

# NHI Dialogue

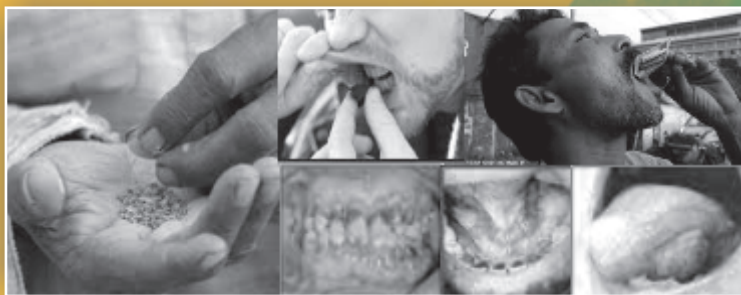


Quarterly Health Magazine of Cardio Diabetes Research Society

Vol. 2 No. 43 April-June 2017

## Get Physical!

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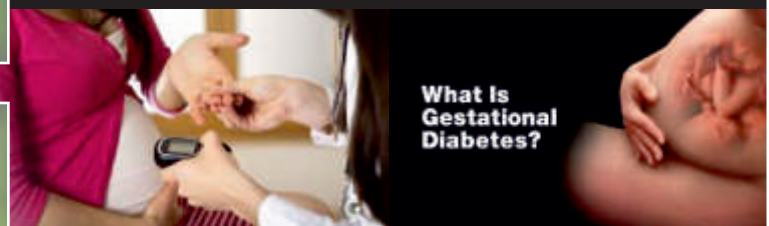


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## धूमहीन तम्बाकू

# 22

## GESTATIONAL DIABETES





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# NHI Dialogue



Vol. 2 No. 43 April-June 2017

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consult their doctor before  
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# Editorial Voice

Dear friends !

Greetings from the NHI Dialogue Team!

Hope the summer vacations have been fun for you!

It's the support and continued patronage from our keen readers, contributors and sponsors that your magazine enters the 13th year of publication, both print and electronic. The last data of January 2017 revealed a circulation of 21,000 print & over 2,00,000 e-magazine quarterly.

Please continue to send your valuable comments and suggestions ...

Once again hoping to raise the hope!

Yours truly

Executive Editor/Desk Editor

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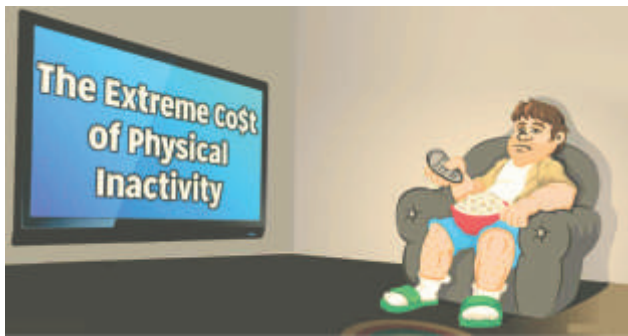
# Get Physical!



**\*A. Kundu, \*\*O. P. Yadava**

**\*Consultant Cardiac Surgeon, \*\*C.E.O. & Chief Cardiac Surgeon**

**National Heart Institute, New Delhi**



A major risk factor for Coronary Artery Disease (CAD) is physical inactivity, or a sedentary lifestyle. CAD has become a curse of our modern lifestyle. Millennia ago, our primitive ancestors walked for miles and miles in search of food and shelter, occasionally stopping to battle some wild beast, often coming second best in the process! Life was one constant journey, always moving from one place to the other with very little rest. But today, we are way behind with regard to our physical activity. No doubt life expectancy has soared, healthcare and nutrition have improved, but at the cost of physical activity. We no longer have to move from place to place to get the basic necessities of life. All our needs (and there are many of them!) can now be met literally with the click of a button. Our midribs have seen a ballooning in diameter parallel to our increased cranial capacity compared to our primitive ancestors. Physical activity and exercise thus assume paramount importance in our daily lives. Exercise improves heart health and can even reverse some risk factors for CAD.

The heart is essentially composed of muscle tissue. Like all muscles, it becomes stronger as

a result of exercise, so it can pump more blood through the body with every beat and continue working at maximum level, if needed, with less strain. The resting heart rate of those who exercise is also slower, because less effort is needed to pump blood. A person who exercises often and vigorously has the lowest risk for heart disease, but any amount of exercise is beneficial. Studies consistently find that light-to-moderate exercise is even beneficial in people with existing heart disease. Note, however, that anyone with heart disease or cardiac risk factors should seek medical advice before beginning a workout program.

## **Effects of Exercise on Heart Disease and Cholesterol:**



Exercise benefits the heart and circulation via many pathways. These benefits include improving cholesterol and fat levels, reducing inflammation in the arteries, promoting weight loss and helping to keep blood vessels flexible and open. Studies continue to show that physical activity and avoiding high-fat foods are the two most successful means of



reaching and maintaining heart-healthy levels of fitness and weight.

The American Heart Association recommends that individuals perform moderately-intense exercise for at least 30 minutes on most days of the week. This recommendation supports similar exercise guidelines issued by the Center for Disease Control and Prevention and the American College of Sports Medicine. However, as the predilection for disease in Indian subcontinent is high and the atherosclerotic process aggressive, one must (ideally) indulge in at least 40 minutes of moderately intense activity everyday.

People who maintain an active lifestyle have a 45% lower risk of developing CAD than do sedentary people. Experts have been attempting to quantify just how much exercise is needed to produce heart benefits. Beneficial changes in cholesterol and lipid levels, including lower LDL ("bad" cholesterol) levels, occur even when people performed low amounts of moderate- or high-intensity exercise, such as walking or jogging over 19 kilometers a week. However, more intense exercise is required to significantly change cholesterol levels, notably increasing HDL ("good" cholesterol). An example of this kind of intense program would be jogging about 32 kilometers a week. Benefits occur even with very modest weight loss, suggesting that overweight people who have trouble losing excess weight can still achieve considerable heart benefits by exercising.

Some studies suggest that for the greatest heart protection, it is not the duration of a

single exercise session that counts but the total weekly amount of energy expended. Resistance (weight) training has also been associated with heart protection. It may offer a complementary benefit to aerobics. Resistance training should be started only after consultation with the healthcare provider in cases of persons with preexisting heart disease.

#### Effects of Exercise on Blood Pressure:



Regular exercise helps keep arteries elastic (flexible), even in older people. This, in turn, ensures good blood flow and normal blood pressure. Sedentary people have a 35% greater risk of developing high blood pressure than physically active people do. It should be noted that high-intensity exercise may not lower blood pressure as effectively as moderate-intensity exercise. In one study, moderate exercise (jogging 3 km a day) controlled high blood pressure so well that more than half the patients who had been taking drugs for the condition were able to discontinue their medication. Experts recommend at least 30 minutes of exercise on most -- if not all -- days. Studies show that yoga and tai chi, an ancient Chinese exercise involving slow, relaxing movements, may lower blood pressure almost as well as moderate-intensity aerobic exercises. Anyone with existing high blood pressure should discuss an exercise program with their doctor. Before starting to exercise, people with moderate-to-severe high blood pressure should lower their blood pressure, and be able to control it with medications. Everyone, especially people with high blood pressure, should breathe as normally as possible through each exercise. Holding the breath increases blood pressure.



### Effects of Exercise on Heart Failure:

Traditionally, heart failure patients have been discouraged from exercising. Now, exercise performed under medical supervision is proving to be helpful for select patients with stable heart failure. Progressive resistance training may be particularly useful for heart failure patients, since it strengthens muscles, which commonly weaken in this disorder. Simply performing daily handgrip exercises can improve blood flow through the arteries. Experts warn, however, that exercise is not appropriate for all heart failure patients; hence it is important for patients to be appropriately stratified according to their symptom intensity before embarking on an exercise program.

### Exercise Programs for High-Risk Individuals :

Anyone with CAD or risk factors for developing CAD or stroke should seek medical advice before beginning a workout program. Patients with heart disease can nearly always exercise safely as long as they are evaluated beforehand. Some will need to begin their workout under medical supervision. At-risk individuals should be very aware of any symptoms warning of harmful complications while they exercise.

Some believe that anyone over 40 years old, whether or not they are at risk for heart disease, should have a complete physical examination before starting or intensifying an exercise program. Some doctors use a questionnaire for people over 40 to help determine whether they require such an



### The questions they use are as follows:

- 1 Has any doctor previously recommended medically supervised activity because of a heart condition?
- 1 Does physical activity bring on chest pain?
- 1 Has chest pain occurred during the previous month?
- 1 Does the person faint or fall over from dizziness?
- 1 Does bone or joint pain intensify during or after exercise?
- 1 Has medication been prescribed for hypertension (high blood pressure) or heart problems?
- 1 Is the person aware of, or has a doctor suggested, any physical reason for not exercising without medical supervision?

Those who answer "yes" to any of the above questions should have a complete medical examination before developing an exercise program. Some people should get a full evaluation and a stress test.

