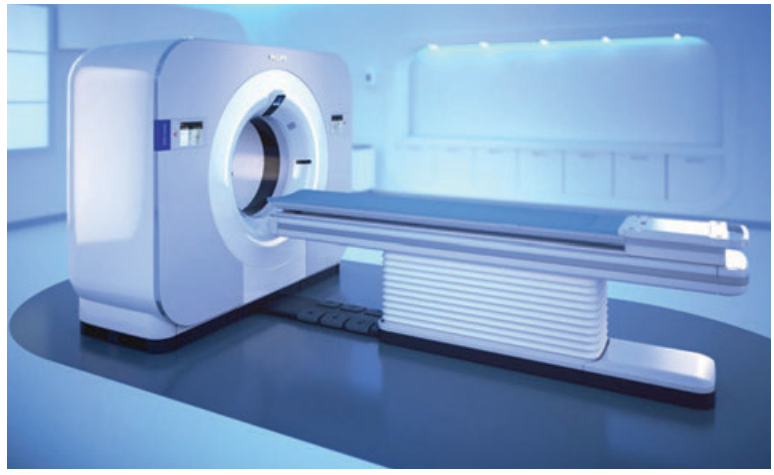
leukaemia and beta-thalassaemia. This approach can ensure that the newborn doesn't carry the same genetic condition affecting their older sibling while having cells that are an exact match of the sibling's ones and therefore won't be rejected after transplantation.

The International Tertiary Hospital will feature a comprehensive array of advanced medical equipment based on multi-disciplinary specialities and sub-specialities, ensuring high-quality medical care. Hybrid operating rooms incorporating procedures such as magnetic resonance imaging (MRI) and coronary angiogram will be one of the exceptional features of the hospital. Operating rooms with hybrid features are more advantageous in terms of resource utilisation, integrating both surgical equipment and medical imaging in one multifunctional room, thus reducing workspace size and greatly enhancing surgical efficiency leading to improved patient safety.

The hospital's cardiology department will also provide patients with bi-plane and single plane cath lab where diagnostic imaging of the heart and arteries can be conducted. Moreover, the hospital will also have 3 Tesla MRI machines that operate at twice the normal strength compared to standard MRI with 1.5 Tesla. This enables production of high quality and detailed images that facilitate a more accurate diagnosis. The hospital also seeks to change how computed topography (CT) scan is regularly conducted by procuring a 512- slice CT scan that allows Cardiac Imaging Analysis in 3D. This enables cardiologists to determine the strength of the heartbeat and to diagnose artery conditions early, preventing more serious heart complications.

CREDIT: KL WELLNESS CITY

Dr Colin Lee



512-slice CT scan

Similarly, innovation is also available outside the operating theatre at KL Wellness City. The International Tertiary Hospital plans to roll out 5G-assisted smart ambulances as part of their emergency response. Seamless connectivity using 5G technology enables patient monitoring systems that can transmit patient data to the hospital in real time. This will enable doctors to correctly brief paramedics in providing immediate care while en route to the hospital. Concurrently, emergency department physicians can make the required preparations based on the most recent ambulance data to manage the patient upon arrival, facilitating a smooth transition from ambulance care to hospital care and enhancing patient outcome.

The hospital will be connected to The Nobel Healthcare Park, an ecosystem of medical, wellness, and business suites where specialists can set up their practice and health travellers can find convenient wellness suites to rent while recovering and receiving outpatient care like physiotherapy and wound dressing management.

Such interconnected ecosystem will provide much more convenient medical services than standard healthcare providers because patients can benefit from both the hospital in-house doctors who are available around the clock and a great variety of specialists who can easily communicate to each other. In this way, patients can be quickly referred to other experts for an additional consultation in suites that are at walking distance from the hospital.

On top of that, KL Wellness City will also provide all the related ancillary and support medical services and non-western-based medicine such as complementary, alternative, and traditional medicine from various countries and cultures. These alternative approaches will be centralised in one location and accessible to patients and the public seeking rejuvenation and rehabilitation therapy.

CREDIT: KL WELLNESS CITY

Wellness care redefined

Dr Colin explained that in ageing population, wellness measures are essential to live long and healthy lives because they can enhance the immune system and lower the risk for multiple non-communicable diseases like cancer, diabetes, and heart problems. KL Wellness City will help people achieve this goal by integrating medical care, wellness and fitness into one comprehensive space.

Rejuvenation therapy will be a key service available at the city. In particular, it will suit the needs of the elderly from both Malaysia and overseas. "We can offer people in their 50s, 60s and even 70s a 3-month rejuvenation package that includes medical check-ups, health screening, and mobility-enhancing interventions such as Tai Chi and rehabilitation exercises that strengthen peripheral muscles and improve balance. By the time the therapy is completed, the 70-year-olds will feel like they are 60."

The concept of KL Wellness City revolves around the idea of "Wellness Redefined" because it comprises a serene environment, modern infrastructure and comprehensive, community-friendly setting that will promote wellness among patients while preserving the mental health and well-being of healthcare providers.

The go-to destination for medical tourists

With more than 20 years of experience in the healthcare tourism industry and regular interaction with patients from other countries, Dr Colin believes that a comprehensive medical facility with adequate accommodation is necessary to fulfil the demands of the growing number of healthcare tourists visiting Malaysia. This led to the conception of KL Wellness City as a one-stop destination for international patients.

Malaysia has been the region's most popular destination for healthcare tourism for four consecutive years before the 2020 COVID-19 pandemic, explained Dr Colin. Most patients come from Indonesia, China, Singapore, and Australia. Indonesians are already the biggest group of medical tourists in Malaysia and are likely to make up an even larger portion of them in the future.

Indeed, the World Bank predicts Indonesia to be the fourth largest economy by 2040, with a bigger population than the US and a larger number of people able to spend their disposable income in quality healthcare. But since the country's healthcare system is still unable to meet the needs of this growing population, many patients seek care abroad to avoid long waiting times.

Dr Colin pointed out that for Indonesians getting treatment in Malaysia is more cost-effective than travelling to Singapore, where healthcare travellers usually pay more than four times what they are charged in Malaysia for the same medical treatment and specialist consultation. As a result, Dr Colin believes the number of Indonesians, and medical tourists from other countries, seeking care in Malaysia will continue to increase in the coming years.

On average, healthcare travellers stay in the country between five to eight days. Most of them prefer to find an accommodation near the facility where they are being treated. They also seldom come alone and are more likely to bring family members with them. "This is where our wellness suites come into play, with patients and their companions having a place to reside between undergoing treatment and travelling around Kuala Lumpur," said Dr Colin, adding that KL Wellness City will bolster Malaysia's standing as a premier destination for international healthcare tourism.

Indeed, the location of KL Wellness City is strategic and conveniently accessible for local and international patients alike as it is in close proximity to seven major highways that connect the economic capital of Kuala Lumpur with the industrialised region of the Klang Valley. It is also situated between two major airports: Subang Airport and Kuala Lumpur International Airport (KLIA), allowing air travellers to reach it in less than an hour.

KL Wellness City will also be an appealing destination for retirees. Indeed, it will offer well-designed retirement homes that are close to the International Tertiary Hospital, giving retirees access to about 3,000 healthcare workers who can provide standard and specialist medical services that will help them stay healthy and easily support them in case of an emergency.

This is just one example of how KL Wellness City will facilitate the delivery of healthcare services through an organised and structured roster of healthcare professionals, making it a unique healthcare project since most hospitals are stand-alone establishments without additional facilities like medical and wellness suites or shopping malls.

North Wing, The Nobel Healthcare Park

Wellness Wing

Easy-to-access space that mitigates its impact on the environment

The city is divided into eight sections that are interconnected and easily accessible to the physically disabled. It also provides weatherproof accessibility so that people can move freely and with minimal assistance.

The city will also be constructed in compliance with green building parameters to reduce the facility's carbon footprint. This means that all its buildings will be constructed with excellent natural lighting and ventilation that will reduce the need for artificial lighting and air conditioning, lowering energy use.

A research hub

Beyond offering high-quality and holistic care, KL Wellness City also aims to be a research and development hub. As a clinician with extensive experience in medical research, Dr Colin knows healthcare innovation can only be achieved through constant research studies. And that's the reason why the new city will house a research office where healthcare professionals will conduct clinical studies that could benefit patients with hard-to-treat conditions by providing them with experimental treatments.

The research projects will involve clinical studies conducted at the hospital, the facility that will provide researchers with lots of different clinical cases to investigate. The city will also create partnerships with universities to conduct lab-based research.

These research efforts will eventually benefit patients because they will tailor medical interventions to the specific needs of the patients treated at the hospital as research findings in far-away countries may not apply to patients of different ethnicity.

Dr Colin added that the world is moving into an era of precision medicine where every individual is considered to have specific traits that require an equally specific medical intervention. For instance, two patients may have similar blood pressure levels but they may respond differently to the same drug, a scenario that can be predicted by precision medicine to improve treatment by selecting the most effective medication for each patient. The team at KL Wellness City aims to turn the promise of precision medicine into a clinical reality.

KL Wellness City is open to explore local and foreign partnerships and ventures with regards to establishing unique medical facilities within the 26.49 acres township.

www.klwellnesscity.com
enquiry@klwellnesscity.com

Quantum Healthcare branches out in Malaysia

Medical mall in Melaka will house specialist centre

Singapore-based Quantum Healthcare has signed an agreement with Hatten Land to open up a specialist outpatient medical centre at the latter's Imperio Mall in Melaka.

The mall will house practices for the company's medical specialists and aesthetic doctors as well as food and beverage brands and offices, with the centre slated for opening in the second half of 2023 and aiming to treat both local and international patients.

"Melaka is one of several healthcare hubs in Malaysia and the federal government is stepping up efforts to further promote the country as one of the leading medical tourism markets in Asia. Besides Malaysians, we want Quantum Specialist Centre to also target Singaporeans and Indonesians. By our estimates, this centre can potentially cater to a catchment area of at least 24 million people – from Singapore, parts of Malaysia and Medan, the capital of North Sumatra in Indonesia," Quantum Healthcare's CEO Thomas Tan told *The Edge.*

A UNESCO world heritage site, Melaka is a popular destination for healthcare travellers seeking treatment in Malaysia. Real estate developer Hatten Land aims to capitalise on the opportunities in the healthcare and medical tourism sectors by transforming Imperio into a medical mall.

"Building a brand-new medical hospital requires significant investment and time, and with the continued push towards telemedicine and outpatient procedures, retail malls are an increasingly attractive location for medical and healthcare services, offering convenience for patients and service providers," Dato' Colin Tan, executive chairman and managing director of Hatten Land, told *The Edge.*

Malaysia boosting its flagship medical tourism hospitals

Programme will support leading providers in improving their medical tourism services

The Southeast Asian nation popular among healthcare travellers has recently launched its Flagship Medical Tourism Hospital Programme, shortlisting four finalists — National Heart Institute, Island Hospital, Mahkota Medical Centre, and Subang Jaya Medical Centre.

The project aims to further boost the country's credentials as a medical tourism hub for international patients from all around the world.

"Through this programme, the country's top hospitals are intensifying their commitment and endeavours to raise the bar of excellence in delivering exceptional end-to-end services to their patients, further reinforcing Malaysia's position as a safe and trusted destination for healthcare," according to a statement from Malaysia Healthcare Travel Council (MHTC), the government agency tasked with promoting the sector abroad.

The MHTC added that the finalists were selected through a rigorous process involving data analysis and on-site assessments. The next step of the programme will see the hospitals being reviewed against best practices in medical care, service quality, and international branding over a period of three years.

The healthcare providers will also benefit from incentives that will facilitate improvements in their medical tourism standing.

"To this end, I am pleased to announce the provision of a Special Investment Tax Allowance (ITA) for the Flagship Medical Tourism Hospital Programme finalists, which will enable our shortlisted hospitals with the resources to make qualifying capital expenditures to support their growth plans during the acceleration period from 2023 to 2025," Malaysian Health Minister Dr Zaliha Mustafa said in the statement.

"This special ITA will include technology investments aimed at driving digital transformation in healthcare, in line with Malaysia's IR4.0 aspiration," she added.

Emirati hospital joins forces with leading Indian provider

The partnership will facilitate clinical collaboration and advances

RAK Hospital has reached an agreement with India-based Apollo Hospitals Group to collaborate on training and telemedicine services as well as academics and laboratory referrals in order to make medical advances through cutting-edge technologies.

The Executive Director of RAK Hospital, Dr Raza Siddiqui, said that international partnerships were crucial for providers to expand their clinical capacity, according to UAE News 247. He added that the collaboration with Apollo would benefit Emirati patients as they would be able to get a consultation with Apollo's medical experts without the need to travel overseas.

Dr K. Hariprasad, Group President of Apollo Hospitals, said that the scope of such collaboration would also allow Apollo's super speciality team to provide care at RAK Hospital.

RAK Hospital is a private provider under Arabian Healthcare Group and just one hour away from Dubai International Airport. It provides treatment for a large number of overseas patients who seek care in the United Arab Emirates (UAE).

Founded in 1983 in Chennai, Apollo is one of the largest hospital groups in Asia, with more than 8,500 beds in 50 hospitals, 100 primary care and diagnostic clinics, and 100 telemedicine units in nine countries.

Medical tourism in South Korea on the rise

The government aims for half a million medical tourists by 2026

The number of international patients seeking care in South Korea is rebounding nearly to pre-pandemic levels, according to recent data by the country's Ministry of Health and Welfare, reports *Koreabizwire*.

About 248,000 non-resident foreigners were treated in Korea last year, marking a 70 percent increase from 2021 and roughly 50 percent of the total reported in 2019 before the COVID-19 pandemic broke out. Americans comprised the largest national group, reaching 17.8 percent of patients, while Chinese individuals made up 17.7 percent, followed by the Japanese at 8.8 percent, Thai at 8.2 percent, and Vietnamese at 5.9 percent.

The biggest surge was seen among Japanese patients whose numbers increased more than sixfold compared to the previous year mostly due to the popularity of plastic surgery and skincare services.

Though the number of international patients rose in all medical specialities, dermatology and plastic surgery recorded the highest surges at 201 and 177.7 percent, respectively. However, the most sought-after services were integrated internal medicine treatments, which include general internal medicine, infectious diseases, and gastroenterology.

The South Korea government plans to attract half a million medical tourists from abroad by 2026 through the Second Comprehensive Plan to Support Overseas Expansion of Medical Services and Attraction of International Patients, which will empower local authorities to pursue the goal while supporting agencies working with international patients. It will also crack down on illegal brokers to improve care quality and safety.

Paediatric Orthopaedic

The Paediatric Orthopaedic Surgery Centre comprises a team of orthopaedic consultants, physiotherapists and rehabilitation services. The team works closely to provide paediatric patients with services such as Traumatology, Paediatric Orthopaedic, Children Fractures and Joint Injuries, Children Deformities (congenital and acquired) and Growth-Related Orthopaedic Disorders.

List of Services:

Splinting

Splinting plays an important role in acute hand injuries to assist in correct healing and alignment, such as following a wrist fracture. At Avisena, we have a range of splinting supports to best assist injury healing.

Congenital Talipes Equinovarus (CTEV)

The goal of Avisena CTEV clinic is to enhance the appearance and function of a child's foot before he or she learns to walk in order to avoid long-term impairments. It offers good long-term outcome.

Fracture Repair Surgery

A variety of procedures are applied depending on the type, location, and degree of the fracture to make sure the bones restore and are stable enough to keep functioning. This could entail immobilisation as well as the placement of pins, plates, screws and wires.

Frequently Asked Questions

Dr Mohd Nawar Ariffin
Consultant Orthopaedic, Traumatology & Paediatric Orthopaedic Surgeon

Q: How do I differentiate a simple sprain from a broken bone?
A: In both sprain and a broken bone, there is pain, swelling and difficulty in moving the injured area in normal manner.

Q: What are the symptoms accompanied with a broken bone?
A:
- Deformity of the bone
- Difficulty placing weight on the area
- Persistent bruising or redness

Q: What causes the fractures?
A: It happens when the bone has more force that it can absorb. Bones are weakest when they are twisted. Falls, trauma or a direct hit to the body can cause bones to break.

Q: What are the risk factors?
A:
- Sports injuries
- Poor nutrition
- Falls from heights
- Accidents
- Obesity
- Low calcium diet

Q: What are the steps to reduce the risk of getting fractures?
A:
- Put on protective gears when taking part in outdoor activities
- Limit carbonated beverages and soda for healthy bones.
- Having a healthy diet
- Encourage your kids to be active and to take part in a variety of sports

Q: How are fractures treated in children?
A:
- Splint or cast
- Medicine
- Traction
- Surgery

Dr Fazrina Ayu Abdul Sani
Consultant Orthopaedic & Paediatric Orthopaedic Surgeon

For more information about Avisena paediatric orthopaedic services, kindly contact us at +603-5515 1888.
The paediatric orthopaedic clinic is located on the 11th floor at Avisena Women's & Children's Specialist Hospital.

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WOMEN'S & CHILDREN'S SPECIALIST HOSPITAL

Silent but deadly: Osteoporosis affects millions who don't know they have it

But health screening and lifestyle changes can prevent bone deterioration

Osteoporosis is a long-term chronic disease that causes bones to become weak and brittle, making them fragile and easy to break. Over time, patients experience a progressive loss of bone mineral density, diminishing bone tissue, and compromised bone strength. Affecting more than 200 million people worldwide, osteoporosis is widely considered a "silent disease" as it develops slowly over many years and its symptoms are usually only seen when a traumatic event, such as a fall or impact or even a cough, causes a bone to break or fracture.

"When you have decreased bone mass, the bone strength becomes less. This will cause bones to break; only then does the symptom manifest itself," Dato' Dr Badrul Shah Badaruddin, an orthopaedic surgeon at the ALTY Orthopaedic Hospital in Malaysia, told *Global Health Asia-Pacific.*

Bone injuries due to osteoporosis can occur even during simple routine activities.

Bone injuries due to osteoporosis can occur even during simple routine activities. "When the bone is the pillar that carries our weight, it is prone to damage in the event of weakened bone integrity. Even a trivial fall can risk producing fracture," he explained.

Fractures are generally attributed to osteoporosis, ranging from hairline cracks to serious breaking of the bone into multiple pieces. The fracture's severity depends on its location, degree of displacement, and surrounding soft tissue damage. Symptoms of a fracture can include pain, swelling, bruising, and difficulty using the affected limb or joint.

Hormonal imbalance can also increase risks

Osteoporosis is commonly linked to a deficiency in two hormones, testosterone and oestrogen, in both males and females. Low levels, especially among women experiencing post-menopause, will cause low vitamin D activation and calcium absorption. "These hormones function in regulating vitamin D and calcium distribution in the bones. Both vitamin D and calcium are essential nutrients in maintaining bone health," Dr Badrul said, noting that low levels would "lead to reduced mineral density and bone mass which ultimately causes osteoporosis."

While women are at risk of developing osteoporosis after experiencing menopause, men are likely to develop it later due to reduced testosterone production. "There are other conditions that can cause low testosterone levels, such as infection of the hypothalamus or pituitary gland that regulates testosterone production," Dr Badrul said.

Unhealthy lifestyles also frequently increase the risk of osteoporosis. "Excessive alcohol consumption and smoking disrupt the absorption of vitamin D and calcium from the gut to the bones. High caffeine uptake will lead to loss of calcium through urine discharge due to its diuretic properties," he said. Lack of exercise can also reduce the circulation of calcium and vitamin D throughout the body, potentially weakening bones that can progress to osteoporosis.

Osteoporosis develops slowly over many years

Osteoporosis is widely considered a "silent disease".

