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MEDiScene

THE SUNDAY TIMES MONTHLY GUIDE TO BETTER HEALTH

Staring at the screen puts a strain on the eye muscle. Pic by M.A. Pushpa Kumara

That harmful gaze

Consultant Ophthalmologist Dr. Dharma Irugalbandara warns of Computer Vision Syndrome or Digital Eye Strain, the result of long hours of screen-use

By Kumudini Hettiarachchi

Look around any place you are in……..men, women and children are 'glued' to some type of a screen.

It may be a tab, laptop, desktop or even a smart phone, but all are gazing intensely at a screen.

Dr. Dharma Irugalbandara

Have we thought of the impact of such screen-use on our eyes?

"When we focus our eyes for a long time on a computer or display device, a condition called Computer Vision Syndrome or Digital Eye Strain can come about," says Consultant Ophthalmologist Dr. Dharma Irugalbandara.

Pointing out that this is due to looking at screens for "protracted, uninterrupted periods of time" which leads to the eye muscles facing an inability to recover from the strain, she says that there could be eye discomfort and vision problems.

Children affected too

The danger in children is that prolonged screen-use could cause myopia (short-sightedness) in later life, cautions Dr. Dharma Irugalbandara.

Get children's eyes checked while making sure that the computers they are using are at the right height, while having adequate lighting.

Tell them to take their eyes off the computer regularly, go for a walk around the home or garden to rest the eyes, she adds.

"The more you keep looking at a digital screen, the higher the level of discomfort," says Dr. Irugalbandara.

The most common symptoms of Computer Vision Syndrome are:

- Eyestrain
- Headaches
- Blurred vision
- Dry eyes
- Neck and shoulder pain

She reiterates that some of these symptoms may be aggravated by poor lighting, the glare coming off a digital screen, improper viewing distances, poor seating posture, uncorrected vision problems or a combination of these factors.

Comparing Computer Vision Syndrome to carpal tunnel syndrome and other repetitive motion conditions, Dr. Irugalbandara creates the image of a person's eyes following the same path over and over, focusing and re-focusing constantly.

"Back and forth your eyes will travel, sometimes looking down at notes and then back again as you key-in those notes. The eyes have to deal with constantly moving and changing images, shifting focus, sending rapidly varying images to the brain," she says stressing that this causes a lot of strain on the eye muscles. Aggravating the situation is that the screen brings on contrast, flicker and glare.

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Simple foods with detox power

By Dr. Nirmala M. Pieris

The detoxing system in our body is quite powerful with the liver, kidneys, gastrointestinal system, respiratory tract, skin and lymphatic system playing critical roles. In the fast-paced world we live in, this system can be under considerable pressure as while it is hard at work eliminating toxins and invaders, there is a continuous overload of substances that strain the natural process. The substances include pesticides, hormones, antibiotics, heavy metals and chemicals.

Detoxing is thus important to flush out toxins accumulated in the body. This will not only make us feel healthier physically, but will also help to lift mood, energy, and even our immune system.You can do this easily with specific and simple foods that will have other health benefits as well.

Lemons

Lemons stimulate the release of enzymes and convert toxins into a form that can be easily excreted from the body. A slice of lemon in hot water is a simple way to start a detox. Lemon water when metabolized in the body produces alkaline by-products that helps balance the acidity of foods. Add a few slices of ginger or a sprinkle of turmeric and a pinch of pepper to enhance the detox process. The citric acid in lemon helps preserve the natural ability of the liver to detox.

Ginger

Ginger stimulates digestion and cleanses build-up of waste and toxins in the colon, liver and other organs. Ginger tea, prepared by steeping slices of fresh ginger in hot water will give the best benefits. Add fresh ginger to as many dishes as you can, or grate some ginger and toss it in the juicer with apples, carrots and a little lemon juice--it tastes great.

Turmeric

The primary active ingredient in turmeric is curcumin, which has anti-inflammatory properties and is rich in antioxidants. This makes turmeric a most important detox additive that is super helpful in cleansing the kidney and liver. Always use black pepper with turmeric as the piperine helps to increase curcumin absorption. Add to curries, rice, soups or even blend into a smoothie.

Garlic

Garlic does not directly flush out toxins, but contributes to detoxing as it helps increase the production of the important antioxidant glutathione. This filters toxins coming out from the digestive system while also helping the liver in getting rid of toxins. Raw garlic provides optimal benefits. Chop or crush and add to a salad dressing or use with tomato on top of pasta or bread.

Beetroot

Beetroot literally pushes toxins out of your body making it a great detox food. Beetroot contains a group of phytonutrients called betalins that supports detox by amplifying specific enzymes that support the liver. It also provides abundant nutrients and is full of magnesium, iron, and vitamin C. Use it in a salad, soup or even as a drink, or combine it with carrot and apple.

Cabbage

Cabbage is a great detox food. Like other cruciferous vegetables, such as broccoli, cauliflower, kale, brussels sprouts, and bok choy, cabbage contains sulforaphane, a chemical which aids the body in the fight against toxins. Cabbage also contains glutathione; an antioxidant that helps promote the liver function. Eating it raw in salads is best, if not steam or sauté. Always stick to short cooking times.

Apples

Apples are rich in the soluble fibre pectin that will help purge toxins from the bloodstream. Pectin also helps in detoxing metals such as mercury, lead and additives. Both apples and apple juice are recommended prior to a liver cleanse because the malic acid in the juice helps to open the ducts that run through the liver, allowing the liver to be more easily flushed.

