

Healthy New Year-2019

HEMISPHERE

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New Year Message from the Vice Chairman



This past year, our team efforts to provide quality, affordable health care in a more convenient and comprehensive manner has resulted in a high patient satisfaction and value addition. The year 2018 was also instrumental in recording significant initiatives that some of our members undertook. One among them, closer to my heart, was the initiative on medical fraternity's health. I particularly appreciate the idea of care provider to also be on the other side and think of his own health, which he often neglects. Sagar Hospitals has successfully undertaken the responsibility of free basic health screening of it's extended network of doctors.

Secondly, the launch of Neurosonology Laboratory by Sagar Brain and Spine Institute, which is the first in the

state of Karnataka, comes at a time when large section of the people of our community should be made aware of Brain Stroke. This leads me to the brave initiative of starting #sagarhealth series on FaceBook Live. I believe the general public needs credible health related information coming directly from their potential doctor, which helps them understand the topic of their interest without getting confused.

The world of healthcare is changing faster than seasons. We have been in operation since 2002, and have been at the forefront of adapting to changes or taking new initiatives. As we head into the New Year, our plan is to continue to provide our people with quality healthcare that is accessible to all. Our patients are our number one priority and they are the responsibility of our doctors and us. We will strive to do our best to provide you with best healthcare options from our highly skilled, well trained doctors using the most latest techniques and technologies that exists in the industry.

I wish the year 2019 brings good health to all.

Best wishes, Dr. D. Premachandra Sagar Vice Chairman Sagar Group

Stroke Prevention - Get Rid of The Demons!!



Dr. AMIT KULKARNI MBBS, MD, DM Lead Consultant Neurologist & Stroke Specialist

Brain attack or stroke is a sudden neurological deficit characterised by sudden weakness or numbness on one side of the body, difficulty with speech or language function, sudden blindness or sudden imbalance while walking. This happens when an artery supplying blood to an area of the brain gets blocked and the resulting symptoms pertain to that particular area of the brain. An acronym called FAST has been coined to create more awareness among general public and help identify symptoms of stroke better in the community.

Stroke related disability is a huge healthcare burden on the society and scores adversely on the quality of life indices of patients as well as care givers.

Isn't it better to prevent strokes from occurring in the first place? Prevention is indeed better than cure. More awareness and efforts should be made in educating the general public on how to prevent an episode of stroke.

It was believed that Kumbhakarna, the brother of the evil Ravana, was cursed by the gods and the curse was that he would sleep excessively and then wake up and eat excessively. In medical terms it could mean obesity as a result of problems in a gland called as hypothalamus which controls sleep, appetite and diurnal rhythm. Some stories state that he would snore excessively while sleeping. These are some of the symptoms which even today are alarming and a cause for concern.

Obesity is a major risk factor for both cardiovascular and cerebrovascular disease. So is the condition that involves excessive snoring, frequent night arousals associated with fall in oxygen saturation and as a result, increased daytime sleepiness (OSA) and in the long run causing high blood pressure. This continues to be one of the most underrecognised causes of brain attacks or strokes. Hence, it wouldn't be inappropriate to say that obesity and OSA are serious health hazards of modern times and continue to be a curse in the Kaliyuga.

One of the best ways to prevent OSA is to reduce weight, have a healthy and balanced diet, and to exercise regularly. If the sleep study shows a significant abnormality, CPAP machine is sometimes recommended by sleep specialists to improve the oxygenation during these episodes of snoring. Hence, awareness about this condition is crucial in getting a timely advice from Sleep specialists/Pulmonologists and preventing complications such as high blood pressure and stroke. High blood pressure continues to be amongst the leading causes of cardiovascular, cerebrovascular disease and mortality. Hence, timely identification and prompt treatment goes a long way in preventing complications. Several dietary modifications are to be made including reduction of sodium intake, cutting down on alcohol, intake of plenty of fruits, vegetables and legumes, low-fat dairy products, and restrict diet with meat, sweets and saturated fats. Cessation of smoking and inclusion of regular aerobic exercise regimen and leading a stress free lifestyle helps in controlling blood pressure and preventing its complications.