Age correlates with weaker bones

The World Health Organization (WHO) reports that those aged 60 and above are expected to reach 2.1 billion by 2050, over double the one billion recorded in 2020. Malaysia is no exception. The World Bank recently declared that the country had reached ageing nation status since seven percent of its population had reached age 65 and above in 2020. As a result, Dr Badrul predicts the number of osteoporosis cases will rise compared to a decade ago. "The lifespan of the population continues to increase and will correlate with rising prevalence of osteoporosis-related injuries, such as fractures," he said.

According to the International Osteoporosis Foundation (IOF) in Switzerland, osteoporosis causes more than 8.9 million fractures annually, with one occurring every three seconds. The global burden of bone disease has significantly increased, with the number of individuals at high risk of fracture expected to double by 2040 from 158 million in 2010. According to research published by the *Journal of Orthopaedic Surgery and Research* in 2021, the global prevalence of osteoporosis among older men and women is 12.5 percent and 35.3 percent, respectively.

Types of fractures

Dr Badrul explained that common areas such as the wrist, hip, and spine were the most prone to fracture injuries. "For example, the most frequent wrist fracture is the Colles fracture which can be caused when someone with osteoporosis tries to catch their fall by stretching out their hand," he said.

He warned that hip fractures were more severe, as any movement under these circumstances could induce pain, causing the patient to be immobile. "Prolonged bed rest can lead to bedsores, which are injuries to the skin area exposed to continuous pressure due to constantly lying down, and orthostatic pneumonia, an acute respiratory infection affecting the lungs that can lead to death," he explained. While past studies indicate that the survival rate of patients with hip fractures is less than five years, modern medicine has paved the way for easy treatment of the condition with fixation and hip replacement, enabling patients to move comfortably.

Spine fractures can similarly manifest acutely when the patient experiences pain and, in the worst-case scenario, numbness due to compression of the nerves or injuries to the spinal cord. "A patient with mild spine

A healthy diet that includes vitamin D and calcium and an active lifestyle are vital to maintaining bone health.

fractures is treated by immobilising the affected bone with a cast, bracing, and extensive pillow to allow it to heal. Surgery may sometimes be necessary to realign the bone fragments and stabilise the fracture. For example, vertebroplasty involves injecting liquid semen into the fractured vertebrae bone," Dr Badrul said. Additionally, pain management and physical therapy can be conducted post-surgery to restore strength and mobility.

Individuals with osteoporosis are also at risk of experiencing bone collapse due to weak and brittle backbones. "Elderly individuals with gradual collapsing of the bone can manifest traits such as reduced height and kyphosis, a medical condition in which the spine in the upper back region curves outward, causing a hunchback-like appearance," Dr Badrul said.

Health screening as a preventive measure

Currently, osteoporosis has no cure, and the risk varies according to gender, age, and lifestyle. Preventive measures, therefore, are key. "Health screening to determine the level of bone mineral density (BMD) and vitamin D is essential in preventing osteoporosis before it occurs," Dr Badrul emphasised. Checks for BMD are now a requirement in many health screenings due to the high prevalence of osteoporosis, as are vitamin D measurements, particularly for sedentary individuals with little exposure to the sun.

Calcium is essential to maintain bone health.

In 2021, the Bone Health Alliance Malaysia (BHAM), a collaboration between three local osteoporosis societies, estimated that 77 percent of Malaysian women with post-menopausal osteoporosis were undiagnosed due to a lack of knowledge of bone health and minimal recognition of osteoporosis as a significant health problem. Dr Badrul believes that the screening of vulnerable groups is essential to enable prompt medical intervention to reduce osteoporosis-related injuries.

"If someone who is post-menopausal is subjected to BMD screening, we can immediately recommend proper vitamin D and calcium-rich diets or provide supplements," he said. In some cases, where BMD levels are low, there is also the probability of developing osteopenia, a precursor to osteoporosis. "In this juncture, you can suggest supplements, calcium treatment, increased exercise activity to strengthen muscles, or prescribe anti-osteoporosis drugs," he added.

Besides MBD and vitamin D screening, other tests include serum calcium screening that estimates the calcium level in the blood and measures hormone levels, specifically thyroid and parathyroid hormones. Thyroid hormones regulate bone tissue replacement, while the parathyroid hormone controls the amount of calcium in the blood. Determining these levels is crucial for preventing osteoporosis and in treating possible blood calcium and hormonal disorders. "Another method that can be considered is renal profiling which assesses kidney health and may reveal some disease that can lead to the onset of osteoporosis," Dr Badrul said.

Healthy eating and exercise for healthier bones

He further stressed that a healthy diet that includes vitamin D and calcium and an active lifestyle are vital to maintaining bone health. "Regular exercise promotes the distribution of essential nutrients throughout the musculoskeletal system and improves bone mass. It should be noted there is a condition called disuse osteoporosis that can occur due to decreased use of the muscles," he elaborated.

Studies show that eating more fruits and vegetables rich in fibre, essential nutrients, and minerals can protect against osteoporosis. *The British Journal of Sports Medicine* issued a consensus statement recommending that individuals with osteoporosis should exercise, especially jogging and brisk walking to increase bone strength, balance training to reduce fall incidences, and spinal extension exercises for improved posture.

THE
RTHOPAEDIC PRACTICE
AND SURGERY

DR TAY EILEEN

UPPER LIMB ORTHOPAEDIC SURGEON

MBBS (S'pore), MMed (Ortho), MRCS (Edin), FRCS (Ortho)

Reverse Shoulder Arthroplasty

Shoulder arthritis is a common form of joint pain that affects millions of people each year. It is typically caused by wear and tear of the cartilage in the shoulder joint. Symptoms include pain, stiffness, and a decreased range of motion. In advanced arthritis, the pain can be so severe that it interferes with everyday activities such as changing clothes, lifting objects, brushing teeth, and even sleeping.

Treatment for shoulder arthritis usually involves a combination of physical therapy, medications, and lifestyle changes. Physical therapy can help with range of motion and strength, while pain medications can help reduce the pain intensity. Lifestyle changes such as avoiding activities that involve repetitive motions and modifying how certain activities are done can also help reduce pain and improve symptoms. If these measures fails to relieve pain and improve stiffness, then early medical help should be sought as surgery may be indicated.

Reverse shoulder arthroplasty is a surgical procedure used to treat shoulder pain and stiffness caused by arthritis or major shoulder injuries. It involves replacing the damaged portion of the shoulder joint with an artificial joint, designed to reduce pain and discomfort caused by arthritis or injury, and improve mobility.

Unlike a traditional shoulder arthroplasty, a reverse shoulder arthroplasty is performed by reversing the ball and socket of the shoulder joint. The ball of the joint is replaced with a metal stem and plastic socket that is fixed into the upper arm bone, and the socket of the shoulder joint is replaced with a metal ball that is attached onto the shoulder blade. This new configuration reduces strain on the muscles and tendons around the shoulder joint, making it easier to move the arm, perform everyday tasks, and relieve rotator cuff strain.

Reverse shoulder arthroplasty not only reduces pain but also improves shoulder mobility, allowing patients to perform activities that were previously difficult or painful. The procedure has low risk and long-lasting results, with a recovery period of around three months. Many patients find that the surgery significantly improves their quality of life by enhancing shoulder range of motion and providing pain relief.

For more information, please contact us or visit our website for more details.

SCAN HERE
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12 Farrer Park Station Road, #09-01 Singapore 217565

Mount Elizabeth Medical Centre
3 Mount Elizabeth, #11-16 Singapore 228510

Medications are a treatment option for osteoporosis.

Pharmaceutical interventions in treating osteoporosis

Most pharmaceutical products that treat osteoporosis focus on calcium retention to maintain bone health. Bisphosphonates are widely considered the gold standard and are administered orally or intravenously, often for three to five years; however, some patients may need to take them longer. Bisphosphonates work by binding to bone tissue and reducing the activity of osteoclasts, cells that break down and degrade bone tissue. The drug can slow down this bone loss and allow bone-forming cells called osteoblasts to function more effectively and ultimately increase bone marrow density, reducing fracture risk. However, long-term administration of bisphosphonates can cause various side effects, from mild complications such as fever, joint pain, and constipation to rare but serious conditions such as osteonecrosis where blood flow to the bone is disrupted, resulting in death of bone tissue.

Osteoporosis treatment for post-menopausal women predominantly relies on hormone replacement therapy using female hormone-mimicking drugs.

Osteoporosis treatment for post-menopausal women predominantly relies on hormone replacement therapy using female hormone-mimicking drugs. Administering oestrogen replacement therapy or selective oestrogen receptor modulators can help to prevent bone loss and improve bone density. Additionally, teriparatide, a synthetic form of the parathyroid hormone, can be injected in both men and women to enhance bone mass and lower fracture risk. Calcitonin is another common osteoporosis drug that inhibits bone resorption and preserves bone density.

Global cooperation in managing osteoporosis

As the global population ages and the prevalence of osteoporosis rises, they pose significant challenges to healthcare systems and society as a whole. In response, the WHO announced a partnership with the European Society for Clinical and Economic Aspects of Osteoporosis, Osteoarthritis and Musculoskeletal Diseases (ESCEO) to craft a strategic roadmap on bone health and ageing. The five-year agreement includes the development of public health policies and action plans to prevent fractures among the elderly and improve the quality of healthcare services in terms of accessibility and prioritisation in treating and managing osteoporosis.

"The initiative will serve to promote action on musculoskeletal conditions, in keeping with the goals of the Decade of Healthy Ageing 2020-2030 for concerted, sustained collaboration to improve the lives of the world's older population," Dr Anshu Banerjee, WHO assistant director-general ad interim, universal health coverage/life course, who signed the agreement with ESCEO, said in a press release. Dr Jean-Yves Reginster, president of ESCEO, expressed concern that the rising osteoporosis statistics would place greater burden on healthcare systems. "We believe that this important agreement with the WHO signifies recognition that action must be taken to address the fragility fracture crisis," he added.

The agreement fosters cooperation between both organisations in developing global estimates on osteoporosis and fracture, reviewing evidence-based interventions to prevent fracture, and devising an economic model for an investment case in fracture prevention and care. Both organisations are also required to provide guidance to countries in enhancing their national health information systems by integrating osteoporosis and fracture into routine data monitoring and how to utilise the data in creating programmes and policies to reduce fracture incidences among older people.

The WHO-ESCEO partnership also proposed the formation of the Bone Health Expert Working Group to advance the agreement with support from the International Osteoporosis Foundation (IOF) and the WHO Collaborating Center for Epidemiology of Musculoskeletal Health and Ageing at the University of Liège, Belgium.

Through this partnership, WHO is expected to generate a range of high-profile publications, including global health estimates on the prevalence and incidence of osteoporosis as well as fracture prevention guidelines. "We expect that the strategic research and publications within the framework of this collaboration will lay the groundwork for the prioritisation of osteoporosis and fragility fracture prevention within global healthcare policy," said IOF president Professor Cyrus Hooper who hailed the WHO-ESCEO collaboration as a game-changer for people with osteoporosis worldwide. ■

Lung Cancer In Non-Smoking People? A Silent Killer

Lung cancer is a daunting reality for millions of people across the globe, with smoking as its primary cause. However, it's essential to note that non-smokers are not immune with lung cancer cases occurring regardless of whether or not someone has ever smoked before.

Why Do Non-smokers Get Lung Cancer?
It is a common misconception that only smoking can lead to lung cancer. Non-smokers can also be affected by this disease. According to Dr Tan Chee Seng, lung cancer specialist at OncoCare Cancer Centre (Singapore), lung cancer in non-smokers is more common than we think, with 10-20% of people who were diagnosed with lung cancer being non-smokers. Genetics like a family history of lung cancer and exposure to environmental risk factors, such as second-hand smoke, air pollution, asbestos, and radon, can increase the risk of lung cancer in non-smokers. It is essential to understand that lung cancer can affect anyone, regardless of their smoking history.

Symptoms Of Lung Cancer
Be aware of the possible signs and symptoms of lung cancer, which may include persistent coughing that worsens over time, chest pain, difficulty breathing, wheezing, coughing up blood, feeling constantly fatigued, and unexplained weight loss.

Lung cancer, or lung carcinoma is often referred to as a "silent killer" because it can develop without causing noticeable symptoms in its early stages. Unfortunately, this can make it difficult to detect the disease until it has advanced to a later stage. Because the lungs lack pain-sensing nerves, lung cancer may not cause pain until it has spread to other areas of the body. Additionally, since the lungs cannot be easily seen or felt, routine screening may not detect the disease until it has become more advanced. Seek medical evaluation & treatment promptly can improve the chances of successful outcomes.

Screenings For Lung Cancer
If you are worried about lung cancer, or if you have a history of smoking or other risk factors, it is important to talk to your healthcare provider about the appropriate screening tests for you. The only recommended screening test for lung cancer is low-dose computed tomography (LDCT). During an LDCT scan, a low dose of radiation is used to create detailed images of your lungs. The scan is painless and only takes a few minutes to complete.

Cancer Treatment Options
For patients diagnosed with lung cancer, treatment options depend on the stage and severity of the disease. For early-stage lung cancer (stage 1 or stage 2), surgery may be recommended to potentially cure

cancer. Surgical procedures such as lobectomy to remove a section of the lung or pneumonectomy to remove the entire lung aim for the removal of the tumour and nearby lymph nodes. In selected patients with high risk features, additional treatment maybe required for eg chemotherapy, oral targeted therapy, immunotherapy or a combination of these. Do consult your oncologist on the individual suitability of these treatments.

In cases where surgery is not possible or if the cancer has advanced, radiation therapy or chemotherapy may be recommended. Radiation therapy uses high-energy rays to shrink or destroy tumours, while chemotherapy uses specially developed medication to prevent the cancer cells from growing and dividing, thereby eliminating it.

Targeted therapy is another form of treatment that blocks specific cancer-promoting processes through the use of drugs and is effective for patients whose cancer cells express certain specific abnormalities.

Immunotherapy is a newer form of lung cancer treatment that works by activating the body's immune system to recognise and destroy cancer cells. It may be used alone or in combination with chemotherapy, in suitable patients.

Conclusions
Lung cancer in non-smoking people is a frightening and sobering reality. It is much more common than we believe and can happen to anyone. Those with a higher risk should pay particular attention to changes in health that could potentially be related to lung cancer. As with all things health related, being proactive and seeking care from qualified professionals is a must. Don't wait until symptoms become more serious.

Dr Tay Chee Seng
MBBS (Singapore)
MRCP (United Kingdom)
ONCOCARE CANCER CENTRE (Singapore)

All Things Orthopaedic at Pantai Hospital Kuala Lumpur

Restoring Mobility with a Devoted Approach to Orthopaedic

Most abundantly, patients will feel at ease being supported in all aspects of the patient's physical, emotional, and social needs.

In today's world of modernity, reclaiming the quality of life is quintessential. Along with people's sedentary lifestyle habits, unexpected shortcomings, and the added burden of the post Covid-19 Pandemic, orthopaedic care is essential for restoring their independence in their day-to-day function. What is more, it was during the pandemic that people experienced the negative impact of isolation, confinement, and physical inactivity due to lockdowns being implemented. As a result of that, the world, for the most part, has remained sedentary. From children and adolescents to young adults and elderly people, restrictions such as staying in households have left people stiff and less active. Having progressed to the year of 2023, in which snapping back after the prolonged lockdowns seemed difficult, has ensured an increasing need for people to maintain healthy bones and joints.

Committed to a shared purpose of treating orthopaedic injuries, Pantai Hospital Kuala Lumpur (PHKL), the uniqueness of PHKL is that its team of 15 expert orthopaedic surgeons, and 5 hand and upper limb microsurgeons that cover a range of orthopaedic conditions:

- Ankle and Feet
- Elbow
- Hands and Wrist
- Hip
- Knee
- Shoulder
- Spine

Other areas that are primarily focused on the musculoskeletal structures of the human body include Orthopaedic Oncology, Sports Injury and Trauma, as well as Paediatric Orthopaedic. Thus, the variety of orthopaedic conditions and symptoms are sub-specialised and can be further developed into a patient's treatment plan. Whether it is non-surgical or surgical, patients can appreciate the convenience of PHKL's

Orthopaedic Centres of Excellence (Spine and Joints Centre and Hand and Upper Limb Centre), as well as the hospital facilities that are easy to access.

Most abundantly, patients will feel at ease being supported in all aspects of the patient's physical, emotional, and social needs. At PHKL, patients will find delight in receiving the right treatment options and procedure during their consultations, which will have our multidisciplinary team work together in diagnosing them. Profoundly, a more personalised means of patient-centred care is the utmost priority for the orthopaedic team at PHKL, which helps to ensure that the patient's investment in their own recovery is possible.

As for the surgical treatments at PHKL, they are based according to the targeted musculoskeletal area of the body. They range from Anthroplasty, which includes total Hip and Knee Replacement, to Hand and Wrist surgical procedures as well as Spine and other treatment modalities. In addition, the orthopaedic centre also offers a plethora of non-surgical treatments and orthopaedic rehabilitation services that do just as well:

Non-Surgical Treatments

- Specific exercises that target the range of motion and flexibility
- Use of immobilisation-oriented apparatus
- Pain-relief medications
- Lifestyle changes and activities

Orthopaedic Rehabilitation

- Physiotherapy

Book an Appointment at Pantai Hospital Kuala Lumpur

At PHKL, it is important for patients to get acquainted with their underlying health conditions before any consultation can be conducted. When that is well under done, a dedicated team of expert orthopaedic surgeons will wait for your visit, and further personalisation of your orthopaedic needs can be within your reach.

With all things considered, an appointment with an orthopaedic surgeons is a good idea if you are experiencing difficulty with joint discomfort, lasting chronic pain, instability, and experience of numbness or pain.

For more information, please contact Spine & Joint Centre 03-2296 0416 or Hand & Upper Limb Centre 03-2296 0478.

WHO drafts new plan for unified global cooperation to prevent next pandemic

International collaboration needed to avoid repeat of COVID-19 mismanagement

"The COVID-19 pandemic has shone a light on the many flaws in the global system to protect people from pandemics."

Member states of the World Health Organization (WHO) have begun formalising a set of coordinated measures to prevent and manage a future global pandemic.

The efforts are in response to the international community's catastrophic failure to present a unified front in addressing the 2020 COVID-19 pandemic, which led to more than 750 million confirmed cases of the infection and 6.8 million deaths worldwide, according to the WHO.

"The COVID-19 pandemic has shone a light on the many flaws in the global system to protect people from pandemics: the most vulnerable people going without vaccines; health workers without needed equipment to perform their life-saving work; and 'me-first' approaches that stymie the global solidarity needed to deal with a global threat," said WHO Director General, Dr Tedros Adhanom Ghebreyesus in an official statement. He hailed the consensus among nations worldwide to negotiate pandemic handling measures as a once-in-a-generation opportunity to strengthen the global health architecture to protect and promote the well-being of every individual.

Formation of a new WHO body and a new draft prevention plan

In December 2021, the World Health Assembly, the decision-making body for the WHO, conducted its first negotiations on the new prevention plan and established the Intergovernmental Negotiating Body (INB) to draft and negotiate a new WHO convention and agreement to provide a coordinated and effective global response to future pandemic incidences.

At its meeting on March 3 this year, members prepared the "zero draft" convention known as WHO CA+, based on the conceptual zero draft and input received by member states. The preparation of the draft will continue over the next year.

Dr Leong Hoe Nam, an infectious disease specialist at the Rophi Clinic in Singapore, told *Global Health Asia-Pacific* that the draft was a good starting point as it recognised governments' failures to work together during COVID-19 and the need for common rules on information and data sharing that could allow countries to better control the next pandemic, leading to fewer deaths and less economic damage.

However, he also believes it will take time for the member states to find a compromise, especially in today's political climate. "The lengthy paper has high expectations, but I have doubts that it can be approved and endorsed by the WHO and member states in 2-3 years," he said, noting that the current tensions between the US, Europe, Russia, and China were not helpful.

