



# Double Helical

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# A Ticking Time



As diabetes is now highly visible across all sections of society within India, there is need for urgent medical intervention to mitigate the potentially catastrophic increase in diabetes in future. To reduce the disease burden that diabetes creates in India, appropriate government interventions and combined efforts from all the stakeholders of the society are required



Managing Your Heart



Don't Smother Birth-Pangs



Get Back into Shape



Avoid Liver Scarring

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# A Ticking Time Bomb



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# Holistic Approach to Health

**W**e are thankful to our esteemed readers and patrons for their uninterrupted support and best wishes to the journey of Double Helical in unfolding the multiple dimensions of health care scenario in India. In the February issue, we are focusing on some of burning health care issues and trends like diabetes, liver cirrhosis and hearing loss, besides many more aspects of medical field. Liver cirrhosis can be life threatening. But if diagnosed early and treated, further damage can be minimised.

As a part of special coverage, the cover story of this issue of Double Helical is on diabetes, now highly visible across all sections of society within the country. There is need for urgent medical intervention to mitigate the potentially catastrophic increase in diabetes in future. To reduce the disease burden that diabetes creates in India, appropriate government interventions and combined efforts from all the stakeholders of the society are required.

Liver cirrhosis, breast cancer and hearing loss are some of the special stories that present a wealth of information to our readers. Apart from that, we are drawing attention towards the current cases of swine flu, increasing with alarming frequency in India. The major challenge which the health officials are facing is how to identify the deadly fever. The national capital has recorded more than 110 cases of swine flu this year alone. The overall cases recorded in the country have crossed 240 with the death toll over 33.

To address the problems confronted by hearing impaired children and adults, the first World Congress on Ear and Hearing Care is being organised under the aegis of Society for Sound Hearing. We present a curtain raiser on the Congress that will

focus on sustainable community ear and hearing care. The discussions will cover all aspects of the early diagnosis, management and rehabilitation of hearing loss.

Guided by a belief that emphasises the healing power of nature, naturopathic practitioners favour a holistic approach with non-invasive treatment. We present guest column on Naturopathy, a form of alternative medicine employing a wide array of “natural” treatments, including homeopathy, herbalism, and acupuncture, as well as diet and lifestyle counselling.

To raise academic issues, we are highlighting the efforts of Medical Council of India (MCI) through an exclusive interview with the President, MCI. The Council, as the interview brings out, is maintaining and monitoring the highest standards of medical education in our country.

The forthcoming Union Budget (2015-2016) is expected to give a fresh impetus to the growth of health sector. India's growth prospects now look much better when compared to the situation a year ago. The medical fraternity wants the current tax exemption limit of Rs 15,000 per annum to be increased to at least Rs 50,000 per annum. This could, to some extent, help to bring the exemption in sync with the rising medical costs. Further, the exemption in respect of expenditure on medical reimbursements/ hospitalisation expenditure in approved hospitals should also be extended to retired employees.

We have many other informative stories and reports and guest columns penned by well-known and respected doctors in this issue of popular health magazine Double Helical. Happy reading!

**Amresh K Tiwary**  
editor-in-chief

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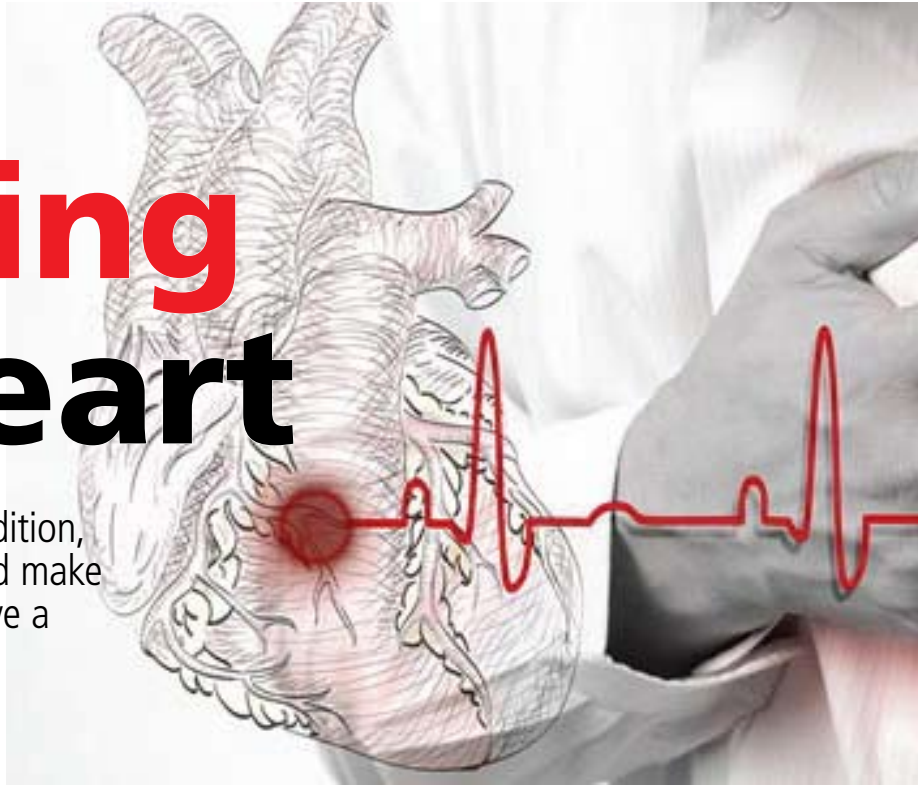
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# Managing Your Heart

Heart disease is a serious medical condition, but if you receive proper treatment and make necessary lifestyle changes, you can live a full and satisfying life

**BY DR K K AGGARWAL**



In India, heart disease has become a common problem. The sedentary lifestyle, lack of physical activities, use of alcohol and deposition of fat in the body, are common causes of heart disease. You can reduce the risk of future heart problems if you react quickly to new or worsening symptoms and make lifestyle changes to improve your health.

The threat of heart disease has been glaring for years. As per report 2.4 million Indians die due to heart disease every year, The numbers continue to grow due to things like stress, unhealthy eating habits, lack of sleep and dependence on alcohol and cigarettes. It has been a leading killer in the West and has now aggressively made its way to India. According to government data, the prevalence of heart failure in India due

to coronary heart disease, hypertension, obesity, diabetes and rheumatic heart disease ranges from anywhere between 1.3 to 4.6 million, with an annual incidence of 491,600 to 1.8 million.

New born child is also under threat. Each year, approximately 36,000 children are born with a heart defect. Out of every 1,000 infants born each year, nine have a heart defect. Many children can benefit from surgery even if the defect is severe. It should be noted that in most cases there is nothing that the parents could have done to prevent these defects. A possible exception would be the mothers who had a drug or alcohol problem during pregnancy.

According to a report by published by The Associated Chambers of Commerce and Industry of India (ASSOCHAM), one of the apex trade associations on the cardiovascular disease scenario in India, the country has seen a considerable increase in the number of heart disease like heart attack, cases over the past couple of decades. The report suggests that the leading cause of this is India's economic growth and urbanization. A large section of the population has adopted an unhealthy lifestyle combined with decreasing physical activity, increasing stress levels and a higher intake of saturated fats and tobacco.

## Symptoms of Heart Attack

A heart attack or myocardial infarction occurs when the blood supply to the heart is suddenly reduced or cut off. It is usually caused by a blood clot that blocks an artery of the heart. Usually this happens after the artery has become clogged and narrowed by fatty deposits on its walls. If these fatty deposits tear or break open, they release substances that cause the blood



platelets to become sticky and thus more likely to form clots that block the artery and reduce the flow of blood to the heart.

As per report each year, over 1.1 million people have a heart attack. Sometimes this is the first noticeable indication of coronary artery disease. Some heart attacks are mild and go unnoticed until sometime later when routine tests are conducted. But for others, a heart attack may be fatal.

Each person is different, but some common symptoms are chest pain, faint and shortness of breath etc. Chest pain may spread to the back, jaw, arms or stomach; or you may feel pain in those areas, but not in your chest. One out of every three people who experience a heart attack does not feel any chest pain. You may think that your stomach pain is indigestion when it is really a symptom of a heart attack. You may feel faint or even lose consciousness. Your lips, hands, or feet may take on a blue hue. You may become disoriented. You may feel anxious, restless, and feel like something bad is going to happen. You may perspire suddenly and experience heavy pounding of heart, or abnormal heart rhythms called arrhythmias. This occurs in more than 90 per cent of the people who have had a heart attack.

### **Take precaution; don't panic**

If you have heart disease, don't panic. It does not mean that your heart has stopped working completely and there is nothing he or you can do about it. It means that your heart is weaker and pumping with less power than normal. The pressure in your heart has increased and your heart is not pumping all the oxygen and nutrients your body needs. Your body depends on your heart to pump oxygen and nutrient-rich blood to the cells in your body. Your cells must receive proper nourishment for

Having a heart disease does not mean that your heart has stopped working completely and there is nothing he or you can do about it. It means that your heart is weaker and pumping with less power than normal

your body to function normally. When your heart can't supply enough oxygen and nutrients to your blood, this can make you feel tired and short of breath. Even common everyday activities like walking, climbing stairs, or carrying groceries can become very difficult. Yes, heart failure is a serious medical condition, but if you receive proper treatment and make the necessary lifestyle changes, you can live a full and satisfying life. If you follow your doctor's directions and exercise plan and change your diet, you can manage this condition.

If you have symptoms like tiredness, weakness, dizziness, racing or irregular heartbeats, doesn't mean you have heart failure. Share your concerns with your doctor and have him examine you and evaluate the condition of your heart.

Your heart may be working harder and pumps faster as it tries to get more blood to your cells.

Because less blood is flowing to your organs and muscles, you feel tired and weak. Your body senses that it must divert blood away from your muscles and less vital organs and send more blood to your brain. But when your brain also receives less blood, the result can be dizziness or confusion. The changing levels of sodium or other substances in your blood can cause confusion.

The symptoms like shortness of breath, wheezing or a dry and hacking cough may occur after exertion such as exercise, but you may experience one or more of these symptoms when you are lying flat on your bed. It may even occur while you are sleeping and cause you to wake up suddenly. Propping up your head and upper body may help you sleep better. These symptoms are caused by fluid backing up in your lungs, or lung congestion. It is because your heart isn't able to supply enough rich blood from your lungs back to your heart so the fluid leaks into your lungs. In case of nausea, the digestive system is receiving less blood.

While you have symptom like swollen ankles and increased urination, it is important to know that less blood to your kidneys causes fluid to build up in your tissues. Because your kidneys are not able to dispose of all the sodium and water, the result is water retention or edema. You may also notice weight gain or a swelling in your legs, feet, or abdomen. This is due to the slower rate of blood flowing out of your heart causing the blood that is returning to your heart to back up, and the fluid to build in your tissues.

### **Treatments for Heart Ailments**

Many treatments are available for blocked or narrowed arteries.

### Formula of 80 to avoid heart attack before 80

- Keep your lower BP, fasting sugar abdominal circumference, resting heart rate and LDL, cholestrol levels at less than 80.
- Walk 80 minutes a day, brisk walk 80 minutes a week with a speed of 80 (at least) steps per minute.
- Eat less , not more than 80 gm/80ml of caloric food in one meal.
- Do not eat refined cereals 80 days in a year.
- Take vitamin D through sunlight 80 days in a year.
- Do not drink alcohol; if you drink take less than 80 ml of whiskey (80 proof 40 percent alcohol) in a day or less than 80 gram (240 ml of whiskey) in a week
- Do 80 cycles of Pranayam in a day with speed of 4 breaths/minute.
- Do not smoke or be ready for placement of heart stent costing Rs 80,000
- If you are a heart patient ,ask your doctor to give 80 mg of aspirin and 80 mg of lonvastalin.
- Donate blood 80 times in a lifetime.
- Avoid an exposure to more than 80db of noise pollution.



Instead of, or in addition to drug therapy, the doctor may do an angioplasty to widen the artery and cause the blood to flow through it more easily. This can be done with a balloon on the end of a catheter or a thin tube that is inserted through the groin up to the narrowed artery. Or a laser angioplasty may be done where a laser is used instead of a balloon. The laser vaporises the plaque to reduce the blockage in the artery. Or a directional coronary atherectomy may be performed. A sharp blade inside a catheter is used by the doctor to remove part of the plaque. A stent implant may be used instead. The stent is a thin metal scaffolding that can be expanded and left in place inside the artery to keep it open. There are other techniques that are used. The doctor will decide which is best for you.

However, you must remember that these symptoms may mean something entirely different. You may be experiencing symptoms caused by pneumonia, indigestion, a rib fracture, spasm of the esophagus, pulmonary embolism (a blood clot in the lung), or other illnesses or diseases. It is imperative that you get examined by a doctor immediately to determine the cause of your problems and begin treatment.

### Arrhythmias

Arrhythmia is an abnormal heartbeat pattern. It may be too fast, too slow, skip a beat, have extra beats or beat irregularly. This is common. You can have arrhythmia and not have heart disease. In fact, your heart may be healthy. But arrhythmia may indicate that you have a serious problem. It can result in heart disease, stroke or sudden cardiac death. A doctor's careful monitoring of your condition is important.

### Congenital Heart Disease

Congenital heart disease is a defect in one or more structures of your heart or the blood vessels near your heart that occurred prior to your birth. It is a condition that occurred while you were developing in your mother's uterus. You were born with this condition although it may not have been diagnosed until later in childhood or even adulthood. There are various types of treatments that your doctor can explain to you if you have this birth defect.

### Causes of Congenital Heart Disease

For many people who suffer with this condition, we'll never know what caused it. Others can be traced to drug abuse or taking certain medications or alcohol during pregnancy. Rubella (German measles) or other viral infections suffered by the mother during the first trimester of pregnancy have been associated with an increased chance of getting congenital heart disease. If a parent or sibling has a congenital heart defect, the risk of an unborn child having the condition is increased.

### Diagnosis

Your doctor may first detect an abnormal heart sound or murmur when he listens to your heart. Further testing can be done such as: an EKG (electrocardiogram), a chest X-ray, an



## Risk of the Heart Disease



Stress

Obesity

Tiredness


Smoking

Over the last few decades, there have been major advances in diagnosis and surgery that have made it possible to repair most heart defects. The condition may be diagnosed before birth, right after birth, during childhood, or later in life

MRI, an echocardiogram or transesophageal echocardiogram, or cardiac catheterisation.

Over the last few decades, there have been major advances in diagnosis and surgery that have made it possible to repair most defects. The condition may be diagnosed before birth,

right after birth, during childhood, or later in life. Many people with these defects are now living longer and leading full, active lives.

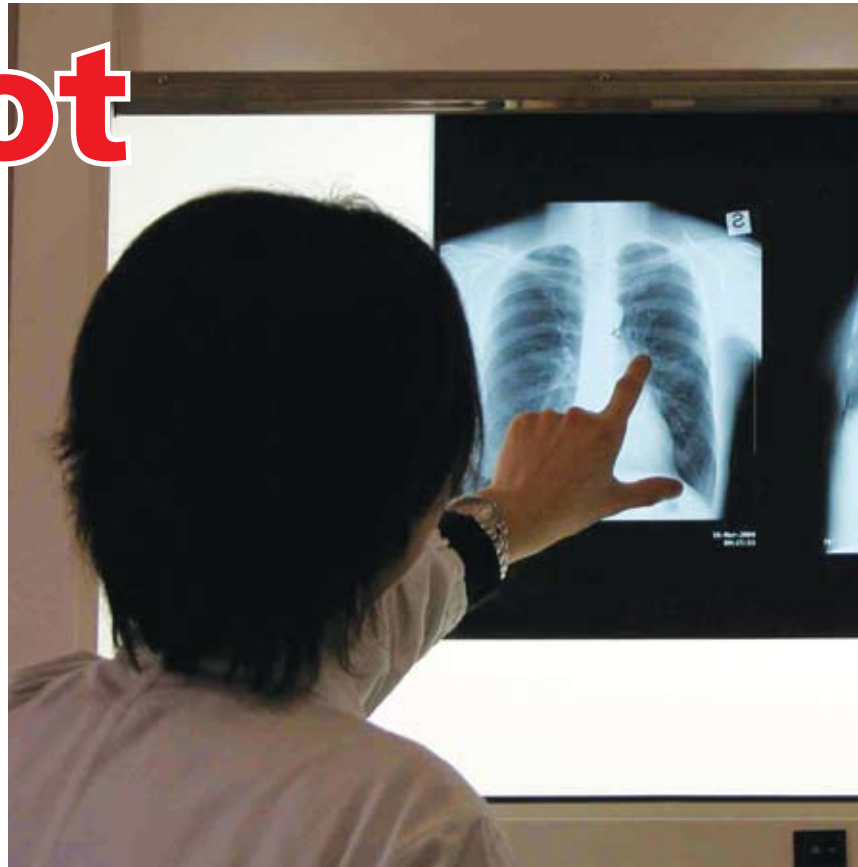
Consult with your doctor to learn more about your specific heart defect and the treatment that can help you. Some mild cases do not need any treatment at all. Others may be treated with medications, surgery or other procedures. Your doctor should monitor your heart so precautions can be taken to ensure your long-term health. Actively taking part in your health care and continually making healthy choices with your doctor's guidance can help lower your risk of future heart problems. Reporting new or worsening symptoms to your doctor can also help alleviate future problems. 