Diabetes continues to be a leading killer and is also a leading cause of stroke, cardiovascular and peripheral artery disease. Adherence to a diet high in fruits, vegetables, nuts, whole grains and olive oil reduces the risk of developing diabetes. It is crucial to identify patients with pre-diabetes, in other words called, IFG and IGT. Patients with a positive family history with other risk factors should frequently undergo testing so that they can be medicated early to prevent complications. It is important to take medications (tablets or insulin) on time and follow a healthy diet pattern in addition to avoiding consumption of food preparation that contains high sugars. Regular exercise helps reduce insulin resistance and improve the sensitivity of the available insulin and makes it work better. Again, identification and prompt treatment is key to prevent complications due to diabetes.

Smoking is not only the leading cause of heart attacks, bronchitis, lung cancers, but also one of the leading causes of stroke. The air that we inhale with its dangerous levels of SPM is a serious health hazard. We have a double whammy when the ill effects of smoking get added to it. Studies are currently underway to analyse the effects of air pollutants on the brain arteries and also on cognitive functions. It will not be surprising if these studies prove a serious adverse impact on these parameters.

High cholesterol is one of the important risk factors for a brain attack. Early identification and prompt treatment certainly helps in preventing complications related to high blood cholesterol. Avoiding a high fat diet, and regular exercise is crucial in preventing complications.

One of the easy ways to identify cholesterol blockages in the neck vessels (atheromatous plaque) and narrowing of the brain arteries is by neurovascular sonography which includes a simple bedside duplex ultrasound monitoring of the neck vessels and transcranial doppler (TCD) monitoring of real time flow in the arteries of the brain. This is not only easy to perform, but is also cost effective and does not involve any contrast exposure. It is safe and non-toxic and can be repeated any number of times. It is recommended as a screening modality for those patients who have risk factors for stroke along with symptoms like sudden onset transient numbness, weakness, speech problems, visual deficits or giddiness. It is also a very convenient bedside test to follow-up patients with cholesterol

plaques to ascertain whether the plaques are regressing, in which case, best medical therapy is sufficient. In case of any progression on serial testing (once every 3-6 months) despite best medical treatment and control of risk factors, interventional management (stenting) or surgical removal of atheroma (endarterectomy) is recommended.

Atrial fibrillation is one of the most common underrecognised causes of stroke. It is a very common rhythm abnormality of the heart which increases in frequency after 70 years of age and also with underlying cardiac problems. Holter monitoring and loop recorder are important in identifying this condition. It is very important to identify this condition as this needs a stronger blood thinner (anticoagulants) to prevent strokes and other medications to ensure heart rate is under optimal control.

Finally, the modern day Ravana is none other than sedentary lifestyle as it is now among the top 5 risk factors for heart attack as well as brain attack. An apt adage to describe this is, 'sitting is the new smoking.' Exercising for 30-45 minutes everyday, leading a healthy and active lifestyle prevents atherogenesis and hence, cholesterol deposition and also clot formation.

The resolution for year 2019 should be to eat healthy, avoid junk food, keep fit to maintain a healthy lifestyle. Resolve to quit smoking, to cut down alcohol and to routinely check blood pressure, cholesterol and blood glucose and control them optimally.

"Up Again After Stroke" was the theme for World Stroke Day, 2018. The mantra for **2019** is to be "**Be up and about, and prevent strokes**"

Awake Neurosurgery - Intra-Operative Neuro Monitoring & Modern Neuroanesthesia



Dr. GAYATRI P. *MBBS, MD, FRCA, FFA Consultant Neuro Anesthesiologist & Neurocritical Care*

Awake neurosurgery (awake craniotomy) and intraoperative neuro monitoring are the two important modalities that are used during selected neurosurgical procedures to monitor the brain activity.

Neuroanesthesiologists have risen up to meet this challenge as both of these demand highly specialised anesthesia techniques.

Awake craniotomy is required if the surgeon has to operate on the eloquent areas of the brain, i.e. the part of the brain which controls speech, language, hearing and movement. The patient is continuously asked to perform these activities while the surgeon is operating, thereby ensuring that these vital functions of the brain are preserved. One may wonder why anesthesiologists are required if the patient is going through 'awake' neurosurgery? On the contrary, awake neurosurgery demands a highly skilled and committed anesthesiologist, as the patient has to be made comfortable, yet awake. The patient has to be made pain free and comfortable lest the patient may not cooperate.