Vision and objective of the WHO CA+

The draft envisions a world in which pandemics are effectively contained in order to preserve the livelihood

The WHO initiates a unified effort for pandemic prevention.

Global cooperation is needed to prevent the next pandemic.

of present and future generations, promote universal health coverage that ensures the best achievable standard of health for all peoples, and recognise existing international entities. Its purpose is to prevent pandemics, save lives, reduce disease burden, and protect livelihoods by proactively strengthening global pandemic prevention, preparedness, response, and post-pandemic recovery capacities. These objectives are guided by equity, vision, principles, and rights outlined in the document.

Dr Leong believes the draft is based on lofty ideals that have great intentions but are difficult to implement. "They cost money, and the wealthy nations will not fund the poorer nations," he said. "I am not so sanguine on the world working together for the common good."

Need better management of global logistics network and technology transfer

The WHO CA+ recommends several national, regional, and international pandemic management initiatives. The WHO Global Pandemic Supply Chain and Logistics Network is one of the convention's recommendations for ensuring an equitable, robust and effective global supply chain. The initiative stresses the importance of manufacturing, strategic stockpiling, and equal distribution of pandemic-related products among countries in accordance with scientific evidence and epidemiological risk assessments. The draft also emphasises promoting and incentivising the transfer of therapeutics and diagnostics-related technology and know-how among manufacturers, specifically in developing countries.

Maintaining health system resilience and international collaboration

The draft pandemic accord acknowledges the significance of a resilient healthcare system that incorporates universal health coverage to lessen the impact of a pandemic and ensure consistency in the quality of healthcare services, hence averting the collapse of the entire system. Reinforcing and maintaining a skilled healthcare workforce is essential in sustaining healthcare capacity during a pandemic. Additionally, collaboration, cooperation, and coordination involving international, regional, and intergovernmental organisations and other bodies are crucial in planning cost-effective measures, procedures, and guidelines for pandemic management in the name of international solidarity.

Financial sustainability and certainty
Achieving the objectives of the WHO CA+ will require national governments to fulfil their primary financial responsibilities in safeguarding and promoting the health of their populations. Member states are encouraged to raise financial resources for successful implementation of the WHO CA+ through bilateral and multilateral funding arrangements, allocate more funding to strengthen their local healthcare systems, and push for enhanced collaboration between health, private, and finance sectors in realising universal health coverage.

Moreover, they should facilitate the timely and effective mobilisation of necessary financial resources, primarily from international financing channels, for impacted nations to continue and restore routine public health operations during and after a pandemic response. Under the agreement, financial and development institutions should also commit to provide financial assistance to developing countries.

To avoid repeating past mistakes, the WHO CA+ emphasises the establishment of an information-sharing system that covers pathogens with pandemic potential.

Increasing R&D capabilities among member states
Empowering medical science and public health institutions to conduct innovative research and development (R&D) on pandemic-related studies is vital to preventing future outbreaks. This can be achieved by increasing funding for R&D and promoting the practice of data and information sharing via open science channels for the rapid dissemination of study findings and research outcomes. Member states can direct their relevant agencies to conduct innovative R&D in novel pathogens and emerging diseases with pandemic potential and cultivate a robust clinical research ecosystem focusing on pandemic recovery.

Increasing R&D capabilities is one way to help prevent future outbreaks.

Improving access to and sharing of pathogen data
One key mistake during the COVID-19 pandemic was slow information sharing, especially at the beginning of the outbreak, stressed Dr Leong, with late acknowledgement that the new virus could transmit from person to person, which stymied early awareness and preparation in most countries.

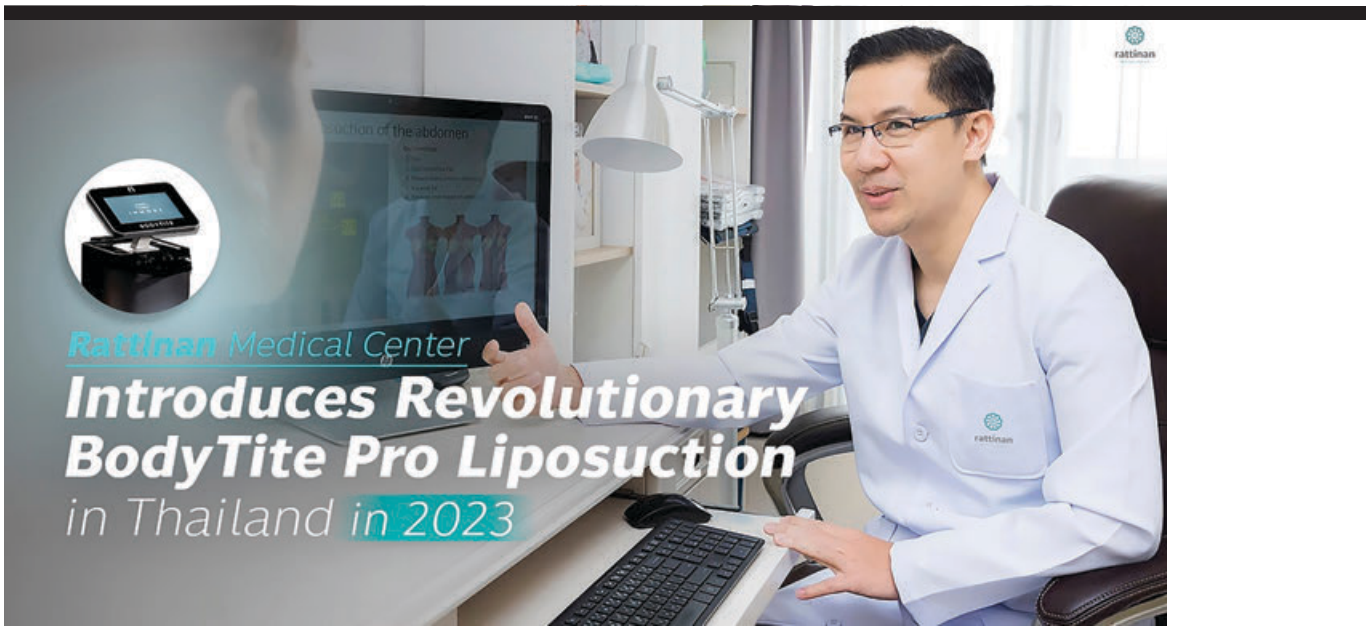
To avoid repeating past mistakes, the WHO CA+ emphasises the establishment of an information-sharing system that covers pathogens with pandemic potential. Called the WHO Pathogen Access and Benefit-Sharing (PABS) System, it will also provide data on genomic sequences and patient information. Member states will be required to direct their research facilities to submit pathogens with pandemic potential from early infections or subsequent variants to a WHO-coordinated network laboratory and upload the genomic sequences to a publicly accessible database. The PABS system will be positioned as a standardised, real-time global and regional platform that will provide accessible and reusable data to all member states in planning their respective pandemic measures.

An example of such data is the work being done in the UK where researchers are already working on technology to monitor genetic changes in respiratory viruses across the globe that could help identify new pathogens potentially able to spark another pandemic.

"Britain was at the leading edge of the genomic surveillance of COVID-19 and was responsible for about 20 percent of all the Sars-CoV-2 genomes that were sequenced across the planet during the pandemic," said Dr Ewan Harrison, who is leading the project at the Wellcome Sanger Institute in the UK, to the *Guardian*.

"The knowledge and data we generated allowed us to track – with unprecedented speed and accuracy – Sars-CoV-2, the virus responsible for Covid-19, and to monitor how it was changing. It was a wonderful aid in helping to fight the disease. Now we are aiming to contribute building a global genomic surveillance for all respiratory viruses. These, after all, are the agents most likely to trigger new pandemics," Dr Harrison added.

Protecting wild places and promoting environmental health matter
The draft also highlights that most emerging infectious diseases and pandemics are caused by pathogens jumping from animals to humans, meaning that reducing the risk of such spillovers is an important preventive approach.



Rattinan Medical Center Introduces Revolutionary BodyTite Pro Liposuction in Thailand in 2023

Bangkok, Thailand – Rattinan Medical Center, the leading medical institution in Thailand, is proud to introduce the revolutionary BodyTite Pro liposuction, the most popular and effective body contouring technology in Thailand in 2023. BodyTite Pro, guaranteed by Dr. Suthipong Treeratana, Asia-Pacific BodyTite® liposuction certified trainer, is a safe and obviously effective way to get rid of fat from the body, providing patients with the best value for their money.

BodyTite Pro is a technology that utilizes heat energy (Radiofrequency Wave) to remove fat from the body and tighten the skin, resulting in firmer skin without the need for additional lifting costs. The RF waves stimulate collagen production, providing additional benefits to the procedure. The technology has a temperature display screen and cannulas with sensors to prevent skin burns during the procedure. Multiple cannula sizes are available for doctors to choose from for different body parts, such as BodyTite, FaceTite, and AccuTite. The small suction nozzle minimizes pain and swelling, allowing patients to return home after the procedure.

The problem of loose skin after fat removal can be reduced with BodyTite Pro, as it includes technology that helps to tighten the skin. This allows patients to show off their beautiful body faster without worrying about sagging skin after the procedure. As a result, the BodyTite Pro has become the preferred choice for liposuction in Thailand.

To maximize fat removal, Dr. Suthipong has incorporated the MicroAire PAL device into his treatment. The Power Assisted Liposuction (PAL) technology is widely used to assist in liposuction procedures, especially in the United States. It helps increase efficiency in fat suction even in hard-to-reach areas and hard and fibrous fat. The vibration system breaks down the fat before suctioning it out, reducing fatigue during the surgeon's work and suction time. Various suction nozzles can be used specifically for the desired fat suction location, and the blunt liposuction cannula is safer than a sharp suction head. The MicroAire PAL can dissolve and suction a large amount of fat, with less bruising than traditional liposuction. It also helps reduce the risk of uneven or dimpled skin, as it is not a thermal energy. Fat suction with PAL can be used to fill different parts of the body or can be extracted and processed into stem cells for anti-aging and health restoration purposes.

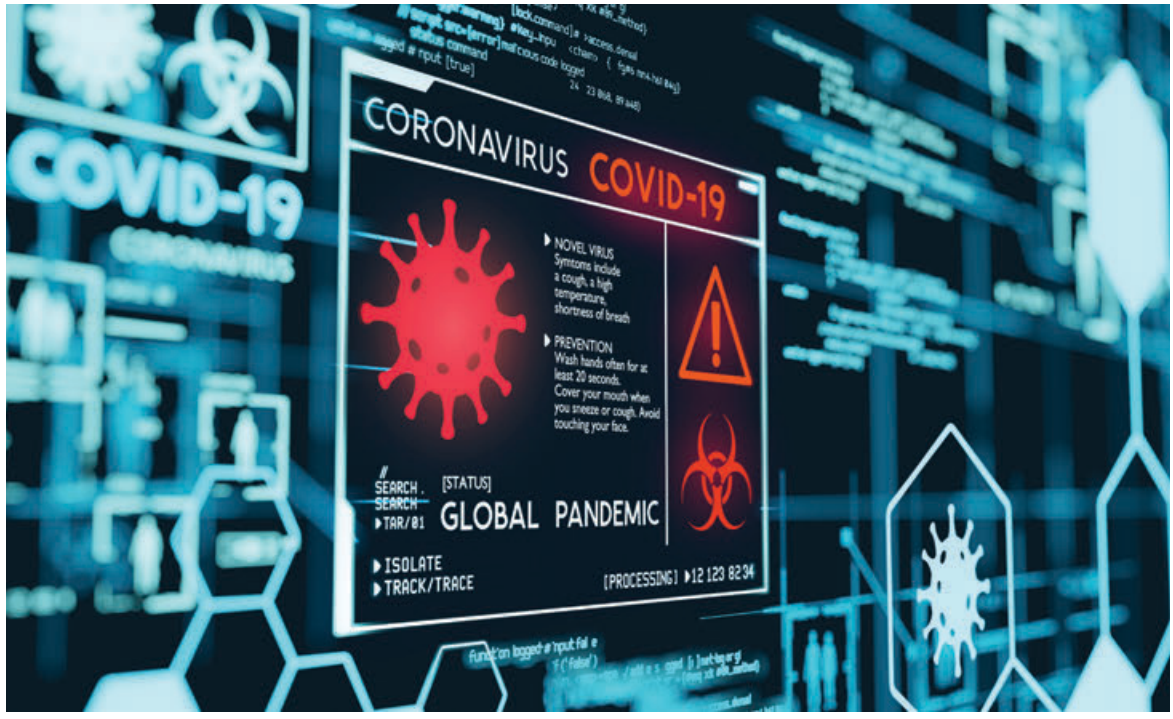
At Rattinan Medical Center, we provide attentive care to every customer, with unique and special fat removal techniques, including the use of radio waves and vibration systems to treat simultaneously. Our treatment also includes adapting to suit problem areas to ensure the treatment is as effective as possible. Currently, liposuction is an advanced treatment that has evolved significantly in terms of technology, equipment, and the expertise of doctors. As a result, it is much safer than traditional liposuction. In particular, liposuction with BodyTite Pro and MicroAire PAL can give you a better body shape without causing harm or serious side effects.

Rattinan Medical Center, the leading liposuction institution in Thailand, has been providing services for over 24 years, with treatment performed by Dr. Suthipong Treeratana, a certified trainer in liposuction in the Asia-Pacific region and an expert in BodyTite and PAL liposuction. Rattinan Medical Center has been trusted by both Thai and foreign clients continuously as one of the safest liposuction institutes in Thailand.

For more information, visit Rattinan Medical Center's website or contact us to schedule a consultation.

www.rattinan.com

The problem of loose skin after fat removal can be reduced with BodyTite Pro, as it includes technology that helps to tighten the skin.



The COVIC-19 pandemic should be a wake-up call for the global community to prepare for the next health crisis.

Such risk can be reduced by addressing its drivers, which include climate change, wildlife trade, land use change, desertification, and antimicrobial resistance. In particular, destruction of wildlife natural habitats increases pandemic risk by making it more likely that the interaction between wildlife and people could result in animal pathogens infecting humans. Indeed, this is one key theory to explain the origin of the COVID-19 pandemic.

"Unfortunately, dominant voices in public health have historically neglected pandemic interventions like ending deforestation."

"Unfortunately, dominant voices in public health have historically neglected pandemic interventions like ending deforestation. This reflects a bias towards immediately measurable public health victories, such as the number of vaccines administered, over those that require a longer time horizon before their benefits are realised. Many of these distant benefits are immeasurable as their goal is for a pandemic not to occur at all," Dr Neil Vora, an expert in outbreak response with Conservation International, told the *Guardian*.

Finishing the WHO CA+ plan

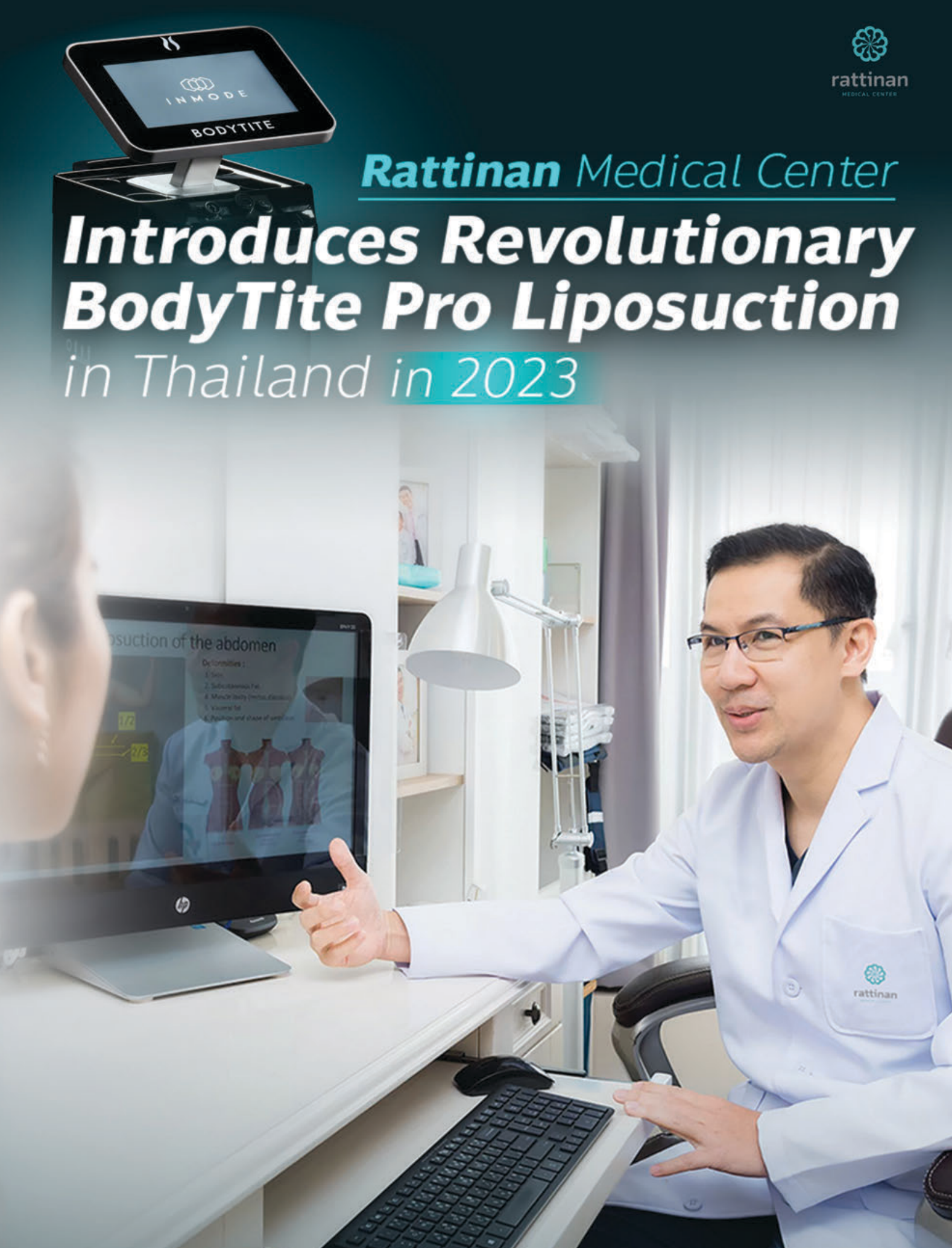
The final draft of the pandemic agreement will be offered for consideration at the 77th World Health Assembly in 2024, together with substantial revisions to the existing International Health Regulations (IHR) that govern the prevention of the cross-border transmission of infectious diseases. Combining these frameworks will pave the way for a comprehensive, complementary, and synergistic set of global health agreements to soften the blow of future pandemics.

The need for such an accord is also buttressed by a report by the International Federation of the Red Cross and Red Crescent Societies (IFRC) that cautions that "all countries remain dangerously unprepared for future outbreaks" and recommends building trust in public health measures, addressing inequities, and focusing on preparedness at the community level in order to become more resilient to health emergencies. "The COVID-19 pandemic should be a wake-up call for the global community to prepare now for the next health crisis," Jagan Chapagain, IFRC's Secretary General, said in a press release.

He is not alone. One study in the US journal *The Proceedings of the National Academy of Sciences* (PNAS) found that the probability of experiencing a pandemic similar to the one caused by COVID-19 is about 38 percent in one's lifetime while the figure may double in the next decades.

Dr Leong shares this gloomy conclusion that the world is still unprepared to adequately cope with another pandemic and believes we don't have much time left to improve preventive measures.