*(The author is a Padamshree awardee, Dr B C Roy Award-recipient and renowned Cardiologist)*

# Error, not Crime

There is a need for striking a delicate balance between the protection of patient's rights and integrity and autonomy of medical profession. In the long run, the present litigation trend should undergo a transformation to the advantage of the patient, doctor, and society at large

**BY DR SUNIL K KHETARPAL**



**B**efore we delve into the extent of fault on the part of doctors, it is important to know what constitutes medical negligence. A doctor owes certain duties to the patient who consults him for illness. A deficiency in this duty results in negligence. A basic knowledge of how medical negligence is adjudicated in the various judicial courts of India will help a doctor to practise his profession without undue worry about facing litigation for alleged medical negligence. The reasons –intentionally, no doctor commits negligence while treating his/her patients, though some mistake or unforeseen complication is inevitable. For this, doctors should not be subjected to undue punishment. Such cases must be solved amicably with patients or their family members.

Today, our society is experiencing a growing awareness regarding patient's rights. This trend is clearly discernible from the recent spurt in litigation concerning medical professional or establishment liability, claiming redressal for the suffering caused during or after treatment. The patient-centered initiative of rights protection is required to be appreciated in the economic context of the rapid decline of State spending and massive private investment in the sphere of the health care system and the Supreme Court's painstaking efforts to constitutionalise the right to health as a fundamental right.

As of now, the adjudicating process with regard to medical professional liability, be it in a consumer forum or a regular civil or



criminal court, considers common law principles relating to negligence, vitiated consent, and breach of confidentiality. However, it is equally essential to note that the protection of patient's right shall not be at the cost of professional integrity and autonomy. There is definitely a need for striking a delicate balance. Otherwise, the consequences would be disastrous for the medical community.

Medical malpractice refers to professional negligence by a medical practitioner in which treatment provided was substandard, and caused harm, injury or death to a patient. In the majority of cases, the medical malpractice or negligence involves a medical error, possibly in diagnosis, medication dosage, health management, treatment or aftercare. Medical malpractice law provides a way for patients to recover compensation from any harms resulting from sub-standard treatment. The standards and regulations for medical malpractice differ slightly from country-to-country; even within some countries, jurisdictions may have varying medical malpractice laws.


A hospital, doctor or other health care professional is not liable for all the harms a patient might suffer. They are only legally responsible for harm or injuries that resulted from their deviating from the quality of care that a competent doctor would normally provide in similar situations. In the context of obtaining processes, there is a deserving need for a two-

pronged approach. On one hand, the desirable direction points towards identification of minimum reasonable standards in light of the social, economical, and cultural context that would facilitate the adjudicators to decide issues of professional liability on an objective basis. On the other hand, such identification enables the medical professionals to internalise such standards in their day-to-day discharge of professional duties, which would hopefully prevent to a large extent the scenario of protection of patient's rights in a litigative atmosphere. In the long run, the present litigation trend should undergo a transformation to the advantage of the patient, doctor, and society at large.

Under the Companies Act, 1956, a consumer is a person who hires or avails any services for a consideration that has been paid or promised or partly paid and partly promised or under any system of deferred payment. This definition is wide enough to include a patient who merely promises to pay. A complaint is an allegation in writing made by a complainant like a consumer that he or she has suffered loss or damage as a result of any deficiency of service. Deficiency of service means any fault, imperfection, shortcoming, or inadequacy in the quality, nature, or manner of performance that is required to be maintained by or under any law for the time being in force or has been undertaken to be performed by a person in pursuance of a contract or otherwise in relation to any service.

Basically, medical negligence is simply the failure to exercise due care. The ingredients of negligence are being considered today like defendant owes a duty of care to the plaintiff, the defendant has breached this duty of care, and the plaintiff has suffered an injury due to this breach. Medical negligence is no different. It is only that in a medical negligence case, most often, the doctor is the defendant.

The duty owed by a doctor towards his patient, in the words of the Supreme Court, is to bring to his task a reasonable degree of skill and knowledge and to exercise a reasonable degree of care. The doctor, in other words, does not have to adhere to the highest or sink to the lowest degree of care and competence in the light of the circumstance. A doctor, therefore, does not have to ensure that every patient who comes to him is cured. He has to only ensure that he confers a reasonable degree of care and competence.

Eventually, we can say that though the same standard of care is expected from a generalist and a specialist, the degree of care would be different. In other words, both are expected to take reasonable care but what amounts to reasonable care with regard to the specialist differs from what amount of reasonable care is standard for the generalist. In fact, the law expects the specialist to exercise the ordinary skill of this speciality and not of any ordinary doctor. 

*(The author is CEO, Delhi Heart and Lung Institute Super Speciality Hospital, New Delhi)*



# Taking Precise Aim

Femtosecond Laser technology is a blade-free cataract surgery technique that allows for the creation of corneal incisions with robotic precision. Each aspect of this advanced blade-free cataract surgery is computer-programmed and monitored

**BY DR MAHIPAL S SACHDEV**

If you experience hazy, fuzzy and blurred vision, increased sensitivity to light resulting in glare and difficulty in night-driving, poor night-vision, poor depth-perception like difficulty in going downstairs as well, there is frequent need to change eyeglass and as cataract develops, even high power glasses would no longer improve the vision.

The clear and transparent human crystalline lens is a part of the focusing mechanism of the eye. With increasing age, the lens becomes cloudy and opaque thereby hampering the normal vision. Any opacity in the crystalline lens which leads to decreased vision is called cataract or "SafedMotia".

About half the population by the age of 60 will get cataract, while around 80 per cent people will have cataract in at least one eye by the age of 70 years. Approximately eight million people in India have hazy vision due to cataract.

The innovative Femtosecond Laser technology allows for the creation of corneal incisions with computer guided laser controlled precision. The laser also fragments the cataract into tiny pieces which can then be safely removed by the surgeon

## Treatment Plan

Surgery is the only treatment for cataract. Phacoemulsification with foldable intraocular lens (IOL) remains the standard surgery for cataract removal where using ultrasonic power, cataractous lens is broken down into small pieces and sucked out using a vacuum-based aspiration system. A new artificial lens is

implanted in its place which allows seeing clearly.

## Femtosecond Laser Cataract Surgery

Femtosecond laser technology or blade-free cataract surgery is a leap ahead of the traditional Phacoemulsification cataract surgery which is a manual technique, where the surgeon makes cuts in the cornea using a hand held blade. Through these incisions, the surgeon then inserts surgical instruments inside the eye to make a manual round opening (capsulorrhexis) around the cataract. An ultrasound probe breaks the old, cloudy lens into pieces. After removing those pieces through the incision, the surgeon inserts an intraocular lens (IOL) inside the eye to replace the natural lens.

In contrast to this, the innovative Femtosecond Laser technology allows for the creation of corneal incisions with computer guided laser controlled precision. The laser also fragments

the cataract into tiny pieces which can then be safely removed by the surgeon. The critical high resolution eye image mapping and measurements that are used to plan and perform the Femtosecond laser cataract surgery to exact specifications are not attainable with traditional surgery. With the use of Femtosecond laser, each aspect of this advanced blade-free cataract surgery is automatically programmed and monitored by the computer.

While cataract surgeons are doing a good job now, femtosecond laser technology introduces the ability for even the best cataract surgeons to be more consistent. It has the potential to, in the simplest of terms, help automate many of the crucial steps of cataract surgery resulting in a quicker and safer operation and improved surgical outcome.

### Femtosecond Laser Advantage

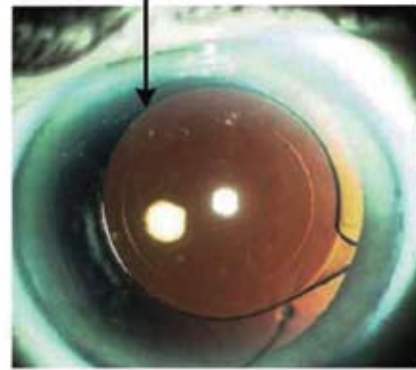
Blade-free laser created incisions deliver precise cuts and are more accurate than manual blade incision. The wound architecture in traditional surgery is limited by hand held instruments and manual incisions. In contrast, the femtosecond laser allows for computerised programming of corneal incisions. The precisely structured self-sealing incisions heal faster and minimise the risk of post-

#### Facts about Femtosecond Laser Cataract Surgery

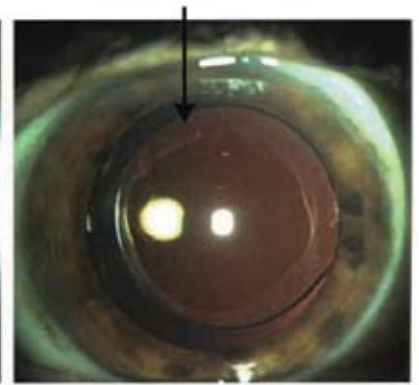
- Blade-free laser cataract surgery
- The actual working of the laser takes less than one minute
- Greater safety, precision & accuracy
- Capsular opening, laser fragmentation & corneal incision is fully automated
- Reduces phaco energy by more than 50 per cent
- Better visual outcome with quicker recovery



**Femtosecond laser capsular opening:**  
Precisely sized and well centred,  
regular in shape



**Manual Capsular opening:**  
Centration and shape not as precise




operative infections.

The first step in Femtosecond laser assisted cataract surgery is the creation of the capsular opening (capsulorrhexis) around the cataract with the help of laser. The opening in the capsule through the use of this technology is twice as strong and five times more accurate in size and shape as compared to the manual opening. The laser then breaks down the cataract into smaller fragments. Then corneal incisions are made with robotic precision. All these steps are performed without using any blade or needle.

In people suffering from astigmatism, the front surface of the eye (cornea) is not curved properly. The curve is irregular resulting in blurred vision. Laser assisted cataract surgery allows for correction of astigmatism at the time of surgery.

Femtosecond laser aims to convert the manual, multi-step, multi-tool

Phaco procedure to one with laser created, computer controlled precision. The critical high resolution eye image mapping and measurements that are used to plan & perform the surgery to exact specifications are not attainable with traditional surgery. In femtosecond laser assisted cataract surgery, every aspect of cataract surgery is automatically programmed and monitored by the computer resulting in a safer operation and improved surgical outcome.

If you need to undergo cataract surgery, opt for an eye centre which offers the latest technology combined with the expertise of a qualified cataract surgeon. Femtosecond laser cataract surgery technology is available at Centre for Sight New Delhi & its Meerut branches. 

*(The author is chairman,  
Centre for Sight Group of Eye  
Hospitals, New Delhi)*



# A Ticking Time Bomb



As diabetes is now highly visible across all sections of society within India, there is need for urgent medical intervention to mitigate the potentially catastrophic increase in diabetes in future. To reduce the disease burden that diabetes creates in India, appropriate government interventions and combined efforts from all the stakeholders of the society are required

**BY AMRESH K TIWARY**

**O**ne day Ravindra Shetty, a 43-year-old employee in an MNC, feels very hungry and tired after returning from office. He takes his dinner and goes to sleep early. This is repeated for a week. Later, he gets hurt while travelling. The wound does not heal. His wife takes him to their family physician. After examining him, his doctor suspects a case of type 2 diabetes mellitus. With a glucometer, he

performs a random glucose test on Ravindra. The doctor finds his blood glucose at 220 which is too high. The doctor confirms him to be suffering from type 2 diabetes and advises for hypoglycemia.

Diabetic individual take anti-diabetic medications. And because these medications bring blood sugar levels down, sometimes they reach below the normal range leading to hypoglycemia. Typical glycemia leads to dizziness,

sweating, weakness and sometimes loss of consciousness. Like Ravindra Shetty, millions of people are suffering from diabetes. If not diagnosed on time, it may become life threatening. Rapid urbanisation, demographic transition and lifestyle modifications are among the leading cause of diabetes. The increases in stress, pressure and anxiety have also contributed to diabetes.

Diabetes is one of the diseases that

affects the endocrine system. The pancreas produces the hormone insulin. In Type 1 diabetes, the insulin producing cells in the pancreas are destroyed. In Type 2 diabetes, insulin is still produced but the body becomes resistant to it. Diabetes may damage almost every tissue and organ of the body, the kidney being one of them. If neglected, a person could go into diabetic nephropathy. Albumin in the urine, blood urea and creatinine levels should be checked once a month. Diabetics should avoid painkillers. They should watch out for swelling of the feet, extreme fatigue, weakness and breathlessness. Obese children should also be screened for diabetes.

### Increasing Incidence of Diabetes in India

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

According to **Dr Vipin Mishra**, Senior Consultant and head of Department of Diabetes and Endocrinology, Pushpanjali Crosslay Hospital, Vaishali, Ghaziabad, "Diabetes is a serious disease that afflicts people of all ages. There are 2 types of diabetes, type 1 and type 2 diabetes, and each one affects people in different ways. People who have diabetes have to take many precautions in order to keep their insulin levels in check. This helps them avoid serious health issues, such as potential blindness, shock, poor circulation, and other types of reactions that can occur from poorly treated diabetes symptoms".

There are many causes for diabetes.



India has more diabetics than any other country in the world. The disease affects more than 62 million Indians, which is more than 7.1% of India's adult population. An estimate shows that nearly one million Indians die due to diabetes every year."

**Dr Vipin Mishra**, Senior Consultant and head of Department of Diabetes and Endocrinology, Pushpanjali Crosslay Hospital, Vaishali, Ghaziabad

One of the largest causes is lifestyle. Being overweight and lacking exercise can lead to diabetes, particularly in adults. Children who are obese when they are young have a much higher chance of getting type 2 diabetes than children who are not obese at a young age. Another cause of diabetes is high blood pressure and heart disease, which are also often caused by poor diet and lifestyle.

"If you have diabetes, no matter what type, it means you have too much glucose in your blood, although the causes may differ. Too much glucose can lead to serious health problems. Hypothetically diabetes

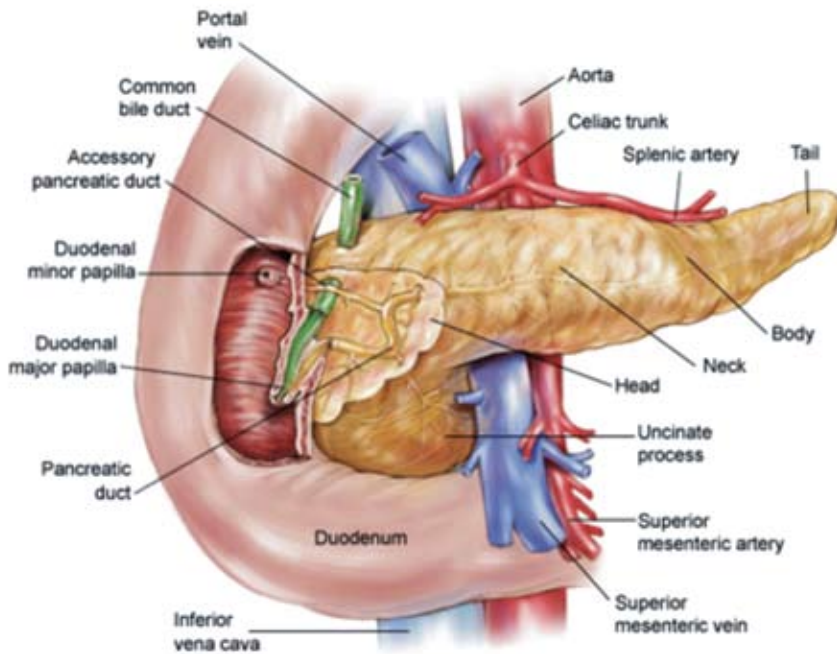
mellitus refers to a group of diseases that affect how your body uses blood sugar (glucose). Glucose is vital to your health because it's an important source of energy for the cells that make up your muscles and tissues. It's also your brain's main source of fuel," says Dr Vipin Mishra.

