A COMPLETE HEALTH JOURNAL

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Double Helical

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September 2015

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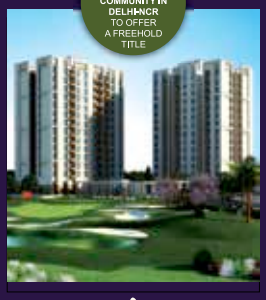

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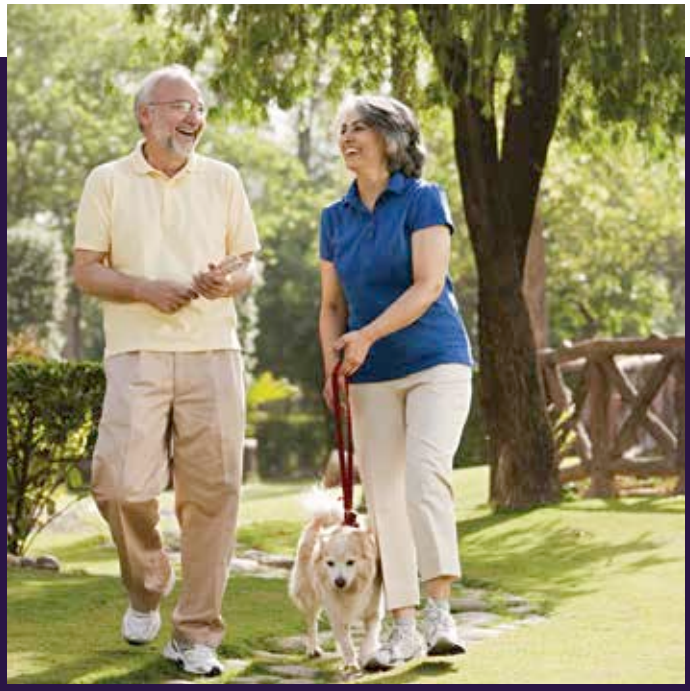

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Contents

Dealing with Deadly Dengue

Dear Readers,

We are overwhelmed with your continued support to Double Helical's mission of contributing to the holistic well-being of the people of India by raising their health awareness quotients. Your keen interest, suggestions and constant encouragement have strengthened our endeavor to bring authentic, in-depth and informative stories on the pertinent health issues and concerns.

The cover story of the September 2015 issue is on the alarming situation of dengue in the national capital and elsewhere. What we are witnessing is the worst outbreak of dengue in the national capital in the last five years, with the death toll crossing the double digit figure and the number of deadly flu cases going past the 2000 figure. The situation threatens to develop into an epidemic, if the authorities and the people do not pull their act together.

Over the past few months, the threat of dengue has grown manifold in Delhi. Considering the rapid increase in the dengue cases, the government machinery has been forced to get into an emergency mode to prevent the situation from going out of hand.As the scare over the deadly fever grows in other parts of the country too, the Centre and the states need to put in collective efforts to tide over the crisis.

But we must avoid panic over the mosquito-borne flu which is very much curable with proper precautions and guidelines under medical supervision. To strengthen the fight against the disease, we bring to you an exclusive story "The Indigenous Solution" written Ayurvedacharya Dr. Partap Chauhan. In this story, you will know about the several benefits of the use of papaya leaf and Guduchi herb in the treatment of dengue.

Moving over to other issues, should not neglect eye care during the monsoon season as a little indiscretion may land you in the grip of common ailments during the wet months. Keeping this in mind Double Helical brings to you good coverage on eye infections. Titled 'Keep an Eye on Infections' written by famous eye specialist Dr Mahipal Sachdev, the health column rightly points out that during the monsoon, weather turns quite pleasant, but there is also a downside to it. Eye infections increase in these wet months. People should exercise caution and follow the advice of doctors to protect their eyes during this season.

Often, people consider good health and healthy living as activities that are consciously chosen, or something that only those who are already fit are privileged to enjoy. But, corporates these days are inculcating a culture that empowers people to a healthy lifestyle. In this issue, we have introduced a series on such initiatives. This time, we are covering industrialist Sunil Kumar Agarwal who has made his lifestyle as an example to usher in a culture of healthy practices.

We have also highlighted many other challenging health issues. Our advisory board member and well renowned columnist Dr Suneela Garg writes that high impact essential interventions are required to be delivered through a primary healthcare approach to strengthen early detection and timely treatmentof the rising threat of Non Communicable Diseases (NCDs). The NCDs, also known as chronic diseases, are not passed from person to person. They are of long duration and generally involve slow progression. The four main types of NCDs are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes.

As part of our special story this time, we bring a highly informative story on road traffic injuries. The road traffic injuries are the leading cause of Traumatic Brain Injuries (TBIs), followed by falls and violence. Concerted efforts are required for effective and sustainable prevention and management of such injuries in India. One of the essential needs is to establish the trauma registries to monitor the system and provide statewide cost and epidemiological statistics.About 1.2 million Indians were killed in car accidents over the past decade, on an average one every four minutes, while 5.5 million were seriously injured. Road deaths in many global emerging markets have dipped even as vehicle sales rose; but Indian fatalities have alarmingly shot up by half in the last 10 years. Deaths in road accidents in the country are the highest despite the fact that its population is much less than the neighboring China and more vehicles ply on US roads than India.

Besides, there are many more stories to keep you abreast with relevant topics and trends in the health sector. So, happy reading!

Amresh K Tiwary
Editor-in-Chief

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Keep an Eye on Infections!

Eye care should not be neglected during the monsoon season as a little indiscretion may land you in the grip of common ailments during the wet months

BY DR. MAHIPAL S SACHDEV

During the monsoon, weather turns quite pleasant, but there is also a downside to it. Eye infections increase in these wet months. People should exercise caution and follow the advice of doctors to protect their eyes during this season.

Common Eye Infections during Monsoon Months

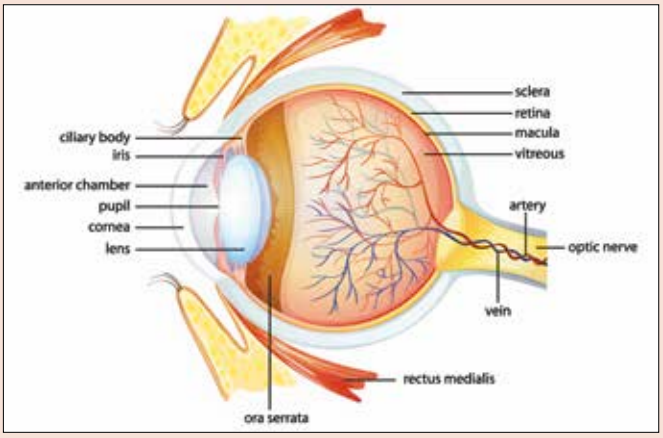
Conjunctivitis is the most common eye infection during these wet months. The surface of the white of the eye and the back surface of eyelids is covered by a thin protective membrane called conjunctiva. Inflammation and redness of this membrane is called conjunctivitis. Conjunctivitis is caused by viral or bacterial infection. It can be the result of allergy to dust, pollen, medicines, cosmetics or contact lenses. The chlorinated water of swimming pool can also cause inflammation in the conjunctiva.

Conjunctivitis doesn't spread by looking in the eyes of the infected person. Wearing dark glasses helps as it keeps your eyes cool & shielded. To avoid conjunctivitis, maintain strict personal hygiene as well as avoid

Eye care for diabetics during monsoon

Monsoons can bring with them various viral and bacterial infections due to increased moisture in the air. Hence, extra eye care becomes important, especially for diabetics.

Common problems encountered during this season include conjunctivitis, stye, meibomitis, dry eyes and corneal ulcers. Most of these can be avoided by taking certain precautions regarding ocular hygiene and good control of diabetes. Uncontrolled or fluctuating levels of blood sugar put a person at more risk of developing infections. Frequent touching of ocular surface with unwashed hands is the main source of infection.



Following are the common problems and precautions to avoid them

Conjunctivitis: Infective conjunctivitis, viral or bacterial is a common problem with red eyes, watering, discharge and pain in the eyes. Common source of infection is spread through unwashed hands, shared handkerchiefs & towels. If you have above symptoms, consult the ophthalmologist. Viral conjunctivitis is self-limiting, for bacterial infection, you may be given topical antibiotics. Do not use contact lenses in case of conjunctivitis till the infection is controlled.

Stye: Lid infections can develop in the form of stye or blepharitis, in which you have lid swelling with pain & redness. It requires a course of systemic & topical antibiotics with warm compresses. In diabetics, untreated lid infections can rarely lead to orbital cellulitis, a potentially blinding infection.

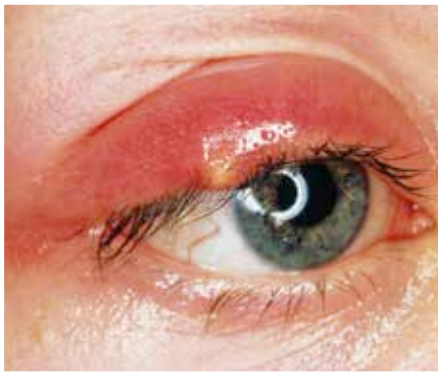
Dry eye: Dryness of eye is again a common problem, aggravated due to increased use of computers, smartphones and air-conditioned indoors. The victim experiences discomfort, burning sensation, grittiness & even blurred vision due to dry eye. Besides ocular hygiene, frequent blinking of eyes, looking away from TV/computer screen every few minutes & use of tear substitutes provides relief.

Cornealulcer: It is a severe form of eye infection due to viral, bacterial or fungal infection. Uncontrolled diabetes may lead to corneal involvement and ulcer formation. If not controlled, it may result in blindness. Good control of blood sugar, ocular hygiene, proper cleansing of contact lenses by contact lens users can help in its prevention.

Prevention is always better than cure. Do not neglect the eye care during monsoon season

Frequent washing of hands & eyes is recommended. Avoid unnecessary touching of the eyes.

- Do not share personal items including cosmetics with others. Contact lens users should pay extra attention.
- Visit a qualified ophthalmologist in case of any eye problem. Do not ignore a red eye.
- Do not do self-medication or buy over the counter eye drops, they may contain steroids which may worsen the eye infection.
- Keep sugar levels in good control & maintain a healthy diet.
- A little extra care can go a long way to ward off serious problems, especially in a diabetic. Keep this in mind and enjoy the showers of monsoon.



sharing of items of personal use like towels, handkerchiefs etc.

Treatment plan: At the first instance of the watering of eyes, you should consult an ophthalmologist. If you are a contact lens user, discontinue wearing them immediately. Your doctor may prescribe antibiotic eye drops. Use them as directed and stay at home to take rest. This way, you will recover faster and not spread the infection to others.

Stye is an infection in the eyelid which looks like a pimple. It occurs when the oil gland in the eyelid gets infected. This painful little bump is a limiting condition which ruptures on its own. Avoid popping a stye. Styes are caused by staphylococcal bacteria found in the nose. When you touch your nose and then your eyes, you are at risk of contracting a stye.

Treatment plan: Warm water compress works as an effective home remedy for relieving the pain and inflammation of stye. However, if the stye happens regularly, get in touch with an ophthalmologist, as severe cases may need antibiotic therapy.

Corneal ulcer is a severe eye infection. It occurs as a red, painful eye, with mild to severe discharge and reduced vision. The condition results from a localized infection of the cornea, similar to an abscess. Most cases of corneal ulcers are due to a bacterial or fungal infection that invades the cornea — often following eye injury, trauma or other damage. There have been instances when splashing of the mucky water from the puddles in the eyes has caused infection surrounding the cornea. Contact lens users are particularly susceptible to a corneal ulcer.

Treatment Plan: An ophthalmologist will diagnose corneal ulcer. Early diagnosis and treatment is crucial in such cases. Corneal ulcer may lead to vision loss or blindness. Hence, there is a need for aggressive treatment plan. Treatment usually involves antibiotics as well as antiviral or antifungal medications. Your doctor may prescribe steroid eye drops to reduce inflammation of the eye. Do not self-medicate yourself under any circumstance with steroid eye drops as it can have devastating effect on your eyes and result in corneal melting or loss of vision. In severe cases, patients are hospitalized so that the correct treatment is given. If infections are stubborn or leave a scar, a corneal transplant may be needed to restore vision.

Watch out for any such symptoms of eye infection, this monsoon and get in touch with your ophthalmologist if you experience any discomfort in your eyes. After all, your eyes deserve the best.

TIPS FOR EYE CARE DURING RAINS

With rains come puddles of dirty water and eye infections soar. But, with a bit of prevention, you could stay safe, as the mercury relents. Here are some effective eye care tips:

Eyes wide shut: Close your eyes when you decide to get soaked in the rain as it screens off atmospheric pollutants. While the rain water is reasonably clean but you need to be wary of the rain water if you stand under a tree or a building, as it can be contaminated with pollutants, which could increase eye infections. Rain water can also strip away tear glands which could make your eyes dry.

Stay out of wind: Wear light coloured sunglasses if you have to go out during the day to keep your eyes protected. Contact lens wearers should diligently follow the rule, or they risk their contacts getting blown away in the wind.

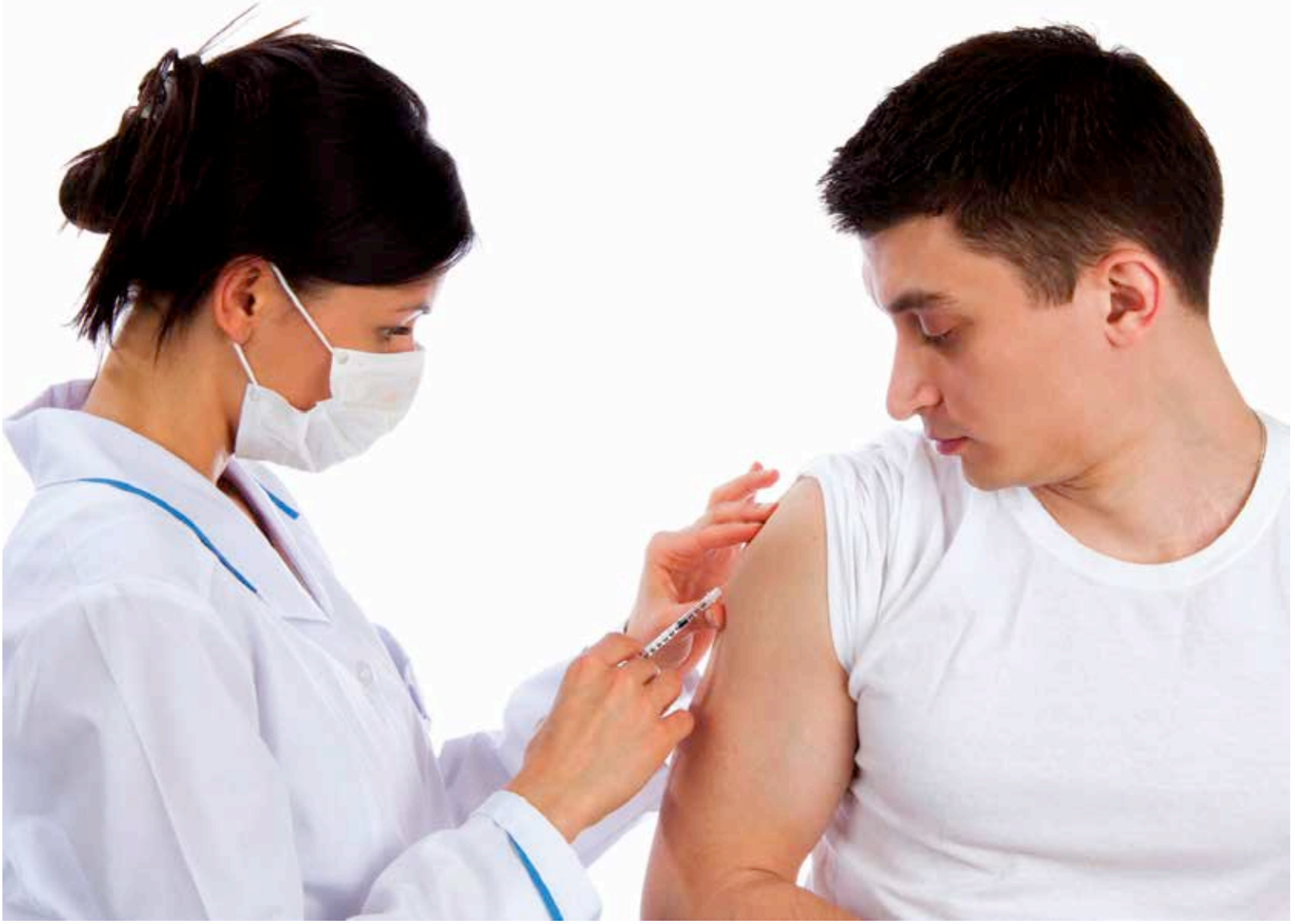
Avoid splash: Splashing sounds fun, reminds of the good old childhood days. But, splash contains muck and if it gets accidentally in your eyes, wash it off immediately with plain water and dry your eyes. If you are not carrying water with you then buy a water bottle immediately to clean your eyes, as mucky water carries a lot of bacteria, which can infect your eyes. Monsoon is also not the time when you should take a dip in the pool, as it can result in eye infections.

Emphasize on hygienic practices: During monsoon, eye infections like conjunctivitis and stye are on the rise. The infection is contagious and can be easily transmitted via towels, handkerchiefs, lenses, glasses and other articles handled during the course of daily activities. To avoid infection, you need to ensure that you do not share articles of personal use with anyone else. Eye infections result in redness of eyes and watery discharge. Use antibiotic eye drops to treat eye infections, only after it has been prescribed by an ophthalmologist. Avoid lenses when you contract an eye infection.

Do not rub your eyes: Refrain from rubbing your eyes when they itch. Stye, an infection of the glands of the eyelids is also usually caused by frequent rubbing of eyes with unwashed or dirty hands.

As a general rule, avoid exposing your eyes to rain water and wash your hands, face and feet well after you have braved the monsoon. Follow the above these tips to breeze through monsoon.