"I am quite certain there will be another pandemic in the next seven years. The world is so connected now, and this fuels human movements, trade movements, and pandemic spreads," he predicted, cautioning that the next pandemic-causing infectious disease might have a much higher death rate than COVID-19. ■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GHQI ACCREDITATION

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GHQIA
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Hospital Accreditation

GHQIA provides hospitals access to the well- established standards of ACHS International, with notable added advantages to the accreditation process:

- Assignment of a local partner who can offer accurate, localised feedback and continuous guidance.
- Option to conduct regular mock assessments and readiness diagnostics of processes, procedures, and outcomes to gear up for the actual audit.
- Overall cost-effectiveness through a localised engagement structure.

CoE Accreditation

The Centre of Excellence (CoE) Accreditation is a first-to-market initiative allowing GHQIA members to undertake accreditation in niche areas of clinical expertise.

GHQIA will apply the ACHS International standards in a focused manner, conducting a deep-dive assessment of the organisation on those selected fronts.

As part of the excellence requirements and to ensure stand-out achievements in the identified specialty, the organisation is required to participate in the ACHS International Clinical Indicator Program (CIP) to benchmark themselves against best- in-class providers and strive for continuous improvements during the time they are accredited.

Clinic Accreditation

With specialist clinics taking on an increasingly critical role in the patient journey, the accreditation serves as a tool to help clinics communicate their commitment to care excellence and differentiate themselves in a saturated market.

Through the accreditation program, members can tap on the expertise of industry experts for advice and guidance on all aspects of clinical operations, including digital health adoption and other innovative healthcare practices.

The GHQIA member network also offers a platform to facilitate knowledge and best practice sharing amongst fellow providers, opening doors to potential creative collaborations.

Who Should Get Accredited?

Hospitals, Medical Centres, Centres of Excellence, Day Surgery Centres, Chronic Care Facilities, Alternative Care, Imaging and Radiology, Diagnostics and Laboratory, and Specialist Clinics across all spectrums of medical care:

Aesthetics | **Dentistry** | **Cardiology** | **ENT** | **Fertility and IVF** | **OB-GYN** | **Gastroenterology** | **Neurology** | **Oncology** | **Ophthalmology** | **Orthopedics** | **Psychiatrist** | **Urology** ...and more

Hospitals

Medical Centres

CoE

Specialist Clinics

Day Surgery Centres

Chronic Care Facilities

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Disabled persons are at greater risk of dying young

Rising mortality rates linked to widespread health inequities, says WHO

A new report by the World Health Organization (WHO) has revealed some unsettling news about people with physical disabilities: they are more likely than non-disabled people to die prematurely due to significant health disparities around the world.

The *Global Report on Health Equity for Persons with Disabilities*, issued in December 2022, provides an outlook on the global situation affecting disabled persons and their health and healthcare. Its findings indicate that men and women with disabilities are at greater risk of dying 20 years and 15 years earlier, respectively, and developing illnesses than their non-disabled counterparts. The report also reinforces the notion that individuals with disabilities who experience health inequity are more likely to have poorer health outcomes, less access to healthcare services, and a higher risk of poverty and social exclusion.

"Doing nothing to address these health inequities for persons with disabilities means denying the realisation of the universal right to the highest attainable standard of health," the WHO said in a press release accompanying the report.

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Worldwide disability: An overview

As of 2022, there were approximately 1.3 billion disabled individuals in the world, or 16 percent of the global population, with 80 percent of them living in low- and middle-income countries. This number has increased from one billion in 2010, according to the WHO Global Disease Burden (GDB) report. The rising trend is attributed to significant demographic and epidemiological changes, such as a growing ageing population and the high prevalence of non-communicable diseases among the elderly that primarily affect muscular tissue, the nervous system, and sensory organs leading to vision or hearing loss. Infectious disease outbreaks, natural disasters, and regional conflicts can also result in physical impairments and traumatic injuries, increasing the number of disabled people.

Disability-related health disparities

The increased risk of premature death among the disabled community is due to persistent health inequity associated with unfair and unjust factors, notes the WHO report. It highlights how the higher mortality of disabled individuals is evident throughout life, with children eight times more likely to die before the age of 17 and older people with physical and mental disabilities facing a higher risk of death within 30 days of hospitalisation. This concerning trend is attributed to the poor quality of health services in many nations and is related to a country's economic growth and individual income levels which can influence a disabled person's life expectancy. For example, a higher gross domestic product (GDP) correlates with an increase in 5.5 years of life, and bigger incomes add 0.5 years of life.

Disabled persons also display a higher incidence of communicable and non-communicable diseases, such as diabetes, stroke, sexually transmitted diseases (STD), and heart conditions due to limited access to healthcare. They're similarly more likely to develop mental health conditions, such as depression and anxiety, compared to those without disabilities. Moreover, poor oral health manifests more frequently among disabled individuals as they present a systematically high rate of untreated dental complications and dental extraction levels that exceed restorative treatment. Apart from physical disabilities, intellectual disabilities, such as Down Syndrome and autism, can pose an increased risk of hormonal imbalance, respiratory and heart complications, and obesity.

The report additionally highlights the complex and multidimensional factors perpetuating health inequalities, ranging from the negative behaviour of healthcare providers, gaps in healthcare services and information delivery, socioeconomic circumstances, and logistical barriers to healthcare access.

Stigmatisation of the disabled community

Stigmatisation and discrimination of disabled persons embedded in institutions, systems, and cultural values perpetuate low community awareness and negative societal attitudes on disability, further reducing their inclusion into the healthcare system. Stigmatising behaviour on the part of healthcare professionals might discourage disabled individuals from obtaining prompt medical care, increasing the risk of mortality, morbidity, and functional limits.

The lack of inclusive policies and existing regulations that could benefit the disabled community

further contributes to their stigmatisation. The exclusion of persons with disability from social protection schemes and denying them healthcare coverage are common in low- and middle-income countries. Furthermore, complicated bureaucratic processes, such as a lengthy application process, the need for a bank account, and communication issues with healthcare insurance providers, risk causing disabled persons to be left behind.

In a number of countries, legislation that would address healthcare inequity among the disabled community has been hindered by the lack of an accountability mechanism that covers monitoring and enforcement in line with the WHO Convention on the Rights of Persons with Disability (CRPD). This has disrupted the practice of disabled-friendly health service related to disability allowances, clinical protocols, and proper accommodation.

The discrepancy in healthcare delivery

The United Nations (UN) Sustainable Development Goals emphasise that disabled persons should be accorded the highest possible healthcare quality that ensures positive outcomes and promotes well-being. However, the absence of disability-specific knowledge, skills, and competencies among health and care professionals is one of the most pervasive and significant hurdles to achieving that objective.

This is evident in the United States, where a survey conducted by Harvard Medical School found that only 41 percent of clinical physicians nationwide were "very confident" that they could provide equal quality of care to disabled and non-disabled patients. The findings, published in the journal *Health Affairs* in 2021, also showed that only 18 percent of physicians believed that the current healthcare system had unfairly treated disabled patients. The survey results represent a potentially skewed perspective among healthcare professionals, one that could lead to more significant healthcare disparities for the disabled community.

This insufficiently trained workforce remains a logistical challenge for local healthcare systems to adequately care for disabled patients and improve their treatment outcomes. For example, in South Africa, only 26 percent of disabled individuals receive the necessary rehabilitation services such as physiotherapy, occupational therapy, speech therapy, and hearing therapy due to a lack of rehabilitation specialists.

Socioeconomic factors and obstacles to healthcare access

The UN's Department of Economic and Social Affairs reported that living with a disability increases the likelihood of falling into poverty. This is because the additional cost of living for disabled persons involves a range of extra expenses for healthcare, housing, transportation, personal assistance, and assistive products. Higher health costs further exacerbate health inequity due to the unaffordability of timely care and treatment and the purchasing or repair of assistive devices.

According to the latest UNICEF data, children with disabilities are 25 percent less likely to receive early childhood education and 49 percent more likely never to attend school. Lack of education among disabled children causes them to be 16 percent less likely to read and 42 percent less likely to possess foundational reading and counting skills. Low education will further lead to slimmer chances of employment and an inability to generate income. Lower education levels correlate with low health literacy, leading to poor oversight of health practices, such as vaccinations, and unhealthy dietary habits, ultimately affecting life expectancy and health outcomes.

It is also essential for the healthcare industry to hire disabled individuals, thereby ensuring a diversified workforce that enhances healthcare organisations.

The housing plans in many countries do not consider the special requirements of disabled persons, resulting in people being sent to institutionalised settings such as special care homes. These often have low accommodation standards, lack of trained caregivers, and poor health outcomes. Disabled persons also face the risk living alone due to a lack of social interaction and limited mobility.

The inability to commute by accessible public transportation is also a significant barrier for disabled individuals attempting to reach the nearest healthcare facility. Disabled passengers are more likely to incur extra costs for more expensive modes of transportation that provide more space for them and their carers and storage space for mobility equipment such as wheelchairs. Lack of access to transport is common in low-income countries where road or rail infrastructure is not extensive enough to cover rural areas. Additionally, multistep transportation services that require changing vehicles can be challenging for those with intellectual disabilities.

Promoting a disability-inclusive health sector

The WHO report stressed that the disabled community is entitled to the same access to quality healthcare as their non-disabled counterparts. It is therefore imperative for governments to design pro-health equity policies that should not be carried out exclusively by the health sector but rather as an inherent element of a country's efforts to enhance its healthcare system.

Empowering primary healthcare (PHC)

PHC contributes to the local health system by providing integrated health services focusing on primary care and essential public functions, promoting cross-sectoral policy and action, and empowering local communities. Cultivating health equity for disabled persons is possible by incorporating targeted disability-inclusive strategies within mainstream actions. One method includes rolling out a training module on disability inclusion to all healthcare workers, such as doctors, nurses, midwives and community health workers, and equipping them to provide adequate and inclusive health services to disabled patients.

It is also essential for the healthcare industry to hire disabled individuals, thereby ensuring a diversified workforce that enhances healthcare organisations. Recruitment of disabled persons can be streamlined by providing employment opportunities to students with disabilities at higher learning institutes and offering career progression programmes for disabled healthcare professionals. Furthermore, non-medical staff such as administration, maintenance, and cleaning personnel can also be trained on accessibility issues and communicating with disabled patients — for example, learning sign language to engage with patients with impaired hearing.

Disability-friendly buildings and public spaces

In terms of making physical infrastructure accessible to people with disabilities, universal design is widely

A sample of disability-friendly public space

regarded as fundamental to disability inclusion. Putting a universal design in the original infrastructure construction plan will be more cost-effective than after installation. Furthermore, it can benefit people other than the disabled community. For example, ramps at hospitals which are initially designed for wheelchair accessibility can also help individuals with difficulty in climbing stairs, pregnant women, and workers moving in heavy items using trolleys. Outside the health sector, universal design can be used in areas such as town centres to facilitate pedestrian navigation and public transportation stops, making it easier for disabled and older people to board buses and trains.

Health funding and investments facilitate disability inclusiveness

Implementing a progressive universalism as a health financing principle entails prioritising the rights and needs of the most marginalised groups of the population, such as people with disabilities. Therefore, setting up universal healthcare coverage (UHC) is essential to ensure that disabled groups receive adequate health services without incurring financial hardship. UHC encompasses a range of critical, high-quality health services, including health promotion, prevention, treatment, rehabilitation, and palliative care.

WHO has indicated that governments can anticipate a return of about US$10 for every US$1 invested in disability-inclusive non-communicable disease (NCD) prevention and care. This is based on a previous cost-benefit analysis involving an investment of US$1 in accessible cancer interventions in low- and middle-income countries, bringing a return of US$8.70. In addition, another similar study that includes a dietary approach to heart disease prevention suggests a return on investment of US$5.10 for every US$1 invested.

Digital technologies for improved outcome

Technological developments can empower disabled individuals to manage their health and access health information and services. Establishing telehealth services has improved the efficiency of integrated health services and care delivery to the disabled community. Furthermore, emerging health technologies such as mobile vision and hearing assessment apps enable sidelined communities to access quality healthcare services. Increased connectivity allows for electronic medical records of patients to be compiled and relayed seamlessly, allowing healthcare providers to make accurate decisions during patient treatment for positive clinical outcomes.

Governments must play more active role

Monitoring and evaluation are important to promote disability inclusion. For instance, disability-related data are necessary for countries to develop evidence-based policies in order to monitor the CRPD's implementation. The data can also be used to assist countries gauge their progress towards national objectives and enable them to make improvements in nationwide policies such as UHC coverage, public health interventions, and the rate of health equity among the local disabled community.

While the report states that progress had been made to reduce the health inequity among the disabled community, much still needs to be done. The WHO's Director-General, Dr Tedros, expressed hope that the key policies and programmatic actions recommended in the report would be observed by governments worldwide to develop their healthcare services in a disability inclusive way. "We hope that governments, health partners and civil society, including organisations of persons with disabilities, will work together to implement the recommendations in this report so that persons with disabilities can realise the highest attainable standard of health," he said. ■

Telehealth services benefit the disabled community.

It's best to seek care in accredited clinics and medical centres

It's a strong sign the highest standards of care are being followed, such as through the new GlobalHealth Quality and Innovation Accreditation

The best way is to look for a quality hallmark that assures them their choice healthcare provider has instituted processes, procedures, and standards that meet the following criteria and are constantly monitored for improvement.

Choosing the right doctor and hospital can often be a tough call for patients as they struggle with questions of safety, cost, and expertise.

One simple thing to look for is the type of healthcare accreditation your doctor or hospital has. This is a key parameter that can reassure people they're going in the right direction.

Luckily in Asia, we have a number of quality improvement consultation and accreditation services that set the standards for specialist clinics in the region, providing a rigorous framework that guides the delivery of safe, high-quality, and innovative healthcare.

Driven by high rates of economic and population growth, healthcare demand in Asia has been soaring, with many new providers springing up throughout the region to cater to the surging number of patients. As a result of this growth, increased oversight of clinical practices will become a top priority, especially at a juncture when digitised medicine and new technologies are transforming the patient experience and informed patients are now having more say in their treatment options.

When choosing a healthcare provider, patients are no doubt looking for the best and most trusted. But how do they know if a hospital or specialist clinic deserves their confidence?

The best way is to look for a quality hallmark that assures them their choice healthcare provider has instituted processes, procedures, and standards that meet the following criteria and are constantly monitored for improvement:

- **Meet quality and safety standards**: The provider's service conforms to global standards, best practices, and local regulatory requirements.
- **Responsible staff**: The provider's staff are accountable for the patient's safety and care.
- **Appropriate care**: The provider will respond to the patient's needs with appropriate care to ensure the best possible outcome.
- **Patient collaboration**: The provider will keep the patient informed and involved in their healthcare planning.

- **Data security and privacy**: The patient's healthcare data is secure, and patient privacy is maintained.
- **Patient safety**: The provider places utmost priority on minimising errors and overall patient safety.
- **Safe and effective medication**: Prescribed medication is within guidelines. There is no over- or under-treatment.

With these criteria as a guide, accreditation then can cement trust in medical institutions by facilitating the following goals:

Improve patient outcomes

- Strive for error-free healthcare operations with accreditation. It's not just about following processes and meeting standards. It's also about self-examination and continuous improvement.
- Gain access to expert consultation and independent assessments in setting up better structures, implementing standard operating procedures, and streamlining processes, allowing the clinic to minimise variability, mitigate risk, and reduce overall costs.
- These efficiencies translate to greater patient engagement, better treatment, and improved outcomes, strengthening the community's trust in healthcare providers.

Innovate for the future

- In today's intelligence age, falling behind in technology adoption can be unforgiving. Accreditation helps members keep up with the transformation of healthcare delivery. Through clear advice and guidance, accreditation inspires and supports efforts to innovate.

Having a competent team and confident leadership

- Empowers to improve care delivery. With every employee aligned with the standards, it can boost teamwork, communication, and productivity.
- Staff will take pride in knowing that the organisation is working according to international best practices.

Access to resources and expert network

- Steers the practice in the right direction by examining itself against established global standards within an identified clinical specialty. Helps a clinic identify areas of improvement and monitor its progress.
- Benefit from discussions with advanced industry experts and tap into a broader expert network, sharing best practices and forging collaborations with fellow providers.

Strengthen recognition and reputation

- Healthcare accreditation helps the clinic communicate information focused on patient safety, quality of care, and commitment to continuous innovations.
- Strengthen the community's trust in providers.

A new accreditation player for healthcare providers in Asia

Global Health Asia-Pacific has recently launched a parent company that will help medical institutions improve their standards of care by providing quality improvement consultation and accreditation services.

Named GlobalHealth Quality and Innovation Accreditation (GHQIA), the new company is a licensed partner of Australia Council on Healthcare Standards (ACHS) International and aims to set the standards for healthcare institutions in Asia by providing a rigorous framework to guide the delivery of safe, high-quality, and innovative healthcare in the region.

The company offers hospitals access to the well-established standards of ACHS International and assigns a local partner to offer localised feedback and guidance as well as the option to conduct regular mock assessments of procedures to gear up for the actual audit.

Specialist clinics can benefit from the accreditation programme by tapping into the vast GHQIA member network, a platform that facilitates knowledge and best practices sharing among providers in the region, potentially paving the way for win-win collaborations.

The company also provides accreditation services for centres of excellence, giving providers the chance to get recognised for care quality in niche areas of medicine. GHQIA will apply the ACHS International standards in a focused manner, conducting a deep-dive assessment of the organisation on those selected fronts.

GlobalHealth Quality and Innovation Accreditation (GHQIA)

ACHS International accreditation

More countries achieved progress in eliminating neglected tropical diseases despite COVID-19 setback

Latest developments meet WHO roadmap goal

NTD caseloads continue to be borne by just a small number of countries, specifically developing nations and impoverished, conflict-ridden regions.

The World Health Organization (WHO) has reported significant progress in eradicating neglected tropical diseases (NTD) worldwide over the past decade. Referred to as "neglected" because they generally afflict the world's poor and receive relatively less attention, NTDs encompass a wide range of exotic sounding afflictions such as dengue, leishmaniasis (parasites from sandflies), and trachoma (blindness-causing bacteria).

The WHO's 2023 Global Report on Neglected Tropical Diseases, released in conjunction with World NTD Day on January 30, 2023, outlines the achievements in reducing worldwide NTD prevalence despite the COVID-19 pandemic. According to WHO Director-General Dr Tedros Adhanom Ghebreyesus, COVID-19 severely disrupted supply chains for NTD medicines and health products, especially in low- and middle-income countries. "These disruptions jeopardised support for prompt diagnosis, treatment and care, as well as for the provision of essential interventions such as vector control and veterinary public health, which are the mainstay of NTD programme activities," he said in a statement.

The report outlines the progress the WHO has made in its 2021 road map to control, eliminate, and eradicate most of these diseases by 2030. One significant finding is that 47 countries had eliminated at least one NTD, with more countries progressing towards similar outcomes. Additionally, the number of individuals requiring NTD-related medical care dramatically dropped by 80 million between 2020 and 2021. Still, over one billion people continue to be treated with NTD interventions through extensive public health campaigns.

NTD caseloads continue to be borne by just a small number of countries, specifically developing nations and impoverished, conflict-ridden regions. NTDs are common in tropical countries and disproportionately affect women and children. Most are transmitted by vectors, have animal reservoirs, and have complex life cycles. They adversely impact more than one billion people due to high death rates, social inequity, and economic hardship. However, various public health policies and initiatives by relevant stakeholders are bringing about positive changes in the fight against NTDs, the report states.