During this procedure, the anesthesiologists prepare the patient psychologically in the preoperative period to remain awake, in addition to regular pre-anesthetic preparation. The patient is given a local anesthetic block to the scalp which makes the surgery pain free. A continuous low dose infusion of sedative medication is given to take the edge off the patient. This is done quite carefully ensuring no unintended over dosage. In case of overdosing, the patient will sleep off and the vital feed-back from the patient is lost as well as the patient may lose the airway. This will mean that the goal of awake surgery is lost! Hence an experienced neuroanesthesiologist plays a pivotal role during this surgical technique.

Surgeries which cannot be done with the patient awake, e.g. surgery on the spinal cord, and some parts of the brain incorporate intra-operative neuro monitoring. This is a special computerised software which evokes electrical activities in the brain and spinal cord and helps to detect if there is a breach in either sensation (Somato sensory Evoked Potential- SSEP), movement (Motor Evoked Potential- MEP), vision (Visual Evoked Potential- VEP), or hearing (Auditory Evoked Potential- AEP). Certain anesthetic drug interferes with the evoked potential and has to be avoided during neuro monitoring. In addition normal body temperature, blood pressure and oxygenation has to be maintained in order to avoid false negative signals. Many a times, anesthesiologists double up as electro-physiologists as well!

Therefore modern neuroanesthesia strives to keep pace with the growing demands of neurosurgery, makes it safe and contributes significantly to the overall success in the outcome.

The Endovascular Revolution



Dr. ROBIN GUPTA MBBS, MS, M.Ch Endovascular Neurosurgeon &

Stroke interventionist

In June 1927 first cerebral angiography was done by Egas Moniz (1874-1955) he was the first to describe the use of this revolutionary technique which, until 1975, was the sole diagnostic tool to provide an imaging of cerebral vessels and therefore alterations due to intracranial pathology. He was the first to allow anatomists, neurosurgeons and neuroradiologists to "see the brain vessels within the skull". Moniz introduced in the clinical practice this fundamental and important diagnostic tool which has revolutionised the field of Neurosciences.

In the medical field and just about everywhere else, the terms "innovation" and "revolution" are applied to myriad technologies, sometimes with low thresholds for actually being innovative or revolutionary. Call it overenthusiasm or merely optimism, but there is no shortage of desire to discuss "the next big thing." So, perhaps you will be inclined to take the following statement with a grain of salt: In the field of neurointervention, the recent progress and innovative advancements in Endovascular procedures for management of aneurysms, AVMs, tumor embolisation, Stroke interventions, Carotid stenting have been nothing short of revolutionary. Interventional radiology has grown by leaps and bounds over the past few years. Improved percutaneous cathethers, microguidewires ,and imaging tools with increasing skills and enthusiasm has lead to this revolution.

"Our ancestors have invented, we can at least innovate".

DSA is still considered the gold standard for detecting vascular abnormalities of the brain and especially cerebral aneurysms. Latest 3D model allows observation and analysis from multiple directions to determine the working projection for interventional procedures. With Latest innovations in Flow divertors management of fusiform aneurysms and giant aneurysms has revolutionised the management of these aneurysms.

In recent times many positive randomised controlled trials of mechanical thrombectomy for large vessel occlusion in the anterior circulation have led to a revolution in the care of patients with acute ischaemic stroke. Its efficacy is unmatched by any previous therapy in stroke medicine. Interestingly the role of interventional stroke management has now been established, it is important to remember that we are still in the relative nascence of this therapy, with great strides still to be made—and many reasons to think they will be.

As neurointerventional specialist we are already experiencing the sea of change to the concepts of neurointerventions. Life is a continuous journey of transformation, accept it and grow with it.

I am delighted to share my experience with neuro-interventions and contribute to this emerging field.



Pre-op Basillar Aneurysm



Pre-op ICA Blister Aneurysm



Post-op Basilar Aneurysm Using **Double Catheter** Technique



Post-op Stenting



Aneurysm

Pre-op Tumor

Blush



PCA Aneurysm





Basillar Stroke

Post Thrombectomy





Post Onyx Embolisation

Nurturing the Brains of Our Future: Phones and Screen Time



Dr. ANN AGNES MATHEW MBBS, MRCPCH Lead Paediatric Neurologist

Technology continues to change our lives in every field and this is a fact of life that isn't going to change anytime soon. But how does all of this affect the growth and development of our children's brains and of society at large?