**Dr Shalini Jaggi**, Consultant Diabetologist & Co-ordinator, Shri Balaji Action Medical Institute, New Delhi, says, "These days diabetes is now found in persons as young as 15 years. Among the main reasons is sedentary lifestyle which has become ubiquitous now. About 17 million people suffer from kidney problems arising out of diabetes, but only a few could afford the costs of treatment. As such, the focus must be on enacting preventive measures such as promoting physical activity".

There are an estimated 77.2 million people in India who are suffering from pre-diabetes. Pre-diabetes is a condition in which the patients have high blood glucose level but were not in the diabetes range. These people are at high risk of getting diabetes. The Indian Council of Medical Research (ICMR) estimated that the country already has around 65.1 million diabetes patients. Only China, with 98.4 million cases, has more diabetes patients globally.

Dr Vipin Mishra says, "Another cause of diabetes is genetics. If a child's parent has diabetes or if diabetes is common among other family members, a person's chances of also having diabetes





Being overweight and lacking exercise can lead to diabetes, particularly in adults. Children who are obese when they are young have a much higher chance of getting type 2 diabetes than children who are not obese at a young age

**Dr Shalini Jaggi**, Consultant Diabetologist & Co-ordinator, Shri Balaji Action Medical Institute, New Delhi

flags.”

### Stages of Diabetes

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

The chronic diabetes conditions include type 1 diabetes and type 2 diabetes. Potentially reversible diabetes

as they age is greatly increased. Mainly, type 2 diabetes is inherited, and this type of diabetes is easier to treat, unlike type 1 diabetes. However, even if diabetes is an inherited disease, there is no guarantee that a person will get it.”

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

**Dr Anup Mohta**, Director, Chacha Nehru Bal Chikitsalaya, East Delhi, says, “Some people get diabetes in ways they cannot control. Juvenile diabetes, for example, is not caused by lifestyle issues or having a poor diet. While it is a myth that only children get this type of diabetes, adults can get it as well. This type of diabetes is caused by the pancreas producing either too much or too little insulin, and requires a person

to always monitor and maintain their insulin levels.”

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

Dr Shalini Jaggi says, “We live in an era where our bodies are being constantly subjected to infections of all kinds. While these infections may be troubling enough in themselves, when they stay with us for a longer period of time than they should, we may have an insulin problem, otherwise known as diabetes. In many cases, the patient may not even be aware that they have the disease, even though they may be staring the symptoms right in the face. An increased desire to drink fluids and urinate may not initially raise any red



## Complications due to Diabetes



**T**here are several side effects that can result from a lack of proper care and they can range from going blind to losing a limb through ulcers in the foot. Patients with diabetes have also been known to end up with hardened blood vessels, which causes poor circulation. A diabetic can also end up with a higher risk of cardiac disease due to these circulation problems and many diabetics have also gone on to experience kidney failure. If you are diagnosed as a diabetic, please be aware of the food you eat and you will drastically improve your chances of survival.

According to **Dr A K Agarwal**, Professor of Excellence and Former, Dean, Maulana Azad Medical College, New Delhi, "Undoubtedly, diabetes mellitus is reaching potentially epidemic proportions in India. The level of morbidity and mortality due to diabetes and its potential complications are enormous, and pose significant healthcare burdens on both families and society. Worryingly, diabetes is now being shown to be associated with a spectrum of complications and to be occurring at a relatively younger age within the country."

There is also a link between depression and diabetes. Research studies have also demonstrated that the chances of developing diabetes are more amongst persons with current depressive and/or anxiety disorders. Some of the newer drugs used in the treatment of mental disorders might increase blood sugar levels. It is now important to monitor all patients on such drugs for their blood sugar levels.

A concerted attempt to identify pre-diabetics and intervene to reverse the metabolic abnormality will prevent further increase in the prevalence of diabetes. Delayed wound healing, frequent infections, nausea, vomiting and weight loss may be other symptoms. Neglected, diabetes will affect the heart, eyes, kidneys and all major organs. With

proper treatment, counseling and personal management, diabetes can be controlled.

The World Health Organisation (WHO) estimates that nearly 200 million people all over the world suffer from diabetes and this number is likely to be doubled by 2030. Even as nations prepare to mark World Diabetes Day on November 14, WHO says about 80% of the diabetes deaths occur in middle-income countries. In India, there are nearly 50 million diabetics, according to the statistics of the International Diabetes Federation. As the incidence of diabetes is on the rise, doctors say, there is a proportionate rise in the complications that are associated with diabetes. They point out that it is a very crucial stage and awareness on the part of people and administration about diabetes is very essential, adding that people should be made aware and educated about their health and fitness level to reduce the number of patients in India.

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

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

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

warned for years that their illness could cause blindness, are in for more bad news, as doctors have claimed that the patients are more likely to lose their hearing, too. Japanese research has found that hearing problems are far more common in diabetics than their healthy counterparts, even when other factors such as ageing and a noisy environment are taken into account.

The association of hearing impairment with diabetes is controversial, but it is believed that over time, high blood glucose levels can damage vessels (causing hearing loss). It's thought that glucose damages the nerves and tissues in the ear, diminishing the ability to hear. Diabetic patients should be screened for hearing impairment from earlier age compared with non-diabetics, from the viewpoint of prevention of several health problems such as depression and dementia caused by hearing impairment.

Diabetes can also cause difficulties during pregnancy such as a miscarriage or a baby born with birth defects. Out of an estimated 62.4 million diabetics in India, 4 to 21 per cent women suffer from gestational diabetes mellitus (GDM) — also called glucose intolerance or carbohydrate intolerance. It is a temporary form of diabetes in which the body does not produce adequate amounts of insulin to deal with sugar during pregnancy. Pregnant women who are obese or have a history of abortions are more prone to gestational diabetes. It is, however, treatable through diet modification, taking the essential medications as well regular exercise. Endocrinologists suggest the use of an innovative technology called continuous glucose monitoring system for patients with diabetes and planning pregnancy to get a correct picture of their blood sugar pattern. If a patient with diabetes is planning to go the family way, it is absolutely vital that blood sugar is very tightly controlled throughout the pregnancy.

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

Unlike a type 1 diabetic, a type 2 may have a little more control when it comes to preventing the lack of insulin break down. Scientists have yet to find a cure for a type 1 diabetic and in fact the only treatment options available continue to be insulin by injection and a major change in lifestyle. Parents should be especially cautious about their young children overeating and becoming obese because history will show that these overweight children have a higher risk of being diagnosed as a type 2 diabetic.

Type 2 diabetes is often referred to as a lifestyle disease, because how healthy persons live their lives is often an indicator of whether they will acquire this type of diabetes or not. While weight is often the largest diabetes cause of type 2 diabetes, high blood pressure and a sedentary lifestyle are also to blame. Luckily, type 2 diabetes is basically curable, meaning that a person can take better care of one’s body so that he no longer has to take insulin. Type 2 diabetes is often associated with older individuals and people who also suffer from heart disease.

As a diabetic, you will need to revise the way you eat and especially be cautious of the foods you need to stay away from. Certain types of food can be a diabetic’s worst nightmare, which is why they should familiarise themselves with what is and what is not in their best interest. Stay away from foods that are



Pre-diabetes is a condition in which the patients have high blood glucose level but were not in the diabetes range. These people are at high risk of getting diabetes. The Indian Council of Medical Research (ICMR) estimated that the country already has around 65.1 million diabetes patients.

**Dr Anup Mohta**, Consultant Diabetologist & Co-ordinator, Shri Balaji Action Medical Institute, New Delhi

high in white flour, such as white bread, also white rice and anything with a lot of sugar.

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

Yet despite the incidence of diabetes within India, there are no nationwide and few multi-centric studies conducted on the prevalence of diabetes and its complications. The studies that have been undertaken are also prone to potential error as the heterogeneity of the Indian population with respect to culture, ethnicity, socio- economic conditions, means that the extrapolation of regional results may give inaccurate estimates for the whole country.

There are, however, patterns of diabetes incidence that are related to the geographical distribution of diabetes in India. Rough estimates show that the prevalence of diabetes in rural populations is one-quarter of that found in urban population for India and other Indian sub-continent countries like Bangladesh, Nepal, Bhutan, and Sri Lanka.

### Challenges in Treating Diabetes in India

Although the Indian urban population has access to reliable screening methods and anti-diabetic-medications, such health benefits are not often available to the rural patients. There is a disproportionate allocation of health resources between urban and rural areas, and in addition poverty in rural areas may be multi-faceted. Food insecurity, illiteracy, poor sanitation, and dominance of communicable diseases may all contribute, which suggests that both policy makers and local governments may be undermining and under-prioritising the looming threat of diabetes. Such inadequacies contribute to an infrastructure that may result in poor diabetes screening and preventive services, non-adherence to diabetic management guidelines, lack of available counselling, and long distance travel to health services. Aged care facilities in rural areas report disparity in the diabetes management compared with their urban counterparts. With these populations more likely to suffer from diabetic complications compared to their urban counterparts, more needs to be done to address the

As a diabetic, you will need to revise the way you eat and especially be cautious of the foods you need to stay away from. Certain types of food can be a diabetic’s worst nightmare, which is why they should familiarise themselves with what is and what is not in their best interest



rural-urban inequality in diabetes intervention.

**American President Barack Obama** in his recent visit to India emphasised that physical activities are required to reduce obesity. Because obesity is one of the major risk factors for diabetes, yet there has been little research focusing on this risk factor across India. Despite having lower overweight and obesity rates, India has a higher prevalence of diabetes compared to western countries suggesting that diabetes may occur at a much lower body mass index (BMI) in Indians compared with Europeans. Therefore, relatively lean Indian adults with a lower BMI may be at equal risk as those who are obese.

There are a number of challenges that plague diabetes care in India. While HbA1c is the gold standard test around the world for insulin initiation and intensification, it is not easily available to a large section of Indian population. Furthermore, there is a lack of “clinical inertia” for the commencement of insulin therapy in both the clinical and patient communities. The most common apprehensions are related to the complexities of the insulin regimen and concerns about weight gain, hypoglycaemic events, and fear of insulin prick. An inadequacy in Indian

guidelines is also responsible for wide variation in treatment preferences across the country. The creation of simple and practical insulin guidelines that can be incorporated into routine clinical practice by primary health care physicians are desperately required to facilitate treatment and the initiation of insulin therapy throughout the country.

The clinicians may be targeted to facilitate the implementation of screening and early detection programmes, diabetes prevention, self-management counseling, and therapeutic management of diabetes in accordance with the appropriate local guidelines. Government policies may help in creating guidelines on diabetes management, funding community programmes for public awareness about the diabetes risk reduction, availability of medicines and diagnostic services to all sections of community. Efforts by various governments and agencies around the world to intervene in diabetes management have resulted in positive health outcomes for their communities.


In India, the steady migration of people from rural to urban areas, the economic boom, and corresponding changes in lifestyle are all affecting the prevalence of diabetes. Yet despite the



While many causes of diabetes can be prevented, some causes are just the way the body is made, and the sooner a diabetes type can be diagnosed, the sooner a person can get back to normal health and take the measures needed to take care of oneself successfully..

**Dr Shishir Narain**, Senior Eye Specialist, Shroff Eye Hospital, New Delhi

increase in diabetes there remains a paucity of studies investigating the precise status of the disease because of the geographical, socio-economic, and ethnic nature of such a large and diverse country..

Nearly 44 lakh Indians in their most productive years like aged 20 to 79 years — aren't aware that they are diabetic, a disease that exposes them to heart attack, stroke, amputations, nerve damage, blindness and kidney disease. The latest global figures on diabetes, released by the International Diabetes Federation (IDF), have raised a serious alarm for India by saying that nearly 52% of Indians aren't aware that they are suffering from high blood sugar. India is presently home to 62 million diabetics — an increase of nearly 2 million in just one year. 



# Don't Smother Birth-Pangs

Women should not opt for caesarean delivery just to avoid labour pains and maintain their figure. Once a caesarean operation is done, there are 80 per cent chances of having successive caesarean operations. **BY DR RUBY SEHRA**

**W**ith advancement in technology, conventional open surgery has been transforming into laparoscopic and even robotic surgery. Doctors are going for smaller cuts for uterus removal, ovarian cysts, fibroids but what about delivery? We are going

away from vaginal deliveries towards big scars of caesarean deliveries. Once a caesarean operation is done, there are 80 per cent chances of having a second caesarean also and if third pregnancy occurs, the third is inevitably an indication for elective caesarean section.

When a girl is young about to be a

mother, she wishes to have fewer traumas to body and maintain her figure. So, she opts for caesarean section. We give her big scars of cesarean section. When she 45 and needs hysterectomy, we try to endure small scars of laparoscopic surgery or robotic surgery (through small holes)

The use of robotic surgery is



undoubtedly good as it leads to faster recovery but why the caesarean section rates are going so high? Caesarean section is a major surgery and carries the risk for infection, bladder and bowel injuries, serious complications for future pregnancy like adherent placenta, bleeding per vaginum during pregnancy and more chances of second caesarean and hysterectomies.

There are some justified indication of caesarean section like breech presentation or oblique lie, low lying placenta or placenta previa, pre eclampsia/eclampsia, multiple

pregnancies with first breech or transverse lie, big sized babies leading to shoulder dystocia and CPD.

Fear of labour pains makes some women avoid vaginal deliveries. Some like to have their baby at auspicious moments e.g. Janmashtami and Gurpurab or at specific date & time as guided by astrologers. Some patients show single reading of dropping foetal heart rate during labour pain. Some having insurance coverage are more likely to undergo caesarean section. For convenience of doctors, C-section is less time consuming and more profitable. It does away with the need for obstetrician and anaesthetist round the clock and probability of medico legal litigation in the case of vaginal deliveries.

### Things to be done by mother to prevent caesarean section

The would be mother must avoid unnecessary weight gain and maintain average weight gain of 11-13 kg during pregnancy. This will give you an average baby weight of 2.5 – 3.1 kg. A weight gain of more than 15 kg will give you macrocosmic baby. An average Indian women with average height of 5feet 3 inches cannot deliver a baby of more than 3.6-3.8 kg. So, she must avoid unnecessary weight gain during pregnancy by modifying her dietary patterns like more of proteins and reduce carbohydrates intake. To deliver a healthy child and avoid caesarean delivery, physical exercise is required. The working women having sedentary job should exercise more or attend antenatal classes.

Pregnancy is a physiological state and

Caesarean section is a major surgery and carries the risk for infection, bladder and bowel injuries, serious complications for future pregnancy



not treated as a disease. It does not require bed-rest. So, a pregnant woman must be working actually throughout her pregnancy unless otherwise indicated in cases of high blood pressure or low lying placenta. For having vaginal delivery, white flour and maida in pizza, pasta and cowmen and pure starches like potato and rice must be avoided by pregnant woman. Doing more of household work is also needed. A would-be mother should attend antenatal classes to learn more about exercises, diet & nutrition, labour pains and delivery. There is need of being patient and cooperative during labour.

### Things to be done by a doctor to avoid cesarean section

Ask your doctor about what is her rate of primary caesarean sections. It should be as low as 10 per cent. Ask about the places where she takes her clients for birthing & inquire about hospital policies for labour birth care & find out the caesarean section rates.

Before marrying a man, women surveys all his particulars about his family & financial status but some patients do little research about the doctor and go by the fact that she has a big name, and has more word of mouth references. Most popular doctors give undesirable or very high caesarean rates. This is where the difference lies between an unskilled & well trained obstetrician. If the obstetrician is well

trained in good premier institution, where she has conducted a good number of deliveries including forceps, vacuum, rotation of occiput in occipitoposterior position, she is confident enough to handle such complicated vaginal deliveries. If she is confident enough to do a caesarean in case of deep stuck head (if trial fails), unnecessary C-section rates can be significantly diminished.



When choosing your baby's birth place, ask about the facilities like epidural anaesthesia, nursery and blood bank in the hospital. Most of the hospitals do not collect the data for vaginal caesarean delivery ratio and moreover they are not transparent about the data for individual doctor's vaginal to caesarean ratio. The data collection should be transparent as it attribute for the patient to choose their obstetrician.


Labour studies have shown that at less than 40 weeks of gestation, women who underwent induction have lower rate of C-section compare to those who received expectant management. The use of cervical ripening methods such as misopristol, dinoprostgel or pge 2 gel, foleys bulbs and laminaria tents lead to lower rate of caesarean section. If colourddoppler studies is normal, the baby weight is within normal range and the mother is feeling good, foetal movements and the cervix is favourable, do not induce the labour before 40 weeks unless medically indicated. They

wait for 24 hours to call it a failed induction. In case of ruptured membranes they must wait for 12 -14 hours of induction

### **Labor support**

It is the most effective tool to improve labour and delivery outcome as continuous presence of one to one

personnel support such as doula improves patient satisfaction and cooperation, this resource is underutilised. Doulas are ideal to give massage, positioning, relaxation, information and many more skills to make the patient comfortable during labour.