Cilantro

Some plants can bind to heavy metals and help to excrete them. These plants are known as “chelators” and cilantro is one of them. Cilantro enhances mercury excretion, decreases lead absorption and is also a brain booster. It is good in salads and makes a good detox juice in combination with lemon, ginger, cucumber and green apples

Fresh fruits

Fresh fruits are fibre rich and play a key role in a detox diet. Packed with vitamins, minerals and antioxidants they help improve digestion. Acidic fruits such as grapefruit, pineapples, oranges, and tomatoes are all especially detoxing. Start your day with cut fruit or a smoothie and then snack on fruit when hunger strikes or eat with your main meals.

Probiotics & Prebiotics

Probiotics (or good gut bacteria) help intestines release toxins and waste products.The most popular are curd and yoghurt. Other bacteria fermented foods such as sauerkraut, apple cider vinegar, and pickled vegetables are also good. Prebiotic foods, serve as fuel for the probiotics. These include ash plantains, onions, leeks, asparagus, greens, beans and oats.

In addition to all this if you really want to detox continuously the first thing is to stop bringing toxins into your body by starting with the food on your plate. Then eat and drink as many detoxing foods and beverages as possible to keep your body clean and healthy.

High-tech hip replacement op sees quick recovery

By Carol Davis for The Mail On Sunday

People who have had a hip replacement operation could be walking out of hospital within hours thanks to new minimally invasive surgery being introduced to the NHS in the UK.

Currently, many of the 95,000 Britons undergoing hip replacements every year will spend up to five days in hospital, unable to walk. But thanks to the new technique, 80 per cent of patients will be sent home within 24 hours.

The high-tech approach avoids cutting through tough muscles and tendons, making the procedure far less painful and speeding up recovery times.

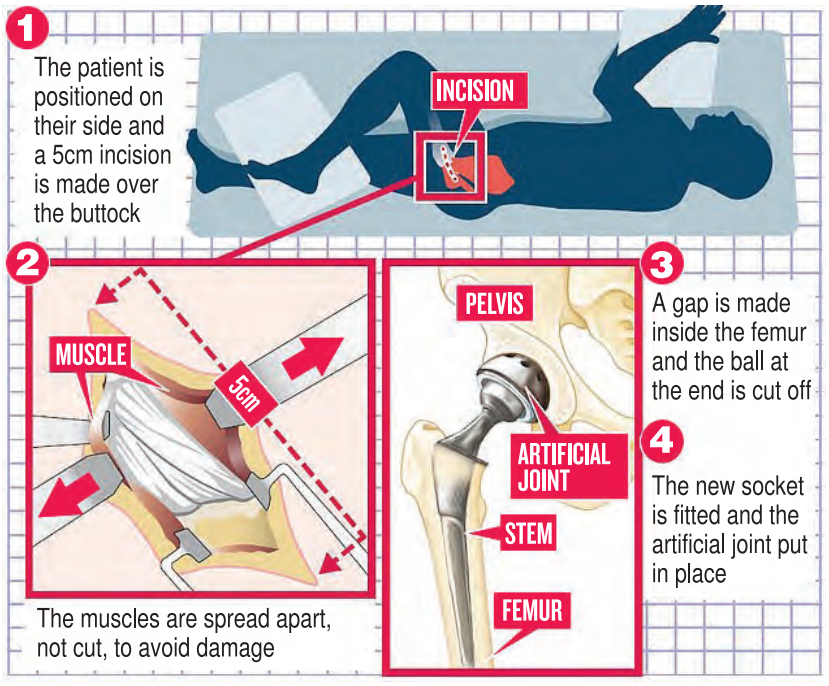
Paul Robertson, 51, a business consultant from Leicestershire, was the first patient to have the operation on the NHS at Leicester General Hospital in April. A couple of hours after the procedure, the father-of-three was walking upstairs with the help of crutches, and returned home the next morning.

He says: 'I expected to be in agony afterwards but instead the pain was minimal.'

The hip joint is made up of a ball attached to the end of the thigh bone – also known as the femur – and a socket, which is part of the pelvis. Hip replacements involve swapping the damaged ball and socket for new, artificial parts.

This is most commonly needed in patients aged between 60 and 80 who develop arthritis in the joint.

This happens when the cartilage – the smooth elastic tissue which cushions the joint – wears away. The bones either side then rub the joint, creating friction that causes agonising pain and affects movement. In a traditional hip replacement, the surgeon makes a large cut of roughly 20cm through the thigh muscle and dislocates the hip to make room to insert the new joint. But the new method, called SuperPath, is far less invasive, requiring an incision of just 5cm.



Rather than cutting through the muscle, it is simply moved aside. No dislocation is needed either because the surgeon uses intricate movements and tools to reach the damaged socket.

'The approach causes very little damage to the tissue around the hip,' says Ashwin Kulkarni, consultant orthopaedic surgeon at University Hospitals of Leicester NHS Trust. 'This means there's less blood loss and pain, and recovery is much quicker.

'Patients are able to get back their full hip function very quickly.'

Another advantage is that it reduces the risk of patients dislocating their hip in the months after surgery, which can occur with normal hip replacements. 'Because we don't dislocate the hip, it makes the joint stronger afterwards,' Mr Kulkarni says.

The operation, which takes an hour, is normally carried out under general anaesthetic. With the patient positioned on their side, the surgeon makes the 5cm incision over the buttock. The hip muscles are moved to either side to expose the joint. While the incision is smaller than in normal hip operations, the surgeon can still see clearly inside. The joint is surrounded by a stiff layer of tissue called the hip capsule which is cut through with a hot scalpel to expose the ball. The surgeon then uses a drill to create a hollow vertical space inside the thigh bone.