**Stress Test.** A stress test helps determine the risk for a heart problem resulting from exercise. Anyone with a heart condition or history of heart disease should have a stress test before starting an exercise program. Some health care professionals also recommend this test before a vigorous exercise program for older persons who are sedentary, even in the absence of known or suspected heart disease. The test is expensive, however. Many physicians believe that it may not be necessary

for older people who start low intensity exercise such as walking, and have no evident health problems or risk factors.



### **Heart Attack and Sudden Death from Strenuous Exercise :**

A word of caution, though; a small percentage of heart attacks occur after heavy physical work.

**High-Risk Individuals.** In general, the following people should avoid intense exercise or start it only with careful monitoring:

- 1 **People who have certain medical conditions:** These conditions include uncontrolled diabetes, uncontrolled seizures, uncontrolled high blood pressure, a heart attack within the previous 6 months, heart failure, unstable angina, significant aortic valve disease, or aortic aneurysm.
- 1 **People with moderate-to-severe hypertension:** Moderate or severe high blood pressure (systolic blood pressure over 160 mm Hg or diastolic (lower number) pressure over 100 mm Hg) should be brought to lower levels before a person starts a vigorous exercise program.
- 1 Sedentary people should be cautious.
- 1 Episodes of exercise-related sudden death in young people are rare but of great concern. Some are preceded by fainting, which is due to a sudden and severe drop in blood pressure. It should be noted that fainting is relatively common in athletes, and is dangerous only in people with existing heart conditions. Young people with genetic or congenital (present at birth) heart disorders should avoid intensive competitive sports.
- 1 Anabolic steroids or products containing ephedra have been associated with cases of stroke, heart attack, and even death.

The risk for heart attack from exercise should be kept in perspective, however. Some form of exercise, carefully personalized, has benefits for most of the individuals mentioned above. In many cases, particularly when the only risk factors are a sedentary lifestyle and older age, exercise can often be increased over time until it is intense.

### **Hazardous Activities for High-Risk Individuals. The following activities may pose particular dangers for high-risk individuals:**

- 1 Intense workouts may be particularly hazardous for people with risk factors for heart disease, especially older people. Examples of intense workouts include heavy shoveling, running, race walking, tennis, heavy lifting, heavy gardening. These workouts tend to stress the heart, raise blood pressure for a brief period, and may cause spasms in the arteries leading to the heart.
- 1 Some studies suggest that competitive sports, which couple intense activity with aggressive emotions, are more likely to trigger a heart attack than other forms of exercise.

**Listening for Warning Signs.** According to one study, at least 40% of young men who die suddenly during a workout have previously experienced, and ignored, warning signs of heart disease. In addition to avoiding risky activities, the best preventive tactic is simply to listen to the body and seek medical help at the first sign of symptoms during or following exercise. **These symptoms include the following:**

- 1 Irregular heartbeat.
- 1 Shortness of breath.
- 1 Chest pain.

**Wishing you Happy Exercising !**



# Answer these questions? Know your own Heart Risk during next 5 years!

- |  |   |   |                                |                                  |                                |
|--|---|---|--------------------------------|----------------------------------|--------------------------------|
| 1. Your Gender                                     | : | <input type="checkbox"/> MALE             |                                | <input type="checkbox"/> FEMALE  |                                |
| 2. Your Age  | : | <input type="checkbox"/> 25-35            | <input type="checkbox"/> 36-45 | <input type="checkbox"/> 46-55   | <input type="checkbox"/> 56-75 |
| 3. Do You Smoke / have smoked till 1 year back     | : | <input type="checkbox"/> Yes              |                                | <input type="checkbox"/> No      |                                |
| 4. Family History (blood relative) of heart attack | : | <input type="checkbox"/> Yes              |                                | <input type="checkbox"/> No      |                                |
| 5. Existing, Recent past heart disease, Stroke     | : | <input type="checkbox"/> Yes              |                                | <input type="checkbox"/> No      |                                |
| 6. Diabetes  | : | <input type="checkbox"/> Yes              |                                | <input type="checkbox"/> No      |                                |
| 7. No Diabetes but Fasting Blood sugar             | : | <input type="checkbox"/> more than 100mg% |                                |                                  |                                |
| 8. Your Waist Size                                 | : | Male :                                    | <input type="checkbox"/> <38"  | <input type="checkbox"/> >38"    |                                |
|  |   | Female :                                  | <input type="checkbox"/> <35"  | <input type="checkbox"/> >35"    |                                |
| 9. What is your Systolic (upper BP)                | : | <input type="checkbox"/> <130/80          |                                | <input type="checkbox"/> >130/85 |                                |
| 10. Are you taking Medicine for high BP            | : | <input type="checkbox"/> Yes              |                                | <input type="checkbox"/> No      |                                |
| 11. What is your : Total Cholesterol               | : | <input type="checkbox"/> <180             |                                | <input type="checkbox"/> >180    |                                |
| 12. What is your : LDL                             | : | <input type="checkbox"/> <100             |                                | <input type="checkbox"/> >100    |                                |
| 13. What is your : HDL                             | : | <input type="checkbox"/> >45              |                                | <input type="checkbox"/> <40     |                                |
| 14. What is your : Triglycerides                   | : | <input type="checkbox"/> >150             |                                | <input type="checkbox"/> <150    |                                |

Please send us your answers we will get back to you.

From the Desk of Late Dr. V.K. Gujral

## The Science behind the health benefits of vegetables



Today the science behind the health benefits of vegetables is growing rapidly. Researchers have discovered that in addition to nutrients, vitamins and minerals, vegetables contain a various group of natural biologically active plant substances, so-called phytonutrients or phytochemicals, which plants produce to protect themselves against stress. Health experts believe these natural substances are also beneficial for human health.

Phytochemicals are natural bioactive compounds produced by plants that work with nutrients and dietary fiber to protect against disease. Currently, the term is being used only for those plant chemicals that may have health-related effects but are not considered essential nutrients (proteins, carbohydrates, fats, minerals, and vitamins).

**Research suggests that phytochemicals, found in fruits, vegetables and nuts, may help slow the aging process and reduce the risk of many diseases, including cancer, heart disease, stroke, high blood pressure, cataracts, osteoporosis, and urinary tract infections.**

The natural pigments that give vegetables and fruits their characteristic colors is just one important group of phytochemicals. Some of the pigments in vegetables, for example beta carotene in

carrots and sweet potatoes, lycopene in tomatoes and lutein in spinach, have antioxidant properties. Antioxidants have the ability to block or reduce damage of cell's DNA from harmful free radicals produced in the body. Each colour group has a unique combination of nutrients and phytochemicals that has been associated with specific health benefits, such as heart health, vision health, bone health, a healthy immune system, and risk reduction for different kinds of cancers.

Some phytochemicals, like Indoles, which are found in cabbages, stimulate enzymes that make the estrogen less effective and could reduce the risk for breast cancer. Allylsulfides, another group of phytochemicals found in onion and garlic, stimulate enzymes that help the body get rid of harmful toxins and strengthen the immune system.

### Phytochemicals :

- \* **Modulate hormone metabolism.**
- \* **Stimulate the immune system.**
- \* **Have antioxidant, antibacterial, anti-carcinogen, antiviral and anti-inflammatory properties.**

The 1970's saw a revolution happen within the food science community, when researchers began to see links between what people ate and their general health and longevity. Around this time, doctors began to become concerned about the supposed link between *dietary cholesterol* and heart disease and cancers. While this link turned out not as important as scientists once figured (eating cholesterol does not necessarily lead to dangerously high cholesterol levels in the blood) it did mark the beginning of a trend. Doctors, researchers and people themselves began to shift their focus from merely

treating an ailment, to actually trying to prevent it.

Studies surrounding folic acid and its role in the health of pregnant women and their children also helped spur on the phytochemical revolution. Studies done on pregnant women showed that a diet lacking in sufficient amounts of folic acid led to higher rates of neural tube defects such as spina bifida. Other studies found that a diet deficient in Folic Acid (B-9) along with B6 and B12, led to higher level of *homocysteine* (an amino acid linked to fat build up in the arteries) in the blood stream and greater incidences of heart attack and stroke.

Since then, population studies were conducted which examined the link between people's diets and their general health and well being. In one epidemiological study the health of Japanese Americans who ate a typical American diet was compared to Japanese people who ate a more traditional diet. Another such study focused on the diet of the French population as compared to the standard American diet. Hundreds of these population studies were done and researchers soon started seeing a link between diets high in plant based foods and lower rates of cancer, diabetes and heart disease.

Another study involved senior citizens who ate a diet rich in *fish, grains and vegetable* compared to those who were more particular in what they ate. In this study, those that ate more veggies had the tendency to lead more active lives thus showing a link between health and diet. Other studies showed a link between whole grains and vegetables and a 40 percent drop in colon cancer. A study on women found that those who ate a diet rich in fruits and vegetable had a 25 percent lower risk of getting breast cancer.

**Why Fruits and Vegetables are Better Than Supplements ?**

When you eat **fruits and vegetables**, hundreds of phytochemicals, well balanced and working as the whole composition, are easily absorbed to provide the maximum health benefits.

In contrast, supplements or pills contain large doses of only one or two phytochemicals. These isolated supplements have not proven to be effective or even safe.

