

BLOOD PRESSURE MATTERS: Keep check on Hypertension

Hypertension is one of the most common diseases worldwide afflicting humans and is a major risk factor for stroke, myocardial infarction, heart failure, vascular diseases and chronic kidney disease. Hypertension is directly responsible for 57% of all stroke deaths and 24% of all coronary heart disease deaths in India. About 33% urban and 25% rural Indians are hypertensive which is defined as a systolic blood pressure (SBP) of 140 mm Hg or more or a diastolic blood pressure (DBP) of 90 mm Hg or more. And only one-tenth of rural and one-fifth of urban Indian hypertensive population have their BP under control.

What Causes Hypertension

Causes of Hypertension may be categorized as:

- Primary:** When there is no identifiable cause present
- Secondary:** Approximately 90-95% of adults with hypertension have primary hypertension, whereas secondary hypertension accounts for around 5-10% of the cases. It's important to look for secondary causes because they are among the treatable causes of hypertension.

Causes of Secondary Hypertension are renal artery stenosis, chronic kidney disease, polycystic kidney disease, obstructive sleep apnoea, coarctation of aorta, primary hyperaldosteronism, pheochromocytoma,

Classification of Blood Pressure

Based on recommendations of the 2017 ACC/AHA guidelines, the classification of Blood Pressure (expressed in mm Hg) for adults aged 18 years or older is as follows

CLASSIFICATION OF BLOOD PRESSURE FOR ADULTS		
Blood Pressure	SBP	DBP
Classification	mmHg	mmHg
Normal	<120	<80
Elevated	120-129	<80
Stage 1 Hypertension	130-139	or 80-89
Stage 2	≥140	or ≥90

hyperthyroidism and hypothyroidism, oral contraceptives, steroids and NSAIDs.

Symptoms of Hypertension

Most people with high blood pressure have no signs or symptoms, even if blood pressure readings reach dangerously high levels. That's why hypertension is also called silent killer.

A few people with high blood pressure may have headaches, shortness of breath, fatigue, chest discomfort or nosebleeds, but these signs and symptoms aren't specific and usually don't occur until high blood pressure has reached a severe or life-threatening stage. It is being recommended that blood pressure should be checked regularly after the age of 18 years.

Basic Investigations for Hypertensive patients are:

- Complete blood cell count

- Blood urea, creatinine, serum sodium, potassium and uric acid
- Fasting blood glucose, and thyroid stimulating hormone
- Lipid profile
- Urinary albumin-to-creatinine ratio
- ECG with optional echocardiogram

Management of Hypertension

Management of hypertension can be broadly divided into two categories- Lifestyle modifications and Drug therapy

LIFESTYLE MODIFICATIONS

Lifestyle modifications are essential for the prevention of high BP, and these are generally the initial steps in managing hypertension. Lifestyle changes can reduce BP by 5-20 mmHg. Various lifestyle modifications are:

Dietary Changes: A number of studies have documented an association between salt intake and BP. The effect of sodium chloride is particularly important in individuals who are middle-aged to elderly. A moderate reduction in sodium chloride intake can lead to reduction in blood pressure. It is recommended that the average daily consumption of sodium chloride should not exceed 5g; this may lower BP by 2-8mm Hg.

The DASH (Dietary Approach to Stop Hypertension) eating plan encompasses a diet rich in fruits, vegetables, and low-fat dairy products and may lower blood pressure by 8-14 mm Hg. Dietary potassium, calcium, and magnesium consumption have an inverse association with BP.

Weight loss and exercise: Up to 60% of all individuals with hypertension are overweight (BMI>25). Weight reduction may lower blood pressure by 5-20 mm Hg per 10 kg of weight loss in a patient. Regular aerobic physical activity can facilitate weight loss, decrease BP, and reduce the overall risk of cardiovascular disease. These activities include brisk walking for 30 minutes a day at least 5 days per week.