Caesarean sections are required if the second stage is prolonged, that is, more than three or four hours in cases of epidural analgesia. Operative vaginal delivery like forceps or vacuum delivery should be used judiciously as they do not have serious morbidity like intracerebral haemorrhage. Hopefully the combined efforts of the doctor and patient would definitely reduce the caesarean section rate. 

To deliver a healthy child and avoid caesarean delivery, physical exercise is required. The working women having sedentary job should exercise more or attend antenatal classes

*(The author is Infertility Specialist & Endoscopic Surgeon, Head of Department Sri Balaji Action Medical Institute, New Delhi)*



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# Get Back into Shape

Breast reconstruction, a surgery to make a new breast shape, is gaining demand in urban areas. But women should know and compare each of the breast reconstruction options to look pretty and gorgeous

**BY ABHIGYAN**

**B**reast reconstruction is a surgery to rebuild a breast for anyone who has lost a breast because of cancer or any other reasons like breast lump, pain, discharge, thickening, swelling or skin irritation. It is a surgery to make a new breast shape after removal of the breast or removal of some breast tissue.

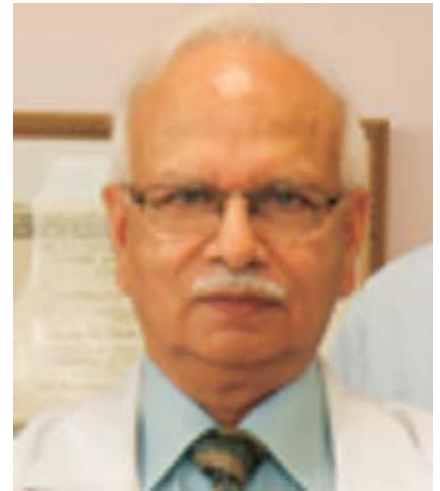
Women, whether living in urban or rural society, tend nowadays feel anxious, uncertain, sad, and mournful about giving up a part of their body that is one of the hallmarks of becoming a woman - a significant part of their sexuality, what makes them look good in clothes, and helps them feed their babies.

Breasts surgery is required to reduce enlarged, undeveloped or asymmetric (uneven) or imbalanced breasts. With increasing awareness it becomes a new demand of modern society. But it is not acceptable to rural areas because of conservative mindset.

But first you must do some careful thinking and delving into your feelings in order to figure out what is best for you. In this concern, you should go through each of the breast reconstruction options to look pretty and gorgeous. The main ways of making a new breast shape include removing the whole breast and the skin and then putting in an implant to gradually stretch the remaining skin and muscle, removing just the breast tissue, but leaving the skin, reconstruction with your own living tissue taken from another part of your body, and combination of your own tissue and an implant.

You will need to speak to your surgeon or breast care nurse to find out which type of reconstruction is suitable for you. After your reconstruction, you may need to have further surgery to create a nipple or change the shape of your other breast to match your reconstructed one. It is





also possible to have breast reconstruction if you've only had part of your breast removed (breast conserving surgery).

There are two types of options for breast reconstruction. One is Breast Implant and other is Tissue Flaps. Reconstruction with implants involves plastic sacs filled with silicone (a type of liquid plastic) or saline (salt water). The sacs are placed under your skin behind your chest muscle. It is important that you discuss these options with your physician who knows your situation and needs. Tissue flap surgeries use muscle, fat, skin, and blood vessels moved from another part of the body to the chest area to rebuild the breast. This tissue can be taken from the lower stomach area, back, buttocks, or inner thigh. The tissue flap can stay attached (pedicle flap) or detached (free flap) from the body to recreate the breast.

You can have reconstruction at the same time as your breast cancer surgery (immediate reconstruction) or sometime late. An immediate reconstruction gives you a new breast straight away. The breast will be different to the one that was removed, but some women find that immediate reconstruction helps them cope more easily with their feelings about the loss of a breast.

In concern with personality profile that indicates psychological distress about your personal appearance and bodily self-image, and a history of having endured criticism, the breast implant is the best option.

According to **Dr. Dinesh Bhargava**, Director, Aesthetics Plastic Surgeon, Pushpanjali Crosslay Hospital, Vaishali, Ghaziabad, "A breast implant is a prosthesis used to change the size, form, and texture of a woman's breast; in plastic surgery, breast implants are applied for post-mastectomy breast reconstruction; for correcting congenital defects and deformities of the chest wall; for aesthetic breast augmentation; and for creating breasts in the male-to-female transsexual patient."

Medical ointments, cream and herbs are available to treat the patients who are suffering from much enlarged, less developed and asymmetric types of breasts. There are three general types of breast implant devices, defined by their filler material: saline solution, silicone gel, and composite filler. The saline implant has an elastomer silicone shell filled with sterile saline solution; the silicone implant has an elastomer silicone shell filled with viscous silicone gel; and the alternative composition implants featured miscellaneous fillers, such as soy oil,

During reconstruction, a plastic surgeon creates a breast shape using an artificial implant (implant reconstruction), a flap of tissue from another place on patient's body or both

**Dr. Dinesh Bhargava**,  
Director, Aesthetics Plastic Surgeon,  
Pushpanjali Crosslay Hospital,  
Vaishali, Ghaziabad

polypropylene string, etc.

"In surgical practice, for the reconstruction of a breast, the tissue expander device is a temporary breast prosthesis used to form and establish an implant pocket for placing the permanent breast implant. For the correction of male breast defects and deformities, the pectoral implant is the breast prosthesis used for the reconstruction and the aesthetic repair of a man's chest wall.

"The original breast implant, the Cronin-Gerow Implant, prosthesis model 1963, was an anatomic tear-shaped design that featured a posterior fastener made of Dacron, to affix it in



the implant pocket,” informs **Dr Dinesh Bhargava**.

There are three types of breast implant used for mammoplasty, breast reconstruction, and breast augmentation procedures like saline implant filled with sterile saline solution, silicone implant filled with viscous silicone gel and alternative-composition implant with miscellaneous fillers (e.g. soy oil, polypropylene string, etc.) that are no longer manufactured.

According to **Dr Dinesh Bhargava**, saline-implant is a physically less invasive surgical technique for emplacing an empty breast implant device through a smaller surgical incision. In surgical praxis, after having placed the empty breast implants to the implant pockets, the plastic surgeon then filled each device with saline solution, and, because the required insertion-incisions are short and small, the resultant incision-scars will be smaller and shorter than the surgical scars usual to the long incisions required for inserting pre-filled, silicone-gel implants.

When compared to the results achieved with a silicone-gel breast

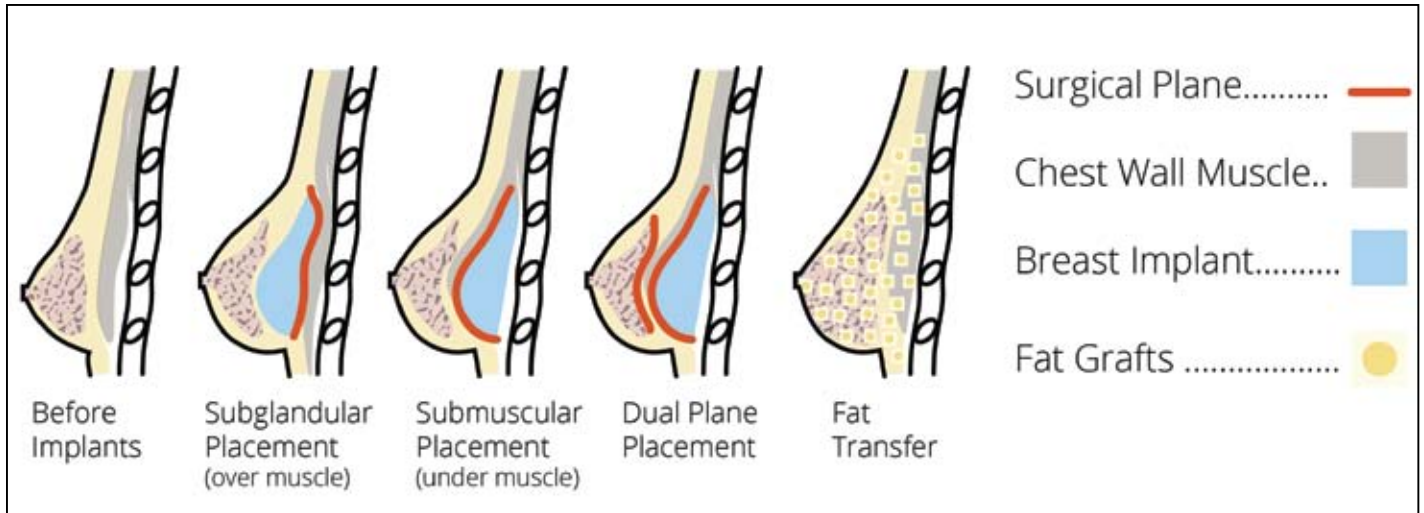
implant, the saline implant can yield acceptable results, of increased breast-size, smoother hemisphere-contour, and realistic texture; yet, it is likely to cause cosmetic problems, such as the rippling and the wrinkling of the breast-envelope skin, accelerated lower breast pole stretch, and technical problems, such as the presence of the implant being noticeable to the eye and to the touch. The occurrence of such cosmetic problems is likelier in the case of the woman with very little breast tissue, and in the case of the woman who requires post-mastectomy breast reconstruction; thus, the silicone-gel implant is the technically superior prosthetic device for breast augmentation, and for breast reconstruction. In the case of the woman with much breast tissue, for whom sub-muscular emplacement is the recommended surgical approach, saline breast implants can produce an aesthetic result much like that afforded by silicone breast implants, albeit with greater implant palpability.

The modern prosthetic breast was invented in 1961, by the American plastic surgeons Thomas Cronin and Frank Gerow, and manufactured by the

Dow Corning Corporation. In due course, the first augmentation mammoplasty was performed in 1962. There are five generations of medical device technology for the breast implant models filled with silicone gel; each generation of breast prosthesis is defined by common model-manufacturing techniques.

Since the mid-1990s, the fifth generation of silicone-gel breast implant is made of a semi-solid gel that mostly eliminates the occurrences of filler leakage (“silicone-gel bleed”) and of the migration of the silicone filler from the implant-pocket to elsewhere in the woman’s body. The studies Experience with Anatomical Soft Cohesive Silicone gel Prosthesis in Cosmetic and Reconstructive Breast Implant Surgery (2004) and Cohesive Silicone gel Breast Implants in Aesthetic and Reconstructive Breast Surgery (2005) reported low incidence-rates of capsular contracture and of device-shell rupture; and greater rates of improved medical-safety and technical-efficacy than that of early generation breast implant devices.

During reconstruction, a plastic surgeon creates a breast shape using



an artificial implant (implant reconstruction), a flap of tissue from another place on your body or both. It is important to know that while breast reconstruction rebuilds the shape of the breast, it doesn't restore sensation to the breast or the nipple. Over time, the skin over the reconstructed breast can become more sensitive to touch, but it won't be exactly the same as it was before surgery.

**Dr Subhash Aggarwal**, Senior Consultant Surgeon, Shri Balaji Action Medical Institute, New Delhi, said, "Breast reconstruction is the rebuilding of a breast, usually in women. It involves using autologous tissue or prosthetic material to construct a natural-looking breast. Often this includes the reformation of a natural-looking areola and nipple. This procedure involves the use of implants or relocated flaps of the patient's own tissue. The primary part of the procedure can often be carried out immediately following the mastectomy. A mastectomy is performed under general anesthesia, which means you are unconscious (asleep) during the surgery."

**Dr Subhash Aggarwal**, adds "We remove all of the breast tissue (and in most cases, but not all, the nipple and areola are also removed). As with many other surgeries, patients with significant medical comorbidities like high blood pressure, obesity, diabetes and smokers are higher-risk




Breasts surgery is required to reduce enlarged, undeveloped or asymmetric (uneven) or imbalanced breasts. After your reconstruction, women may need to have further surgery to create a nipple or change the shape of their other breast to match the reconstructed one

**Dr. Subhash Aggarwal**,  
Senior Consultant Surgeon, Shri  
Balaji Action Medical Institute

candidates. Surgeons may choose to perform delayed reconstruction to decrease this risk. There is little evidence available from randomised studies to favour immediate or delayed reconstruction".

The infection rate may be higher with primary reconstruction (done at the same time as mastectomy), but there are psychological and financial benefits to having a single primary reconstruction. Patients expected to receive radiation therapy as part of their adjuvant treatment are also commonly considered for delayed autologous reconstruction due to significantly higher complication rates with tissue expander-implant techniques in those patients. Waiting for six months to a year may decrease the risk of complications, but this risk will always be higher in patients who have received radiation therapy.

Delayed breast reconstruction is considered more challenging than immediate reconstruction. Frequently not just breast volume, but also skin surface area needs to be restored. Many patients undergoing delayed breast reconstruction have been previously treated with radiation or have had a reconstruction failure with immediate breast reconstruction. In nearly all cases of delayed breast reconstruction tissue must be borrowed from another part of the body to make the new breast. 

# Cheers for your Heart's Health!

There are several ways by which you can take care of your heart – prudently flavoured salt diet combined with a brisk physical activity, compensating sedentary lifestyle with healthy salads and so on ...

**BY DR RAJAT ARORA**



**A**t the heart of good health is good nutrition. A healthy diet and lifestyle are your best weapons to fight cardiovascular diseases. Not much emphasis is given to salt intake or reduction of sodium in food. With evidence indicating that consuming too much sodium can raise blood pressure, a leading risk factor for heart disease, and as Indians are known to consume salt liberally, there is a need to vociferously promote the need for reducing salt that could pose a threat to a healthy heart.

This calls for a pledge that needs to be taken by all those with a heart!

**I love you salt, but, you are breaking my heart.**

With this pledge, it is important for us to say NO to higher risk of BP, heart

disease, stroke, kidney disease and other health problems – not to mention the bloating flabby tummies – linked to too much of sodium. The dangers of excessive salt have been known for so long that thousands of years ago Chinese noblemen had reportedly used large amounts to commit suicide.

As Lawrence Appel, the Director of the Welch Center for Prevention, Epidemiology and Clinical Research at Johns Hopkins University in Baltimore, Maryland has rightly pointed out, elevated blood pressure is the leading cause of preventable death worldwide and intake of too much sodium leads to high BP that consequently may result in cardiac ailments.

There could be no better way to a healthy heart if a prudently flavoured salt diet is combined with a brisk

physical activity. For most healthy people, it is important to get the equivalent of at least 150 minutes per week of moderate to intense physical activity, like brisk walking. And in case the BP or cholesterol needs to be lowered, it is better to go for a 40 minute moderate to vigorous activity three to four times a week.

Yet another matter that needs utmost attention is the health of sportsmen and athletes. To take it for granted that sportsmen are at little or no risk of heart diseases could merely be a myth. As their adrenaline increases during games so does the stress on their heart. The combination of stress and exertion can cause heart problems to surface and help in their cases often comes late.

Hence the health experts, akin to the West, need to concentrate on sportspersons. A physical examination to all athletes may ideally be listening to the heartbeat, checking blood pressure and reviewing family medical history. An examination of the heart periodically among athletes may help detect about two-thirds of the deadly, concealed heart problems aggravated by rigorous sports.

A study conducted by the American Heart Association on subjects who underwent a four-week exercise programme following heart-failure revealed that exercise had slowed muscle-wasting and improved their exercise capacity, regardless of age. The study confirmed that exercise can reduce inflammation in skeletal muscle.

Mental well being and physical health go hand in hand. Past studies have linked the feeling of hopelessness to the development and worsening of coronary heart disease. But little research has been done on helping patients, and many healthcare professionals overlook things like mental state, attitude, perspective and outlook as aspects of patient care.

If you feel you are turning to be a couch potato, spending too many hours in front of the computer at office, then



Mental well being and physical health go hand in hand. Past studies have linked the feeling of hopelessness to the development and worsening of coronary heart disease


compensate your sedentary lifestyle with healthy salads. Say no to pizzas, biryanis and rich cream pastries. Group lunches really can be heart-healthy as each can bring a different salad ingredient. In some offices, it can be a little too easy to keep that cup of coffee filled throughout the day. While one to two cups of coffee a day do not seem harmful, excess caffeine, whether it's from coffee or energy drinks, could be bad.