The old, diseased ball, which is attached to the end of the thigh bone, is cut off and removed.

Then, after reshaping the old socket, a new titanium socket with a cushioned plastic or ceramic liner is fitted in place. Finally, a titanium-alloy stem – the stick of the new artificial joint – is used to fill the hollow gap inside the thigh bone.

The new artificial ball is attached to this piece of metal and put in position inside the pelvic socket.

With the new joint assembled, the muscles are moved back in place and the cut stitched up.

SuperPath – possible in up to 80 per cent of patients needing a replacement hip – is also being trialled by the NHS at Hereford County Hospital.

Understanding the problem of g

By Prof. Raveen Hanwella

You might wonder why a psychiatrist is writing about obesity but in my practice, weight gain is a common problem among my patients. There are several reasons. Often mental illnesses such as depression make people lethargic and inactive. They eat inappropriate food and stop exercising. The medicines we use in the treatment of psychiatric problems such as depression and psychosis as a side-effect cause weight gain due to an increased appetite and derangement of metabolism. So, weight gain is often a problem patients ask my advice on.

MediScene continues our series by Consultant Psychiatrist Prof. Raveen Hanwella, Chair Professor of Psychiatry in the Department of Psychiatry, Faculty of Medicine, University of Colombo and Consultant Psychiatrist to the National Hospital of Sri Lanka. He is past President of the Sri Lanka College of Psychiatrists.

Please see Prof. Hanwella's website http://www.apeymansa.com for more on mental health

Why We Get Fat: And What to Do About It - a best-selling book by science journalist Gary Taubes was an eye-opener for me. For years I have been telling my patients that they become fat because they eat too much - too many calories in and too little calories out and the balance calories get stored as fat. It was simple and logical. "But doctor," they would protest, "that can't be true. I eat so little and I work hard at my household work and hardly have time to sit down but yet I keep putting on weight."'"Aha," I would reply with a knowing smile, "you think you are eating little but you must be eating more than you claim. Human beings, unlike plants, cannot produce food from air and sunlight. All foods must be eaten." Watertight logic? This is the accepted teaching, but is it correct? Gary Taubes says "No. The calories in calories out model is the most misguided and damaging of the nutritional models of the last century."

The first hint that this model might be wrong comes from the study of specific tribes where in spite of poverty and lack of food there is widespread obesity. For example, a Native American tribe in Arizona USA known as the Pima have one of the highest incidences of obesity and diabetes in the United States. It was thought that they became fat because they abandoned their traditional hunter-gathering lifestyle, became sedentary and started eating the typical American diet. But looking more closely anthropologists observed that the Pima became obese well before the Second World War at a time when the tribe had gone from affluence to poverty. So why were they fat? The answer lies in the type of food and not the quantity.

To understand this, we need to know a little about how our bodies handle food. The hormone insulin controls fat accumulation in the body. When we secrete insulin, calories are stored as fat and when insulin levels are low, the fat is released and burned for energy. Insulin is secreted in response to eating carbohydrates or starch and sugars. The more refined the carbohydrates the more the amount of insulin released into the blood.

If insulin makes us fat why does it make only some people fat? This is due to our genetic predisposition. The effect of a hormone depends on a number of factors, and depending on the particular combination of factors including our genes, insulin will partition the calories you consume into energy or storage as fat. In those with a tendency to fatten, insulin partitions a disproportionate number of calories into storage as fat rather than energy for muscles. Such persons will also have less energy available for physical activity and will tend to be sedentary.

If you want to lose weight and cut back on the total amount of food you will end up by eating less fat and protein, which are not fattening and more of carbohydrates that are. The resulting weight loss will, therefore, be minimal. The resulting state of constant hunger will probably make you give up the effort quite soon. So, to have effective weight loss while cutting back on carbohydrates you should increase your consumption of fat and protein.

As we grow older our cells become more resistant to the effects of insulin. Our muscle cells become resistant before our fat tissue. So, even if you were active and lean when young you will tend to put on weight as you age. Hence the reason for the 'middle-age spread'. With less energy available for muscle older persons become more sedentary. As commonly believed, we do not become fatter with age because of inactivity but rather we become inactive because we have become fatter.

What can we do about it? Can we beat our genes even if we are predisposed to become fat? It is the carbohydrates in our food that determine

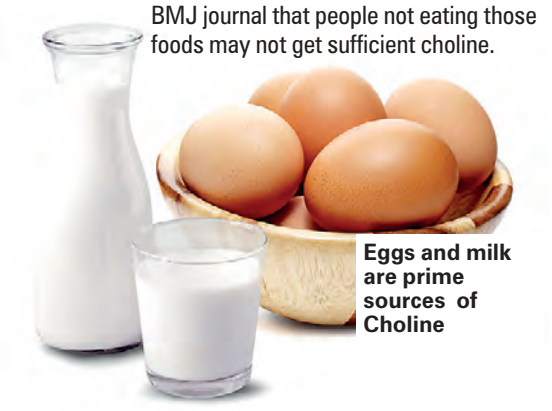
The brain nutrient vegans need to know about

By Caroline Parkinson, Health editor, BBC News website

People who eat vegan or plant-based diets should ensure they are getting enough of a key, but little-known, brain nutrient, say experts.

Choline, which helps transfer signals between nerve cells, is highest in dairy foods and meat.

Nutritionist Emma Derbyshire told a BMJ journal that people not eating those foods may not get sufficient choline.



Eggs and milk are prime sources of Choline

But the British Dietetic Association said, with planning, it was possible to obtain enough from a vegan diet.

Choline is also linked to liver function.