**You can prevent many disorders and delay aging by just following the simple guide line : every time you eat, fruits and vegetables should be half of what you eat.**

Scientists are learning more about the role that diet plays in disease prevention, the interactions among foods and their elements, such *as fiber*, nutrients, and phytonutrients that strengthen their health-promoting abilities and continue to discover other benefits as well, which makes vegetable and fruit research a very active and exciting field.

Based on scientific evidence, it is clear that the safest and most effective treatment for various diseases are right in our households. A mixture of natural fruits, vegetables and herbs are some of things needed to prevent or cure disease.

Folk Medicine has collected home remedies using vegetables for many centuries. Every vegetable has a unique well-balanced chemical composition. The newest research just acknowledges the folk wisdom in the ability to prevent and cure diseases and improve overall health by combining the right natural ingredients in right proportions.

**With the right combination of ingredients, a cure can be created in the privacy of your own home !**

The other ingredients used in these home remedies besides vegetables are natural honey, alcohol and some herbs. That's it.

**No chemicals, no side effects.**

# Which Nut is the Best and Healthiest?

*A new study positions walnuts in the No. 1 slot among a family of foods that lay claim to being among the most nearly perfect, packaged foods and it only takes 7 walnuts a day to get the benefits....*

In a report at the 241st National Meeting & Exposition of the American Chemical Society, scientists presented an analysis showing that walnuts have a combination of more healthful antioxidants and higher quality antioxidants than any other nut.

Joe Vinson, Ph.D., who did the analysis stated that, "Walnuts rank above peanuts, almonds, pecans, pistachios and other nuts." "A handful of walnuts contains almost twice as much antioxidants as an equivalent amount of any other commonly consumed nut. But unfortunately, people don't eat a lot of them. This study suggests that consumers should eat more walnuts as part of a healthy diet."

Vinson noted that nuts in general have an unusual combination of nutritional benefits - in addition to those antioxidants - wrapped into a convenient and inexpensive package. Nuts, for instance, contain plenty of high-quality protein that can substitute for meat; vitamins and minerals; dietary fiber; and are dairy- and gluten-free. Years of research by scientists around the world link regular consumption of small amounts of nuts or peanut butter with decreased risk of heart disease, certain kinds of cancer, gallstones, Type 2 diabetes, and other health problems.

Despite all the previous research, scientists until now had not compared both the amount and quality of antioxidants found in different nuts, Vinson said. He filled that knowledge gap by analyzing antioxidants in nine different types of nuts: walnuts, almonds, peanuts, pistachios, hazelnuts, Brazil nuts, cashews, macadamias, and pecans. Walnuts had the highest levels of antioxidants.



Vinson also found that the quality, or potency, of antioxidants present in walnuts was highest among the nuts. Antioxidants in walnuts were 2-15 times as potent as vitamin E, renowned for its powerful antioxidant effects that protect the body against damaging natural chemicals involved in causing disease.

"There's another advantage in choosing walnuts as a source of antioxidants," said Vinson, who is with the University of Scranton in Pennsylvania. "The heat from roasting nuts generally reduces the quality of the antioxidants. People usually eat walnuts raw or unroasted, and get the full effectiveness of those antioxidants."

If nuts are so healthful and nutritious, why don't people eat more?

Vinson's research shows, for instance, that nuts account for barely 8 percent of the daily antioxidants in the average person's diet. Many people, he said, may not be aware that nuts are such a healthful food. Others may be concerned about gaining weight from a food so high in fat and calories. But he points out that nuts contain healthful polyunsaturated and monosaturated fats rather than artery-clogging saturated fat. As for the calories, eating nuts does not appear to cause weight gain and even makes people feel full and less likely to overeat. In a 2009 U. S. study, nut consumption was associated with a significantly lower risk of weight gain and obesity. Still, consumers should keep the portion size small. Vinson said it takes only about 7 walnuts a day, for instance, to get the potential health benefits uncovered in previous studies.

*Presented at a meeting of the American Chemical Society, March 2011*

# THE LAST PUFF -- Mantras to Quit Smoking!

Excerpts from **"THE LAST PUFF"**  
– A Quit Smoking Book written by **Dr. Sajeela Maini**



"I love you; I hate you!" A smoker has a weird and wonderful bond with his cigarettes. He loves his cigarette as much as he hates them. Strangely, most smokers are aware that cigarettes are harmful to their body; but still they continue to smoke their fill. Fear psychology does not usually work in most cases. A structured support is the need of the hour. We have taught enough about the harmful impact of smoking; what needs to be addressed is the route to quitting the stick successfully and effortlessly" (page 6, THE LAST PUFF).

Smoking is a complex habit that needs to be handled in a holistic manner. A 360 degree program is required that handles the smokers' mind, his body, his complexes, his myths, his reasons, and his lifestyle. Smoking is an intertwined habit that has its tentacles spread all over the smoker, like a person caught in a "Spiders' web".

## **Decide goal:**

The first step to quitting the stick is to decide the goal ZERO CIGARETTES. "There is a great difference between "Zero cigarettes" and "Close to Zero cigarettes". Zero Cigarettes is success and Close to zero cigarettes is failure" (page 150, Mantra 1, THE LAST PUFF). We need to aim at ZERO; because nothing less than zero would work. Remember, reduction is difficult and quitting is easy (Mantra 21, THE LAST PUFF).

## **Physiological craving - 72 hour phase (Mantra 11, THE LAST PUFF):**

The physiological withdrawals and cravings are only for three days. After the first 72 hours of abstinence, the urges and withdrawals will diminish drastically.

## **Attack – Attacking wins (Mantra 6, THE LAST PUFF):**

Attitude plays a major role in our successes and failures. We need to take the attack attitude – "I have to win", and 50% of our battle is won. On the contrary, if we take the defensive attitude – "I might not loose"; we stand on a losing battlefield. So the mantra is ATTACK THE WITHDRAWALS.

## **Remove all cigarettes from vicinity (Mantra 14, THE LAST PUFF)**

"There is a great difference between buying a cigarette and having one at hand. We will definitely not buy a cigarette if we enrol for the quit smoking program; but if we have one odd cigarette with us, we might smoke it, if urge shoots up; or any bad mood engulfs us." (page 178, THE LAST PUFF). So remove all cigarettes, lighters and tobacco from near vicinity. The more we see it, the more the cravings would appear.

## **Treatment – Intervention module**

Smoking is a mind body addiction; and we need to handle physical as well as psychological cravings. The purpose is to make the quitting process easy and very less discomfoting. Our treatment is a mix of psychotherapeutic interventions; along with pharmacotherapy (medicines) to substantially reduce the withdrawals/urges of quitting the stick; and also a detailed relapse prevention therapy to

maintain long term and permanent abstinence.

The treatment program should essentially be a harmonious mix of psychotherapy and medicine therapy. The intervention needs to be addressed in a holistic way, to attain desired results.

### 1. Psychotherapeutic interventions

The psychotherapeutic interventions include a series of specialized cessation counseling sessions to help the smoker change their behaviour and provide step-by-step assistance during the quit attempt. The behavioral intervention usually includes motivation enhancement therapy, cognitive-behavioral therapy, rational emotive therapy, adaptive coping skills training, and relapse prevention therapy.

### 2 Pharmacotherapeutic interventions:

The pharmacotherapeutic intervention includes medicines to help control the urges/withdrawals; and to make the quitting easier. We use a combination of various therapies to help control the withdrawals and unpleasantness while quitting smoking. Regular administration of these medications, as prescribed, makes the quitting process easy and very less discomforting.

Nicotine Replacement therapy (NRT) is the mainstay of Smoking Cessation Therapy. The rationale of the therapy is to supply nicotine into the body via a different route. This lessens the cravings and withdrawals drastically; thereby making quitting possible, easy and less discomforting. NRT comes in various forms, such as nicotine transdermal patches, nicotine chewing gums, nicotine jelly/lozenges; nicotine nasal spray and nicotine inhaler. In India, we have nicotine transdermal patches as well as nicotine gums and lozenges. Usually combining the NRT products work better than using monotherapy.

### 3 Lifestyle Modification Therapy:

We teach yogic exercises to help smokers expel toxins and revive their lungs. We make effective use of lifestyle modifications, and naturopathy techniques, that go a long way in improving the physical and psychological wellbeing of the smoker; and also help in relapse prevention. We also focus on effective stress management techniques; and response to external stressors at work and at home

#### The bigger question - How to remain quitted!

Remaining quitted for life is a bigger challenge; because smokers have a tendency for relapse. We have a structured program for training a smoker on how to remain quitted for life. We warn him for the “One Puff Syndrome”, and train him for relapse prevention. We also impart “Adaptive Coping Skills Training” so that the smoker understands and learns how to handle his life situations and stresses without the deadly cigarette. Our effort is to reduce relapses drastically, so that the smoker quits for his lifetime.

#### Quit Success rate of the program:

With our sustained efforts; and intensive intervention module, we achieve a quit success rate of 80% over a period of three months follow up.

**We strive to make the world a “Tobacco Free World”.**

Quitting smoking is the most important gift that a person can give to himself; as well as to his loved ones. Smokers think aloud years and years of quitting the stick. Now it is time for action. Act now and stub YOUR LAST PUFF

**“Decide on your last puff**

**Before your puff decides your fate”**

..... Dr. Sajeela Maini

\*(The author is Dr. Sajeela Maini, Author of “THE LAST PUFF – A Quit Smoking Book”; and Head, Tobacco Cessation, National Heart Institute, New Delhi.)