Making healthy food choices, including controlling portion sizes and reading food labels, is an essential step in maintaining a proper body weight. A heart-healthy diet includes foods that are low in fat, cholesterol, and sodium. By writing down what you eat, and how it affects your glucose levels, you can keep better track of how foods affect your body. Check your blood sugar one hour to one-and-a-half hours after eating to see how your body reacts to various foods.

Worksite wellness programme is a very important concept that India should emulate from the West going by the glued-to-seat kind of work that a majority have been engaged in. This programme may include weight loss competitions, gym memberships, financial incentives and behavioural intervention programmes to reduce stress. American Heart Association has suggested that online activity tracker could be easy for companies to set up as part of their worksite wellness programmes.

The ancient practice of yoga may well be a way to boost your heart health. Yoga can help lower blood pressure, increase lung capacity, improve respiratory function and heart rate, boost circulation and muscle tone.

Yoga influences the hypothalamus directly, the area of the brain that controls endocrine activity, and helps prevent heart attacks. A complete yoga programme involves exercises (asanas), breath control (pranayama), sleep control (yoga Nidra) and mind control (meditation). These are the tenets for cardiac health; also probably the reason why cardiologists universally recommend yoga to their patients.

Acute emotional stress has a significant adverse effect on the heart and that's where yoga can be of tremendous benefit to manage the stress. It is highly recommend that patients with cardiac issues consult a qualified and trained cardiac medical yoga instructor. It is largely believed that mental relaxation through meditation and yoga contributes immensely in offsetting of coronary artery blocks due to the deposition of fats on the inner walls of the heart. Thus, owing to its many positive effects – direct and indirect on the cardiovascular system – yoga assumes a pivotal role in heart care. 

*(The author is Interventional Cardiologist, Yashoda Superspeciality Hospital, Ghaziabad)*

**B**reast reconstruction is a surgery to rebuild a breast for anyone who has lost a breast because of cancer or any other reasons like breast lump, pain, discharge, thickening, swelling or skin irritation. It is a surgery to make a new breast shape after removal of the breast or removal of some breast tissue.

If you have symptoms like tiredness and weakness, fluid which leaks from the bloodstream and builds up in the legs and abdomen (ascites), loss of appetite, feeling of sickness, and vomiting, weight loss (although you may put on weight if you retain a lot of fluid), a tendency to bleed and bruise more easily, jaundice (going yellow) and itching, don't waste your time immediately contact your doctors. These are common symptoms of liver cirrhosis. It becomes alarming in our society. The symptoms of cirrhosis of the liver vary with the stage of the illness. If you have cirrhosis, you should have regular checks to make sure that there are no signs of liver cancer developing.

Most people who drink large amounts of alcohol harm their livers in some way, but not all of these people get cirrhosis of the liver. Women who are heavy drinkers are at higher risk than men. People who have hepatitis B or hepatitis C are more likely to suffer liver damage from alcohol. The symptoms of cirrhosis of the liver vary with the stage of the illness. In the initial stages, there may not be any symptoms.

The outlook depends on factors such as the underlying cause, how early the condition is diagnosed, and how early treatment is given. Many people who have cirrhosis which is not too extensive live a normal life for a number of years. In some cases, the progression of the cirrhosis can be halted or slowed by treatment. The outlook is not so good if there is a lot of liver damage, especially if you have alcoholic cirrhosis and do not stop drinking.

Some fat in the liver is normal. But if fat makes up more than 5-10 per cent of the weight of your liver, you may have



# Avoid Liver Scarring

Liver cirrhosis can be life threatening. But if it is diagnosed early and the cause is treated, further damage can be minimised

**BY ABHIGYAN**

alcoholic or nonalcoholic liver disease. In some cases, these diseases can lead to serious complications. More than 15 million people in western countries

abuse or overuse alcohol. Almost all of them 90 to 100 percent develop fatty livers. Fatty liver can occur after drinking moderate or large amounts of

alcohol. It can even occur after a short period of heavy drinking (acute alcoholic liver disease). Genetics or heredity (what is passed down from parent to child) plays a role in alcoholic liver disease. It may influence how much alcohol you consume and your likelihood of developing alcoholism. And, it may also affect levels of liver enzymes involved in the breakdown (metabolism) of alcohol.

If you have cirrhosis, you have an increased risk of developing cancer of the liver. The risk varies according to the cause of cirrhosis. The greatest risk is with cirrhosis caused by hepatitis C infection, followed by cirrhosis caused by hereditary haemochromatosis. The risk of developing liver cancer is lower in those with alcoholic cirrhosis.

According to **Dr Gurwant S Lamba**, Chief of Gastroenterology and Hepatology, Action Institute of Liver and Diagnosis Diseases, “With the advancement of technology, it is easier to control the disease, if not completely cure it. Liver Cirrhosis is a late stage of scarring (fibrosis) of the liver caused by many forms of liver diseases and conditions like hepatitis and chronic alcohol abuse. The liver carries out several necessary functions, including detoxifying harmful substances in your body, cleaning your blood and making vital nutrients.”

Cirrhosis occurs in response to damage to your liver. The liver damage done by cirrhosis can't be undone. But if liver cirrhosis is diagnosed early and the cause is treated, further damage can be limited. As cirrhosis progresses, more and more scar tissue forms, making it difficult for the liver to function (decompensate cirrhosis). Advanced cirrhosis is life-threatening.

**Dr Monica Jain**, Chief of Gastroenterology and Hepatology, Action Institute of Liver and Diagnosis Diseases, says, “Liver Cirrhosis is a serious condition where normal liver tissue is replaced by scar tissue (fibrosis). It tends to progress slowly and often does not cause symptoms in its early stages. However, as the function



**Dr. Gurwant Lamba**, Chief of Gastroenterology and Hepatology, Action Institute of Liver and Diagnosis Diseases

of the liver gradually becomes worse, serious problems can develop. In the western countries the two common causes of cirrhosis are heavy alcohol drinking and hepatitis C infection. Treatments may vary, depending on the cause. If cirrhosis becomes severe, a liver transplant may be the only option.”

The liver is in the upper right part of the abdomen. It has many functions which include storing glycogen (fuel for the body) which is made from sugar. When required, glycogen is broken down into glucose which is released into the bloodstream helping to process fats and proteins from digested food. Proteins are essential for blood to clot (clotting factor). Liver helps to remove or process alcohol, poisons and toxins from the body, makes bile which passes from the liver to the gut and helps to digest fats.

There are many causes of cirrhosis. In the UK, the most common causes are heavy alcohol drinking and infection with the hepatitis C virus. Your liver cells break down alcohol, but too much alcohol can damage the liver cells. As a rule, the heavier you're drinking, the more your risk of developing cirrhosis. However, alcoholic cirrhosis is not just a condition of alcoholics. People who are not heavy drinkers can also develop cirrhosis.

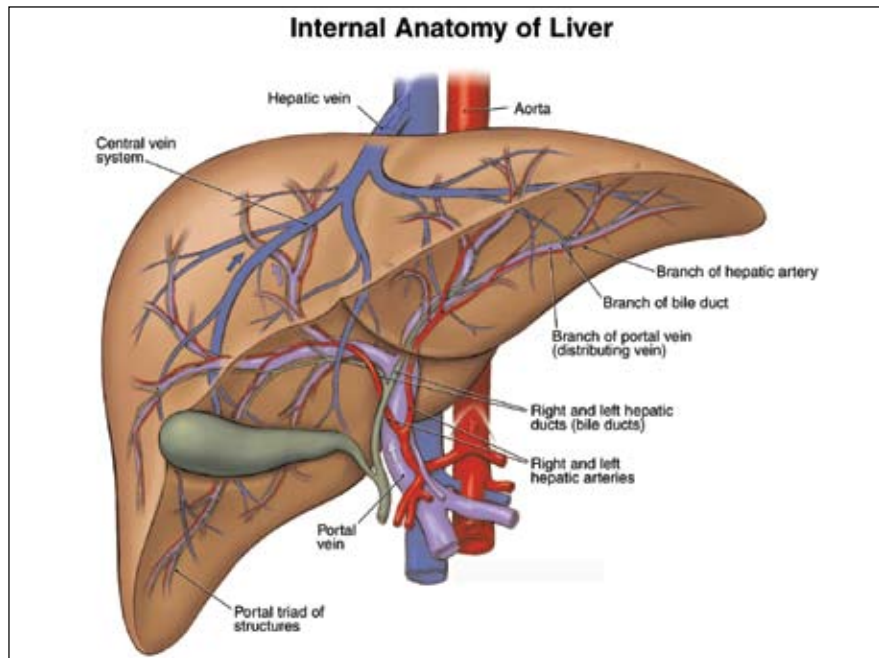
**Dr Gurwant S Lamba**, said, “About 1 in 10 heavy drinkers will eventually develop cirrhosis. It tends to occur after 10 or more years of heavy drinking. It is not clear why some people are more prone to their liver cells becoming damaged by alcohol and to developing cirrhosis. There may be a genetic tendency. Women who are heavy drinkers seem to be more prone to cirrhosis than men. Chronic (persistent) infection with the hepatitis C virus causes long-term inflammation in the liver. This can eventually lead to liver scarring and cirrhosis. Up to one in five people with chronic hepatitis C develop cirrhosis but this usually takes about 20 years or even longer than the initial infection”.

Says **Dr Vishal Garg**, Senior Gastroenterologist, Pushpanjali Crosslay Hospital, Vaishali, Ghaziabad, “Worldwide, chronic infection with the hepatitis B virus is the most common cause of cirrhosis (but alcohol and hepatitis C are the most common causes in the UK). The immune system normally makes antibodies to attack bacteria, viruses, and other germs. In people with autoimmune diseases, the immune system makes antibodies against part(s) of the body. Something triggers the immune system to make these auto-antibodies but the trigger is not known. In autoimmune hepatitis, the immune system makes antibodies against liver cells, which can lead to damage and cirrhosis. Diseases that cause blockage of the bile ducts can cause back pressure and damage to the liver cells. For example, primary biliary cirrhosis, sclerosing cholangitis, and congenital problems of the bile ducts.”

Non Alcoholic Steato Hepatitis (NASH) is a condition which causes fat to build up in the liver. This can lead to scarring and cirrhosis. Being overweight/obese increases your risk of developing NASH. This is more likely to occur with people who are obese, diabetes patients, those with high blood lipid (fat) levels, as well as individuals with hypertension (high blood pressure). NASH, in its early stages, begins with the accumulation of



**Dr. Monika Jain,**  
Chief of Gastroenterology and  
Hepatology, Action Institute of Liver  
and Diagnosis Diseases



too much fat in the liver. The fat causes inflammation and scarring, resulting in possible cirrhosis later on.

The person's own immune system attacks healthy tissues in the body as though they were foreign substances. Sometimes the liver is attacked. Eventually the patient can develop cirrhosis. In the early stages of the condition, often there are no symptoms. You can get by with a reduced number of working liver cells. However, as more and more liver cells die, and more and more scar tissue builds up, the liver fails to make enough proteins such as albumin that help to regulate the fluid composition in the bloodstream and body. And also fails to make enough chemicals needed for blood clotting.

Cirrhosis can develop in severe cases as toxins build up in the bloodstream and affect the brain. This can cause changes to your personality and behaviour, confusion, forgetfulness and difficulty concentrating. Eventually it can lead to loss of consciousness and hepatic coma. These changes are known as hepatic encephalopathy.

Also, the scar tissue restricts the flow of blood through the liver. As the cirrhosis becomes worse, this causes back pressure in the portal vein (known

as portal hypertension). The portal vein is the vein that takes blood from the gut to the liver - it contains digested foods. Increased pressure in this vein can cause swellings (varices) to develop in the branches of the vein in the lining of the oesophagus (gullet) and stomach. These varices have a tendency to bleed easily into the gut. If a bleed occurs, you may vomit blood, or pass blood with your stools (faeces).

### How is cirrhosis diagnosed?

The doctor first examines if a patient has enlarged liver, or that he is retaining fluid. Cirrhosis may be thought of as a cause of his symptoms if he has a history of heavy alcohol drinking or have had a previous episode of hepatitis. Blood tests may show abnormal liver function.

An ultrasound scan (or a CT or MRI scan) may show that you have a damaged liver. To confirm the diagnosis, a biopsy (small sample) of the liver may be taken to be looked at under the microscope.

If the underlying cause of the cirrhosis is not clear, then further tests may be done to clarify the cause. For example, to check for antibodies to hepatitis viruses, and autoantibodies that may have attacked your liver cells, to look in a blood

sample for excess iron or copper, etc.

**Dr Vishal Garg**, says, "Liver Cirrhosis tends to get progressively worse if the underlying cause persists and is not treated. In general, once the damage is done, the scarring is not able to reverse. Therefore, the aim of treatment is, if possible, to prevent further liver scarring, or to slow the progression of the scarring process. Treatments that may be advised include the following. Whatever the cause of cirrhosis, you should stop drinking alcohol completely. Drinking alcohol will increase the rate of progression of cirrhosis from whatever cause."

"Always tell your doctor or pharmacist that you have cirrhosis if you take any prescribed or over-the-counter medicines. Some medicines that are processed in the liver may need their dose adjusted if you have liver problems, or even should not be used at all," **Dr Vishal Garg** adds.

**Dr Gurwant S Lamba** elaborates, "Some of the causes of cirrhosis can be treated. This may slow down, or halt, the progression of cirrhosis. For example, do not drink alcohol if alcohol is the cause. Interferon and other medication may be used to treat viral hepatitis. Steroid medicines or other





**Dr Vishal Garg,**

Senior Gastroenterologist, Pushpanjali Crosslay Hospital, Vaishali, Ghaziabad,

immunosuppressant medicines may be used to treat autoimmune diseases causing liver damage. Regular removal of a pint or so of blood can remove excess iron which occurs in haemochromatosis.”

### Liver transplant

**Dr Monica Jain** says, “In severe cases, where the scarring is extensive and the liver can barely function, then a liver transplant may be the only option. Up until recently the scarring process of cirrhosis was thought to be irreversible. However, recent research has led to a greater understanding of the scarring process. Some research suggests that medicines may be able to be developed that can reverse the scarring process. Stem-cell or liver cell transplantation aimed at restoring liver function is also being investigated. This research continues.”

### Alcohol

The most common cause of cirrhosis is alcohol drinking. The most important way to prevent cirrhosis from developing is to drink within the recommended safe limits. Men should drink no more than 21 units of alcohol per week, no more than four units in any one day, and have


at least two alcohol-free days a week. Women should drink no more than 14 units of alcohol per week, no more than three units in any one day, and have at least two alcohol-free days a week. For pregnant women, advice from the Department of Health states, “Pregnant women or women trying to conceive should not drink alcohol at all. If they do choose to drink, to minimise the risk to the baby, they should not drink more than 1-2 units of alcohol once or twice a week and should not get drunk”.

In addition to quantity, safe alcohol limits must also take into account frequency. There is an increased risk of liver disease for those who drink daily or near daily compared with those who drink periodically or intermittently. In general, the more you drink above these limits, the more harmful alcohol is likely to be. But, you should not drink alcohol at all if you have already developed early cirrhosis or you have chronic hepatitis or certain other liver problems.

### Infectious diseases

**Dr Gurwant S Lamba**, Chief of Gastroenterology and Hepatology, Action Institute of Liver and Diagnosis, observes, “Some causes of cirrhosis are due to infectious diseases which can

often be prevented. For example, people who inject street drugs are at risk of hepatitis B and C if they use unclean needles or other injection equipment. These infections may also be passed on through unprotected sex. Hepatitis B can be prevented by immunisation which is offered to those at risk such as healthcare workers, drug users and people with multiple sexual partners. Cirrhosis can cause death due to bleeding from varices, or by going into a coma from liver failure. People with cirrhosis are also at increased risk of developing serious infections.”

Various treatments may be advised, depending on the severity of the cirrhosis and the symptoms that develop. Adequate food intake (including calories and protein) and regular exercise are important to prevent excessive weight loss and muscle wasting. A low-sodium diet or diuretics (water tablets) is helpful to reduce fluid accumulating in the body. Zinc deficiency is common in cirrhosis and zinc supplements may be used. There is need of vaccination to protect against hepatitis A, influenza and pneumococcal infections. Osteoporosis may also occur and so prevention and treatment of osteoporosis is important. 