Eggs, milk and beef are prime sources. But it is also present in foods including:

- Roasted soya nuts
- Cruciferous vegetables like broccoli and Brussels sprouts
- Baked beans
- Mushrooms
- Quinoa
- Peanuts

Dr Derbyshire, an independent nutrition and biomedical science consultant, wrote in BMJ Nutrition, Prevention and Health that the UK was falling behind other countries by not recommending or monitoring dietary levels of the nutrient.

She suggested there had been research suggesting pregnant and breastfeeding women in particular had to ensure they had enough choline in their diets, because of suggested benefits for foetal brain development.

Dr Derbyshire said: "I'm looking in the first instance to raise awareness. But I also think if people are eating a plant-based diet, particularly if they are women of childbearing age, they should look at supplements."

Bahee Van de Bor, a spokeswoman for the British Dietetic Association, said: "You absolutely can meet the requirements with a vegan or plant-based diet.

"But you have to have a plan. Foods can be vegan but not provide the necessary nutrients.

Courtsy BBC

Afternoon na

Scientists find adults who face a lower risk of sufferin

By Connor Boyd, Health Reporter For Mailonline

Grabbing 40 winks in the afternoon halves your chances of suffering a heart attack or stroke, a study suggests.

Researchers found people who take a daytime nap once or twice a week are almost 50 per cent less at risk compared with those who never snooze during the day.

But napping any more than twice a week had no further benefits on heart health, the study found.

Lack of sleep raises the risk of atherosclerosis, which is a build-up of plaque in the body's arteries that causes them to narrow and harden.

Scientists say the sweet spot for sleep

aining weight

n secretion and insulin causes cumulation. Not all get fat they consume carbohydrates r those who do carbohydrates blame.

oods containing carbohy- are not equally fattening. ntrated carbohydrates are the st culprits. Concentrated es of carbohydrates include d flour derived bread, cereals asta, liquid carbohydrates like ruit juices and sodas, and es like potatoes, rice and corn. foods are cheap calories and n why obesity is common g poorer communities. People -income countries get fat not se they eat too much or are tary but because the foods they tarch, refined grain and sugar attening.

ontrast, the carbohydrates in green vegetables such as spin- abbage and lettuce are bound ndigestible fibre and enter the stream more slowly and are kely to trigger a burst of insu- hey are therefore less fatten- s these foods contain more and less digestible carbohy- for their weight than starch- od sugar levels rise only slow- r eating them. As a result, the n response is slower, and ore, less fattening. Fruits too lesser concentration of car- rates but contain a type of called fructose. If you eat copious amounts of fruit, they too can induce the insulin response and increase the deposition of fat.

If you want to lose weight and cut back on the total amount of food you will end up by eating less fat and protein, which are not fattening and more of carbohydrates that are. The resulting weight loss will, therefore, be minimal. The resulting state of constant hunger will probably make you give up the effort quite soon. So, to have effective weight loss while cutting back on carbohydrates you should increase your consumption of fat and protein. Hang on you might say, "Is not increasing fat bad for your health? Won't it lead to heart disease?"There is increasing evidence that this too is a myth. Eating fat per se does not lead to heart disease but rather the carbohydrates and resulting obesity is the cause.

So, if you are going on a diet reduce the fattening carbohydrates but eat all you want of protein and fat. There is another challenge however, even if we avoid hunger by eating more of proteins and fat, it will not stop the craving for some carbohydrates like sugar which is an addiction. Studies show that it may take up to one year for the craving for sweets to be lost. If you allow yourself even small amounts, the craving will continue.

Those of you who want to lose weight, keep trying, do not give up. If you stick with it you will succeed.

p is good for you

have a snooze twice a week ng a heart attack or stroke

hours per night. Napping can l to help people get to that num- ey missed it the night before.

research team from the sity Hospital of Lausanne in rland monitored 3,400 people 5 to 75 for an average of five

looked at the association between napping frequency and average nap duration, and the risk of a heart attack or stroke.

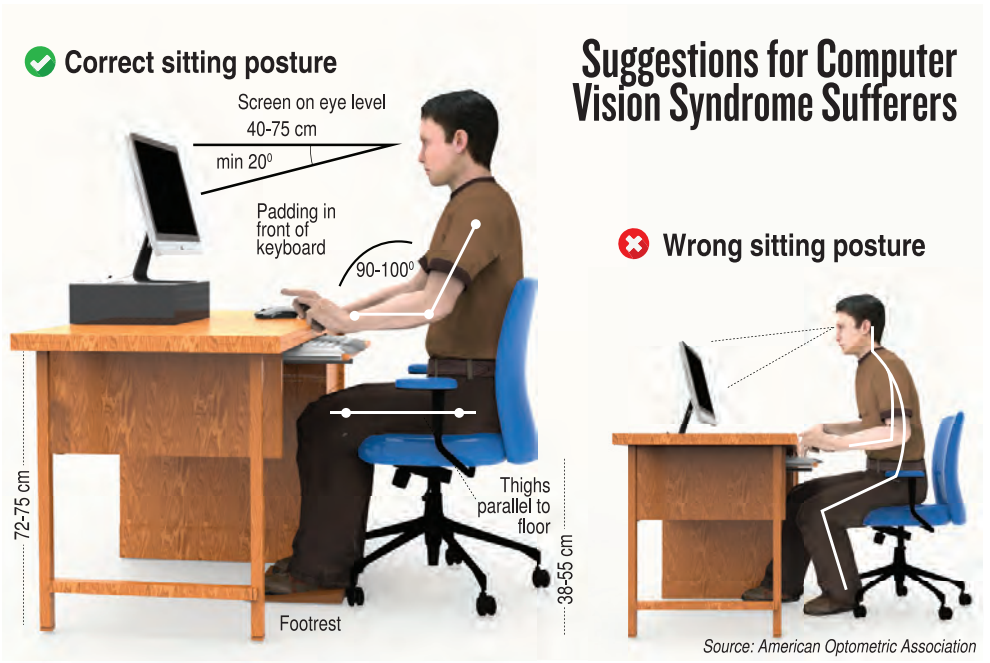
During the five years there were 155 heart attacks or strokes. Napping once to twice weekly was associated with almost halving the risk (48 per cent) compared with those who didn't nap at all.

