MOST parents feel strongly that keeping the house spick and span is the secret to keeping the family

You might want to think twice before you give your kitchen a good scrub with a disinfectant.

Common cleaning products may be linked to childhood obesity, according to research recently published in the Canadian Medical Association Journal. Scientists now say disinfectants and other multi-surface cleaners could contribute to unjoint pain in children by allow

trismitate treaties found to the toweight gain in children by altering the gut bacteria of infants.

Canadian researchers said faecal samples showed that three and four-month-old infants exposed weekly to antihacterial cleaners had higher levels of a type of Lachnospiraceae, a gut bacteria that zaps extra energy out of food, USA Today reported. These babies were more likely to be overweight or obese by age three, the research

Anita Kozyrskyj, senior researcher and a professor of paediatrics at the University of Alberta in Canada, said that findings showed parents who used "eco-friendly" cleaning products had babies with less risk of being overweight by age three.

"Take it easy when you're cleaning with disinfectants," she told *HealthDay*. "Our observations were at the high end (of cleanliness), with people who were cleaning more than weekly, up to daily."

Keeping clean, getting fat

Household cleaners are making your kids fat, study reveals.



According to a recent research, common cleaning products may be linked to childhood obesity. — AFP

Representatives of the cleaning product industry said they were "disappointed at the sensational claims"

The study ignored other explana-

tions for excess weight, such as when solid foods were given and what kinds of foods were eaten by each child, said Richard Sedlak executive vice president of technical and international affairs for the American Cleaning Institute.

"Based on our scientific and techby the researchers don't really hold up," Sedlak told US News and World

Report.
Scientists, meanwhile, stand by their research. They collected fecal samples from 757 infants, aged three months to four months, and asked the babies' mothers about their use of household cleaners. They then tracked weight gain in the babies to age three years.

Antibiotics and antimicrobial agents can alter any person's gut makeup (microbiome) by killing off certain species of bacteria, which allows room for others to blossom,

they say.

The most famous example is clostridium difficile, a bacteria caused by overuse of antibiotics that can lead to life-threatening diarrhea.

diarrhea.

Kozyrskyj told US News and
World Report, "Disinfectant products used very often, weekly or
greater, did cause changes to the
infants' gut bacteria. It caused some bacteria to decline and others to increase."

If you needed an excuse to not clean the house, or at least wait until you can get less harmful cleansers, you're welcome. – The Mercury News/Tribune News

STANDING just three matchboxes tall, a new device out of the University of Texas is expected to make surveillance of a mosquito species known for carrying deadly diseases quick and easy. Researchers created a tool with

Researchers created a tool with which users can crush a dead mosquito and add a mixture of chemicals to it. After a half-hour wait, the blend is poured into a small 3D-printed box, where blue LED lights are cast onto it.

If the blend glows green, the mosquito belongs to the Aedes aegypti species, which can carry the Zika virus, dengue, chikungunya or yellow fever, research asso-

ya or yellow fever, research asso-ciate Sanchita Bhadra and research educator Tim Riedel said.

Symptoms of Zika, which has affected two people in Texas this year, include joint pain, red eyes, fever and an itchy rash, Texas Department of State Health Services officials said.

This year's cases have been travel-related and occurred in Williamson and Collin counties

Device detects disease-causing mosquitoes



Right now, the device can only help identify which mosquitoes belong to the Aedes aegypti species. — TNS

Travis County had one Zika case last year and 18 in 2016, state health data show. Statewide, eight Zika cases were reported in 2015,

315 cases in 2016 and 55 cases in

Right now, the UT researchers' device can only help identify which mosquitoes belong to the

Aedes aegypti species and whether a mosquito has come into contact with Wolbachia, bacteria that can help reduce the spread of some

But in the future, researchers want the device to be able to identify whether a mosquito is carry-ing specific diseases, such as Zika or West Nile virus

or west Nile virus.
The device, which took two
years to create, is meant to be
friendly enough to be used by anyone, Riedel said.
"Our goal has been always to

have this device work in the field without needing too many steps," Bhadra said.
The tool also helps make sur

veillance of mosquitoes a faster and cheaper experience, she said, so it is easier to anticipate a possible disease outbreak and help public health officials jump

"What surveillance allows us to do is basically figure out what is coming," Bhadra said. "We are hoping that our field system would allow surveillance to be done in a much more regular and widespread manner."

Mosquitoes breed more in

warmer months, said Department of State Health Services spokes-man Chris Van Deusen. They like hanging out in standing water, which state health officials recom-mend you drain to avoid them.

To prevent mosquito bites, you can use an insect repellent that contains DEET, wear long sleeves and pants when the sun is rising and setting, use air conditioning, and put screens on all doors and windows at home, state health officials said. – Austin American-Statesman/Tribune News Service

Unexpected cancer response

RESEARCHERS at the University of California, San Diego, say a rela-tively unexplored pathway the immune system uses to recognise cancer is far more important than

previously recognised.

The finding could help scientists design new cancer immunothera-pies and predict responses to them.

When this pathway doesn't rec-ognise mutated genes, tumours that exploit the mutations are more common, the researchers found. The relationship is even

found. The relationship is even stronger than that of a bet-ter-known pathway. The research highlights the com-plexity of the immune system, which consists of many different types of cells that interact with each other and abnormal and invading cells in a web of relationships that are still far from under-stood.

Scientists led by Hannah Carter, assistant professor of medicine at UC San Diego School of Medicine, researched the pathway between a subtype of T cells and a molecule

found on immune cells.

Results were published this week in the journal Cell. The study can be found at j.mp/cancermhc2.

T cells are a class of white blood

cells that recognise and kill infectious microbes and abnormal cells, including cancer cells. The subtype examined in the study is called CD4-plus, or "helper" T cells. It works with a family of molecules presented on the surface of immune cells, called MHC 2.

A related family, known as MIIC 1, has received most of the atten-

tion in cancer immune therapy. But the study suggests MHC 2

could be even more important.