More intense workouts of 20-30 minutes, 3-4 times a week may also lower BP and have additional health benefits.

Reducing stress, yoga, quitting smoking and limiting alcohol intake are also important life style modifications that help in lowering blood pressure.

Drug Therapy

If lifestyle modifications are insufficient to achieve the normal blood pressure (BP), there are several drug options for the treatment and management of hypertension.

According to the JNC 8 guidelines, the 4 Class of drugs are first line therapies for hypertension for most patients:

Angiotensin-converting enzyme inhibitors [ACEIs]. Angiotensin

receptor blockers [ARBs]. Calcium channel blockers [CCBs]. Thiazide diuretics

The drug class recommendations based on various clinical trials are:

Heart failure: Diuretic, beta-blocker, ACEI/ARB, aldosterone antagonist

CAD/ Myocardial Infarction: Beta-blocker, ACEI

Diabetes: ACEI/ARB

Chronic Kidney Disease: ACEI/ARB. ♦



Dr. Gajinder Goyal
Head of Department and Sr. Consultant
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SAVE YOUR KIDNEYS from Recurrent Stones

The first documented case of urinary stone disease was seen in an Egyptian mummy about 6000 years old. Since time immemorial, urinary tract stone disease has plagued mankind causing immense misery and suffering. Repeated stone disease is a well-known risk factor for Kidney failure. Without treatment, stones can recur in almost fifty percent of patients.

Why Do Urinary Tract Stones form?

There are many reasons of urinary stones formation. The main reasons are -

- Climate - A hot dry climate favours stone formation
- Low water intake
- Obesity - A BMI more than 30 doubles risk of stone formation
- Diet - A diet high in salt, oxalate and animal protein predisposes to stone formation

- Infection- Repeated urinary tract infection can predispose to stone formation
- Anatomical Anomalies - Abnormal anatomy of the urinary tract can lead to recurrent stones
- Metabolic Abnormalities - Certain metabolic anomalies can lead to repeated stone formation
- Drugs - Certain class of drugs can also lead to formation of rare type of stones

How to Identify Stone Disease?

Stone disease can present as pain over abdominal flanks, difficulty in passing urine, nausea with vomiting, blood in urine, occasionally fever with burning sensation while passing urine.

How to confirm Stone Disease?

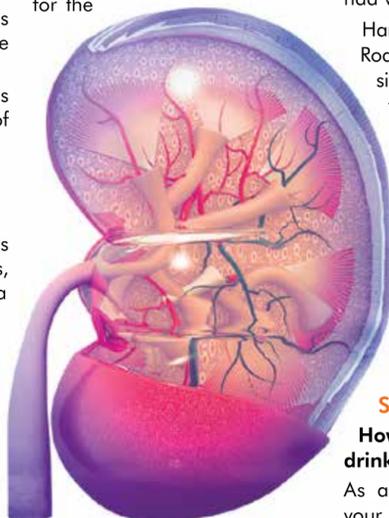
Ultrasound is an excellent screening method. It has no radiation and is cheap.

Contrast CT Scan of the Urinary Tract is more accurate and gives more details of the Stone and anatomy.

Treatment

Medical Treatment

This is used in the clinical setting for the



acute stone pain. Antibiotics are given in case of infection and as preventive strategy for stone formation. Aggressive Medical Treatment is required to prevent stones.

In the past, *Surgical treatment* had very high mortality rates.

Harold Hopkins introduced the Rod lens system in 1959 and since then it has revolutionised the treatment of urinary tract stones. With better endoscopes and energy sources, the treatment of urinary tract stones has become simpler and many patients can be treated on day-care basis. The chances of residual stones has also decreased.

How to Prevent Stones?

How much water should I drink?

As a rough guide try to keep your urine colourless throughout

the day; this equates to a urine output of at least 1.5 to 2 litres per day.

What should I drink?