# धूम्रहीन तम्बाकू

प्रोफेसर श्रीधर द्विवेदी

वरिष्ठ हृदय रोग विशेषज्ञ, नेशनल हार्ट इंस्टीच्यूट, ईस्ट आफ कैलाश नई दिल्ली-११००६५

**गुटका सुर्ती धूम सब जग में विष की खान,  
वा खाये मुख सड़त है वा पीवे विषपान।\***

\* (भावार्थ : तम्बाकू का सेवन चाहे सुर्ती – गुटके (धूम्रहीन) के रूप में हो या बीड़ी सिगरेट पीकर धूम्रपान की तरह किया जाये दोनों जहर के समान हैं। सुर्ती – तम्बाकू खाने – चबाने से आदमी का मुँह सड़ जाता है जो आगे चल कर कैंसर का स्वरूप ले लेता है तथा धूम्रपान विष की भांति पूरे शरीर को रोगग्रस्त कर देता है जिसकी चरम परिणति दिल के दौरें, ब्लड प्रेसर, पक्षाघात, विविध प्रकार के कैंसर में होती है। इसलिए तम्बाकू चाहे वह धूम्रहीन हो या धूम्रपान दोनों ही त्याग करने योग्य है।)

यूरोप, अमेरिका और पश्चिमी देशों में तम्बाकू का सेवन केवल धूम्रपान के रूप में किया जाता है। परन्तु भारतवर्ष तथा पड़ोसी देशों जैसे पाकिस्तान, बंगलादेश, श्रीलंका और नेपाल में तम्बाकू का प्रचलन धूम्रपान और धूम्रहीन दोनों रूपों में होता है। भारत और उसके पड़ोसी देश विश्व में एकमात्र ऐसे देश हैं जहाँ लोग धूम्रहीन तम्बाकू का प्रयोग विविध रूपों में जैसे सुर्ती, जर्दा, गुटका, सुगन्धित पान मसाला, गुल, नसवार, मंजन आदि के रूप में करते हैं और उसके विविध दुष्परिणामों को भुगतते हैं।



अंग्रेजी में इसे स्मोक लेस टोबैको [SLT] कहते हैं और हिन्दी में धूम्रहीन तम्बाकू। यह कितनी विडम्बना की बात

है कि जब सिगरेट को यूरोपीय – पुर्तगीज और ब्रिटिश लोग भारत में तम्बाकू १६ वी शताब्दी में ले आये तब उन्हें यह अहसास भी नहीं रहा होगा कि कुछ जुगाडू और उदयमशील किस्म के भारतीय धूम्रपान का स्थानापन्न धूम्रहीन तम्बाकू खोज लेंगे और धूम्रपान के नाम पर नाक – भौं सिकोड़ने वाले लोग अपने विशुद्ध स्वार्थ पूर्ति के लिए इसे सामाजिक और सांस्कृतिक मान्यता प्रदान कर देंगे। मौखिक तम्बाकू को परिष्कृत करते करते उसे आज के इस स्वरूप पर लाकर खड़ा कर देंगे कि लोग धूम्रपान की जगह धूम्रहीन तम्बाकू के दीवाने हो जायेंगे भले ही इस नशीली आदत के लिए उन्हें अपनी सेहत और धन दोनों से हाथ धोना पड़े।

## तम्बाकू से उत्पन्न पांच महामारी

भारत इस समय तपेदिक, मलेरिया, एड्स जैसी संक्रामक बीमारियों के अलावा पांच प्रमुख महामारियों (दिल की बीमारी, ब्लड प्रेसर, डॉयबिटीज, कैंसर तथा पक्षाघात) से जूझ रहा है। इन सब में तम्बाकू की किसी न किसी रूप में अहम भूमिका होती है। इन महामारियों में तम्बाकू की खतरनाक भूमिका को देखते हुए किसी चिकित्सक ने लिखा है – खाइए खूब गुटका सुर्ती, जल्दी होगी संसार से छुट्टी। गुटके को कुछ विद्वान मौत का खटका अर्थात् प्रवेश द्वार मानते हैं। तम्बाकू धूम्रपान के रूप में या मुख में चबा कर या रख कर प्रयोग की जाती है। मुख द्वारा तम्बाकू के सेवन को तकनीकी शब्दों में धूम्रहीन (धुँआ रहित तम्बाकू/मौखिक तम्बाकू) कहते हैं।

**व्यापकता** – मौखिक तम्बाकू – सुर्ती का प्रचलन समाज के गरीब, महिलाओं तथा किशोर लोगों में विशेष है। वर्तमान में उच्च और मध्यम वर्ग के किशोर तथा व्यस्क धूम्रपान की अपेक्षा गुटके और पान मसाले का प्रयोग विशेष करने लगे हैं। गुटके और तम्बाकू द्वारा हमारे स्वास्थ्य पर बढ़ते हुए खतरे के विषय में समाज के इन वर्गों पर विशेष ध्यान देने देने की आवश्यकता है:



१. सब्जी फल बेचने वाले लोग, २. सफाई कर्मचारी, ३. चौकीदार/सुरक्षा प्रहरी, ४. ड्राइवर, ५. राजगीर, ६. पत्थर तरासने वाले लोग, ७. पान तम्बाकू बेचने वाले लोग, ८. माली, ९. मोची, १०. धोबी, ११. रात्रिकालीन पाली में काम करने वाले लोग, १२. किशोर।

**गरीबी में आटा गीला :** मेहनतकश मजदूर को आखिर हृदयाघात क्यों होता है ? जाड़ा, गर्मी हो या बरसात दिन भर खटने वाले इस निहायत गरीब को, रेहड़ी, ठेला, खोमचा या पटरी लगाने वाले आदमी को दिल के दौरों से क्या लेना देना? सड़क की पटरी पर दिन भर धूप में, खड़ी दोपहरी में पसीना बहाने वाली मोची, धोबी या दरजी क्यों पड़ा दिल का दौरा ? क्यों हुई इन्हे डायबिटीज ? आखिर किस कारण वश इन्हें ब्लड प्रेसर या लकवे की बीमारी हुई? क्या मतलब है इन बीमारियों का इन गरीब व्यक्तियों को होने का ? सुनने में ये प्रश्न बहुत अजीब से लगते हैं पर इनके पीछे कुदरत का एक सर्वमान्य सरल सा नियम है और वह नियम यह है – जिसने भी प्रकृति के मौलिक नियमों को तोड़ा उसे दण्ड मिलेगा चाहे वह कोई भी हो राजा, रंक या फकीर।

प्रकृति ने अच्छी सेहत के लिए कुछ नियम बनाए हैं। खान – पान में सावधानी बरतने का, धूम्रपान, सुर्ती, तम्बाकू शराब से बचने का, मांसाहार विशेषतः गोमांस या भेड़ के मांस से परहेज का। घर से काफी दूर पूरे दिन पटरी पर जीवन यापन करने के कारण पेट की भूख मिटाने के लिए मजबूरी वश अब इनका खान-पान पूरी तरह से शहरी हो गया है। ये लोग ठेले पर बिकने वाले तुरंत भोजन वाली चीजें जैसे चाइनीज नूडल्स, चिकेन – चावल और कोकाकोला बड़े चाव से खाते – पीते हैं। अपने ठेले पर रखे फल को उतने शौक से शायद ही खाते हों। ऐसी स्थिति में यदि इनका कोलेस्ट्रॉल और रक्त शर्करा बढ़ जाये तो इसमें आश्चर्य क्या है ?

व्यवहार में हम देखते हैं कि ज्यादातर मेहनत-मजूरी करने वाले लोग किसी न किसी प्रकार के नशा-पानी से ग्रस्त रहते हैं, जैसे बीड़ी पीना, सुर्ती खाना, गुटका चबाना, खैनी-जर्दा लेना आदि नशीली चीजों का सेवन। इसके लिए चाहे उनको कितनी भी मुसीबतें क्यों न उठानी पड़े। इन चीजों का चस्का एक बार लग गया तो उससे पिंड

छूटाना बहुत मुश्किल होता है। दूसरी महत्वपूर्ण बात यह है कि इन समस्त लोगों का काम यद्यपि बहुत श्रम शील होता है परन्तु वास्तव में ये सब एक स्थान पर कभी कभी तो एक मुद्रा में बैठे बैठे दिन भर काम करते हैं जिसके परिणामस्वरूप उनकी तोंद निकल आती है। पेट करीब करीब गोलाकार हो जाता है। हाथ पैर उतने मोटे नहीं होते। तोंद के अंदर जमी चिकनाई में कुछ ऐसे साइटोकाइन रासायनिक तत्व जैसे टी एन अल्फा 1, आई एल ६, आदि पदार्थ होते हैं जो अत्यन्त दहनशील होते हैं और दिल के लिए अत्यन्त हानिकारक होते हैं। ये तत्व यह नहीं देखते हैं कि अमुक गरीब है तो इसको नुकसान न पहुँचायें। ये दहनशील तत्व बिलकुल निरपेक्ष होते हैं जो सबके लिए चाहे वह अमीर हो या गरीब, पुरुष हो या स्त्री समान रुख अख्तियार करते हैं। एक बार बीड़ी सिगरेट या सुर्ती तम्बाकू से उत्तेजित हो गए तो दिल पर अपना कहर ढहाएंगे ही ढहाएंगे। अलबत्ता यदि आप बीड़ी तम्बाकू नहीं खाते पीते हैं और गरीब हैं दिन भर परिश्रम करते हैं तो ज्यादा सम्भावना है कि आपको हृदयाघात नहीं होगा।