Significant regional progress in NTD elimination

Africa

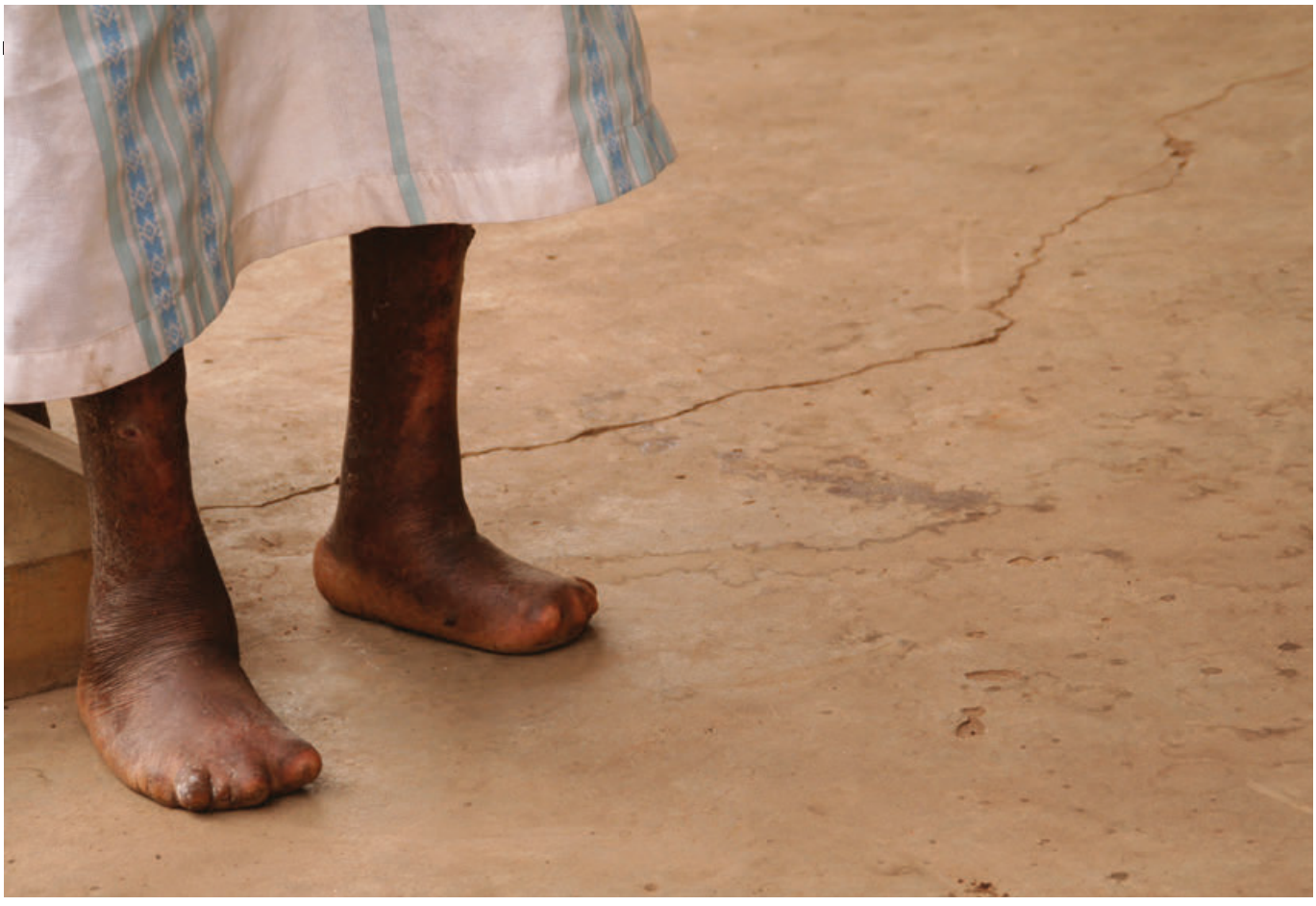
The WHO Regional Office in Africa reported that the continent had significantly reduced NTD cases. Only 802 cases of African sleeping sickness, or trypanosomiasis from the parasite of a Tsetse fly, were reported in 2021, the lowest number in 50 years. Ghana, Gambia, Malawi, and Togo are now certified free of trachoma (an infection that can cause blindness), with the latter two also eliminating lymphatic filariasis, a parasitic infection that causes severe swelling of the limbs. The continent primarily reported a decreasing prevalence of leprosy, Buruli ulcer (bacterial infection often causing ulcers in the arms and legs), and visceral leishmaniasis (a parasitic infection that is often fatal if untreated) between 2011 and 2021. WHO has also developed a regional framework for snakebite envenoming aligned with its global strategy and the NTD road map.

In 2021, four African countries reported fifteen cases of dracunculiasis, a rare water-borne disease caused by guinea worm infection, representing a 48 percent decrease compared to 27 cases in 2020. By the end of 2022, the WHO certified that Congo had eliminated dracunculiasis transmission. Along with Cameroon and the Central African Republic, Congo also increased its efforts to eradicate yaws, a chronic skin infection, by administering the antibiotic azithromycin to the entire population.

The Americas

NTD elimination efforts in the Americas are outlined in the Elimination Initiative, an integrated sustainable approach to disease management and strengthening the local health system for an NTD-free region. Various initiatives were rolled out in countries with high NTD prevalence, such as the trachoma elimination toolkit consisting of recommendations on trachoma response and serosurveillance of infectious diseases that involve blood testing for antibody levels against infection.

Guyana conducted a mass drug administration (MDA) of triple therapy IDA (ivermectin -diethylcarbamazine citrate- albendazole), covering



The diseased feet of a patient with leprosy.

72 percent of the population with the target of eliminating lymphatic filariasis by 2021. Columbia, Ecuador, Guatemala, and Mexico reported eradicating onchocerciasis (infection caused by a worm and potentially leading to visual impairment and skin disease), while 11 Latin American countries were able to contain schistosomiasis infection. Increasing international partnerships have improved Chagas disease (a parasitic infection that can be life-threatening if untreated) prevention, control, and treatment through vector control, universal blood screening, and access to antiparasitic drugs. WHO and the Pan American Health Organization (PAHO) are supporting Brazil and Colombia in carrying out integrated actions to control tungiasis, an inflammatory skin disease caused by female sand fleas. Interventions planned by PAHO include distributing dimethicone oil-based skin ointments and producing a manual for tungiasis control and treatment guidelines.

Asia

WHO has established regional technical advisory groups, launched several action plans, and implemented regional frameworks to expedite the elimination of NTDs. These initiatives adopt a number of WHO-endorsed recommendations for certain NTDs. For example, vector control measures and an integrated field entomology workshop were proposed to empower local governments to reduce dengue and mosquito-borne diseases.

In addition, a regional strategy framework with enhanced cross-border collaboration has also been launched to expedite the eradication of visceral leishmaniasis. This initiative is encouraged by the latest reports indicating a historical decline in visceral leishmaniasis from 23,056 cases in 2012 to 1,456 in 2021, a 94 percent drop in incidence. While several countries display low occurrences of yaws, India has maintained its zero status for the disease since 2016. Malaysia and the Philippines have expanded IDA treatment among vulnerable populations to reduce lymphatic filariasis prevalence.

According to WHO, India and Indonesia account for more than half of all leprosy cases worldwide, with 85,687 new cases reported in 2020, rising to 93,485 cases in 2021. To sustain the health system's capacity for leprosy elimination, the WHO Regional Office established an e-learning module to build healthcare worker capacity on case identification, diagnosis, and treatment.

Eastern Mediterranean

The regional WHO office stated that the number of people seeking NTD intervention decreased by 55 percent between 2010 and 2021. The percentage of NTD illnesses causing loss of health years was reduced by 3.9 percent in 2019 compared to 2015. Furthermore, seven countries have eradicated at least one NTD, the most recent being Saudi Arabia which

Deformed hand of a patient with leprosy.

became trachoma-free. Egypt and Yemen have been verified to have eliminated lymphatic filariasis. Sudan has ramped up its MDA rollout for treating lymphatic filariasis, onchocerciasis, and trachoma. Moreover, the country has successfully achieved dracunculiasis transmission-free status due to its proactiveness in targeted health information messaging, infection containment measures, and improved water filtration.

2021 NTD ROAD MAP PILLARS

Despite the disruption caused by the pandemic, the work on the central pillars of the 2030 road map has also advanced.

The COVID-19 pandemic disrupted the global NTD care landscape by prompting donors to reassess sponsorship priorities and adapt new working systems, thereby changing multi-dimensional funding mechanisms. Furthermore, the public health crises have reduced the implementation of community-based interventions, restricted access to health facility-based services, and impaired the supply chain for NTD-based health products. Despite the disruption caused by the pandemic, the work on the central pillars of the 2030 road map has also advanced.

Intensifying programmatic action

The WHO framework on NTD management encompasses promoting scientific progress, filling the gap in research-based knowledge, improving the quality of intervention and implementing innovative approaches to reducing the incidence, prevalence, morbidity, disability and fatalities due to NTDs. To achieve this target, WHO proposed numerous strategic and tactical recommendations such as equipping the healthcare system to handle NDT crises, innovation in NTD health programmes, prioritising support for refugees who are more prone to NTDs, mathematical modelling to predict COVID-19 impact on NTD spread, and integrated vector management on NTDs with high outbreak potential.

The WHO prioritised continuous publications of NTD-related guidelines, strategic reports, and policy briefs to promote NTD awareness among local healthcare professionals and the public. Throughout the 2021-2022 period, publications output includes guidelines on the management and prevention of pork tapeworm, control and elimination of schistosomiasis-causing parasitic worms, manuals on insecticide resistance among mosquito vectors, and policy briefs on NTD rehabilitation, among others.

The WHO also signed seven Memorandum of Understanding (MOU) with pharmaceutical companies such as Novartis and GlaxoSmithKline to ensure continuous donation of NTD medicines to localised NTD programmes. Investment in innovative research saw new medicinal products such as acoziborole and treatment approaches like triple therapy developed to treat NTDs like African sleeping sickness. Moreover, pharmaceutical researchers worked to improve Fosravuconazole, an antifungal drug used to treat fungal mycetoma that not only demonstrates high efficacy but also has the potential to reduce treatment duration, increase patient compliance, and be more cost-effective for the patient and treatment provider. Equally crucial is the constant development of NTD diagnostic techniques, as the continual decline in infection intensity and prevalence threatens to weaken the specificity and sensitivity of current diagnostic methods, hence impeding the delivery of proper healthcare to vulnerable populations.

Expanding cross-cutting strategies

The NTD roadmap also focuses on increasing cross-cutting approaches through integrated delivery of NTD interventions, incorporating NTD treatments in the national health systems to eventually transition to universal health coverage, and practising cross-sectoral frameworks such as WASH, Global Vector Control Response 2017 – 2030, and the WHO One Health platform.

The One Health platform is one of the significant components in the cross-sector coordination outlined in the road map. This “whole-of-system” approach involves planning between health ministries and relevant stakeholders to reduce the NTD burden. A notable example is reducing the burden of Chagas disease in Latin America through indoor insecticide spraying, improving house hygiene, and screening of blood donors to halt disease transmission via blood transfusion.

Global Arbovirus Initiative

The global vector control response saw significant progress with the launch of the Global Arbovirus Initiative, designed to enhance the monitoring and control of insect-borne diseases and improve prevention, preparedness, and response to future outbreaks. The framework was devised in response to the increasing disease burden of two NTDs, dengue and chikungunya, due to climate change and expanding geographical distributions of mosquito vectors.

Sylvie Briand, WHO Director of Pandemic and Epidemic Diseases, emphasised the importance

of the initiative in advocating stronger international collaboration, surveillance, and research innovation to avoid a similar disastrous response to COVID-19. "The next pandemic could very likely be due to a new arbovirus. And given human mobility and urbanisation, the risk of amplification of localised arbovirus outbreaks is real," she remarked during the initial launch event in March 2022.

Moreover, the framework emphasises public-private partnerships and community mobilisation to reach the NTD road map objective. Additionally, the WHO has expanded its arsenal of operational and global advice tools and regulated several regional and country-level vector control initiatives cultivating multiple sector coordination and local data adaptability in curbing the spread of NTD.

Role of WASH in NTD management

Dr Maria Neira, Director of the WHO Department of Environment, Climate Change and Health, recently acknowledged the significant link between the Water, Sanitation and Hygiene (WASH) framework and NTD elimination, including supplying and promoting clean water and sanitary conditions as part of the road map's recommendation. "Good hygiene and access to water and sanitation are important in the prevention, care and management of all 20 diseases of poverty that massively impact the health of over one billion people," she said in an official statement in conjunction with World Water Day in 2021. Cross-sectoral collaboration is steadily growing with the implementation of community-level measures such as the cleaning of irrigation channels and local awareness campaigns on schistosomiasis. It is also notable that community handwashing and supplying sanitary products, which was initially part of the local NTD programme, has significantly influenced the COVID-19 response, enabling the local healthcare system to manage NTD and the pandemic simultaneously.

Integrated administration of treatments common to several NTDs

Preventive chemotherapy is one of the widely practised interventions that can be applied across multiple NTDs. This procedure was broadly utilised as a safe, single-administration, quality-assured method, benefiting over a billion people worldwide, treating NTDs such as lymphatic filariasis, parasitic worms' infections, and onchocerciasis. Integrated strategies for treating NTDs that primarily manifest on the skin include active case detection, management of wounds, lesions and affected limbs, targeted MDA in high endemic areas, and rollout of mobile diagnostic apps to enable quick and real-time exchange of skin lesion images that can lead to prompt medical intervention.

Investments in building country ownership

Maintaining competency of NTD programmes depends on constantly modifying the operation models to facilitate country ownership. Coordination among the NTD community by expanding a global collective of NTD collaborators and platforms for advocacy and information sharing is vital in meeting the 2030 target. Such collaboration includes the Neglected Tropical Disease NGO Network (NNN) and Uniting to Combat NTD, a partnership encompassing industry players, financial donors, trust companies, advocacy groups, and academic institutions.

Good hygiene is important to prevent infectious diseases.

Maintaining NTD funding

NTD road map progress largely relies on continuous financing that enables NTD activities on a state, national, and regional level. Including NTD programmes in a country's health budget is vital to sustaining local NTD care delivery. The border closures and trade disruptions due to COVID-19 caused an economic slowdown that disrupted NTD programme funding and forced countries to review their spending on NTD care. WHO has prioritised investing in NTD activities that can significantly increase the efficiency of diagnostics, monitoring and evaluation, access and logistics, advocacy, and funding.

Act now, act together and invest in NTDs

In light of the progress made in eradicating NTDs in susceptible regions, it is vital that the relevant authorities reverse the setback caused by COVID-19 in achieving the aims of the 2030 roadmap and ensure the continuation of recent progress. It is also important to expand investments in innovative operations, financial solutions, and cross-sector alliances in order to fulfil the UN Sustainable Development Goals for the eradication of NTDs. ■

Preventive chemotherapy is one of the widely practised interventions that can be applied across multiple NTDs.

Treatment gaps in epilepsy could lead to more premature deaths

WHO recommends cross-sector collaboration to resolve health crisis

People diagnosed with epilepsy are seven times more likely than young healthy individuals to die due to severe gaps in epilepsy care, according to the latest technical brief by the World Health Organization (WHO).

Entitled "Improving the Lives of People with Epilepsy," the brief states that more than 50 million people worldwide have epilepsy, with 7.6 people per every 1,000 displaying active epilepsy at some point in their life. Approximately 125,000 epilepsy-related deaths have been recorded annually, with 80 percent of them in low- and middle-income countries (LMIC).

Epilepsy is a neurological disorder characterised by persistent seizures and convulsions due to the disruption of the brain's electrical activity. Seizures are caused by an abrupt surge in this electrical activity, which can cause various symptoms depending on the affected brain area. Symptoms range from uncontrollable jerking movement of arms and legs to low muscle tone, low awareness, dizziness, speech impediment, and mood swings. Epilepsy can develop in people of all ages, but it is commonly diagnosed in children and adults over 60.

The cause of epilepsy varies, but some factors include genetics, environmental triggers, brain injury, infections, and developmental disorders.

The cause of epilepsy varies, but some factors include genetics, environmental triggers, brain injury, infections, and developmental disorders. Some types of epilepsy can be caused by genetic mutation and inherited traits, while others can be triggered by excessively high temperatures, light exposure, sleep deprivation, and prolonged exposure to dangerous chemicals. Epilepsy risk is also increased by brain complications, such as head injuries, neurodegenerative diseases like Alzheimer's disease, infections that cause inflammation of brain regions, and tumours. Developmental disorders such as autism, cerebral palsy, and attention deficit and hyperactivity disorder that are prevalent at an early age also contribute to epilepsy among children.

Gaps in epilepsy treatment

Having epilepsy has broad implications from a personal, social, ecological, economic, and policy standpoint that affects patients, family members, and caregivers. In its investigation of the consequences of the high global disease burden from epilepsy, the WHO discovered that most epileptic individuals did not receive the necessary treatment for seizure management. They also identified gaps in healthcare services that have increased mortality rates among epilepsy patients. This discrepancy varies globally from 50 percent in most middle-income countries to 75 percent in LMIC.

Shortage of qualified medical personnel

Epileptic individuals often go undiagnosed or diagnosed late due to a lack of trained medical workers knowledgeable in epilepsy management. Such omissions can result in inaccurate and delayed diagnosis, which disrupts the delivery of appropriate treatment. According to the WHO Neurology Atlas, there is a global shortage of neurologists, marked by significant inequality in medical expertise across different regions. WHO reported an estimated 0.03 neurologists per 100,000 people in LMIC and 4.74 per 100,000 in high-income countries, which highlights the stark divide in local access to quality healthcare. Furthermore, only 23 percent of nations have neurologists in rural areas where people with epilepsy are regularly treated at primary healthcare facilities, although these may not be equipped to provide immediate and long-term care.

Deficiency in local epilepsy knowledge

Healthcare access can also be hampered by geographical restrictions which require epilepsy patients to travel long distances to the nearest treatment facility. Persistent stigmatisation is also widely attributed to the epilepsy treatment gap as it socially impacts patients and their families. According to a study by the Makarere University in Uganda, one prevailing misconception about epilepsy in Sub-Saharan Africa stems from a cultural belief that epilepsy is contagious. Featured in the Epilepsy and Behaviour Journal, the study said that such misconceptions impact the delivery of first-aid treatment and further cause epileptic individuals and their acquaintances to be socially excluded from the local community. One result is that patients resort to seeking care from traditional healers, leading to incorrect diagnosis and treatment.

Limited medical resources

The underdiagnosis of epilepsy is also caused by the scarcity of diagnostic equipment, such as

electroencephalogram (EEG) machines, since ill-equipped primary care facilities can impede the proper diagnosis of epilepsy. Providing quality healthcare service to epilepsy patients can similarly be hindered by inadequate access to antiseizure medications. A survey involving nearly fifty WHO countries discovered that less than half of pharmacies stocked antiseizure medicines that are part of the WHO essential medicine list, ultimately leading to poorer health outcomes.

Various factors can limit a pharmacy's epilepsy drug capacity, including regulatory setbacks, supply chain disruptions, lack of storage facilities, and varying prescribing patterns. Some countries have seen the unregulated circulation of substandard or counterfeit medicines, which impedes epilepsy care.

Comorbidity factors related to epilepsy

The WHO report also notes that half of the epilepsy population is susceptible to physical or mental health conditions associated with poorer health outcomes, increased healthcare needs, declining quality of life, and greater social isolation. Furthermore, depression and anxiety, the comorbid mental health conditions common among people with epilepsy, can increase the risk of seizure, while children with epilepsy exhibit behavioural and cognitive comorbidity.

Stigmatisation of epilepsy

Unfortunately, people living with epilepsy can

experience stigma due to misconceptions and misunderstandings fueled by negative public views, myths, and false beliefs about the condition. They are unlikely to get married due to unfounded concerns of heritable transmission of the disease and the social and economic impact that the family might have to bear in managing epilepsy. The WHO cited a study by the Obafemi Awolowo University Teaching Hospitals Complex of the Nigerian female population that revealed that women with epilepsy are more at risk of becoming victims of sexual violence and abuse. The study published in the Epilepsy and Behaviour Journal stated that they also tend to be economically disadvantaged, characterised by living in poor housing conditions compared to women without epilepsy.