Study author Dr Nadine Hausler said the team accounted for potential factors which could influence the study.

Naveed Sattar, Professor of Metabolic Medicine at the University of Glasgow, said those who nap frequently during the week tend to be healthier overall.

The findings are published in the British Medical Journal, Heart.

(C) Daily Mail, London



That harmful gaze

Continued from Page 1

It is totally different to when we read a book or piece of paper, she says, pointing out that the letters on a screen are not as precise or sharply defined while the level of contrast of the letters to the background is reduced, and there is also glare and reflections on the screen.

"A person staring at a screen also blinks far less frequently (usually we blink about 15-20 times per minute), leading to the eyes drying out and the vision getting blurred on and off. It is when we blink that the tears get spread out over the eyes.

Age also makes matters worse, as after 40, the ability to focus on near and far objects decline (presbyopia)," adds Dr. Irugalbandara.

This is while minor vision problems could also add discomfort to the screen-user, it is learnt.

Sometimes, we tend to tilt our heads or bend towards the screen to see it better. These changes in our postures cause spasms in the muscle or a pain in the neck, shoulder or back, she says.

Referring to how Computer Vision Syndrome may be diagnosed, this Consultant Ophthalmologist says eye doctors will do an eye examination, after taking a detailed case history. They will check out whether the person has other health issues and what medications he/she is taking.

There will be a visual acuity measurement to determine whether the vision is affected and if so to what extent; refraction to ascertain the lens power needed to compensate for refractive errors (near-sightedness, far-sightedness or astigmatism) and also tests to see how the eyes focus, move and work together.

Simple adjustments

Having done an extensive search on the web, Dr. Dharma Irugalbandara suggests some simple adjustments which can help people overcome Computer Vision Syndrome.

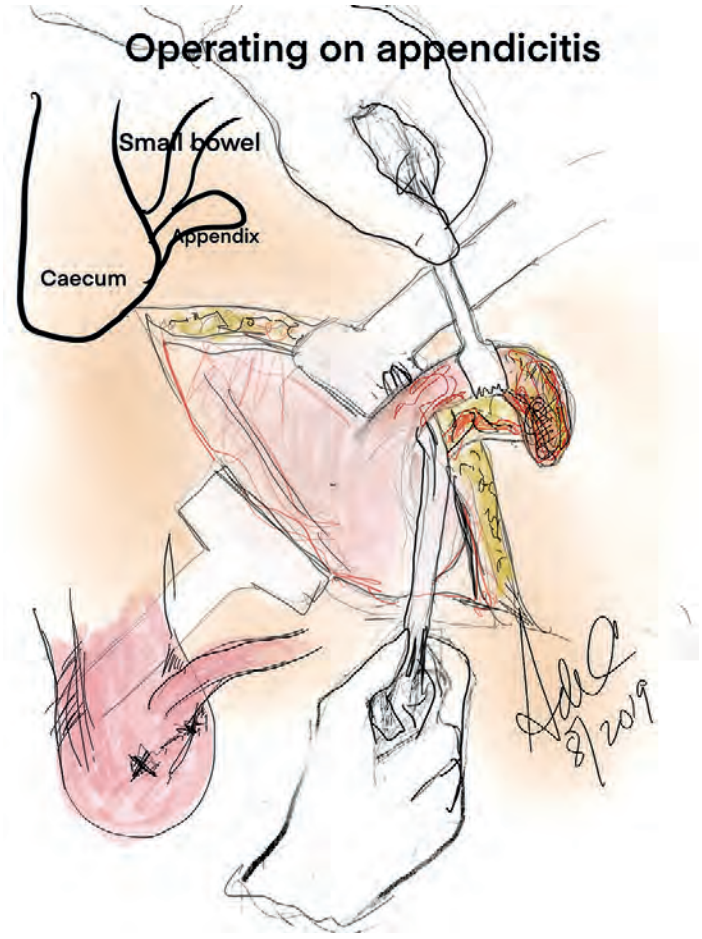
They include:

- **Setting yourself the 20-20-20 rule –** take your eyes off the screen every 20 minutes, look at an object about 20 feet away and do so for about 20 seconds. This allows your eyes to re-focus. To keep your eyes moist, you need to blink frequently. Take a longer break after two hours' time on a screen.

  Position your computer right – among the suggestions are that the computer screen should be about 25 inches, or an arm's length, from your face, with the screen centre being about 10-15 degrees below eye level.
- **Reduce the blue light and glare –** this can be done by using a screen filter or lowering the colour of your screen. Blue light is known to cause eye-strain.
- **The lighting in the room where the computer is matters –** it should be bright and the light from the screen should not be brighter.
- **Where to place any reference material –** they should be above the keyboard and below the monitor, at the same distance from the eyes as the screen. Otherwise, use a document holder beside the monitor. This would prevent the constant turning of the neck and eyes from the screen to the document.
- **How to sit before the computer --** The height of the seat of the chair should be in a position to allow you to rest your feet flat on the floor. If there are chair-arms, they should support your arms while typing. Your back should be straight and resting on the chair-back.