(The author is Chairman, Medical Director and Senior Consultant, Ophthalmology, Centre for Sight, New Delhi)



Ignored but Imperative

The significance of extending the benefit of immunization to other age groups calls for efforts to raise the awareness about vaccination of adults. The primary care physicians/ family physicians should start recommending adult vaccines to their patients

BY DR SUNEELA GARG/ DR AKANKSHA RATHI/ DR G S MEENA

Vaccination is the most cost effective and powerful weapon of prevention. Vaccination is one of medicine's greatest accomplishments, reducing and in some cases eradicating once life-threatening diseases such as smallpox and polio. In today's fast paced world, where there is little time to even fall ill, vaccinations are becoming imperative for adolescents and adults too.

The Centre for Disease Control (CDC) states, "Traditionally, vaccines have been associated with protecting young children, but far too many adults become ill, are disabled, and die each year from diseases that could easily have been prevented by vaccines". Vaccination not only saves the vaccinated person from disease and disability but also has direct effects on reducing the incidence and prevalence of that disease by creating herd immunity i.e. the immunity imparted to even unvaccinated people because of vaccination of a certain portion of population. Many studies have proved that the financial burden that

Dr Suneela Garg

Dr Akanksha Rathi

Dr G S Meena

people and country face due to disease is much greater than vaccinating against those diseases.

However, if we talk about India, adults have been long ignored as far as immunization is concerned. On one hand, we are struggling to improve our paediatric immunization coverage through Indradhanush Mission (Launched on Dec-25, 2014) and on the other hand we lack basic intent and infrastructure to extend the benefit of immunization to other age groups.

Adults are 60% of our population and the most economically productive age group. They often neglect their health while taking care of others. The immunity that children acquire because of vaccination wanes off as they turn into adults making them susceptible to diseases once again. If they acquire the diseases they not only lose some days of productive work but can also infect their little ones. There is no data on adult immunization coverage in India neither are there any recommendations in place and it is assumed that adult immunization is 15-20 years behind as far as large scale acceptance is concerned. A news report recently suggested that more than 95% deaths due to Vaccine Preventable Diseases (VPDs) occur in adults. The cost incurred due to the morbidity caused by VPDs is unimaginable. Far less adults are fully vaccinated when compared to children.

The reasons for adult immunization being in a poor state are:

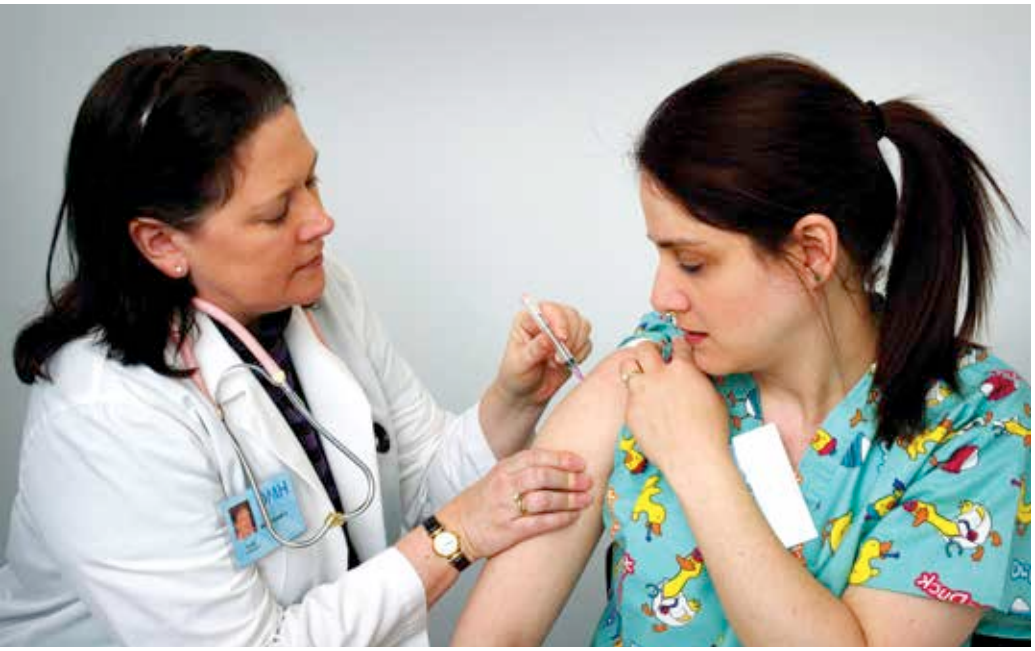
- Many adults do not go to the doctor regularly, or do not have a primary care physician.
- Lack of awareness and adults think that vaccination is only for kids.
- No recommendations of vaccinations by family physicians as they themselves have little awareness about the same. It is possible as there are no recommendations and guidelines for adult immunization in India and very few physicians recommend their adult patients any vaccines.
- Adults are busy and ignore their health status for too long.

Even healthcare providers who are at such a high risk of acquiring blood born infections like hepatitis-B have a low coverage of Hep-B vaccination amongst them. A study by Singhal V et al on 'Hepatitis B in Health Care Workers: Indian Scenario' has revealed that though healthcare workers are at a very high risk of acquiring the infection but only 50% have received a shot of hepatitis-B in Delhi. Also, the results cannot be extrapolated to other areas of the country.

> The immunity that children acquire because of vaccination wanes off as they turn into adults making them susceptible to diseases once again. If they acquire the diseases they not only lose some days of productive work but can also infect their little ones

The following are the various vaccines that have been recommended by Advisory Committee for Immunization Practices that adults need:

1. **Tdap –** All adults need a tetanus booster vaccine every 10 years. Tetanus booster is available in combination with diphtheria (Td vaccine) or diphtheria and pertussis (Tdap vaccine). Adults should get Tdap once and then Td every 10 years after. Indian Academy of Paediatrics (IAP) has also recommended Tdap for pregnant females in every pregnancy because apart from saving the newborn from neonatal Tetanus, it also imparts immunity against pertussis.
2. **Hepatitis B-** All children and adolescents younger than 18 years and not previously vaccinated should receive the vaccine. India is a country of high endemicity with 300,000 new Hepatitis cases occurring each year. Adults in high risk groups of acquiring Hepatitis B are healthcare providers, those who require frequent blood, injectable drug users, people having multiple sexual partners, men who have sex with men and household contacts of Hepatitis B patients or carriers.
3. **Influenza-** The burden of disease in adults is unimaginable as a study has revealed that during peak periods of influenza activity circulation i.e. during the monsoon period, 20% of all hospital admissions have influenza positivity. Around 40,000 deaths occur due to Influenza annually and the situation is grimmer when an epidemic or outbreak is there. CDC recommends the administering influenza vaccine to all persons 6 months of age and older annually. However, the IAP has recommended seasonal influenza vaccine to high risk children and adults like people



with chronic cardiac, pulmonary (excluding asthma), hematologic and renal (including nephrotic syndrome) condition, chronic liver diseases, diabetes mellitus, acquired immunodeficiency (including HIV infection) and laboratory personnel and healthcare workers

4. **Hepatitis A -** Various findings have shown that a significant proportion of the Indian adolescent and adult population is at risk of Hepatitis A Virus (HAV) infection. A study from showed an increased incidence of symptomatic HAV among children (10.6% to 22.0%) and also in adults (3.4% to 12.3%) amongst the patients with acute viral hepatitis attending a hospital. The vaccine is specially recommended in high risk groups like international travellers, men who have sex with men, people with clotting factor disorder and persons with chronic liver disease.
5. **MMR-** All females of reproductive age group should receive 2 shots of MMR vaccine, at least 3 months before pregnancy.
6. **Meningococcal vaccine-** Several epidemics of meningococcal disease have been reported, pre-dominantly from the major cities, and particularly from New Delhi. This distribution may be because of overcrowding, vulnerability to the new strains, or suitable climatic conditions. Routine vaccination of the population at large is not recommended except during epidemic situations. Also, Meningococcal vaccine is recommended to be given to Haj pilgrims and other travellers visiting the countries where meningococcal disease is a major problem or where outbreaks are occurring, high risk groups, e.g. children living in orphanages, jail inmates, soldiers in Barracks etc.
7. **Chicken pox vaccine-** Many studies have found out that though chicken pox is a disease of children but in tropical countries like India, the disease is common in adults in whom it causes greater morbidity and mortality. Due to reasons not clearly known, the sero-conversion in tropical countries is low leading to such a disease trend. The bigger problem that India is facing is that due to these factors, a large proportion of women of childbearing age are susceptible to Varicella Zoster virus during pregnancy. They may pass the virus to their unborn child leading to congenital varicella syndrome in the child. Vaccination may limit the morbidity and mortality associated with adult and neonatal disease and helps to reduce the individual, social and economic incurred by this disease.
8. **Shingles (Herpes Zoster) vaccine-** Shingles is a painful and debilitating condition that occurs in elderly due to the chicken pox vaccine that lays dormant for years in the nerve roots of spinal cord after causing chicken pox in childhood. One-fifth of childhood chickenpox infection leads to shingles in old age. Thus it is important for people more than 60 years to get this vaccine.
9. **Pneumococcal vaccine-** Preventable Invasive Pneumococcal Disease (IPD) includes meningitis, pneumonia and septicemia. They lead to great morbidity and mortality through age groups worldwide. 85% of invasive pneumococcal disease occurs in adults. ACIP recommends pneumococcal vaccination for the following adults: Age 65 years and older, age 19-64 years of age with: asthma, diabetes, lung, heart, or liver disease, or alcoholism, cigarette smokers and residents of long-term or chronic care facilities (e.g., nursing homes). A 23-valent vaccine is recommended in adults and prevents about 60-70% of the invasive disease.

Way forward

Vaccination in adults is important so that they are more productive and healthy and their families are safe. There should be some efforts from government's end to raise the awareness about vaccination of age groups other than childhood. The government might not be able to afford giving them but should at least endorse these adult vaccines so that awareness about them increases. The primary care physicians/ family physicians should start recommending them to their patients. The vaccine companies should devise some accreditation process for the doctors to increase their knowledge regarding adult vaccines.

(The authors are from Department of Community Medicine, Maulana Azad Medical College, New Delhi)

Death Traps

Road traffic injuries are the leading cause of death in India. The situation calls for a multidisciplinary approach for prevention, pre-hospital and post-hospitalization care of critically injured patients

BY AMRESH KUMAR TIWARY

Road traffic injuries are the leading cause of Traumatic Brain Injuries (TBIs), followed by falls and violence. Concerted efforts are required for effective and sustainable prevention and management of such injuries in India. One of the essential needs is to establish the trauma registries to monitor the system and provide state-wide cost and epidemiological statistics.

As per available statistics, about 1.2 million Indians were killed in car accidents over the past decade, one every four minuteson an average, while 5.5 million were seriously injured. While road deaths in many global emerging markets have dipped even as vehicle sales rose, fatalities on India roads have alarmingly shot up by half in the last 10 years. Deaths in road accidents in the country are the

highest despite the fact that its population is much less than neighboring China and more vehicles ply on US roads than India. Road traffic injuries were the ninth leading cause of deaths in 2004 and at the current rates, it would be the fifth leading cause of death, overtaking diabetes and HIV/AIDS by 2030.

Says Dr. Anmol Maria, President, Delhi Orthopaedic Association, "The alarming figures of death and disability place a huge economic and social strain on the family as well the society at large. Data suggest that on Indian roads, there is one serious injury every minute and one death every 4 minutes. Delhi stands dubiously distinct with highest number of traffic accident related deaths amongst all cities in India. Public awakening at large is the only way forward for the prevention of this malady."

Road transport shares 4.8% of economical contribution towards GDP in India but the loss to the Indian economy due to fatalities and accident injuries is estimated at 3 per cent of GDP. On top of that, more than 52 per cent of road victims in India are in the age group of 25-65 years. Pedestrians, bicycle and two wheelers account for around 39 per cent of the fatalities.

Dr Dhananjay Gupta, Secretary, Delhi Orthopaedic Association, says, "Last year, 2199 fatalities were attributable to road accidents in Delhi, which is the highest amongst all cities in India. Compared to last year, there is 3% rise in fatalities in Ghaziabad area alone. In Delhi-NCR, age group affected the most unfortunately is between 15 years to 29years. Overspeeding accounted for almost 31% of the cases, 39%; careless driving, poor weather conditions claimed 3.2% cases and 1.6% cases were attributable to drug/alcohol influence."

Road Accidents: Leading Cause of Trauma

The World Report on Road Traffic Injury Prevention indicates that by 2020, road traffic injuries will be a major killer accounting for half a million deaths and 15 million disability adjusted life years. Evidence supports the fact that timely referral to trauma centres, equipped with proper facilities to deal with serious injuries, results in reduction of mortality among victims.

Alarmed by the increasing fatalities, the union government has begun a five-year project to cut road deaths by a fifth every year, part of the most ambitious overhaul of highway laws since independence in 1947. The Prime Minister has assured of a road transport & safety bill, national road safety policy, & cashless treatment of accident victims which might come in handy in addressing or arresting the current critical situation.

Observes Dr Deepak Chaudhary, Director, Sports Injury Center, Safdarjung Hospital, "Still, a lot need to be done to avert road menace – a new mandatory traffic education system is required, both at school level as well as at license procurement level. People should be taught traffic sense, techniques and strategies to avoid an accident. The Supreme Court has already ordered that the person helping an accident victim should not be harassed; this needs to be strictly implemented. In fact, such people need to be rewarded as fatality can be reduced if the victim reaches the hospital or trauma center in time. In medical terms, we call it 'Golden Hour' and actually the period is simply priceless for a person fighting for his life."

Active nightlife comprising clubs and pubs, reluctance to use helmets, seat belts, violation of speed limits, lack of tolerance, and increasing competition are some of the causes of increasing road traffic accidents.In this context, accurate mortality statistics are important for implementing appropriate prevention strategies, improving emergency preparedness, instituting financing policies and appropriate health packages.

The latest report of National Crime Records Bureau says that the total number of deaths every year due to road accidents has now crossed the 135,000 mark. While trucks and two-wheelers are responsible for over 40 per cent of deaths, peak traffic during the morning and evening rush hours is the most dangerous time to be on the roads. The situation is compounded by the menace of drunken driving. Liquor is a state subject and it is taking its toll everywhere in the country, not just Mumbai, Delhi, Bangalore, Hyderabad and metro towns. Ineffective laws, inadequate judicial procedure, little

"The alarming figures of death and disability place a huge economic and social strain on the family as well the society at large. Data suggest that on Indian roads, there is one serious injury every minute and one death every 4 minutes. Delhi stands dubiously distinct with highest number of traffic accident related deaths amongst all cities in India. Public awakening at large is the only way forward for the prevention of this malady."

Dr. Anmol Maria, President, Delhi Orthopaedic Association

enforcement by the police, no specific segment where they can book people under drunk driving are making it difficult to check accidents under the influence of alcohol.

The road deaths are more rampant in developed states like Andhra Pradesh, Maharashtra and Tamil Nadu. Road safety experts believe that the real numbers of fatalities could be much higher since many cases are not even reported. There is no estimate as to how many people injured in road accidents die a few hours or days after the accident.

Head and Spinal Injuries Produce Trauma

Head injury is much more common in young adults than in the elderly. Trauma is the leading cause of death in people under the age of 40.The main causes of head injury are falls, motor vehicle accidents, and assaults.

In the words of Dr A K Singh, renowned Neuro Surgeon,"Trauma to the head can lead to several types of injuries, including skull fractures, concussions, and cerebral contusions, diffuse axonal injury, epidural hematomas, and subdural hematomas and intracerebral hematomas. The skull fractures result from a significant blow to the head and can be associated with any of the above listed injuries."

Concussion refers to a relatively minor injury, causing a relatively brief loss of consciousness. Cerebral contusions are brain bruises which

occur from acceleration and de-acceleration of the head. Head trauma can also produce microscopic changes that are scattered throughout the brain. This category of injury is called diffuse axonal injury (DAI) and refers to the microscopic severing of axons (fibers which allow brain neurons to communicate with each other). If enough axons are injured in this way, then the ability of nerve cells to integrate and function may be lost or greatly impaired.

Dr Munish Aggarwal, Senior Neuro Surgeon, Shree Balaji Action medical Institute, New Delhi, says, "There is a need to increase tertiary trauma care units with multidisciplinary approach for comprehensive care of critically injured patients. Steps must also be taken to improve injury surveillance and the quality of data collected. Detailed, complete and relevant data will guide prevention efforts aimed at risk factors in the individual and the environment and provide feedback to trauma care providers. Further monitoring of these trends will influence training, improve the focus of the trauma service and direct the provision of more effective care to these severely injured patients."

A study conducted at a level I trauma centres like Jai Prakash Narayan Apex Trauma Centre, All India Institute of Medical Sciences, New Delhi, says that about 3500 patients are admitted every year, with no assigned trauma catchment area or geographic jurisdiction. Retrospective data were collected from CPRS (computerized patient record system) of this hospital and autopsy reports maintained in the department of Forensic Medicine. All the cases/autopsy reports with spinal injuries whether in isolation or as a part of polytrauma were reviewed.

Says Dr Amit Gupta of Dr Jai Prakash Narayan Apex Trauma Centre, "Injuries are caused by a complex interaction among agents (vehicles, products), human and environmental factors operating in complex sociopolitical and economic systems. Injury prevention and control depending on evidence-based research is gaining momentum all over the world. High-income countries have made significant progress in the past two–three decades by developing comprehensive, integrated and intersectoral approaches based on scientific understanding. This has resulted in a decline in death and disability due to injuries."

"Last year, 2199 fatalities were attributable to road accidents in Delhi, which is the highest amongst all cities in India. Compared to last year, there is 3% rise in fatalities in Ghaziabad area alone. In Delhi-NCR, age group affected the most unfortunately is between 15 years to 29 years. Over speeding accounted for almost 31% of the cases, 39%; careless driving, poor weather conditions claimed 3.2% cases and 1.6% cases were attributable to drug/alcohol influence."

Dr Dhananjay Gupta,
Secretary,
Delhi Orthopaedic Association

"The Supreme Court has already ordered that the person helping an accident victim should not be harassed; this needs to be strictly implemented. In fact, such people need to be rewarded as fatality can be reduced if the victim reaches the hospital or trauma centre in time. In medical terms, we call it 'Golden Hour' and actually the period is simply priceless for a person fighting for his life."

