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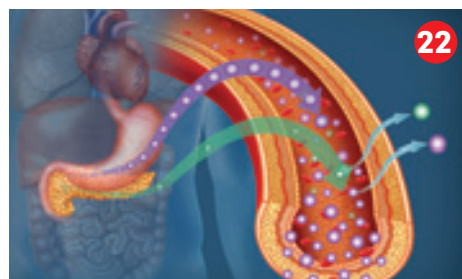
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# Health is the key to looking beautiful

**D**ear readers,  
Thanks for your continuous support and encouragement to us in carrying out our commitment to bring to light, analyse and interpret the latest happenings in the Indian healthcare sector.

We are glad to inform you that after successfully organising National Health Award 2017 at hotel Lalit in New Delhi, your favourite magazine Double Helical is going to hold the Punjab edition of the event on 6th November, 2017 to acknowledge the outstanding achievements of healthcare/allied professionals and institutions from the land of five rivers. More than 500 doctors from Punjab and Delhi are likely to witness the State Health Awards 2017 in the vibrant, cosmopolitan city of Chandigarh. The upcoming prestigious event of the Indian healthcare sector will witness a high profile gentry including eminent doctors, bureaucrats, policymakers, entrepreneurs, philanthropists and social activists. The extraordinary efforts of all stakeholders in fulfilling the goals, values, and mission of inclusive healthcare will be duly recognised at a credible platform.

This time as part of cover story, we are providing you a comprehensive package on the threat posed by the increasing incidence of diabetes. According to expert diabetes can be cured without any medication including insulin. The strategy involves micronutrient-rich diet, exercise & herbal food supplements, all of which stimulate the pancreas to produce more insulin, block the liver to release sugar in the blood stream and make cells more sensitive to insulin to absorb



sugar to prevent rise in the the blood sugar level.

An exclusive story written by Dr Harmohan Dhawan reveals that diabetes is one of the chronic lifestyle diseases characterized by elevated blood glucose (blood sugar) which can lead to serious health complications. Diabetes and obesity are twins and spreading like an epidemic the world over.

According to International Diabetes Federation (IDF), India has the second largest diabetes population of about 6.5 crores people and at this rate India will become the diabetes world capital by 2030. Every 10 seconds a person dies of diabetes related complication & every 10 seconds 2 people are diagnosed of diabetes.

The pharmaceutical lobby in the world is so powerful that the industrially produced synthetic drugs have become a major tool in the treatment of various diseases. All these allopathic medication are composed of various chemicals which have many side effects too. There is a need to educate and help people to get rid of these harmful drugs. In this regard, a three-pronged strategy of micronutrients-rich diet, exercise and herbal food supplement can help us win the battle against various lifestyle diseases.

“Beauty from the Inside Out” is an exclusive story penned by the queen of herbal cosmetics in India, Shahnaz Husain, on the magical power of Ayurveda. She has become a global ambassador of Ayurvedic herbal solutions for beauty. According to her, Ayurveda is a holistic system of healing. Actually, it is not merely a system of healing, but an entire way of life. The treatments prescribed by Ayurveda are all-encompassing and take into consideration, diet, exercise, lifestyle, relaxation, massage and so on. Ayurveda is not only for those who are ill, but also for those who wish to come closer to nature to achieve both health and beauty. Similarly, we are carrying an interview with celebrity hair-stylist Jawed Habib. As he succinctly puts it, “Work on the health of hair, if it is healthy, it is beautiful.”

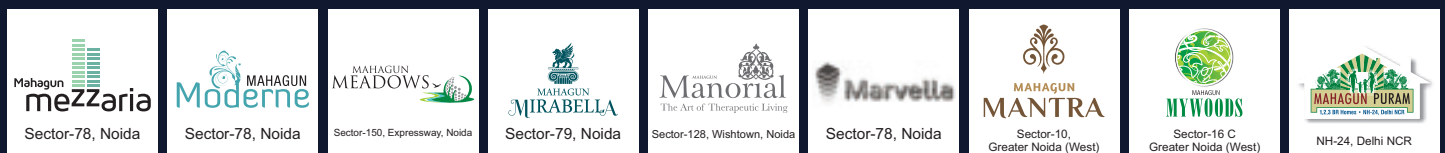
There are many more such insightful, engaging and interesting stories to broaden your horizon on healthcare and related issues. Happy reading to you all!

Warm regards,  
**Amresh K Tiwary,**  
Editor-in-Chief

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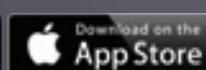


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The Union Minister for Health & Family Welfare, J.P. Nadda unveiling the communication campaign, under ‘Mission Parivar Vikas’, on the occasion of the World Population Day, in New Delhi. The Minister of State for Health & Family Welfare, Smt. Anupriya Patel and other dignitaries are also seen.

## Health Ministry Launches Mission Parivar Vikas to Stabilise Population

**M**ission Parivar Vikas is a new initiative conceived by the Health Ministry with a strategic focus on improving access through provision of services, promotional schemes, commodity security, capacity building, enabling environment and intensive monitoring.

According to J P Nadda, Union Minister of Health and Family Welfare(HFW), Mission Parivar Vikas will focus on 146 high fertility districts in 7 states with high TFR (total fertility rate). Under this, specific targeted initiatives shall be taken for population stabilisation through better services delivery. Nadda congratulated the team for undertaking micro-planning for these districts and developing need-based programmes to address TFR at a function organised by Jansankhya Sthirita Kosh (JSK) to mark the World Population Day recently. Anupriya Patel, Minister of State (HFW) also graced the occasion.

The Health Minister also advised the officials to undertake half yearly review of the programme and correlate the achievements with time to gauge whether the programme is moving in the right direction or not. He said, “We have enhanced the basket of contraceptive choices to meet the changing needs of people and have taken steps to ensure quality assured services and commodities are delivered to the last-mile consumers in both rural and urban areas.”

During the event, J P Nadda introduced the new injectable in the public health system under the “Antara” program and launched a new software – Family Planning Logistics Management Information System (FP-LMIS) – designed to provide robust information on the demand and distribution of contraceptives to health facilities and ASHAs to strengthen supply chain management.

As a part of the new communications campaign linked to the rollout, the Health

Minister also launched a new consumer-friendly website on family planning and a 52-week radio show for couples to discuss issues related to marriage and family planning, which will be aired across the country.

The Health Minister further highlighted the life cycle approach of the Ministry and stated that a continuum of care approach has been adopted by the Ministry with the articulation of ‘Strategic approach to Reproductive Maternal, Newborn, Child and Adolescent health (RMNCH+A), bringing focus on all the life stages.

Anupriya Patel, Minister of State (HFW), said that population dynamics have a significant influence on sustainable development. The changes in population growth rates and age structures are closely linked to national and global developmental challenges and their solutions. She further stated that the issue of population stabilization is so gigantic in its proportion that the government alone

cannot address the issue and thus the collective involvement of NGOs, private sector and corporate sector shall play a pivotal role.

J P Nadda also gave away awards to the winners of the painting competition organised by Jansankhya Sthirita Kosh to create awareness regarding family stabilisation among young children. Also present at the function were R K Vats, Additional Secretary and Director General; Vandana Gurnani, Joint Secretary; Reproductive Child Health Care and PreetiNath, Executive Director, Jansankhya Sthirita Kosh along with other senior officers of the Ministry and representatives of development partners.

### MISSION PARIVAR VIKAS' FOR HIGH FERTILITY DISTRICTS (HFD)

#### BACKGROUND

146 districts have TFR  $\geq$  3.0 (56% of the 261 districts in the 7 High Focus States i.e. UP, BH, MP, RJ, JH, CG, AS)

#### State wise number of districts segregated based on TFR RATIONALE

	UP	BIHAR	MP
TFR: $\geq$ 4.0	11	8	2
TFR: 3.5-3.9	19	9	6
TFR: 3.0-3.5	27	20	17
<b>TOTAL</b>	<b>57</b>	<b>37</b>	<b>25</b>

Rajasthan	Jharkhand
2	0
6	3
6	6
<b>14</b>	<b>9</b>

Chhattisgarh	ASSAM	TOTAL
0	0	23
1	1	46
1	1	76
<b>2</b>	<b>2</b>	<b>146</b>

1. These 146 districts, with TFR 3 and above, contribute to 28% of India's population, 25-30% of maternal deaths and 50% of infant deaths.

2. TFR has a direct correlation with MMR and IMR. The greater the TFR, the more will be the MMR and IMR. Hence, reducing the RFR would lead to decrease

in maternal mortality and morbidity and infant mortality and morbidity.

#### KEY STRATEGIC AREAS

The key strategic focus is on improving access to contraceptives through:

- Provision of Services
- Promotional schemes
- Commodity security
- Capacity building
- Enabling environment
- Intensive monitoring

#### A. Delivering assured services:

1) Roll out of Injectable Contraceptive MPA (Antara) at one go till Sub centre level

In 146 HFDs, Injectable contraceptive (under Antara Program) and Centchroman (Chhaya) will be rolled out up to Subcentre level.

2) Augmentation of PPIUCD Services to all delivery points

3) Augmentation of Sterilization services through enhanced HFD compensation scheme

4) Condom Boxes will be placed at strategic locations (such as Health Facilities, Gram Panchayat Bhavan, etc)

5) Social Marketing of condoms and pills: Social Marketers under the government's scheme would be directed to intensify their efforts in these districts.

6) 'Mission Parivar Vikas' Campaigns: (4 per year):

i) Service delivery fortnight (in line with WPD microplan methodology)

ii) April, July, October and January (11th to 25th of the designated months).

#### B. Promotional Schemes:

1) "NAYI PAHEL" – an FP KIT for "NEWLY WEDs"

A family planning kit will be given to the newly-wed couple by the ASHA with a view to improving inter-spousal communication and consensual decision-making with regards to their reproductive and sexual health as well as delay the birth of the first child and space the second.

#### 2) SAAS BAHU SAMMELAN

It is aimed to facilitate improved communication between mothers-in-law

and daughters-in-law so as to bridge the gap in their attitudes and beliefs about reproductive and sexual health.

#### 3) SAARTHI-Awareness on Wheels

In order to generate and increase awareness as well as sensitize the community and disseminate family planning messages in far flung areas, special buses/vans equipped with communication material, IEC material and FP commodities will be mobilized during the Mission Parivar Vikas fortnights.

4) LOCAL RADIO SPOTS with messages from local actors would be promoted

#### C. Ensuring commodity security:

Logistic and Supply chain management (LMIS) to be operationalized to track the supplies and consumption to different facilities,

#### D. Capacity Building/ HRD for enhanced service delivery:

These districts have severe crunch of trained providers and the high demand generated would be satisfied with improved service provision

#### E. Creating Enabling Environment:

Advocacy and Inter-sectoral Convergence to reduce TFR for a healthy mother and child:

a. State level: Meeting under CM with State HFMs, local MPs/MLAs, PS (HFW) with DMs/ Collectors and CMOs of HFDs and other stakeholders.


b. District level: Meeting under DM with CMO and BMOs/ BDOs, and line functionaries.

c. Block level: meeting under BMO/ BDO with all MOs, Nurses, and Sarpanch & Patwaris, Nehru Yuvak Kendra volunteers and National Service Scheme volunteers)

#### Intensive Monitoring

Intensive Monitoring for MPV districts will be done through:

State program implementation body-at State level and headed by respective Principal Secretary of States

1. District Program Implementation Body-at District level and headed by respective District Collectors. 

## Skill for Life, Save a Life' initiative

**J**P Nadda, Union Minister for Health and Family Welfare, recently launched the 'Skill for Life, Save a Life' initiative. Speaking on the occasion Nadda said that India enjoys a demographic dividend as more than 65% youth are below the age of 35 years and the Government is determined to seize this opportunity by providing adequate skills and employability to the youth for a strong foundation for continued and sustainable growth. 'Skills for Life, Save a Life' Initiative' aims to upscale the quantity and quality of trained professionals in the healthcare system. Under this initiative various courses are planned to be initiated targeting specific competencies for healthcare professionals as well as for general public.

Rajiv Pratap Rudy, Minister of State for Skill Development and Entrepreneurship, Faggan Singh Kulaste, Minister of State for Health & Family Welfare, C.K. Mishra, Secretary (Health & Family Welfare) and Dr. Henk Bekedam, WHO Representative to India were also present at the occasion

Speaking at the function, Nadda said that skilling the youth enhances the employability and skilled India will help the nation reap rich dividends. "This shall reduce the gap between expectations of employment of the youth and the actual job they get", Nadda added. The Health Minister further pointed out that skill enhances economy of the country, too by reducing the gap between demand and supply of trained and skilled manpower in every field. The potential for skilled healthcare workers and professionals is immense in the country. Such courses ensure that the health sector gets the adequate skilled health workers.

Nadda further informed that the curriculum has been designed by National Institute of Health and Family Welfare (NIHFW) and AIIMS, Delhi. The Health Minister highlighted that in India 1,324 accidents occur on roads every day and a life is lost every 4 minutes and measures taken in the first 10 minutes can save a life. It was thus announced that the Ministry is initiating its 'Skill a Life, Save a Life' program by launching First Responder course for professionals as well as general public, to be conducted in Central and State government training institutes from the next month across the country in each district, to empower every single citizen of the country to be the first person to provide first aid and initial care in case of an emergency.


Addressing the participants, Rajiv Pratap Rudy, Minister of State (I/C) for Skill Development and Entrepreneurship said that skill development provides platform for lakhs of youth in the country to get trained for employment. The Skill Development Ministry is providing several certified courses for skilling to provide manpower for various areas of work. This has provided employment to lakhs of young boys and girls, many of whom haven't had the opportunity for formal education.

Faggan Singh Kulaste, Minister of State for Health and Family Welfare emphasised on the issue of lives lost during delivery and pregnancy due to lack of access to primary care. Kulaste stated



that the trained and skilled personnel, through this innovative training course, will be able to help save lives in the golden hour during an emergency situation.

Highlighting the importance of the initiative, C K Mishra, Secretary (HFWS) stated that India is working towards the attainment of the global mandate of Universal Health Coverage (UHC) for providing affordable, accountable and appropriate healthcare of assured quality to the fellow citizens, which is possible through substantive and strategic investment in the health workforce. "This is part of a larger plan and program for ensuring Universal Health Coverage. This program will provide trained and skilled people by broadening the base to include the community. Through such programs, we create a mass of 'first responder' who complements the specialists/experts to fill the vacuum of adequate trained professionals," Mishra added.

At the event, J P Nadda also launched the logo of 'Skills for life, Save a life' along with the Standardized Professional curriculum for – Physiotherapy, Optometry, Dialysis therapy technology, Medical radiology and imaging technology, Radiotherapy technology, Health information management, Operation theatre technology and Medical laboratory science and short term training courses with varying entry qualification in - First Responder, General Duty Assistant, Geriatric Care Assistant, Home Health Aide, Phlebotomist, Sanitary Health Inspector, Dietetic Aide, Diabetes Educator, Emergency Medical Technician and Basic and Medical Equipment Technology Assistant 





## Health Ministry launches Intensified Diarrhoea Control Fortnight (IDCF) Population

The Ministry of Health and Family Welfare has recently launched the Intensified Diarrhoea Control Fortnight (IDCF) in order to intensify efforts to reduce child deaths due to diarrhoea. The Ministry has made it a national priority to bring health outcomes among children to a level equitable with the rest of the world.

Through this initiative, the Ministry will mobilize health personnel, state governments and other stakeholders to prioritize investment for the control of diarrhoea, one of the most common childhood illnesses. It aims to create mass awareness about the most effective and low-cost diarrhoea treatment — a combination of Oral Rehydration Salt (ORS) solution and zinc tablets.


During the fortnight, intensified community awareness campaigns on hygiene and promotion of ORS and zinc therapy will be conducted at state, district and village levels. Nearly 12 crore under 5-children will be covered during the

program across the country.