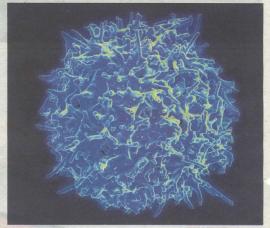
Normally, the MIIC molecules signify the cells bearing them are

"self", and should be left alone. When they present "non-self" mol-ecules called antigens, such as from bacteria, viruses or cancer, they prime the immune system to

destroy cells with those antigens.
The two molecules play complementary roles. While MHC 1 is displayed on all cells, MHC 2 is displayed only on immune cells, and also can present more antigens The researchers found that

when MHC 2 strongly binds to an antigen, that antigen is less likely to show up in a tumour. Any incipient cancers with this antigen are presumably destroyed early, before a detectable tumour forms.

This relationship is even more pronounced than a previous finding the researchers made with MHC 1. That study was also published in *Cell.* – The San Diego Union-Tribune/Tribune News



A healthy T cell, a family that includes CD4+ cells, which a UC San Diego study found has unexpected power in fighting cancer. — TNS



'No country has an example of this model. It'll be a case of the tail wagging the dog,' said Dr Kuan Joo on the proposed voluntary health insurance



Assoc Prof Ng pointed out that there appears to be geographical and ethnic disparities with regards to premature mortality.



they'd rather keep their funds for their kids' education. And we let them go home. It's



Diseases are getting more complex so an illtrained specialist is not going to do any good, remarked Prof Adeeba. — Filepic

By REVATHI MURUGAPPAN

THE country is facing an acute shortage of medical specialists, but it will take years before adequate numbers can be achieved, based on current training modules.

"There is no short cut to postgraduate train-

ing. Yes, we are churning out medical specialists but we cannot expand the numbers quickly. For example, we need 30,000 primary care physicians and from our current train-ing, it may take a lifetime to achieve this," said Universiti Malaya Faculty of Medicine dean Prof Datuk Dr Adeeba Kamarulzaman.

The current push is for local masters programmes; 23 specialisations are being offered by seven local universities. However, places are limited as only 800 to 1,000 slots are offered yearly.

"This is not enough to cater for the 5,000 medical students who graduate yearly. There are tensions between provision of service and training so it delays entrance into the pro-

gramme.

"Also, the quality of candidates varies, the delivery of training is inconsistent and there is inadequate training for trainers.

"We also have two parallel training systems, which is not healthy. The problem with

overseas qualifications is that it is expensive, has variable training and supervision, and lacks local relevance. Anyone can sign up for the UK-based MRCP during their housemanship while medical officers need to serve in

while intend officers received to serve in the government for four years before they can apply for the local masters programme.

"There is also a misconception that passing an examination equals being trained to be a doctor. The MRCP exam tests only knowledge and there is no requirement to demonstrate competence. Diseases are getting more complex, so an ill-trained specialist is not going to do any good," she remarked.

Prof Adeeba was speaking at the recently concluded healthcare conference organised by the Federation of Private Medical

Practitioners Associations, Malaysia

(IPM/PAM) here.
With the theme, "Current issues in medical practices and healthcare in Malaysia", the two-day event provided a platform to discuss relevant issues common to medical and healthcare practitioners, both in private and public sectors. Presenting her paper on Revamping Postgraduate Education and Training, the academician said the National Postgraduate Medical Curriculum Project, which started in 2014, is intended to ensure that all junior doctors are trained to the high-est standards, thus ensuring patient safety

est standards, into ensuring patient safety and quality of care. She said, "We are trying to achieve a curric-ulum that is internationally recognised and locally relevant. Hopefully, we can roll out the internal medicine postgraduate programmes next year."

Mortality rates

The latest figures from the Department of Statistics indicate that the number of live births recorded in 2016 was 508,203 babies, a decrease of 2.5% as compared to 2015

The number of deaths in 2016 increased by 4.1%. There were 162,201 deaths recorded in 2016, 4.1% more than the number recorded in 2015 (155,786). The crude death rate increased from five (2015) to 5.1 (2016) per

'Hot' issues in health

Current issues in medical practices and healthcare in Malaysia were discussed at FPMPAM's inaugural healthcare conference recently.



Delegates listening attentively to the keynote speaker at the recently con-cluded healthcare conference
— Photos: AZHAR MAHFOF/The Star

1,000 population, with Perlis recording the highest number at 7.5 per 1,000 population. Speaking on Premature Mortality in Malaysians, Assoc Prof Dr Ng Chiu Wan said that from 1963-2016, crude death rates had fallen but crude birth rates had fallen more rapidly compared to death rates.

"The guestions is "are all deaths equal?"

"The questions is ... are all deaths equal? Can we compare a premature death to some-one in the 90s dying?" she asked. Premature mortality is defined as a person dying before the average age of death in a

population.
"Most babies born today can live beyond
70. In Malaysia, the total years of lives lost in
2001 was 1.7 million years, and in 2008, it was
1.5 million years. The burden of premature mortality, mainly caused by ischaemic heart disease and other non-communicable diseas-es, has decreased over the past 15 years (1998-2012). The lowest decline in mortality appears to be between the ages 45 and 49 for both genders," she said.

However, Assoc Prof Ng pointed out that there appears to be geographical and ethnic disparities. The lowest premature mortality is among the Chinese, followed by the Malays and the Indians.

and the Indians.

"The figures are higher in the poorer districts, especially in the north-east of
Peninsular Malaysia, similar to infant mortality rates. Hence, there is an urgent need to
understand causes of these disparities and to find solutions.'

Unexpected health bills

One can never take health expenses for granted as you never know when catastrophe can strike. Healthcare can be categorised into basic care, which covers vaccinations, common prescription drugs, outpatient visits and in-patient acute care such as surgery

its and in-patient acute care such as surgery and trauma; and catastrophic care, where one incurs catastrophic health spending. "Access to basic care is good in Malaysia, at a modest cost to payers of US41.80 (RM7.43) per head and a mere 4% of the country's GDP. But, we need more, especially when we get older," said Dr Lim Teck Onn, consultant in clinical research and medical statistics. "Unwayer access to carear care is carear care."

consultant in clinical research and medical statistics. "However, access to cancer care is still low as it is very expensive."

Finances are usually borne by the patients themselves, via pooled financing (health insurance) or via third party insurance.

The nephrologist said, "Pool financing is the best. If it's self financing, the poor get excluded. Patients say they'd rather keep their funds for their kids' education. And we let them go home. It's either they pay or they die.

mey die.