The incidence of hearing loss among Indians is increasing at an alarming rate. The treatment of such patients as well as those hearing-impaired from birth must be done at an early age so that they can join the mainstream of life

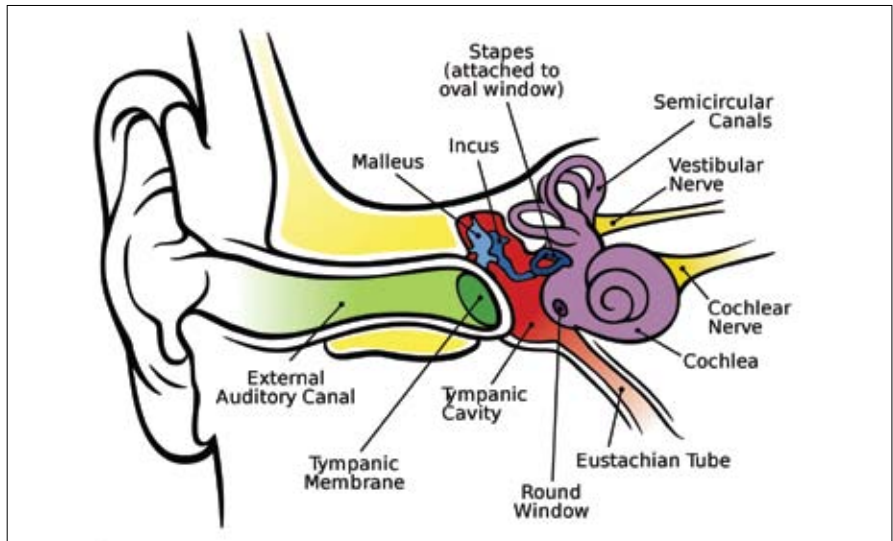
**BY DR A K AGARWAL**



# Coping with Hearing Impairment

**T**he sense of hearing is a crucial faculty for the humans to communicate and thereby adapt in the society. At least 250 million people globally have hearing loss, i.e., more than 4 per cent of the world's population. At least two-thirds of these people, about 165 million, live in developing countries.

According to a report, hearing loss in India is preventable. Hearing impairment is an invisible handicap, yet its effects on one's personal health, happiness, and personal well-being are real. Early diagnosis and treatment of hearing loss is of paramount importance in children since this limits the learning potential and development of the child. Also, among adults and the elderly, hearing loss can greatly impact the quality of life. Hearing loss also affects people living with those who have hearing impairment, like family members, since communication is a two-way street.



Changes in lifestyle and excessive noise exposure were cited as two of the reasons explaining the increasing incidence of hearing loss in India. Other factors included genetics, age, health conditions, drugs, chemical products, and physical trauma.

Deaf people cannot hear at all. If they hear some, they cannot understand speech. Hard of hearing people, with or without hearing aids, can hear and understand some speech. Though no exact numbers are available, between five and 15 million people are deaf in India. There are many causes of deafness. Various diseases (high fever, mumps) and accidents can cause deafness. Very few (eight per cent) are born to deaf parents. The deafness is not contagious. Only a small percentage of deaf people can read lips. Each country has its own sign language, just like spoken languages. In India, deaf people use Indian Sign Language (ISL). However, there are some variations. Research shows about 8 to 12 per cent difference in signs used among various regions. However, deaf people from different regions on India can understand each other.

The great problem deaf people face is learning a spoken/written language. Children learn one or

Hearing impairment is an invisible handicap, yet its effects on one's personal health, happiness, and personal well-being are real

more spoken language naturally through hearing. Deaf children, deprived of the sense of hearing, have to learn written languages very slowly.

Due to lack of education and training, deaf people in India have a hard time getting a job. But deaf people in western countries do all kind of jobs. Some are lawyers, doctors or dentists. Some hold high government positions. There are some deaf people who get elected to Parliament and legislative assemblies.

The cochlear implant helps deaf children and adults hear by implanting electrodes in the cochlea by a very complex surgery. Results vary. Some can understand speech very well while other only hear some sounds. Deaf people like all other minorities have their own distinct

culture and language. Deaf people are covered under the Persons with Disabilities (PWD) Act. But they need society's help; they need understanding. As a first step toward understanding deaf people, you should learn to communicate with them.

In a study coordinated by ICMR from 1986 to 1990, knowledge, attitude and practice (KAP) related to deafness were analysed. The basic problems found in the rural areas for the lack of health awareness were poverty, illiteracy, ignorance, poor hygiene, inadequate medical guidance, and age-old customs and beliefs. Only 28 per cent of the mothers and 51 per cent of the teachers had correct information regarding ear care. Training was given to health workers and teachers who in turn passed the knowledge to the experimental population. Primary and secondary prevention were stressed upon and at the end of the study there was a perceptible change in the hearing status of the population as against the control areas where inputs were not given.

According to the World Health Organization (WHO) and India's National Sample Survey Organization (NSSO), four in every 1,000 children in India are born with hearing

impairment and the incidence of hearing loss in adults and the elderly is increasing at an alarming rate.

As per the latest survey, the 6 per cent of the total population in India has some type of hearing problem. About 40,000 people are hearing-impaired from birth or acquire hearing loss during early childhood. Today about three or four in a thousand people have total hearing loss. If children are born deaf, they need to be treated in the first two to three years of their life. Otherwise, it will result in permanent deafness, because of which they will also be unable to speak.

An objective is to educate people about the importance of early intervention regarding hearing loss. Whether it is providing hearing aids or surgery, treatment of hearing loss patients must be done at an early age so that they can join the mainstream of life.

The National Sample Survey reports that hearing disability was the second most common cause of disability after locomotors disability. The hearing loss has accounted for 9 per cent of all disabilities in the urban and 10 per cent in the rural areas. Depending upon the extent of a person's inability to hear properly, the degree of hearing disability was ascertained. It was estimated that the number of persons with hearing disability per one lakh persons was 291, it was higher in rural (310) compared with urban regions (236).

In the same survey, about 32 per cent of people had profound (person could not hear at all or could hear only loud sounds) and 39 per cent had severe hearing disability (person could hear only shouted words). The survey results revealed that about 7 per cent of people were born with a hearing disability. About 56 per cent and 62 per cent reported the onset of hearing disability at less than 60 years of age in the rural and urban areas, respectively. The incidence of




According to the World Health Organization (WHO) and India's National Sample Survey Organization (NSSO), four in every 1,000 children in India are born with hearing impairment

hearing disability in the past one year was reported to be 7 per one lakh population.

The magnitude of milder degrees of hearing loss and unilateral hearing loss would be larger than these estimates for bilateral hearing loss. The major causes of hearing loss and ear disease in India have been listed by the WHO survey. Ear wax (15.9 per cent) was the most common cause of reversible hearing loss. Non-infectious causes like ageing and presbycusis are the next most common causes of auditory impairment in India (10.3 per cent). Middle ear infections such as chronic suppurative otitis media (5.2 per cent) and serous otitis media (3 per

cent) are other leading causes of hearing loss. The other causes include dry perforation of tympanic membrane (0.5 per cent) and bilateral genetic and congenital deafness (0.2 per cent).

The NSS 58th round also enquired about probable causes of hearing loss in India. In about 25 per cent and 30 per cent cases, for rural and urban India, respectively, the probable cause was old age. Of the other reasons, ear discharge and other illnesses were identified as the cause by a comparatively large proportion of persons with hearing disability. Also, in the same survey, nearly one per cent of hearing disabled persons reported German measles/rubella as the cause of hearing disability.

It has been estimated in a study by UNICEF that nearly 80 million people suffered from hearing impairment of various grades in India. Out of these, 35 million were below the age of 14 years. More importantly, more than 50 per cent of these disabilities were preventable. 

*(The author is renowned ENT Surgeon, Professor of Excellence and Former Dean, Maulana Azad Medical College, New Delhi)*



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**9289522005**

# “Behavioural domain is incorporated in medical curriculum for inculcation of compassion in doctors”

**Dr Jayshree Ben Mehta**, *President, Medical Council of India (MCI)* says that the emphasis of the Medical Council of India has always been on maintaining and monitoring the standards of medical education in India. The Council aims at ‘merit based’ admissions in various medical schools in the country which are devoid of any ‘capitation fee’. Excerpts of her interview with Double Helical ...

**What is the current state of the health sector in India? What steps has your council initiated to raise Indian health care system to global standards?**

Medical Council of India is created by a Parliamentary enactment for the purposes of maintaining and monitoring the standards of medical education in India. The basic onus vested with it is therefore pertaining to governing the maintenance of desired standards in various medical schools in the country under its ambit, so as to ensure generation of efficiently trained health care manpower which would be able to deal with health care delivery system meaningfully.



In order to ensure the same, the Council has ventured into updating the curricula for the undergraduate medical course by adoption of global competencies and to put it in a mode and manner so that it conforms to global standards. The curriculum is incorporated as an integral part of Graduate Medical Regulations notified by the Council u/s 33 of the IMC Act, 1956 which has a binding force for all the medical schools and examining universities to adhere to. By the said modality, the Council is also vested with the authority for further upgradation of the same taking into consideration the requirements from time to time at their end.



### **In terms of raising the seats in medical colleges and opening the new medical colleges what steps are being taken by the MCI?**

The opening of new medical colleges is governed in terms of the provisions incorporated at Section 10A of the IMC Act, 1956 and by the procedure entailed thereto in the governing regulations notified by the Council. An applicant has to fulfill the binding requirements in terms of procuring the 'Essentiality Certificate' from the concerned State Govt. and the 'Certificate of Consent of Affiliation' by the examining university along with a developmental plan for the purpose of opening of a new medical college. In terms of this stipulated time schedule, the application so made upon its 'primary scrutiny' by the Government of India is remitted to MCI for 'technical evaluation' and recommendations thereon. The recommendations are made by the Council on the basis of an 'on site' inspection conducted through its 'assessors' conforming to the prescribed eligibility in terms of evaluation of the plan as per minimum standard requirements prescribed in the governing regulations.

It is a matter of reality that the

The objective incorporated in Graduate Medical Education Regulations clearly brings out that the purpose is to create 'confident, competent and compassionate' medical practitioners who would be practising the profession within the tenets of ethical conduct

opening of medical colleges has been open ended in nature in as much as their geographical distribution has been inconsistent as against the population.

It is for this reason that the reconstituted MCI at its meeting held on March 28, 2014 has proposed that a national perspective development plan for opening of new medical college with reference to their locations based on social and

economical backwardness should be a parameter so as to ensure equitable distribution vis-à-vis geographical location.

### **Education at private medical college is highly expensive and out of reach for a majority of people. What is the council doing to bring in and enforce laws whereby more and more medical aspirants can get good medical education at affordable costs at private medical colleges?**

The emphasis of the MCI has always been on 'merit based' admissions in various medical schools in the country and which are devoid of any 'capitation fee'. The prescription of fee in unaided medical colleges in the country is governed by 'fee fixation committee' of the concerned state constituted in terms of composition and authority brought out by the pronouncement of the Supreme Court in Islamic Academy vs. Union of India case. Likewise the 'Admission Committee' headed by a retired judge of the High Court in each state is required to monitor the admissions. In addition, the Council monitors the admissions to undergraduate and postgraduate courses in each of the medical

college for the purposes of ensuring that they are strictly in accordance with the regulatory requirements and defaulters are suitably penalised. Admissions made in nonconformity to the binding rules are annulled forthwith. In order to ensure merit based admissions, the concept of National Eligibility Entrance Test was mooted at the initiative of the Council way back in 2009.

**What is your council doing to ensure that doctors follow the ethics of medical profession?**

The objective incorporated in Graduate Medical Education Regulations clearly brings out that the purpose is to create 'confident, competent and compassionate' medical practitioners who would be practising the profession within the tenets of 'ethical conduct' incorporating ethicality, morality and value based medical practice as contemplated in Indian Medical Council (Professional Conduct, Etiquette and Ethics Regulations, 2002) . Diligent and faithful enforcement of the same has been worked out by the MCI in consultation with the various State Medical Councils and the cases are dealt in a time bound manner with MCI vested with the appellate jurisdiction on the said cases.

**What are you doing to introduce quality health education in medical institutions? Do you support the idea that integration of the best of all systems, including Ayurveda, Siddha, Yoga, Naturopathy, Homeopathy etc, in the medical curriculum is the need of the hour?**

The process of making medical education at all levels 'quality centric' including undergraduate, postgraduate and super speciality courses is an ongoing venture of the MCI through various modalities. It includes curricular update, rationalisation of the infrastructural




The process of making medical education at all levels quality centric including undergraduate, postgraduate and super speciality courses is an ongoing venture of the MCI through various modalities

requirements and the incorporation of appropriate tools and techniques and technology in teaching learning process commensurate with appropriately designed tools of 'assessment and mechanism of evaluation' for the entire process. It is done through issuance of timely guidelines and commensurate regulations framed vide their update from time to time.

The Indian Medical Council Act

defines Medicine at Section 2 sub-section 2(f) very specifically and categorically with reference to its inclusions and exclusions as well. In view of the said binding definition and the pronouncement of the Supreme Court from time to time, it is not open and permissible for the MCI to integrate the system of modern medicine with any other system of medicine.

**Medical profession in India is gradually becoming bereft of compassion. How do you intend to prevent the commercialisation of this noble profession?**

In the Graduate Medical Education Regulations curriculum, structuring of the curriculum has been stipulated in three distinction contents namely 'knowledge, attitude and skills including clinical skills'. The structuring of behavioural domain is incorporated in the curriculum for the purposes of inculcation of compassion in the learner. It has been structured to ensure desired 'altruism' incorporated in him/her. 



**SUBSCRIPTION AD:**



# Stay Connected with World

There is need for implementation of national plans for primary ear and hearing care, building partnership to provide affordable hearing aids, and address major preventable causes of hearing loss

**BY DR SUNEELA GARG**



**C**ommunication skills are central to a successful life for all of us. Communication disorders greatly affect education, employment, and the well-being of many. However, each day is a challenge for millions of people and their families due to hearing disorders. Over five per cent of the world's population – 360 million people – has disabling hearing loss (328 million adults and 32 million children). Disabling

hearing loss refers to hearing loss greater than 40decibel (dB) in the better hearing ear in adults and a hearing loss greater than 30dB in the better hearing ear in children. The majority of these people live in low- and middle-income countries.

Approximately, one-third of people over 65 years of age are affected by disabling hearing loss. The prevalence in this age group is greatest in South Asia, Asia Pacific and sub-Saharan Africa.

## Through public health interventions 50 per cent of hearing loss is preventable

### Causes of Hearing loss and Deafness

The causes of hearing loss and deafness can be divided into congenital causes and acquired causes.

#### Congenital causes

Hearing loss can be caused by hereditary and non-hereditary genetic factors or by certain complications during pregnancy and childbirth, including maternal rubella, syphilis or certain other infections during pregnancy; low birth weight; birth asphyxia (a lack of oxygen at the time of birth); inappropriate use of ototoxic drugs (such as amino glycosides, cytotoxic drugs, ant malarial drugs and diuretics) during pregnancy, and severe jaundice in the neonatal period, which can damage the hearing nerve in a newborn infant.

#### Acquired causes

Acquired causes lead to hearing loss at any age. Among children, chronic otitis media is the leading cause of hearing loss.

Wax or foreign bodies blocking the ear canal can cause hearing loss at any age. Such hearing loss is usually mild and can be readily corrected.

Infectious diseases such as meningitis, measles and mumps can lead to hearing loss, mostly in childhood, but also later in life; chronic ear infection, which commonly presents as discharging ears, can lead to hearing loss. In certain cases this condition can also lead to serious, life-threatening complications, such as brain abscesses or meningitis. Collection of fluid in the ear (otitis media) can cause hearing loss.

Use of ototoxic drugs at any age, such as some antibiotic and

antimalarial medicines for example, can damage the inner ear.

Excessive noise, including working with noisy machinery, and exposure to loud music or other loud noises, such as gunfire or explosions, can harm a person's hearing.

Age-related hearing loss (presbycusis) is caused by degeneration of sensory cells.

### Impact of hearing loss

#### Functional impact

One of the main impacts of hearing loss is on the individual's ability to communicate with others. Spoken

language development is often delayed in children with deafness. Children with listening difficulties due to hearing loss or auditory processing problems continue to be unidentified and underserved population.

Hearing loss and ear diseases such as otitis media can have adverse effect on the academic performance of children. However, when opportunities are provided for people with hearing loss to communicate they can participate on an equal basis with others. The communication may be through spoken/ written language or through sign language.

#### Intellectual and Social Impact

Hearing loss affects a person's social interaction; memory, comprehension and vocabulary development; emotional development, performance, speech perception and production. Child may have problems in academic achievement, delayed developmental milestones, low IQ scores and in future less employment opportunities. Children suffer from self-described feelings of isolation, exclusion, embarrassment, annoyance, confusion, and helplessness.