Almost all the deaths due to diarrhoea can be averted by preventing and treating dehydration by use of ORS (Oral Rehydration Solution), administration of zinc tablets along with adequate nutritional intake by the child. Diarrhoea can be prevented with safe drinking water, sanitation, breastfeeding/appropriate nutrition and hand-washing.

ASHA worker would undertake distribution of ORS packets to households with under-five children in her village. ORS-Zinc Corners will be set-up at health care facilities and non-health facilities such as schools and Anganwadi centres. Frontline workers will hold demonstration of ORS preparation, along with counselling on feeding during diarrhoea, hygiene and sanitation. The activities are also being supported by other ministries of the Government of India, especially the Education, Panchayati Raj Institutions, Women and Child Development, and Water and Sanitation.

India has realized impressive gains in child survival over the last two decades. There has been a consistent decline in Infant Mortality Rate (IMR) and Under-Five Mortality Rate (U5MR). Increased access to immunization and child healthcare services during this period have greatly contributed to this decline. Yet, an estimated 1.1 million children die each year in India, including approximately 1.1 lakh deaths due to diarrhoea.

A range of preventive and promotive interventions are already being implemented such as Vitamin A supplementation, promoting early initiation of breastfeeding, exclusive breastfeeding up to 6 months and appropriate complementary feeding apart from capacity building and service provision of staff for management of childhood diarrhoea in all government health facilities. Besides this, introduction of Rotavirus vaccine under UIP will also help in reducing diarrhoea mortality due to rotavirus disease. 



# Brain Under **Attack**

High blood pressure, smoking, high cholesterol, diabetes and increasing age constitute the most common risk factors for stroke. It is important to eat right and have a healthy lifestyle to avoid occurrence of stroke

**BY DR RAJUL AGARWAL**

**A** stroke, also known as a cerebrovascular accident or CVA is when part of the brain loses its blood supply and the part of the body that the blood-deprived brain cells control stops working. This loss of blood supply can be ischemic because of lack of blood flow, or hemorrhagic because of bleeding into brain tissue. A stroke is a medical emergency because strokes can lead to death or permanent disability. There are opportunities to treat ischemic strokes but that treatment needs to be started in the first few hours after the signs of a stroke begin. The patient, family, or bystanders, should activate emergency medical services immediately should a stroke be suspected.



The types of strokes include Ischemic stroke (part of the brain loses blood flow) and hemorrhagic stroke (bleeding occurs within the brain). Transient ischemic attack, TIA, or mini-stroke (The stroke symptoms resolve within minutes, but may take up to 24 hours on their own without treatment. This is a warning sign that a stroke may occur in the near future.).

Always try to follow on the word FAST which stands for Face drooping, Arm weakness, Speech difficulty and Time to assistance if you think someone might be having a stroke. The causes of strokes include ischemia (loss of blood supply) or hemorrhage (bleeding) in the brain. People at risk for stroke include those who have high blood pressure, high cholesterol, diabetes, and those who smoke. People with heart rhythm disturbances, especially atrial fibrillation are also at risk.

Stroke is diagnosed by the patient's symptoms, history, and blood and imaging tests. You can prevent stroke by quitting smoking, controlling blood pressure, maintaining

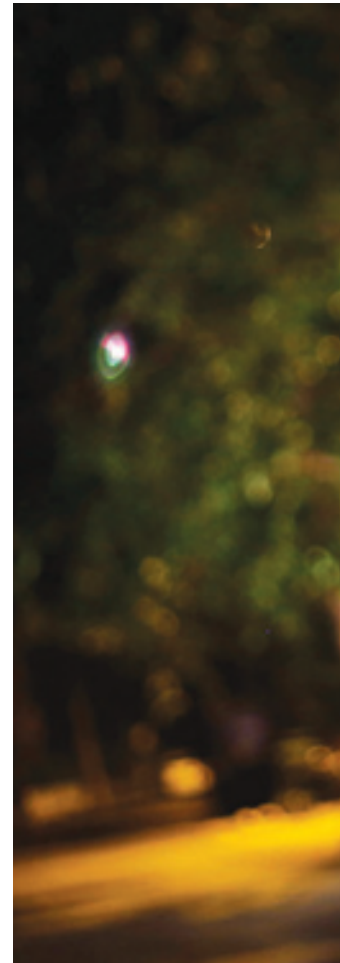
a healthy weight, eating a healthy diet, and exercising on a regular basis. The prognosis and recovery for a person that has suffered a stroke depends upon the location of the injury to the brain.

How a person is affected by their stroke depends on where the stroke occurs in the brain and how much the brain is damaged. For example, someone who had a small stroke may only have minor problems such as temporary weakness of an arm or leg. People who have larger strokes may be permanently paralyzed on one side of

their body or lose their ability to speak. Some people recover completely from strokes, but more than 2/3 of survivors will have some type of disability. Each year nearly 800,000 people experience a new or recurrent stroke.

As per an estimate, three adults suffer from a stroke every minute in India, though up to 80 percent of strokes can be prevented. A stroke can sometimes cause temporary or permanent disabilities, depending on how long the brain lacks blood flow and which part was affected. Complications may include: You may become paralyzed on one side of your body, or lose control of certain muscles, such as those on one side of your face or one arm. Physical therapy may help you return to activities hampered by paralysis, such as walking, eating and dressing. A stroke may cause you to have less control over the way the muscles in your mouth and throat move, making it difficult for you to talk clearly (dysarthria), swallow or eat (dysphagia).

You also may have difficulty with language (aphasia), including speaking or understanding speech, reading or writing. Therapy with a speech and language pathologist may help. Many people who have had strokes experience some memory loss. Others may have difficulty thinking, making judgments, reasoning and understanding concepts.



People also may be sensitive to temperature changes, especially extreme cold after a stroke. This complication is known as central stroke pain or central pain syndrome. This condition generally develops several weeks after a stroke, and it may improve over time. But because the pain is caused by a problem in your brain, rather than a physical injury, there are few treatments.

People who have had strokes may become more withdrawn and less social or more impulsive. They may need help with grooming and daily chores. In case of stroke, you may develop sudden numbness, weakness or paralysis in your face, arm or leg, especially on one side of your body. Try to raise both your arms over your head at the same time. If one arm begins to fall, you may be having a stroke. Similarly, one side of your mouth may droop when you try to smile. A sudden,

severe headache, which may be accompanied by vomiting, dizziness or altered consciousness, may indicate you're having a stroke.

Medical risk factors include High blood pressure — the risk of stroke begins to increase at blood pressure readings higher than 120/80 millimeters of mercury (mm Hg). Your doctor will help you decide on a target blood pressure based on your age, whether you have diabetes and other factors.

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Not all strokes affect the brain equally, and stroke symptoms and signs depend upon the part of the brain affected. For example, most people's speech centre is located in the left half of the brain so a stroke affecting the left side of the brain would affect speech and comprehension. It also would be associated with weakness of the right side of the body. A right brain stroke



would make the left side of the body weak. And depending on where in the brain the injury occurred, the weakness could be the face, arm, leg or a combination of the three.

The NIH Stroke Scale tries to score how severe a stroke might be. It also monitors whether the person's stroke is improving or worsening as times passes as the patient is re-examined. There are 11 categories that are scored and include whether the patient is awake, follow commands, sees, moves the face, arms and legs and has normal body sensations or feelings, speech difficulties or coordination problems.

The most common risk factors for stroke are: high blood pressure, smoking, high cholesterol, diabetes and increasing age. Heart conditions like atrial fibrillation, patent foramen ovale, and heart valve disease can also be the potential cause of stroke. When

stroke occurs in younger individuals (less than 50 years old), less common risk factors to be considered include illicit drugs, such as cocaine or amphetamines, ruptured aneurysms, and inherited (genetic) predispositions to abnormal blood clotting. An example of a genetic predisposition to stroke occurs in a rare condition called homocystinuria, in which there are excessive levels of the chemical homocystine in the body. Scientists are trying to determine whether the non-hereditary occurrence of high levels of homocystine at any age can predispose to stroke.

Strokes happen fast and will often occur before an individual can be seen by a doctor for a proper diagnosis. For a stroke patient to get the best diagnosis and treatment possible, they should be treated at a hospital within 3 hours of their symptoms first appearing.

Ischemic strokes and hemorrhagic strokes require different kinds of treatment. Unfortunately, it is only possible to be sure of what type of stroke someone has had by giving them a brain scan in a hospital environment.

There are several different types of diagnostic tests that doctors can use to determine which type of stroke has occurred like physical examination by checking blood pressure, listen to the carotid arteries in the neck, and examine the blood vessels at the back of the eyes, all to check for indications of clotting, blood tests to find out how quickly the patient's blood clots, the levels of particular substances (including clotting factors) in the blood, and whether or not the patient has an infection. CT scan, and MRI scan - radio waves and magnets create an image of the brain to detect damaged brain tissue.

## The eatwell plate

Use the eatwell plate to help you get the balance right. It shows how much of what you eat should come from each food group.



Treatment can begin with drugs to break down clots and prevent others from forming. Aspirin can be given, as can an injection of a tissue plasminogen activator (TPA). TPA is very effective at dissolving clots but needs to be injected within 4.5 hours of stroke symptoms starting.

Emergency procedures include administering TPA directly into an artery in the brain or using a catheter to physically remove the clot. Recent studies have questioned the effectiveness of these methods, and so research is still ongoing as to how beneficial these procedures are. There are other procedures that can be carried out to decrease the risk of strokes or TIAs. A carotid endarterectomy involves a surgeon opening the carotid artery and removing any plaque that might be blocking it.

Alternatively, an angioplasty involves a surgeon inflating a small balloon in a narrowed artery via catheter and then inserting a stent (a mesh tube) into the

opening to prevent the artery from narrowing again.

Hemorrhagic strokes are caused by bleeding into the brain, so treatment focuses on controlling the bleeding and reducing the pressure on the brain.

Treatment can begin with drugs given to reduce the pressure in the brain, control overall blood pressure, prevent seizures and prevent sudden constrictions of blood vessels. If the patient is taking blood-thinning anti-coagulants or an anti-platelet medication like Warfarin or Clopidogrel, they can be given drugs to counter the medication's effects or blood transfusions to make up for blood loss.


Surgery can be used to repair any problems with blood vessels that have led or could lead to hemorrhagic strokes. Surgeons can place small clamps at the base of aneurysms or fill them with detachable coils to stop blood flow and prevent rupture.

Keeping these mentioned things in mind, the

author has special interest in neuro critical care, stroke, headache, epilepsy, abnormal movement disorder, neuro-rehabilitation and more. His personal and professional aim is to help people by giving them the best and most advanced treatment at affordable cost. Apart from his expertise in his field, his amiable nature has won many patients' hearts.

Today neuro critical care and acute stroke case are more common. Patient coming with a stroke within 4-5 hours of the onset of symptoms receive injection RTPA, which has ability to open blood clot. Thrombolytic therapy and neuro critical care are very helpful for trauma cases.

It is not about success with one single patient. It is about sustained dedicated efforts day after day throughout the year. As soon as a patient arrives in casualty, he/she is seen immediately by neurology team and best treatment is given on an urgent basis. The patient is then shifted to neuro ICU and monitored constantly. The author is focused on providing the most advanced neurological care to our patients.

Over a period of time, our population is aging. The average life span of a human being has increased from 60 years to 80 years due to the advancement in medical science. When a person gets older, there are increased chances for him to be prone to neurological diseases like stroke, dementia and Parkinson diseases as well. It is very important that we preserve our body and have healthy aging. We should take care of eating habits and lifestyle and avoid smoking, drinking and fast food, which can adversely affect health. It is important to eat right and have a healthy lifestyle to avoid neurological diseases. 

(The author is a Senior Neurologist, Sri Balaji Action Medical Institute, Delhi)



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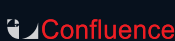
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# Dealing with Diabetes

As India faces a rising burden of diabetes, it calls for appropriate government interventions and combined efforts from all the stakeholders of healthcare sector to prevent the disease from assuming catastrophic proportions.

**BY AMRESH K TIWARY**







**W**ith a fast-growing population of diabetic people, it is feared that India may soon become the diabetes capital of the world. As per reports, growing incidence of diabetes, considered as one of the most silent killer diseases, is a major challenge for doctors and the government.

India has more diabetics than any other country in the world. The disease affects more than 62 million Indians, which is more than 7.1% of India's adult population. An estimate shows that nearly one million Indians die due to diabetes every year. The average age on onset is 42.5 years. The high incidence is attributed to a combination of genetic susceptibility plus adoption of a high-calorie, low-activity lifestyle by India's growing middle class. A report says that if not controlled, India will witness the greatest increase in people diagnosed with diabetes (102 million) by 2035.

**ENORMITY OF THE THREAT**

Diabetes might be one of the most common diseases across the world and especially in India, but awareness about the same can well be estimated by the fact that India today has more people with type-2 diabetes than any other nation. The WHO also estimates that 80 per cent of diabetes deaths occur in low and middle-income countries and estimates that such deaths will double between 2016 and 2030.

The etiology of diabetes in India is multifactorial and includes genetic factors coupled with environmental influences such as obesity associated with rising living standards,

steady urban migration, and lifestyle changes. Yet despite the incidence of diabetes within India, there are no nationwide and few multi-centric studies conducted on the prevalence of diabetes and its complications.

The studies that have been undertaken are also prone to potential error as the heterogeneity of the Indian population with respect to culture, ethnicity, socio-economic conditions, means that the extrapolation of regional results may give inaccurate estimates for the whole country.

There are, however, patterns of diabetes incidence that are related to the geographical distribution of diabetes in India. Rough estimates show that the prevalence of diabetes in rural populations is one-quarter that of urban population for India.

**CAUSES OF DIABETES**

There are many causes for diabetes. One of the largest causes is lifestyle. Being overweight and lacking exercise can lead to diabetes, particularly in adults. Obese children, when matured into adults, have a much higher chance of getting type-2 diabetes than children who are not obese at a young age. Another cause of diabetes is high blood pressure and unhealthy eating habits,

According to **Arvind Garg, Senior Child Specialist, Apollo Hospital, Noida**, "Obesity is one of the major risk factors for diabetes, yet there has been little research focusing on this risk factor across India. Despite having lower overweight and obesity rates, India has a higher prevalence of diabetes compared to western countries suggesting that diabetes may occur at a much

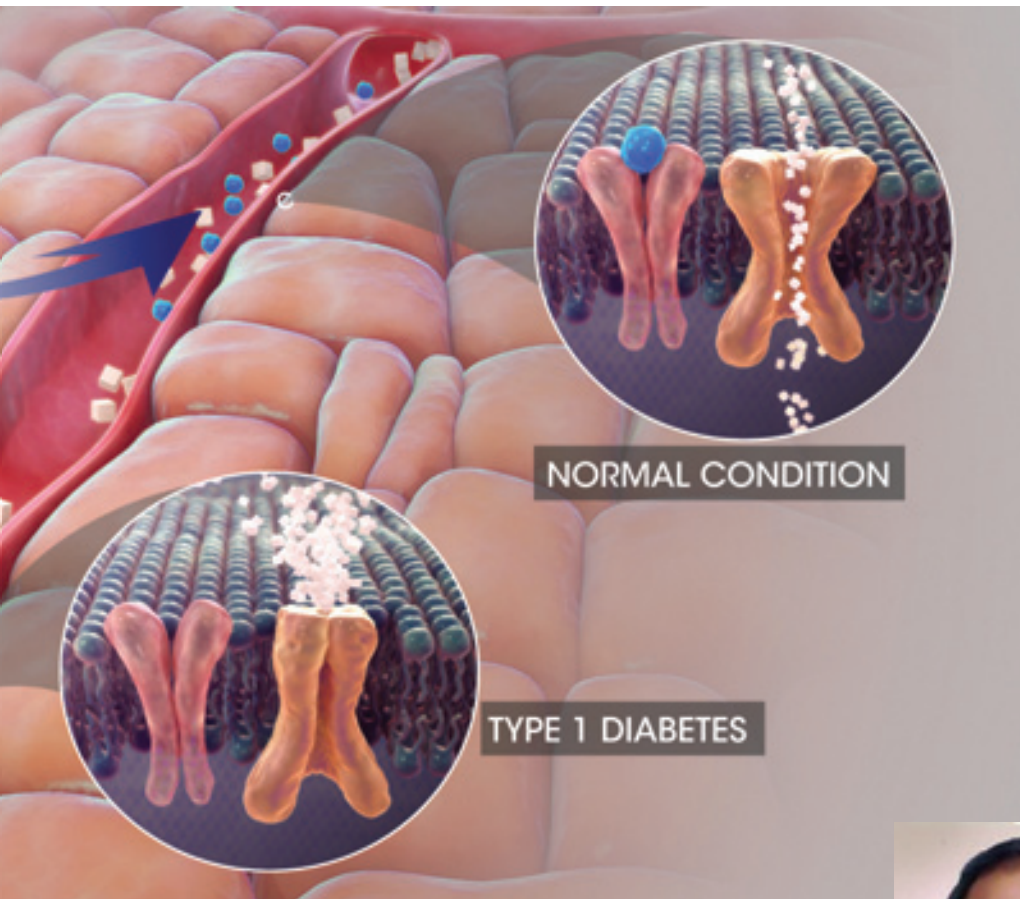


lower body mass index (BMI) in Indians compared with Europeans. Therefore, relatively lean Indian adults with a lower BMI may be at equal risk as those who are obese."