Children are amazing in their ability to see the world afresh with new eyes, but their brains are even more amazing. It is this young dynamic brain of theirs that gives them, the unique ability to grow and adapt so efficiently. The human brain has a great capacity to reorganize itself by making new neural connections called synapses and this is how we learn new things and adapt throughout our life, based on our experiences. Although this ability, also called neuroplasticity, is present throughout life, it is strongest during the first five years of life, when maximum brain development takes place, with development peaking within the first two years. The child's brain makes 700 to a 1000 new synapses every second and these connections are created through every interaction that a child has. This is why it is easier to learn a new language as a child as opposed to when one is older.

Our babies and children of today are often left in front of a TV or mobile while the parents are single handedly trying to do other tasks such as cooking etc. With increasing pressures on families and the breakdown of the traditional family structure, newer challenges have emerged. Most families have both the parents working, which means that there would be some reliance on either grandparents or unrelated care providers such as nannies who would in turn have difficulty in meeting the stamina and the great thirst for stimulation and an enriched environment that a child has. The answer to most of these challenges arising from changing societal mores and expectations is not to turn back the change, which would not be a sustainable or possible intervention, but rather to discover these issues early on and come up with innovative solutions that work within our reality. For example starting children with high risk for autism as early as possible in play groups would be good for their development, even though there may be some stigma attached to sending a child to school too early.

The playgroup would be a good setting for the young child to learn how to socialize, which is a very important skill that Another important side effect to screen time is its attendant reduced physical activity, which can lead to a lifetime of obesity and life style disorders such as diabetes and high blood pressure with all its complications.

One other area of concern is how parental screen time use has a negative impact on the development and overall health of their child. This is something for all us to think about.

So all of this was about why screens are bad for our children's brains. Then what can we do to improve them? The answer is in providing an enriched environment for children. Doing so doesn't require special equipment or spending a lot of money. All it takes is a little creativity in using existing material and most importantly in creatively using our time with our children so that they have a lot of meaningful interactions with us and with as many people as we can safely arrange for them, be it their peers, grandparents or taking that extra effort for play dates with other families with children, all the while remembering that every time we are interacting with a child, we are literally growing a brain!

A child has a hundred billion neurons (nerve cells), the same as an adult, but the child's brain has quadrillion connections, which is nearly 2.5 times that of the adult brain. These connections are "pruned" as they grow older, losing pathways that are less often used and strengthening connections that are used often. So with the brain it is "use it or lose it".

Into this dynamic environment let us consider what interactions with screen devices such as mobiles, iPads, tablets and laptops do. Intuitively one can understand that screen time and the developing brain don't go together. Scientists have been able to prove that there is a very strong link between early exposure to screens with its associated limitation to other environmental stimuli and social interactions, leading to social communication disorders. Thus making children at risk of having diseases like autism. This does not mean that all electronic devices ought to be banned, but it is the way in which it is used, that is at the root of its harm, in that it is seldom used interactively. In today's society, both urban as well as rural, it is used increasingly as a surrogate nanny!

would stand him or her in good stead throughout life.

If this is what screen time does to a young child's brain, what does it to do the older child or the adolescent? The answer to this is not straight forward, as there is emerging data on all its impact. We do know from many scientific studies in varied societies all over the world, that children and adolescents, who are given unfettered access to screen time, tend to have difficulty in various areas.

For instance, a teenager who has unsupervised access to a laptop or television might end up having very long screen time exposure, which in turn might affect their sleep cycle, as they may suffer from poor impulse control which would be further worsened by this behaviour. This could in turn cause chronic sleep deprivation with all its attendant health issues. What is particularly alarming would be the way this could also magnify behavioural and psychiatric problems in teenagers, adding to a cocktail of mental health issues that could be worsened by this too being added into the mixture.



All that Jitters, is not a Seizure and all Seizures aren't Jitters!!