Plain water is good. Water with Citrous fruit juice helps in preventing stones. Tea and coffee can be taken in moderation. Black tea should be avoided by recurrent stone formers. Replace all lost fluid. Make sure that you keep yourself well hydrated.

Do I need to modify my diet?

Diet also contributes to your risk of stone formation. A balanced diet with adequate amount of fibre and vegetables should be taken. Meat consumption should be restricted to less than 100 grams. Recurrent stone formers should take less salt and food rich in oxalates like spinach, strawberries and tomato seeds. A moderate intake of Calcium is encouraged to prevent stones. Calcium absorbs excess oxalates in the gut.

Do I need to lose weight?

Yes. Obesity is a significant risk factor for stones.

Do I need to treat infection?

Yes! Infection leads to rapid recurrence of urinary stones.

Is there a need for Metabolic Evaluation?

Yes. In high risk stone formers two 24 hour urine specimens are analysed for biochemical anomalies. If the stone is available then Stone analysis can also be done. ♦



Dr. Alok Jha
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TUBERCULOSIS IS TREATABLE & PREVENTABLE

Q&A

with Dr. G.S. Chhabra

What causes Tuberculosis?

Tuberculosis (TB) is a notifiable disease caused by the bacteria *Mycobacterium tuberculosis* and uncommonly by *Non tuberculous mycobacteria*. It most commonly affects the lungs although it can also affect the lymph nodes, brain, heart, skin, kidneys, bones etc. TB can be fatal if not recognized and treated. However, TB is treatable and preventable.

TB kills an estimated 480,000 Indians every year and more than 1400 every day. TB in India has 4 fold higher prevalence in those with a low standard of living index compared to those with a high standard of living index. Prevalence of TB is three times higher among ever-smokers as compared to that of never smokers.

How does tuberculosis occur?

The tuberculosis (TB) bacteria are spread through the air from a person who is ill with active TB that involves the lungs or airways.

In some cases, the person develops an immune response that controls the bacteria by containing it inside the body. The person does not develop active TB at this time but is said to have **latent TB infection (LTBI)**. During this latent stage, person is well and cannot spread the infection to others. Active TB (TB disease) may develop if latent infection is not fully treated or gets reactivated. This is called reactivation TB, and it occurs in 5 to 10 percent of people with latent infection at a later time in their lives. Reactivation can also occur more readily in people with HIV, diabetes mellitus, malnutrition, or those who take medications that weaken the immune system, such as medications for rheumatoid arthritis, steroids, or cancer chemotherapy.

How is latent tuberculosis diagnosed?

Latent tuberculosis (TB) infection (LTBI) can be diagnosed with a skin test (tuberculin skin test/Mantoux test) or with a blood test (interferon-gamma release assays -IGRAs), followed by a clinical evaluation and imaging (usually a chest X-ray) to make sure the tuberculosis is not active and not causing disease.

What are the symptoms of active TB?

Signs and symptoms of active TB include:

- Coughing that lasts for two or more weeks
- Coughing up blood
- Chest pain, or pain with breathing or coughing
- Unintentional weight loss
- Fatigue
- Fever
- Night sweats
- Chills
- Loss of appetite
- When TB occurs outside your lungs, signs and symptoms vary according to the organs involved. For example, tuberculosis of the spine may cause back pain, and tuberculosis in kidneys might cause blood in urine
- Micronutrient deficiency esp. iron and folate, vitamin A, zinc, vitamin D

How is Active Tuberculosis Diagnosed?

- It is very difficult to diagnose TB by a person's symptoms on their own as some other diseases have same symptoms. Clinical diagnosis often includes chest X-ray, ultrasound/CT/MRI of site involved.
- A diagnosis is usually only certain when there is definite evidence of TB bacteria which includes sputum/specimen microscopy, the culture test as well as the new GeneXpert/CBNAAT test/LPA.