Hypothetically diabetes mellitus refers to a group of diseases that affect how your body uses blood sugar (glucose). Glucose is vital to your health because it's an important source of energy for the cells that make up your muscles and tissues. It's also your brain's main source of fuel. According to

**Dr N P Singh, Senior Consultant, Max Superspeciality Hospital, Vaishali (Ghaziabad)**, "If you have diabetes, no matter what type, it means you have too much glucose in your blood, although the causes may differ. Too much glucose can lead to





serious health problems.”

These days diabetes is now found in persons as young as 15 years. Among the main reasons is sedentary lifestyle which has become ubiquitous now. About 17 million people suffer from kidney problems arising out of diabetes, but only a few could afford the costs of treatment. As such, the focus must be on enacting preventive measures such as promoting physical activity.

Knowing causes of diabetes can help a person understand how best to treat their symptoms, and help them understand how they got diabetes in the first place. While many causes of diabetes can be prevented, some causes are just the way the body is made, and the sooner a diabetes type can be diagnosed, the sooner a person can get back to normal health and take the measures needed to take care of oneself successfully.

**Dr Anup Mohta, Director, Chacha Nehru Bal Hospital, East Delhi,**

says, “A major cause of diabetes is genetics. If a child’s parent has diabetes or if diabetes is common among other family members, a person’s chance of also having diabetes as they age is greatly increased. Mainly, type 2 diabetes is inherited, and this type of diabetes is easier to treat, unlike type 1 diabetes. However, even if diabetes is an inherited disease, there is no guarantee that a person will get it.”

#### **EFFECTS OF DIABETES**

Diabetes is one of the diseases that affects the endocrine system. The pancreas produces the hormone insulin. In Type 1 diabetes, the insulin producing cells in the pancreas are destroyed. In Type 2 diabetes, insulin is still produced but the body becomes resistant to it. Diabetes may damage almost every tissue and organ of the

body, the kidney being one of them. If neglected, a person could go into diabetic nephropathy. Albumin in the urine, blood urea and creatinine levels should be checked once a month. Diabetics should avoid painkillers. They should watch out for swelling of the feet, extreme fatigue, weakness and breathlessness. Obese children should also be screened for diabetes.

The doctors believe when diabetes is not well controlled there is damage to the organs and the immune system is impaired. Foot problems occur in people with diabetes and can get serious very fast. Recent statistics show that approximately a quarter of all people with diabetes worldwide at some point during their lifetime will develop sores or breaks (ulcers) in the skin of their feet.

The symptom that you could easily miss is the unexplained loss of weight, sudden feeling of fatigue, and problems with your vision, without the need for corrective lenses. The patients may go through bouts of extreme hunger as the body calls for more food to generate energy. They could also experience unexplained tingling in their feet and hands, including dry skin. If any of these symptoms of diabetes show themselves, it may be time to consult your doctor for evaluation and possible treatment.



#### **STAGES OR TYPES OF DIABETES**

There are two stages to this disease, otherwise known as type 1 diabetes and type 2 diabetes, and they are caused when the pancreas does not produce enough insulin. A type 1 diabetic is more commonly found in younger adults and will require the use of insulin injections and a major adjustment in their diet. Type 2 diabetes is probably more common in adults; however, it is hardly ever diagnosed until the patient is required to do a blood test for some other medical problem. A type 2 diabetic is



## SYMPTOMS OF DIABETES

Education is of utmost importance in the prevention of diabetes. Here's a list of symptoms that you should look out for in your body to make sure you are not suffering from any diabetes-related complications like frequent urination, excessive thirst, increased hunger, weight loss, tiredness, lack of interest and concentration and a tingling sensation or numbness in the hands or feet.

Other signs include blurred vision, frequent infections and slow-healing wounds. Don't ignore basic warning signs as they could be indicative of graver problems. In case you are unsure, consult your doctor

immediately.

## REMEMBER, YOU ARE AT THE RISK OF DIABETES IF YOU:

- Are obese or overweight
- Are physically inactive
- Have been previously diagnosed with glucose intolerance
- Have unhealthy dietary habits and meal times
- Are above the age of 40
- Are a patient of high blood pressure and high cholesterol
- Have a family history of diabetes
- Have a history of gestational diabetes
- Are from a particular ethnicity (higher rates of diabetes have been reported in Asians, Hispanics and African Americans)

## AYURVEDIC APPROACH TO DIABETES

In Ayurveda, diabetes is known as Madhumeha (Madhu means 'honey' and Meha means 'urine'). Madhumeha is categorized as Vataj Meha (a problem caused by aggravation of Vata). Vata symbolizes wind and dryness. Deterioration of the body is a characteristic that indicates impairment of Vata. Maximum deterioration of dhatus (body tissues) occurs in this type of disease and this is the reason why all vital organs are affected by diabetes.

The other prime cause of diabetes is impaired digestion. Impaired digestion leads to accumulation of specific digestive impurities (known as ama) which accumulate in the pancreatic cells and impair the production of insulin.

According to Ayurveda, sugar levels can be kept under control with the help of proper medication and a strict diet-lifestyle plan. Because diabetes is a chronic metabolic disorder that arises when the pancreas does not produce enough insulin, or when the body cannot effectively use the insulin it produces, it can only be treated if the body is rejuvenated in its entirety.

Therefore, the treatment of diabetes recommended in Ayurveda – as against modern medicine – is aimed at rejuvenating the body to not only balance sugar levels, but also foster a positive change in the patient's life. Ayurvedic medicines work on the root cause of the

disease, strengthening the patient's immunity, enhancing digestion and helping him lead an overall healthy life. Along with medication, dietary and lifestyle changes are also recommended to rejuvenate the body's cells and tissues, allowing them to produce insulin properly.

## RECOMMENDED ROUTINE FOR A DIABETIC

**Wake up time:** Wake up by 6 am in the morning, as you also need ample time to exercise. Have a glass of lukewarm water mixed with two teaspoonful of fresh lemon juice every day.

**Exercise:** Exercise forms an important part of treatment for diabetic patients. A morning walk is the best form of exercise. Yoga and meditation can also be beneficial, especially to relieve stress and bring clarity to the mind. If your health permits, opt for exercises such as jogging, swimming, cycling, etc.

**Breakfast:** In the morning, take two slices of whole meal bread with butter and fresh milk (boiled and taken warm). Seasonal fresh fruits can be taken occasionally, with or without milk.

**At work:** If you are an office-goer, make sure you carry filling snacks with you all the time, as diabetics are advised not to keep their stomachs empty. Instead of snacking on cheese, chips or crackers, enjoy a handful of nuts or seeds. Go for variety with sunflower, pumpkin seeds, almonds, cashews, and walnuts.

**Lunch:** For lunch, opt for steamed or

lightly cooked green vegetables such as cauliflower, cabbage, tomatoes, spinach, turnip, asparagus and mushrooms. Vegetable soup or boiled vegetables can also be taken. In addition, two or three whole wheat bread (chappatis), sprouts, salad, boiled rice, lentils (daal) etc. can be taken according to appetite. A glass of butter milk (salty lassi) is a nice drink to end the lunch. Roasted cumin seeds, black salt, grated ginger and green coriander leaves can be added to the butter milk.

**Daytime sleep:** If you are a non-working diabetic, always remember not to sleep during the daytime, as it increases Kledaka Kapha. A sub-dosha of Kapha, Kledaka Kapha governs the protective mucous lining of the digestive system, thereby facilitating proper digestion. In an increased state, it can lead to impairment of digestion, which can cause additional problems in diabetes patients.

**Evening snacks:** Have a glass of fresh fruit or vegetable juice. You can also take Ayurvedic tea with roasted chickpeas.

**Dinner:** Always remember that your dinner should be light and not have too many items. Boiled vegetables, sprouts, cottage cheese (paneer) or a bowl of salad made from fresh raw vegetables of the season. Also, make it a point to eat at least two hours before you go to bed.

**Bedtime:** Go to sleep before 10 pm. Have a glass of fresh boiled warm milk before going off to bed.



usually a patient who is constantly fighting with weight problem.

The chronic diabetes conditions include type 1 diabetes and type 2 diabetes. Potentially reversible diabetes conditions include prediabetes when blood sugar levels are higher than normal, but not high enough to be classified as diabetes and gestational diabetes, which occurs during pregnancy but may resolve after the baby is delivered.

Dr. Shishir Narayan, Shroff Eye Hospital, New Delhi, says, "The eyes of a diabetic also need special attention and care. Regular eye check-ups are a must. The retina could get affected, and blood vessels in the eye could leak blood. Diabetes also produces early cataract. In extreme cases, the patient can lose eyesight."

Those with long standing diabetes are at the risk of developing diabetic neuropathy and complications of diabetic foot. Round-the-year foot care can ensure that the chances complications are minimised.




Diabetics, who were warned for years that their illness could cause blindness, are in for more bad news, as doctors have claimed that the patients are more likely to lose their hearing, too. A Japanese research study has found that hearing problems are far more common in diabetics than their healthy

counterparts, even when other factors such as ageing and a noisy environment are taken into account.

The association of hearing impairment with diabetes is controversial, but it is believed that over time, high blood glucose levels can damage vessels (causing hearing loss). It's thought that glucose damages the nerves and tissues in the ear, diminishing the ability to hear.

Diabetic patients should be screened for hearing impairment from earlier age compared with non-diabetics, from the viewpoint of prevention of several health problems such as depression and dementia caused by hearing impairment.

Diabetes is now highly visible across all sections of society within India, there is need for urgent medical intervention to mitigate the disastrous increase in the disease in future. Medical experts feel that timely detection and right management can go a long way in helping patients lead a normal life. 

# Natural Way to Cure Diabetes

Diabetes can be cured with out any medication including insulin. The strategy involves micronutrient-rich diet, exercise & herbal food supplements, all of which stimulate the pancreas to produce more insulin, block the liver to release sugar in the blood stream and make cells more sensitive to insulin.

**BY DR HARMOHAN DHAWAN**

**D**iabetes is one of the chronic lifestyle diseases characterized by elevated blood glucose (blood sugar) which can lead to serious health complications. Diabetes and obesity are twins and spreading like an epidemic the world over.

According to International Diabetes Federation (IDF), India has the second largest diabetes population of about 6.5 crores people and at this rate India will become the diabetes world capital by 2030. Every 10 seconds a person dies of diabetes related complication & every 10 seconds 2 people are diagnosed of diabetes. According to American Diabetes Association, if you check your blood glucose level in the

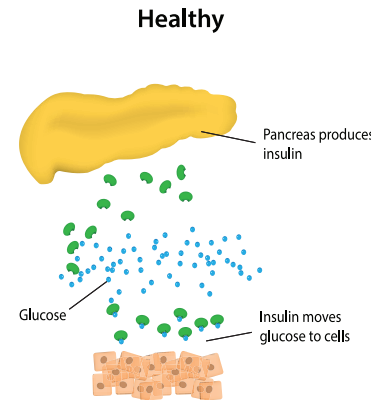


morning before breakfast and if it is between 70-110 mg/dl it is normal. If the reading is between 110-125 mg/dl, you are pre diabetic and the reading above 126 mg/dl you are diagnosed of diabetes.

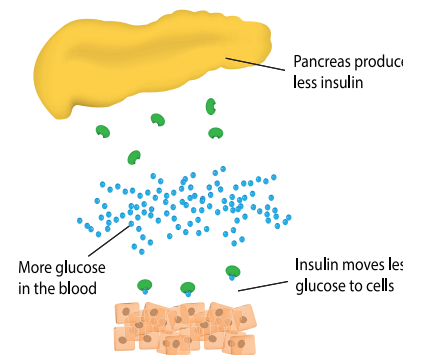
The pharmaceutical lobby in the world is so powerful that the industrially produced synthetic drugs have become a major tool in the treatment of various diseases. All these allopathic medication are chemicals which have many side effects too.

There is a need to educate and help people to get rid of these harmful drugs. In this regard, a three-pronged strategy of micronutrients-rich diet, exercise and herbal food supplement can help us win the battle against

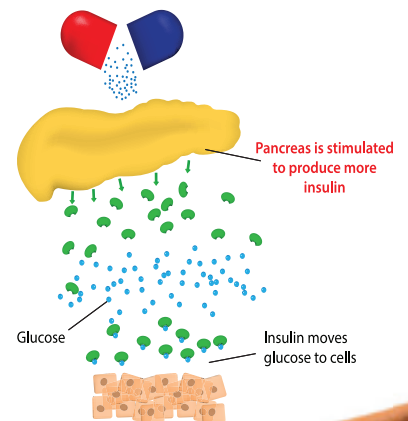




### Type 2 Diabetes



### Type 2 Diabetes with Treatment



various lifestyle diseases.

### WHAT IS DIABETES?

Most foods we eat are converted into sugar which enters the blood stream. Sugar is very important because the body needs it for energy. There is an organ behind the stomach called pancreas which produces a hormone called insulin. The insulin carries the sugar into the cells where it is used for energy. When the pancreas doesn't produce enough insulin or the insulin cannot perform its functions properly, the sugar accumulates in the blood & the blood sugar level rises. A prolonged high level of blood sugar is a serious health hazard.

### DIABETES SYMPTOMS

Unfortunately except for extreme thirst, urination, hunger, fatigue & numbness in the fingers, there are no other visible symptoms of diabetes. In the initial stage since it doesn't cause any physical discomfort, people with diabetes become complacent. Even those who are on medication develop a feeling of false sense of security that perhaps the medication is taking care of their diabetes & it has given them a license to eat whatever they like but this is a misconception and may lead

to serious complications.