Dr. KALYANI KARKARE MBBS, DM Consultant Neurologist

"Navin is being very inattentive in school nowadays. He is daydreaming a lot and asks me to repeat the sentences. He is dropping his grades too." Sadhana Madam was complaining to Asha, Navin's mother. Asha was surprised and a bit sad too. Why is my child inattentive? Then after a series of warnings at home, multiple visits with psychologists, Navin was seen by a pediatrician who suspected "absence seizures" and referred him to neurologist who confirmed it with EEG (electroencephalograph) and started on tablets. Navin was once more a bright student as he was before. Absence seizures are transient unawareness of surroundings and arrest of an ongoing activity lasting less than 10 seconds and occurring multiple (even more than 100 in some) times per day.

"Sandhya, what's wrong with you? Why are you dropping the cup? Are you still sleepy?" Amma shouted. Sandhya was not sure. She thought she was fresh enough. "Strange!" She thought, "I am even dropping my pen in school. How do I write my boards exams?" She decided to talk to her Akka (elder sister), Sushma, who was learning MBBS. Sushma knew right away that it's not the clumsiness, but something more. She took Sandhya to her Professor, who diagnosed her with 'Juvenile Myoclonic Epilepsy', a type of epilepsy/fits with early morning jerks of limbs, which may later develop into generalized seizures. Sandhya is on appropriate medicines now and doing well.

Abdul was telling Aman "Abbu sleeps most of the time of the day and night. He refuses food, water. I have seen him twitching his eyes sometimes. We are using diapers all the time. The local doctor says it is old age. Ya Allah, what a pity! I took him to our peer baba who says it's black magic. I think it is my cousin who is doing all that. Shame on him!" Aman disagreed with Abdul. He said "How about taking him to Dr Singh? Our family doctor, who has a vast experience and has treated my Grandpa". Dr Singh checked Abbu and asked for a brain scan and EEG. Though brain scan was normal, EEG showed hidden seizures! Abdul could not believe. What? But he is not jerking, frothing has no tongue bite. How can it be fits? Dr Singh explained that elderly individuals when are drowsy, have fluctuating awareness and minimal twitching of the body, can actually have underlying (subclinical) seizures which can only be suspected and diagnosed by EEG. Abbu was up with few injections of seizure controlling drugs. He was in non-convulsive status, an uncommon entity with subclinical seizures presenting as behavioral or cognitive deficits.

These stories around us are just the glimpses of variety of seizures which remain unrecognized due to lack of awareness in patients and some doctors too. The commonest seizures (commonly known as fits) are the ones with loud cry, tightening and jerking of the limbs, up rolling of eyes and frothing with or without tongue bite, known to most as "major" or "generalized" seizures. But they are just the tip of the iceberg. There are many types and subtypes of seizures, which if identified by appropriate investigations, can guide in the choice of drugs and help physicians prognosticate (anticipate the course of epilepsy). On the other hand, it is also important not to over diagnose seizures as many nonepileptic events, movement disorders, startles, syncope can resemble different kinds of seizures.

Taking the help of the new ILAE classification of seizures, the seizures can be classified into those with or without awareness. Then each group can be subdivided into predominantly motor or non-motor component. The motor seizures can be tonic (sustained tightening of limbs), colonic (rhythmic jerking of limbs or body parts), myoclonic (irregular, abrupt, brief jerking), atonic (sudden loss of tone or floppiness), spasms (flexion or extension of body), automatisms and sometimes combination of these. Nonmotor seizures are difficult to diagnose as they can present as behavior arrest (brief unawareness or arrest of ongoing activity), cognitive (inability to comprehend or say words), autonomic (rapid changes in BP, excessive salivation, gustatory), emotional (excessive laughter or crying) and sensory (tingling, flickering or colored vision). Depending on the onset, they are subdivided into focal, generalized or unknown. This systematic approach helps the clinician to proceed for investigations, choose appropriate drugs and decide which patients are surgical candidates. Yes! Some epilepsies are surgically treatable. The etiology and pathophysiology of seizures is a separate topic and justifies deliberation at other time.

We, at Sagar Hospitals, are equipped with Epileptologist, Epilepsy surgeon, EEG technician, Neuropsychologist and MRI with video EEG availability, to help the frequently misdiagnosed epilepsy patients. Apart from the services available, we firmly believe that public awareness is the cornerstone of our efforts to fight against epilepsy.