### गुटके – तम्बाकू की आदत कैसे लगती हैं ?

सुर्ती, गुटके – तम्बाकू की आदत ज्यादातर माता पिता या घर-परिवार के बड़े सदस्यों से लगती है। कभी कभी संगी साथी या मनोहारी विज्ञापनों अथवा नीम हकीम लोगों द्वारा भी यह कुटेव लग सकती है। आदर्श रूप में हर माता-पिता अपने बच्चों को बुरे रास्ते से विरत कर अच्छे रास्ते पर ले जाते हैं। शायद ही कोई माँ-बाप यह चाहेगा कि उनका बच्चा तम्बाकू खाये या सिगरेट-बीड़ी, शराब पिये। उनके सामने तो कतई नहीं। काश यह बात शत प्रतिशत सही होती। चिकित्सको को इसका अनुभव गाहे-बगाहे मिलता रहता है। मरीज पिशता देवी की वैसे तो उम्र ६० साल की थी पर वे ६५-७० के बीच लग रही थी। ४५ साल की उम्र में ही उनके सारे दाँत गिर चुके थे। जिसका दोष वे अपनी डायबिटीज को दे रही थी। शायद उन्हें यह ज्ञान नहीं था कि उनकी हुक्के-बीड़ी की आदत ने उनके मुँह की हालत चौपट कर दी थी। मसूड़े पक गए थे। पायरिया ने दाँतो की जड़ों को हिला कर रख दिया था। रही सही कमी डायबिटीज ने पूरी कर दी। उन्होंने बड़े गर्व से बताया कि तम्बाकू की आदत जब वह अत्यंत अंबोध थी, बचपन से ही उनके पिताजी ने लगा दी थी। तम्बाकू उनके परिवार की शान थी। अब आप अनुमान लगा सकते हैं पिशता देवी की तम्बाकू की आदत छुड़ाना क्या आसान काम है ?

तम्बाकू की आदत के कारण उन्हें यह दिन देखना पड़ा। साँस-खांसी, डायबिटीज और उससे जुड़ी आधा दर्जन



बीमारियां। अब दिल भी जबाब दे रहा था। एक एक पल भारी पड़ रहा था। अस्पताल में दिन गिन रही थी। इलाज चल रहा है लगातार ऑक्सीजन पर है। डॉक्टर लगे हुए हैं। हम चिकित्सक भी विचित्र प्राणी हैं। जब भी मौका मिलता है धूमपान के जहर के विषय में बोलते ही रहते हैं। आखिर कभी न कभी तो सुनने वाला द्रवित होगा और छोड़ेगा। यही हुआ पिशता देवी के साथ उन्होंने तम्बाकू छोड़ दिया।

**तम्बाकू – सुपाड़ी का गठजोड़ : तम्बाकू, सुपाड़ी व धूम्रपान – सब साथ साथ**

तम्बाकू के कारण पूरा मुँह और पूरा शरीर जहर की पोटली या कूड़ेखाने में बदल जाता है। मुँह में दुर्गन्ध कैंसर और घाव बन जाता है। दांतों के मसूड़ों में सूजन और सड़न हो जाती है। हृदय में प्रदाह होता है। दिल की नसें कड़ी पड़ जाती हैं। कम उम्र में दिल का दौरा पड़ता है। किसी किसी को पक्षाघात या पैरों में नासूर हो सकता है। तम्बाकू व्यक्ति को जल्दी बूढ़ा बनाती है।

**तोंद और तम्बाकू एक भयानक गठजोड़ :**

मोटी तोंद वाले लोग यदि सुर्ती –तम्बाकू का सेवन करते हैं तो ऐसी स्थिति उनके स्वास्थ्य के लिए भयंकर विपत्ति का कारण बन सकती है। तोंद चिकनाई के अकूत कारखाने के समान होती है। उसमें अनेक दहनशील पदार्थ जैसे आई एल –८, आई एल –१५ एल डी एल, टी एन एफ अल्फा का भंडार होता है। उसमें तम्बाकू का सेवन मानो घी के अम्बार में भीषण आग लगने के समान की स्थिति है। शरीर के सारे महत्वपूर्ण अंग विशेषतः हृदय के अंदर प्रचण्ड प्रदाह होता है जो तम्बाकू सेवी को हृदय मृत्यु की तरफ अग्रसर करता है।



**कैंसर व हृदय रोग दोनों का कारण:**

गुटका, पान मसाला व सुपाड़ी ये सब मुँह के कैंसर और हृदय रोग के कारण होते हैं। कभी-कभी ये दोनों रोग आगे-पीछे एक व्यक्ति में देखे जा सकते हैं।

**तम्बाकू और वातावरण प्रदूषण:**

तम्बाकू-गुटका खाकर या चबा कर जो लोग सड़क या आस पास थूक देते हैं वह गंदगी का कारण तो बनता ही है उसके साथ साथ कई बीमारियों के संक्रमण का कारण भी बनता है। इससे वातावरण प्रदूषित तथा रोगजनक बनता है।

**अर्थ व्यवस्था पर बोझ** – व्यक्तिगत, सामाजिक, राष्ट्रीय, पीढ़ी दर पीढ़ी का भविष्य खराब होता है:

*तम्बाकू ने किया देश का देखो कैसा बंटाधार,  
कैंसर दिल दौरों से प्रतिदिन मरते अपने युवा हजार,  
तरुणाई का नाश हो रहा क्षय होती सम्पति अपार,  
औषधि में स्वाहा होती है अरबों की धन राशि कतार।  
आँख मूंद हम गले लगाते तम्बाकू अमृत आहार,  
ये कैसी विभीषिका श्रीमन् क्या मजबूरी क्या आधार?  
इस विष का प्रचार करते टी वी पट पर क्यों धुंआधार,  
हे नाथ अशर्फियाँ लुटे कौड़ियों का हो रहा व्यापार।*

**निपटने का तरीका** – समाज में चेतना, बच्चों को स्कूल में इसके दुष्प्रभाव को बताना, विधिगत, इसको पूर्णतः समाप्त करने के लिए न्यायपालिका, कार्यपालिका सबमे समन्वय, टी-२१ का रास्ता

**तम्बाकू से जुड़ी कुछ गलतफहमियां :**

यद्यपि तम्बाकू भारत के सेहत का सबसे बड़ा दुश्मन है फिर भी इस उद्योग से जुड़े लोगों ने समाज में इतनी गलतफहमियां फैला रखी हैं मानो तम्बाकू खाना या चबाना धूम्रपान की अपेक्षा श्रेष्ठ और पूरी तरह से निरापद है। जिसका निराकरण अब बहुत जरूरी है।

**भ्रम १** – माना कि धूम्रपान बुरा है परन्तु सुर्ती, तम्बाकू, गुटका, पान मसाला लेने में कोई नुकसान नहीं है।

**सच** – यह कतई सच नहीं है। किसी भी प्रकार की तम्बाकू सेहत विशेषतः दिल और दिमाग के लिए खतरनाक होती है।

**भ्रम २** – हुक्का पीना बीड़ी सिगरेट की अपेक्षा ठीक है। वह सेहत की लिए हानिकारक नहीं है।

**सच** – ऐसा कदापि सत्य नहीं है। हुक्का बीड़ी सिगरेट से ज्यादा नुकसानदायक है।

**भ्रम ३** – जाड़े में सुबह सुबह बीड़ी पीने से गर्मी मिलती है।

**सच** – यह सही नहीं है। जाड़े में सुबह सुबह ठंडक और नमी के कारन वातावरण में बहुत प्रदूषण रहता है इसलिए इस समय बीड़ी पीना और ज्यादा खतरनाक होता है। सबेरे सबेरे बीड़ी पीकर आप साँस – खांसी को खुला निमंत्रण दे रहे हैं। आ खांसी आ। आ बैल मुझे मर। एक दूसरी बात और – जाड़ा दिल के लिए वैसे भी उतना अनुकूल नहीं होता है। इस मौसम में ब्लड प्रेसर बढ़ जाता है और दिल के दौरों की संभावना ज्यादा होती है।

**भ्रम ४** – क्या हुआ जो मैं मोटा हूँ तोंद वाला हूँ और बीड़ी पीता हूँ ? बीड़ी का मोटापे से क्या लेना देना ?

**सच** – मोटा व्यक्ति बीड़ी सिगरेट पीता है तो उसमें दिल के दौरों की संभावना कई गुना बढ़ जाती है। इसका कारण उसकी तोंद के अंदर जमा चर्बी में कई ऐसे सक्रिय ज्वलनशील जैव रसायनिक अणुत्व जैसे TNF-अल्फा, IL-६, IL-८, लेप्टिन आदि पदार्थ होते हैं जो धूम्रपान के अंदर उपस्थित निकोटीन से मिलकर, सक्रिय होकर पुरे शरीर में विशेषकर हृदय की नलिकाओं में आग लगाने जैसी दहनशील परिस्थिति उत्पन्न कर देते हैं और दिल को क्षति पहुँचते हैं। इसलिए मोटे और तोंद वाले व्यक्तियों को बीड़ी न पीना ही श्रेष्ठ है।