### TYPES OF DIABETES

There are three types of diabetes:-

1. **Type 1 diabetes:** It manifest in childhood or young adults. It is also called insulin dependent diabetes. The white blood cells (WBCs) in the blood are called the 'army' which protects you & fight against various bacteria & viruses. Sometimes mistakenly the WBCs attack the beta cells of the pancreas & destroys them as a result there is no production of insulin and one has to depend upon insulin injections from external sources.
2. **Type 2 diabetes:** It is called adult onset or non-insulin dependent diabetes. About 90% of the patients have type 2 diabetes. Most patients with type 2 diabetes still produce insulin but either it is not enough or the insulin can't perform its function properly which is called insulin resistance as a result there is build-up of glucose in the blood.
3. **Gestational diabetes:** It is



140

HEART RATE

Heart rate is the number of times your heart beats per minute. It is a measure of how fast your heart is pumping blood through your arteries. A normal heart rate for a healthy adult is between 60 and 100 beats per minute. However, heart rate can vary depending on your age, fitness level, and other factors. For example, athletes often have a lower heart rate, while people who are stressed or exercising may have a higher heart rate. Monitoring your heart rate can help you understand your cardiovascular health and how your body responds to different activities.

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similar to type 2 diabetes except it occurs during pregnancy. Normally it disappears after child birth. It indicates a sign of insulin resistance and a warning signal that type 2 diabetes may be around the corner.

### CAUSES OF DIABETES

The scientific evidence clearly shows that the excess weight and a diet rich in refined & processed foods, animal & dairy products, excess sugar, oil & sedentary lifestyle are the root cause of not only obesity & diabetes but most of the lifestyle diseases as well.

Our body is made of trillion of cells which make up our tissues. Our muscle cells store a very little amount of fat in the cells, in medical language is called intramyocellular lipids (intra means inside myo is muscle cells and lipid is fat inside the muscle cells) There are little furnaces in the cells called mitochondria which burns the fat into energy to power your muscle cells. Somehow if the influx of fat is more, the furnaces cannot cope with the extra fat coming into the cells and as a result fat goes on accumulating inside the cells. Normally the insulin attaches to the receptors on the surface of the cell and signals the cell membranes to allow the sugar to enter. However excess of fat clog the cells, & interfere with the insulin intracellular signaling process. Now when insulin cannot perform its function of getting the glucose inside the cell, it is called insulin resistance. The problem starts here. Since the fat inside the cell does not allow sugar to get in, the built up of sugar starts in the blood stream. This is the onset of diabetes and this dreaded disease if not controlled can play havoc within your body organs which can lead to serious medical conditions.

### DIABETES COMPLICATIONS

1. Hardening of the arteries (atherosclerosis)
2. Stroke
3. Heart attack

4. Kidney diseases leading to dialysis
5. Weakened immune system
6. Vision loss leading to blindness
7. Nerve damage called neuropathy leading to tingling, pain, and loss of sensation in the feet, legs & fingers.
8. Erectile dysfunction leading to impotency in men
9. Slow wound healing leading to amputation.

### TREATMENT OF DIABETES

When you are diagnosed of diabetes, the conventional method of treatment is medication. Your doctor will prescribe oral medication and if it is not managed he will put you on to insulin therapy. We have observed that invariably with every visit to your doctor the dose of insulin goes on increasing. There are serious side-effects of high dosage of insulin, which leads to increase in weight and the excess of weight requires more insulin. This means excess weight more insulin & more insulin excess weight. The patient is trapped in a vicious circle. It has been observed that the insulin hardens the arteries. About 80% of the diabetics who are on insulin therapy die of heart attacks. Insulin combined with oral medication is playing havoc with human lives. Just imagine the mental, physical pain and agony besides financial burden the patient has to live all through his life. Can we put an end to these human sufferings & save the precious lives?

Certainly, yes. Just get closer to Nature and enjoy a disease free, happy & healthy long life.

### PREVENTION OF DIABETES

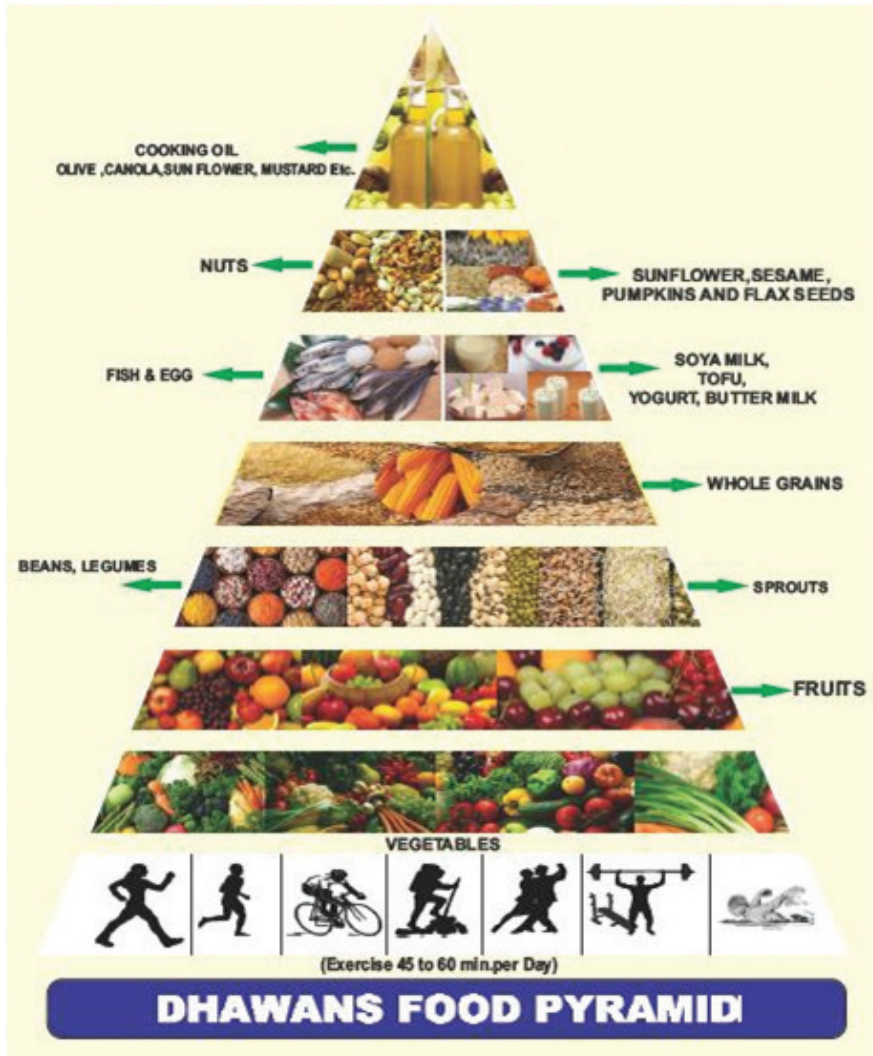
We can naturally eradicate diabetes without any medications. The nutritional approaches to prevent & reverse diabetes is the only solution and not the drugs. First of all we will remove the causes which lead to the manifestation of diabetes. As you know the fat build up clogs the cells which results in insulin resistance.

Now to increase the cell sensitivity to insulin, we shall resort to dietary intervention to declog the cells so that the insulin can carry the sugar into the cells. To achieve it:-

- Eliminate animal products from your diet.
- Avoid dairy products like milk, butter, ghee and paneer.
- Eliminate refined, processed, fried & spicy foods.
- Minimize the use of cooking oil.

By eliminating these foods and eating a micronutrient rich diet will bring down your blood sugar level dramatically. At Imperial College School of Medicine in London, the researcher studied two groups of volunteers who were of similar age, height & weight. The one group was on vegetarian diet & the other on animal & dairy products. When they measured the intramyocellular lipid, (fat) in the calf muscles, it was 31% less in vegetarians as compared to those who were omnivores. It is now clear that the micronutrient rich diet definitely helps prevent fat build up in cells.

We at Dhawans Nature Cure have successfully treated hundreds of diabetic patients. Those who were on insulin therapy, we took them off insulin within about 20 days. Those who were on oral medication, all of them stopped it within two to eight months. A micronutrient rich diet, exercise & herbal food supplements was the tool we applied and achieved dramatic result in reversing diabetes. Since the ability of the pancreas to produce insulin never gets destroyed completely this three pronged strategy of diet, exercise & herbal food supplements combined together does miracle. It stimulates the pancreas to produce more insulin, blocks the liver to release sugar in the blood stream and make cells more sensitive to insulin to get sugar into the cells. By this regimen we have been successful in bringing the blood sugar level within the normal ranges. Side by side we go on reducing the medication to avoid



found in natural whole plant foods like vegetables, legumes, nuts & seeds. These are life-saving & life protecting nutrients, which play a major role in optimal health, diseases reversal & protection too.

By now you must have understood that both the macro and micro nutrients are vital for a robust and optimal health. Our body needs all these nutrients and if there is any excess or deficiency of these nutrients, there could be some serious medical complications. Keeping into consideration the various recommendations of the World Health Organization (WHO); Nutrient requirements and Recommended Dietary Allowances (RDA) for Indians released by the Indian Council of Medical Research (ICMR), and our own experience of 7 years of extensive research and trials at Dhawans Nature Cure, we have designed the “Dhawan’s food pyramid” which meets all the nutritional requirements of an individual. Besides macro nutrient, (protein, carbohydrate and fat) this eating plan is loaded with vitamins, minerals, fiber, antioxidants and phytochemicals for your diseases free optimal health.

**MAINTENANCE DIET PYRAMID**

The major emphasis in this pyramid

hypoglycemia (drop in glucose level) and finally take the patient off all the medications.

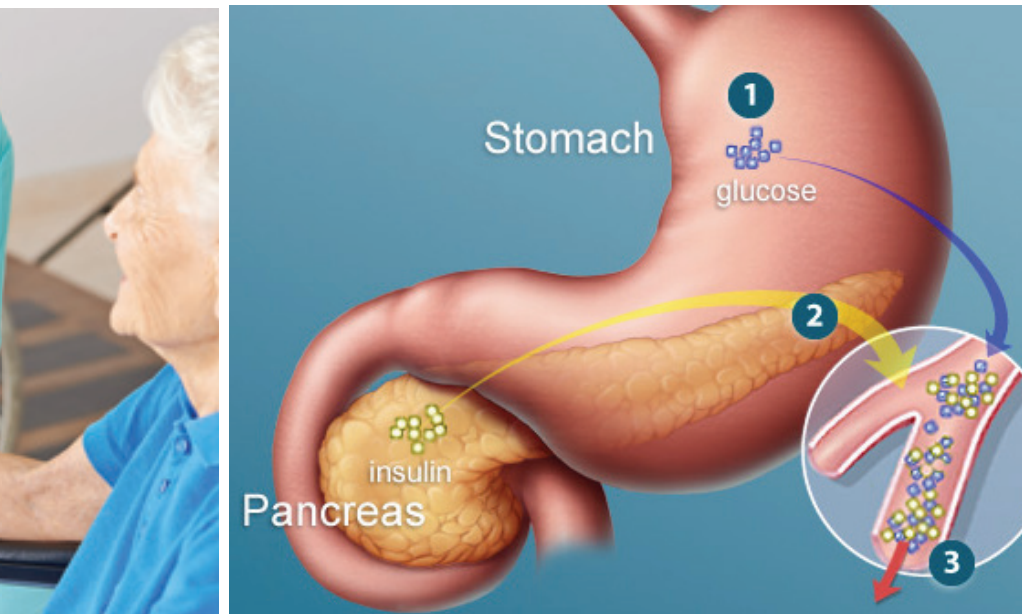
**MAINTENANCE DIET**

Nutrition is such a potent & powerful weapon with which you can win major battles against various diseases and lead an optimal healthy life.

After falling back to Nature, our cells are cleansed of extra fat. The insulin now carries the sugar into the cells where it’s used as a fuel for energy. By declogging the cells, thenormal functions have been restored. As a result the blood sugar level comes within normal ranges.

Now the stage has come where we will structure a diet which has the maximum therapeutic effects. The

foods we eat contain 3 macronutrients (protein, carbohydrates & fat) which have calories & the body uses them for energy. Along with these three nutrients there are two micronutrients, vitamins & minerals in the food which do wonders. These micronutrients have no calories & are important for the normal body functions, repair, maintenance & elimination of the waste from the body. These vitamins & essential minerals are vital to our health and were discovered in the 1940s. Phytochemicals are the third type of micronutrients which have been discovered in the last one and a half decade. The nutritional scientists have shown that these phytochemicals play a much bigger role than the vitamins in human health. They are



is the maximum consumption of green vegetables which are very low in calories and rich in antioxidant, phytochemicals, fibre, folate, minerals and vitamin A, E and C. you must eat minimum of 500 grams of vegetables in the form of salads, cooked vegetables and soups. It helps maintain a healthy blood sugar level and protects you and reduces the risk of diabetes, stroke, heart diseases and cancer.

Next in the leader are fruits. The diabetic should eat two fruits as snack at the mid-morning and in the evening. Fruits are good source of potassium, vitamins A & C, folate, minerals and fibre. They are the only food which is digested in the mouth and travels straight to the small intestine & its nutrients enter the blood stream. All the health benefits are yours within half an hour of eating it.

The next food group is beans and pulses which are high in soluble fibre, which slow down the absorption of glucose in the blood stream. Another fibre in it is called insoluble fibre which provides bulk to our stool, helping the bowel movement. Nutritionists have discovered a third type of fibre which is called resistant starch and have no calories & the most of which do not raise blood sugar level. Legumes (dals) are richer in protein & fibre and

contain sufficient amount of resistant starch which have a favorable impact on blood sugar level & weight loss. These are perfect source of complex carbohydrates particularly for diabetics. The scientific literature shows dals provide a great deal of protection against diabetes, cancer, stroke & heart diseases. Sprouts are another excellent source of nutrients which should be liberally included in your diet.

Next group is grains –various grains provide carbs, protein, fibre, vitamins & minerals which are essential for good health. However, when these grains are refined they are denuded of the vital fibre & various vitamins & minerals. White basmati rice & maida are processed & refined grains which should be avoided & brown rice & whole wheat flour instead should be preferred.


The next food group is soya milk – it is naturally high in protein, fibre, vitamins & minerals particularly calcium & iron. These nutrients are essential for the functioning of the body at optimal level. Regular intake of soya milk reduces the triglycerides & LDL and improves the good cholesterol (HDL).

As compared to dairy milk which is loaded with saturated fat & cholesterol, soya milk has most of unsaturated fat

& zero cholesterol. It also promotes weight loss and osteoporosis. It is an ideal drink and a good substitute of dairy milk; we have substituted with a healthy soya milk, tofu, fat free yogurt and butter milk (lassi).

Animal and processed meat products are eliminated because of saturated fat & cholesterol. Those who are meat addict may eat 1 portion of meat, chicken and egg white in a week.

Next are Nuts and Seeds, storehouse of nutrients and rich in energy, protein, vitamin, minerals, antioxidants, healthy fats particularly omega 3 and fiber. Consumption of nuts and seeds has a lower risk of weight gain, diabetes, heart problems and stroke. Nuts and seeds provide us healthy diet because they give us essential nutrients and play a role in disease prevention and keep you healthy. Almonds, walnuts, sesame, pumpkin, sunflower and flax seeds are the most nutritive and should be eaten to maintain the optimal health.

The next is oil. The use of oil in cooking should be minimal. We should remember that oils is 100% fat and each gram of it carries 9 calories which is fattening. Refined vegetable oil during processing are heated and chemical solvent are used which can be a serious health hazards. Cold pressed olive oil could be a healthy option. Last but not the least we cannot ignore the health benefits of exercise which stimulate the circulatory & respiratory system & enable the oxygenated blood to reach the remotest part of the body and make cells to work more efficiently. There are many physical activities to choose from brisk walking, jogging, biking, swimming, hiking, stair climbing, tennis etc. Our heart beats 72 times/min but after doing regular exercise, the heart beat will beat less. That means the lessening of burden on the heart resulting in longevity. 