Dr Deepak Chaudhary,
Director, Sports Injury Centre,
Safdarjung Hospital, New Delhi

There are no organized comprehensive trauma care services either at the Centre or State level and services developed in the past have not been linked to an effective multidisciplinary trauma care system. There is acute need for emphasis to be laid on adequate training of medical and paramedical personnel, provision of facilities for transport of patients, suitable strengthening of existing emergency and casualty services, and improving referral linkages.

"Both research and experience have

Alarming Statistics

- The global annual cost of road traffic accident is 230 billion dollars, of which the share of developing countries is 65 billion dollars. This is double of the total aid received for the national projects received. In India, more than 12.75 lakh people sustain serious injuries in road traffic accidents and 1.2 lakh die every year.
- India has one percent of the world's vehicles, but 6 percent of the total global road traffic accident deaths. Economic loss amounts to Rs 550 crore, an amount that equals our defense budget. Majority of road traffic accident injuries are of the nervous system, predominantly of the brain. In our country, 60 percent of TBIs are caused by road traffic accidents. Fatality rate is 70/1000 vehicles, which is 25 times higher than in developed countries.
- The major cause of road traffic accidents is rash driving which usually happens during night. Intoxication by alcohol as a causative factor is seen in 15-20 percent traffic accidents. Reported incidence of mortality due to severe traumatic brain injury ranges from 38 to 43 per cent. Rehabilitation needs of severe head injury are 100 percent but there is a woeful lack of neuro-rehabilitation facilities.
- Nearly 10-30 per cent of hospital registrations are due to road traffic injuries and a majority of these people have varying levels of disabilities. A majority of victims of road traffic injuries are men in the age group of 15-44 years and belong to the poorer sections of society. Also, a vast majority of those killed and injured are pedestrians, motorcyclists and pillions riders, and bicyclists.
- A clearly defined road safety policy, a central coordinating agency, allocation of adequate resources, strict implementation of proven and effective interventions and reliable information systems are urgently required. Greater participation from health and other sectors based on an integrated, intersectoral and coordinated approach is essential. Health professionals can contribute in numerous ways and should take a lead role in reducing the burden of road traffic injuries in India.

"There is a need to increase tertiary trauma care units with multidisciplinary approach for comprehensive care of critically injured patients. Steps must also be taken to improve injury surveillance and the quality of data collected. Detailed, complete and relevant data will guide prevention efforts aimed at risk factors in the individual and the environment and provide feedback to trauma care providers."

Dr Munish Aggarwal,
Senior Neuro Surgeon, Shree Balaji Action Medical Institute, New Delhi

proved that with existing resources, many activities can be performed at peripheral levels with adequate knowledge and skills. This implies that staff (medical/non-medical) requires training to perform these tasks with basic and refresher programmes. Availability of equipment means that these facilities are not only available but also functional, and can be put to use throughout a 24-hour period. Organizational support must be provided for skills enhancement,

curative and partial rehabilitative services to trauma patients," Dr Amit Gupta, added.

The World Health Organization (WHO) in its first ever Global Status Report on Road Safety claims that speeding, drunk driving and low use of helmets, seat belts and child restraints in vehicles are the main contributing factors. Every hour, 40 people under the age of 25 die in road accidents around the globe.

According to the WHO, this is the second most important cause of death among 5 to 29 year olds.

Dr Munish Aggarwal says that comprehensive research in India in the area of Traumatic Brain Injuries (TBIs) is extremely limited. Scientific information in this area is vital and a basic prerequisite is to understand the enormity of the problem and its various determinants and various dimensions to formulate, implement and evaluate programs for reduction of morbidity, mortality, disability and socio-economic losses in every country. Earlier research in India has been extremely limited and has been from isolated settings based on personal areas of interest by individual researchers.

Injuries and TBIs in India have been increasing significantly due to rapid motorization, industrialization, migration and changing value systems of Indian society. The consequences on health are tremendous and have been underestimated due to absence of research. Apart from instantaneous deaths, the suffering and poor quality of life among survivors is a living testimony to the impact of TBIs. It is estimated that nearly 1.5 to 2 million persons are injured and 1 million road accident victims succumb to death every year in India. Road traffic injuries are the leading cause of TBIs followed by falls and violence. Alcohol involvement is known to be present among 15-20 percent of TBIs at the time of injury. The rehabilitation needs of brain injured persons are significantly high and increasing from year to year. India and other developing countries face the major challenges of prevention, pre-hospital care and rehabilitation in their rapidly changing environments to reduce the burden of TBIs.

Nurturing Life

Child care centres and agencies are increasingly in demand in urban India. Child care professionals build strong relationships with children and support each child's learning and development in safe, happy and protected environment

BY DR MANISHA YADAV

You may be asking questions like: How do I find a child care service? How much will it cost? How will I know if the service is safe, clean and comfortable? What will my child learn? Who will be caring for my child? Are they suitable and qualified to work with children? These are many of the questions you have about what quality child care looks like and the types of things you should ask a service when choosing child care.

In India, undoubtedly, it is a new, exciting yet challenging experience when as a parent you start thinking about using child care, especially if it is the first time that you have considered entrusting your child with someone other than yourself, a relative or family friend. Your child care journey often begins when choosing a child care service.

Many child care centres and agencies have produced a series of family factsheets. These factsheets can provide you and your family with information about aspects of child care including advice and tips which will assist you to prepare for and recognize quality child care practice. This article includes extracts from some of these factsheets.

The child specialists also encourage you to access the full version of family factsheets. Remember, all of your questions about child care are important. The suggestions given by child specialists and child care agencies will only answer some of them and they encourage you to talk with your service about your child's care.

A quality child care service is one that works with you to ensure that your child is safe, happy and protected; and that you feel confident with the decision you made to use child care. The child care professionals and families share a common goal for children to be cared for in secure, blissful and supportive environments. The children benefit most when these environments include trusting and supportive partnerships.

The quality child care services are places where child care professionals

build strong relationships with children and support each child's learning and development through positive experiences. The relationship between you and your child care service is also crucial to your child's wellbeing. This means that the partnerships between families and child care professionals are unique. They should be built on trust and respect and are characterized by active communication, consultation, and dependent upon the specific needs and interests of each person.

Building a partnership with your child care service child care will help to build and support these partnerships when using child care. Important linkages exist between maternal health, child health, and family planning.

When families need to use child care, it is important that their children are enrolled in the highest quality care possible. Children who have spent time in high quality child care environments have lasting benefits from the experience. Research indicates that children who receive a high quality early childhood education have better mathematical, linguistic and social skills as they enter school.As they grow older, they require less special education, progress further in school, have fewer interactions with the justice system and have higher earnings as adults.

Objectives of the Mobile Health Clinics

(1) To provide primary, preventive, curative, promotive and referral health services to the people in the designated area.

(2) To co-ordinate with the district public health systems to achieve improvement in the Millennium Development Goals such as IMR, MMR, Life expectancy etc.

(3) Prevention and Control of communicable diseases.

(4) To engage in providing essential quality primary health care services to the people in the designated areas.

Several research studies have found that high quality child care programmes have certain characteristics in common. These characteristics can help parents make better child care choices for their children because they indicate a much greater likelihood of high quality care. Quality indicators measure the conditions that generally foster a safe, nurturing and stimulating environment for children. They have low child/teacher ratios, small group size, staff with higher education & on-going training, prior experience and education of the director, low teacher turnover, positive teacher/child interactions, accreditation or higher than minimum licensing standards, age appropriate activities and good health and safety practices.

Low ratios and low turnover allow teachers to respond to the individual needs of children, to give each child ample attention and to create a strong bond, adding to the child's security. Higher education helps staff and directors understand the needs and development of young children, which helps teachers plan activities for children and interact with them in developmentally appropriate ways. Well-compensated teachers with good benefits change jobs with less frequency, lowering turnover and increasing opportunities for children to create attachments and build relationships. Finally, child care programmes with a national accreditation or higher-than-minimum license demonstrate an intent to provide high quality care and have met higher-than-minimum standards to receive the accreditation or license.

> The partnerships between families and child care professionals are unique. They should be built on trust and respect and are characterized by active communication, consultation, and dependent upon the specific needs and interests of each person

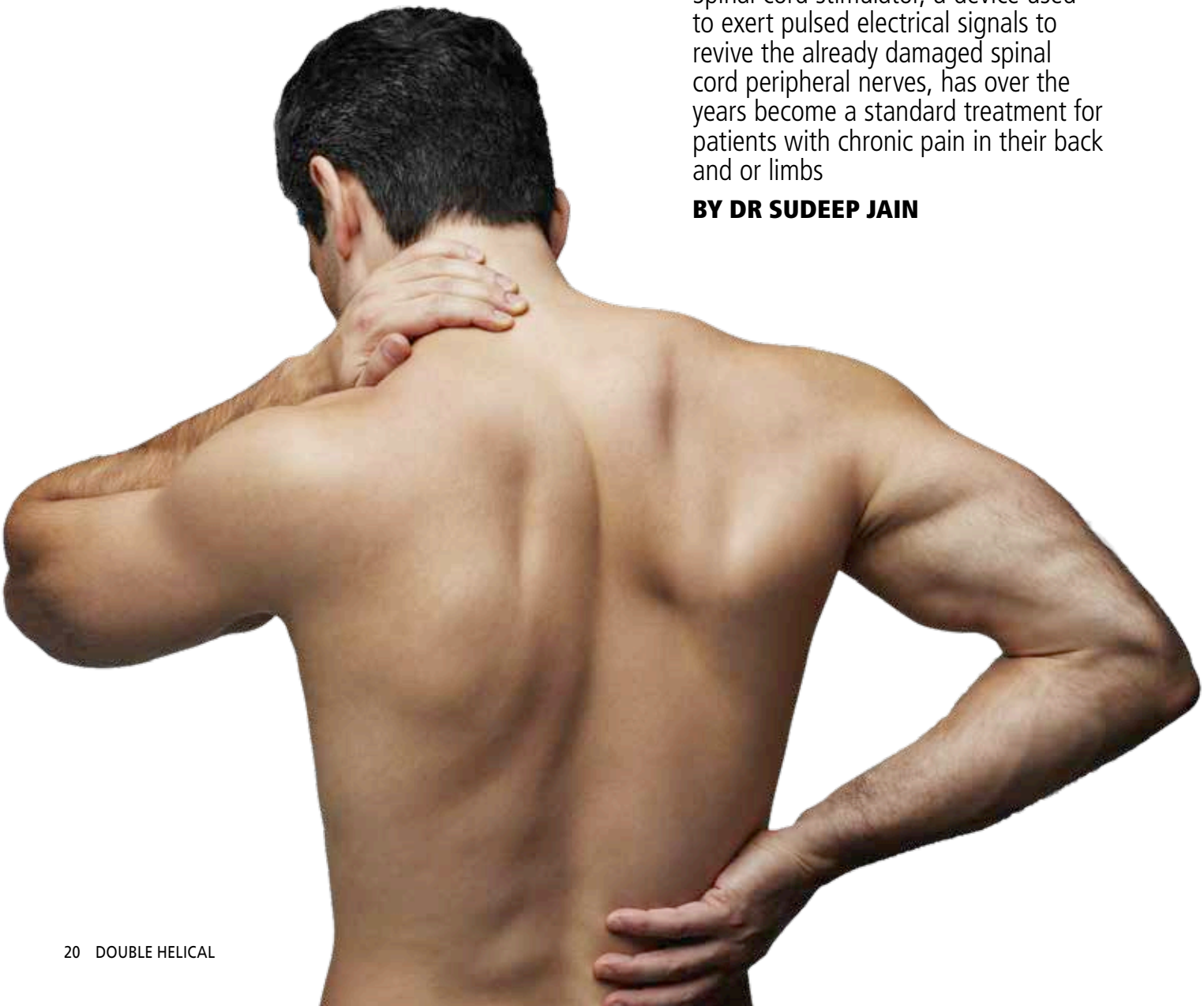
Some child care agencies carry out mobile health clinic with the support of Karnataka Health System Development and Reform Project (KHSDRP) in Siddlaghatta Taluk of Chikkaballapur District. They have been covering 10 remote villages in this area. Establishment of Mobile Health Clinics is one of the innovative schemes which will provide health coverage to people living in the unreachable deep interior forest and remote villages.

(The Author is a medical practitioner)

Goodbye spinal pain

Spinal cord stimulator, a device used to exert pulsed electrical signals to revive the already damaged spinal cord peripheral nerves, has over the years become a standard treatment for patients with chronic pain in their back and or limbs

BY DR SUDEEP JAIN



With latest developments in medical science, Spinal Cord Stimulator has become a ray of hope for those suffering from damaged spinal nerves and spinal cord.

We have all heard of cardiac pacemaker and how it can revive a critically and irreversibly damaged heart by generating electrical impulses called cardiac impulses or action potentials required for proper pumping of heart, thus acting as a true life saviour in otherwise hopeless condition. Quite similar to it, spinal cord stimulator is a device used to exert pulsed electrical signals to revive the already damaged spinal cord peripheral nerves of the patient when everything else has failed,thus giving relief from chronic pain.

Approved by the FDA in 1989, spinal cord stimulation (SCS), a form of neuro stimulation technology has over the years become a standard treatment for patients with chronic pain in their back and or limbs and those who have not found pain relief from other treatments. Spinal cord stimulation (SCS) is a pain relief technique that delivers a low-voltage electrical current continuously to the spinal cord to block the sensation of pain.

Spinal cord stimulation (SCS), in its simplest form, involves stimulating electrodes implanted in the epidural space, an electrical pulse generator implanted in the lower abdominal area or gluteal region with the conducting wires connecting the electrodes to the generator, and the generator remote control. As pain changes or subsides, stimulation can be adjusted, when necessary.

Most patients who qualify for neurostimulation therapy report a 70 to 90% reduction in overall pain, as well as an increased ability to participate in normal family and work activities. Many patients find that they can decrease or stop taking painkillers or other pain medications after undergoing spinal cord stimulation. Given these benefits, there has been ongoing research and advances in spinal cord stimulation technology, and many individuals suffering from chronic pain find that neurostimulation positively impacts the quality of their lives. However, it is important to note that the degree of pain relief experienced from spinal cord stimulation or peripheral nerve stimulation varies from person to person.

In general, neurostimulation works by applying an electrical current to the source of chronic pain. SCS is the most commonly used implantable neurostimulation technology for management of pain syndromes. As many as 50,000 neurostimulators are implanted worldwide every year.

Types of incurable diseases where Spinal Cord Stimulation is used for treatment:

One of these is Arachnoiditis , a painful condition caused by inflammation of the arachnoid, one of three linings that surround and protect the brain and spinal cord.It impacts the nerves and causes symptoms such as numbness, tingling, and a distinctive stinging and burning pain in the lower back or legs. Other symptoms include debilitating muscle cramps, twitches, spasms, and bladder/bowel/sexual dysfunction. Some of the known causes of this are irritation from chemicals arising from spinal procedures and epidural steroid injections;bacterial or viral infections; spinal cord injury; or complications arising from spinal surgery.There is no cure for this condition except spinal cord stimulation &neuromodulation.

> Spinal cord stimulation (SCS) is a pain relief technique that delivers a low-voltage electrical current continuously to the spinal cord to block the sensation of pain.As pain changes or subsides, stimulation can be adjusted, when necessary.

Dr Sudeep Jain

One more disease where onlyspinal cord stimulation &neuromodulation only works is Complex regional pain syndrome (CRPS) , an uncommon nerve disorder which causes intense burning pain, usually in the arms, hands, legs or feet. Along with the pain, the patient may experience extreme skin sensitivity and changes in the colour, temperature or moistness of the skin .Causes are largely unknown but it can occur after an injury, either to a nerve or to tissue in the affected area.

Besides, Spinal Cord Stimulant is used in several other conditions such as Failed Back Surgery Syndrome (FBSS),where surgery for back pain was done but the patient does not recover.In such cases too,SCS works wonders. Other conditions include nerve damage, neuropathy, or neuritis andmotor neuron disorders (MNDs) which are classified as incurable diseases.

All in all, Spinal Cord Stimulation is a measure of last resort and generally helps in reducing the chronic pain the patient might be suffering from,thus giving him or her a chance to have a better quality of life.

(The author is Director, Spine Solutions India)

Chronic Concerns

In view of the rising threat of Non Communicable Diseases (NCDs), high impact essential interventions are required to be delivered through a primary healthcare approach to strengthen early detection and timely treatment

BY DR SUNEELA GARG/DR SUMEETA

Dr Suneela Garg

Non Communicable Diseases (NCDs), also known as chronic diseases, are not passed from person to person. They are of long duration and generally involve slow progression. The four main types of NCDs are: cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes.

These diseases kill an estimated 38 million people each year. Almost three quarters of NCD deaths – 28 million– occur in low- and middle-income countries. All age groups and all regions are affected by NCDs. NCDs are often associated with older age groups, but evidence shows that sixteen million NCD deaths occur before the age of 70. 82% out of these "premature" deaths occurred in low- and middle-income countries. Cardiovascular diseases account for

most NCD deaths, or 17.5 million people annually, followed by cancers (8.2 million), respiratory diseases (4 million), and diabetes (1.5 million). These four groups of diseases account for 82% of all NCD deaths.

A risk factor is any attribute, characteristic or exposure of an individual that increases the likelihood of developing a disease or injury. Common, preventable risk factors underlie most non communicable diseases. Most NCDs are the result of four particular behaviours (tobacco use, physical inactivity, unhealthy diet, and the harmful use of alcohol) that lead to four key metabolic/ physiological changes (raised blood pressure, overweight/obesity, raised blood glucose and raised cholesterol). Children, adults and the elderly are all vulnerable to the risk factors that contribute to NCDs. These diseases are driven by forces that include ageing, rapid unplanned urbanization, and the globalization of unhealthy lifestyles. For example, globalization of unhealthy lifestyles like unhealthy diets may show up in individuals as raised blood pressure, increased blood glucose, elevated blood lipids, and obesity. These are called 'intermediate risk factors' which can lead to cardiovascular disease.