Treatment of latent tuberculosis

Treating LTBI greatly reduces the risk of the infection progressing to active TB later in life. India has 40% of the population infected with *Mycobacterium Tuberculosis*. Treating 40% of the population for LTBI based on Tuberculin Skin Test (TST) positivity or Interferon Gamma Release Assay is neither rational nor practicable. So, LTBI treatment is given to high-risk infected patients such as those receiving long term corticosteroids, immunosuppressants, HIV

infected, children less than 6 years of age, high risk adult and patients with silicosis.

Treatment of active tuberculosis

If there is evidence of active lung TB on a chest X-ray, sputum microscopy, cultures and GeneXpert are performed. Other tests, such as a bronchoscopy or biopsy may also be needed. A tissue biopsy/FNAC/Aspiration may be performed to obtain specimens for culture if TB is

suspected in other organs (such as lymph nodes, pleural fluid or kidney).

While waiting for the results of the culture/GeneXpert, treatment with several (usually four) TB drugs may be recommended. Infection caused by a strain of TB that has become resistant to standard TB drugs (MDR/XDR TB) is more difficult to treat and may require five or more medications and a longer duration of treatment.

Treatment of TB should be taken in adequate doses and for total duration otherwise it may lead to drug resistant TB. ❖



Dr. G.S. CHABBRA
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SUFFERING FROM BACKPAIN? Know How to Deal with it.

The spine consists of multiple bones called vertebrae that are stacked on top of each other. In between each vertebra there are protective circular pads called discs that contain a softer gel-like substance. A slipped disc occurs when one of the discs is damaged and presses on the nerves.

There are a number of factors that can put increased pressure and strain on the spine such as bending awkwardly, jobs that involve heavy or awkward lifting, lots of sitting, particularly driving, being overweight or obese, weight bearing sports, such as weightlifting or traumatic injury to the back. Smoking also plays a role as it causes the discs to lose their natural flexibility. As we get older, our spinal discs start to lose their water content, making them less flexible and more likely to rupture. The damaged disc can put pressure on the

whole spinal cord or on a single nerve.

Symptoms of a slipped disc

Most people with a slipped disc experience pain in the back that starts slowly and gets worse over time.

A slipped disc in the neck can cause:

- neck pain
- numbness or a tingling sensation in the neck, shoulder, arm or hand
- weakness in hand muscles

A slipped disc in the lower back can cause:

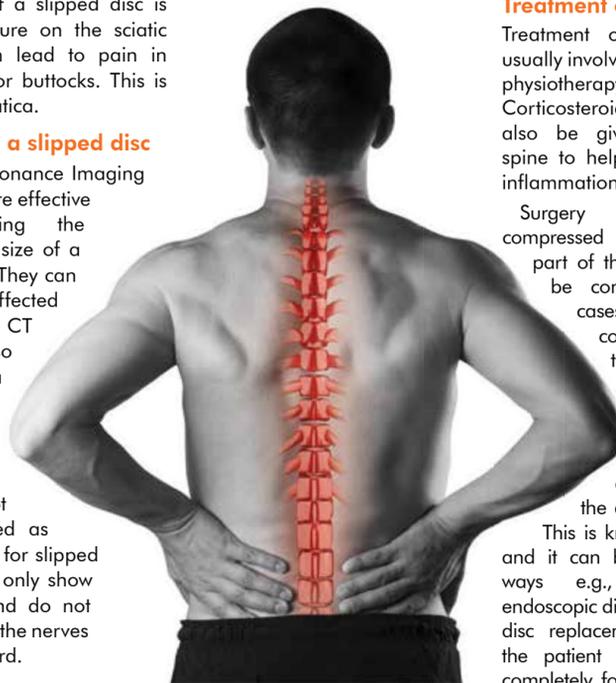
- back pain
- numbness or a tingling sensation in the back, buttocks, genitals, legs or feet
- weakness in leg or foot muscles
- Sciatica

The sciatic nerve runs from the back of the pelvis, through the buttocks and down the legs

to the feet. If a slipped disc is putting pressure on the sciatic nerve, it can lead to pain in the leg, hip or buttocks. This is known as sciatica.