"Cancer incidents are rising but mortality from cancer in the US is decreasing. Sadly, in Malaysia, cancer mortality is still high. Fifty to 80% of breast cancer deaths are avoldable but we let most of our cancer patients die prematurely because we don't want to finance the sick."

Besides options for pool financing, Dr Lim, who spoke on Catastrophic Health Expenditure, said our healthcare needs lower treatment costs i.e. lower cost of goods or medicines, and cost of health ser-

"Our healthcare system is tied to public services and this is not a good thing." Dr Lim Kuan Joo, one of the pioneers in

health planning, health economics and healthcare financing added, "Our public hospitals are bursting at the seams. The facilities are inadequate, there is a long waiting time and waiting list, the hospitals are old colonial ones and we are spending relatively high amounts on curative care." relatively high amounts on curative care

relatively high amounts on curative care."
Almost 20 years ago, external consultants, had proposed setting up the National Health Financing Scheme backed by a National Health Security Fund to finance all health-care costs, both in the public and private

neatm sectors.

The findings of the study was approved by the Government, which then commissioned two phases of study on the feasibility and acceptability of the National Health Security Fund.

Security Fund.
Unfortunately, due to lack of information dissemination, dialogue and understanding about the proposed scheme, the initiative was highly criticised and opposed by stake holders. Subsequently, the implementation of the National Health Financing Scheme and National Health Security Fund were deformed. deferred.

deferred.

On the proposed voluntary health insurance (VHI) expected to be introduced soon, Dr Kuan Joo voiced his reservations.

"No country has an example of this model. By starting with the B40 group, it'll be a case of the tail wagging the dog, as the present system is doing the same thing at a cheaper cost. Voluntary contributions to health insurance schemes also have limited. cheaper cost. Voluntary contributions to health insurance schemes also have limited effect in terms of moving a health system towards universal health coverage," he said in his paper, From Social Health Insurance to Voluntary Health Insurance.



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It's a backbreaking world

Low back pain can also be a 'young people's problem'.

ARE you or someone you know experiencing low back pain? Do you know that low back pain is actually not an old person's

Low back pain is a common musculoskeletal disorder (MSD) found in people of all ages and it is most prevalent in working adults.

The Social Security Organisation (SOCSO) has seen a spike in the number of claimable es arising from MSDs in the Malaysian workforce. Reports from SOCSO show that more than 60% of the claims under the category of MSDs were for low back pain issues and the majori-

45 years old.
In other words, young working adults are at risk of low back pain too.

Because low back pain is a

common problem for many, it is often taken lightly.

Unfortunately, once the condi-tion is aggravated due to negli-gence, it is almost impossible for one to fully recover from the

backache.
In other words, the condition could only be improved, not

cured.
Though fatality from low back pain is rare, MSDs pain restricts physical capabilities and is a

physical capabilities and is a financial burden. From 1990 to 2015, it has been found globally that the disability rate caused by low back pain had increased drastically by 54%, and it is most prevalent in low-income and middle-income countries.
Studies indicate that low back

pain is the main occupational

health issue that leads to work-place absence globally and impacts workforce productivity and business operations.

As such, low back pain is a critical occupational health issue that corporations and working adults need to take heed.

adults need to take need.

The good news is, low back
pain is 100% preventable. One of
the easiest precautionary steps
to take, especially working
adults, is not to remain in an inactive body posture for long

Working adults who sit long hours in the office are recommended to take short breaks and stretch their body every two

Other methods are doing exercises that promote flexibility and strength of muscles and having ergonomic office equipment in the workplace.

Fixback is a sustainability campaign organised by the Bachelor of Corporate Communication (Hons) final year students of Universiti Tunku Abdul Rahman (UTAR), starting from October 29. 2018 to November 18, 2018. In line with the United Nation's (UN) Sustainable Development Goal 3: Good health and well-being and Sustainable Development Goal 8: Decent work and economic growth, the main goals of the campaign are to educate working adults in the Klang Valley about low back pain and occupational health measures, and to encourage and empower them to stay healthy in hopes of improving and sustaining their daily productivity at work. For more information, visit: https://www. facebook.com/utarfixback.



Working adults who sit long hours in the office are recommended to take short breaks and stretch their body every two hours.



The Doctor Says Dr Milton Lum

The plague of NCDs

NCDs accounted for 60% of the disease burden in Malaysia in 1990, and this increased to 72% in 2013.

ACCORDING to the 2015 National Health and Morbidity Survey (NHMS), about two-thirds of Malaysians have at least one of three non-communicable diseases (NCDs) i.e. dia-betes, high blood pressure (hypertension) or

hypercholesterolaemia.

More than one in four (26.3%) have at least two of these NCDs and 7.2% have all three NCDs.

The report revealed the prevalence of such diseases in those aged more than 18

● High blood pressure – 30.3%. High blood pressure was diagnosed in 13.1% and undi-agnosed in 17.2% i.e. for every two persons diagnosed with high blood pressure, there

were three undiagnosed.

Diabetes - 17.7%. Diabetes was diagnosed in 8.3% and undiagnosed in 9.2% i.e. for every one person diagnosed with diabetes.

tes, there was one more undiagnosed.

• High blood lipids (hypercholesterolaemia) – 47.7%. High blood lipids were diagnosed in 9.1% and undiagnosed in 38.6% i.e. for every one person diagnosed with high blood lipids, there were four undiagnosed.

Hypertension

Ischaemic heart disease, cerebrovascular disease and chronic kidney disease are the 1st, 2nd and 9th causes of deaths in 2016, with an increase of 39.6%, 23.8% and 34.3%

respectively since 2005.

Ischaemic heart disease and cerebrovascular disease are the top two causes of death and disability combined in 2016.

Hypertension ranks as the 2nd risk factor

of death and disability combined in 2016, with a 47.2% increase since 2005 and contributed to 42.2% of deaths.

Of the diagnosed hypertensives, 58% were treated at Ministry of Health (MOH) clinics,

18% at MOH hospitals, 19% at private clinics and 3% at private hospitals, with 2% self-medicated by purchasing medications

directly from pharmacies (NHMS 2015).