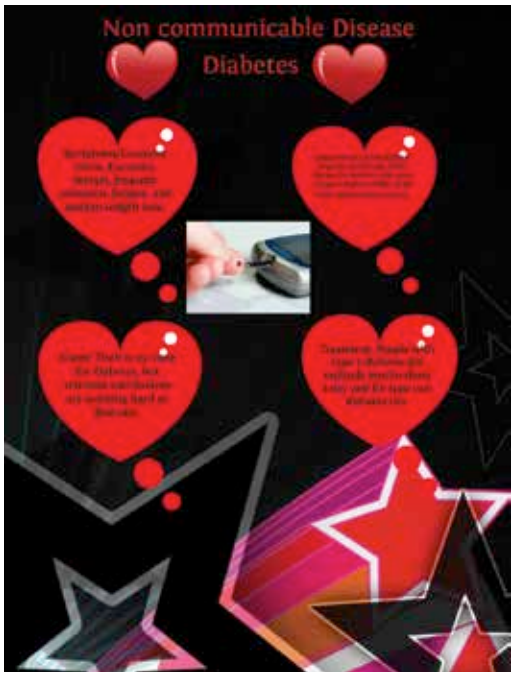
Socioeconomic impact of NCDs

About 30% of people dying from NCDs in low- and middle-income countries are aged under 60 years and are in their most productive period of life. These premature deaths are all the more tragic because they are largely preventable. This is a great loss, not just at an individual level, but also profoundly affects the family and a country's workforce.

Poverty is closely linked with NCDs. The rapid rise in NCDs is predicted to impede poverty reduction initiatives in low-income countries, particularly by increasing household costs associated with healthcare. Vulnerable and socially disadvantaged people get sicker and die sooner than people of higher social positions, especially because they are at greater risk of being exposed to harmful products, such as tobacco or unhealthy food, and have limited access to health services.

NCDs are driven by forces that include ageing, rapid unplanned urbanization, and the globalization of unhealthy lifestyles. For example, globalization of unhealthy lifestyles like unhealthy diets may show up in individuals as raised blood pressure, increased blood glucose, elevated blood lipids, and obesity

In low-resource settings, healthcare costs for cardiovascular diseases, cancers, diabetes or chronic lung diseases can quickly drain household resources, driving families into poverty.In many countries, harmful drinking and unhealthy diet and lifestyles occur both in higher and lower income groups. However, high-income groups can access services and products that protect them from the greatest risks while lower income groups can often not afford such products and services.



Dr Sumeeta

Prevention and control of NCDs

To lessen the impact of NCDs on individuals and society, a comprehensive approach is needed that requires all sectors, including health, finance, foreign affairs, education, agriculture, planning and others, to work together to reduce the risks associated with NCDs, as well as promote the interventions to prevent and control them.

An important way to reduce NCDs is to focus on lessening the risk factors associated with these diseases. Low-cost solutions exist to reduce the common modifiable risk factors (mainly tobacco use, unhealthy diet and physical inactivity, and the harmful use of alcohol) and map the epidemic of NCDs and their risk factors.

Other ways to reduce NCDs are high impact essential NCD interventions that can be delivered through a primary healthcare approach to strengthen early detection and timely treatment. Evidence shows that such interventions are excellent economic investments because, if applied to patients early, they can reduce the need for more expensive treatment. These measures can be implemented at various resource levels. The greatest impact can be achieved by creating healthy public policies that promote NCD prevention and control and reorienting health systems to address the needs of people with such diseases.

> Vulnerable and socially disadvantaged people get sicker and die sooner than people of higher social positions, especially because they are at greater risk of being exposed to harmful products, such as tobacco or unhealthy food, and have limited access to health services.

Lower-income countries generally have lower capacity for the prevention and control of NCDs.

High-income countries are nearly four times more likely to have NCD services covered by health insurance than low-income countries. Countries with inadequate health insurance coverage are unlikely to provide universalaccess to essential NCD interventions.

(The authors are Director Professors / Senior Reseacher, Deptt of Community Medicine, Maulana Azad Medical College, New Delhi)

Cultivating Healthy Culture

Sunil Kumar Agarwal make his lifestyle as an example to usher in a culture of healthy practices at Kay2 Steel Ltd

Today, most people consider good health and healthy living as activities that are consciously chosen, or something that only those who are already fit can fully achieve. But imagine a culture that empowers everyone to live the healthiest lives. Well-known industrialist Sunil Kumar Agarwal, Director of Kay2 Steel Ltd and one of the founder members of Kamdhenu Ispat Ltd, has been working on, as an organisation, to build a culture of health enabling all employees to lead healthier lives.

He has been striving to live up to this vision over the past 35 years by adhering to the following practices:

Think Yoga: Yoga is an ultimate option to keep one's energies charged up. He has organised yoga workshops on regular basis to train his workers for optimal yoga practises and imbibe them in their lifestyle. He scrupulously sticks to half-an hour yoga practice daily.

Exercise Enthusiast: Sunil Agarwal is lover of exercise. He promotes regular exercises in his organisation to keep all his employee fit and fine.

Promoting Sanitation: At Kay2 Steel, a majority of employees are grey collar workers for whom awareness about sanitation is of immense importance. As head of the organisation, Sunil Agarwal himself takes keen interest in promoting the practice of sanitation among workers.

Popularising Hand-Wash: Regular washing of hands is a good habit which can help employeesfight infections. Although it may seem obvious, many don't take hand-wash as seriously as they should. Kay2 Steel promotes the practice of washing one's hands before eating, after using the restroom, and after sneezing or coughing.

Clean Workspace: The average desk harbours bacteria hundreds of times morethan a toilet seat – Alarmed, right? At Kay2 Steel, employees learn to keep their work area neat and organized as the company gives awards for this.

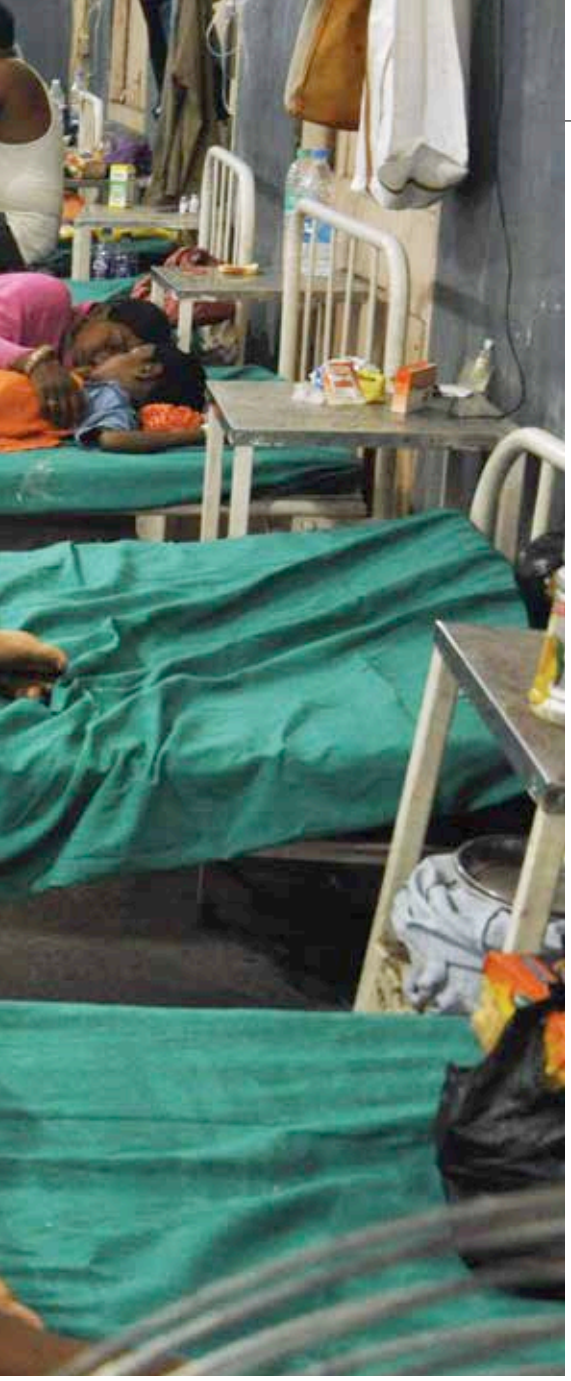
Inhaling Fresh Air: At Kay2, during lunch hour is the time when employees provide themselves with the daily dose of Vitamin D by going outdoors every day. They invigorate themselves by taking a brisk walk around the office building. Or, calm their nerves after a hectic day by simply sitting and meditating quietly for a few minutes in the lap of nature.

Says Sunil Agarwal, the proponent of healthy work culture, "We believe that striving toward a Culture of Health will help us realize our mission to provide healthcare for all. We know that realizing this vision will take time. It will require collaboration,collective sharing and caring. And I certainly cannot do it alone. Nonetheless, I firmly believe the vision is within the reach of our organisation, and we intend to put in all-out efforts to help our organisation achieve this goal."

DREADFUL DENGUE

In the worst outbreak of dengue in the national capital in the last five years,the number of deadly flu cases is on a steep rise. If the dengue situation is out of control in Delhi, it speaks of the sad state of affairs in the rest of the country too

BY AMRESH KUMAR TIWARY



With a three-year-old girl succumbing to the deadly dengue, the list of deaths due to the mosquito-borne fever has reached alarming figures in the national capital. At the time of going to the press, the total number of dengue cases in Delhi had crossed the 2,000 mark. Over the past few months, the incidence of dengue has grown manifold. Considering the rapid increase in the dengue cases,the state of health affairs in Delhi seems to be going from bad to worse.As the scare over the fever grows in other parts of the country too, the authorities and people need to pull their act together to counter the potential epidemic

Many dengue deaths have occurred in the capital amidst the mounting allegations surrounding private hospitals refusing to provide treatment to patients in emergency situations. Recently, the parents of a seven-year-old boy, who died of dengue, jumped to their deaths from a building after they failed to get him admitted to a hospital in time. The deceased couple's only son had died of suspected dengue after allegedly being denied admission at two prominent private hospitals.

In view of such cases, the government is mulling bringing an ordinance to punish such errant hospitals with the provision for cancellation of registration of hospitals violating its directive to provide mandatory treatment in dengue cases. It is also in the process of setting up "fever clinics" across Delhi to offer free treatment to the patients.

The dengue threat has also led to filing of a PIL in the Delhi high court by a law student Gauri Grover who has drawn the court's attention to the allegedly callous conduct of Delhi government in handling the menace. The PIL seeks directions to Delhi Police to file an FIR for abetment to commit suicide against the directors of named hospitals and a direction to treat dengue as an epidemic so that dengue patients should not be denied admission in any hospital, government or private. The petitioner has argued that the primary objective of her petition is to ensure that no person dies in future because of the callous attitude of hospital authorities who deny admission to poor patients just to get more money by admitting rich patients in place of EWS patients.

Dengue is a mosquito-borne viral infection. The infection causes flu-like illness, and occasionally develops into a potentially lethal complication called severe dengue. The global incidence of dengue has grown dramatically in recent decades. About half of the world's population is now at risk. Dengue is found in tropical and sub-tropical climates worldwide, mostly in urban and semi-urban areas. Severe dengue is a leading cause of serious illness and death among children in Asian and Latin American countries. There is no specific treatment for dengue/ severe dengue, but early detection and access to proper medical care lowers fatality rates below one percent. Dengue prevention and control solely depends on effective vector control measures.

"Dengue virus belongs to family Flaviviridae, having four serotypes that spread by the bite of infected Aedes mosquitoes. It causes a wide spectrum of illness from mild asymptomatic illness to severe fatal dengue haemorrhagic fever/ dengue shock syndrome (DHF/DSS)".

Dr Narendra Saini,
Infectious Disease Expert and General Secretary Indian Medical Secretary

Dengue virus is transmitted by female mosquitoes mainly of the species Aedes aegypti and, to a lesser extent, A. albopictus. The disease is widespread throughout the tropics, with local variations in risk influenced

"It is a myth that all dengue patients require platelet transfusion. In fact unnecessary transfusion causes more harm and puts the patient at risk of complications such as sepsis, transfusion-related acute lung injury (TRALI), transfusion-associated circulatory overload (TACO), allo-immunisation and allergic and anaphylactic transfusion reactions".

Dr KK Aggarwal, President, HCFI and Honorary Secretary General, Indian Medical Association

by rainfall, temperature and unplanned rapid urbanization.

According to Dr Narendra Saini, Infectious Disease Expert and General Secretary Indian Medical Secretary, "Dengue virus belongs to family Flaviviridae, having four serotypes that spread by the bite of infected Aedes mosquitoes. It causes a wide spectrum of illness from mild asymptomatic illness to severe fatal dengue haemorrhagic fever/dengue shock syndrome (DHF/DSS)".

Other features of the disease include its epidemiological patterns, including hyper-endemicity of multiple dengue virus serotypes in many countries and the alarming impact on both human health and the global and national economies.

Not only is the number of cases increasing as the disease spreads to new areas but explosive outbreaks are occurring. The threat of a possible outbreak of dengue fever now exists in Haryana, UP, Maharashtra and other parts of the country.

But don't worry, dengue is both preventable and manageable and fatalities occur only in 1% of the cases. Dengue is characterized by flu-like symptoms like headache, fever, muscle and joint pain. It affects everyone and at times can be fatal. There is no vaccine currently available against the disease, and hence it becomes necessary to prevent it by doctors'advice.Many fever-afflicted people also seek admission in hospital in panic against the doctor's advice.

Over a period of 24 to 48 hours, plasma leakage leads to increase in vascular permeability, which is the ability of small molecules or even whole cells to flow in and out of a blood vessel wall. The patients with marked plasma leakage, may develop shock, especially if treatment is delayed and is associated with case-fatality rate of 12%. In mild cases, when medical attention is received early, oral rehydration may be sufficient.

It is important to manage plasma leakage with intravascular volume repletion to prevent or reverse hypovolemic shock. However, in patients with established intravascular volume loss, it is recommended to administer intravenous fluid. Blood transfusion is only appropriate in patients with significant bleeding or those who have low hematocrit and fail to improve despite fluid resuscitation.

According to Dr KK Aggarwal, President, HCFI and Honorary Secretary General, Indian Medical Association, "Of late, the number of dengue patients has been on the rise, as the virus is transmitted by the bite of an infected Aedes mosquito. Plasma leakage is the most specific and life-threatening feature of dengue which occurs three to seven days after the onset of the illness. It is important to be aware of dengue's life-threatening aspect, even though 99% of dengue cases are non-fatal. The chest radiography and chest/abdominal ultrasound are useful for detection of plasma leakage".

As the threat of dengue refuses to

fade away, it is important to know the risksof platelet transfusion and when it is required for dengue patients. Transfusion for a dengue patient is required only if their platelet count is below 10,000 and there is spontaneous, active bleeding.

Adds Dr KK Aggarwal, "It is a myth that all dengue patients require platelet transfusion. In fact unnecessary transfusion causes more harm and puts the patient at risk of complications such as sepsis, transfusion-related acute lung injury (TRALI), transfusion-associated circulatory overload (TACO), allo-immunisation and allergic and anaphylactic transfusion reactions".

In Delhi, among those affected by dengue were a Palestinian diplomat and his two sons. Abd Elrazeg Abu Jazer, first secretary in the Palestine embassy, was admitted to a private hospital in Chanakyapuri while his two sons, Ashraf (23) and Amzad (16), were hospitalized recently. Salvatore Girone, one of the two Italian marines facing murder charges, was also reported to be down with dengue. The Italian defense ministry has sent two military doctors to India to monitor their health.

Recently, a 35-year-old woman died due to organ failure at a Gurgaon hospital after she was diagnosed with dengue, becoming the season's first victim of the vector-borne disease in Delhi-NCR. The Delhi-based woman was admitted to the private hospital three days ago with very low platelet count.

Gurgaon has recorded 12 confirmed cases of dengue so far. Over 10 cases have been reported, ironically, during the dengue prevention month observed by the health department.

While most dengue cases are reported during monsoon starting late July, the first case was reported earlier than usual this year. According to doctors, the trend is worrying as this may mean more number of cases this year.

The monsoon season brings with it several kinds of viral infections and fevers. Most of them are largely harmless and abate after a week or so. However, the fever could be due to dengue. It is important to be on guard against it and not let mosquitoes breed in your surroundings.

Recently, a10-year-old Manipur native girl from south Delhi had died at the AIIMS after a week of high fever, becoming the first suspected death victim of the vector-borne disease, though the municipal corporations did not consider the case, as the ELISA test was not conducted on her. As per municipal norms, only ELISA test- confirmed cases are taken in the official death count from the disease.

Last year, the city had reported three deaths and recorded nearly 1,000 cases. Till August 29, the number of houses found positive for

Safeguards against Dengue

1. Doctors suggest using mosquito repellant, maintaining personal hygiene, keeping the surroundings clean, wearing full-sleeve clothes and not allowing water or garbage to accumulate to prevent dengue.
2. Don't accumulate or store water in buckets, drums, and flower pots. Use the water up or empty them as soon as possible. If you cannot throw the water cover it up entirely.
3. Use mosquito repellents or sleep under mosquito nets. If someone at home is suffering from dengue, ensure that there are no mosquitoes in the house. You can use natural mosquito repellents like camphor or keep a tulsi plant near your window. Tulsi prevents the breeding of mosquitoes.
4. Do not keep your doors and windows open. Dengue mosquitoes bite in the morning and hence prevent mosquitoes from entering your house during the day. Make sure your doors and windows have a safety net that does not have any holes in it. If they do, fix them up instantly.
5. If anyone at home is exhibiting the symptoms of dengue, consult a doctor immediately. Read about other practical tips that can help you keep dengue at bay.
6. If you or any family member is suffering from suspected dengue fever, it is important to carefully watch yourself or relative for the next few days, since this disease can rapidly become very serious and lead to a medical emergency.
7. The complications associated with Dengue Fever/Dengue Haemorrhagic Fever usually appear between the third and fifth day of illness. One should therefore watch the patient for two days.

Platelet transfusion: Important Precautions

Dengue disease presents highly complex pathophysiological, economic and ecologic problems. During the last 50 years a large number of physicians have treated and described dengue disease in India, but the scientific studies addressing various problems of dengue disease have been carried out at limited number of centres.

While medical fraternity globally recognizes the role of platelet transfusion in the management of hospitalized dengue patients the exact indications and situations in which these are to be transfused may vary. Dengue infection is usually a benign syndrome caused by an arthropod borne virus. Bleeding in dengue is one of the dreaded complications and is associated with higher mortality in dengue hemorrhagic fever (DHF)/ Dengue shock syndrome (DSS). Bleeding manifestations are highly variable and do not always correlate with the laboratory abnormalities in the coagulation profile. Factors like mild degree of disseminated intravascular coagulation (DIC), hepatic derangement and thrombocytopenia act synergistically to cause bleeding in dengue patients.Severe bleeding is related to severe thrombocytopenia.Platelet transfusion is given in those patients who are either bleeding or having other haemorrhagic symptoms along with thrombocytopenia.