Institutionalised stigmatisation has perpetuated discrimination in the epilepsy community regarding access to education, employment opportunities and applying for a driver's license due to misleading knowledge of the cause, characteristics, and genetic factors surrounding epilepsy. Constant marginalisation in all aspects of daily life only drives individuals with epilepsy to detach themselves from the local population, leading to anxiety, depression, and suicide. Moreover, stigmatisation can also affect family and friends by reducing their mental health and quality of life.

Central nervous system infections such as encephalitis and meningitis can obstruct the brain's electrical activity and cause an imbalance in certain chemical levels in the brain, such as neurotrans-mitters, producing seizures. Up to 5 percent of epilepsy cases worldwide are cause

Strategies for improving lives of epilepsy community

Persistent epilepsy discrimination and treatment disparities in the healthcare system can quickly escalate to a severe public health crisis. Addressing the global burden of epilepsy requires a multifaceted approach that involves improving access to appropriate care, reducing stigma, and increasing education and awareness of the condition. Bridging the epileptic treatment gap is critical for reducing the economic and social consequences of epilepsy.

Enhance public awareness to reduce stigma

Currently, there are several initiatives to promote public awareness of epilepsy and minimise the rampant stigmatisation surrounding the condition. WHO spearheaded the Global Campaign Against Epilepsy in 1997, which is conducted jointly with the International League Against Epilepsy (ILAE) and the International Bureau for Epilepsy (IBE) that educates the public on epilepsy and encourages governments to strengthen the healthcare system by improving diagnostics and care services and devising prevention-oriented public health policies. The campaign also advocates partnerships and collaborations with relevant stakeholders in reducing the global burden of epilepsy.

The international community observes Purple Day on March 26 annually to encourage an improved understanding of epilepsy in terms of recognising the signs of a seizure and how to support individuals with epilepsy go through their daily activities. Additionally, November is commemorated as Epilepsy Awareness Month, which includes the promotion of epilepsy awareness on social media and investing in research to produce new technology and better treatment options.

Prevention of epilepsy among risk groups

Identification of vulnerable groups with a tendency to develop epilepsy is essential to ensure accurate medical intervention and optimise healthcare resources. Nearly 20 percent of cases of epilepsy in children are due to birth complications such as low birth weight, pre-eclampsia, maternal nutrient deficiency, and perinatal infection. Proper pre-postnatal care and obstetrics services can reduce the chance of epilepsy development.

An average of 5 percent of epilepsy cases occur among patients with traumatic brain injuries due to road accidents, falls, and assault. Improved safety in terms of traffic and infrastructure is essential to mitigate this risk factor. Studies have shown that stroke is a significant risk factor for epilepsy, particularly in older adults. This is because stroke can damage the brain tissue and disrupt electrical activity, causing seizures. Since stroke is attributed to high cholesterol levels, a healthy diet and active lifestyle must be practised to decrease the risk. In addition, primary healthcare facilities should be fortified to provide timely intervention in treating diabetes and high blood pressure, while discouraging smoking and alcohol consumption.

Central nervous system infections such as encephalitis and meningitis can obstruct the brain's electrical activity and cause an imbalance in certain chemical levels in the brain, such as neurotransmitters, producing seizures. Up to 5 percent of epilepsy cases worldwide are caused by bacterial and viral infections, such as neurocysticercosis caused by pork tapeworm and cerebral malaria, which is more prevalent in LMIC. Local governments must roll out public health measures such as vector control, early screening, improved hygiene, and vaccinations to reduce seizure-inducing communicable diseases.

International collaboration in realising universal health coverage

Recently, the World Health Assembly adopted the "Intersectoral Global Action Plan on Epilepsy and Other Neurological Disorders" to promote a multinational and coordinated effort in combating epilepsy worldwide. A cross-sectoral approach involving health organisations, social protection groups, and labour and education advocates is proposed to provide integrated care for people with neurological disorders. The plan emphasised incorporating universal health coverage (UHC) as a comprehensive measure to improve the care and quality of life of individuals with neurological disorders.

UHC significantly reduces the burden of epilepsy by promoting early diagnosis, improved access to antiepileptic drugs, strengthening healthcare infrastructure, and promoting community-based intervention such as support groups to assist people with epilepsy and their families. WHO estimated up to 70 percent of epilepsy patients could become seizure-free after accurate diagnosis and prescription of antiseizure medicines, costing as little as US$5 per year and giving epileptic people a chance at everyday life.

Better healthcare services

The existing training module on medical and allied health professionals should be revamped to integrate more emphasis on epilepsy as well as the management of convulsive and non-convulsive seizures. Improving healthcare workers' knowledge of epilepsy can be facilitated through the WHO Mental health gap action program (mhGAP). The programme aims to enhance the capacity of health systems to provide quality mental health care and evidence-based guidance and tools to help health workers identify, diagnose, and manage epilepsy patients.

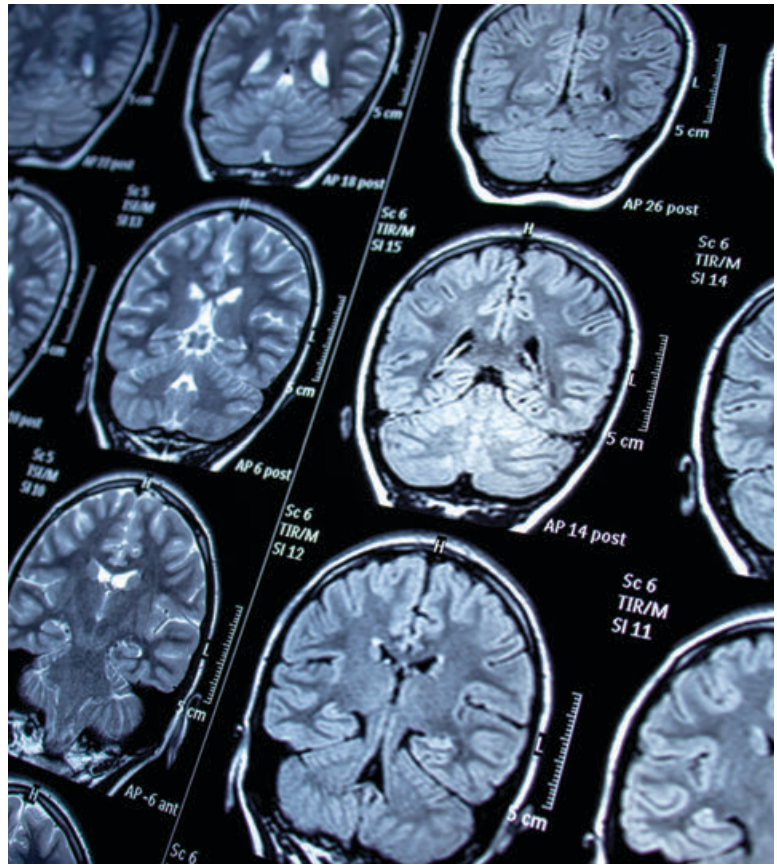
Healthcare providers, specifically in LMIC, should extend training curricula to include community health workers, nurses, midwives, social workers, and teachers so that they can recognise epilepsy symptoms. This initiative was carried out in India where the Indian Council of Medical Research funded a three-year project consisting of surveys and training for schoolteachers to address epilepsy stigmatisation and provide treatment to children with epilepsy. Furthermore, ministries of health should consider incentivising healthcare workers to participate in neurology training courses to enhance their proficiency in epilepsy care and provide additional benefits if they are placed in primary care facilities in rural settings.

The ministries should also invest in nurturing local professionals so that they can identify and refer epilepsy cases in all sectors, such as psychologists, psychiatrists, and educators. A local and international clinical network is also vital for sharing knowledge and seeking support, especially when dealing with rare types of epilepsy.

Government policy and networking

Politicians, governments, and civil society consisting of epilepsy advocacy groups should be more actively engaged in the decision-making process related to epilepsy prevention, treatment, and care. Recommended policies should include the establishment of national and regional collaborations between government and non-government organisations and strengthening the political commitment to implement laws that reduce the stigmatisation of people with epilepsy.

Adequate funding and resource allocation



Central nervous system infections can obstruct the brain's electrical activity, producing seizures.

is crucial to ensure people with epilepsy can obtain quality care without any financial hardship. Therefore, governments are recommended to create a specialised budget for epilepsy and consistently provide epilepsy care funding for underserved populations. Local finance and treasury ministries should also design a social protection programme that provides disability payments to people with epilepsy, their carers, and their families.

Governments can cultivate networks with academic and research institutions to foster cooperation for exchanging knowledge, devise sustainable initiatives, and coordinate responses to local epilepsy prevalence. A cross-sectoral approach involving the education and labour sectors is essential to ensure that nondiscriminatory practices in education delivery and employment screening are in place.

Tailoring a multisectoral approach

The WHO's report emphasises that every country can tailor a multisectoral approach to epilepsy according to the context and its national priorities in order to maximise benefits for society and enhance the lives of persons with epilepsy. ■

THE CONVERSATION

What are microaggressions? And how can they affect our health?

Author: Mahima Kalla, Digital Health Transformation Research Fellow, The University of Melbourne

This article was published in The Conversation in April 2023:
https://theconversation.com/what-are-microaggressions-and-how-can-they-affect-our-health-193309
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Microaggressions are seemingly innocuous verbal, behavioural or environmental slights against members of minority communities.

The term microaggressions was coined by American psychiatrist Chester Pierce in his 1970 essay Offensive Mechanisms. He explained:

Most offensive actions are not gross and crippling. They are subtle and stunning. The enormity of the complications they cause can be appreciated only when one considers that these subtle blows are delivered incessantly. Even though any single negotiation of offence can in justice be considered of itself to be relatively innocuous, the cumulative effect to the victim and to the victimiser is of an unimaginable magnitude.

Most offensive actions are not gross and crippling. They are subtle and stunning.

While originally conceived in the context of race relations, microaggressions may also relate to gender, sexual orientation, religion, disability status, weight, or a combination of these.

What do microaggressions look like?

Consider these situations. All are real-life stories from people of colour I know (used with their consent):

- a woman walks into a hairdresser's shop. The shop is empty and the hairdresser is cleaning hair from the floor. The woman asks if she could get a haircut – if not right now, perhaps another day. The hairdresser says she can't help as she is not taking on any new customers.
- a man is waiting to pick up his partner in his car, parked on a side street near his partner's apartment, which is located in a predominantly white suburb. He is minding his own business sitting in his own car. Each time a person walks by, they stare at the man, and keep staring as they walk past.
- a couple is waiting to order coffee in a busy city cafe. The server is chatty with the white couple ahead of them. When they progress to the front of the line, the server is curt, avoids eye contact, and is eager to move on to the next customer. After placing their order, the couple stands where other patrons had previously waited for their orders. A staff member comes over and asks the couple to wait outside instead.

Examples of microaggressions towards other identity minorities may include moving away from a trans person on public transport, or not considering wheelchair accessibility needs when booking venues for meetings or events.

Each of these incidents in isolation may not seem particularly harmful, and some may even chalk them up to coincidences or "reading too much into a situation".

However, when experienced repeatedly, daily, or even multiple times a day, they can harm people's psychological and physical health.

Microaggressions are subtle

Microaggressions are often so subtle that even the victim may not realise that they have just experienced one until later – likely because microaggressions are often accompanied with dissociation (i.e. disconnection from thoughts, feelings or personal sense of identity).

As psychologist Ron Taffel explains, dissociation is a "psychically handy" tool that helps ease the pain, *making sure that the moment does not fully register or does its damage until a less vulnerable time later – perhaps during a quiet time alone…*

Microaggressions affect our physical and mental health

Microaggressions can occur in all environments, from the workplace, to shops, medical clinics, schools, universities, even while walking or parked on the

street. So victims often become increasingly self-conscious and hypervigilant.

The impacts of microaggressions may extend beyond psychological burden and also impact the body's physiological state.

When humans perceive a sense of imminent danger, the body's "fight, flight, freeze response" is activated. While this is a useful evolutionary mechanism to protect us from physical danger, when triggered frequently – as may be the case with microaggressions – it can take a toll on the body and contribute to issues such as high blood pressure, anxiety, depression and addiction.

Racial microaggressions have also been associated with suicide risk. One study found experiencing race-related microaggressions leads to more symptoms of depression, which in turn increases thoughts of suicide.

Microaggressions may deter people from seeking help

Health issues among victims may be further compounded when microaggressions are experienced in the health-care sector. A study from 2011 found that sexual orientation-related microaggressions (for example, derogatory comments or assumptions about a person's sexual orientation) reduced the likelihood of LGBTIQ+ people seeking psychotherapy and impacted their attitudes towards therapy and therapists.

Research involving Indigenous people also suggests microaggressions impact help-seeking behaviours in this group (such as not scheduling or attending regular health-care appointments), which subsequently increases the risk of hospitalisation.

Indirect effects of microaggressions

Microaggressions may also impact people's health status indirectly. Research suggests repeated microaggressions can cause marginalised groups to internalise feelings of inadequacy.

Over time, this internalised oppression may impact their academic and professional success, and consequently socioeconomic status.

Sceptics and victim-blaming

Sceptics often attribute microaggressions to victims' "negative emotionality" – a tendency to show negative affect and always feel like a victim.

However, proponents argue that this is a form of victim-blaming that further compounds the harm caused by microaggressions.

Clinical psychologist Monnica Williams suggests that the years of unchecked microaggressions themselves could be the very thing to cause negativity in marginalised people.

Victims' responses to microaggressors

Victims' responses to microaggressions can vary among people, and among events experienced by the same person. Victims have to regularly decide whether to let it slide or confront the aggressor.

The discourse on microaggressions in social media seems to be on the rise. One study found that there was a drastic increase in the usage of the term "microaggression" on Twitter between 2010 and 2018. Social media discussions and other online spaces may help victims (particularly younger people) to respond more critically to microaggressors.

Other technological innovations, such as the virtual reality-based intervention Equal Reality, are also helping people walk in another's shoes, recognise unconscious bias, mitigate risk of microaggressions, and promote more inclusive workplaces. ■

Navigating the next wave of surgical robotics

In a decade defined by disruption, the next market leaders will combine a deep understanding of growth opportunities and customer needs with fast progress and a clear long-term perspective

Promising improved precision and visualization for surgeons, and better experiences and outcomes for patients, investments in surgical robotics have swelled over the past 10 years. It's now a $3 to $3.5 billion global market, up from around $800 million in 2015.

What does the next decade hold? From artificial intelligence (AI)-assisted to fully autonomous robots, advancements in technology and hardware will revolutionize operating rooms. Leading players, such as Intuitive in general surgery, or Stryker and Zimmer Biomet in orthopedics, are expanding pioneering platforms into new areas. Other large companies, like Johnson & Johnson, are making a play for the burgeoning market through acquisitions, partnerships, and heavy investments in developing their own systems. And start-ups and small to midsize companies are challenging the status quo. Recent breakthroughs are sparking robust M&A activity and a frenzy of VC funding that will fuel the next wave of transformational developments.

In the US, most surgeons are eager to embrace these new technologies. Bain research shows that across specialties that we surveyed, 78% say they are interested in surgical robotics (see Figure 1).

Despite significant advances and rising interest, there's still plenty of room to grow: Today, around 44% of surgeons say they aren't using robotics in hip replacement procedures at all. And more than a third of surgeons say they aren't relying on robots during the majority of a knee replacement procedure.

Several obstacles stand in the way of scaling existing surgical robotic systems. Surgeons at both ambulatory surgery centers (ASCs) and hospitals cite a lack of efficiency, due to longer surgery time, as the largest hurdle. In addition, they say limited clinical evidence and high ongoing and up-front costs hinder their adoption. That's not to mention many procedures where robots are still in development or face technological obstacles.

A market this ripe with potential begs many questions: How can OEMs help customers overcome the barriers to adoption? Where are the greatest opportunities for growth? And how can OEMs adapt their portfolio at the pace of change, winning share as competitors and technological developments continuously shake up the landscape?

In a recent survey of 200 surgeons and procurement specialists, we examined the state of robotic surgery across several major specialties that are primed for considerable growth, including general surgery, cardiology, orthopedics, neurosurgery, and vascular surgery. Their responses provide a glimpse into the future of surgery, from where the next wave of disruption will hit to what it will take to boost adoption.

Ready for robots?

With surgeons already utilizing robotics in many procedure types, general surgery will remain the most established market. But robotics is starting to take hold in other specialties. Several indicators suggest orthopedics and neurosurgery will continue to grow substantially in the coming decade (see Figure 2).

Given the advanced technologies available, general, orthopedic, and neurosurgery are primed for greater adoption. Existing platforms, such as hip and knee offerings, will likely see usage accelerate. For some procedure types in these specialties, such as spinal surgery, residents are already training on platforms, indicating growth is ready to ramp up. Here, OEMs have a clear opportunity to connect with customers, increasing training and awareness. In other procedures that lack substantial offerings, OEMs are actively working to leverage existing platforms. For

Figure 1: Percentage of surgeons interested in surgical robotics

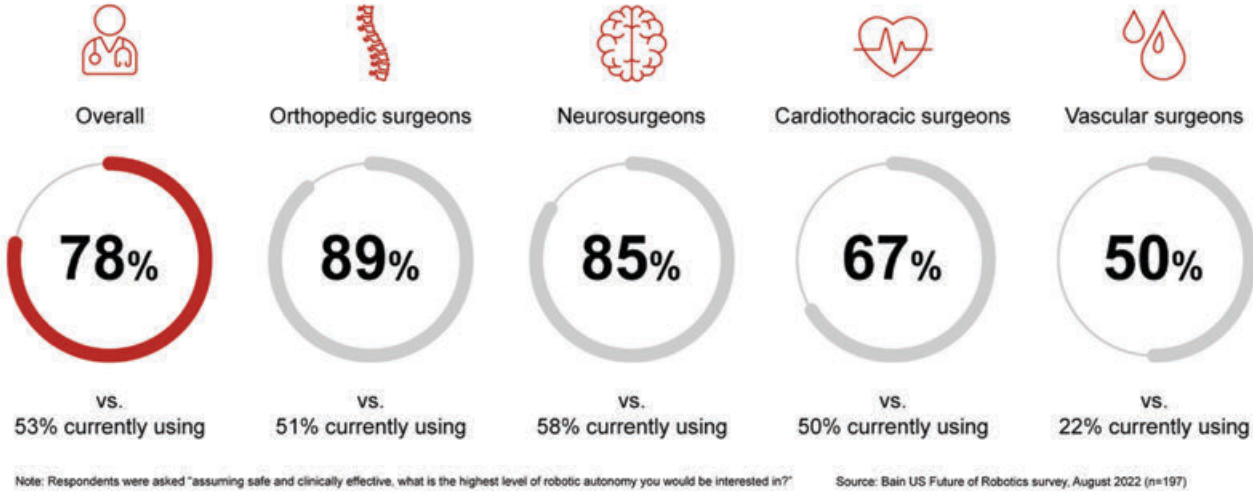


Figure 2: 10-year growth projection by specialty type

Note: Robotics include robotic-assisted navigation and imaging

Source: Bain US Future of Robotics survey, August 2022 (n=197)

instance, Zimmer Biomet has brought its Rosa technology for knee replacements to spine and brain procedures. And as players like Johnson & Johnson bring new systems to market, increased competition will help lower the barriers to adoption.

On the other hand, some areas, such as vascular surgery and cardiology, will grow at a much slower pace. Technology limitations, coupled with procedural complexity, will make it difficult to deploy viable robotics solutions in the near term. But given the clip of innovation, we expect technological advancements to surmount procedural complexity over time.