(The author is well-known Naturopathist and Ex Union Civil Aviation Minister, Govt of India)



# Challenges & Opportunities

To become the global leader in healthcare, India needs to come out with innovative ways to deliver healthcare at affordable costs to the rapidly rising population

**BY DR GIRDHAR GYANI**



Indian healthcare sector is in focus due to a variety of reasons. There are some positives and few negatives. There is constant demand and realization that we need to cover vast majority of population for delivering appropriate healthcare services. Few states have rolled out social health insurance schemes.

These include; Andhra Pradesh, Telangana, Tamil Nadu, Karnataka, Gujarat, Maharashtra and Rajasthan. Then we have few central schemes like Rashtriya Swasthya Bima Yojana (RSBY) for below poverty line (BPL) population and some for employees

and pensioners i.e. Central Government Health Scheme (CGHS), Ex-servicemen Contributory Health Scheme (ECHS) and Employment State Insurance Scheme (ESIS). Although the general perception is that a vast majority of Indian population continues to depend on out of pocket expenses to meet with healthcare needs, but the world bank report suggest that close to 50 percent population was covered under some or other scheme to meet the healthcare expenses.

As the population is beginning to be more conscious about the needs and rights to have basic healthcare, more

and more states are expected to roll out similar health insurance schemes. The Government of India, based on their manifesto is also committed to implement 'National Health Assurance Mission' and its roll out is already overdue. The scheme in the meantime has been re-casted under the name 'National Health Protection Scheme (NHPS)' and it will replace RSBY. It will provide cover of Rs. one lakh for BPL families.

There is proposal to integrate the NHPS with existing state insurance schemes and operate as standalone scheme in those states, which do not have their insurance schemes. Once scheme gets operational, it is expected that more than 70 percent population will come under some or other health insurance scheme. This will take our country close to complying with norms of universal health coverage (UHC).

Normally for implementing UHC, it is pre-requisite for the government to have a majority share in delivery of healthcare services. Presently, the government has only 30 percent share in Out Patient Department (OPD) and 40 percent share in In-Patient Department (IPD) services. Even in terms of healthcare spending, the government contributes to 25 percent in terms of GDP spending, with the balance 75 percent coming from the private sector. Therefore, to realise its goal of UHC, the government will have to rope in private sector in a big way; something similar to what Andhra Pradesh (AP) government did under Arogya Shri scheme. In this scheme, the AP government reimburses to empaneled hospitals for delivering cashless healthcare services to BPL citizens. Such an arrangement has been proved to be win-win for government, industry and community.

The government is spared of investing in healthcare infrastructure and on the other hand, the private sector gets business opportunity. The challenge in such an arrangement is



how the government fixes the rates of various medical procedures for reimbursement to the empanelled hospitals, as we have not done any exercise in our country to fix the costing of various medical procedures. Government for its schemes like CGHS/ECHS has fixed the rates on the basis of open tenders, by which many rates have come out to be highly illogical.

Recently, some of the state governments have indicated that they would take the regulatory route to fix the rates for medical procedures and would make it mandatory for private hospitals to follow. Once again in the absence of any scientific study, it will be disaster to fix the rates as it will compel hospitals to adapt short cuts and compromise on quality and patient





safety. Considering that India was registering a whopping 5.2 million medical errors annually (as per a Harvard study), any measure to cut down the cost will lead to further increase in morbidity and mortality.

According to an Institute of Medicine report in 1999, to 'err is human raised' the important issue for the first time about un-reported medical errors and their catastrophic impact on human lives. We in India till date have no institutional framework to monitor or measure the medical errors/ sentinel events. It will therefore be important


that while rolling out UHC, the government would have to make sure that quality was taken as pre-requisite for all participating hospitals.

It is pity that even after 12 years of the launch of National Accreditation Board for Hospitals (NABH); we have only about 550 hospitals accredited. Government, scheme owners and payers have to give serious thought on how to incentivize quality. It is encouraging to note that Insurance Regulatory and Development Authority (IRDA) has issued an order by which all private insurance schemes will

empanel only those hospitals/nursing homes/clinics, which shall have at least entry level NABH certificate. Similarly some of the state governments like Tamil Nadu and Andhra Pradesh have issued similar order for their state level insurance schemes.

Quality in healthcare will soon go beyond accreditation. Hospitals will be judged on many dimensions like being patient friendly, green, lean and clean. Quality and cost will be integral factors. Hospitals will be evaluated on how much value they add for unit payment. Value will be linked with clinical outcomes, patient's satisfaction index, etc. Some of these concepts are already being practised in developed nations. Tomorrow's hospitals, therefore, will have to be intelligent/ smart to account for these factors.

To sum up, the Indian healthcare is facing the challenge to come out with innovative way to deliver healthcare to its more than 1.2 billion people, without asking for huge outlay. The challenge for hospitals is to provide quality service at affordable cost by being SMART. The opportunity is to be the global leader in healthcare by improving patient safety records and by improving cost competitiveness, i.e., providing first-rate services at third-world cost. This will not only help improving clinical outcomes of our country but will also raise the stocks of foreign exchange by way of increase in number of medical tourists from overseas countries.

In the end, we need to empower the community to enable citizens to demand quality. We also need to educate the community by which healthcare along with education and environment become election agenda in our country. All in all, healthcare industry is in for exciting times ahead. 

(The author is Director General, Association of Healthcare Providers, New Delhi)







# Coping With Ailing Healthcare



To meet the challenges of lack of basic healthcare infrastructure in towns and villages; lack of emphasis on hygiene, environment, overemphasis on secondary and tertiary healthcare facilities with few primary health centres; massive poverty which doesn't allow people to use expensive health services in the private sector, the government has taken a number of steps but many more are required to achieve universal health coverage

**BY DR M. R. SURWADE**

**H**ealthcare is one of the fastest growing sectors in India though a mere 1.4 % of the GDP is spent on healthcare as opposed to 3.1% in China and 8.3% in the US. Effective use of communication and technology by healthcare and public health professionals can bring about an age of patient/public-centred health information and services and help the sector further realise its potential.

Ensuring healthy lives and promoting well-being for all at all ages (by 2030) is a major challenge in the present context of the future of healthcare. The majority of health expenditure is done privately. Expenditure on curative care is mainly private, and expenditure on preventive care is mainly through public sources.

In this concern, the framework of sustainable development goals (SDGs) and managing healthcare with focus on district health system, can regularly contribute to the smartness of healthcare for India in line with the agenda pursued by Indian Institute of Health Management and Research (IIHMR).

According to a global study, despite rapid economic growth, India was ranked 143rd among 188 countries, below Comoros and Ghana on health indicators due to various factors including mortality rates, hygiene

and air pollution.

Challenges of this complexity and magnitude cannot be solved by government ministries alone. They require a collaborative approach involving business and political leaders, members of civil society and academia, youth groups and social entrepreneurs.

According to the World Health Organization (WHO), India's per capita spending on healthcare is in the bottom quartile amongst all countries, patients are in competition with the likes of Nigeria, Rwanda and Uganda (never a good list to be in). This has resulted in an appalling lack in basic government healthcare infrastructure (the only hope for millions). More than 15000 people die of lack of medical care every year, and more than 10 times that number die because of lack of access to even those negligent facilities!

Healthcare is not only medical care, but also all aspects of preventive care as well. WHO defines health as "state of total physical, mental and social well-being and not a mere absence of disease or infirmity." But, in India, there is no such health well being. Let's look at the problems of health care in India.

The social problems are enormous. There is a complete neglect of rural population. According to



KPMG report, 32% hospitals and 16% beds are available in the rural areas where nearly 75% of the population reside. Furthermore, the suicide rate is worrisome in India. According to the WHO, the suicide incidences in India are 21.1 per one lakh population. It confirms the lack of mental well-being of citizens. Also, the tribal community is fighting hard against the health problems. The Under-5 mortality among the tribals is more than any other community in India.

There is a lack of hospitals along with the weak strength of doctors and nurses. It is a policy failure as the focus is more on demand-side rather than handling supply side; for instance, lack of emphasis on hygiene, environment, sanitation, etc. Similarly, there are many political and infrastructure problems. There is an overemphasis on secondary and

tertiary healthcare facilities with no serious primary health centres, which is the first point of contact. Furthermore, the condition of healthcare infrastructure is in a sad state.

There are economic problems too. On the one hand, there is massive poverty which doesn't allow people to use expensive health services in the private sector. On the contrary, public health expenditure is inadequate. The public health care spending is nearly 1% of GDP, which is way below than the other developing countries. For instance, China invests approximately 3% of GDP. Therefore, the out of pocket expenditure shifts families from APL to BPL.

For tackling the rural health care problems, there have been schemes like National Rural Health Mission (NRHM) and ASHA workers. But the



structure isn't enough; there are significant flaws in governance and implementation. On the other hand, out of pocket expenditure or affordability is covered through Rashtriya Swasthya Bima Yojana

# Healthcare Challenges in India

India faces the double burden of infectious diseases and a dramatic rise in non-communicable diseases, now estimated to account for more than half of all deaths. These include cardiovascular disease, cancer, chronic respiratory conditions and type 2 diabetes, all of which affected over 63 million Indians in 2012 alone. Apart from causing individual tragedies, these diseases are also a major economic threat. According to a study, India stands to lose \$6.15 trillion due to non-communicable diseases and mental disorders by 2030.

Many health challenges are linked to sanitation. The Narendra Modi government has turned a special focus on this issue. Linking a clean environment to human capital productivity is an issue that should be looked at as an investment and not a cost. The challenge is to identify and implement the right way to provide 1.2 billion Indians with a clean environment. There is a need for India to closely examine the norms that allow violence and a broader pattern of gender discrimination to continue. The gender gap holds back economies all around the world. Any society that does not value women as much as men is not reaching its full potential.

India's large population places a severe strain on its natural resources, and most of its water sources are contaminated by sewage and agricultural run-off. While progress has been made, gross disparities in access to safe water remain. The World Bank estimates that 21% of communicable diseases in India are related to unsafe water, and diarrhoea alone causes more than 1,600 deaths daily.

Most healthcare resources in India are with the private sector, which includes 80% of doctors, 26% of nurses, 49% of beds, 78% of ambulatory services, and 60% of in-patient care. India's per capita expenditure on healthcare is very low compared with developed countries such as the US.

Creating artificial scarcity in one area and high concentration in another causes hardship for the rural poor people, increasing the out of pocket expenditure. Apart from this, there are many challenges that rural healthcare is facing. Among them, the main challenge is lack of knowledge and awareness.

Awareness about healthcare is the key to improve healthcare in India. First of all, the Government should hire a Health Solution Organization to make people aware about healthcare and start with the health education in schools to educate the children as well as their parents about healthcare.

(RSBY) but it is more secondary and tertiary health problems and neglecting the main primary health care services.

The ambitious scheme of Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) aims at correcting the imbalance in the availability of affordable healthcare facility by setting up AIMS-like institutes. But, there is a criticism of it being too ambitious and not entertaining the issues related to the primary health sector. The Jan Aushadhi scheme set up many Jan Aushadhi stores which provide quality generic drugs at affordable prices. But, there are issues regarding lack of medicines reported as only 73 of 361 essential drugs listed under the Jan Aushadhi scheme. Furthermore, there is a huge push towards traditional AYUSH mission, but the existing infrastructure of AYUSH is


underutilized and practitioners are moving away from the traditional system for better opportunities.

Providing healthcare for vulnerable sections is critical for reaching universal health coverage. In this respect, calling 'Viklang' to 'Divyang' is a good step in changing the attitude towards differently abled. Also, the Accessibility Program (Sugamya Bharat) is a prospect, but there are still many buildings with no ramps and wheelchair supported toilets.

The Mental Health Bill for providing universal mental health is a significant step, but the lack of mental health practitioners creates a huge gap in the implementation of such initiative in the future. Similarly, high MMR and IMR shows India is unable to tackle the problems of institutional delivery though there are schemes of Janani Suraksha Yojana (JSY) and Janani

Shishi Suraksha Yojana (JSSY).

Therefore, many steps have been taken, but many more are required. The recent Millennium Development Goals (MDGs) results are a manifestation of this problem. The new SDGs which emphasize on universal health coverage (SDG-3) is a good initiative. Now, it is important to understand how the Healthcare for All is achievable. How to solve the challenges and set the future course of action?

The government of Prime Minister Narendra Modi has a clear mandate for change. It can fulfil this mandate to a great extent by ensuring quality basic education and primary healthcare for people. 

(The author is Chairman and Managing Director, Humatrix Health Pvt Ltd)



# Waging War

## on Mosquitoes



In the wake of increasing threat from vector borne diseases such as dengue, malaria, and chikungunya, the Union Health Ministry has been providing all logistical and technical support to the states, besides ensuring community participation and empowerment through awareness campaigns for the preventive of these diseases

**BY DR. SUNEELA GARG**

**O**f late, vector borne diseases such as dengue and chikungunya have emerged as serious threats to public health. The government authorities and the society at large need to take effective steps for the prevention and control of these diseases.

Vector borne diseases are the

diseases that are transmitted by living organisms also known as vectors which can transmit infectious diseases between humans or from animals to humans such as mosquitoes, fleas, ticks, sand flies, bugs etc. The vector borne diseases account for more than 17 per cent of all infectious diseases and cause more than 1 million deaths annually.

Of all these vectors, the mosquitoes

are the main disease vector which cause several diseases affecting public health namely malaria, dengue, chikungunya, yellow fever, Japanese encephalitis, lymphatic filariasis etc.

Recently, there has been an outbreak of dengue and chikungunya in the national capital territory of Delhi, affecting a large number of population. The mosquito borne diseases are largely preventable through the

various vector control strategies. National Vector Borne Disease Control Programme covers various vector control strategies for six important vector borne diseases namely malaria, dengue, chikungunya, lymphatic filariasis, yellow fever and Japanese encephalitis. Let's take a close look at the prevention and control of three most important of mosquito borne diseases namely malaria, dengue and chikungunya.

## **MALARIA**

Malaria is a potentially life threatening parasitic disease caused by parasites known as *Plasmodium vivax* (Pvivax), *Plasmodium falciparum* (Pfalci-parum), *Plasmodium malariae* (Pmalariae) and *Plasmodium ovale* (Povale). Recently, a fifth parasite *Plasmodium knowlesi* (P knowlesi) has been found to be existing in India. However, two types of parasites, *Plasmodium vivax*, *P falciparum*, are commonly reported from India. Infection with *Pfalciparum* is the most deadly form of malaria.

Malaria is transmitted by the bite of infective *Anopheles* mosquito. Man develops disease after 10 to 14 days of being bitten by an infective mosquito. Inside the human host, the parasite undergoes a series of changes as part of its complex life cycle in liver cells (pre-erythrocytic schizogony) and red blood cells (erythrocytic schizogony).

### **Symptoms of malaria**

The symptoms of malaria typically includes fever, headache, vomiting and other flu-like symptoms. As the parasite infects and destroys red blood cells, this results in easy fatigability due to anaemia, fits/convulsions and loss of consciousness. In case of cerebral malaria, the malarial parasites are carried by blood to the brain and other vital organs. Malaria in pregnancy poses a substantial risk to the mother, foetus as well as the newborn infant.

### **Vectors of Malaria**

There are many vectors of malaria but the main vector of malaria is *Anopheles culicifacies*. The vector of malaria can be identified by the presence of spotted wings and resting position at an angle except *Anopheles culicifacies*.

### **Habits of the Anopheles Mosquito**

**Feeding habits:** *Anopheles culicifacies* is a zoophilic species (affinity towards animals) and when high densities build up, then they feed on man.

**Resting habits:** The vector rests during daytime in human dwellings and cattle sheds.

**Breeding places:** It breeds in rainwater pools and puddles, borrow pits, river bed pools, irrigation channels, seepages, rice fields, wells, pond margins, sluggish streams with sandy margins. Extensive breeding of the mosquito is generally encountered following monsoon rains.