Since there is inherent risk associated with the transfusion of blood/ blood-component, it is imperative for each institution (or country) to lay their own criteria for transfusion of these blood components. A recent study was conducted to lay precise criteria and transfusion trigger for platelet transfusion in our set-up.

This study suggests that bleeding occurs more often in patients with severe thrombocytopenia. High-risk patients having platelet count <20,000/cumm and risk of bleeding require urgent platelet transfusion. Patients with platelet count 21-40,000/cumm are in moderate risk and require platelet transfusion only if they have any haemorrhagic manifestations and other superadded conditions.

Dengue fever and dengue haemorrhagic fever have emerged as a global public health problem in recent decades. The South-East Asian countries such as India, Indonesia, Myanmar, and Thailand are at the highest risk of dengue fever and dengue haemorrhagic accounting for nearly half of the global risk.

mosquito breeding stood at 1, 48,745 in the capital.

Elsewhere, Ahmedabad reported 37 cases of dengue in the first week of August, while the figure reached 327 since January this year. The 37 cases of dengue were recorded in Ahmedabad in the first week of August even as a sitting judge of the Gujarat High Court was also diagnosed with the mosquito-borne disease. Apart from dengue, there have been 247 cases of malaria in the city and nine cases of 'falciparum-caused' acute malaria in the first week of August.

The incidence of dengue has grown dramatically around the world in recent decades. The actual numbers of dengue cases are underreported and many cases are misclassified. One recent estimate indicates 390 million dengue infections per year (95% credible interval 284–528 million), of which 96 million (67–136 million) manifest clinically (with any severity of disease). Another study on the prevalence of dengue, estimates that 3900 million people, in 128 countries, are at risk of infection with dengue viruses.

Member states in the WHO regions regularly report the annual number of cases. In 2010, nearly 2.4 million cases were reported. Although the full global burden of the disease is uncertain, the initiation of activities to record all dengue cases partly explains the sharp increase in the number of cases reported in recent years.

Severe dengue (also known as Dengue Haemorrhagic Fever) was first recognized in the 1950s during dengue epidemics in the Philippines and Thailand. Today, severe dengue affects most Asian and Latin American countries and has become a leading cause of hospitalization and death among children in these regions.

As per a study, approximately 2.5 billion people live in dengue-risk regions with about 100 million new cases each year worldwide. The cumulative dengue diseases burden has attained an unprecedented proportion in recent times with sharp increase in the size of human population at risk.

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The Indigenous Solution

There are several benefits of the use of papaya leaf and Guduchi herb in the treatment of dengue fever

BY DR. PARTAP CHAUHAN

Dr. Partap Chauhan

Dengue is a virus transmitted by the Aedes-type mosquito. It is a painful flu-type disease that has affected many tropical towns and cities. It breeds in habitat such as old tyres, coconut husks, blocked gutters, plastic tarps, and anything else that can form small pools of water. This mosquito is active during the day, and often bites at the ankles.

With the number of people catching dengue fever on the rise every year in India, especially during this rainy season, the demand for a simple and inexpensive remedy has never been felt higher. All the more so as with so many common ailments, the modern medical system is not very helpful in fighting dengue. The good news is that Ayurvedic researchers in India have managed to discover a good remedy for dengue. It is the common 'papaya leaf'. Since they have discovered this, many people from India have managed to successfully and quickly cure dengue without spending a fortune on hospital visits.

Several studies have shown positive results. According to Ayurvedic researchers, enzymes in the papaya leaf can fight viral infections, not only of dengue, but they can help in regenerating platelets and white blood cells.

While market rates of most fruits remain quite high throughout the year, it is generally papaya that is available at affordable rate. The tree and its fruit both have very unique shape. Even the taste is different than most of the other fruits. In recent years, medicinal properties of papaya have attracted worldwide attention, though Ayurveda recognized them long ago.

The fruit of papaya is light, soft and rough in properties. While most of the other fruits in nature taste sweet and are cold in potency, the papaya fruit is bitter and pungent to taste and hot in potency.Chemically, the fruit contains a yellow colored gum resin, sugars, glycosides, acids primarily citric acid and a digestive enzyme called 'Papain'. This enzyme has a unique property to digest proteins and fats. Apart from this, papaya also contains vitamins such as A, B complex and C. Some minerals like sodium and potassium are also found in papaya. While most of the other fruits increase lot of kapha in body and are therefore not preferred in winter, papaya doesn't increase kapha so much but in fact pacifies vata&pitta. It is because of this property and pungent taste that even diabetic patients are allowed to eat

According to Ayurvedic researchers, enzymes in the papaya leaf can fight viral infections, not only of dengue, but they can help in regenerating platelets and white blood cells

papaya when most of the other fruits are not allowed to them.

Papaya proves useful for treating digestive problems and intestinal worms. It is recommended in flatulence, liver disorders and infection of the pancreas. Ayurvedic medicines for arthritis use Papaya too. Fresh cuts or wounds are treated with applying the juice of a fresh fruit. The latex from the unripe fruit is also excellent for the rapid cure of stubborn ulcers in mouth, tongue, and throat. To treat skin diseases, especially scabies and scalp eczema, papaya latex is mixed with alum powder and the paste is applied on the affected areas. The area is then cleaned with warm water after an hour.

After the significance of papaya, we come to herbs used in Ayurveda. There are only few herbs which are called by name 'Amruta' which means immortal. Guduchi happens to be one of those herbs which can cure even dreadful diseases and almost make the individual immortal. Definitely it deserves the name 'Amruta'.

Guduchi is one of the most frequently used herbs in Ayurveda. Its ability to act in a variety if ailments ranging from ordinary skin burning to cancer offers it a unique place in Ayurvedic system. The name 'Guduchi' itself means to protect from diseases. Other names of Guduchi are Amruta, Rasayani, Jeevanti and Vayastha which all reflect its unique ability to offer long and healthy life to the eater. A vain that lives for several years, Guduchi attracts attention due to its heart shaped leaves which are actually responsible for its botanical name 'cordifolia'. Though the vain produces flowers & fruits, it is the rhizome which really holds most of its medicinal properties.

The taste of Guduchi felt on tongue is bitter and slightly pungent & astringent, Guduchi undergoes transformation after digestion. So it doesn't act like other bitter, pungent plants act but works like sweet tasting herbs. This is an exceptional property of Guduchi which offers it a front seat in the treatment of diabetes where sweet herbs are generally prohibited. Diabetic patients cannot receive the benefits of other sweet herbs as they can increase their blood sugar levels but Guduchi gives them those benefits without increasing their sugar levels. Another speciality of Guduchi lies in the fact that it is neither very cold nor very hot in nature. Most of the other herbs either increase or decrease heat in body. But Guduchi maintains a balance and, therefore, can be used in any condition, any season and for any individual. It is light to digest, ignites fire, gives strength to the tissues and pacifies all three doshas. Apart from this, Guduchi has ability to digest toxins (ama) in tissues. Very rarely, so many virtues are found in a single herb.It is because of these properties that Guduchi proves effective in various types of fever, skin diseases, metabolic diseases, respiratory diseases, venereal diseases, jaundice, anaemia, gout, worms, ulcers, diabetes, piles, heart problems and urinary problems.

> Guduchi strengthens immune system of the body and helps it overcome the infections very fast. Clinical trials have proved Guduchi's efficacy in infectious fevers like dengue, swine flu, bird flu and malaria

Guduchi's role in combating various infectious febrile illnesses is beyond any doubt. It has been observed that Guduchi increases the resistant ability of the macrophages and efficiency of white blood cells. In other words, Guduchi strengthens immune system of body and helps it overcome the infections very fast. Clinical trials have proved Guduchi's efficacy in infectious fevers like dengue, swine flu, bird flu and malaria. A liquid herbal preparation made from crude powder of Bhoomyamlaki (Phylanthus amarus), Guduchi (Tinospora cardifolia), Kutki (Picorrhiza kurrae) and Tulsi leaves has been found effective in the treatment of dengue fever by increasing platelet counts of the dengue patients.

(The author is Ayurvedacharya and Director at Jiva Ayurveda)

Towards Health for All

The Indian healthcare system is largely private sector dominated. There is crying need to ensure that the majority of population canhave access to free public healthcare that includes supply of essential generic medicines

BY DR VINAY AGGARWAL

There is a widespread perception that 'healthcare has not been a political priority in India'. There seems an undue concentration on controversies in areas like pharmaceutical pricing as opposed to the importance of achieving equitable financial arrangements for enabling universal healthcare access. In view of the growing burden of long-term non-communicable conditions (NCDs) being recorded in the country, there is a need for addressing the threat of rising NCD and lifestyle linked mortality and morbidity in timely and effective ways. The country should go for the judicious use of medicines and other health care interventions for the primary, secondary and tertiary prevention of conditions such as vascular and renal diseases.

There is global human interests in areas such as assuring continuing investment in high risk biomedical research and development, as well as facilitating affordable world-wide access to medicines.

There is continuing concerns surrounding TRIPS (the Agreement on Trade Related Aspects of Intellectual Property Rights), alongside the significance of recent Indian decisions to issue compulsory licenses (CLs) for a number of patented medicines. Such actions have been applauded by some observers.

Transforming Healthcare in India

In 2012 the agency IMS, with research based pharmaceutical industry funding, conducted nearly 15,000 household interviews across 12 Indian States. This work took place in rural and urban areas and examined experiences of both hospital and outpatient care. It found that over 90 per cent of respondents said they felt able to get medical help when they are ill, albeit that this was less often the case in rural areas than in urban localities. This research also confirmed that the cost of medicines is the healthcare concern most frequently expressed by people, and that affordable access to treatment for chronic illnesses is more of a problem than access to drugs for acute illness episodes.

Better access to essential medicines

In 2012, there was a proposal to supply free medicines through public hospitals and health centres. It was intended that by 2017 over half the total population will have access to free public healthcare that includes a comprehensive range of essential generic medicines supplied via the country's 160,000 sub-centres, 23,000 primary health centres, 5000 community health centres and 600-plus district hospitals. It was proposed that the Government would directly fund 75

per cent of the relatively limited cost of extending public health service generic medicines supply.

This important policy initiative also envisaged that doctors working in the public service should cease prescribing branded drugs and that the National List of Essential Medicines (NLEM), which presently includes some 350 treatments ranging from anti-HIV medicines to analgesics, was to be used by states as a guide to what should be supplied free of charge to all those entitled to publicly funded treatment. It is of note that a number of states, such as, for example, Chhattisgarh, are already seeking to introduce extended free medicines supply arrangements.

States should be required to procure medicinal drugs directly from their manufacturers or importers through an open tender system, and should provide state-of-the-art warehouses for drug storage and distribution. Such actions help to address criticisms made by agencies such as the WHO to the effect that, although India has rapidly developed pharmaceutical manufacturing capabilities and achieved a relatively strong exporting record, its health policy makers have not to date been as effective as their industrial policy equivalents in ensuring that free or low cost, good quality, medicines are consistently available to the poorer half to two thirds of the domestic population.

The country's future success in this area will in large part depend on reducing levels of corrupt and allied perverse behaviours amongst prescribers and publicly funded medicines suppliers and purchasers. One possible way forward in this context could be the development of enhanced mechanisms for consumer reporting of public health service failures to supply free medicines, through – for example – the anonymous use of SMS (short message service) texting to independently run National Health Service quality surveillance centres.

To date, local Indian pharmaceutical manufacturers have had little or no need for intellectual property protection other than the use of trade names. Their domestic earnings have been in large part derived from promoting the sale of branded mature medicines. But if the use of minimum cost high quality generic medicines is significantly extended, progressive Indian companies may become more motivated to invest in developing new, more effective, products. It is by no means certain this will prove possible. But if it can be achieved they will consequently become more dependent on provisions other than brand name protection, including patents or alternatives such as periods of 'regulatory exclusivity', for the successful continuation of their businesses. In the case of outpatient (i.e. primary and community care) services, private facilities are today typically more accessible – in the sense that most people find it easier to travel by them than publicly provided services. This was not found to be so with hospital care. People in rural and poorer urban areas are, unsurprisingly, more likely to be public service users than the remainder of the population. This is mainly because of the opportunity to obtain free medication.

Yet it is of note that other observers have reported recurrent drug shortages in public service settings. There is evidence that patients – for reasons often related to provider side corruption, and inappropriate purchasing and/or the diversion of products away from public facilities – have frequently been denied access to free medicines they are in fact entitled to receive. It was also found by IMS that most people said that they would use public services if their quality was felt to be as good as that of private sector services.

Improving perceptions of the adequacy, integrity and responsiveness of public health services is t an important goal, if they are in future to play a more extensive role. Presently, the Indian healthcare system is, in urban areas especially, largely private provider dominated. The findings of this research try to explain why the provision of healthcare has not been a high profile political issue in India.

Because medicine costs are a clear public concern the above findings may also be taken to confirm that it is understandable that political and media attention has often focused on cutting the prices of medicines, even if in reality the latter can have little impact on overall care costs and/or outcomes in poorly structured markets and health service environments. Free publicly funded medicines supply has fundamental advantages for poor and vulnerable service users.

(The author is Chairman, Max Super Speciality Hospital, Vaishali and Former President, Indian Medical Association, New Delhi)

The Bane of Disability

People with disabilities suffer from a lack of access to proper, timely and adequate healthcare. The society and policy-makers must address the barriers that exclude such people from participating in the mainstream of life

BY DR SUNEELA GARG/DR TAPAS SADASIVAN NAIR

People with disabilities are among the most marginalized groups in the world. They have poorer health outcomes, lower education achievements, less economic participation and higher rates of poverty than people without disabilities. They also report seeking more healthcare, have greater unmet needs and are particularly vulnerable to deficiencies in healthcare services. Disability is now understood to be a human rights issue. People are disabled by society, not just by their bodies. These barriers can be overcome if governments, nongovernmental organizations, professionals and people with disabilities and their families work together.

Any restriction or lack of ability to perform an activity in a manner or within the range considered normal for the human beings, resulting from impairment is termed as disability. Impairment concerns the physical aspects of health; disability is the loss of functional capacity resulting from an impaired organ; handicap is a measure of the social and cultural consequences of an impairment or disability. The types of disability include locomotor, hearing, speech, visual and mental disability.

A recent development is the International Classification of Functioning, Disability and Health (ICF) developed by WHO in 2000. The ICF defines disability as an umbrella term for impairments, activity limitations and participation restrictions. Disability is the interaction between individuals with a health condition (e.g. cerebral palsy, Down syndrome and depression) and personal and environmental

factors (e.g. negative attitudes, inaccessible transportation and public buildings, and limited social supports).

Global scenario:

The WHO's Global Burden of Disease study starts with the preva¬lence of diseases and injuries and distributions of limitations in functioning – where available – in different regions of the world, and then estimates the severity of related disability. The analysis of the Global Burden of Disease 2004 data for the World Report on Disability estimates that 15.3% of the world population (some 978 million people of the estimated 6.4 billion in 2004) had "moderate or severe disability", while 2.9% or about 185 million experienced "severe dis¬ability". Among those aged 0–14 years, the figures were 5.1% and 0.7%, or 93 million and 13 million children, respectively. Among those 15 years and older, the figures were 19.4% and 3.8%, or 892 million and 175 million, respectively.

Disability situation in India:

Disability	Specific Data
Movement	20.3%
Seeing	18.8%
Hearing	18.9%
Speech	7.5%
Mental retardation	5.6%
Mental Illness	2.7%
Any other	18.4%
Multiple disability	7.9%

(Source: Census India 2011)

The 2011 Census reported over 26 million people in India as suffering from one or the other kind of disability. This is equivalent to 2.21% of the population. Among the total disabled in the country, 15 million are males (2.41%) and 11.8 million are females (2.01%). There is a slight increase in disability among both sexes over the past decade.

Among the eight types of disabilities on which data has been collected, the prominent ones are related to movement (20.3%), hearing (18.9%) and seeing (18.8%). The disabled by sex follow a similar pattern excepting visual and hearing disabilities where the proportion of disabled females is higher.

Disability in children:

The functioning of a child should be seen not in isolation but in the context of the family and the social environment. Children under age 5 in developing countries are exposed to multiple risks, including poverty, malnutrition, poor health, and unstimulating home environ¬ments, which can impair cognitive, motor, and social-emotional development. Children screening positive for increased risk of dis¬ability are less likely to have been breastfed or to have received a vitamin A supplement. As the severity of stunting and being underweight increases, so does the proportion of children screening positive for risk of disability. An estimated 200 million children under age 5 fail to reach their potential in cognitive and social-emotional development. 90% of children with disabilities in developing countries do not attend school, according to UNESCO.

Disability in youth:

Adolescents and youth with disabilities are among the neediest and most overlooked of all the world's children. In the developing countries this figure is between 75 and 150 million, with significant increase in their numbers predicted over the next few decades.

Young people are at a greater risk of acquiring a disability due to work related injuries, risk taking behaviour such as extreme sports, motor vehicle accidents, experimentations with drugs, unprotected sex, and indeed through violence and warfare.

Disability in women:

Women with disabilities are recognized to be multiply disadvantaged, experiencing exclusion on account of their gender and their disability. Women with disabilities are more likely to be victims of violence or rape, according to a 2004 British study, and less likely to obtain police intervention, legal protection or preventive care. A small 2004 survey in Orissa, India, found that virtually all women and girls with disabilities were beaten at home while

Dr Tapas Sadasivan Nair

25% of women with intellectual disabilities had been raped and abused.

Disability in elderly:

Global ageing has a major influence on disabil¬ity trends. Higher disability rates among older people reflect an accumulation of health risks across a lifespan of disease, injury, and chronic illness. Older people are disproportionately repre¬sented in disability populations. Rates of disability are much higher among those aged 80 to 89 years, the fastest-growing age cohort worldwide, increasing at 3.9% a year and projected to account for 20% of the global population 60 years or older by 2050.

How are the lives of people with disabilities affected?