A team from the MOH and the Universities of Malaya and Melbourne studied the data of Malaya and Meibourne studied the data on hypertension in NHMS 2011 (Source: Universal Coverage of Hypertension Treatment Services in Malaysia Is Still an Elusive Goal. Health Systems & Reform. 8 August 2017. https://doi.org/10.1080/23288604 .2017.1342746).

They found that the "age-standardised"

prevalence of hypertension was estimated to be 33.9%. Only 39.0% of adults with hyper-tension had been diagnosed by a medical practitioner, 35.7% had been on treatment, and 9.6% had blood pressure controlled

under treatment.
The diagnosis, treatment, and controlled treatment coverage were higher for older persons compared to younger persons. There were no differences in the diagnosis and treatment coverage between urban and rural areas and between ethnic groups.

The prevalence of diabetes increased from 6.3% in 1986 to 8.2% 1996, 11.6% in 2006 and 17.7% in 2015 (NHMS 1986, 1996, 2006 & 2015). At the current rate of increase, about one in four to five Malaysians will be diabet-

ic in 2020 and three in 10 in 2025.

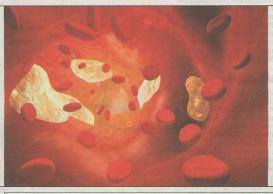
Of the diagnosed diabetics, 59% were treated at MOH clinics, 20% at MOH hospitals, 15% at private clinics and 4% at private hospitals, with 1.5% self-medicated by purchasing medications directly from pharma-cies (NIIMS 2015).

The majority of the diabetics had other

> TURN TO PAGE 6



For every two persons diagnosed with high blood pressure, three are undiagnosed.



The prevalence of hypercholes terolaemia increased from 28.2% in 2006 2015. — AFP

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lministered in adequate amounts, confer a health benefit on the host."

Human gastrointestinal tract is a very complex ecosystem which contains a huge number of bacteria with more than 500 different bacterial species naturally. In fact, the number of bacteria in the gut is ten times the total number of cells in the entire human body. This complex system is also called intestinal or gut flora. It is made up of a delicate balance of beneficial (friendly) and potentially pathogenic (harmful) bacteria. Probiotics are friendly bacteria that keep the harmful ones in control.

Good health starts in the gut

A balanced gut flora is important! Whether we enjoy good gut health or are susceptible to intestinal upsets depend upon which bacteria is more dominant the good or bad. The correct environment should be the good bacteria outnumber the bad bacteria in a ratio of 80:20. A healthy gut flora serves as a barrier to prevent invaders such as harmful bacteria, toxins, allergens, chemicals and pollutants from penetrating into our body where they will cause health problems.

First line of defense

The gut is the largest immune organ in the human body. About 80% of immune cells reside in our gut. There are increasing evidences that exhibit an intimate interaction between gut flora and immune defenses. The primary site of action for probiotics is on the intestinal wall where they interact with immune cells by direct contact or by stimulation of cytokine production.

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co-morbidities – 75% had hypertension and 70% hypercholesterolaemia (diagnosed or undiagnosed). Those whose co-morbidities were controlled were 29% and 48% for hypertension and hypercholesterolaemia respectively. (NHMS 2015)

Of the diagnosed diabetics, only 38% had bled dives level that was within treet.

blood glucose levels that were within treat-ment targets, suggesting that there were more than a million uncontrolled diabetics.

Hypercholesterolaemia

Hypercholesterolaemia

The prevalence of hypercholesterolaemia increased from 28.2% in 2006 to 47.7% in 2015 respectively. It was diagnosed in 9.1% and undiagnosed in 38.6%, with the increase due to an increase of undiagnosed hypercholesterolaemia from 26.6 % in 2011 to 38.6% in 2015. (NHMS 2015)

Of those with diagnosed hypercholesterolaemia, 50% were treated at MOH clinics, 19% at MOH hospitals, 24% at private clinics and 5% at private hospitals, with 2.3% self-medicated by purchasing medications directly from pharmacies (NHMS 2015).

Of the diagnosed cases, 45% and 37% of those treated at MOH hospitals and private clinics respectively had their total blood cholesterol levels controlled. However, the survey was limited by no distinction between LDL and HDL cholesterol.

Some trends

Although there was a general increase in the prevalence of diabetes and hypercholes-terolaemia, some states are affected more – the highest prevalence of diabetes was in the northwest and east coast of Peninsular

Malaysia and Sarawak.

Although the prevalence of hypertension throughout Malaysia decreased slightly between 2011 and 2015, Kelantan is the

only state which had an increase. Negri Sembilan, which had a high preva-lence of diabetes in 2006, had a decrease in the prevalence between 2011 and 2015.



The prevalence of diabetes increased from 6.3% in 1986 to 17.7% in 2015. — TNS

Going forward

NCDs accounted for 60% of the disease burden in Malaysia in 1990. This increased to 72% in 2013.

According to the World Health
Organization, Malaysia has no operational
multisectoral national NCD policy, strategy
or action plan that integrates several NCDs and their risk factors (Source: apps.who.int/gho/data/view.main.2473 Accessed 20 September 2018).

This incongruence is difficult to under-

stand, particularly when the NCD epidemic in the country shows no sign of slowing

The MOH's targets are to reduce the prevalence of hypertension from 32.2% to 26.0%; halt the rise of diabetes and obesity; and reduce the risk of premature mortality from cardiovascular disease, diabetes, cancer and chronic respiratory disease from 20% to 15% (Source: National Strategic Plan for Non-communicable disease 2016-2025

Private sector clinics provide more than half the primary care for the population. Private registered medical practitioners (RMPs) have provided and continue to provide cost-efficient and patient-centric servicioners. vide cost-efficient and patient-centric services, usually in a one-stop patient-friendly facility. Choice, accessibility and affordability has not been a major issue for this established service.

It is time that the private sector clinics be officially recognised as part and parcel of the national primary care system.

For a start, they can be engaged to combat the NCDs of hypertension, diabetes and hypercholesterolaemia.

The private RMPs can play significant

nypercnolesterolaemia.
The private RMPs can play significant roles in reducing the large numbers of the undiagnosed and poorly controlled NCDs within the parameters of a protocol acceptable to the MOH and private RMPs.
Private RMPs have a better relationship

with patients compared to their public sec-

tor counterparts.