For example, soft robotics could eventually solve difficult access and navigation issues in endovascular surgery. For procedures in sports medicine, foot and ankle, and more, the development of smaller, mobile robotic solutions may enable customers to overcome hurdles like high costs and long setup times. And, where robotics aren't as compelling an option yet in vascular surgery and cardiology procedures, new digital solutions that incorporate intra-operative device guidance, AI-based planning, and other cutting-edge features will fill the gaps in the interim. While there is a longer path of applicability testing, training, and adoption ahead, early movers will focus on near- and long-term strategies today.

Taking a customer-centric approach

Across specialties, leading medtech companies will take a customer-focused lens to how they develop and sell robotic systems. They will not only help customers overcome barriers to adoption, but also build enticing, differentiated offerings that meet customers' most critical needs.

First and foremost, leading OEMs will address prohibitive costs. According to our survey, surgeons at hospitals and ASCs ranked up-front equipment costs as both the most important consideration when making a purchase and the third largest barrier to adoption. Flexible financing options can help. For instance, according to our survey, hospitals prefer all-cash financing, whereas nearly half of ASCs want capital leases. In addition, future market leaders will simplify their robotics offerings as more options become available, enabling a smaller footprint and lower cost solutions, such as platforms that can perform multiple procedures.

Beyond costs, it will be key to tailor solutions to customer needs. While purchasing criteria and barriers to adoption are relatively consistent across the board, there are subtle but meaningful differences by site of care, decision maker, and specialty.

Site of care. Compared with hospitals, ASCs are particularly interested in the ability to perform procedures with less in-room surgical support. Similarly, ASCs are more likely to be held back by limited interoperability within the existing infrastructure of their facilities. ASCs also express the need for vendor support for routine maintenance, whereas hospitals are more likely to want training for their employees to handle servicing.

Decision maker. Health system executives, hospital and faculty executives, chiefs of surgery, and staff surgeons make more than 60% of all purchasing decisions for surgical robotic systems at hospitals and ASCs. Of course, each has different priorities. Surgeons rank improved precision, visualization, and clinical outcomes as their top three factors when deciding to use surgical robotics. Procurement teams also rank clinical outcomes as a top factor when determining robotics' return on investment, but many prioritize revenue growth and surgeon recruiting and retention as well.

Specialty. In areas like orthopedics and neurosurgery, where the technology is more advanced and surgeon interest is higher, leading OEMs will invest in the future functionalities that matter most to customers. Orthopedic surgeons, for instance, say they are most interested in performing a greater variety of surgical procedures with one robot. Neurosurgeons, on the other hand, prioritize the ability to operate remotely over greater distances, providing care from miles away. While surgeons across specialties want these features, tapping into nuanced priorities can help OEMs differentiate in an increasingly competitive landscape.

How OEMs can propel the future of surgery

The horizon of possibilities in surgery is seemingly endless. The only certainty is that in 10 years, surgery will look drastically different from how it looks today.

AI, 5G, and augmented reality technologies are already making the previously unthinkable possible, and companies are moving in rapidly to seize their potential. OEMs must be ready to act quickly. They will need to consider competitive moves for the next three to five years, as well as their more aspirational strategic outlook for the next 10.

The next generation of industry leaders will be those that develop a comprehensive "today forward, future back" strategy. They will focus on today's needs by facing the unvarnished truth about their level of maturity in robotics and considering how to maximize the potential of the current business.

But, at the same time, these companies will keep a close eye on tomorrow's opportunities and disruptions. They will establish a perspective on the future of the market, determining not only if and how disruption could hit their current market, but also where and how they want to play. They will evaluate customer needs by segment and their portfolio accordingly. With a clear vision, they will decide where to invest internally or partner so they can develop the best-in-class capabilities and technology needed to get to their destination.

This article was written by Mayuri Shah, Partner with Bain & Company in New York, Jason Asper, Partner with Bain & Company in Chicago, and Cate Miller Goldstein, Practice Senior Manager with Bain & Company in Boston.

PGT-A

What is PGT-A?
PGT-A stands for Pre-implantation Genetic Testing for Aneuploidy. As its name suggests, it is a genetic test performed on your embryos before their implantation. This test allows for the screening of aneuploidies or an abnormal number of chromosomes, which may cause implantation failure and miscarriage. Aneuploidy may also lead to various chromosomal disorders such as Down's syndrome and Turner syndrome.

How is the test performed?
Routine IVF cycle is performed and the subsequent embryos are cultured to the blastocyst stage (Day 5 & 6), at which point several cells are biopsied from the blastocyst. These cells are sent for genetic testing while the blastocyst is cryopreserved for later use.

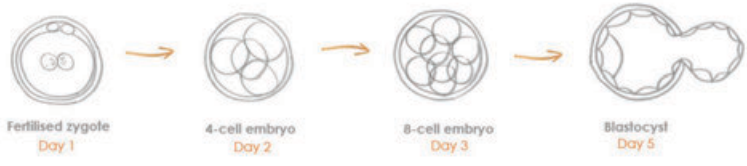


Figure 1. Embryo development

Is biopsy harmful to my blastocyst?
When the biopsy process is carried out on the blastocyst which has roughly 100-200 cells, the risk to the blastocyst is minimal, as only a few cells are removed during the process (normally 3-6 cells). In the past, biopsies were performed on Day 3 embryos, which would typically have 8 cells. As expected, the success rates then were lower, as by removing even one cell from the 8-cell embryo would entail a 12.5% loss of the embryo's cell number, compared with 3% at the blastocyst stage. An additional advantage of blastocyst biopsy is the additional genetic material for testing (3-6 cells vs 1 cell), which would entail a more accurate genetic result for the embryo. As such, a majority of IVF centres have moved towards blastocyst biopsies for PGT-A testing, where the risk of harming the embryo is minimal.

Is PGT-A for me?
The percentage of abnormal embryos increases with maternal age, and to a lesser degree, paternal age. This is especially true for women above 35, in which the rate of attaining abnormal embryos increases dramatically. Furthermore, PGT-A will benefit couples who have had recurrent miscarriages or implantation failure. As aneuploid blastocysts that will cause adverse outcomes in pregnancies are deselected, even if you do not fall in the above groups, PGT-A will allow you to have a higher chance at a pregnancy and a shorter time-to-pregnancy.

Figure 2. Increased percentage of abnormal embryos as maternal age increases

The percentage of abnormal embryos increases with maternal age. This explains why the chance of a pregnancy for older patients is lower. However, once we identify the normal embryo, the chance of pregnancy will be the same for both groups of patients.

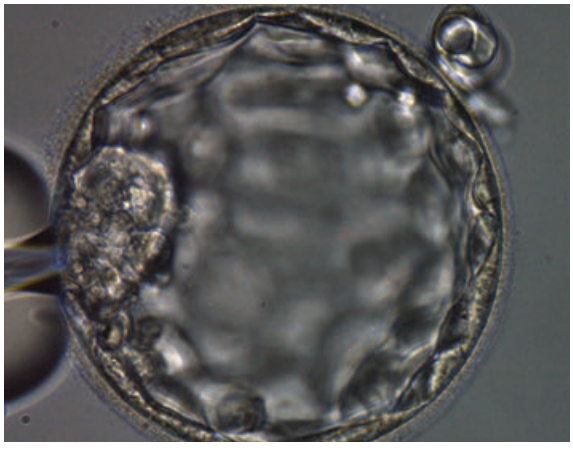
What are the benefits of PGT-A?
- Higher implantation rates
- Reduce the risk of adverse outcomes in pregnancies
- Single embryo transfer that reduces complications associated with multiple pregnancies
- Decreased time to pregnancy
- Increased cost-effectiveness

Who will benefit from PGT-A?
- Women of advanced age
- Women who experienced recurrent implantation failure
- Women who had more than one miscarriage
- Men with severe infertility (oligoasthenoteratozoospermia, OATS)
- Couples with previous history of children with aneuploidy
- All who should do a routine screening

PGT-M

What is PGT-M?
PGT-M stands for **Pre-implantation Genetic Testing for Monogenic Disorder**. Similarly to PGT-A, it is a genetic test performed prior to implantation. However this test is a targeted screening of single gene inherited diseases for both rare and more common diseases such as thalassemia, muscular dystrophy, ATRX syndrome and etc. With this, the chance of passing on specific single gene disorder can be reduced or prevented.

What's more, PGT-M can be performed along with Leucocyte Antigen (HLA) typing in order to identify embryos that are HLA-compatible for children who need a bone marrow or cord blood transplant.

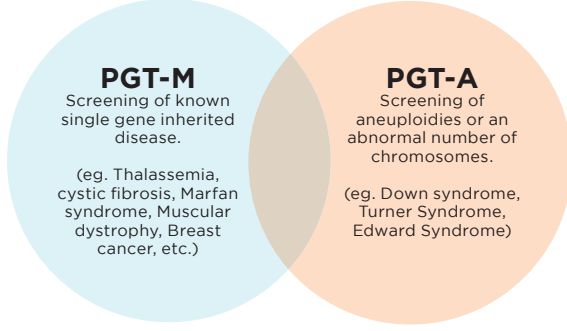


How is the test performed?
PGT-M requires a preparation test prior to IVF cycle. Genetic counselling with our in-house genetic counsellor will be carried out and family histories will be accessed. DNA samples from the couple and their family member(s) will be collected (blood/ saliva) then tested in advance. Once the preparation is ready, similar to PGT-A, routine IVF is then performed and the subsequent embryos are cultured to the blastocyst stage (Day 5 & 6), at which point several cells are biopsied from the blastocyst. These cells are sent for genetic screening while the blastocyst is cryopreserved for later use.

What are the benefits of PGT-M?
- Reduce the risk of passing on affected gene(s) to next generation
- Decrease time to pregnancy
- Increase cost-effectiveness
- Assist in the search of a HLA-compatible donor to the affected child

Who will benefit from PGT-M?
- Couples with a history of pregnancy termination(s) due to a serious genetic disorder
- Couples who have children with genetic disorders
- Couples who want to perform HLA matching
- Couples who have a family history of any inherited genetic condition
- Couples with inherited mutated gene(s) (pre-marital screening / carrier screening test)

How does PGT-M differ from PGT-A?



Dr. Aaron Chen Jang Jih
Lead Preimplantation Genetic Testing Scientist.
Sunfert International Fertility Centre

Acne Scarring Is Not Just Skin Depth

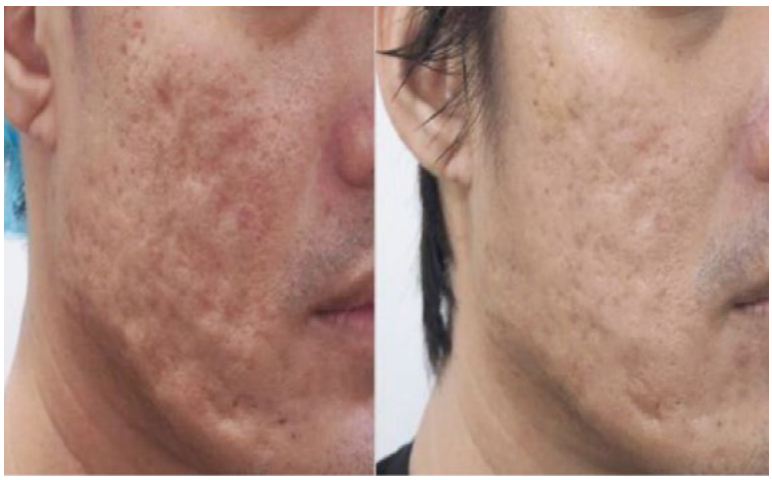


Image (1) is the result attained after two sessions over a period of eight months.

Acne scarring is often the result of delayed and or inadequate medical treatment but it is undeniable that it may even develop despite appropriate intensive therapy. Collagen and other tissue damage, secondary to inflammation of acne, leads to permanent skin texture changes and fibrosis. Acne scarring is a therapeutic challenge to clinicians as many treatments may be only partially effective, leading to patient disappointment and frustration. The detrimental effects of acne scarring are not only limited to impaired physical appearance. Rather, acne scarring has also been associated with depression and other mental health disorders, suicidal ideation, emotional debilitation, embarrassment, poor self-esteem and general social impairment.

Acne scar formation is determined by inflammation depth and duration. Multiple acne scar grading classification systems of varying complexities have been introduced. The most basic, practical system divides atrophic acne scars into three main types namely ice pick, rolling and boxcar scars. It is common for patients to have more than one type of scar.

A plethora of treatment options have resulted from the need to treat various acne scar types, variability of responses noted in various skin types and increasing popularity of minimally invasive modalities.

Preventing and treating acne scars has always been my passion as I truly believe that the scar is not just skin depth. Early accurate clinical diagnosis and targeted interventions are of the utmost importance in preventing acne scars from setting in. The awareness of seeking early treatment for acne is still lacking in the general population in spite of well-researched and documented clinical practice guidelines for acne management. In my clinical practice, I am very particular in choosing the appropriate treatment protocol to curb acne at the earliest stage. With the advent of a vast armamentarium of clinical approaches for acne scars, choosing the right one remains a tough challenge for clinicians. Over time I have tried and tested multiple modalities and I have come to realise that a combination of different approaches always leads to the best outcome.

Different treatment modalities have been used for the revision of atrophic acne scarring, with varying degrees of success. Many controlled trials have demonstrated that moderate to severe atrophic acne scars can be safely improved through ablative fractional CO2 laser resurfacing (fractional laser skin resurfacing, FLSR). Although FLSR is still the most popular therapeutic modality for the correction of acne scars, it is not always effective in all types of atrophic lesions, the most common type of defects encountered after inflammatory acne. Over the past decade, non-ablative laser resurfacing and radiofrequency micro-needling have been shown to create some improvement in the appearance of these atrophic scars.

There has also been interest in non-autologous augmentation by way of injections of hyaluronic acid (HA), polymethylmethacrylate microspheres (PMMA) and calcium hydroxyapatite (CaHA) to improve atrophic acne scars.

Multiple clinical and histologic studies have documented the safety and efficacy of CaHA microspheres. By its very composition, CaHA is designed to provide immediate correction and long-term bio stimulatory neocollagenesis. Over time, the gel is absorbed, fibroblasts appear and the process of neocollagenesis begins, stimulating the gradual growth of the patient's own collagen.

In my clinical experience, the synergy of Potenza™ (CynoSure) micro-needling radiofrequency technology with the bio-stimulating effect of Radiesse® (CaHA-based filler) has given me excellent results for atrophic acne scars. At least two to three sessions over a period of three to four months will be required for optimal results.

Dr UsHa Hoh is the CEO & Senior Medical Director Of MX Clinic and APAC Trainer & International Speaker For Merz Aesthetics.

How to clean hair after hair restoration/transplantation?

Hair transplantation, the surgical transfer of follicles from one part of the body to another, has emerged as a popular treatment for baldness and other forms of hair loss. However, hair transplantation, depending on the case, can be a complicated procedure, so it's best to educate yourself or consult an expert before beginning treatment.

How to clean your hair after a hair transplant

- Lotion should be applied to the transplanted area and left on for 15-30 minutes. The lotion soothes the skin around the grafts and the donor area, which speeds healing and removes any remaining signs of blood. Rinse the scalp with warm water after 15-30 minutes. A medicated shampoo is used to wash both the donor and transplanted areas. Apply some shampoo to your scalp and work it into a lather.
- Towel dry your hair after washing it. Avoid rubbing the area. When your scalp feels dry, you should use a moisturiser. Those who experience persistent dryness between washes can also benefit from using a moisturiser.
- After 14 days, you can resume your regular hair care routine. You can wash your hair more than once per day if you need to.
- Please check the ingredients of any hair product you intend to buy to make sure it doesn't have silicone, perfume, or artificial dyes.

What to use on for your hair after regrowth

For the first few weeks following restoration, baby shampoo is recommended. It's mild and effective in avoiding irritation in the delicate transplant region. Wash it with a solution of baby shampoo and water from a cup. Some natural hair treatments that work well for restored hair, other than baby shampoo, are:

- Tea Tree Oil
- Avocado Oil
- Coconut Oil
- Argan Oil
- Peppermint Oil

When to clean new hair grown after a transplant

After having a hair transplant, there is a 48-hour waiting period. Before having surgery, you can wash your entire body if you choose. The patient can begin shampooing their hair three days following the transplant. For the first five days, you should take it easy. A transplant may be lost if it is scrubbed too vigorously after surgery. Be careful not to put your head directly under the water, since the pressure from some shower heads may be rather high.

The patient should also be very careful when actually bathing themselves. Squeeze some shampoo into your palm, work it up into a good lather between your fingers, and then gently rub the shampoo into your hair. After seven days, if any scabs remain, apply conditioner to the affected area and massage in a circular manner to encourage their removal.

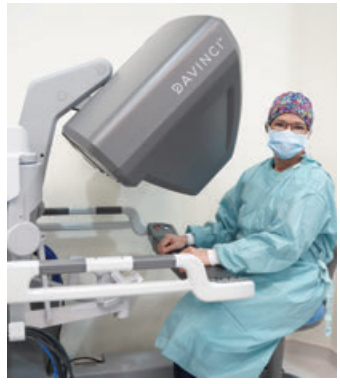
After getting a hair transplant, is it ok to massage your scalp while washing your hair?

Ten days following surgery is when people should try a scalp massage for the first time. Even so, gentle pressure is required. This is because the scalp needs at least 10 days to recover from the surgical procedure. There's a good possibility the transplanted hair follicles will be destroyed if you don't wait the recommended 10 days.

Datuk Dr Inder is an aesthetic physician at Klinik Dr Inder in Malaysia.

Robotic surgery in gynaecology:

A safe and available option for women



Minimally invasive surgery (MIS), or keyhole surgery, has been widely used over the last two decades. Now the gold standard and a preferred route in many gynaecological operations, it has replaced open abdomen surgery for benign gynaecological conditions. Its proven benefits include smaller incisions, minimal pain, an earlier return to normalcy, and less risk of wound infection and adhesion formation.

Robotic-assisted keyhole surgery in gynaecology is an extension of MIS. Its use has been refined and expanded in recent years due to advances in robotic technologies. Based on the current incremental deployment rate of the robotic system across hospitals worldwide and in Southeast Asia, it has gained more traction with increased popularity amongst gynaecologic surgeons. This growing trend has also been attributed to advanced training opportunities and a shorter learning curve to master robotic surgery, especially for inclined endoscopic surgeons. Compared to a conventional keyhole and open abdomen surgery, robotic surgery provides an excellent 3-dimensional view of the operating field, as well as precise wrist-like movements of the robotic instruments, miming the intricate manoeuvres of human hands. Together, these offer the surgeon greater control of the surgery, minimising hand tremors and providing greater precision, accuracy, and enhanced safety during surgeries. These advantages are paramount for gynae-oncologic and fertility preservation surgery. In the hands of learned and experienced robotic gynaecologic surgeons, the available data consistently reports minimal blood loss, fewer complications, shorter hospital stays, and, most importantly, enhanced patient comfort, especially after oncologic surgery compared to conventional surgery.

What gynaecologic surgery is best performed robotically?

Technically, all spectrums of gynaecologic procedures for laparoscopic surgery can be done robotically, benefiting all women. However, due to its financial implications (higher cost), there are some reservations and considerations in case selection.

Dr Sharifah Halimah Jaafar is a Consultant Obstetrician & Gynaecologist, Endometriosis Specialist, Minimal Access & Robotic Surgeon at the Gleneagles Hospital Medini Johor.

Robotic surgery could be considered a highly safe option and a more cost-effective surgical tool than conventional keyhole surgery for women who have to undergo complex gynaecology surgery, which requires higher technical precision, especially in cases of severe or deeply infiltrating endometriosis, uterine fibroid with fertility preservation, deep pelvic surgery, complex hysterectomy, and surgery for gynaecological malignancy. It has also been proven beneficial for those with associated medical issues or comorbidities, such as morbidly obese patients with a body-mass index (BMI) of more than 30 kg/m2 or patients with underlying lung problems. The application of robotic-assisted surgery in such cases has reduced both the numbers of traditional open surgery and the risk of conversion to open surgery from traditional keyhole surgery; both should be considered when performing a cost-benefit assessment of using the robot.