People with disabilities are particularly vulnerable to deficiencies in healthcare services.

a) Secondary conditions - Secondary conditions occur in addition to (and are related to) a primary health condition, and are both predictable and therefore preventable. Examples include pressure ulcers, urinary tract infections, osteoporosis and pain.

b) Co-morbid conditions - Co-morbid conditions occur in addition to (and are unrelated to) a primary health condition associated with disability. For example the prevalence of diabetes in people with schizophrenia is around 15% compared to a rate of 2-3% for the general population.

c) Age-related conditions - The ageing process for some groups of people with disabilities begins earlier than usual. For example some people with developmental disabilities show signs of premature ageing in their 40s and 50s.

d) Engaging in health risk behaviours - Some studies have indicated that people with disabilities have higher rates of risky behaviours such as smoking, poor diet and physical inactivity.

e) Higher rates of premature death - Mortality rates for people with disabilities vary depending on the health condition. However, an investigation in the United Kingdom found that people with mental health disorders and intellectual impairments had a lower life expectancy.

Barriers to healthcare:

a) Prohibitive costs - Affordability of health services and transportation are two main reasons why people with disabilities do not receive needed health care in low-income countries.

b) Limited availability of services - The lack of appropriate services for people with disabilities is a significant barrier to healthcare. For example, research in Uttar Pradesh and Tamil Nadu found that after the cost, the lack of services in the area was the second most significant barrier to using health facilities.

c) Physical barriers - Uneven access to buildings, inaccessible medical equipment, poor signage, inadequate bathroom facilities, and inaccessible parking areas create barriers to healthcare facilities.

d) Inadequate skills and knowledge of health workers - People with disabilities

were more than twice as likely to report finding healthcare provider skills inadequate to meet their needs, four times more likely to be treated badly and nearly three times more likely to be denied care.

Strategies:

a) Enable access to all mainstream systems and services -Mainstreaming is the process by which governments and other stakeholders address the barriers that exclude persons with disabilities from participating equally in any service intended for the general public, such as education, health, employment, etc. This requires changes to laws, policies, institutions and environments.

b) Invest in programmes and services for people with disabilities -Some people with disabilities may require access to specific measures, such as rehabilitation, support services, or vocational training, which can improve functioning and independence and foster participation in society.

c) Adopt a national disability strategy and plan of action -All sectors and stakeholders should collaborate on a strategy to improve the well-being of people with disabilities. This will help improve coordination between sectors and services.

d) Involve people with disabilities -In formulating and implementing policies, laws and services, people with disabilities should be consulted and actively involved. At an individual level, persons with disabilities are entitled to have control over their lives and therefore need to be consulted on issues that concern them directly.

e) Improve human resource capacity -Human resource capacity can be improved through effective education, training and recruitment. For example training of health professionals, architects and designers should include relevant content on disability and be based on human rights principles.

f) Provide adequate funding and improve affordability -Adequate and sustainable funding of publicly provided services is needed to remove financial barriers and ensure good quality.

g) Increase public awareness and understanding about disability -Mutual respect and understanding contribute to an inclusive society. It is vital to improve public understanding of disability, confront negative perceptions, and represent disability fairly.

h) Improve the availability and quality of data on disability -Data need to be standardized and internationally comparable to benchmark and monitor progress on disability policies and on the implementation of the CRPD nationally and internationally. At the national level, dedicated disability surveys can also be carried out to gain more comprehensive information.

(i) Strengthen and support research on disability -Research is essential for increasing public understanding about disability, informing disability policy and programmes, and efficiently allocating resources. More research is needed, not just about the lives of people with disabilities, but also about social barriers, and how these can be overcome.

(The authors are from Department of Community Medicine, Maulana Azad Medical College, New Delhi)

Destroying Dreams

JRA is the most common cause of chronic arthritis in children. It is an autoimmune disease, wherein the immune system, which is supposed to protect the body from harmful invaders, instead releases chemicals that can damage healthy tissues and cause inflammation and pain

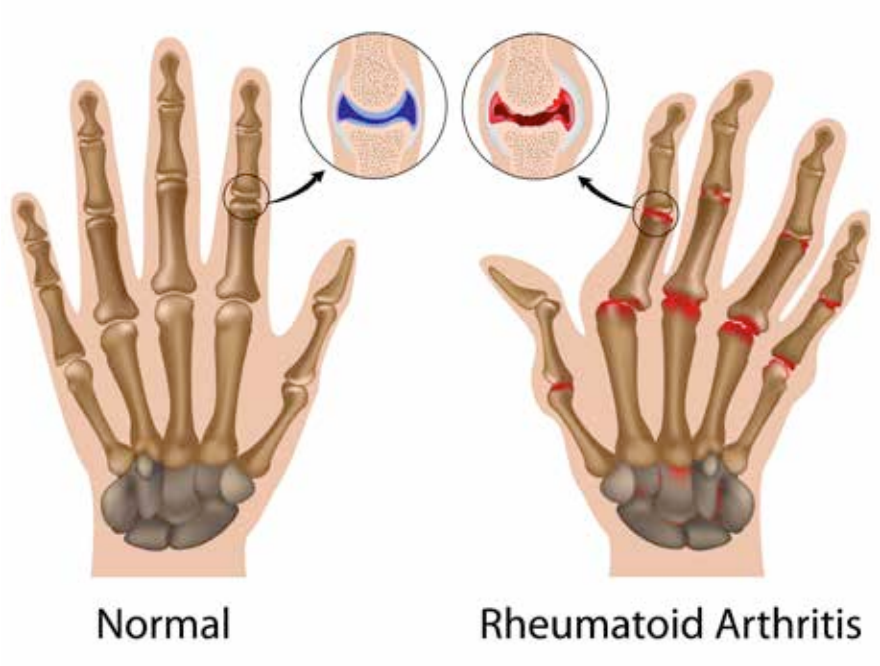
BY DR. RAMNEEK MAHAJAN

Dr. Ramneek Mahajan

It was a bright, sunny morning. Aniket, a 14-year-old emerging football player from West Delhi, had just finished his everyday practice as he was preparing for the state's junior team selection to be held soon. But suddenly, he started suffering from pain in his right ankle, accompanied by swelling. He took pain killers and pain relieving ointments but to no avail.

His family took him to anorthopaedic doctor and he was diagnosed with Juvenile Rheumatoid Arthritis (JRA) which is increasing among children. The doctor suggested complete rest to Aniket and advised him against playing football. As he was preparing for state level selection, this news came as a big blow to young Aniket and his parents. His dream of making into the State's junior football team came crashing down. He felt helpless at such a young age and for his parents too it was tough time. Mr Mehta, father of Aniket said, "Our son would sit at home and watch the television, he lost his appetite, he was an active kid but now due to his illness he has to be confined to home at such an age".

Arthritis is an inflammation of the joints which is characterized by swelling, heat and pain. In India out of every 1000 children, one child is affected by JRA. It is more frequent among young girls than boys in India. As this disease is not well-



known, many cases go unreported. Arthritis can be for short term which can last for few weeks or months, or it can be chronic which might last for months or years. In rare cases, it could last a lifetime.

Juvenile Rheumatoid Arthritis or JRA is the most common cause of chronic (lasts more than 6 weeks) arthritis in children. It is of different types depending on the clinical signs and symptoms. In JRA, child has joint pain associated with swelling and along with this may have fever, skin rash, lymph node enlargement, backache, red eye, or pain in sole or heel.

According to research, JRA is an autoimmune disease. In autoimmune diseases, white blood cells cannot tell the difference between the body's own healthy cells and bacteria/viruses. The immune system, which is supposed to protect the body from these harmful invaders, instead releases chemicals that can damage healthy tissues and cause inflammation and pain. To effectively minimize the effects of arthritis, an early diagnosis is essential. It is important to understand the symptoms and characteristics of different types of JRA, so that you can help your child maintain an active and healthy lifestyle. The JRA usually appears in kids between 6 months and 16 years old. The first signs are joint pain and swelling and reddened or warm joints. There are seven major types of JRA.

Systemic JRA: It affects the whole body. Its symptoms include high fever that often increases in the evenings and then may suddenly drop to normal. During the onset of fever, the child may feel very ill, appear pale, or develop a rash. The rash may suddenly disappear and then quickly appear again.

Oligoarthritis: Affects four or fewer joints. Symptoms include pain, stiffness, or swelling in the joints. The knee and wrist joints are the most commonly affected.

Polyarticular Arthritis, rheumatoid factor negative: Affects more girls than boys. Symptoms include swelling or pain in five or more joints. The small joints of the hands are affected as well as the weight-bearing joints like the knees, hips, ankles, feet, and neck.

Polyarticular Arthritis, rheumatoid factor positive: Affects about 15% of kids with polyarticular arthritis or about 3% of all children with JRA.

Psoriatic Arthritis: Kids with this also have the psoriasis rash themselves or a close relative with psoriasis. Their fingernails and or toenails might be affected by the condition.

To effectively minimize the effects of arthritis, an early diagnosis is essential. It is important to understand the symptoms and characteristics of different types of JRA, so that you can help your child maintain an active and healthy lifestyle

Enthesitis-Related Arthritis: Most commonly affects the lower extremities and the spine. Kids also might have inflammation where tendons join bones.

Undifferentiated Arthritis: Arthritis that doesn't fit into any of the above categories or fits into more than one of the categories.

It is important to take dietary precautions. Foods like potatoes and pulses do not increase joint paints. A proper balanced diet is a must for maintenance of muscle mass, bone strength and adequate haemoglobin in blood. From a young age, a child should avoid food rich in fat and salt. It is important to maintain a regular exercise programme. The muscles should be strong and healthy so that they can support and protect the joints. Be sure that your child warms up the muscles through stretching before exercising. Make exercise a family activity to build fun and enthusiasm. The child must eat a balanced diet which includes plenty of calcium to promote bone health. He/she should attend school, participate in extra-curricular and family activities, and live life as normally as possible.

(The author is Orthopaedics and Joint Replacement Surgeon, Saket City Hospital, New Delhi)

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Out of Common Man's Reach

India needs to invests adequately in improving universally accessible healthcare, besides preventing and treating not only infectious disorders but also non-communicable diseases (NCDs)

BY DR A K AGARWAL

Since independence in 1947, life expectancy in India at birth for men and women combined has doubled to 65 years. However, the country has experienced delayed demographic and epidemiological transitions as compared with China and many other parts of Asia. Despite the gradual progress of recent decades, infant mortality is still over 40 per 1000, while maternal mortality is 2 per 1000 live births. Healthy life expectancy in India remains about 55 years, compared with close to 70 years reported in countries such as China, the US and Japan.

About 40 per cent of all deaths in India are still due to infections. The majority of the remainder are mainly due to non-communicable conditions such as cardiovascular diseases (heart attacks and associated conditions, including strokes, are alone responsible for a quarter of all mortality), chronic respiratory disorders and cancers.

Presently, the burden of ill health imposed on Indian society is equivalent in lost potential welfare terms to 12.5 per cent of GDP for infectious and allied complaints and 12.5 per cent of GDP for non-communicable diseases (NCDs). However, the harm and loss caused by NCDs will in future rise in its relative significance, especially if tobacco consumption does not fall and the use of medicines along with other interventions to prevent and manage disorders such as hypertension, hyperlipidaemia and type 2 diabetes is not markedly increased. It is anticipated that 100 million people in India will be living with type 2 diabetes by 2040.

India currently spends only 1.2 per cent of its GDP on publicly funded health care. This is considerably less than most other comparable countries. Total Indian health spending is conventionally estimated at a little over 4 per cent of GDP. The public healthcare system has been strengthened since the start of the 21st century by initiatives such as the National Rural Health Mission (NRHM). But it still suffers from significant limitations in areas such as the (free) provision of essential medicines to the 400-600 million poorest Indians.

Most healthcare in India is presently provided via the private sector. Because of a lack of affordable insurance protection it is principally funded via out-of-pocket payments. A majority of Indians believe they have

adequate access to services. But there is evidence that the current system often fails to meet medically defined need and is ill-suited to meeting the requirements of communities characterised by increasing chronic/non-communicable disease burdens.

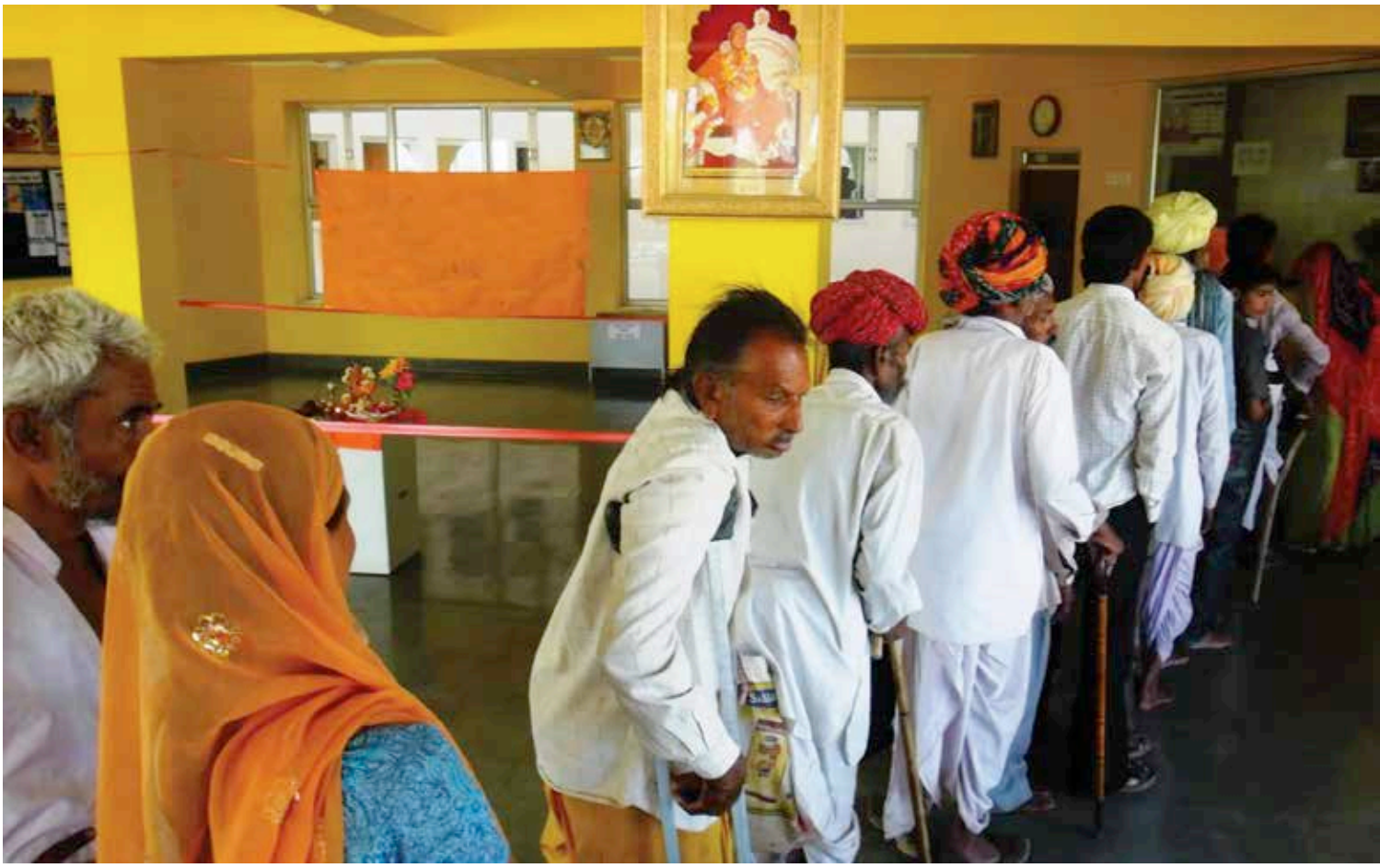
The Planning Commission of India, presently known as Niti Ayog, which complements the directly elected elements of Government, instituted a High Level Expert Group (HLEG) on Universal Healthcare Coverage (UHC). This was chaired by Dr Srinath Reddy of the Public Health Foundation of India and reported in 2011. Subsequently, the country's 12th Five Year Plan projected an increase in public health spending to 2.5 per cent of GDP by 2017. The former Prime Minister, Dr Manmohan Singh, set a goal of this total reaching at least 3 per cent of GDP by 2022. He also announced extensions in the publicly funded supply of free generic medicines to the less advantaged half of the Indian population by 2017. A five year cumulative sum of US $5 billion, or about 0.3 per cent of annual GDP, was to be allocated to this reform. However, the HLG on Universal Health Coverage recommended increasing Indian annual public spending on medicines from 0.1 per cent of GDP to 0.5 per cent of GDP, and it now appears that because of reductions in India's rate of economic growth, improvements in generic medicines supply are to be delayed or abandoned.

> About 40 per cent of all deaths in India are still due to infections. The majority of the remainder are mainly due to non-communicable conditions such as cardiovascular diseases (heart attacks and associated conditions, including strokes, are alone responsible for a quarter of all mortality), chronic respiratory disorders and cancers

Many in India appear to believe that a key way of achieving better public health is via reducing the prices of medicines for treating conditions such as advanced cancers. Yet this is not the case. Measures like issuing compulsory licenses on such products can at best benefit only small numbers of better-off people and some local pharmaceutical companies. The public as a whole will benefit much more from the introduction of universal health coverage and a wider use of medicines for preventing and treating early stage vascular diseases, diabetes and cancers.

India is now the world's 3rd largest medicines producer by volume. But it is not yet in the top 10 by value. The available sources indicate that the domestic Indian pharmaceutical market for allopathic drugs is today worth in the order of US $13-14 billion a year. India's pharmaceutical exports – which the Government is seeking to expand – are of comparable value.

In financial terms, India's most important external pharmaceutical markets are the US and the EU. Low cost Indian made medicines have been important in extending access to treatments for conditions such as HIV in poorer parts of the world. However, India does not as yet have a strong record in fundamental pharmaceutical innovation.