Hearing loss due to otitis media can be prevented by healthy ear and hearing care practices. It can be suitably dealt with through early detection, followed by appropriate medical or surgical interventions





Therefore, it becomes very important to identify hearing morbidities in young age only and start treatment as soon as possible.

Limited access to services and exclusion from communication can have a significant impact on everyday life, causing feelings of loneliness, isolation and frustration, particularly among older people with hearing loss.

**Economic impact**

In developing countries, children with hearing loss and deafness rarely receive any schooling. Adults with hearing loss also have a much higher unemployment rate. Among those who are employed, a higher percentage of people with hearing loss are in the lower grades of

employment compared with the general workforce. In addition to the economic impact of hearing loss at an individual level, hearing loss substantially affects social and economic development in communities and countries.

**Prevention**

Half of all cases of hearing loss can be prevented through primary prevention. Some simple strategies for prevention include:

Immunizing children against childhood diseases, including measles, meningitis, rubella and mumps; immunizing adolescent girls and women of reproductive age against rubella before pregnancy;

Screening for and treating syphilis and other infections in pregnant

women; improving antenatal and prenatal care, including promotion of safe childbirth; avoiding the use of ototoxic drugs, unless prescribed and monitored by a qualified physician;

Referring babies with high risk factors (such as those with a family history of deafness, those born with low birth weight, birth asphyxia, jaundice or meningitis) for early assessment of hearing, prompt diagnosis and appropriate management, as required;

Reducing exposure (both occupational and recreational) to loud noises by creating awareness, using personal protective devices, and developing and implementing suitable legislation.

Hearing loss due to otitis media can be prevented by healthy ear and hearing care practices. It can be suitably dealt with through early detection, followed by appropriate medical or surgical interventions.

One in five adolescents have hearing loss. Listening to loud music through ear buds – the tiny electronic speakers that fit into ears – is probably the main reason that more adolescents are losing some of their hearing.

**Identification and management**

Early detection and intervention is the most important factor in minimising the impact of hearing loss on a child's development and educational achievements. In infants and young children with hearing loss, early identification and management through infant hearing screening programmes can improve the linguistic and educational outcomes for the child. Children with deafness should be given the opportunity to learn sign language along with their families.



Pre-school, school and occupational screening for ear diseases and hearing loss can also be effective for early identification and management of hearing loss.


People with hearing loss can benefit from the use of hearing devices, such as hearing aids, assistive listening devices and cochlear implants. They may also benefit from speech therapy, aural rehabilitation and other related services. However, current production of hearing aids meets less than 10 per cent of global need. In developing countries, fewer than one out of 40 people who need a hearing aid have one. The lack of availability of services for fitting and maintaining hearing aids, and the lack of batteries are also barriers in many low-income settings. Teaching in sign language and lip reading skills will benefit children with hearing loss, while provision of captioning and sign language

Hearing loss affects a person's social interaction; memory, comprehension and vocabulary development; emotional development, performance, speech perception and production. Child may have problems in academic achievement, delayed developmental milestones

interpretation on television will facilitate access to information.

Officially recognising national sign

languages and increasing the availability of sign language interpreters are important actions to improve access to sign language services. Human rights legislation and other protections can also help ensure better inclusion for people with hearing loss.

With this background, we can conclude that there is need for implementation of national plans for primary ear and hearing care, building partnership to provide affordable hearing aids, address major preventable causes of hearing loss, raising awareness and collecting data on deafness and hearing loss to demonstrate the scale and impact of the problem. 

*(The author is Director Professor, Organising Secretary World Congress Sound Hearing 2030, Department of Community Medicine, Maulana Azad Medical College, New Delhi)*

# Health Sector Pins Hopes on Budget 2015-16

The forthcoming Union Budget is expected to give a fresh impetus to the growth of health sector

**BY DR VINAY AGGARWAL**



India's growth prospects now look much better when compared to the situation a year ago. Various agencies project GDP growth to be around 5.5/5.6 per cent this fiscal year. This is a welcome improvement from below 5.0 per cent GDP growth witnessed in the previous two fiscal years – 4.5 per cent in 2012-13 and 4.7 per cent in 2013-14. Inflation which had been a persistent worry has finally moved to a downward path. Latest numbers indicate inflationary pressure waning, with both wholesale and retail prices easing. Also, the decline in prices has been broad-based with an evident

fall noted in food and fuel segment prices. Further, our current account position which was a dominant risk factor until last year has been changed for the better. The global oil prices have softened and the exchange rate is projected to remain pretty much stable. Export growth has also been steady so far this year.

## Make Medical Insurance More Comprehensive and Affordable

Under Section 10, any sum paid by the employer in respect of any expenditure incurred by the employee on the medical treatment of self/ family is currently exempt from tax, to the extent of Rs 15,000 per annum. This limit was last revised long back and needs to be revisited in the light of the rising medical and hospitalisation costs especially for private hospitals. The expenditure incurred by/for retired employees in respect of medical treatment on self/ family is currently not exempt from tax.

We want the current tax exemption limit of Rs 15,000 per annum to be increased to at least Rs 50,000 per annum. This could to some extent help to bring the exemption up to speed with the rising medical costs. Further, the exemption in respect of expenditure on medical reimbursements/hospitalisation expenditure in approved hospitals should also be extended to retired employees.

Deduction in respect of health insurance premium under Section 80D is also a challenging issue. Currently, a deduction up to Rs. 15,000 for self/ family and Rs. 15,000 for parents is available to an individual under Section 80D of the Act from taxable income, towards health insurance premium paid by him. The limit for parents is increased to Rs 20,000 if the parents are senior citizens. Unlike many other countries, India does not have a comprehensive health-care system for its citizens. There are Government hospitals but the facilities available are woefully inadequate while the private hospitals are very expensive. Also, the penetration and awareness of health insurance in India is very slow. Most individuals buy insurance only to save taxes.

We think that there is a need to raise the above limit to achieve two-fold objective of giving a tax incentive while also encouraging people to obtain larger healthcare cover in wake of the rising



We want the current tax exemption limit of Rs 15,000 per annum on medical expenses to be increased to at least Rs 50,000 per annum. This could to some extent help bring the exemption in sync with the rising medical costs

costs. It will be immensely helpful if, till the Government introduces adequate healthcare systems, the quantum of deduction under Section 80D of the Act is increased. A reference to General Insurance Corporation to find out how much they charge as premium for insurance of a family under a comprehensive hospitalisation scheme will give an indication about the reasonable higher limit of the deduction.

## Budgetary Boost Needed to extend Health Care Facilities

An aim to health for all prioritise two key initiatives like free drug service and free diagnosis service, besides earmarking Rs 500 crore to set up four more AIIMS-like institutes in the country in the Budget 2014-15. The government has already decided to set up 15 Model Rural Health Research Centres (MHRCs) in states for better health care facilities in rural India. However, no separate allocation has been made to fund this initiative. The health sector has got a total outlay of Rs 35, 163 crore, up from last year's Rs 33,278 crore. The government said two National Institutes of Ageing (NIA) will be set up at AIIMS in New Delhi and Madras Medical College in Chennai.

Setting up of NIAs was among the top health initiatives of the erstwhile UPA government but it never took off. It aims to cater to the needs of the elderly population which has increased four-fold since 1951. The number of senior citizens above the age of 60 was 76.6 million as per the 2001 census, which constituted about 7.5 % of the total

population. At this rate, it is projected to be 173 million by 2026. The health ministry also proposed to add 12 government medical colleges, where dental facilities would also be provided.

The government needs to provide central assistance to strengthen the States' Drug Regulatory and Food Regulatory Systems by creating new drug testing laboratories and strengthening the 31 existing state laboratories.

According to a report by the Ministry of Statistics and Programme Implementation, Children in India 2012

outside of it. The first Budget of the current government announced in July, 2014 was growth oriented and set a positive tone by emphasising the need for tackling the most pressing macro-economic challenges being faced by the nation. The Budget was an apt mix of short term and long term measures geared towards boosting confidence of all key constituents. The coming Budget should set into motion a more comprehensive agenda intended at taming inflation and giving a boost to investments in manufacturing and infrastructure sectors. Several measures towards creation of a seamless logistics


network are expected in the Union Budget.

### Further Bring Health Care within the Reach of teeming Millions

Since taking over the reins of government, the Narendra Modi government has taken multiple other steps across many areas. It is heartening to see government going the extra mile to give a fresh impetus to the growth of health sector. The government has not only announced some new national health campaigns, but is also putting effort to address some of the long pending issues.

The focus on Health for All campaign is a landmark step by the government. With this initiative, India has embarked on the path to become a global healthcare hub. The focused approach adopted by the government is laudable and some of the sectors identified are clearly the ones where India has/or can have a competitive advantage – including health care.

### The Budget provides an opportunity to strengthen the demand situation in the economy

The forthcoming Union Budget should further boost up demand and investments. The economy is certainly on the mend and the government has provided a big dose of confidence to the potential investors. However, we are still away from the point where a shift can be made to a higher growth trajectory which can be sustained going ahead. The demand situation remains weak and the capacity utilization levels across sectors have seen limited improvement. The forthcoming Union Budget provides an opportunity to put in place levers to strengthen the demand situation in the economy which will benefit the health sector too. 



- 48 per cent of children under the age of five are stunted (too short for their age), indicating that half of the country's children are chronically malnourished. The report states that malnutrition is higher among children whose mothers are uneducated. Similarly, the percentage of underweight children in lowest wealth index is three times higher than higher wealth index.

The new government has taken a series of progressive policy measures aimed towards improving the business environment and giving a strong push to growth. The commitment of the government towards reforms has been reflected in its first Union Budget as well

The government needs to provide central assistance to strengthen the States' Drug Regulatory and Food Regulatory Systems by creating new drug testing laboratories and strengthening the 31 existing state laboratories

*(The author is Chairman, Pushpanali Crossly Hospital, Member, Medical Council of India and Former National President, Indian Medical Association)*



## Health News

# The First World Congress on Ear and Hearing Care on February 12-14, 2015

The first World Congress on Ear and Hearing Care is being organised by Sound Hearing 2030 under the aegis of Society for Sound Hearing in collaboration with CBM. The Congress is being organised with technical support of WHO. The Congress would be held from February 12-14, 2015 at the India Habitat Centre, New Delhi. The theme of the Congress is **“Action towards Better Hearing”**.

**T**he Congress will focus on sustainable community ear and hearing care. Discussions will cover all aspects of the early diagnosis, management and rehabilitation of hearing loss. The thrust will be on developing countries and the role of developed world to facilitate this initiative. The Congress would provide a platform to bring together different stakeholders from across the globe in this endeavour.

New Delhi, which is the capital city of India, offers a testimony of every period of history (going back to nearly 2000 years) in its historical monuments and sites along with modern buildings, shopping plazas and malls, winding flyovers and zipping metro and subways. The month of February is the best season to visit New Delhi when the cold winter has receded, the hot summer is still far, and the beautiful, colourful spring with blooming flowers is in full swing. Being organised at the India Habitat Centre, the Congress and exhibition will take place in its sprawling six acre campus.


The Congress will be a meeting point for different initiatives and ideas and a step towards effective delivery of primary ear and hearing care along



Hearing loss affects a person's social interaction; memory, comprehension and vocabulary development; emotional development, performance, speech perception and production.

with advancements in the field with affordable high tech care. Keeping these facts in view and the current global trends, this Congress would bring all stakeholders together with the common goal of advancing and developing the field of ear and hearing care using cost effective strategies. The event promises to bring the very best and the latest in the field of ear care.

**Dr A K Aggarwal**, Organising

Chairman, World Congress on Ear and Hearing Care, says, “We believe our theme cannot be realised without the collective support of various stakeholders from the ministries, non-governmental organisations and the industry, who contribute in marching closer to our goal across the world. We invite all concerned that form an integral part of our community to partner with us.” 

# Rooted in Nature



Guided by belief that emphasises the healing power of nature, naturopathic practitioners favour a holistic approach with non-invasive treatment

**BY R C CHHARIA**



**N**aturopathy is a form of alternative medicine employing a wide array of “natural” treatments, including homeopathy, herbalism, and acupuncture, as well as diet and lifestyle counseling. Naturopaths favour a holistic approach with non-invasive treatment and generally avoid the use of surgery and drugs. Naturopathic philosophy is based on

a belief in self-healing.

Guided by a philosophy that emphasises the healing power of nature, Naturopathic practitioners now use a variety of traditional and modern therapies. This provides a general overview of naturopathy and suggests sources for additional information.

The term naturopathy was created from Latin and Greek roots for birth and suffering to suggest natural

healing. Naturopathic practitioners can be divided into three categories: traditional naturopaths; naturopathic physicians; and other health care providers that provide naturopathic services. Naturopathic physicians employ the principles of naturopathy within the context of conventional medical practices. Much of the ideology and methodological underpinnings of naturopathy are in conflict with the paradigm of medicine their training adds up to a very small amount of that of primary care doctors.

Naturopathy is an old science based on philosophy founded on natural principles of healing. We usually mention health promotive, disease preventive,

curative and rehabilitative values of different Naturopathy practices in ancient Indian texts. Recognising and realising the need for developing naturopathy

system on the basis of its own principles, the Government of India established Central Council for Research in Yoga & Naturopathy (CCRYN), New

Delhi and National Institute of Naturopathy (NIN), Pune, Maharashtra. Approximately 500 Naturopathy hospitals are currently functioning in the

country having indoor and outdoor treatment facilities. These hospitals are engaged in the propagation of positive health, treatment and management of

various lifestyle and psychosomatic disease conditions and are serving the suffering masses.

Naturopathy, also known as naturopathic medicine, is a medical system that has evolved from a combination of traditional practices and health care approaches popular in Europe during the 19th century.

We suggest take advice from doctors about any complementary health practices you use. Give them a full picture of what you do to manage your health. This will help

## The government needs to provide central assistance to strengthen the States' Drug Regulatory and Food Regulatory Systems by creating new drug testing laboratories and strengthening the 31 existing state laboratories

ensure coordinated and safe care.

The central belief in naturopathy is that nature has a healing power. Practitioners view their role as supporting the body's ability to maintain and restore health, and prefer to use treatment approaches they consider to be the most natural and least invasive.

Apart from India today, naturopathy is practised in a number of countries, including the United States, Canada, Germany, Great Britain, Australia, and New Zealand. People visit naturopathic practitioners for various

health-related purposes, including primary care, overall well-being, and complementary treatment (used in addition to conventional medical treatment) of chronic illnesses as well as acute conditions such as colds and flu. Many practitioners also provide complementary health care for patients with serious illnesses.

The practice of naturopathy is based on principles that are similar to and consistent with the principles of primary care medicine as practised by conventional physicians. These minimise harmful side effects, avoid suppression of symptoms, educate patients and encourage them to take responsibility for their own health, consider all factors (e.g., physical, mental, emotional, spiritual, genetic, environmental, seek to identify and remove obstacles to the body's natural processes for maintaining and restoring health and focus on the causes of a disease or condition, rather than its symptoms.

Naturopathic practitioners use many different treatment modalities. There are some examples like nutrition counseling, including dietary changes (such as eating more whole and unprocessed foods) and






use of vitamins, minerals, and other supplements, herbal medicines, homeopathy, hydrotherapy, physical medicine, such as therapeutic massage and joint manipulation, exercise therapy and lifestyle counseling.

Some studies have shown a few areas of scientific interest to pursue. For example, a study of warehouse employees with chronic low-back pain found that naturopathic care was a more cost-effective approach than standard physiotherapy advice. In another study, postal employees with chronic low-back pain had significantly greater improvement from naturopathic care than from standard physiotherapy advice. Researchers have also found evidence that naturopathic treatment may help improve quality of life in

Recognising and realising the need for developing naturopathy system on the basis of its own principles, the Government of India established Central Council for Research in Yoga & Naturopathy (CCRYN), New Delhi and National Institute of Naturopathy (NIN), Pune, Maharashtra

multiple sclerosis patients.

A study treatment approaches for patients with temporomandibular (jaw) disorders found that two complementary health practices—naturopathic medicine and traditional Chinese medicine—both resulted in greater pain reduction than state-of-the-art conventional care.

However, naturopathy is not a complete substitute for conventional care. Relying exclusively on naturopathic treatments and avoiding conventional medical care may be harmful or, in some circumstances (for example, a severe injury or an infection), have serious health consequences. 

*(The author is an experienced Naturopathist and Director, Balaji Action Hospital)*

# Killer Flu



Cases of swine flu are increasing with alarming frequency in India. The major challenge which the health departments are facing is how to identify the deadly fever

**BY AMRESH K TIWARY**

**T**he increasing incidence of swine flu in India seems to be alarming with the national capital Delhi having recorded more than 110 cases this year alone. The overall cases recorded in the country have crossed 240 with the death toll over 33.