Green is the color of LIFE, Come On, Lets Green it Up.

Go Green & Reduce Your Foot Print! Save Mother Earth,

Our Future Generations Need Her Too!



Dr. MURALI MOHAN

MBBS, DNB Senior Consultant Neurosurgeon & Head

This coming year, let's take a GREEN pledge!

Seven pledges signifying seven days of a week, throughout the year!

1. Let's walk more

Go for a walk every day. If the distance to travel is not much, choose to walk. Hit the stairs! Walk in a park, rather than on a treadmill. Walking is very important exercise that utilizes all our muscles. It burns out our fat, keeps our heart in good shape. The guts work better! There are dual advantages: we stay healthy, and we also reduce our CARBON FOOTPRINT, as we reduce the use of fossil fuel and electricity.

2. Let's connect more - real time not virtually, reduce our Screen time!

We interact with our computer / mobile screens more than anyone else in today's world. Our kids are following the same trend, which is even more disturbing. The artificial light does reset our biological clock and we age faster! Our mental task performing ability also reduces. Good social interaction cannot have a substitute. In future, we need people who can communicate in real world, not just in virtual world on mails and chats!

It is also an act to conserve energy, and we definitely reduce our CARBON FOOTPRINT.

3. Let's mindfully nourish more - incorporate Healthy eating habits & reduce food waste

Our stomach is not a dustbin! Eat for necessity; Eat for pleasure, but let's not dump food into us. We pay a price of health. It is important to eat healthy to Live healthy. Planning a meal without food wastage is also important for the health of our planet. Let us not waste food! A lot of effort and time goes into food preparation, not just the cooking. From farming or rearing, to the table, it is a time consuming effort. By reducing food wastage, we definitely reduce our CARBON FOOTPRINT.

4. Let's waste less - waste segregation at source

The government and community can function better if we contribute too. The waste management has become a burning concern, affecting all. It is the duty of every citizen of the Globe to take active participation towards waste segregation and waste management. First, let us reduce our waste generation, be it the plastics, electronics or the perishable wastes.

Second, let us learn to segregate the waste at source, not by force, but by us. It is the need of the hour. Let us keep our daily environment - the home, office and the neighborhood clean. We can have a cleaner country! And reduce our CARBON

We are in very peculiar situation – in the entire history of our human race! Do borders matter in current day scenario, anymore? Today, borders don't mean anything. Your childhood friend is an American / Singaporean or a European holding a valid citizenship. Only In trade, we talk about business across the borders.

Struggle for land and minerals are historical; today it's for clean air and water! We humans are consuming our natural resources at a pace which is going to question our very survival in future.

Enough has been spoken about this issue; we at Sagar Hospitals have taken a GREEN PLEDGE as our New Year resolution! Come let us join hands and fight the issue of Global warming and Pollution. Every citizen of Earth has his/her responsibility towards our future. Our act today will determine the health of future generations; including ours at present!

A little contribution from everyone of us can trickle into a major revolution. What's this Green Pledge all about?

FOOTPRINT.

5. Let's Conserve energy more - Electricity

Conserve Electricity! Conserve Electricity! And Conserve Electricity! It can't be over emphasized. It is the most common source of ENERGY that we use in our daily life. Please understand that even the simple conversion of AC current from the Electric poles to the DC current in every appliance we use, releases heat! It is not about affordability; rather the energy that's consumed to generate and regulate the electricity has huge CARBON FOOTPRINT, though we feel electricity is clean source of energy.

6. Let's Save WATER more!

Water is available in abundance on earth. But clean potable and drinking water is scarce! Our fresh water bodies are being polluted at an alarming rate today that even the underground water bodies have been contaminated. Apart from communicable disease, heavy metal poisoning is a real threat from these sources! The water that we get at home / work place is precious, use it judiciously! Conserve water and Treat Fresh water bodies as divine, a practice that was followed since ancient times in INDIA, we call our rivers as mother goddess!

7. Let's pollute less - Clean Air

Our Air today is polluted. We all feel the freshness of the environment as we travel out of our hectic city life. Let us not just blame the industries! We can contribute to clean air through our efforts too. Let us plant more trees! Let us go GREEN, The natural air purifier of our planet. Let us avoid fossil fuel, let us celebrate our festivals and important days in a more ecofriendly manner rather than crackers! Use of public transport and car pooling are options today!