What does this news mean for women and women's healthcare?

Fear of pain and surgical complications, loss or reduced productivity after surgery, and limitations in daily functioning after open abdomen surgery are among the most common reasons for hesitancy and delays in undergoing a needful surgery in many women. Such indecisiveness might affect the prognosis and impair the overall outlook of their illness, particularly for those diagnosed with malignant conditions requiring earlier surgery and others where fertility preservation is concerned. The enhanced safety and greater performance at surgery offered by minimal access and robotic technology could allay the fear and increase confidence in some women when making timely healthcare decisions.

Depending on the affordability and accessibility of facilities and the skillset of surgeons, the addition of robotic surgery in the armamentarium of gynaecological surgery now provides women with more expansive options for minimal access and safe surgery should they require gynaecological surgery for benign or malignant conditions.

Face Thread Lift

Ageing is a disease that affects us all. As we grow older, our skin loses its elasticity and begins to sag, causing wrinkles and fine lines to appear. While this may be a natural part of the ageing process, many people seek out aesthetic treatments to help rejuvenate their appearance. One such treatment that has become increasingly popular in recent years is the threadlift procedure.

Threadlift is a non-surgical facelift technique that involves the use of fully-absorbable threads that are inserted beneath the skin to lift and tighten the facial tissues. The procedure is minimally-invasive, with minimal downtime, and little to no scarring, making it an attractive alternative to traditional facelifts.

Threadlift is suitable for people who are experiencing mild to moderate signs of ageing and are looking for a non-invasive way to rejuvenate their appearance. It is particularly effective for those who want to avoid surgery or who are not good candidates for surgical facelifts. Those with generally good health will benefit the most from the subtle impact of a threadlift. So it's best to talk to your doctor about your health condition prior to the procedure to ensure the treatment is best suited to your needs.

Generally, there are three main types of threads used in a threadlift procedure — mono, screw, and cog threads. Each has unique characeristics and is used to achieve different aesthetic goals.

1. Mono threads are smooth threads that are inserted beneath the skin and are used to stimulate collagen production. They do not have any barbs or hooks and rely on the body's natural healing process to create a supportive network of collagen fibres around the thread. Mono threads are most commonly used to treat fine lines and wrinkles and to provide overall skin rejuvenation.
2. Screw threads, on the other hand, have a spiral shape and small barbs that provide additional lifting and support to the skin. They are used to lift and tighten sagging skin and can be used on various areas of the face. Screw threads provide a more immediate lifting effect than mono threads and are ideal for patients with mild to moderate sagging.
3. Cog threads are the most advanced type of thread and have the most significant lifting capacity.

They have barbs that are designed to anchor into the skin, creating a strong and long-lasting lift. Cog threads are typically used for more severe sagging, such as deep folds and wrinkles, and provide the most dramatic results. They are most commonly used in the lower face and neck to create a more defined jawline and improve the appearance of jowls.

The procedure involves the use of special threads made of either polydioxanone (PDO), polylactic acid (PLLA) or polycaprolactone (PCL) that are inserted beneath the skin using a small needle. Once the threads are in place, they are gently pulled to lift and tighten the skin, creating a more youthful appearance.

One of the main benefits of a threadlift is that it is a minimally-invasive procedure that requires only local anaesthesia, meaning that the patient can return home on the same day. The procedure typically takes around 30 minutes to an hour to complete, depending on the number of threads required. The results are visible immediately after the procedure. However, the full effects of the procedure may not be visible for several weeks as the skin settles into its new position. The downtime for a threadlift procedure can vary depending on the individual and the extent of the treatment, but it is generally minimal compared to traditional facelift surgery. Some patients may experience mild swelling or bruising for a few days, but many are able to return to their normal activities with 24-48 hours.

Another benefit of a threadlift is that it can be used to target specific areas of the face, such as the eyebrows, nose, cheeks, jowls, and neck. This makes it a versatile treatment that can be customised to meet the unique needs of each patient.

Aftercare for threadlift is important to ensure proper healing and optimal results. Your doctor will likely provide specific instructions tailored to your individual needs, but here is some general advice:

1. Avoid strenous activities, including exercise, for the first few days after the procedure
2. Avoid smoking and alcohol for 1-2 weeks
3. Sleep with your head elevated for the first few nights to reduce swelling
4. Use cold compresses to reduce swelling and bruising
5. Avoid touching or rubbing the treated area
6. Avoid saunas, hot tubs and steam rooms for at least 1-2 weeks
7. Avoid facial treatments or massages for at least 4-6 weeks
8. Follow any other instructions provided by your doctor for optimal results and attend follow-up appointments with your doctor to monitor your progress and ensure proper healing

Despite all its advantages, it is important to note that a threadlift is not a permanent solution to the effects of ageing. The results typically last for around 12 to 18 months, after which the threads will dissolve and be absorbed by the body. Patients may choose to undergo the procedure again after this time to maintain their youthful appearance.

While threadlift is generally considered safe, there are some potential complications to be aware of. These may include bruising, swelling, infection, and thread migration. In rare cases, threads may break or become visible under the skin. Hence, it is important to choose a qualified and experienced medical professional to minimise the risk of complications.

Murall Clinic is an established aesthetic clinic in Malaysia which provides the latest state-of-the-art aesthetic procedures performed by a qualified and expert team of doctors. We are a multi-award winning centre that includes the acclaimed Face Lift (Non-surgical) Centre of the Year in Asia Pacific by GlobalHealth Asia-Pacific. Besides our Signature Facelift and Signature Noselift, Murall Clinic also specialises in various aesthetic procedures such as dermal fillers, botulinum toxin, skin boosters, and other treatments. With our custom-tailored management plan made specifically for you, we will reveal the beauty within you.

Dr Yip Henry
Education : MBBS (IMU)
Expertise background: Threadlift, PRP, Skin boosters, Bioidentical hormone replacement therapy

Murall Clinic Petaling Jaya
Pg-K3, Ground Floor, PJ 33, Lot 33,
Jalan Semangat, Section 13,
46100, Petaling Jaya, Selangor,
Malaysia

Murall Clinic Mont Kiara
Unit 09 , Second Floor, 163 Retail Park 8 Jalan Kiara,
Mont Kiara 50480 Kuala Lumpur,
W.P Persekutuan,
Malaysia

ChatGPT in Healthcare?

What are the potential benefits and pitfalls?
Healthcare leaders are trying to determine where ChatGPT, the new technology chatbot, could be most helpful and where it may cause harm.

The artificial intelligence-powered chatbot is being touted as a tool that could "transform" healthcare, as it is said to be capable of mirroring intuitive human conversation. According to OpenAI, the tool's creator, ChatGPT works by learning from human feedback. The tool is also said to be able to answer follow-up questions, admit its own mistakes, challenge incorrect premises, and reject inappropriate requests.

While the tool is still in its early stages, hospital and health system IT and physician leaders believe the technology has significant potential.

There are rare moments when you see a new technology capability and realise the future world will never be the same and will inevitably be transformed by this technology.

While the tool is still in its early stages, hospital and health system IT and physician leaders believe the technology has significant potential.

Still, there are plenty of questions surrounding how quickly the tool may start to be integrated into healthcare workflows and what its limits are. It is not a question of 'if' but rather 'how fast' and 'exactly how'.

AI being helpful to physicians and minimising the administrative EHR burden on physicians would be very valuable given the well-documented physician electronic health record (EHR) burnout.

The technology's strategy of constantly learning from what it is being asked could lead to privacy concerns in healthcare, as it could be used to de-anonomize patient data.

ChatGPT also sounds authoritative even when it is wrong. That is a major problem for critical activities — like healthcare — where the providers using such a tool will need to constantly evaluate the validity, accuracy, and added value of what's been suggested before acting on it.

Can ChatGPT be clinicians' Digital Assistant?
Several leaders have referenced clinical documentation as a key opportunity for ChatGPT to improve workflows.

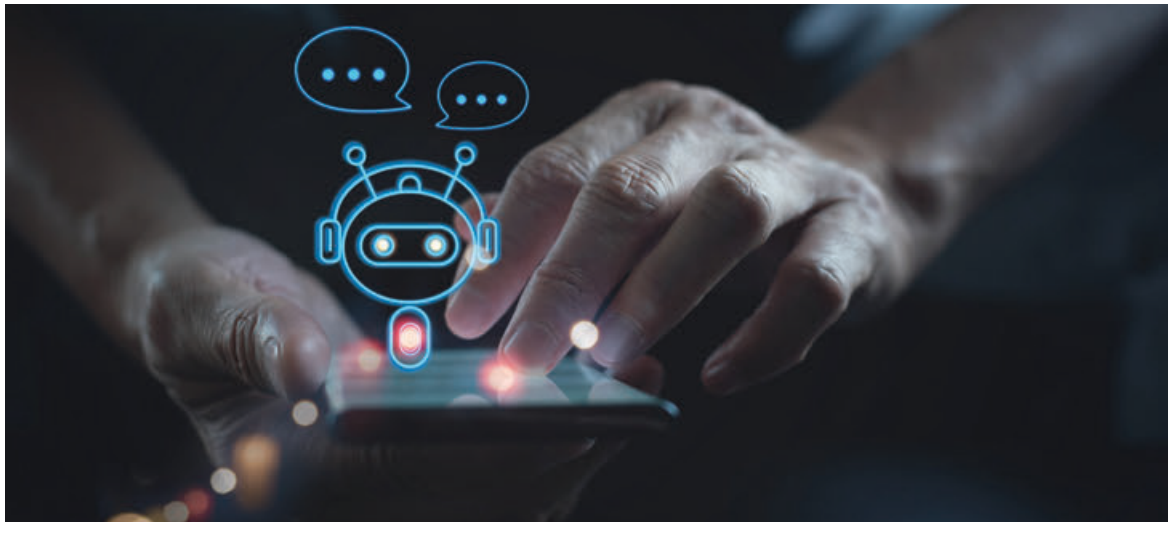
The ability to exponentially extend a person's reach and productivity is a truly exciting development. For the physician, as an example, the capability to use this type of generative AI to keep close tabs on an entire patient population as well as summarise individual encounter notes all while simultaneously cross-examining most academic literature and research studies to cite within visit documentation in near real time is just the type of major accelerator healthcare could benefit from.

The possibilities seem endless when looking at a beneficial digital assistant in almost any portion of the healthcare patient journey. From the very beginning of the journey, ChatGPT could assist with patient education, appointment scheduling, documentation, and general navigation. Prior to the visit, prior authorisation, appointment confirmations, and healthcare summaries could be prepared and delivered.

The tool could also help clinicians order tests, provide clinical decision support, and produce discharge instructions and follow-up.

Providers are suffering from "electronic data overload" amid the proliferation of patient portals and other third-party digital health apps, so AI chatbots can alleviate some of this burden and work alongside clinicians as a "virtual care assistant."

It may take on administrative tasks such as



providing responses to prior authorisations and insurance claim denials, which no clinical provider enjoys doing. It will also be able to enhance clinical decision-making by summarising patient records and extracting the pertinent information that is needed to meet the patient's care needs in the moment.

Still, AI is only as good as the data it employs, so that information will have to be accurate, up to date, and unbiased for the technology to be used in a field as important as healthcare. As it stands, ChatGPT has limited knowledge on anything after 2021, so some of its ideas may be outdated or incorrect.

AI Chatbots will be 'The future of medicine delivery'

The ROI is crystal clear on the sheer power of AI chatbots. AI chatbots are the future of the delivery of medicine. Just like automation has made flying airplanes significantly safer, so too will AI chatbots.

Other possible ChatGPT uses for hospitals and health systems include writing rough drafts of patient education content; quickly summarising lengthy medical records (with a HIPAA-compliant version of ChatGPT); and near - or real-time translation services.

The key, at least for now, will be to ensure that humans still review the work. ChatGPT is still learning, and like any learner, still needs some oversight.

Some risks as technology still novel

The tool's "newness" should warrant caution as ChatGPT could have security risks.

This is new technology and in most cases is a 'free' technology. So it also stands to reason that we really need to proceed cautiously and understand exactly how this technology works, determine how accurate it truly is, and verify from both a privacy and security perspective just what the implications of this 'free' technology could mean for patient and organisational data, and what privacy protections and recourse should exist for healthcare organisations.

When tested, ChatGPT could offer only limited support for languages other than English and could not identify political material, spam, deception or malware. ChatGPT also warns its users that it "may occasionally produce harmful instructions or biased content."

Healthcare needs to remain cautious about the tool's potential risk in generating false or inaccurate information.

But the risk can be significant due to the potential to generate inaccurate or false information. Therefore, its use in clinical medicine will require greater caution with lots of clinical collaboration and input into the specific clinical use cases.

This technology can possibly be used to answer patient-related administrative, "decision-tree", or general health-education questions.

However, it's important to remember that healthcare is very personal, and generative AI technologies are as good as the data accessed. Data sources within healthcare are rightfully secure and protected, so we must be careful not to overhype the promise — especially when it comes to areas such as symptom detections, triage, and clinical treatment suggestions.

ChatGPT takes artificial intelligence into a new realm, one that can create real value and also palpable harm. But we don't believe in artificial intelligence, we believe in augmented intelligence — that is to say, as humans, being given a statistical analysis of data of the past to help us make decisions in the future is wonderful.

(Excerpts extracted from Becker's hospital Review 2023)

Dr Timothy Low is CEO and Board Director of Farrer Park Hospital in Singapore.

Warm Greetings from Malaysia Healthcare!

Dear Readers,

As we move into the second half of 2023, I am proud to reflect on Malaysia Healthcare's recent achievements. In 2022, following the reopening of Malaysia's borders in April 2022, we garnered RM1.3 billion in healthcare travel revenue, coming close to 76% of pre-pandemic levels. This milestone is a testament to our unwavering commitment to providing world-class healthcare while prioritising our patients' safety and well-being. We remain humbled by the trust placed in us by international patients seeking advanced medical treatments, and we are deeply grateful for the hard work and dedication of our healthcare facilities and medical professionals. As we embark on the rebuild phase of our Malaysia Healthcare Travel Industry Blueprint (2021-2025), we are driven by a renewed sense of enthusiasm and determination. Our unwavering focus on delivering the best possible healthcare experience propels us towards new heights, while maintaining our commitment to excellence in providing seamless, world-class healthcare to all individuals, regardless of their socio-economic status or geographic location. We remain steadfast in our pledge to ensure equitable access to healthcare, striving to make it as effortless as possible.

Prioritising Preventive Healthcare

In reinforcing the Malaysia Healthcare brand and facilitating the delivery of true care to healthcare travellers, we continue to expand our focus to prioritise preventive healthcare on top of curative healthcare. Taking proactive preventive measures to safeguard one's health increases the individual's awareness of their current condition and empowers them with the option of choosing the best preventive routes. More profoundly, it offers a better chance of detecting medical concerns at an earlier stage to facilitate better treatment outcomes. Recognising the importance of preventive care, we have launched a multi-industry collaboration to introduce our Premium Wellness Programmes. These programmes are designed to offer healthcare travellers comprehensive health and wellness screenings, top-notch accommodations, flights, and leisure tour packages - all within a safe and trustworthy setting. Our screenings are tailored to the specific needs of each individual, taking into account factors such as age, gender, and current health status. We offer targeted screenings to detect a range of conditions, including cancer, bone health issues, and cardiovascular problems, as well as include certain dental and aesthetic procedures. Our Premium Wellness Programmes create differentiated products for multiple markets and expand opportunities for more scientific wellness programmes, such as genetic screenings which empower patients with more predictive and prescriptive assessments, enabling them to take proactive steps towards reducing the risk of developing certain diseases.

An Exceptional Healthcare Ecosystem

In line with our commitment to providing the best patient experience, we rolled out a first-of-its-kind Flagship Medical Tourism Hospital programme in 2022. We are proud of the level of dedication shown by all of the participating hospitals as they underwent extensive and rigorous assessments, guided by international standards and benchmarks for medical and service excellence as well as international branding. We've since identified the finalist hospitals, namely Island Hospital, Mahkota Medical Centre, National Heart Institute and Subang Jaya Medical Centre and we have now moved forward to the Acceleration Phase (2023 to 2025). Numerous incentives are being granted to support their growth and expansion and we are excited to see how they will continue to enhance the nation's healthcare ecosystem.

As part of our unwavering commitment to providing the best healthcare travel experience, we have taken significant strides towards digitalisation to make the journey for healthcare travellers more accessible and convenient. Our efforts include the reintroduction of the eVISA Medical platform and the recent launch of the Malaysia Healthcare One-Stop Portal (OSP). The portal serves as a digital gateway for the Malaysia Healthcare brand, providing healthcare travellers with all the information they need at their fingertips, giving instant access to a myriad of healthcare facilities and medical packages. Additionally, we have also introduced a special immigration lane for healthcare travellers and a forthcoming Medical Companion Service, providing personalised assistance throughout their treatment journey with Malaysia Healthcare.

Our ongoing plans and initiatives make us confident that we are on track to delivering the Best Healthcare Travel Experience by 2025, as outlined in our Industry Blueprint. As we continue down this path, we remain committed to strengthening Malaysia's position as a safe and trusted destination for healthcare travel. We welcome interested parties to collaborate with us and foster stronger industry partnerships as we work towards our aspiration of elevating the healthcare travel experience.

Join us on the Malaysia Healthcare journey and connect with us on our social media platforms at **www.facebook.com/MHTCMalaysia** or **LinkedIn (Malaysia Healthcare Travel Council)**. Visit **www.malaysiahealthcare.org** for more information.
#ExperienceMalaysiaHealthcare

Farizal B. Jaafar
Acting Chief Executive Officer
Malaysia Healthcare Travel Council

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Our Story

OCT 2017

Started in October 2017 with a mission to provide world class health care

Strategically located in thriving landscape of Bangsar South

A full fledged hospital equipped with comprehensive Gastrointestinal & Liver disease management

A multidisciplinary team of experts to ensure best care for our patients

Highlights

24 hour Accident & Emergency

- 24-Hour Outpatient Accident and Emergency Service
- 24-Hour Outpatient Primary Care Service
- In-patient Ward Services
- Outpatient Specialty Clinic Service

24 hour Primary Care Service

- Day Care Surgery - Endoscopy
- General, Gastrointestinal & Hepatobiliary Surgery
- Pharmacy Service
- X-ray and Biomedical Imaging (Radiology) - Diagnostic & Interventional Radiology
- Comprehensive on-Site Laboratory Service

Gastrointestinal Oncology

- Comprehensive on-Site Laboratory Service
- Histopathology
- Dietetics
- Physiotherapy
- Gastrointestinal Oncology Service

Comprehensive on-site Laboratory

- Ambulance Service
- Health Screening Service
- Colorectal Surgery
- Urology
- Cardiology

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Global Health Awards 2019 Malaysia Health & Wellness Brand Award (Private Hospitals) Sin Chew

2019 Gastroenterology Service Provider of the Year in Asia Pacific Global Health Awards

2021 Bariatric Medical Centre of the Year in the Asia Pacific

2022 Bariatric Medical Centre of The Year In Asia Pacific

2022 Gastroenterology Medical Centre of The Year In Asia Pacific

CENGILD G.I. MEDICAL CENTRE (CGI)
Unit 2-3 & 2-4, Nexus @ Bangsar South, No.7, Jalan Kerinchi, 59200 Kuala Lumpur, Malaysia

+603-2242 7000 | +6011-2110 2798 | www.cengild.com | cgimedicalcentre | cgimedicalcentre