**भ्रम ५.** तम्बाकू से दाँत पक्के होते हैं। कब्ज दूर होता है। गैस से आराम मिलता है।

**सच** – तम्बाकू से दाँत और मसूड़े दोनों खराब होते हैं। इससे मुँह का कैंसर हो सकता है। भारत में कम उम्र के लोगों को मुख के कैंसर की महामारी का मुख्य कारण सुती तम्बाकू या गुटखा है।

सत्य यह है कि तम्बाकू या धूम्रपान से न तो गैस में आराम मिलता है न ही कब्ज दूर होता है।

सच पूछिये तो धूम्रपान से आमाशय और कोलन का (बड़ी आंत) का कैंसर हो सकता है। विश्व प्रसिद्ध पैथोलॉजिस्ट प्रोफेसर विलियम बॉयड को अत्यधिक धूम्रपान के कारण कोलन का कैंसर हुआ और उसी में वे चल बसे।

**भ्रम ६** आजकल बाजार में नई फिल्टर वाली तम्बाकू सेहत की दृष्टि से ठीक –ठाक है।

**सच** – यह बिलकुल गलत और धोखा देने वाली चाल है। इससे बचिए। फिल्टर वाली तम्बाकू फिल्टर वाली सिगरेट की तरह हानिकारक और कैंसर कारक है।

**भ्रम ७** नयी चली इ – सिगरेट हानिकारक नहीं होती।

**सच** – इ – सिगरेट भी सेहत के लिए हानिकारक है।

**भ्रम ८** – बीड़ी-सिगरेट पीने से आदमी ज्यादा चुस्त-दुरुस्त और स्मार्ट दिखता है।

**सच** – यह सरासर झूठ और वैज्ञानिक तथ्यों से परे है। सत्य यह है कि धूम्रपान करने से आप अपने वास्तविक उम्र से कम से कम ५ या १० वर्षों से अधिक उम्र के दीखते हैं। मतलब समय से

पहले बूढ़े और थके लगते हैं। आप धूम्रपान जनित अनेक रोगों से ग्रस्त होकर जल्दी मृत्यु को गले लगाते हैं।

**भ्रम ९** – धूम्रपान यदि बड़े बड़े लोगों और चिकित्सकों को नुकसान नहीं पहुँचाता तो मुझे क्यों पहुँचायेगा?

**सच** – सच यह है कि धूम्रपान सबके लिए चाहे वह राजा हो या रंक अथवा फकीर डाक्टर हो या दार्शनिक या धर्म का सबसे बड़ा ठेकेदार सबको समान रूप से दण्डित करता है। सबको उसका दुष्परिणाम भुगतना पड़ता है। इसका सबसे बड़ा उदाहरण विश्व के सर्वाधिक शक्तिशाली देश के द्वितीय महायुद्ध के समय रहे प्रेसीडेंट एंफ्र डी दफ आर रूजवेल्ट, पाकिस्तान के संस्थापक प्रेसीडेंट जिन्ना साहेब, सुप्रसिद्ध हृदय रोग विशेषज्ञ पालवुड साहेब हैं जिन लोगों की असामयिक मृत्यु हुई जिसका प्रमुख कारण उनकी धूम्रपान की आदत थी। अल्प समय में ही उन सबको धूम्रपान के कारण इस धरती से जाना पड़ा।

**भ्रम १०** : हम नारियों को प्रकृति ने दिल के दौरों और ब्लड प्रेसर से सुरक्षा प्रदान कर रक्खा है। तम्बाकू हमारा क्या बिगड़ कर पायेगा ?

**सच** : वास्तविकता यह है की जब आप तम्बाकू, सुती या सुपाड़ी आदि नशीली चीजों का सेवन शुरू करते हैं उसी समय इन सब चीजों के अंदर उपस्थित हानिकारक रसायन अपना दुष्प्रभाव दिल, दिमाग और अन्य महत्वपूर्ण अंगों पर डालना शुरू कर देते हैं। कुदरत की तरफ से मिला हार्मोनल सुरक्षा कवच कमजोर और अक्षम हो जाता है। गुटखा- पान मसाला या तम्बाकू खाने वाली महिलायें भी पुरुषों की भांति दिल की बीमारी से ग्रस्त हो सकती हैं।

हृदय की बीमारियों के अलावा मौखिक तम्बाकू का सेवन गर्भावस्था पर भी दुष्प्रभाव डालता है। पेट में गर्भ ठहरने की स्थिति में तम्बाकू का सेवन करने से निम्न खतरें हो सकते हैं :

१. गर्भावस्था के समय रक्तश्राव
२. अस्थानिक गर्भावस्था
३. गर्भपात
४. शिशु का समय से पूर्व जन्म
५. मृत जन्म प्रभाव

## तम्बाकू खाना मौत बुलाना, गुटका चबाना कैंसर पाना:

गुटका, सुर्ती, पान मसाले आदि वे समस्त पदार्थ जिनमे तम्बाकू परोक्ष या अपरोक्ष रूप से मिली होता है हमारे शरीर के लिए उतने ही हानिकरक होते है जितना धूम्रपान करने से नुकसान होता है। ध्यान योग्य बात यह है की ये सभी धूम्रहीन वस्तुएं (गुटका, सुर्ती, पान मसाले) मुख – कैंसर के प्रधान कारण है।

सुर्ती, जर्दा, पान-तम्बाकू, सुपाड़ी को सामाजिक – सांस्कृतिक मान्यता मिलने के कारण इनकी पैठ गाँव – देहात, शादी- बारात, पंचायत –सभा, किसान-मजदूर, श्रमिक लोगों में बहुत होती है जिसके कारण इसकी आदत इस वर्ग के बच्चों- किशोरों तथा महिलाओं मे बहुत पायी जाती है। इसका दुष्प्रभाव काम करने के लिए इन वर्गों पर विशेष ध्यान और इसके खतरे से इन्हे परिचित करने की बहुत आवश्यकता है। इसके लिए स्कूलों, पाठशालाओं, मदरसों, कालेज, हॉस्पिटल, विश्वविद्यालय के निकट इन पर लगे प्रतिबन्ध का सख्ती से पालन करना चाहिये। जन संचार (समाचार पत्र, टेलीविजन, रेडियो, बसों, गाड़ियों व राजमार्गों) के सभी माध्यमों में इनके विज्ञापन पर पूर्णतः प्रतिबन्ध लगाना जरुरी है।

छोटी कक्षाओं (दर्जा ६ से ८ तक) के बच्चों को हर ६ महीने में एक बार अच्छी जीवन शैली पर एक पारस्परिक वार्ता का आयोजन होना चाहिये।

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# Urinary Incontinence

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Urinary incontinence is the involuntary leakage of urine; in simple terms, it means a person urinates when they do not want to. Control over the urinary sphincter is either lost or weakened.

Urinary incontinence is a much more common problem than most people realize.

## Symptoms of urinary incontinence:

The main symptom is the unintentional release (leakage) of urine. When and how this occurs will depend on the type of urinary incontinence.



Millions of Americans suffer from urinary incontinence.

## Stress incontinence:

This is the most common kind of urinary incontinence, especially among women who have given birth or gone through the menopause.

In this case "stress" refers to physical pressure, rather than mental stress. When the bladder and muscles involved in urinary control are placed under sudden extra pressure, the person may urinate involuntarily.

The following actions may trigger stress incontinence:

- | A sudden cough
- | Sneezing
- | Laughing
- | Heavy lifting
- | Exercise

## Urge incontinence (effort incontinence):

Also known as reflex incontinence or "overactive bladder," this is the second most common type of urinary incontinence. There is a sudden, involuntary contraction of the muscular wall of the bladder that causes an urge to urinate that cannot be stopped.

When the urge to urinate comes, the person has a very short time before the urine is released, regardless of what they try to do.

## The urge to urinate may be caused by:

- | A sudden change in position
- | The sound of running water (for some people)
- | Sex (especially during orgasm)

Bladder muscles can activate involuntarily because of damage to the nerves of the bladder, the nervous system, or to the muscles themselves.

## Overflow incontinence:

This is more common in men with prostate gland problems, a damaged bladder, or a blocked urethra. An enlarged prostate gland can obstruct the bladder.

The bladder cannot hold as much urine as the body is making and/or the bladder cannot

empty completely, causing small amounts of urinary leakage. Often, patients will need to urinate frequently, and they may experience "dribbling" or a constant dripping of urine from the urethra.

### **Functional incontinence:**

With functional incontinence, the person knows there is a need to urinate, but cannot make it to the bathroom in time due to a mobility problem.

### **Common causes of functional incontinence include:**

- | Confusion
- | Dementia
- | Poor eyesight
- | Poor mobility
- | Poor dexterity (cannot unbutton pants in time)
- | Depression, anxiety, or anger (unwilling to go to the toilet)

Functional incontinence is more prevalent among elderly people and is common in nursing homes.