These are small steps and suggestions that can be included in our daily life that can in-turn make a big difference in long run. Let us Pledge to Save Our Mother Earth, and Save US! Green is the Color of Life.

Healthy Life Through A Healhy Diet

Healthy Lifestyle is a way of living that helps us to enjoy more aspects of the life. Health is not just about avoiding a disease or illness. It is about physical, mental and social well-being too. It is a way of living that lowers the risk of serious illness.



Ms. FARHANA

Consultant Nutritionist

Here are some reasons why healthy diet is important:

1. Decrease the Chance of Developing Various Diseases Having quality eating habits can reduce the risk of developing certain diseases that could severely impact the health. Among these maladies are hypertension, diabetes and heart disease, If one wants to increase the chances of staying well, it's best to stick to a healthy diet.

2. Helps Keep a Healthy Weight

Eating natural food instead of processed foods can have a positive effect on your weight. Plus, weight also influences the overall health. For example, being overweight raises the risk of developing Type II diabetes. It can also harm the joints, limiting the mobility.

3. Maintains Immune System

Our immune system is our defense against disease, but poor nutrition is the most common cause of immuno-deficiencies. Maintaining a good health requires an intake of proper vitamins and minerals. Eating a well balanced diet will help in supporting a healthy immune system.

4. Delays Aging and Improves Skin Health

Good nutrition doesn't just affect the weight or the energy. It can also play a role in the health of the skin and aging. Foods that contain vitamins C and E, lycopene and other antioxidants, as well as olive oil, can help to protect your skin against sun damage and early aging.

5. Increases Focus

Food has an impact the way we think. When the body is low in glucose, the brain is not receiving the energy it needs to remain focused. Diets high in fats can seriously damage the brain by building up plaque in brain vessels, damaging brain tissue and causing strokes. Eating fruits and vegetables throughout the day helps keep the mind healthy.

6. Healthy Eating Positively Affects Our Mood

Diet low in carbohydrates increase feelings of tension whereas diets high in carbohydrates have a more uplifting effect on mood. A diet rich in protein, moderate in carbohydrates and low in fats will have a positive effect on mood because it leaves an adequate supply of iron, omega -3 fatty acids and iron. As much as food affects our mood, our mood affects our food choices. When we experience feelings of sadness, we are more likely to choose unhealthy foods. People feeling happier are more likely to choose healthier foods.

Balanced Diet

It is a key to healthy lifestyle. A balanced diet should contain all right food in right quantities like carbohydrates, high fibre content, water, proteins, fats, vitamins and minerals. Most people spoil their health by taking unnecessary food items. If one wants to lead a healthy lifestyle, eating healthy food is crucial. One need to know what to eat and what to avoid in order to be fit and healthy. The following guidelines will deal with the importance of a balanced diet for a healthy lifestyle.

Essential nutrients for a healthy balanced diet

Nutrient	% of Daily Calories	Function	Source
Carbohydrates	45-55%	Energy	Grains (unrefined): wheat, maize, corn, millet, oats, rice, flour, pasta
Protein	10-25%	Tissue growth and maintenance	Meat, fish, nuts, eggs, Milk soya, beans and pulses
Fat	20–35% from fat	Energy, energy storage, hormone production	Nuts, seeds, plant oils, dairy products (milk, cheese)
Fibre	Included in carbs.	Regulates blood sugar levels, bowel function and bowel health	Peas, beans, vegetables, fruit, oats, whole grains, brown rice, nuts, seeds
Vitamins & Minerals	trace	Metabolism regulation, aiding cell growth, other biochemical functions	Specific to each vitamin/mineral. A range of vegetables, lean meat, nuts & seeds will cover most neonle's needs
Water	0	Maintaining hydration	Drinking water, other beverages. About 20% of water intake comes from food.

PRACTICE

HEALTHY

EATING

Increase the liquid intake into your body: Fluids are very essential for human body to lead healthy lifestyle. Nearly 80% of human cell is filled by water; water is a co-factor in many of the metabolic activities and reactions. According to health experts at least two to three liters a day is essential. Try to minimize the intake of tea, coffee and alcohol.