Diagnosing a slipped disc

Magnetic Resonance Imaging (MRI) scans are effective in diagnosing the position and size of a slipped disc. They can pinpoint the affected nerves. A CT scan can also pinpoint a slipped disc, although it is often not as effective. X-rays are not generally used as a test to look for slipped discs as they only show the bones and do not give a view of the nerves and spinal cord.



Treatment of slipped disc

Treatment of a slipped disc usually involves a combination of physiotherapy and medication. Corticosteroid injections can also be given to the lower spine to help reduce pain and inflammation.

Surgery to release the compressed nerve and remove part of the slipped disc may be considered in severe cases, or in case the pain continues for longer than six weeks and there is progressive weakness in the muscles. The aim of surgery is to cut away the piece of the disc that bulges out.

This is known as discectomy and it can be done in several ways e.g., microdiscectomy, endoscopic discectomy or artificial disc replacement. Post surgery, the patient may need to rest completely for the first couple of

days to speed up the recovery and ensure that exercise is gentle and does not put a strain on the back. Swimming is an ideal form of exercise because the water supports the weight and puts very little strain on other joints.

Preventing a slipped disc

To avoid back pain and help prevent a slipped disc, one should keep oneself mobile, exercise regularly, maintain good posture while sitting and standing, use safe techniques when lifting heavy objects, avoid sitting for a prolonged period of time and quit smoking. ❖



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Sr. Consultant
Orthopedics & Joint Replacement



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IS YOUR CHILD OBESE? Don't take it lightly

Obesity is a common health hazard affecting millions world wide. Its impact on adults is well known but children are also getting affected. Obese children become obese adults and do carry the same risks as associated with adult obesity like diabetes and heart disease.

So, it is important to identify obesity in childhood. Obesity may be defined as extra body fat. Being overweight is tendency to become obese i.e. their weight is more than normal and will soon reach obese levels if not controlled.

Several bodies have laid down many definitions of obesity. Most agree that Body Mass Index (BMI) more than 95 percentile is obese and that between 85-95 percentile is overweight. BMI is calculated by weight in kilograms divided by square of height in meters. If someone has BMI more than or equal to 25, he or she is definitely overweight.

WHAT CAUSES OBESITY

Most common factors for obesity are genetic factors, dietary factors, lifestyle factors, it can



also be associated with medical or hormonal conditions. Usually more than one factor affects an individual. Dietary and lifestyle modification is most important method to manage obesity. Television, computer, Mobiles are a big culprit for obesity. Children spend hours in getting entertained through these, this decreases outdoor activities.

Hardly any calories are burnt thus allowing fat deposition. On top of this junk food and binge eating increases calorie intake adding obesity further.

EFFECTS OF OBESITY

Obese children are at high risk to develop hypertension, high cholesterol, coronary artery disease, diabetes, osteoporosis,

constipation, skin rashes, stress, anxiety and depression. They face difficulty in every phase of life. Physically, mentally, socially they are unfit as compared to their non-obese friends. An obese child when depressed eats even more and a vicious cycle continues which is very hard to break.

How to Help My Child?

- Lifestyle modification-** encourage your child for outdoor activities. Their hours of T.V. viewing or computer usage should be cut to minimum possible. Elders in family should also play like a role model. Whole family should engage in morning walk or exercise, swimming etc.
- Dietary modification-** again all family members need to be part of this modification. Diet should contain balanced portions of proteins, carbohydrates and fat. Enough fruit and vegetable should be there. Salad is must to add roughage. The fibre content in diet helps decreasing fat absorption. Fast food and junk food should also be decreased.
- A diary of eating habits** can be maintained. If calorie intake is calculated and that's more than required, then certain alterations in diet can bring good results. Changes should be gradual and general rather than too strict. Children should be engaged in discussions of dietary changes and their need.