Appendicitis: To operate or not

By Prof. Alan de Costa



After a long and celebrated reign Queen Victoria of England died in 1901. Her oldest son Edward was due to be crowned King on June 16, 1902. Two weeks before the great event, he began to get episodic pain in his abdomen, which then became constant and severe. The most eminent physicians in the land gathered around him, and when the Prince began to deteriorate, they did what physicians have done from time immemorial; they sent for a surgeon.

The most distinguished surgeon in England at the time was Sir Frederick Treves, and summoned to the royal bedside, Treves diagnosed an appendix abscess and advised immediate operation.The Windsors have a reputation for being phlegmatic, but not bright. The Prince, demurred, claiming "my people would expect me to attend the coronation." To this Treves is said to have replied, "Then sir, you will go as a corpse." The prince then changed his mind. Treves drained his appendix abscess in a room in Buckingham Palace under an ether anaesthetic. The coronation was delayed at vast expense, but he was eventually crowned in August 1902, and as Edward the VII went on to rule for seven years. With his appendix! Treves was lavished with Royal honours, and became one of the most famous men in England.

The last half of Victoria's reign, and that of her oldest son marked what came to be known as La Belle Epoque, a period of extraordinary wealth, innovation and creativity. On the medical side, Pasteur laid the groundwork for the germ theory of disease allowing Lister to make Operative Surgery safe for patients. Anaesthesia was brought out of the fairgrounds into hospitals; operating theatres were designed using Listerian technologies, and Surgery transitioned from uncertain craft to a thoughtful science.

It is likely that appendicitis has been an affliction of mankind for millennia. But the precise cause of abscess formation in the lower abdomen was thought to be a disease of the caecum- what the French called "typhlitis". In 1886 in a masterly presentation in Boston, the pathologist Reginald Fitz described the evolution of appendicitis, and recommended to surgeons that early removal of the appendix would prevent the lethal complications of the disease.

Supported by the increasing availability of anaesthesia, American surgeons took this advice and across the country appendixes were sacrificed on altars of both necessity as well as expediency. The saying "there are two types of appendicitis, acute suppurative, and chronic remunerative" became fashionable to describe adventurous surgeons. Surprisingly many surgeons in England and France were less enthusiastic, and preferred to wait until an abscess formed following appendicitis and then draining the abscesses and sometimes removing the appendix. By 1906 Treves himself had operated on over a thousand patients with appendicitis, but he did not believe in early operation. When his young daughter developed appendicitis, Treves delayed an operation leading to her death.

Eventually the notion of early surgery for appendicitis was widely adopted. Over the last 20 years keyhole surgery has become standardized, and young doctors the world over use expertise in laparoscopic appendicectomy as the foundation for the development of their surgical technique. Serious morbidity is uncommon, and death rare.

Well, is that the end of it? Perhaps not quite.

Why do people develop appendicitis? Surprisingly the answer is unclear.

So, what do we know about the demographics of appendicitis? Where it has been studied, the condition may affect anyone at any age. The highest incidence is in the second decade. Males suffer from appendicitis slightly more than females, and in Europe and North America, there is a seasonal variation, it being more common in the summer and autumn. Twin studies have been striking, suggesting that up to 30% of all cases of appendicitis may have genetic associations.The incidence of appendicitis is about 30/100,000/ per annum, 30% of which are perforated, giving a lifetime risk of around 9% in western populations.

Back to the question "Why do people get appendicitis?" An explanation given by surgeons over the years is that something blocking the opening of the appendix into the caecum may allow bacteria to overgrow, inflame and perforate the appendix. The commonest cause is of a faecalith, a hard lump of faeces, sometimes calcified, that blocks the appendix. Other things that block the appendix as well, like a piece of bone, lead shot, seeds or even parasites reinforce this view. The appendix itself may be involved in its own disease processes eg cancer, infections eg. measles and other inflammatory conditions. But the great majority of cases have none of these things. They seem to just happen.

It has also been known that some cases of appendicitis seem to resolve, and others to resolve with the use of antibiotics. This has sparked intense research interest, as if antibiotics can be shown to "cure" appendicitis, a different treatment pathway, outside the surgical pathway of early operation may emerge. Initial research tended to support the proposition that antibiotics may indeed cause resolution of early appendicitis. Many different antibiotic regimes seemed to work equally well. Over the last two years many of these studies have been pooled together(meta-analysis) and a half dozen are now available. It must be emphasized that these studies looked at early appendicitis, and where there was any likelihood of perforation or peritonitis these patients were operated on immediately.

What these analyses seem to be telling us is:

- 75% of cases of early appendicitis may respond to antibiotic treatments
- Almost all antibiotic regimes from the simplest to the most powerful, seem to work equally well
- In a majority of cases appendicitis may not be progressive to perforation, and perforating appendicitis may be a separate entity.
- 100 % of cases are cured by appendicectomy
- Of those that respond to antibiotics a proportion will recur requiring further treatment.This group may be 10-20%.

Conclusions from these analyses suggested that while an effect of antibiotics was likely, this was of insufficient magnitude to recommend a change in protocol. Early appendicectomy also deals with the small number of cases of appendix tumours (0.5%), that non-intervention may miss.

A recent further interesting study from Korea, has shown that if patients with early appendicitis are randomized into a treatment arm (antibiotics only) and an observation only arm, a similar number from each group resolve, and a similar number progress to appendicectomy. This will have to be confirmed with other studies, but raises the tantalizing possibility that a majority of patients with early appendicitis may well resolve with or without antibiotics rather than progress to perforation and peritonitis.