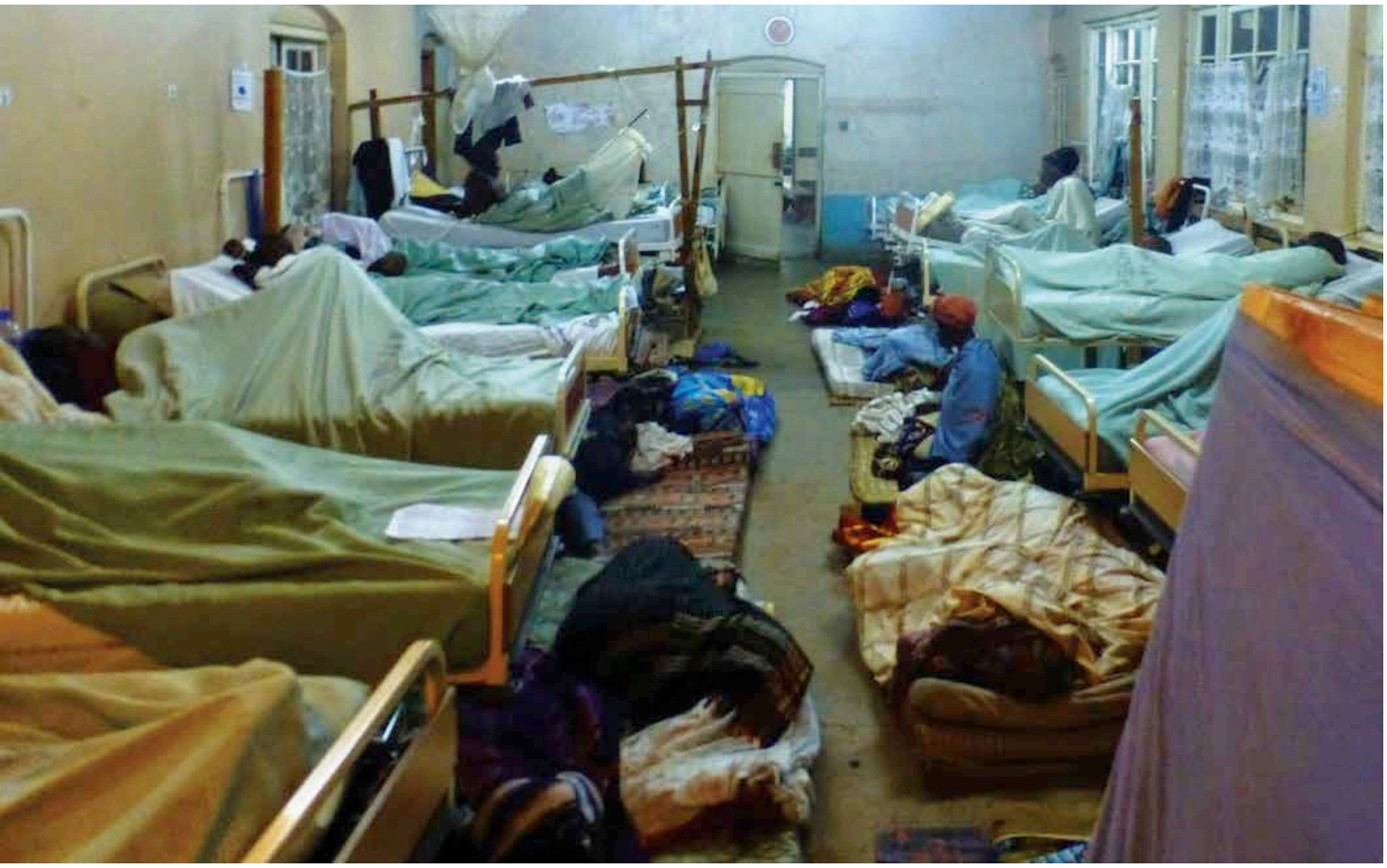
Critics argue that current Indian policies are narrowing and limiting intellectual property protection for products such as medicines and that this is inconsistent with long term Indian as well as global public interests in both enhancing universal access to essential medicines and increasing worldwide investment in biomedical research and development. A future global way forward could be to strengthen intellectual property rights for new medicines while in addition extending the requirements placed on IPR holders to provide affordable and/ or free essential treatment in poor areas through measures such as stratified pricing.

The country is vulnerable to internal and external challenges associated with, for example, continuing gender inequalities and global warming. At worst, there is a risk of a stalled demographic transition coupled with increased rates of non-communicable illnesses. But if India invests adequately in improving universally accessible healthcare and preventing and treating not only infectious disorders but also NCDs, these dangers should prove avoidable. The country could in time again become one of the world's wealthiest and healthiest nations.

Commentators have observed that there are two ways of looking at their country in its modern context. Viewed positively, India has long enjoyed centres of wealth and a rich social diversity. Seen from this perspective, it is today in the process of recovering its position as a global 'super-power'. Discounting the EU as a collective entity and as measured in purchasing power parity (PPP) based terms, India's economy is already the third largest in the world.

Although China's economic development from around that time has been faster (even in 1990 the two countries had roughly the same per capita GDP), India, which is home to over 1.2 billion people, has made important progress. As already stated, average life expectancy at birth has risen to over 65 years for men and women combined. This is about twice the figure recorded when the nation became independent in the late 1940s. In the southern State of Kerala average life expectancy is, at 74 years, comparable to that presently reported for China as a whole.

For comparison, when healthcare systems such as the UK's NHS were established at the end of the 1940s, life expectancy at birth in Western Europe and the US was at the same level that India enjoys today. Since then it has increased in the 'mature industrialised' economies by another 10 years. This is only a third of the absolute gain achieved by India in the same period, albeit that enhancing fitness and survival rates in



older people is a fundamentally different task from that of cutting infant and child mortality. The challenges facing India today relate to bridging the transition from fighting infections to reducing the burden of chronic disease and living healthily in later life.

It is understandable that the Indian public is concerned about the cost of pharmaceutical products. On a day-to-day basis many people experience outlays on drugs (which to varying degrees also encompass professional and institutional fees, as well as taxes) as the dominant element in the out-of-pocket expenditures they believe are needed to protect their health. Many sources suggest that a half of total healthcare outlays are spent on purchasing 'drugs'.

Yet the available data can be difficult to interpret. It is concluded here that spending on allopathic (western science based as opposed to other traditional) medicines expressed in manufacturer's prices (net of mark-ups by suppliers of all sorts, which may encompass practitioners' fees) is unlikely to account for more than about 20 per cent of total health spending in India. This is not far out of line with equivalent figures reported elsewhere. What has been more atypical is India's to date low overall level of health investment. It is also worth stressing that tragedies such as families being driven into poverty because of healthcare costs can in large part be seen as resulting from a collective failure adequately to provide systems that protect patients from potentially catastrophic risks, including those of hospital care that is not available via public agencies.

> Because of a lack of affordable insurance protection, it is principally funded via out-of-pocket payments. A majority of Indians believe they have adequate access to services. But there is evidence that the current system often fails to meet medically defined need and is ill-suited to meeting the requirements of communities characterised by increasing chronic/non-communicable disease burdens

(The author is Professor of Excellence and Former Dean, Maulana Azad Institutes of Medical Science, New Delhi

Breathless during Sleep

Dr Tripti Brar

Sleep Apnea, a common disorder in which you have one or more pauses in breathing or shallow breaths while you sleep, is a leading cause of excessive daytime sleepiness, increased anxiety levels or depression, loss of interest in sex, poor performance at work or school etc

DR TRIPTI BRAR

We all require a good night sleep in order to relax our mind and body. Sleep is very important for proper functioning of our body. When we sleep, all the muscles in our body become more relaxed including the ones that that help keep the airway open and allow air to flow into the lungs. But sometimes, due to various reasons, our sleep pattern gets

disturbed; leading to sleep disorders and one such disorder is Sleep Apnea.

Sleep Apnea is a common disorder in which you have one or more pauses in breathing or shallow breaths while you sleep. Normally, our upper throat remains open enough during sleep to let the air pass by. However, some people have a narrow throat area. When the muscles in their upper throat relax during sleep, their breathing may stop for a period of time (often more than 10 seconds). This condition is called Apnea.

Breathing pauses in Sleep Apnea can last from a few seconds to minutes. They may occur 30 times or more in an hour. Typically, normal breathing then starts again, sometimes with a loud snort or choking sound. As a result, the quality of your sleep is poor, which makes you tired during the day. Sleep Apnea is a leading cause of excessive daytime sleepiness.

Sleep Apnea usually is a chronic (ongoing) condition that disrupts your sleep. When your breathing pauses or becomes shallow, you'll often move out of deep sleep and into light sleep.

The snoring in people with obstructive Sleep Apnea is caused by the air trying to squeeze through the narrowed or blocked airway. However, everyone who snores does not have Sleep Apnea. If a person's lower jaw is shorter as compared to the upper jaw (retrognathia), then that person has a higher risk of developing Sleep Apnea.

Factors like certain shapes of the palate or airway that cause the airway to be narrower or collapse more easily, large neck or collar size (17 inches or more in men and 16 inches or more in women), large tongue which may fall back and block the airway, obesity, large tonsils and adenoids in children that can block the airway; increase the chances of developing this problem.

Sleep Apnea often goes undiagnosed. Doctors usually are unable to detect the condition during routine visits. Also, there are no blood tests that can help diagnose this condition.

Most people who have Sleep Apnea don't know themselves that they have this problem because it only occurs during sleep. A family member or bed partner can be the first to notice signs of Sleep Apnea. People with poorly treated Sleep Apnea often have increased anxiety levels or depression, loss of interest in sex, poor performance at work or school etc.

Sleep Apnea, if it remains untreated, can lead to increased risk of developing high blood pressure, heart attack, stroke, obesity, diabetes and even worse, heart failure. It may also lead to arrhythmias or irregular heartbeats, increase in chances of having work-related or driving accidents, daytime sleepiness etc.

Sleep Apnea, if it remains untreated, can lead to increased risk of developing high blood pressure, heart attack, stroke, obesity, diabetes and even worse, heart failure. It may also lead to arrhythmias or irregular heartbeats, increase in chances of having work-related or driving accidents, daytime sleepiness etc.

The problem of Sleep Apnea is completely curable with proper treatment. While a diagnosis of Sleep Apnea can be scary, it is a treatable condition. In fact, there are many things you can do on your own to help, particularly for mild to moderate Sleep Apnea. Home remedies and lifestyle modifications can go a long way in reducing Sleep Apnea symptoms.

People who are overweight have extra tissue in the back of their throat, which can fall down over the airway and block the flow of air into the lungs while they sleep. So, it is important to lose weight. Besides, if you smoke, please quit this habit. Smoking is believed to contribute to Sleep Apnea by increasing inflammation and fluid retention in your throat and upper airway. Similarly, avoid alcohol, sleeping pills, and sedatives, especially before bedtime as they relax the muscles in the throat and interfere with breathing.

Avoid caffeine and heavy meals within two hours of going to bed. Maintain regular sleeping hours. Sticking to a steady sleep schedule will help you relax and sleep better. Apnea episodes decrease when you get plenty of sleep. These small changes in lifestyle can to a large extent help in minimising the problem of Sleep Apnea.

For those suffering from obstructive sleep apnea (OSA), simply changing lifestyle won't be enough. After consulting their doctor, such patients can opt for a Continuous Positive Airway Pressure therapy (CPAP), a machine to help a person breathe more easily during sleep. A CPAP machine increases air pressure in your throat so that your airway does not collapse when you breathe in.

Surgical management of snoring and OSA is indicated when a surgically correctable abnormality is believed to be the source of the problem and the patient has tried continuous positive airway pressure (CPAP) without success. In addition, many patients opt for surgical treatment after non-invasive forms of treatment have proven ineffective or difficult to tolerate.

Some people who have Sleep Apnea might benefit from surgery. But, the type of surgery and how well it works depends upon the cause behind the disease. A surgery is done to widen breathing passages. It usually involves shrinking, stiffening, or removing excess tissue in the mouth and throat or resetting the lower jaw.

Sleep apnea is a chronic condition that requires long-term management. Lifestyle changes, mouthpieces, surgery, and breathing devices can successfully treat Sleep Apnea in most people.

(The author is Consultant, ENT, Jaypee Hospital, Noida)

Rejuvenating Sojourn

Availability of world-class healthcare at competitive cost drives medical tourists from all over the world to visit India in large numbers

BY DR SWAPNIL SHIKHA

A strong system of healthcare in India has made it a much sought after destination for medical services. The country is known for its high quality and world class medical facilities that boast economical pricing, robust infrastructure and top notch healthcare services.

International patients not only from countries in the neighbourhood such as Bangladesh, Pakistan, Afghanistan, Sri Lanka, Maldives but also from the US, UK, Europe and many African countries come to India to avail world-class medical services and they leave from here impressed with India's commitment to quality medical treatment at affordable pricing.

Why should one consider India for one's healthcare needs?

India has several advantages when it comes to healthcare services. Some of them are mentioned below:

1. High standards in medical, surgical care and patient handling
2. Low cost treatment
3. Fluent English speaking hospital staff
4. Waiting period for surgeries and other treatment is lower than in other countries
5. A large number of private hospitals where the medical facilities and serving doctors can be compared to the best in the world
6. State-of-the art technology available to treat even the most difficult medical cases
7. Availability of traditional/alternative healing systems like Ayurveda, Yoga, Ayush, Siddha, Unani and Naturopathy
8. India has many tourist attractions

that offer healing environs and picturesque surroundings.

Key strengths of the country for medical tourism

The corporate hospital standards in India are world class, able to compete with the best and can offer you any service comparable with anywhere else in the world.India has a well-trained pool of manpower when it comes to doctors, physicians, nurses, and paramedical staff. You receive immediate attention to all your needs, be it for treatment or surgery. Now you don't have to wait for months to get treated. Even after you go back, you can still consult with your doctors and with the hospital through the facility of telemedicine.

Dr Swapnil Shikha

Indian nurses are some of the highly trained and compassionate medical professionals in the world.Besides, if you are just looking for a change from your busy life, then India has many wellness / holistic medical centres where you can get traditional massages and Ayurvedic therapies.

High standards in medical, surgical care and patient handling

Many hospitals and health centres specialize in certain fields such as cardio thoracic surgery, dentistry, ophthalmology, etc. Many healthcare facilities organize seminars and conferences where they invite leading doctors from around the world. World class diagnostic centres, blood banks and imaging centres have been set up.

Low cost treatment

The cost of getting treatment in India is

India has a well-trained pool of manpower when it comes to doctors, physicians, nurses, and paramedical staff. Now you don't have to wait for months to get treated here. Even after you go back, you can still consult with your doctors and with the hospital through the facility of telemedicine

very low even when compared with other medical tourism countries. It is at the most 10% to 20% of what will be charged in the US or UK. Above all you will find the same standards upheld that you would have found in your country.

Fluent English speaking hospital staff

There is high professionalism in the Indian medical industry. All doctors, nurses and most paramedical staff will speak to you in excellentEnglish. Now you don't have to worry about not being understood. And this eliminates the need for a translator.

Waiting period for surgeries and other treatment is lesser than in other countries

Many patients come to India after learning that they would have to wait for months to undergo a similar surgery in their country. Rather than waiting for a long time and suffer in the meanwhile, flying to India for medical treatment is a much better option.

A large number of private hospitals where the medical facilities and serving doctors can be compared to the best in the world

Hospitals and clinics in India are constantly acquiring the latest equipment and state-of-the-art technology to deliver the widest range of services. Many hospitals have also started international patient wards with special desks that cater to the travel requirements, translation and dietary requirements of international medical tourists exclusively.

State-of-the-art technology available to treat even the most difficult medical cases

India is known for medical treatments where advanced healthcare is required, such as organ transplants, cardio-vascular surgery, kidney treatment, etc. Indian hospitals are equipped with high end technologies such as Gamma knife, Cyber knife, IMRT, brain suite, Novelix TX, PET scan, IGRT, etc.

> When you are done with your medical procedure, you can visit several scenic tourist destinations in India. Many of the people who come to India for health tourism end up exploring the beauty and mystique of the country

Availability of traditional/ alternative healing systems like Ayurveda, Yoga, Ayush, Siddha, Unani and Naturopathy

If you are looking for holistic healing centres for alternative procedures, then India is a well-known medical tourism destination where you can access traditional and highly recommended treatments like the world renowned Ayurveda, yoga, meditation and naturopathy.

India has many tourist attractions that offer healing environs and picturesquesurroundings

India has a rich cultural and historical past, and is well connected to all places by train, bus and flight. Travel is also very economical and easy. When you are done with your medical procedure, you can visit several scenic tourist destinations in India. Many of the people who come to India for health tourism end up exploring the beauty and mystique of the country.

(The author is director, Amrapali Health Care)

Raising Road Safety Awareness

Delhi Orthopaedic Association (DOA) believes that for cutting down road accidents, it is necessary to have compulsory traffic training at secondary school level; the association also plans to present a petition to Delhi Government in this regards. Indian Orthopaedic Association (IOA) has marked this year for 'Road Safety', in keeping with the "National Bone and Joint Day 2015". The DOA, Delhi chapter of the IOA, is running an awareness campaign to highlight the menace associated with road accidents. The Association is placing road safety awareness posters in doctor's clinics & hospitals and plans to visit Road Transport Offices to propagate the best practices amongst learner licensees. The DOA will also be running a school programme to educate the kids about road safety and first aid.

The DOA is also focusing of school education programme; members will be visiting the schools in their communities and initiate talk programmes for kids. The program will make kids aware about safe driving for avoiding road accidents. The members will also be informing kids about better road behaviour to prevent road rage cases. The DOA will be giving a petition to the Delhi government for inducting traffic education as part of curriculum and hopes that it will be taken up by the government as a priority.

Amrapali Group Plays Against Cancer

With a pious motive to support cancer patients, Amrapali Group –a renowned name in the realty sector – played against cancer with a smaller ball.

Recently, a Corporate Futsal (variant of Football) Challenge, was organized at Thyagaraj Stadium by Can Support with the support of Amrapali Group as associate sponsor, to support the good cause. As many as 24 corporate teams took part in this indoor football event where each team consist of 5 players.

Futsal is a modification of football that is played on a smaller field and mainly played indoors with a smaller ball with less bounce than a regular football. This lets the players concentrate on improvisation and creativity. It is widely viewed as the ideal skill building environment for producing technically excellent football players. On this occasion, **Dr. Pallavi Mishra, CEO of Amrapali Group** honoured the winner team and said, "We have best medical facilities in our country to cure cancer but people are not much aware about it and they still tend to believe that cancer is synonymous with death. By initiating such event, we would like to spread awareness among masses and wish to provide them a happy life."