**Biting time:** Biting time of each vector species is determined by its generic character, but can be readily influenced by environmental conditions. Most of the vectors, including *Anopheles culicifacies*, start biting soon after dusk. Therefore, biting starts much earlier in winter than in summer but peak time varies from species to species.

### **Treatment of Malaria**

Chloroquine is the drug of choice for uncomplicated malaria. Drug Distribution Centres (DDCs) and Fever Treatment Depots (FTDs) have been established in the rural areas for providing easy access of anti-malarial drugs to the community.

Alternative drugs that are recommended as per the drug policy of malaria and to be used in chloroquine resistant cases include Artesunate, Artemether and Arteether.

## **DENGUE**

Dengue is a viral disease which is transmitted by the infective bite of *Aedes aegypti* mosquito also known as tiger mosquito. Man develops disease

after 5-6 days of being bitten by an infective mosquito.

It occurs in two forms: Dengue Fever and Dengue Haemorrhagic Fever (DHF). Dengue fever is a severe, flu-like illness. Dengue Haemorrhagic Fever (DHF) is a more severe form of disease, which may cause death due to bleeding leading to low blood pressure and low blood volume. Person suspected of having dengue fever or DHF must visit a doctor immediately.

### **Signs and Symptoms of Dengue**

The signs and symptoms of Dengue includes abrupt onset of high fever, severe frontal headache, pain behind the eyes which worsens with eye movement, muscle and joint pains, loss of sense of taste and appetite, measles-like rash (due to low platelet count) over chest and upper limbs and nausea and vomiting.

### **Vector of Dengue**

The vector of dengue is *Aedes aegypti* mosquito. It is a small, black mosquito with white stripes and is approximately 5 mm in size. It takes about 7 to 8 days to develop the virus in its body and transmit the disease.

### **Habits of the Aedes Mosquito**

a) **Feeding Habit:** *Aedes* mosquito is a day biter and mainly feeds on human beings in domestic and peri-domestic situations. It bites repeatedly.

b) **Resting Habit:** *Aedes* mosquito rests in the domestic and peridomestic situations especially in the dark corners of the houses, on hanging objects like clothes, umbrella, etc. or under the furniture.

c) **Breeding Habits:** *Aedes aegypti* mosquito breeds in any type of manmade containers or storage containers having even a small quantity of water. The eggs of *Aedes aegypti* can live without water for more than one year. The favoured breeding places of the mosquito are desert coolers, drums, jars, pots, buckets, flower vases, plant saucers, tanks, cisterns, bottles, tins, tyres,



### Gearing-up for Control of Vector Borne Diseases

J P Nadda, Union Minister for Health and Family Welfare, held a high level meeting to review the preparedness of the Ministry for prevention and control of vector borne diseases (dengue, malaria, chikungunya) in the country recently. During the meeting, Nadda asked the states for mounting aggressive IEC campaigns to enhance awareness on prevention and control of vectors in their surrounding areas and neighbourhoods.

Taking stock of the situation, Nadda was briefed on the preparations of the Health Ministry and was informed that technical guidelines for prevention and control and clinical management were developed and shared with the states for implementation. The ministry has also conducted review meetings with the states and more than 13 advisories have been sent to all states as early as January for strengthening their preparedness before the vector borne disease season.

The Health Minister was further informed that the Ministry has requested the states/UTs to declare Dengue as notifiable disease for improving reporting and for taking preventive measures in the affected areas. Under the guidance and direction of the Union Health Minister, several awareness programmes have been initiated through print and electronic media and issue advertisements for controlling these diseases. Besides, for sensitization of the masses on the subject, the National Dengue Day was celebrated on 16th May, 2017.

Nadda stated that the Health Ministry has already provided all logistical and technical support to the states including Delhi in terms of surveillance and diagnostic kits to strengthen their efforts in addressing dengue and chikungunya. Noting that community participation and empowerment are the most crucial areas in prevention, Nadda urged all the stakeholders to start rigorous awareness campaigns regarding the preventive steps to be taken by the people in their communities.

The Minister also directed the officers to conduct regular supervisory visits to the states and various hospitals for assessing the situation, preparedness and to provide on the spot technical guidance to the health authorities. He also directed the officers to be vigilant and monitor the situation in the northern states including Delhi as vector borne diseases increase with the onset of monsoon in these states. The Minister also asked Secretary (Health) to review the preparedness of the states through a video conference.

C K Mishra, Secretary (Health), Dr Saumya Swaminathan, Secretary (DHR) and DG (ICMR), Dr. (Prof) Jagdish Prasad, DGHS and other senior officers of the Union Health Ministry, National Vector-Borne Disease Control Programme (NVBDCP), National Centre for Disease Control (NCDC) were also present in the meeting along with Directors/ MS from the Central Government hospitals.



roof gutters, refrigerator drip pans, cement blocks, cemetery urns, bamboo stumps, coconut shells, tree holes and places where rainwater collects or is stored.

### Treatment of Dengue

Intake of plenty of oral fluids and rest is advised for the patient. Symptomatic treatment is given in form of antipyretics and anti-inflammatory drugs (such as paracetamol). However, it is advisable that self-medication should not be done and one should always consult the doctor immediately.

### CHIKUNGUNYA

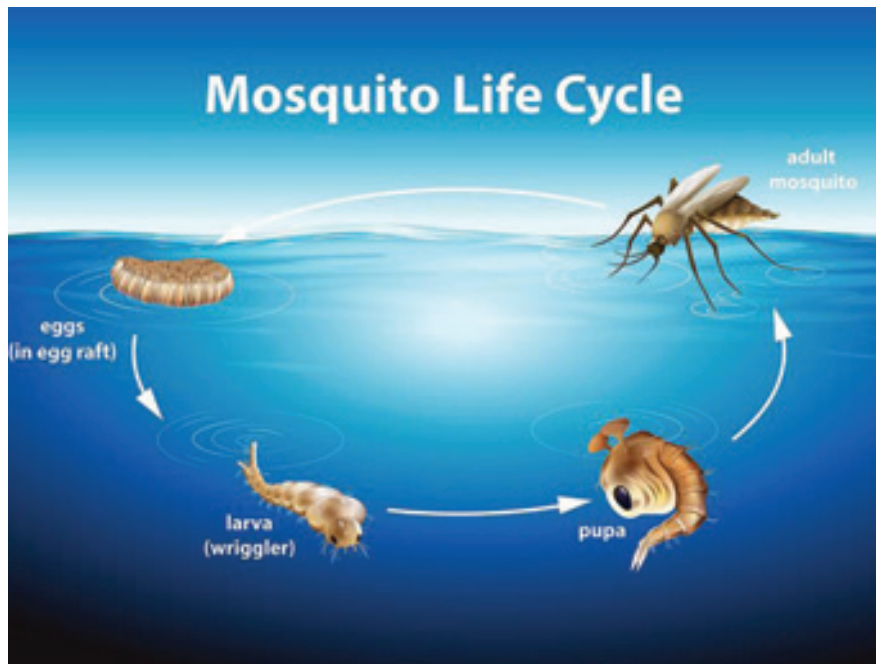
Chikungunya also known as Chikungunya virus disease or Chikungunya fever is a debilitating, non-fatal, viral illness that is spread by the bite of infected mosquitoes. It resembles dengue fever in presentation.

Humans are the major source or reservoir of Chikungunya virus for mosquitoes. Therefore, the mosquito usually transmits the disease by biting an infected person and then biting someone else. An infected person cannot spread the infection directly to other persons i.e. it is not a contagious disease.

### Signs and Symptoms of Chikungunya

Chikungunya usually starts suddenly with fever, chills, headache, nausea, vomiting, joint pain, and rash. In Swahili, "Chikungunya" means "that which contorts or bends up". This refers to the contorted or stooped posture of patients who are afflicted with the severe joint pain (arthritis) which is the most common feature of the disease. In children, usually there are no symptoms of the disease.

In Chikungunya, the patient usually recovers. However, convalescence can be prolonged and persistent joint pain may require analgesics and long-term anti-inflammatory therapy.



### Vector of Chikungunya

Chikungunya is spread by the bite of Aedes mosquito, primarily Aedes aegypti. The habits of the Aedes mosquito have already been discussed above with dengue.

### Treatment of Chikungunya

There is no specific treatment for chikungunya. Supportive therapy that helps ease symptoms involves administration of medicines like the paracetamol and taking plenty of rest. Infected persons should be isolated from mosquitoes in order to avoid transmission of infection to other people.

### Vector Control Strategies

The vector control strategies are largely the same for the mosquito borne diseases. The various control strategies for mosquitoes include environmental control, chemical control, biological control, personal protective prophylaxis and community participation.

**Early case Detection and Prompt Treatment (EDPT):** EDPT is the main strategy necessary for all the cases of mosquito borne diseases to prevent their transmission.

**Chemical Control:** Use of Indoor Residual Spray (IRS) with insecticides

is recommended under the National Vector Borne Disease Control Programme (NVBDCP).

Chemical larvicides like Abate (Temephos) used in potable water, aerosol space spray and malathion fogging is used during outbreaks. In case the water collection cannot be removed or has to be utilized for cattle or other purposes, then Abate can be used once a week in a dose of 1 ppm (parts per million). Pyrethrum extract of 0.1 percent ready-to-use formulation should be sprayed in rooms to kill the adult mosquitoes hiding in the house.

The application of mineral oil is an accepted method of controlling mosquito larvae. The oils that are used commonly includes kerosene oil, fuel oil, diesel oil, malariol etc. Kerosene oil is the preferred oil because of its remarkable spreading property over water. The oil penetrates the breathing apparatus of the mosquito larva and kills it.

**Biological Control:** Larvivorous fish such as Gambusia commonly known as the Guppy fish, Poecilia fishes etc. are used in ornamental tanks, fountains etc. Biocides (microbes which feed on mosquito larvae) such as Bacillus thuringiensis var israelensis and Bacillus sphaericus are also used as part of biological


control.

**Personal Prophylactic Measures:** These measures can be taken up by the individuals/communities and include the use of mosquito repellent creams, liquids, coils, mats etc., screening of the houses with wire mesh and wearing clothes such as full sleeves shirts, full pants with socks so as to cover maximum surface area of the body. Bednets treated with insecticide should be used for sleeping during night as well as day time to prevent mosquito bite.

**Community Participation:** Community participation involves sensitizing and involving the community for detection of mosquito breeding places and their elimination. NGO schemes are involved in the programme strategies and collaboration is carried out with different agencies.

**Environmental Management and Source Reduction Methods:** This strategy involves detection and elimination of mosquito breeding sources near the domestic or per-domestic areas such as management of roof tops, porticos and sunshades, proper covering of stored water, reliable water supply, channelization of breeding source and observation of weekly dry day.

The weekly dry day involves not allowing water storage for more than a week by emptying and drying the water containers weekly, straining of the stored water by using a clean cloth once a week to remove the mosquito larvae from the water and this water can then be reused. The sieved cloth should be dried in the sun to kill immature stages of mosquitoes.

**Health Education:** Imparting knowledge to common people regarding the disease and vector through various media sources like T.V., radio, cinema slides, etc. is important in controlling mosquito borne diseases. 

(The Author is HOD, Department of Community Medicine, Maulana Azad Medical College, New Delhi)

# ‘No’ to Tobacco, ‘Yes’ to life!

The second round of Global Adult Tobacco Survey (GATS) has found decrease in the prevalence of tobacco use from 34.6% in 2009-10 to 28.6% in 2016-17 in India

**BY DR. MANISHA YADAV**



**G**lobal Adult Tobacco Survey (GATS) is a household survey of persons aged 15 and above conducted in all 30 states of India and two Union Territories. The first round of GATS was conducted in 2009-10 and the second round in 2016-2017 by Tata Institute of Social Sciences, Mumbai on behalf of the Ministry of Health & Family Welfare with technical support from the Centres for Disease Control and Prevention (CDC) and the World Health Organization (WHO). A multi-stage sample design was used and from each of the sampled households, one household member aged 15 and above was randomly

selected for individual interview. In all of India, a total of 74,037 individuals were interviewed during August 2016 to February 2017.

#### **KEY FINDINGS OF THE SURVEY: PREVALENCE OF TOBACCO USE**

Prevalence of tobacco use has decreased by six percentage points from 34.6% in GATS-1 in 2009-10 to 28.6% in GATS-2 in 2016-17.

19.0% of men, 2.0% of women and 10.7% of all adults currently smoke tobacco.

29.6% of men, 12.8% of women and 21.4% of all adults currently use







smokeless tobacco.

42.4% of men, 14.2% of women and 28.6% of all adults currently either smoke tobacco and/ or use smokeless tobacco.

From GATS-1 to GATS-2, the total number of tobacco users has reduced by about 81 lakh.

The National Health Policy 2017 of Government of India has set the target of “relative reduction in prevalence of current tobacco use by 15% by 2020 and 30% by 2025”. GATS-2 shows a relative reduction of 17% in prevalence

of current tobacco use since GATS-1.

#### **MOST USED TOBACCO PRODUCTS**

Khaini and bidi are the most commonly used tobacco products. 11% of adults consume khaini and 8% smoke bidis.

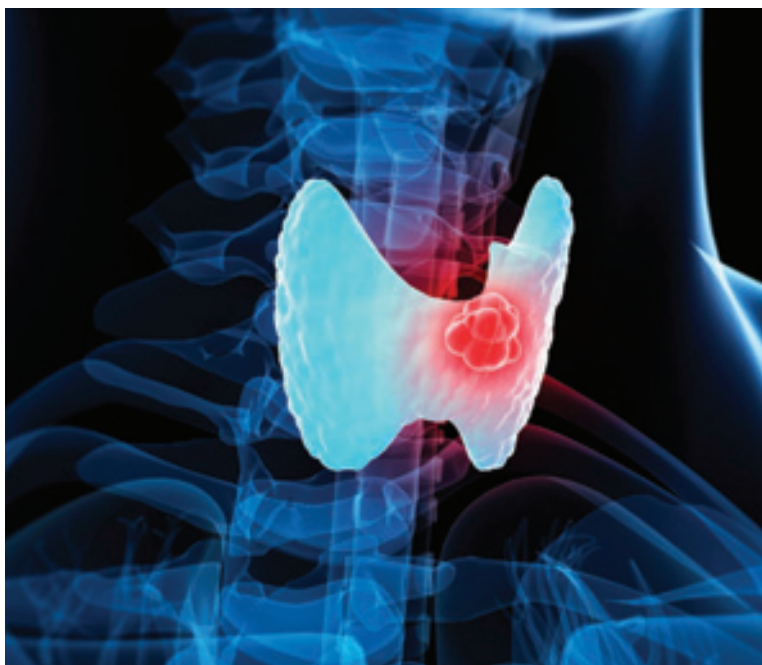
#### **YOUTH CONSUMPTION AND AGE OF INITIATION**

The prevalence of tobacco use among the young population aged 15-24 has reduced from 18.4% in GATS -1 to 12.4% in GATS -2, which is a 33%

relative reduction.

The prevalence of tobacco use among minors aged 15-17 & adolescents aged 18-24 has shown a relative reduction of 54% and 28% respectively.

The age at initiation of smoking among daily smokers aged 20- 34 is 18.9 years and the age at initiation of smokeless tobacco use among daily smokeless tobacco user is 18.8 years. From GATS-1 to GATS-2 there is an increase of one year in the age at initiation of both smoking and smokeless tobacco use.



**PURCHASE OF LOOSE TOBACCO PRODUCTS**

68% of cigarette smokers, 17% of bidi smokers and 50% of smokeless tobacco users purchased loose cigarettes, bidis and smokeless tobacco respectively.

**AVERAGE EXPENDITURE FOR TOBACCO PRODUCTS**

On an average the expenditure incurred during last purchase of cigarette, bidi and smokeless tobacco is Rs30.0, Rs12.5 and Rs12.8 respectively.