This crucial factor alone will contribute to better screening, diagnosis, treatment and its compliance, and health education of diagnosed and undiagnosed cases of these NCDs.

Dr Milton Lum is a past President of the Federation of Private Medical Practitioners Associations, Malaysia and the Malaysian Medical Association. The views expressed do not represent that of any organisation the writer is associated with. The information provided is for educational and communication purposes only and it should not be construed as personal. only and it should not be construed as personal medical advice. Information published in this article is not intended to replace, supplant or article is not intended to replace, supplant or augment a consultation with a health profes-sional regarding the reader's own medical care. The Star disclaims all responsibility for any loss-es, damage to property or personal injury suf-fered directly or indirectly from reliance on such



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By Assoc Prof Dr RAIA AFFENDI RAIA ALI

THE adage "You are what you eat" is closer to the truth than you might think. Gut health is important to your overall well-being.

In fact, it can be said that your gut is your second brain. Your gut health is closely connected to your digestive, immune, endocrine, circulatory, and central nervous systems, and it can affect both your physical and mental

One major factor that determines your gut health is the gut microbiota, which is the diverse population of microorganisms that can be found in your intestine.

can be found in your intestine.

It is vital to keep the gut microbiota in balance. Imbalance of the gut microbiota happens when the population, diversity and richness of good and bad bacteria in your gut deviate from the normal ratio, causing disruption and damage to the mucosal layer of your gastrointestinal tract.

This will negatively affect your gut health,

and consequently your mind and body.

To keep your gut healthy, it is necessary to have a healthy lifestyle and consume a balanced diet. A well-balanced, moderate and varied diet is essential in keeping your gut

healthy.

Also, your gut health can be maintained by practising good habits, like regular exercise and enough sleep, and avoiding bad habits, like drinking excessive alcohol and overuse of antibiotics.

Apart from that, there are also certain foods that can help to balance the ratio of good and bad gut microbiota, such as probiotics, prebiotics and fibre.

Probiotics are live microorganisms that

Probiotics are live microorganisms that when consumed can have a certain health benefit to the host. They can be consumed in the form of health supplements, prescribed medicinal products or natural food products,

like yoghurt and kimchi.

When your gut microbiota population is not in balance, for example after an episode of diarrhoea and after treatment with antibiotics, probiotics can be consumed to restore the normal ratio of good and bad microbiota

In your gut.

There are many different species of gut microbiota that can be classified as probiotics, consisting of bacteria and yeasts. In fact, your body contains trillions of bacteria, viruses and fungi, and about 400 different types of probiotic bacteria. Some of the wellnown species of probiotics are described

Lactobacillus is the largest group of probiotic bacteria in the intestines. There are more than 50 species of lactobacilli, such as *L. acidophilus, L. rhamnosus GG* and *L. bulg-*

It can be naturally found in the digestive, urinary, and genital systems, and also in natural foods and supplements.

Lactobacillus can potentially be used to

For the good of the gut

Gut health is closely connected to your digestive, immune, endocrine, circulatory and central nervous systems.



prevent or treat acute diarrhoea (also termed acute gastroenteritis), which is most commonly due to viral infection, irritable bowel syndrome (IBS), urinary tract infections (UTIs), vaginal yeast infections, com-mon cold, skin disorders, viral respiratory infections in children and also to reduce lac-

infections in children and also to reduce lactose intolerance and cholesterol levels.

Bifldobacterium is comprised of approximately 30 different species, such as *B. bifldum, B. lactis*, and *B. longum*. It is one of the first bacterial species to grow in babies' intestines, especially in breastfed infants, and can help digest breast milk.

Breastfeeding can help develop babies' gut microbiota, and children who are breastfed for at least six months are found to have more Bifldobacteria than those who are both are

more Bifidobacteria than those who are bot-

Bifidobacterium, similar to Lactobacillus, is also used to help prevent or treat various gut conditions, infections and skin problems

Streptococcus thermophilus, which can be found in our colon, produces a large quantity of lactase that can break down lactose in milk to lactic acid, and is widely utilised in the production of yoghurt and cheese.

Other species of the same Streptococcus enus, like S. pneumoniae, may be pathogenc, but S. thermophilus has been proven to be safe as a probiotic. Its optimal growth tem-perature is also in a range that is suitable for

our gut microbiota.

It can also improve digestion, enhance immunity and help with other health prob-

lems.
Saccharomyces boulardii is different from the previously-mentioned probiotics. S. bou-lardit is a close relative of S. cerevisiae, also known as baker's yeast. However, it has a higher optimal growth temperature at 37°C and better survival at acidic pH, enabling it does not need refrigeration.

As S. boulardii is a yeast species, it is not affected by antibiotics, which only target



We can get our probiotics from traditional fermented foods like tapai pulut and raw tempeh.

It is essential to consult your doctor to find the most suitable probiotic for your needs.

Assoc Prof Dr Raja Affendi Raja Ali is a Consultant Physician & Gastroenterologist. This article is courtesy of the Malaysian Paediatric Association's Positive Parenting programme in collaboration with expert partners, supported by

Bioflor. For further information, visit www. mypositiveparenting.org. The information pro-vided is for educational and communication pur-

poses only and it should not be construed as personal medical advice. Information published

in this article is not intended to replace, supplant or augment a consultation with a health profes-sional regarding the reader's own medical care. The Star disclaims all responsibility for any loss-es, damage to property or personal injury suf-

fered directly or indirectly from reliance on such

bacteria. Thus, it is suitable for restoring gut microbiota balance after treatment with antibiotics.

antibiotics.

That is why it is especially useful for treating acute diarrhoeal illness and antibiotic-associated diarrhoea. S. boulardii may be found in fermented food, such as kefir or kombucha, which has a combination of yeast

kontibutina, which has a combination of yeast and bacterial problotics.

Saccharomyces boulardii was "found" in the early 1920s by a French microbiologist, Henry Boulard, when he observed that people in Indochina who drank a special concocpile in Indochina who drank a special concocpile. tion made from the skin of lychee and man-gosteen did not develop diarrhoea and other symptoms of cholera during an outbreak. This strain was named after him upon his discovery and is commonly sold as an

anti-diarrhoeal medication.