One of the clear messages from some of this work, is that early appendicitis, is not an emergency and can be managed in the light of day. Perforation or peritonitis is managed with urgent operation to save life.

This underlies the necessity for diagnostic precision and the differentiation of uncomplicated appendicitis from complicated or perforated appendicitis. How is this done?

The very basis of western Medicine emphasizes history and physical examination. It has long been known and worked out statistically that certain signs and symptoms

to operate?

are associated with a particular diagnosis. Appendicitis is a good example of these systems at work, and have allowed different Scoring algorithms to be worked out. The Alvarado Score for appendicitis is one of them.

Alvarado score — The Alvarado score (also called the MANTRELS score) is a 10-point score derived from eight components: (Modified)

- Mild generalised abdominal pain (1 point)
- Anorexia (loss of appetite) (1 point)
- Nausea/vomiting (1 point)
- Tenderness in the right lower abdomen (2 points)
- Rebound tenderness (suggesting localised peritonitis) in the right iliac fossa (1 point)
- Elevated temperature >37.5°C (1 point)
- Elevated white blood cells in blood (2 points)
- Shift of the white blood cell-count(where more cells showing infection become apparent) (1 point)

So clearly an A score of 3 or less will not need surgical review. A score between 3 and 7 may suggest further diagnostic steps. This is where imaging is used and where surgical opinion may be sought. Without imaging at this stage and proceeding to operation (look and see rather than wait and see) a negative appendicectomy rate (where an operation is performed and the appendix is normal) may be as high as 20%. Good imaging should bring the negative appendicectomy rate to 5% or less, and is what good practice demands.

Abdominal ultrasound is the cheapest and safest imaging modality. It is quite sensitive (where a positive result strongly supports the diagnosis of appendicitis) but not very specific (a negative result does not outrule appendicitis), and rather dependent on who is doing the test. An abdominal CT scan is both very sensitive and specific, and is increasingly used routinely particularly in North America. Someone with an Alvarado score greater than 7 may proceed directly for surgical review and operation, though increasingly these patients will have CT scans as well.

The place of imaging is particularly important in some clinical situations, children under 5, and pregnant women. In these situations diagnostic precision has to be achieved with urgency, and imaging including CT scan, US and even MRI may have a role.

These are often difficult situations requiring specialist expertise across several areas to bring successful resolution.

Surgery and anaesthesia are not risk free. There may be a 5% risk of complications from operation, and about a 2% lifetime risk of intestinal obstruction.

But none of this tells us why appendicitis occurs. The science of metagenomics gives us an insight into the organisms that populate the human intestine. This combined with the use of sophisticated microscopy shows that a high proportion of cases of perforated appendicitis are associated with invasion of the appendicular wall-but by organisms not normally seen in the bowel, but in the mouth (fusiformis). These organisms are sensitive to most antibiotics, and may relate to some of the studies mentioned earlier.

Good research answers some questions, but raises others. Surgery, the most practical of crafts, remains the handmaiden of good science.

Felix qui potuit rerum cognoscere causas

Happy is he who has learned the causes of things

Virgil. Georgics, 29 BC.

(The writer is Prof. of Surgery, James Cook University, Cairns , Australia)

Badminton, a 'thinking' sport that's good for your brain

By Vanessa Chalmers Health Reporter For Mailonline

Playing 'complex' sports such as badminton are good for your brain, according to research.

Twenty participants were asked to take a cognitive test before and after taking part in different forms of exercise.

Scientists found performance was boosted after participants played badminton - but no effect was seen from running on a treadmill.

The researchers said badminton requires the player to make decisions and use co-ordination, which has positive effects after.

There is already robust evidence that exercise has positive effects on the brain, and can help prevent disease such as dementia.

Many studies have shown the benefits of exercise on executive function - but little is known about what types is best in comparison to each other.

The team, led by Shinji Takahashi at Tohoku Gakuin University, Japan, recruited 20 adults who played badminton for ten minutes.

How is exercise good for your brain?

Many scientific studies encourage people to exercise by touting the benefits it could have on their brains – but what exactly does it do?

In a round-up of recent research, Harvard Health Letter's executive editor, Heidi Godman, explained it can boost the size of certain parts of the brain, improve sleep and stimulate healthier brain cells.

Research by the University of British Colombia showed people who did regular aerobic exercise – such as running, swimming or cycling – have larger and more active hippocampus regions of the brain, which are associated with learning and emotions.

Other research adds that the prefrontal cortex and medial temporal cortex tend to be larger in people who exercise more often – these regions control thinking and memory.

Exercise can also reduce inflammation (swelling), which can damage cells if sustained, throughout the body, including in the brain.

It can also stimulate the production of growth factors, which are chemicals affecting the health of brain cells and the growth of new blood vessels to provide more oxygen to the organ.

Exercise also helps people to sleep better and have reduced stress and anxiety, all of which have been shown to have positive effects on brain power and mental health.

They also ran on a treadmill, considered a simple exercise, and sat down, a control intervention, for ten minutes per task.

The participants completed the Stroop test before and after each intervention. It involved matching words to colours.

In the main test, test scores increased from 53.6 to 57.1 after playing badminton, on average. They went from 55 to 57.2 after running.

Writing in the journal PLOS One, the authors of the study said: 'In badminton, players are required to not only grasp the speed and orbit of the shuttle, spatial position of the opponent, but also to choose appropriate shots and perform them.

'Such cognitive demands could activate the regions of the brain concerned with executive functions.

'We conclude that the large effect of the badminton intervention on executive function was due to the cognitive demands required to play the game.'