### **Gross total incontinence:**

This either means that the person leaks urine continuously, or has periodic uncontrollable leaking of large amounts of urine.

The patient may have a congenital problem (born with a defect), there may be an injury to the spinal cord or urinary system, or there may be a hole (fistula) between the bladder and, for example, the vagina.

### **Risk factors for urinary incontinence:**

**The following are risk factors linked to urinary incontinence:**

- | **Obesity** - obese people have increased pressure on their bladder and surrounding muscles, which weakens the muscles and makes it more likely that a leak occurs when the person sneezes or coughs

- | **Smoking** - regular smokers are more likely to develop a chronic cough, which may result in episodes of incontinence

- | **Gender** - women have a significantly higher chance of experiencing stress incontinence than men, especially if they have had children

- | **Old age** - the muscles in the bladder and urethra weaken during old age

- | **Some diseases and conditions** - people with diabetes, kidney disease, spinal cord injury, or neurologic diseases (in particular, residual deficits after a stroke)

- | **Prostate disease** - patients with a history of prostate surgery or radiation therapy

### **Causes of stress incontinence:**

- | Pregnancy
- | Childbirth (labor)
- | Menopause - when estrogen levels drop the muscles may get weaker
- | A hysterectomy - surgical removal of the uterus (womb)
- | Some other surgical procedures
- | Age
- | Obesity

### **Causes of urge incontinence:**

The following causes of urge incontinence have been identified:

- | **Cystitis** - inflammation of the lining of the bladder.

- | **CNS (central nervous system) problems** - examples are multiple sclerosis, stroke, and Parkinson's disease.

- | **An enlarged prostate** - the bladder may drop, and the urethra could become irritated.

### **Causes of overflow incontinence:**

This happens when there is an obstruction or blockage to the bladder. The following may

cause an obstruction:

- | An enlarged prostate gland
- | A tumor pressing against the bladder
- | Urinary stones
- | Constipation
- | Urinary incontinence surgery which went too far

### **Causes of total incontinence:**

#### **The following can cause total incontinence:**

- | An anatomical defect the person has had from birth.
- | A spinal cord injury which messes up the nerve signals between the brain and the bladder.
- | A fistula - a tube (channel) develops between the bladder and a nearby area, most typically the vagina.

#### **Other causes of urinary incontinence:**

- | Some medications - especially some diuretics, antihypertensive drugs, sleeping tablets, sedatives, and muscle relaxants.
- | Alcohol
- | Urinary tract infection

#### **Treatments for urinary incontinence:**

Treatment for urinary incontinence will depend on several factors, such as the type of incontinence, the patient's age, general health, and their mental state.

#### **Stress incontinence:**

Pelvic floor exercises, also known as Kegel exercises, help strengthen the urinary sphincter and pelvic floor muscles - the muscles that help control urination.

#### **Bladder training:**

- | **Delaying the event** - the aim is to control urge. The patient learns how to delay urination whenever there is an urge to do so.

- | **Double voiding** - this involves urinating, then waiting for a couple of minutes, then urinating again.

- | **Toilet timetable (scheduled toilet trips)** - this means going to the toilet at set times during the day. The patient learns to go, for example, every 2 hours.

Bladder training helps the patient gradually gain back control over their bladder.

#### **Medications for urinary incontinence:**

If medications are used, they are usually done so in combination with other techniques or exercises. The following medications are prescribed to treat urinary incontinence:

- | **Anticholinergics** - calm overactive bladders, may help patients with urge incontinence.
- | **Topical estrogen** - may reinforce tissue in the urethra and vaginal areas and lessen some of the symptoms of incontinence.
- | **Imipramine (Tofranil)** - a tricyclic antidepressant

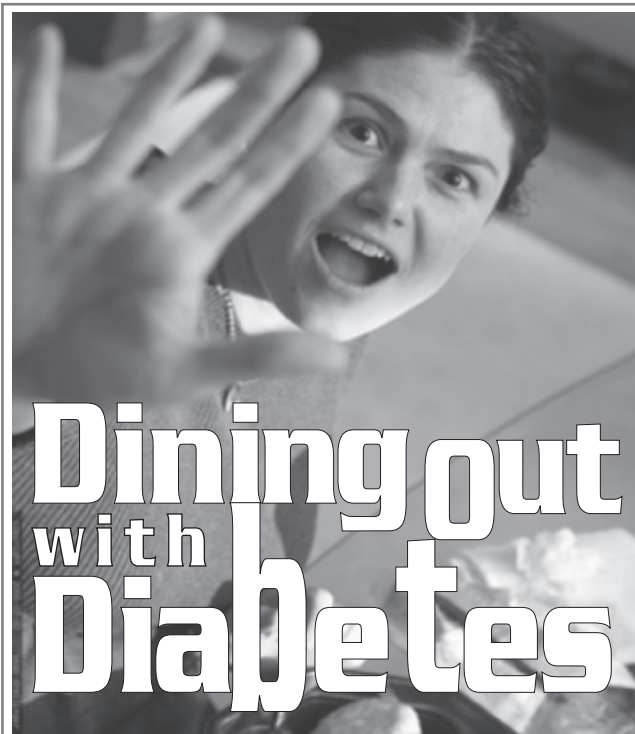
#### **Medical devices:**

The following medical devices are designed for females.

- | **Urethral inserts** - the woman inserts the device before activity and takes it out when she wants to urinate.
- | **Pessary** - a rigid ring inserted into the vagina. It is worn all day. The device helps hold the bladder up and prevent leakage.
- | **Radiofrequency therapy** - tissue in the lower urinary tract is heated. When it heals it is usually firmer, often resulting in better urinary control.
- | **Botox (botulinum toxin type A)** - injected into the bladder muscle, to help those with an overactive bladder.
- | **Bulking agents** - injected into tissue around the urethra, to help keep it closed.

- | **Sacral nerve stimulator** - implanted under the skin of the patient's buttock. A wire connects it to a nerve that runs from the spinal cord to the bladder. The wire emits an electrical pulse that stimulates the nerve, helping bladder control.

- | **Absorbent pads** - There is a vast range of absorbent pads available at pharmacies and supermarkets.
- | **Urinary Catheter** - a tube which goes from the bladder, through the urethra, out of the body into a bag which collects urine.



*The more active the role you play in your health-care decisions, the easier it is to manage your diabetes. For instance, cooking your own meals allows for better blood-sugar control because you know exactly what and how much is in your food. However, it's not always possible to prepare home-cooked meals. And living with diabetes doesn't mean you can't enjoy dining out.*

## **FOLLOW THESE TIPS FOR SMART DINING**

### **PLAN AHEAD**

- Choose a restaurant with a large menu of healthy items. Many chains have nutritional information available online.
- Call the restaurant ahead of time and ask whether they can handle special requests.
- Have a small snack before going to a restaurant, when you are dining later than usual, so you aren't too hungry.
- Review your meal plan before going out, so you will know what your carbohydrate allocation is.

### **ORDERING MEALS**

- If you aren't sure how a dish is prepared, ask your server.
- Watch your portion sizes. For the main course, order an appetizer and either split an entrée with your companion or eat half of it and take the rest home.
- Ask for substitutions. For example, order vegetables instead of French fries.
- Avoid breaded, fried foods and foods in heavy sauces. Try fish or poultry that's grilled or broiled, without butter.
- Ask for salad dressing and sauces on the side.
- Limit to one serving drinks that contain alcohol.
- Be careful of all-you-can-eat restaurants. When you do eat at a buffet, fill up first on vegetable dishes.

With these tips in mind, you can keep your blood glucose in control and make dining out an enjoyable experience.

# GESTATIONAL DIABETES

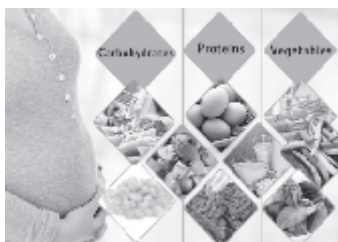
Ms. Simarjeet Kaur, Sr. Dietician, NHI



## What Is Gestational Diabetes?



Pregnancy is a happy phase in any woman's life where she eats without worrying about calories as it is popularly believed that "a pregnant woman eats for two". So she indulges herself in all kinds of food items that she craves for during pregnancy. But the sad news is, if the pregnant woman is diagnosed with diabetes during pregnancy, this same happy phase turns out to be more serious and troublesome. With changing lifestyles, gestational diabetes or high glucose during pregnancy is becoming more common. Now days about 6 to 8 percent of pregnant women are diagnosed with diabetes during pregnancy. It usually arises in the second half of pregnancy and goes away as soon as the baby is born. However, if gestational diabetes is not treated, you may experience complications.



The first step in treating gestational diabetes is to modify your diet to help keep your blood sugar level in the normal range,

while still eating a healthy diet. Most women with well-controlled blood sugar deliver healthy babies without any complications.

One way of keeping your blood sugar levels in normal range is by monitoring the amount of carbohydrates in your diet. Carbohydrate

foods digest and turn into blood glucose (a type of sugar). Glucose in the blood is necessary because it is the fuel for your body and nourishment your baby receives from you. However, it's important that glucose levels stay within target.