In Jaipur, Rajasthan first 25 days of January 2015 witnessed more swine flu cases than the whole of 2014. Besides, one more person died of swine flu and six others tested positive for swine flu undergoing treatment in different hospitals.

In January at least 80 persons tested positive for swine flu. In 2014, there were 67 persons who tested positive for

the disease. The health officials now face the daunting challenge of controlling the spread of swine flu as the cases are scattered. At least 99 percent of the deaths reported this year were of

The increasing incidence of swine flu in India seems to be alarming. Concerns over swine flu are increasing with sporadic cases being reported from across the country

patients who were in the age bracket of 15 to 60 years.

They all belonged to different areas of the city. The Indian Medical Association (IMA) believes that seasonal flu is far more fatal than H1N1. To put things in perspective, swine flu kills one in 10 lakh people annually as opposed to the one in a lakh by seasonal flu annually. So, there is no need to panic, those with underlying health conditions can talk to their doctors about vaccination.

Andhra Pradesh and Telengana have been the worst hit with 100 cases and 18 deaths while the national capital is also witnessing a steep rise, with over 110 cases and four deaths so far. Rajasthan has reported 23 positive cases

and nine deaths. The virus has also set foot in Haryana infecting eight people.

### What is the government doing?

The Health Ministry claims it has placed an order for procuring 30,000 doses of the drug to treat a potential outbreak in India. The central government is also in the process of adding four more laboratories to test cases more efficiently. Concerns over swine flu are increasing with sporadic cases being reported from across the country. The major challenge which the health departments under the ministry are facing is how to identify swine flu cases when patients of common cold, with similar symptoms to swine flu, are thronging the hospitals in increased numbers. Aware of these issues, health ministry has directed the officials to collect swab samples to test patients suffering from swine flu symptoms.

With direction from the ministry, the health department is providing facility of free testing of swine flu for BPL, under-five children, pregnant women, people above 60 and those patients who are suffering from chronic diseases like renal disease, heart and second stage of cancer. All these categories are susceptible to swine flu and mortality rate is quite high. A team of National Centre for Disease Control (NCDC) is in touch with the senior health department officials on preventing the situation from worsening.



In a majority of the cases, swine flu symptoms are like a regular flu and can be easily managed at home. People with underlying health complications like asthma, heart and lung and kidney ailments, pregnancy, face greater risk

### Causes and symptoms

Sudden drop in temperature is the reason. Every winter, influenza cases are on the high, this is nothing new. And just like the flu, the symptoms are clogged chest, breathlessness etc.

**Dr Manisha Yadav**, Associated with Sir Ganga Ram Hospital, explains, "It's hard to explain whether you have swine flu or seasonal flu, because most symptoms are the same. People with swine flu may be more likely to feel nauseous and throw up than people who have seasonal flu. But a lab test is the only way to know for sure. Even a rapid flu test you can get in your doctor's office won't tell you for sure. In 2009, H1N1 was spreading fast around the world, so the World Health Organization called it

a pandemic. Since then, people have continued to get sick from swine flu, but not as many."

In a majority of the cases, swine flu symptoms are like a regular flu and can be easily managed at home. People with underlying health complications like asthma, heart and lung and kidney ailments, pregnancy, face the risk of complications. One in four such patients will need hospitalisation.



**Dr H P Singh**, Senior Child Specialist, Mother Child care Clinic, vaishali Ghaziabad, says, "Swine flu is transmitted from person to person by inhalation or ingestion of droplets containing virus from people sneezing or coughing; it is not transmitted by eating cooked pork products. The newest swine flu virus that has caused swine flu is influenza A H3N2v (commonly termed H3N2v) that began as an outbreak in

2011. The “v” in the name means the virus is a variant that normally infects only pigs but has begun to infect humans. There have been small outbreaks of H1N1 since the pandemic; a recent one is in India where many deaths have been reported.”



**Dr. Bhaskar Saikia**, Paediatric Intensivist, Balaji Action hospital, New Delhi, concurs, “Swine flu is contagious, and it spreads in the same way as the seasonal flu. When people who have it cough or sneeze, they spray tiny drops of the virus into the air. If you come in contact with these drops or touch a surface (such as a doorknob or sink) that an infected person has recently touched, you can catch H1N1 swine flu.”

Anti-viral medicine, Tamiflu is needed in respiratory distress. It remains effective since there has been no mutation. For the prevention of the disease, cover your mouth and nose while sneezing, and maintain a distance of at least three feet from the person who is coughing and sneezing. Washing hands regularly helps in warding off infections as well.

**Dr Anup Mohta**, Director, Chacha Nehru Bal Chikitsalaya, East Delhi, said, “While swine flu isn’t as scary as it seemed a few years ago, it’s still important to protect yourself from getting it. Like seasonal flu, it can cause more serious health problems for some

people. The best protection is to get a flu vaccine, or flu shot, every year. Swine flu is one of the viruses included in the vaccine.”



### What is Swine Flu?

According to **Dr Narendra Saini**, Infectious Disease Expert at Pushpanjali Crosslay Hospital, Vaishali (Ghaziabad) and Former Secretary General, Indian Medical Association. “Swine flu is a respiratory disease caused by viruses (influenza viruses) that infect the respiratory tract of pigs, resulting in nasal secretions, a barking cough, decreased appetite, and listless behaviour. Swine flu produces most of the same symptoms in pigs as human flu produces in people. Swine flu can last about one to two weeks in pigs that survive.


Adds **Dr Narendra Saini**, “Swine influenza virus was first isolated from pigs in 1930 in the U.S. and has been recognised by pork producers and veterinarians to cause infections in pigs worldwide. In a number of instances, people have developed the swine flu infection when they are closely associated with pigs (for example, farmers, pork processors), and likewise, pig populations have occasionally been infected with the human flu infection. In most instances, the cross-species infections (swine virus to man; human flu virus to pigs) have remained in local areas and have not



caused national or worldwide infections in either pigs or humans.”

Symptoms of swine flu in humans are similar to most influenza infections like fever (100 F or greater), cough, nasal secretions, fatigue, and headache. Vaccination is the best way to prevent or reduce the chances of becoming infected with influenza viruses. Two antiviral agents, zanamivir (Relenza) and oseltamivir (Tamiflu) have been reported to help prevent or reduce the effects of swine flu if taken within 48 hours of the onset of symptoms. The most serious complication of the flu is pneumonia.

“People who have swine flu can be contagious one day before they have any symptoms and as many as seven days after they get sick. Kids can be contagious for as long as 10 days. Like seasonal flu, swine flu can lead to more serious complications, including pneumonia and respiratory failure. And it can make conditions like diabetes or asthma worse. If you have symptoms like shortness of breath, severe vomiting, abdominal pain, dizziness, or confusion, call your doctor or helpline 911 right away,” advises Dr Narendra Saini.

Consult with your doctor to learn more about your specific heart defect and the treatment that can help you. Some mild cases do not need any treatment at all. Others may be treated with medications, surgery or other procedures. Your doctor should monitor your heart so precautions can be taken to ensure your long-term health. Actively taking part in your health care and continually making healthy choices with your doctor’s guidance can help lower your risk of future heart problems. Reporting new or worsening symptoms to your doctor can also help alleviate future problems. 



# Combating Overweight in Kids

While underweight in childhood is still a major public health problem in the Indian subcontinent, the increasing prevalence of overweight poses an additional threat to public health. **BY DR SUNEELA GARG/DR PIYUSH K. GUPTA/DR TANU ANAND**

**O**besity can be seen as the first wave of a defined cluster of non-communicable diseases called “New World Syndrome”, creating an enormous socio-economic and public health burden in poorer countries. The World Health Organization (WHO) has described obesity as one of today’s most neglected public health problems, affecting every region of the globe.

The problem of overweight and obesity in childhood and adolescence is a global phenomenon and has been increasing in the developing world. In childhood, the condition of overweight

is a serious public health problem that tracks into adulthood with a higher risk of morbidity and mortality. The morbidities associated with overweight include an increased risk of heart disease as well as other chronic diseases in adult life, such as type 2 diabetes mellitus, atherosclerosis, hypertension, dyslipidemia, and metabolic syndrome, which are all becoming common among children and adolescents.

Childhood obesity in developed countries has reached alarming proportion and developing countries are not far behind. It has been estimated that worldwide over 22

million children under the age of 5 are obese, and one in 10 children is overweight. Studies reports the prevalence of childhood obesity to fluctuate in different countries, with the prevalence of overweight in Africa and Asia averaging well below 10 per cent and in the Americas and Europe above 20 per cent. The proportion of school-going children affected almost doubled by 2010 compared with the surveys from the late 1990s up to 2003.

In the Indian subcontinent, especially India, Bangladesh, and Pakistan, malnutrition leading to underweight has been the major public health



concern for decades, with little or no attention being paid to overweight until recently. The recent studies report the prevalence of overweight to be as high as 35–40 per cent, which is close to the national estimates of overweight in many industrialised countries, including the United States and Australia. While underweight in childhood is still a major public health problem in the Indian subcontinent, the increasing prevalence of overweight poses an additional threat to public health.

There is significant heterogeneity in this time trend of obesity in India. Socio-economic trends in childhood obesity in India are also emerging. Studies from north, south, east, west, and central parts of India have reported varying prevalence rates of overweight and obesity in children and adolescents, suggesting strong geographical, economic, and societal influences on the progression of this massive epidemic.

Limited evidences are available regarding burden of overweight and obesity among children in Indian scenario. Socio-economic trends in childhood obesity in India are also emerging. A study from northern India reported a childhood obesity prevalence of 5.59 per cent in the higher socio-economic strata when compared to 0.42 per cent in the lower socio-economic strata.

### Determinants of Adolescent Obesity

A variety of mechanisms participate in weight regulation and the development of obesity in children, including genetics, developmental influences (“metabolic programming”, or epigenetics), and environmental factors. The relative importance of each of these mechanisms is the subject of ongoing research and probably varies considerably between individuals and populations. The rapidly changing dietary habits along with the adoption of sedentary lifestyle increases enormously the obesity-



In childhood, the condition of overweight is a serious public health problem that tracks into adulthood with a higher risk of morbidity and mortality

related non-communicable diseases such as insulin resistance, type 2 diabetes mellitus, and metabolic syndrome. In developed countries, it is seen that greater social inequality is associated with increase chance of obesity contrary to developing countries. And once obesity is established, the role of primary prevention is of paramount importance with strategies of behavioural changes, diet control, and physical activity being the core interventions.

Obesity is caused by numerous social and environmental factors that influence people’s energy intake and physical activity. Once an individual is

overweight or obese, reversing the energy balance to restore a healthy weight is a significant challenge, particularly for children and young people who can have little direct control over food and activity choices.

Key determinants of childhood obesity are many like lack of physical activity, excess caloric intake, lifestyle related factors like daily allowance (pocket money) to purchase lunch, easy availability of domestic help to take care of household chores, commuting to school by bus or car instead of walking or bicycling, aggressive advertising by transnational fast-food and cola companies. Socio-cultural factors and urbanisation like overprotection and forced feeding by parents, false traditional beliefs about health and nutrition, low knowledge about nutrition in parents and caregivers also contribute to obesity. Again limited availability of open spaces and parks due to population expansion and illegal settlements with abundance of fast-food outlets and eating points increase the chance of the child becoming obese.



### What India can learn from developed nations?

In India, we are still struggling with the burden of malnutrition but the issue of over-nutrition cannot be ignored. Effectively addressing this complex problem calls for a sustained, multi-sectoral response involving the public, private, and health professional and non-governmental sectors. Timely action must be initiated to combat the rising epidemic of childhood obesity. There is considerable knowledge, research and scientific information about the risk factors on the causes and consequences of childhood obesity. India should also formulate a national policy and partner with the private sector to end the childhood obesity problem. Effective policies and tools to guide healthy eating and active living are within our grasp. Some of the specific recommendations are as follows:

**Surveillance** like periodic monitoring of nutritional and obesity status of children including adults. Health education for all children and their families, routine health care should include obesity-focused education, Community mobilisation like organisation and participation in health walks and healthy food festivals.


**In early infancy and prenatal period** like balanced nutrition to pregnant mothers, encourage exclusive breastfeeding, avoidance of catch-up obesity in children.



**School-based interventions** like high importance on physical activity, making healthier choice available and banning un-healthy food in cafeteria, (sweetened beverages and energy-dense junk food). Teachers can play a vital role in this initiative, training of teachers regarding nutrition education.

**Home-based interventions** like key goals to address are the common diet-related problems encountered in children, set firm limits on television and other media early in the child's life, and establish habits of frequent physical activity, TV/computer time to be restricted to maximum 2 h/day, Mandatory 60 min of physical activity daily to be supervised by parents, Restriction on eating out at weekends and restricting availability of junk foods at home.

**Policy formulation** like creation of national task force for obesity, decrease in taxes and prices of fruits and vegetables, proper food labelling practices and quality monitoring, more playgrounds, parks and walking and bicycle tracks.

To conclude, childhood obesity is a growing menace in India and the world over. We need to bring in lifestyle modifications early in this life phase so as to prevent serious implications later in life. 

*(The authors are associated with Maulana Azad Medical College, New Delhi)*

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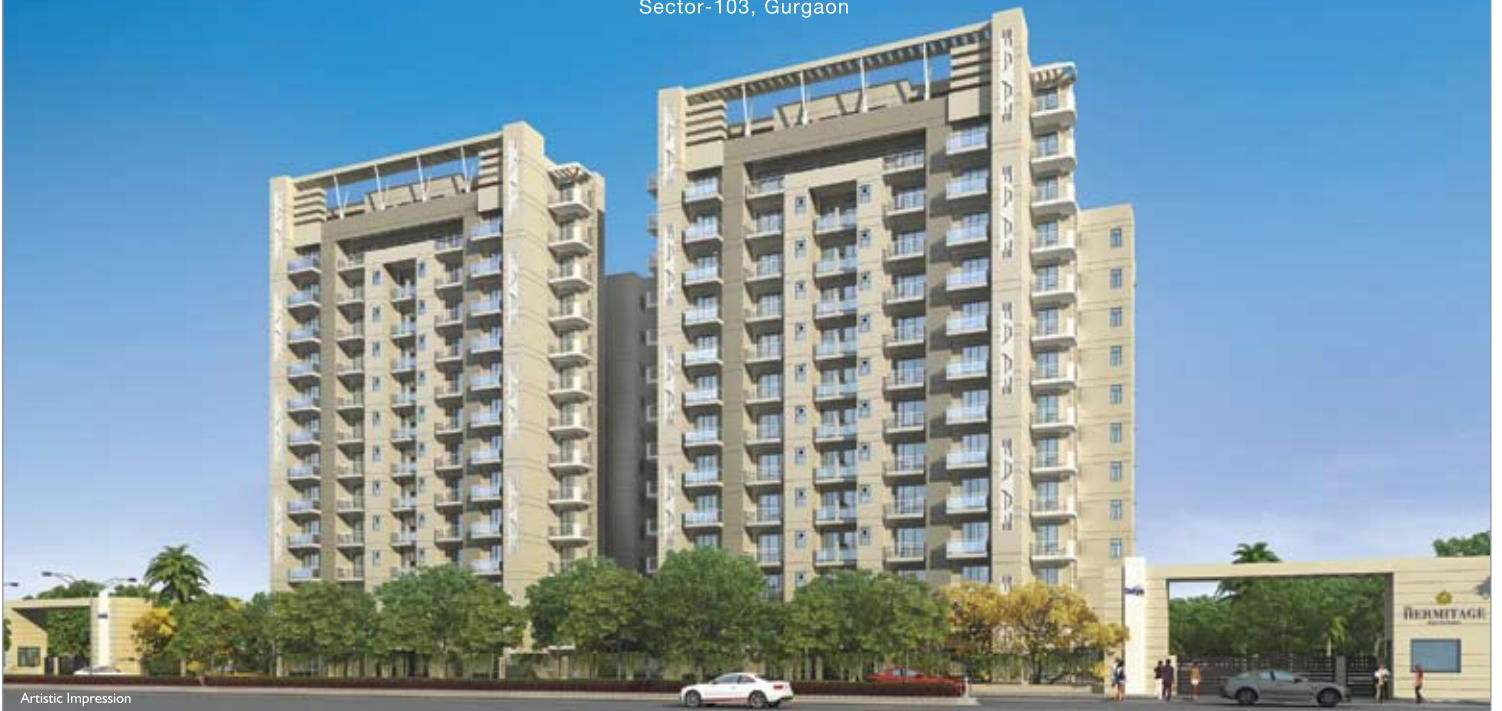
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