Probiotics are an important part of our diet to keep the gut healthy. Other than the food mentioned above, we can also get our probiotics from traditional fermented foods

like raw tempeh and tapai.

Probiotics can also be used to prevent or reduce the symptoms of various gut disorders such as constipation, diarrhoea, acute diarrhoeal illness, antibiotic-associated diarrhoeal





For many smokers, eating

is associated with smoking, up to a point that it

has become so

natural in their smoking

Lets eat, not smoke

Smoke-free eateries would benefit all, including smokers.

By Dr NIZAM BAHAROM

THE recent proposal by the Ministry of Health to gazette all eateries as smoke-free places was met with heated discussion in

places was met with heated discussion in the media and online.

By the end of this year, smokers will no longer be allowed to light up at any indoor or outdoor eateries. Smokers and sympathisers may profess their objections to this proposal, but the fact is, smoke-free public places, including at all eateries, would benefit all including smokers themselves.

effi ALL, including at an earlies, would be effi ALL, including smokers themselves. In this day and age, nobody is denying that smoking is harmful. We don't have to look at the abundance of epidemiological and scientific evidence to win this argument includes and the same facilities. ment, just look at the many friends and family that we know who suffered the con-

Sequences of active and passive smoking. Smokers themselves are not in denial, not with constant reminders on cigarette

The National Health and Morbidity Survey 2015 revealed that nearly a third of smokers had considered quitting as a result of looking at cigarette pack pictorial health warnings and half of smokers had ttempted quitting at least once in the past

Many can't quit because of the powerful nicotine addiction that compels them to keep lighting up.

The saddest fact is that the Tobacco Atlas

The saddest fact is that the Tobacco Alas by The American Cancer Society estimated that tobacco use kills 27,000 Malaysians annually, a rate that translates to one smoking related death every 20 minutes! The list of public places with a smoking ban in Malaysia is expanding over the years, albeit at a gentler pace that cannot keep up with the harmful consequences from exposure to cigarette smoke. The trend of increasing smoke-free pub-

from exposure to cigarette smoke. The trend of increasing smoke-free public places is seen across the globe, probably facilitated by the orchestrated efforts of the WHO Framework Convention of Tobacco Control (FCTC).

Despite the main agenda of Article 8 FCIC, which is to protect the public from exposure to cigarette smoke, a smoking ban benefits smokers in many ways. Having established the fact that the

majority of smokers want to quit, a smoking ban in public places actually favours them. Studies have shown that a smoking ban reduces the number of cigarettes

smoked per day.

Imagine if you are allowed to smoke at your desk at work, how many cigarettes would you have smoked in an auto-pilot

However, with regulations in place, smokers not only cut down the number of cigarettes smoked, they are also more

mindful of their smoking habit.

A smoking ban at the workplace helps smokers to control their smoking, not to mention the financial benefit of smoking less.

Some of us may remember a time when assengers were allowed to smoke in

Nowadays, smokers are able to with-stand long flights without even lighting up from the moment they step into the air-

Being mindful of smoking is exactly the same reason why Muslim smokers are able to last the whole day without smoking during Ramadhan. Even though nicotine



addiction is powerful, we are able to

addiction is powerful, we are able to refrain from smoking if we need to. One of the methods of quitting is gradually reducing your cigarettes before commencing complete abstinence.

Physicians often advise patients to start with smoking sessions that are the easiest to break away from such as mindless smoking during working, driving or watch-

ing TV.

This will gradually move to the harder smoking sessions to remove, such as post mealtimes, times of stress and first thing in the morning.

For many smokers, eating is associated

with smoking, up to a point that it has become so natural in their smoking behav-

Eating has become the trigger to smoke. Eating has become the trigger to smoke. I remember talking to a patient who said he avoided going to certain restaurants as being or eating there entices him to break his abstinence.

Those who have tried to quit will remember how hard it can be being with friends who smoke at eateries. The Ministry of Health's move to han smoking.

Ministry of Health's move to ban smoking in all eateries will help millions of smokers

In all eateries win help furnions of students to dissociate smoking and meal times.

Imagine how this regulation will assist more than half of five million smokers who had attempted to quit smoking.

Some will argue that a smoking ban at all eateries is bad for business. They only

have to look at evidence from Britain, Australia, America and South Korea. Not only will business be as usual, some stud-ies demonstrated that smoking bans are good for profits.

Smokers will still come and eat but they may smoke at a different place and time. Nearly 80% of Malaysians are non-smok-ers, so the math is in favour for business-es. How many times have we heard, "let's not eat here because there is too much smoke in the air"?

smoke in the air"?

The smoking ban at all eateries will also strengthen the message that smoking is harmful for health. We all wish for smoke-free Malaysian future generations. Nobody, not even smokers, want their children to

not even smoking.

Nevertheless, our children are getting mixed messages when schools teach them that smoking is bad yet when they go to public places, smoking is the norm for

many adults.

Parents can use these smoking ban regulations to emphasise that what they learn

in school is indeed true.

Kudos to the Ministry of Health who has a huge responsibility to improve the nation's health for the sake of national development.

development.

Sometimes, tough and unpopular decisions have to be made. In the spirit of Sayangi Malaysiaku, the proposed regulation of a smoking ban at all eateries will benefit the whole rakyat.

It may take a while for behavioural and cultural changes, yet we have to start sometime, and as they say, the best time is

Dr Nizam Baharom is a Public Health Physician at the Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia (USIM).



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EXPECTANT mothers of today are inundated with information on how they should go about their pregnancy, making it hard to sepa-

rate truth from misconception. According to Dr Fairuz Ashikin Abd Kadir, obstetrician and gynae-cologist (maternal foetal medicine) at Avisena Specialist Hospital Shah Alam (formerly known as DEMC Specialist Hospital), traditional beliefs and taboos do have a basis as they were generally observed for the good and safety of mother and child.

Some taboos concerning food consumption should be taken seriously, such as avoiding pineapple and unripe papaya as they increase

the risk of miscarriage.
Pincapple is high in the enzyme bromelain that softens the cervix, while unripe papaya is high in papain, which induces contracit is high in vitamin E.