The researchers were specifically investigating a part of executive function called inhibitory function, which we have from early childhood.

It manifests itself in many ways, but is largely involved with controlling our impulses.

Poor inhibitory function, or 'control', may stop a child from focusing in class, causing interruption and boredom.

An adult may honk their horn suddenly in traffic out of frustration, or succumb to eating a slice of cake despite being on a 'diet'.

The researchers said the main finding of the study was that badminton increased performance of inhibitory function, 'over and above' the effect of running.

They said further research is needed to understand if a long bout of exercise would find similar results.

Currently, studies have found conflicting evidence for the exercise with the greatest effects on the human brain, with everything from aerobics to team sport being investigated.

But scientists concur that any is better than none – with even ten minutes of leisurely activity, such as doing the gardening, reducing the risk of cognitive decline.

What evidence suggests exercise prevents Dementia?

Aerobic exercise such as walking and running may halt dementia by preventing the brain from shrinking, researchers from the universities of Western Sydney and Manchester wrote in the journal NeuroImage in 2017.

The team analysed 14 studies with a total of 737 participants and found being active several times a week maintains the size of the region of the brain associated with memory - the hippocampus.

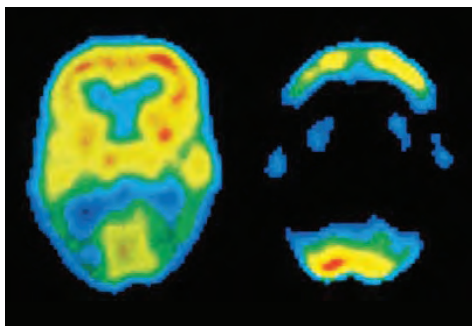
Scientists said exercise doesn't need to be excessive. Just 30 minutes three times a week is enough, according to a study published in the American Heart Association journal Stroke in 2012.

University of Lisbon, Santa Maria Hospital in Portugal, who led the study, found those regularly exercising for a total of 90 minutes a week - less than recommended levels - reduced their risk of vascular-related dementia by 40 per cent and impairment in brain skills by 60 per cent.

Dementia

Dementia is an umbrella term used to describe a decline in cognitive functioning like thinking, remembering, reasoning, and the ability to perform everyday activities. Apart from Alzheimer's, dementia can be caused by other factors like a head injury, or a stroke. Its greatest risk factor is age, which is significant in Sri Lanka since the elderly population—that is, those above the age of 60—is rapidly escalating. Estimated to be 9.2% of the population in 2001 and 12.5% in 2012, that figure is expected to jump to a whopping 25% by the year 2041. About 5.3 million people in Sri Lanka will be over the age of 60 in 2041.

People with dementia have particular problems with their short-term memory. They consistently forget things that they have just said or done, even though they can often recall clearly events that happened many years ago. Their sense of time and place is typically lost. They may develop problems with finding words and it becomes increasingly difficult for them to learn new information and to do new things. As time goes on, people with dementia need help to perform even the most basic tasks of everyday living, including washing. Eventually, people with dementia may become uncommunicative and incontinent. Sometimes there are severe behavioural problems. Most people with dementia eventually require 24 hour care. Dementia often goes on for many years - 5, 10 or even 20 - and is not usually the actual cause of death.



BRAIN ACTIVITY IN DEMENTIA
These two PET scans show the level of metabolic activity in a normal brain (left) and in the brain of a person with dementia (right), with yellow and red indicating areas of high activity, blue and purple areas of low activity, and black indicating minimal or no activity.

Types of Dementia

- Alzheimer's disease is the commonest cause of dementia, accounting for about 60 percent of all cases.
- Among other types of dementia is vascular dementia, which is the second most common type of dementia. Vascular dementia results from brain damage due to tiny strokes.
- Lewy body dementia, which some people regard as a variant of Alzheimer's disease or Parkinson's disease. It takes its name from abnormal collections of protein, known as Lewy bodies, which occur in the nerve cells of the brain.
- Fronto-temporal dementia, for example Pick's disease in which there are striking changes in behaviour before the memory problems appear. Pick's disease is a rare type of dementia. It shares various similarities with Alzheimer's disease (AD) but also differs from AD in a number of important respects.
- Huntington's disease, also sometimes called Huntington's chorea, which is characterized by jerky movements in addition to dementia. Huntington's disease is an inherited disease. If your mother or father had the disease, there is a 50 % chance that you will also develop it.
- AIDS related dementia
- Dementia that sometimes occurs together with Parkinson's disease
- CreutzfeldJakob disease or CJD is an extremely rare type of dementia. CJD usually progresses very rapidly and is often fatal within a year.
- Dementia due to a brain tumour - One type of slow-growing brain tumour, known as a meningioma, sometimes causes symptoms of dementia. Most brain tumours cause other kinds of symptoms such as headaches, loss of limb function, visual disturbance and loss of balance, In some cases, removal of a meningioma may result in recovery from dementia.
- Normal pressure hydrocephalus, due to a build up of fluid in the brain - Early symptoms of this type of dementia include incontinence of urine and problems walking.
- Dementia due to an excessive intake of alcohol over an extended period of time, known as Korsakoff's syndrome, which develops because of vitamin B1 deficiency.
- Dementias due to various treatable causes, including vitamin deficiency, hormone deficiency, and syphilis.

Source: Lanka Alzheimer's Foundation Newsletter

Vascular dementia can occur due to a series of blockages of blood vessels that supply the brain, usually due to clots. Each clot prevents oxygenated blood from reaching a small area of the brain, causing tissue death (infarct) in the affected area.

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