- Provide psychological support** to children. Don't punish them for being obese rather tell them that you love them and you will help them in controlling weight. Don't use food as a reward and starvation as a punishment. Be sensitive to your child's needs.
- Take medical help-** a doctor can help you diagnose obesity and help you identify its cause and whether you require any investigation or not. What dietary changes you need to make. On serial follow ups doctor can identify the reasons for non-improvement. And can help you overcome the medical problems associated with obesity. ❖



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THE NOSE JOB



Big nose can be made smaller, smaller nose bigger, bridge of the nose can be narrowed or widened, elevation of nose can be modified, shape of tip and nostrils can also be modified surgically.

There are set guidelines to define an ideal nose, which differs according to the race of the individual, but all corrections are tailored to be in perfect harmony with the remaining facial features.

Nose being the center of face draws maximum attention in a one to one interaction with any person. No doubt why one should not be extra conscious about its magnificence. Not uncommon, many people have concerns about their nose which bothers them consistently. Some wanted it small, some bigger, some wanted it narrower a bit, others wanted sharper pointed tip. Some wanted a crooked nose, dorsal hump or flare corrected.

who can readily address most of these concerns and help achieve the desirable nose. Rhinoplasty is also done to correct deformities of nose that are congenital, commonest being one associated with cleft lip or deformities following trauma or infection of the nose.

Rhinoplasty done for minor modifications can be done as a closed procedure without any visible external scar on the nose, but for major modifications, an open rhinoplasty is required in which you will have a 3-4mm scar on the underside of the nose.

Rhinoplasty or the nose job is the surgical procedure best done by expert plastic surgeons

A beautiful nose can add charm to your face in a way that you can look stunning even without a makeover. These services are now available at QRG Hospitals. ❖



Dr. Kiranmayi Atla
Consultant
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KIDNEY TRANSPLANT is better than Dialysis

In India, chronic kidney disease is the eighth leading cause of death where diabetes is the largest contributor. And with rising number of diabetics, this figure is likely to worsen.

According to study in 2015, about 1,36,000 Indian adults die prematurely due to renal failure, representing about 3% of all premature adult mortality. But with the innovation in the field of renal sciences, experts are optimistic that soon no one will die of kidney failure. Today, we have well defined renal replacement protocols in form of hemo and peritoneal dialysis and kidney transplant.

Though, government has come with various schemes of promoting dialysis but due to lack of trained manpower and nephrologists, there are instances when dialysis is able to sustain life but is unable to provide good health to the patient. To add to this problem is the man hour loss. If a working person tries to get dialysis done 2 to 3 times in a week it means that he/she would be losing upto 33 % of his working days which may not be acceptable to the employer.

At present patients are trying to get dialysis done with whatever savings they have made and because of the recurring cost, their pooled finances actually drain off and gradually the condition of the patient deteriorates because



of the compromises with the dialysis schedule, medication and nutrition. In this given scenario, kidney transplant has emerged as the best option. In a study it was found that kidney transplant was more economical for the Indian patients. Average cost of dialysis is Rs 15,000 to Rs 20,000 per month. And this cost is going to recur for entire life. And even 3 dialysis per week is able to replace only 10 to 15% of kidney function.

QRG hospital has tried to make kidney transplant highly accessible & affordable. Once the transplant is done, it will be able to provide maximum

rehabilitation to the patient. There are instances when patients with kidney failure have resumed their normal day to day life. They are now able to earn their livelihood and bear the cost of the treatment. ❖

Courtesy: Delhi Times



Dr. Jitendra Kumar
Director and
Sr. Consultant
Nephrology &
Kidney Transplant



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CARE OF FEET FOR THE DIABETICS

The news that India is likely to be the diabetes capital of the world has been going around for a while. Diabetic patients are at a unique risk of developing foot wounds whenever the skin barrier is breached due to injury and disease.