Other foods to avoid are raw

produce (salmonella risks), fish with high mercury content, over-night leftovers, alcohol and caffeine (causes heart palpitations). In addition, fresh milk and fruit juices must be properly pasteurised.

Eating for two

Many accept the notion that many accept the house that pregnant mothers are to eat for two. However, this is less about doubling the quantity consumed and more about the quality of nutrients the mother and baby are

getting.
"Babies consume what the mother provides, whatever (nutrient deposits) the mother has. A mother has to eat well so that she will have

nas to eat wen so that she will have enough nutrients for herself after the baby is born," says Dr Fairuz. According to Dr Fairuz, a healthy diet for a pregnant woman should contain between 2,200 and 2,400 calories a day, be rich in proteins and low in fats and carbohydrates Fruits and vegetables are not to be

The average weight gain of a healthy mother should range from 10kg to 15kg, while a heavier mother should not gain more than 6kg as it could be detrimental to the

VITAL INFO ON PREGNANCY

About eating right, working out, warning signs and safe delivery.



Women who lead a sedentary lifestyle but wish to exercise during pregnancy should start slow with low-stress activities such as yoga, Pilates and walking.

health of mother and baby.

Exercise

Dr Fairuz recommends physical exercise for all expectant mothers as it strengthens and increases the flexibility of the limbs for easier

While riskier sports such as while its and rock climbing should be avoided to prevent accidents that may jeopardise the health of mother and child, a physically fit woman can continue to exercise during her pregnancy as it does not cause extra stress on her body and the baby. Women who lead sedentary life-

styles but wish to be active during their pregnancy are encouraged to start slow with low-stress exercises such as voga, Pilates and walking,

Warning signs

There are a few symptoms that a pregnant woman should not

pregnant women surface ignore.
Firstly, a pregnant woman must seek immediate medical help if she encounters bleeding or any discharge from her nether region, as it could be signs of a miscarriage, infection or other complications.
Abdominal pain should also not be ignored.

"During pregnancy, a mother may encounter abdominal pain that is not caused by contractions. This pain could be related to medical conditions such as appendicitis, liver problems or renal stones," Dr Fairuz explains.

If a pregnant woman is experiencing headaches, blurred vision or massive weight gain, she could be experiencing hypertension, fits or stroke.

Fever should not to be taken

lightly. If a mother is diagnosed with dengue fever, emergency care must be given as it is much harder to treat a dengue patient who is pregnant.

A mother knows the movements of her baby best. If she notices that her baby is moving less in her womb, she should go for a checkup to ensure her child is safe.

Delivery methods

Ensuring a safe delivery is just as important as maintaining a healthy pregnancy throughout.

Take heed when a pregnant woman experiences bleeding, abdominal pain, headaches, blurred vision massive weight gain, and even fever, says Dr Fairuz.

A trend that is becoming increasingly popular among modern mothers is gentle birthing – a method that is meant to reduce the trauma or stresses of childbirth for the mother, baby and father.

Although the concept may seem empowering and idyllic, Dr Fairuz

warns of its danger to mother and baby as medical staff and mid-wives in Malaysia are not ade-

quately trained in this method.

She shares that the death risk for babies rises three-fold compared to those in proper medical health facilities, and gentle birthing causes a higher possibility of maternal death as mothers are not super-

vised by personnel with proper medical qualifications. Dr Fairuz emphasises the impor-tance of consulting a certified med-ical doctor instead of relying on hearsay and online articles

"A labouring mother should not see two sunsets, because it indicates that her labour is abnormal," she says.

If you have questions regarding pregnancy health, call 03-5515 1888.

IT is normal for your body to experience an inflamed sensation when you have an injury, but it should be a cause for concern when it lasts for a long time.

"Inflammation is a normal reac-'inflammation is a normal reac-tion of the body upon injury or infection. It is usually characterised by rechess, heat, pain and swelling in a specific part of the body," says Jan Martell, a research associate at the Research and Development
Centre of Chang Gung
Biotechnology and the Centre for
Molecular and Clinical Immunology of Chang Gung University, Taiwan. "Where the skin has been

breached, the immune system will be activated and some cells called macrophages will engulf bacteria and cell debris to prevent infection and clean the wound," he says.

Inflammation is a localised reaction of the immune system to injuy or infection. A typical acute inflammation is rapid, intense and self-limiting while a chronic inflammation is low intensity and may be delayed and long-lasting, says Martell

"Chronic inflammation is a reaction of the immune system that propagates to the whole body through blood and other body flu-

ids," he says.

A common cause of chronic inflammation is food allergy – causing pain, redness and swelling in the knees, hands or other parts

Understanding chronic inflammation

of the body – that may occur hours after the food has been consumed.

"Chronic inflammation has been called a deadly killer because it range of a deady killer because it may lead to many chronic diseases such as heart disease, type 2 diabetes, cancer, asthma, Alzheimer's disease and arthritis." he adds.

Chronic inflammation has also

been observed in normal ageing, overeaters and obese individuals

"In the long term, chronic inflammation may affect metabo-lism by reducing sensitivity to insu-lin. Insulin is a hormone secreted by the pancreas in response to consumption of carbohydrates in

foods.

"When the body becomes insulin resistant, it is unable to get the energy needed rapidly and this may lead to fatigue and other health conditions including type 2 diabetes, chronic kidney disease and cardiovascular disease," he

According to Martell, the best way to treat chronic inflammation is to reduce or eliminate exposure to the triggers that cause it in the first place

Various foods also contain anti-inflammatory molecules – such as fish, flax seeds and walnuts, which contain high omega-3

fasting, reducing stress and improving sleep quantity and quality are other good strategies to reduce chronic inflammation," he

Besides adopting a healthy lifestyle, inflammation is usually treated with corticosteroids such as cortisone and dexamethasone

However, while it may be effect tive at reducing symptoms, it also comes with negative side effects after prolonged use and should be considered only in cases of acute inflammation or as a last resort

Other than pharmaceutical treatments, those with inflammation often seek alternative treatments

such as cordyceps.

"Cordyceps is a medicinal fungus
with a long history of use in traditional chinese medicine (TCM) to
fortify the lungs and kidneys,
as well as a boost. as well as to boo energy and libido," said Martell.