Cancer is the world's second biggest killer after cardiovascular disease, but one of the most preventable non-communicable chronic diseases. According to the WHO, an estimated 14.1 million new cancer cases and 8.2 million cancer related deaths occurred in 2012, three quarters of whom were in low-and middle- income countries. By 2015, that number is expected to rise to 9 million and increase further to 11.5 million in 2030.

Interestingly, up to 40% of all cancer deaths can be avoided by reducing tobacco use, improving diets and physical activity, lowering alcohol consumption, eliminating workplace carcinogens and immunizing against hepatitis B virus and the human papilloma virus, Dr Mishra further added.

The initiative is part of Amrapali group's CSR initiatives.

Pushpanjali Crosslay Hospital Renamed as Max Super Speciality Hospital

Max Healthcare (MHC) recently announced that Pushpanjali Crosslay Hospital (PCH) has been renamed as Max Super Speciality Hospital, Vaishali. Max Healthcare, one of India's leading healthcare services provider, had announced the acquisition of the NCR-based PCH through fresh investments and acquisition of shares from existing promoters in May 2015. Situated just 4 kms from Max Super Speciality Hospital in Patparganj, the 340-beds hospital occupies a prime location along the East Delhi-Ghaziabad-Noida corridor. The hospital which has the capacity to expand up to 540 beds, is NABH and NABL accredited and has been operational since 2010.

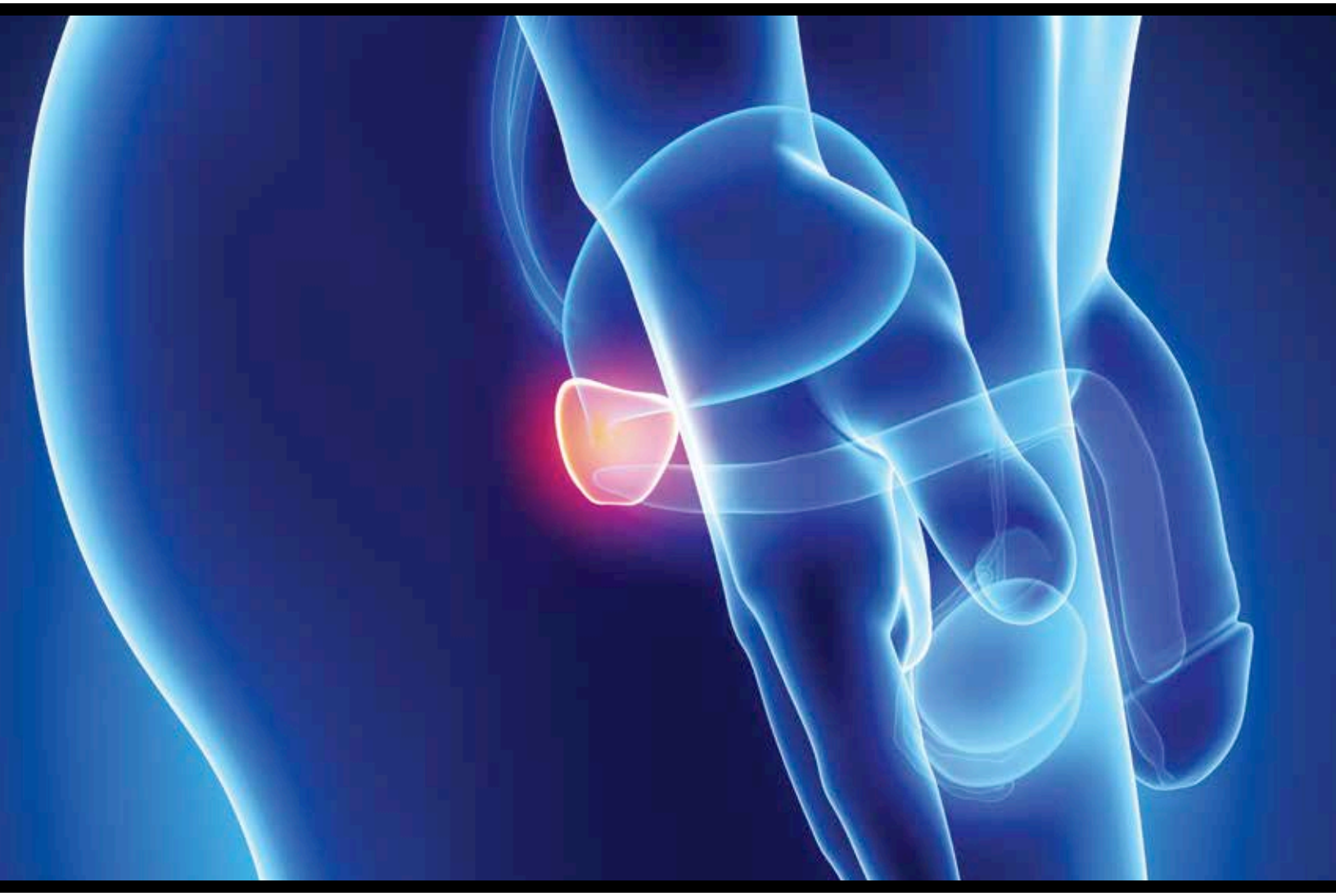
Rajit Mehta, MD and CEO, Max Healthcare, said, "Pushpanjali Crosslay Hospital is one of the few hospitals in NCR region which matches Max Healthcare's infrastructure and scale standards. It is a welcome addition to our hospital network. Like all other hospitals of our network, Max Super Speciality Hospital, Vaishali will provide standardized, seamless and international-class healthcare services. Our patients will receive the similar high levels of care and treatment that they have come to expect from any Max Hospital."

The renaming of the PCH Hospital to Max Super Speciality Hospital, Vaishali is in line with Max Healthcare's ambitious growth strategy and comes on the heels of its impressive financial performance and turn around to profitability. Under the Max Healthcare umbrella, Max Super Speciality Hospital, Vaishali, is expected to benefit immensely from clinical, managerial and financial synergies with the Max Healthcare network in general and Max Super Speciality Hospital, Patparganj in particular.

PCH was founded by prominent Delhi clinician Dr Vinay Aggarwal along with a cooperative of around 250 doctors and 450 nursing staff. The property has 11 operation theatres, 4 labour rooms, 1 cath lab and is spread across 3.46 acres of freehold land, with a built up area of 3.84 lakh sq. ft. With top-of-the-line infrastructure and an opportunity to optimize the hospital's operating model to drive efficiencies, the hospital presents MHC with immense scope for expansion and for transforming the hospital to a super speciality institution of choice in the near future.

Dr. Vinay Aggarwal, Founder of Pushpanjali Crosslay Hospital, said "The renaming of the hospital today will strengthen its consumer's association with Max Healthcare. The brand comes with the legacy of trust, top of the class medical care and seamless service excellence. With Max Healthcare services now available in Ghaziabad, patients will be able to avail world-class expertise locally and save on cost and time. Also, under the umbrella of the Max brand and existing top-of-the-line infrastructure, Max Super Speciality Hospital, Vaishali, will only continue to grow as one of the leading healthcare providers in the region".

Misery of Men



A new procedure called Prostatic Artery Embolization or PAE has been developed for prostate cancer. It can be performed on prostate of any size; does not produce side effects like in open surgery; it is done under local aneasthesia, leading to no surgical scar; requires only one day hospitalization, no sexual dysfunction after procedure, no blood loss or risk of blood transfusion

BY ABHIGYAN

Cancer causes cells in the body to change and grow out of control. Most types of cancer form a lump or a growth called a tumour. Prostate cancer starts in the prostate gland.Patient may not know that there is a cancerous tumuor in the prostate. Most cases of prostate cancer develop very slowly. However, in some men, it can grow quickly and spread to other parts of the body.

Prostate cancer is often seen in men after 60 years of age. It is the second most common cancer in men (after lung cancer) and the second major cause of death for elderly men. One in five men gets diagnosed with prostate cancer during their lifetime. While the exact causes of prostate cancer are not known, certain risk factors have been linked to prostate cancer. Aging is the greatest

"Often, the problem may be just an enlarged prostate or a simple infection. Further tests, including urinalysis, blood tests, x-rays, ultrasound or a biopsy, may help diagnose your problem. The expert (urologist) may refer you to other specialists for some of these tests and for any needed treatments".

Dr S P Yadav, Senior Urologist and CMD of Pushpanjali Hospital, Gurgaon

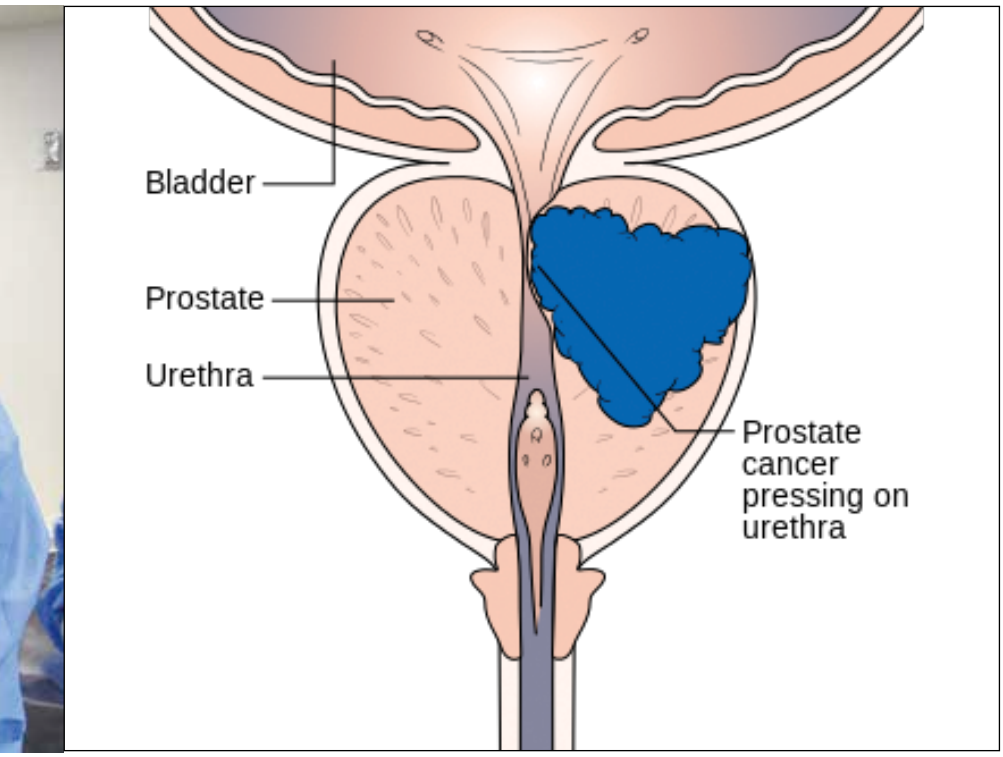
risk factor for prostate cancer. Family history also plays a role. If a man's father or brother has ahistory ofprostatecancer, his risk is two to three times greater than the average. Diet may also be a factor. Men who eat large amounts of animal fat, particularly fats from red meat, may face a greater risk of prostate cancer than men who eat less animal fat.

Prostate is a walnut sized male reproductive gland located in front of the stool passage (rectum), at the base of urine bag (urinary bladder) surrounding the urine outlet pipe (urethra). In a normal adult, it weighs around 20 grams. The size of this gland increases slowly with age. This is known as Benign Prostatic Hyperplasia (BPH) or Lower Urinary Tract Symptoms (LUTS). But, it may grow too large causing problems. This condition is very common in males over 50 years of age. BPH is non-cancerous enlargement.

As men get older their prostate glands often enlarge. This is usually not due to cancer. It is a condition called benign prostatic hyperplasia. Earlystage prostate cancer generally does not cause any symptoms at all. Many prostate cancers start in the outer part of the prostate gland, away from the urethra. If a tumour is not large enough to put much pressure on the tube that carries urine out of the body (the urethra), you may not notice any effects from it.

There are often no early prostate cancer symptoms. Many men never get to know that they are suffering from prostate cancer at early stages. Symptoms of any prostatic problem include frequency of urination (increase in the number of times), urgency to urinate (becomes unavoidable and urgent), straining (forceful trying to empty the bladder), hesitancy while urination (weak stream of urine), urging even after urination (incomplete/ unsatisfied emptying feeling), burning/ pain during urination (dysuria), dribbling of urine even after voiding urine, some amount of blood in urine (hematuria), frequency of urine at night (nocturia), and/or uncontrolled outflow of urine. The early symptoms of Benign Prostatic Hyperplasia and Prostate Cancer are nearly the same as these are not symptoms of the cancer disease. Instead, these symptoms are caused due to the blockage from the cancerous growth in the prostate in cancer patients and by the enlargement of prostate tissue in BPH cases.

Dr S P Yadav,Senior Urologist and CMD of Pushpanjali Hospital, Gurgaon, said, "Surgery, radiation therapy, hormone therapy or some combination of these are available for the treatment of prostate cancer. You have the right to know all the choices that you play an active part in your treatment decision. Symptoms of advanced prostate cancer may include dull, deep pain or stiffness in the pelvis, lower back, ribs, or upper thighs; pain in the bones of those areas; loss of weight and appetite; tiredness, nausea, or vomiting; swelling of the lower extremities; weakness or paralysis



> "In prostate cancer, there is a 10% chance of the disease to pass from one generation to other. Which means that it's a hereditary disease and every person with family history of prostate cancer should undergo prostate screening."
>
> **Dr. Sameer Khanna,**
> Senior Consultant Urologist, Sri Balaji Action Medical Institute, New Delhi

in the lower limbs, often with constipation."

The presence of prostate cancer may be indicated by symptoms, physical examination, prostate-specific antigen (PSA), or biopsy. Treatment generally involves surgery, various forms of radiation therapy, proton therapy or, cryosurgery. Hormonal therapy and chemotherapy are generally reserved for advanced disease cases.

According to Dr. Sameer Khanna, Senior Consultant Urologist, Sri Balaji Action Medical Institute, "In prostate cancer, there is a10% chance of the disease to pass from one generation to other. Which means that it's a hereditary disease and every person with family history of prostate cancer should undergo prostate screening."

Observes Dr. Gautam Banga, Consultant Urologist, Andrologist and Geneto-Urinary Renconstructive Surgeon, SCI Hospital, "Some dietary changes can help maintain good prostate health and may help ward off cancer. Lycopene and selenium reduces the danger of prostate cancer very fast. Vegetables such as broccoli, cabbage and cauliflower contain isothiocyanates, which are phytochemicals and antioxidants that are protective for prostate cancer. Fish and vegetable oils high in omega-3 fats are also very effective. Vitamin E is known to reduce prostate inflammation. Its sources include vegetable oils, nuts and seeds, whole grains, etc".

A study of nearly 50,000 men found that Lycopene, found in foods as tomatoes, tomato products, and watermelons appears to reduce the risk of prostate cancer drastically. Selenium is another mineral that offers great protection. This antioxidant is found in nuts, seafood, meat, fish, wheat bran, oats, and brown rice. Soy products can also help prevent prostate enlargement and may slow tumour growth. This effect is attributed to isoflavones, plant chemicals that help lower dihydrotestosterone (DHT), a male hormone that stimulates the overgrowth of prostate tissue.

Red meat, on the other hand, is high in saturated animal fats and has been linked to an increased incidence of prostate problems. Excessive weight has also been linked to prostate troubles. Anyone with an enlarged prostate should drink plenty of water and other non-alcoholic fluids to flush the bladder. Caffeine and beer should be reduced to a minimum as they irritate the urinary tract.

Says, Dr S P Yadav,"If there is something suspicious, more tests are required. Often, the problem may be just an enlarged prostate or a simple infection. Further tests, including urinalysis, blood tests, x-rays, ultrasound or a biopsy, may help diagnose your problem. The expert (urologist) may refer you to other specialists for some of these tests and for any needed treatments".

You should get a second opinion before undergoing any treatment. Seek advice from a specialist (urologist, surgeon, radiologist or oncologist) who has

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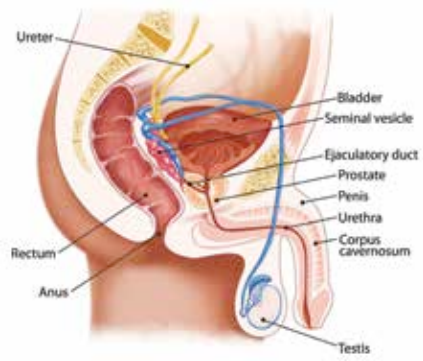
Dr. Gautam Banga,
Consultant Urologist, Andrologist and Geneto-Urinary Renconstructive Surgeon, SCI Hospital

extensive experience in the diagnosis and treatment of prostate cancer.

Not all treatments work for everyone. However, you have the right to know all the choices you have and to play an active part in the treatment decision.

The earlier prostate cancer is detected, the more options are available. Surgery, radiation therapy (either external beam or internal seed implants), hormone therapy or some combination of these are all commonly used. Depending on your age, condition, and wishes, your healthcare provider may recommend that you be tested several times a year. Some urologists feel that for men over the age of 70, the risks of surgery or radiation treatment outweigh any benefits. Therefore, they recommend watchful waiting.If you are younger and in good health, your healthcare provider will be more likely to recommend how the cancer be treated. Any treatment may have side effects. Talk with your doctors about your treatment options. Make sure you understand the risks, benefits and chances of success.

According to Dr Pradeep Muley, Senior Consultant International Radiologist,



Fortis Hospital, New Delhi,"As a man ages, there is a good chance that he will develop an enlarged prostate or benign prostatic hyperplasia (BPH). About 30% of man may need surgery to correct symptoms from this enlarged prostate. The symptoms may include: weak urine stream, difficulty in urination, increased frequency of urination at night, urgent need to urinate and not being able to completely empty the bladder and urine infection.

Most of the men may go for traditional open surgeries. But there are complications such as blood loss even few days after surgery, urinary incontinence, retrograde ejaculation, loss of bladder control and erectile dysfunction.

Now, a new procedure called Prostatic

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Dr Pradeep Muley,
Senior Consultant International Radiologist, Fortis Hospital, New Delhi

Artery Embolization or PAE has been developed. The advantages of PAE are: it can be performed on prostate of any size; does not produce side effects like in open surgery; it is done under local aneasthesia, leading to no surgical scar; requires only one day hospitalization, no sexual dysfunction after procedure, no blood loss or risk of blood transfusion and makes for faster recovery. Its success rate is about 98 percent.

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