An optimal environment must be provided to support the essential biochemical and cellular activities required for efficient wound healing and to protect the wound from factors that impede the healing process. The most important factors that influence wound healing are:

- Nutritional status of the patient
- Presence of infection or contamination of the wound
- Diseases like diabetes, varicose veins and reduced blood supply

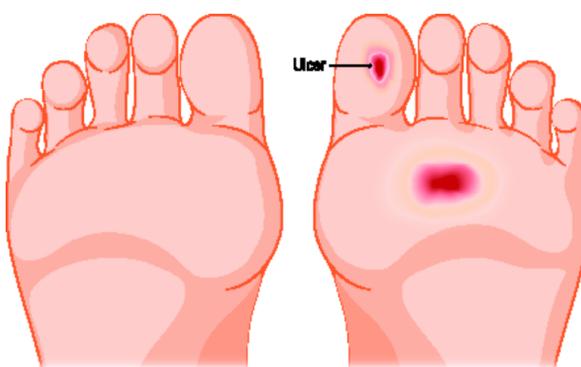
Once such a wound is formed on skin, it progresses through various phases and generally heals with a scar. There are occasions when these wounds

fail to heal in spite of treatment for 4 to 6 weeks. These wounds are referred to as chronic ulcers. The management of these ulcers requires expertise and attention to detail. It is important that all wounds are attended to appropriately at the earliest. Often delay in seeking proper advice is the most important reason for non-healing of wounds. Care of diabetes and early recognition of ulcers are the cornerstones in the successful prevention of chronic ulcers.

The concept of wound management clinics and wound care specialists in the developed world has helped many patients to save their limbs and have a functional life.

How does a modern wound management centre deal with non-healing wounds?

Cleanse and decontaminate wounds with the help of a procedure called 'debridement'. The 'Advanced Wound Care Centre' at QRG Health City



HEALTHY FOOT

DIABETIC FOOT

is equipped with 'hydrojet debriding unit' that uniquely removes unhealthy tissues and saves injury to healthy tissues.

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Centre' has helped hundreds of patients with the use of this therapy to attain a functional life at the earliest. This therapy helps in either healing the wounds completely or in helping prepare a bed for the wound to receive a skin graft. The last part of the management is to provide skin cover by means of stitching the edges together or by use of different types of skin grafts.

Another very important aspect of wound management is to improve nutrition of the patient & improve blood supply to the limb. The latter may require interventions like angioplasty and bypass operations.

How can diabetic foot ulcers be prevented?

Check your feet daily: People with diabetes are less aware of pain in their feet due to decreased sensitivity, it's important to keep an eye open for cuts, cracks, blisters and other signs of the beginning of a wound.

Keep your feet clean: Wash your feet everyday with mild soap and lukewarm water. Dry them gently with a towel and moisturise on the top and bottom of feet and use talcum powder between the toes.

Choose the right shoes: Your footwear should be tight enough to keep the fabric from rubbing against the skin and causing diabetic foot ulcers, but loose

enough to be comfortable and not crowd the toes.

Don't smoke: Smoking greatly reduces circulation, which can increase your blood flow issues in your feet.

Get regular check-ups: People with diabetes should have a foot examination by a wound care specialist at least once per year. During these appointments, the specialist inspects your feet for circulation issues, early signs of nerve damage and other foot problems that could potentially lead to infection and eventual loss of limb if it is neglected. ❖



Dr. Prabal Roy
Director
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ALCOHOLIC LIVER DISEASE

Alcohol affects every organ of body. Absorbed by stomach and intestines very rapidly into blood stream, it reaches every organ of body including brain where it acts as a depressant. Alcohol is metabolized by liver to harmless substances, however, liver can only metabolize a small amount of alcohol at a time, leaving the excess alcohol to circulate throughout the body. Hence the intensity of effect of alcohol on the body is directly proportional to the amount of alcohol consumed.