Research done by

Inflammation is a localised reaction of the immune system to injury or infection, says Martell

the group at Chang Gung Biotechnology and Chang Gung University have found that Cordyceps produces other benefits that have not been described earlier as part of TCM such as reducing the activation of human immune cells in culture, according to published reports.

Similarly, Cordyceps also reduced signs of inflammation in animal models of lung inflamma-tion, diabetes and obesity by induc-ing the growth of the "good bacte-ria" in the gut which protects the intestinal lining, preventing bacte-rial molecules from entering the blood and causing inflammation, the reports state.



larly consume Cordyceps as a dietary supplement," says Martell.

To learn more about chronic inflammation and how you can manage it, attend a health talk on Stopping the Silent Killer: Chronic Inflammation organised by Eu Yan Sang on Oct 6 (11am) at Cititel Mid Valley, Kuala Lumpur, which will be Valley, Kuala Lumpur, which will be presented by Martell.

HIV Connect in AIDS

Improving our care and management of HIV/AIDS patients.

ACCORDING to the 2018 UNAIDS report on Malaysia, from the estimated 87,000 people living with HIV (PLHIV), 39,018 patients are currently on antiret-roviral therapy (ART). This means that only 45% of

HIV patients are currently covered by ART. These dismal statistics prove that there are many measures that should be implemented to improve our care and management of HIV/AIDS

We need to figure out why there are patients who are still not covered by ART.

The problem is most likely multifactorial in nature: patients might be affaid or reluctant to get treatment for HIV/AIDS; access to treatment might be lacking in certain parts of Malaysia; and doctors might not be providing an environment that is supportive enough for patients to get the necessary

From the 2016 Global AIDS Response Progress Report released by the Ministry of Health, the key populations in Malaysia that are affected by HIV/AIDS are people who inject drugs (PWID), female sex workers (FSW), transgender people (TG), and men who have sex with men (MSM).

If initially the epidemic in Malaysia was due to PWID, over the years, the trend has shifted to be more due to sexual transmission.

It is crucial for healthcare practitioners to approach these key populations and be sensitive of their needs.

Doctors should also be

non-judgmental and focus on the health issues that revolve around the patient's sexual activity so that patients are willing to be honest and get tested for HIV.

If doctors start to act as moral arbiters, he or she will impose his or her values on to the patients' and deter patients from coming forward to receive the

necessary treatment.
As a society, we still attach stigma when it comes to HIV/ AIDS and sexually transmitted infections (STIs), which prevent proper diagnosis and manage-ment of these patients. From the 2014 Integrated Bio-

Behavioral Surveillance (IBBS) study, only 13.4% to 39% of key populations (FSW, MSM, and TG) had received condoms with HIVrelated information. It is obvious that we are still lacking when it comes to advice that we should

impart to our patients.
Doctors might avoid talking about safe sexual practices, but they should know that their medical advice can save lives.

Furthermore, the IBBS survey in 2012 and 2014 shows an increased trend of alcohol and psychotropic drug use before sexual intercourse. These behaviours further complicate sexual practices and can prevent proper use of a condom during sexual intercourse.
Thus, doctors should take a

thorough history from the patients and give comprehensive advice to them. Doctors should be part of the solution in the HIV/AIDS epidemic, instead of resorting to blaming the patients.

In a cross-sectional study by Kwee Choy Koh et al. (2017) involving 65 patients newly diag-nosed with HIV, up to 56.9% of patients had presented with HIV-related conditions at a primary healthcare facility during the three years prior to diagnosis. This shows that there are

This shows that there are missed opportunities to detect, and consequently treat HIV earlier. Therefore, more training should be given to doctors in general and primary care physicians in particular, to ensure that we are more proficient when dealing not only with key populations but also with populations but also with patients who have the risk to be infected with HIV/AIDS.

Medicine (MASHM) to create

HIV Connect.

It is an online training plat-It is an online training plat-form that educates primary care physicians regarding diagnosis and treatment options of HIV/ AIDS, pre- and post-exposure prophylaxis of HIV/AIDS, and STIs.

Dr Suresh Kumar Chidambaram, President of MASHM and Infectious Diseases Consultant at Hospital Sungai Buloh said of the programme: "Those successfully completing this online module will be invited for face-face to training. After this training, they will be provid-ed the opportunity to do clinical attachments in the nearest infec-tious diseases clinic. This way they will be comprehensively trained in management of HIV and STI.

"Because we want to reach out to as many primary care physi-cians as possible, this platform is free of charge. We hope that this programme can fill in the gaps that may exist in the physicians' knowledge of HIV/AIDS and STIs and also remind them of the sen-sitivities involved when it comes to sexual history taking and imparting advice related to sexual health.

"Collaboration with communiy-based organisations such as MAF will give doctors more holistic training that ensures the concerns of the PLHIV are incor-

porated in the training."

Dr Suresh also believes that we should work toward "more PLHIV to be diagnosed and started on effective treatment. Unlike in Western countries, very little HIV treatment is currently being provided by general practition-ers in Malaysia".

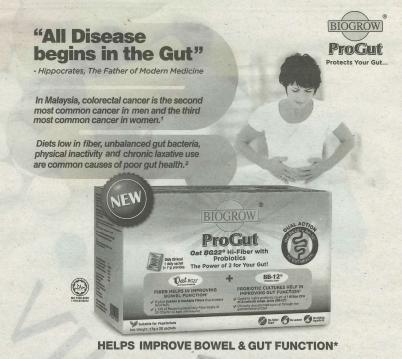
In alignment with the Ministry

of Health's commitment to end AIDS by 2030, we hope that this programme will supplement the other programmes that are already in place. We hope that in already in place. We hope that in addition to the government facilities, the private clinics will also step up so that patients will have more choices when it comes to getting and receiving the proper care. This programme is our way to empower primary care physicians – I hope they will take up this call. this call.

The online program can be accessed through https://hivcon-nect.mashm.net/. If you have any enquiries, email HIVconnect@mac.org.my or call 03-40474312.

Malaysian AIDS Foundation (MAF) has teamed up with the Malaysian Society for HIV Medicine (MASHM) to create HIV Connect, an online training platform that educates primary care physicians regarding diagnosis and treatment options of HIV/AIDS





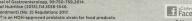
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