**INTENTION TO QUIT TOBACCO USE AND ADVICE BY HEALTHCARE PROVIDERS**

55% of smokers are planning or thinking of quitting smoking and 50% of smokeless tobacco users were planning or thinking of quitting tobacco use.

49% of smokers and 32% of smokeless tobacco users were advised by healthcare provider to quit tobacco.

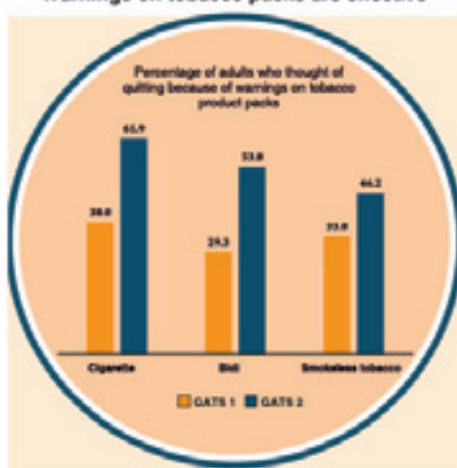
**EXPOSURE TO SECOND HAND SMOKE**

Three in every 10 adults who work indoors were exposed to second-hand smoke at their workplace.

23% of adults were exposed to second-hand smoke at a public place.

There is a reduction in the exposure

Warnings on tobacco packs are effective



to second-hand smoke at home from 52% to 30%.

There is reduction in the exposure to second-hand smoke at any public place like government building, healthcare facility, public transport/stations, and restaurants from 29% to 23%.

**TOBACCO ADVERTISING AND PROMOTION**

13% of smokers noticed smoking tobacco advertisement and 11% smokeless tobacco users noticed smokeless tobacco advertisement at point of sale.

**ANTI TOBACCO INFORMATION**

75% of smokers noticed information about dangers of smoking tobacco or that encourages quitting on television or radio and 66% of smokeless tobacco users noticed information about dangers of using smokeless tobacco or that encourages quitting on television or radio.

**IMPACT OF LARGE TOBACCO PACK WARNINGS**

62% of cigarette smokers and 54% of bidi smokers thought of quitting because of warning label on the packets.

46% of smokeless tobacco users thought of quitting because of warning label on smokeless tobacco products.

**KNOWLEDGE, ATTITUDE AND PERCEPTIONS**

92% of adults believe that smoking causes serious illness; and 96% of adults believe that use of smokeless tobacco causes serious illness.

**DEMAND FOR CESSATION**

55% of smokers and 50% of smokeless tobacco users are planning or thinking



of quitting tobacco use

#### **AWARENESS OF ILL-EFFECTS OF TOBACCO USE**

Percentage of adults who believed second-hand smoke causes serious illness among non-smokers has increased from 83% to 92%.

Percentage of adults who believed that use of smokeless tobacco causes serious illness has increased from 89% to 96%.

The Global Adult Tobacco Survey (GATS) is a global standard for systematically monitoring adult tobacco use (smoking and smokeless) and tracking key tobacco control indicators. GATS is a nationally representative survey, using a consistent and standard protocol across countries including India. GATS enhances countries' capacity to design, implement and evaluate tobacco control programs. It assists countries to fulfill their obligations under the WHO Framework Convention on Tobacco Control (FCTC) to generate comparable data within and across countries. 

#### **NADDA HONOURED WITH WHO AWARD FOR GLOBAL TOBACCO CONTROL**

J P Nadda, Union Minister of Health and Family Welfare was conferred the WHO Director-General's Special Recognition Award for Global Tobacco Control, recently.

The global recognition was presented to him by Dr Poonam Khetrpal Singh, Regional Director, WHO South-East Asia at the 'National Consultation on Accelerating Implementation of WHO Framework Convention on Tobacco Control (FCTC) for achievement of SDGs'. Faggan Singh Kulaste and Anupriya Patel, Ministers of State for Health & Family Welfare, were also present at the occasion.

Accepting the award, J P Nadda attributed it to the collective endeavour of the ministry, members of NGO, social activists, civil society organizations and many more who are contributing to this cause in their own ways across the country. "Tobacco is a prime driver of poverty and it affects the family as a whole, the community and the country and requires a multisectoral approach to control it. It has rightly been identified as a development issue. I am happy that tobacco users have reduced by 81 lakhs and the consumption of tobacco by the youth sees marked decrease." Nadda added, "My focus has always been on youth. My mantra for success in tobacco control efforts is "Catch them Young". I am very pleased to note, therefore, that there has been a 54% relative reduction in prevalence of tobacco use among minors (15-17 years) and 28% reduction in the age group of 18-24 years. Further, age of initiation among youth has also increased by one year," Nadda elaborated.

Expressing happiness that India has come a long way in controlling the use of tobacco, he said, "We have implemented large pack warnings with 85% pictorial health warnings on both the sides, conducted second round of Global Adult Tobacco Survey (GATS), strengthened & upscaled cessation facilities with the launch of the toll-free national tobacco Quitline and

mCessation services and have made substantial investment under the 12th Five Year Plan for expansion of National Tobacco Control Programme – which has been recognized by WHO as a best practice in its Global Tobacco Control report, 2015."The Health Minister added that India has also put a ban on smokeless tobacco products and has strengthened the implementation of the Tobacco free film and television policy.

Faggan Singh Kulaste, Minister of State for Health & Family Welfare, stated that there is a need for a social movement with all the stakeholders including states participating in it for controlling the tobacco use. Kulaste reiterated the importance of awareness campaigns about tobacco use in schools and colleges in both rural and urban areas. He further said that alternative job/employment avenues for tobacco growers needs to be thought of and deliberated upon.

Anupriya Patel, Minister of State for Health & Family Welfare, stated that with 27 crore users, tobacco consumption in India is second largest in the world. She said that the Centre and State must have dedicated tobacco control cells. Anupriya Patel also highlighted the measures taken by the Ministry through FSSAI to control tobacco use.

Congratulating the Union Minister of Health, Dr Poonam Khetrpal Singh, Regional Director, WHO South-East Asia said, "The minister has accelerated India's tobacco control initiatives and taken bold measures to protect people against multiple health, economic, social and development hazards of tobacco use." Pointing out that more than 100 million lives have been lost to tobacco in the 20th Century, she stressed on the tobacco control at the initial stages and said that more focus should be on youngsters.

Also present at the event were Dr Jagdish Prasad, DGHS and Dr Arun Kumar Panda, Addl. Secretary along with other senior officers of the ministry and representatives from donor partners, health experts and NGOs.



# Beauty from the Inside Out

Ayurveda brings people closer to Nature, helping them to achieve both health and beauty, thanks to the great Indian tradition of herbal healing. The harmony of mind and body does wonders to you because when you feel good, it makes you look good too

**BY SHAHNAZ HUSAIN**

**A** stroke, also known as a cerebrovascular accident or CVA is when part of the brain loses its blood supply and the part of the body that the blood-deprived brain cells control stops working. This loss of blood supply can be ischemic because of lack of blood flow, or hemorrhagic because of bleeding into brain tissue. A stroke is a medical emergency because strokes can lead to death or permanent disability. There are opportunities to treat ischemic strokes but that treatment needs to be started in the first few hours after the signs of a stroke begin. The patient, family, or bystanders, should activate emergency medical services immediately should a stroke be suspected.

Ayurveda is a holistic system of healing. Actually, it is not merely a system of healing, but an entire way of life. The treatments prescribed by Ayurveda are all-encompassing and take into consideration, diet, exercise, lifestyle, relaxation, massage and so on. Ayurveda is not only for those who are ill, but also for those who wish to come closer to a state of perfect health.

We have become more aware of fitness and yet, our lifestyle and diets take us away from good health and an attractive appearance. The highly



competitive career world and the so-called “rat race,” coupled with a lack of exercise, lead to stress. All this can leave both men and women vulnerable to excess weight, heart ailments, circulatory problems, strained necks and backs, or diabetes.

Ayurveda believes in the body’s inherent capacity to heal itself. The way of life it advocates raises the level of fitness, strengthens the immune system and keeps diseases at bay. The influence of the mind on the body is upheld by Ayurvedic principles. Good mental health and freedom from stress are necessary for total well-being. This is the reason why Ayurveda

prescribes Yoga and meditation, to bring about harmony of mind and body.

The old adage “Internal health for external beauty” holds true. The ancient sages of India placed high value on raw, natural foods, fresh fruit and vegetable juices. Detoxification of the body through raw foods and juices is considered to be the first step in curing disease and achieving good health, bringing about a sense of well being and vitality.

Men are as concerned as women about their looks and the condition of their skin and hair. Vitamins play an important role in maintaining skin and



**GODDESS OF GORGEOUSNESS**

Shahnaz Husain is the CEO of Shahnaz Herbals Inc. Known as the Global Ambassador of Beauty and Ayurveda, she is credited with revolutionizing and transforming the beauty business with her sheer passion, grit and vision.

She was awarded the Padma Shri by the Government of India in 2006 for bringing laurels to the country and for assiduously promoting the concept of Ayurvedic herbal products.

Shahnaz is a first generation entrepreneur, a pioneer, visionary and innovator, who introduced a new concept of Ayurvedic Care and Cure worldwide, with universal appeal and application.

hair health. A diet that is high in fresh fruits, vegetables, unprocessed cereals, sprouted grains, nuts, seeds and yogurt can make you look and feel much better. The general feeling of well being and vitality actually improves the mental outlook too, helps to cope with stress, boosts self confidence and adds a zest to life.

The same goes for exercise. It not only benefits the figure, but reduces stress and improves the health of the skin and hair. The body looks and feels youthful. Exercise tones the muscles,




increases stamina, improves blood circulation, imparts vitality and promotes good health. Without physical activity, you actually encourage premature ageing, lack of energy, chronic fatigue and lethargy. Ayurveda recommends Yoga and Meditation for good health of both body and mind. In fact, yoga is very relevant to our modern lifestyle.

The yogic exercise of Pranayama encourages correct breathing. This helps to reduce stress, increase oxygenation and improve blood circulation. Taking deep breaths makes you feel the purifying effects of oxygen intake. It instantly revitalizes you. Such exercises are now being followed worldwide. Yoga improves blood circulation, which helps to supply essential nutrients to the skin and hair. It also promotes the removal of toxins. It tones the skin and imparts a healthy glow. It also keeps the scalp healthy and promotes hair growth.

When we talk of good looks, we do not talk only about the face. We also include a slim figure, with suppleness

and good posture, essential for both men and women. A slim figure can take years off and make you look well groomed. Since yoga helps to induce relaxation and reduce stress, it also helps in dealing with stress-related conditions like acne, hair loss, dandruff, etc. Studies conducted on those who practise yoga have shown that positive changes also occur in the personality, in attitudes, emotional stability and self-confidence. It has a direct effect on the mind, emotions and mood. In fact, Yoga is a regular stress-buster! Feeling good makes you look good too!

Whenever we have gone away from nature, we have suffered, in terms of losing both health and beauty and even in the destruction of the world we live in. Ayurveda brings us closer to Nature. I firmly believe that India has a great deal to offer the rest of the world, by way of our great tradition of herbal healing. Today, the entire world is looking at Nature and holistic systems like Ayurveda with enlightened eyes. 

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“Hair is beautiful,  
if it is healthy.  
Hair professionals  
are no less than  
doctors of hair”

Javed Habibi is a renowned figure in the hair styling and grooming industry. Not many people know that this hair expert graduated from the prestigious Jawaharlal Nehru University (JNU) in French literature. As destiny had willed, Javed went to London's Morris School of Hair Design to specialize in hair coloring, setting and dressing out.

On his return, Javed set up salons across many cities in the country in the first five years. He relied on the franchise model to expand his business and followed a hands-on approach to the business by training the staff himself and conducting workshops and seminars to woo customers to his salons.

Today Javed's beauty business comprises 400 hair & beauty salon chains in India and abroad. The association with celebrities and the high profile people has imparted a distinct visibility to the Javed Habib brand. The brand also runs academies to impart quality education in hair and beauty to aspirants in the profession of cosmetology.

Excerpts of Javed Habib's exclusive interview with Double Helical...



**What path-breaking innovations you have introduced in hair care industry?**

I think preconditioning is a game-changer from my end. It is working very well. The trend is not for conditioner after shampoo, but for oil before shampoo now!

**Where does Indian hair care industry stand today in comparison to global standards?**

We are pretty close to meeting the global standards of hair industry now, but the only problem we face is lack of education and system.... Indians are great technicians, but they need polishing in their systems. We are still quite good.

**What are some of your smart tips to make hair beautiful?**

Preconditioning, daily shampoo, good haircut, spa once a month & some colour highlighting.

**Is there any smart and cost effective technique to restore hair in case of hair loss?**

Hair once lost cannot be brought



back, it's simple. All we can do is to prevent hair loss with a healthy hair care regime. Preconditioning and daily wash is very helpful in that case. It works for all.


**How, do you think, hair care is related to overall healthcare?**

Hair is a part of our body, if we are healthy, our hair is healthy. That is why it's not just styling services in the salons these days, professionals work like doctors of hair.

**Don't you think there is a need to make hair care and grooming packages more affordable?**

There are all kinds of services available in the markets, you can easily get affordable hair services also. It's about what you want and from where you want. Our brand JH Hair Xpresso is the low-cost salon chain which offers very affordable hair services.

**As a celebrity what would you advise to our readers as perfect grooming solutions?**

Work on the health of hair, if it is healthy, it is beautiful. Also go to good professionals for styling. Don't experiment with hair, hair damages are mostly permanent. 



# Children At Risk

Hypertension in children should not be dismissed lightly as it may lead to serious complications such as heart failure, vision problems, kidney failure, paralysis and stroke early in life

**BY DR ALKA AGGARWAL**

**H**igh blood pressure (hypertension) can occur even in children. Parents should initiate an appropriate management plan in consultation with a paediatrician to avoid its dreaded complications.

Contrary to popular belief, high blood pressure (hypertension) can occur, even in new-borns and young children. The problem may go undetected, because many a times there are no symptoms or signs of this disease. If left untreated hypertension can lead to heart failure, vision problems, kidney failure, paralysis and stroke early in life. Following are the answers to all your questions about this problem that may adversely affect your child.

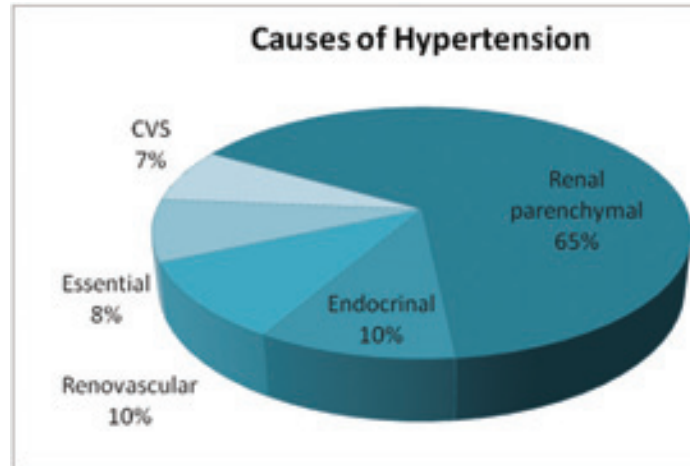
If a cause for hypertension is diagnosed, appropriate treatment can

be initiated and the child may have normal blood pressure afterwards. For few reasons, a child may have to remain on anti-hypertensive medicines throughout the life. Once a child is diagnosed to have hypertension, it is very important to evaluate for any underlying disease and to find out risk factors for essential hypertension like obesity, smoking, alcohol, etc.