ALCOHOLIC LIVER DISEASE:

Since Liver is responsible for alcohol metabolism, it is obvious to have maximum tendency to get damaged by excessive consumption of alcohol landing up to Alcoholic Liver Disease.

It is a common, but preventable disease.

There are three primary types of alcohol induced liver diseases, including the following:

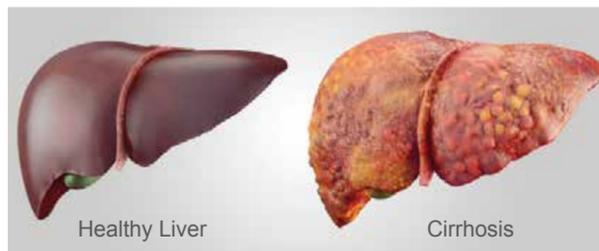
Fatty Liver: Fatty liver is

excessive accumulation of fat inside the liver cells. It is most common alcohol induced liver disorder. Liver gets enlarged causing upper abdominal discomfort.

Alcoholic Hepatitis: It is an acute inflammation of liver, including destruction of liver cells, frequently followed by permanent scarring. Symptoms include fever, jaundice, weakness, loss of appetite, right sided abdominal pain and nausea. The Total Leukocyte Count tends to increase and liver is enlarged and tender too.

Alcoholic Cirrhosis: It is destruction of liver tissue, leading to non functional scar tissue. Symptoms and signs, in addition to those of alcoholic hepatitis, include portal hypertension (increased resistance to blood flow through the liver), enlarged spleen, ascites, kidney failure, confusion and may also lead to liver cancer.

Around 60-100% of heavy drinkers may suffer from fatty liver, among which 20-30% may



Healthy Liver

Cirrhosis

progress to steatohepatitis of which around 10-15% of patients may suffer from cirrhosis.

Risk Factors:

Quantity of Alcohol: In Men, 40-80g/d of alcohol produces fatty liver; 160 g/d for 10-20 years causes hepatitis or cirrhosis

Gender: Women exhibit increased susceptibility to alcoholic liver disease.

Hepatitis B & C infection:

• Hepatitis B & C viruses are risk factors for ALD, with disease developing at a younger age, more severe symptoms and degenerative effects, and a decreased chance of survival.

• Hepatitis C increases the risk of cirrhosis by 30 fold in heavy drinkers.

Genetics: Gene polymorphism may include alcohol dehydrogenase, cytochrome P4502E1 etc.

Drinking Pattern:

• Drinking outside of meal times increases the risk of ALD by 2.7 times

• Daily drinking carries more than twice the risk of liver damage compared with intermittent drinking once or twice per week

• Binge drinking dramatically increase the risk of developing ALD

Note : Gin, Rum, Vodka, Whisky contain approximately 40g of alcohol per 100 ml

When to refrain from drinking:

Drinking is a problem if it is causing trouble in your relationships, in college, in social activities, in professional work, or how you think and feel.

Pregnancy is a big no for drinking alcohol as it can affect foetal development.

Diagnosis:

In addition to a complete medical history and physical examination, diagnostic procedures for alcohol induced liver disease may include the following:

- **Laboratory Tests** - Liver Function Tests, Coagulation Profile, Alpha Fetoprotein, Complete Blood Count, Kidney Function Test and Viral Markers
- **Imaging** - Ultrasound abdomen, Fibroscan, CT abdomen triple phase and MRI

- **UGI Endoscopy**
- **Liver Biopsy**

Management & Treatment:

- Total abstinence remains the core (psychological & medical help)
- Proper nutrition (protein rich high calorie diet)
- Liver Protective Agents- S-adenosyl methionine, UDCA, Vitamin E, Pentoxifylline
- Aggressive forms may require steroid therapy
- Prevention & Management of complications (HRS, HE, HPS, sepsis)
- Advanced liver disease requires Liver Transplant. ❖



Dr. Sanjay Kumar
Director and Sr. Consultant
Gastroenterology



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