Carbohydrates and Fats are core macro-nutrient which should be taken in daily diet. carbohydrates have other important functions:

- The brain needs carbohydrates, specifically glucose, because
- neurons cannot burn fat. • Dietary fiber is made of polysaccharide that our bodies do not digest.

Eating foods with fat is definitely part of a healthy diet. Just remember to choose foods that provide good fats (mono-unsaturated and polyunsaturated fats) and balance the amount of calories you eat from all foods with the amount of calories you burn. Omega-3 and omega-6 are known as essential fatty acids (EFA's) because the body can only get these from diet. They are found in oily fish such as sardines, salmon and mackerel.

Eat Fit, Stay Fit!

Protein is a component of every cell in our body. Our body uses it to build and repair the tissue. We need it to make enzymes, hormones, and other body chemicals. It is an important building block of bones, muscles, cartilage, skin and blood. Milk, curd, paneer, pulses. Legumes and meat, fish, chicken and eggs are rich sources of protein which should be taken daily in the diet.

Eat fresh vegetables & fruits everyday: Maximize the intake of fresh fruits and vegetables which will help avoid many health disorders. Fresh food will provide good source of fibre and vitamins which are essential for body growth. Avoid consuming deep fried and overcooked vegetables.

HABITS Make time to chew food: Healthy eating starts with smart eating. Most people do not recognize the importance of chewing as it is essential to digest many of components. In reality half of the digestion will be finished in buckle cavity. Make sure that you eat slowly rather than swallowing, it will also help you to enjoy the actual flavour and taste of the food.

> **Avoid eating excess food:** Avoid eating when you don't have appetite. Excess food may lead to overweight in the long run.

Avoid stress during eating: Avoid eating while working or watching TV which could disturb your concentration. It may lead to heartburn and colitis.

The daily amount of energy and nutrients we need varies from person to person, and also varies with age, gender, body height, body weight, activity level and health conditions. Apart from checking the Healthy Eating Food Pyramid for the right portion size and ratio of food items, attention should also be paid to food labels that contain information on the ingredients and nutrients of food.

For better health, choose food items of a high nutritional value.



'Momentous Moments'

Success Stories, Celebrations, Happy Moments & More... Sneakpeek of the happy moments from the year 2018 - to be remembered and cherished.





Celebration & Patient Happy Moments



Sagar Brain & Spine Institute

delivers innovative, integrated and individualized care to both adult an paediatric patients with diseases affecting the nervous system.

Sagar Brain & Spine Institute is Bangalore region's first designated private neurological institute and the only Neuroscience Center of *Excellence providing state-of-the-art care to both adult and pediatric* patients with diseases affecting the nervous system.

It's multidisciplinary team of neurosurgeons and neurological specialists provides a full spectrum of services, including diagnosis and treatment of brain tumors, epilepsy, strokes, spine and pain disorders, Parkinson's, Alzheimer's and more.

Leading experts in neurology, neurosurgery, neuroradiology and other specialties collaborate to devise customised care plans using the latest clinical advances and cutting-edge technologies through it's specialised clinics.





Dr. SRINIVAS H V MBBS, MD, DM Consultant Neurologist



Dr. SANTOSH KUMAR MBBS, DM Consultant Neurologist

NEUROLOGISTS



Dr. AMIT KULKARNI MBBS, MD, DM Lead Consultant Neurologist & Stroke Specialist



Dr. KALYANI KARKARE MBBS, DM Consultant Neurologist



Dr. AMAR B R MBBS, MD, DM Consultant Neurologist



Dr. ANN AGNES MATHEW MBBS, MRCPCH Lead Paediatric Neurologist

NEUROSURGEONS



Dr. MURALI MOHAN MBBS, DNB Senior Consultant Neurosurgeon & Head



Dr. ROBIN GUPTA MBBS, MS, M.Ch Endovascular Neurosurgeon & Stroke interventionist



Dr. MANMEET SINGH CHHABRA MBBS, MS, M.Ch Consultant Neurosurgeon



Dr. PRATAP KUMAR PANI MBBS, MS, M.Ch Consultant Neurosurgeon

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Observation, Reason, Human Understanding, Courage; These Make a Good Doctor.





MBBS, MD, FRCA, FFA Consultant Neuro Anesthesiologist & Neurocritical Care

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