In addition tests are required to find out if any complication (involvement of eye, heart or kidney) has occurred or not. The common tests which may be required are kidney function tests, hormone levels, lipid profile, urine examination, ultrasound and doppler test of kidney, kidney scan, echocardiogram, ECG and eye examination. Most children with essential hypertension require lifestyle modifications which include weight reduction, meditation, yoga, exercise,

low salt diet (<3.5 gm/day). Other risk factors like smoking, alcohol, steroids, oral contraceptives, sleep apnea should also be controlled. For secondary hypertension, surgery helps in certain cases, e.g. if any tumour is causing hypertension, then it needs to be removed surgically. Timely detection helps in appropriate treatment of hypertension and its cause and helps to prevent end organ damage in adult life.

It is a general belief that high blood pressure (hypertension) as a problem affects only adults. Contrary to this belief, hypertension can be present at any age, even in new-borns and young children. When the parents learn that their child has hypertension, it is very natural for them to deny the possibility due to their ignorance. It is for the paediatrician and the paediatric nephrologist to clear their doubts and



To label a child as hypertensive, BP charts have been issued by the fourth US task force report on hypertension. These are charts consulted by doctors to arrive at a conclusion whether the child has hypertension or not. Since these charts are difficult to interpret and not easily available to parents, it is recommended that if your child's BP is beyond the values listed in the table below for the specific age group, you need to consult your doctor (paediatrician/paediatric nephrologist)

The hypertension has been graded according to the BP readings

a) Prehypertension: - Blood pressure is > 90th percentile but <95th percentile (as per BP chart). Children in this range of BP should be carefully followed up as they grow up.

b) Stage 1 hypertension (Unsafe):- BP exceeds 95th percentile up to 5 mm above 99th percentile. Blood pressure in this range should be rechecked at least twice in the next 1-3 week or even earlier.

c) Stage 2 hypertension (Dangerous):- BP exceeds 5 mm or more above the 99th percentile. Confirmation should be made at the same visit.

Children who are more than 3 years and are seen at health care setting (for example cold, cough or fever) should have their blood pressure measured. Children who are less than 3 years should get their BP checked if they have:

initiate appropriate management plan.

Blood pressure is the force of the blood against the walls of blood vessels as the heart pumps bloods to various parts of the body. If this pressure becomes too high, the child is said to have high blood pressure or hypertension. As in adults, a child's BP is read as two numbers. The first number or systolic BP is the pressure when the heart is pumping blood to various parts of the body. The second number or the diastolic BP is when the heart is resting between the beats. The diastolic BP is less than the systolic BP. A child is considered to be hypertensive when either the systolic, diastolic or both blood pressures are high.

You will be surprised to know that approximately 2-5% of children suffer from hypertension, with the majority unaware that they have this problem. A rise in incidence of hypertension has been linked to concurrent increase in

prevalence of obesity. The prevalence of hypertension in obese children is higher and ranges from 10-30%.

If hypertension is allowed to continue or become worse over years, the prolonged extra pressure in the blood vessels can lead to heart failure, stroke, damage to eyes and kidney even in children. Normal BP is lower in children than in adults. BP increases with age and body size. Normal BP for a child will depend on the child's age, sex and height. The doctor compares your child's BP to readings given on BP charts which lists normal BP or high BP for boys and girls based on their height and age. A child is said to be hypertensive if his average systolic or diastolic BP is more than 95th percentile (according to the standardized charts) for age, gender and height on more than 3 occasions. BP charts are provided at end of this article for ready reference. Your doctor is the best person to read and interpret the charts.

a) History of low birth weight, prematurity or requirement of neonatal intensive care.

b) History of heart disease by birth

c) History of recurrent urinary tract infection

d) History of blood or protein loss in urine

e) History of any kidney disease in the past

f) Family history of kidney disease

g) History of organ transplantation

h) History of receiving medicines which can cause high blood pressure/ kidney damage.

The usual symptoms of hypertension are headache (sometimes throbbing in nature), flushing, giddiness, bleeding from nose, vision disturbances, poor school performance, irritability, blood or protein in urine, passing urine more or less frequently and weight loss. In some cases hypertension can be without symptoms. Therefore those children, who are obese, have history of neonatal intensive care stay, or have kidney/ heart disease or cardiac disease should have their blood pressure checked.

Generally it is preferred to check the blood pressure when the child is sitting comfortably in a chair with feet on the ground and the arm at the level of the heart. The BP cuff should be of the right size for the child's age. The width of the cuff bladder (rubber inside the outer cloth) should be 40% of the arm circumference midway between the shoulder and elbow joint and the length should be double the width. Another simple way is to get a bladder cuff whose width covers  $\frac{3}{4}$  of the upper arm. If the cuff size is not appropriate the blood pressure readings may come falsely high or low. However, if an appropriate cuff size is not available the next bigger size can be used. Cuff sizes with a width of 4 cm, 9cm, 10cm, 13cm, and 20cm are available in the market.

Mercury instruments are the best for checking blood pressure, but as they are being phased out, aneroid devices are being used more commonly and they are fairly accurate, but they



AGE (YEARS)	BP (MM HG)
0 – 5 YEARS	100/70
5 – 10 YEARS	120/80
>10 YEARS	130/90

require frequent calibration. Automatic BP machines are also being used. If an automatic (digital) blood pressure machine is being used and blood pressure readings come high, then they need to be confirmed with mercury or aneroid device.

ABPM means blood pressure is recorded over a 24 hours period by a BP monitor where cuff is tied to the arm and a small digital blood pressure machine is attached to a belt around the waist. The child carries on his/her normal activities in the day and sleep with it, while the machine is on. The machine takes the blood pressure readings at regular intervals usually every 15-30 minutes during the day and night. The monitor should be kept on throughout the night. At the end of 24 hours, the cuff and the machine are removed and given to the hospital for analysis of readings. For the machine to work properly, it is important to make sure that the tube attached to the machine is not twisted or bent. As a parent you are instructed to maintain a diary, to note the timing of going to bed, medication and general activities.

There are a number of reasons why a doctor advises 24 hour ABPM, which are:

a) To find out if the high BP reading in the clinic is higher than the reading away from clinic e.g. home (called



white coat hypertension).

b) To see how well the medicines are working and whether they are controlling the blood pressure all the time.

c) To see whether blood pressure at night is less than the recording during the day time.

In majority of young children an underlying cause of hypertension can be identified e.g. kidney, heart, blood vessels, hormone problems, tumour or drugs. Diseases of the kidney are the most common cause of hypertension in children. Primary or essential hypertension, commonly seen in adults, is becoming common in children, who are obese or overweight.


#### THE INDICATIONS FOR DRUG TREATMENT IN HYPERTENSION?

a) Stage 1 hypertension persisting even 6 months after lifestyle modifications or those who have any pre-existing kidney disease

b) Stage 2 hypertension

c) Damage to eye, kidney, heart, or brain has occurred

d) Pre hypertension in a child with chronic kidney disease, diabetes or lipid abnormalities

Timely detection helps in appropriate treatment of hypertension and its cause and helps to prevent end organ damage in adult life. 

(The Author is HOD, Department of Pediatric, Santosh Medical College and Hospital, Ghaziabad)



# Keep Liver Healthy

Liver disease can be managed by simple interventions such as keeping alcohol intake in moderation; Hepatitis B vaccination; avoiding reuse of needles, sharing needles; improving surveillance of blood products; control of obesity and safe drinking water

**BY DR AJAY SACHDEVA**

**A**lcohol is very important cause of liver disease. Unfortunately, alcohol consumption has increased across all social, age and gender groups. Awareness about alcohol consumption is of paramount importance in preventing liver disease. Lack of self-help groups and social stigma in approaching them prevents people in need of help from coming out in open. We need a massive public awareness campaign to educate people about safe and responsible alcohol consumption.



Harmful use of alcohol is defined by the World Health Organization (WHO) as “drinking that causes detrimental health and social consequences for the drinker, the people around the drinker and society at large, as well as the patterns of drinking that are associated with increased risk of adverse health outcomes”. The excessive use of alcohol leads to deaths of millions of people worldwide every year, making it a grave concern for society.

Fatty liver is a condition usually picked up incidentally on routine ultrasound and investigation for deranged liver function tests. It is a

slowly progressive disease but in a significant number of subjects can lead to liver cirrhosis over years to decades. The most common causes for fatty liver are obesity and diabetes. The epidemic of fatty liver has grown with rise in these lifestyle diseases. In western world, it is already the second most common cause of liver cirrhosis after hepatitis C. Prevention remains the cornerstone of treatment of fatty liver. Adopting a healthy lifestyle with dietary precautions are more effective than medication in early course of this disease.

Liver is a solid organ, located in the right upper part of the abdomen just below the rib cage. It is a complex organ both structurally and functionally. Liver is a pivotal organ for metabolic functions of our body. The function of liver can be categorized into two major groups: excretory function and synthetic function.

Most foreign substances and waste product made in body are metabolized within the liver before being excreted via bile or kidney. Excretion of bilirubin from liver is important as defect in bilirubin excretion leads to jaundice. Liver is the site of synthesis of all major proteins in body. These proteins are building blocks for all important functions in body. Bile is synthesized in liver and which helps in digestion of fat in body. Liver also plays an important role in fat and carbohydrate metabolism.

Early or mild form of liver diseases may give rise to non-specific symptoms like fatigue or weakness. Significant liver injury can cause jaundice, which means yellow discoloration of sclera of eye ball and is associated with dark yellow urine. Liver cirrhosis results from persistent damage to liver due to any cause (alcohol, hepatitis B & C). Common manifestations of liver cirrhosis are ascites (accumulation of fluid in the abdomen), loss of consciousness (coma) and bleeding from gastrointestinal tract in form of



vomiting of blood.

Contrary to popular belief, liver diseases are not associated with problems of digestion. Many people attribute any upper abdominal discomfort to liver-related problem, which is fallacious.

Liver diseases are of two types: (a) Short lasting and self-limiting which resolve completely without causing any permanent damage or functional impairment and (b) Smoldering slow diseases which cause a permanent damage to liver which is manifest as "liver cirrhosis".

The major causes of liver diseases are viral hepatitis (A, B C, D & E), alcohol intake, fatty liver disease, inherited and metabolic diseases and drugs. Liver can in addition be involved in any generalized disease process like infection (e.g.: typhoid, malaria, dengue) or various malignancies.


Among the hepatitis viruses, Hepatitis A and E causes jaundice, which is self-limiting. Hepatitis A and E are spread by contaminated food and water. Thus if we have safe drinking water supply and pay attention to hygiene, these diseases

can be prevented. There is vaccine available for hepatitis A and can be used safely at any age. There is no vaccine available for hepatitis E at present but safe drinking water could be the most effective measure to control hepatitis.

Hepatitis B and C cause chronic infection of liver, which can lead to cirrhosis of liver. Hepatitis C is the leading cause of cirrhosis worldwide. In our country, hepatitis B is a major challenge. Both hepatitis B and C are spread by blood transfusion, needle sharing, sexual contact and from mother to child. Thus to a large extent, these things are preventable by simple measures like improving testing in blood bank, increasing awareness for voluntary blood donation, educating people against reuse or needle sharing and safe sex practices. In addition we have a very effective vaccine against hepatitis B. There is no vaccine against hepatitis C as yet. Hepatitis C has a very high prevalence in parts of India where intravenous drug abuse is rampant. Public awareness is the most important tool in preventing the spread of this disease.

#### **MEASURES FOR KEEPING LIVER HEALTHY**

The concept of prevention of liver diseases has still not caught up. The fact remains that most liver diseases can be avoided by simple interventions such as the following:

1. Keeping alcohol intake in moderation
2. Hepatitis B vaccination
3. Avoiding reuse of needles, sharing needles.
4. Promoting voluntary blood donation and improving surveillance of blood products
5. Control of obesity
6. Safe drinking water
7. Avoiding unprescribed medications. 

(The author is Senior Gastroenterologist, Shri Balaji Action Hospital, New Delhi)



# Preventing **Paediatric Problems**





We can decrease admissions in Paediatric Intensive Care Units (PICUs) by taking preventive measures such as ensuring clean water and sanitation, clean air, and vaccination for children  
**DR PRADEEP SHARMA**

**O**ne of the most panicking and stressful situation occurs when somebody in the family needs intensive care admission. This becomes more stressful for the family if the patient is a child.

Despite rapid expansion of paediatric intensive care services in both public and private sector, still there is substantial gap in the need and availability of quality Paediatric Intensive Care Units (PICUs). Although there is a need to increase the PICU services in our country, equally important is to implement the measures capable of reducing hospitalization.

We have approximately 1000 admissions per year in our PICU, 60% are due to infectious diseases, and other common reasons are seizure (20%) and traumatic injuries (8%). As per UNICEF report, around 1.2 million children died of preventable causes in India in 2015 before celebrating their fifth birthday. There are few preventive measures which if applied at individual, community or state level have great potential to decrease PICU admissions.

**CLEAN WATER AND SANITATION:**

Majority of infectious diseases in children are due to unsafe drinking water, poor personal hygiene and poor sanitation. Diarrhoea alone accounts for 9 per cent of all deaths among children under age 5 worldwide in 2015. This translates to over 1,400 young children dying each day, or about 526,000 children a year (300,000 children in India only), despite the availability of simple effective treatment. Improvement in these areas especially sanitation can drastically decrease the infectious disease burden. “Swachh Bharat Abhiyan” if delivered effectively along with bringing out the change in people’s attitude towards cleanliness has a tremendous potential in helping realisation of this goal.

**Clean Air:** There is significant increase in allergic, asthmatic admissions in PICU due to bad air quality. Everyone in society needs to contribute in improving air quality for betterment of our children future.

**Vaccination:** Immunization averts an estimated 2 to 3 million deaths every year. India alone records 5 lakh child deaths annually due to vaccine preventable diseases. More than 30 percent of Indian children (estimated 89 lakhs) miss the benefits of full immunization every year. One out of



every 3 children in India does not receive all vaccines that are available under UIP. Impact of mass vaccination is evident in the form of eradication of polio. However, only focussing on single vaccine or disease has led to decreases in coverage of other vaccines under UIP. A major impact in reducing the disease burden of vaccine preventable disease can be achieved if vaccination as a whole rather than individual vaccine or disease is promoted. Vaccination against diseases not covered or partially covered under national programme like pneumonia (Hib, Pneumococcal Vaccines) and Rotavirus diarrhoea have potential to decrease the disease burden of two leading causes of under-five mortality in India.

**Strict impositions of traffic rules and construction rules:** Needless to emphasize on importance of using helmets, seat belt and following traffic rules in averting premature death as well as medical emergency. Another important aspect in prevention of paediatric head injury is that the rooftops of all the houses should have at least 1.3metres of boundary wall.

**Stress free environment:** Today, it




is important that a child get stress free environment at home, school and community to realise his or her full potential. We are witnessing a major increase in behavioural problem in children, which are precursor of chronic diseases in adulthood.

**Vector Borne Disease:** Due to poor state of affairs of our vector borne disease control programmes we are witnessing epidemics of dengue, chikungunya and malaria. Year after year the cases are rising. We need to learn from our neighbouring country Sri Lanka who has eliminated malaria in September 2016!

**Health Insurance:** Although not preventive but health insurance can take care of financial burden associated with ICU admissions, which

at times may take more importance than disease and condition of child itself. However, to decrease the harassment of patient as well as treating physician by the insurance companies many reforms are required.

It is nice to know that we are a fastest growing economy and currently ranked seventh in world in term of GDP. However, it is equally painful to see our country languishing in the bottom of chart in health indicators. Neighbouring countries like Bangladesh and Sri Lanka have better infant mortality rate than us. We should invest more time in health and education as individual, society and country because a healthy and educated nation can only progress in every field. These preventive strategies are already of proven benefit but unpopular because it requires persistent hard work for years – from seed to fruit. We have currently the largest young population and if sow the seed now then only can we enjoy fruits and shade in future. 

(The author is Senior Consultant & Head, PICU, Sri Balaji Action Medical Institute, New Delhi)

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