## A Few Tips to Remember While Eating During Your Pregnancy.

- 1 Carbs are not only found in food with processed sugars like soft drinks, but also in food containing natural sugars like milk, fruits, yogurt etc.
- 1 Preferably have natural cultured yogurt which is high in protein, lower in carbs and rich in calcium and has probiotics, the good bacteria that can help in digestion during pregnancy.
- 1 If you eat high carb food in one meal and then avoid it in other meals, it will still raise your blood sugar level. Therefore, always stick to recommended carbs in your diet.
- 1 Never skip a meal as skipping a meal can make you feel very hungry and you tend to eat more in the next meal.
- 1 Eat small meals, preferably every 2 to 3 hours. You can have a healthy snack, salad, fruits in between. However, make sure at



least one and a half to two hours of gap is maintained between snack and the next meal.

- | If you are a rice eater, always prefer brown rice to white rice due to its low GI.
- | Have salt in moderation as consuming more salt can lead to water retention and further increase swelling during pregnancy and can also lead to gestational hypertension which along with gestational diabetes can be very risky for both the mother and the baby.
- | Try to consume home cooked food as much as possible.
- | If you are buying ready to eat packaged meals or drinks, make sure to check the date of manufacture and expiry and also the list of ingredients and make sure it has not added sugar in them.

#### **Stay away from added sugars:**

Don't add sugar, honey or syrup to your foods.

#### **When a product says it's "sugar-free," take a closer look.**

Products containing sugar-alcohols are often labeled "sugar-free," but they may still contain significant amounts of total carbohydrate. Look at the food label to see the grams of total carbohydrate contained.

Sugar alcohols may have a laxative effect or cause gas and bloating. The following are examples of sugar-alcohols:

- | Mannitol
- | Maltitol
- | Sorbital
- | Xylitol
- | Isomalt
- | Hydrogenated starch hydrolysate

Some products labeled "sugar-free" are indeed carbohydrate-free and will not affect your blood sugar, including diet sodas and sugar-free Jell-o.

#### **Keep food records:**

Be sure to record all of the foods and the amount that you eat each day, which will help you monitor your carbohydrate intake. Also, use measuring cups for accuracy when possible.

#### **Some Do's And Don'ts In Your Diabetic Diet During Pregnancy:**

- | Include less starchy vegetables as they are rich in fiber, minerals, and vitamins.
- | Include protein rich food like eggs, seeds, nuts, fish, meat, etc. These foods not only make you feel full but also will not spike your glucose levels.
- | Select lean meat and dairy products with low fat.
- | Drink 9 to 12 glasses of water every day and keep yourself well hydrated.
- | Eat fresh fruits rather than fruit juices.
- | Include two servings of fruits and vegetables every day in your meals as they are loaded with fiber, vitamins and minerals.
- | If you are a strict vegetarian then include dals, cereals, pulses, nuts and whole grains in your diabetic diet as a source of protein.
- | Don't eat deep fried food
- | Don't eat junk food
- | Don't drink soft drinks
- | Reduce the intake of oil and butter

## SUGGESTED MEAL PLAN FOR GESTATIONAL DIABETES

**Breakfast:** 2 slices of multigrain bread or 2 small plain roti (no ghee or oil)  
+ 1 egg or 1 slice of cheese + ½ cup plain low fat yoghurt  
± 1 medium size fruit or 1 cup milk + tea or coffee (avoid sugar)  
+ tea or coffee (avoid sugar)  
Soaked almonds 4 or 5 will provide protein and omega 3 for a good head start

**Mid Morning:** 1 serve of fruit or 2 plain biscuits  
+ 1 glass of low fat milk + 1 fruit  
You can have tender coconut water or a glass of lemonade

**Lunch:** small bowl rice (boiled) or 2 small plain roti + large serve of vegetables (seasonal) and avoid large amounts of oil/ghee and potato in the vegetable dish  
+ dal, ¾ cup cooked (limit use of oil) or 1 small potato (aloo)  
+ a small serve meat, chicken or fish curry (avoid fat or skin)/ paneer or soyabean

OR

2 slice of multigrain bread  
+ 1 egg or cheese  
+ large serve of salad  
+ 1 serve of fruit

**Evening tea:** 1 cup of tea (avoid sugar) + 1 tablespoon roasted channas or raisins or almonds  
+ 4 biscuits

**Dinner:** small bowl rice (boiled) or 2 small plain roti  
+ large serve of vegetables (seasonal) – avoid large serve of potato (aloo) and avoid large use of oil/ghee  
+ dal, ½ cup cooked or 1 small potato  
+ a small serve meat, chicken or fish curry (avoid fat or skin) or paneer/soyabean  
+ ½ cup plain low fat yoghurt (raita) + salad

**Post dinner:** 1 serve of fruit or 1 glass of low fat milk or ½ cup custard or ice-cream



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पेट बढ़ा,  
वेट बढ़ा,  
शक्कर का खतरा बढ़ा

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दिल पर बोझ बढ़ा,  
दिल का दौरा पड़ा  
दिल में छल्ले पड़े।



प्राणों के लाले पड़े,  
पेशमेकर की बात चली,  
कितनी मुसीबतें बढ़ी,  
कैंसर झेलना पड़ा



अस्पतालों के चक्कर पर चक्कर लगे,  
पेट काटना पड़ा,  
जिगर बदलना पड़ा,  
बाईपास हुआ

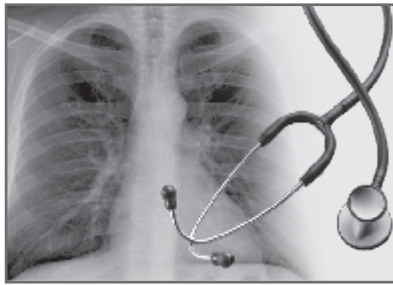
पेट पशुस्त हुआ,  
घुटनों ने जवाब दिया,  
उन्हें भी बदलना पड़ा,  
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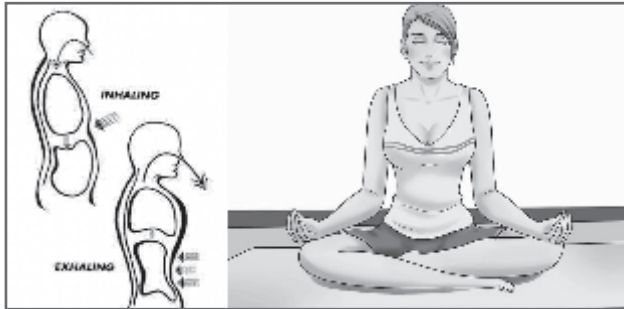
**EAT HEALTHY  
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# NHI Pulmonary Rehabilitation Program

**Dr. P. P. Bose, Pulmonologist**

**Dr. Veenu Kumar, Master Physiotherapist**



## A. Pulmonary Rehabilitation

A comprehensive intervention for patients with chronic diseases who are symptomatic and often have decreased daily activities. It is designed to reduce symptoms, optimize functional status, increase participation, and reduces health care costs through stabilizing or reversing systemic manifestations of the disease and tries to address morbidities and their consequences through education and exercise. Patients are encouraged to become more actively involved in their own health care, more independent in ADLs and less dependent on health professionals and expensive medical resources. Rather than focussing solely on reversing disease processes, rehab attempts to reduce symptoms and make individual more functional and restore function following an illness or injury, with the goal of maximizing a person's ability to achieve fullest life possible. Program provides you the best range of breathing exercises training, weight reduction treatment services, and balance training exercises with their effective team of Master physiotherapist, nutritionist, wellness coach, saksham health workers under the personalised guidance of Dr. Bose. Rehabilitation tries to address morbidities and their consequences through education and

exercise. Patients are encouraged to become more actively involved in their own health care, more independent in ADLs and less dependent on health professionals and expensive medical resources. Rather than focusing solely on reversing disease processes, rehab attempts to reduce symptoms and make individual more functional.

## B. Who can benefit?

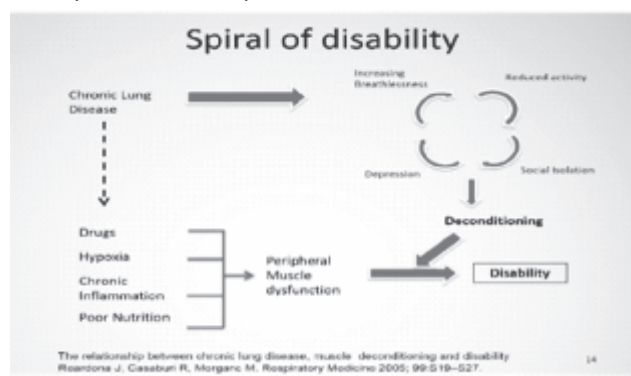
1. Chronic Respiratory disease symptomatic with optimum drug therapy.  
eg. COPD, Chronic asthma, Interstitial Lung disease etc.
2. Chronic Cardiovascular diseases with breathlessness despite optimum intervention and drug therapy, for eg Low ejection fraction with recurrent cardiac failures.
3. Lifestyle disorders like Stress, obesity especially patients who are deconditioned and are suffering due to substance abuse.
4. Sleep disordered breathing like obstructive sleep apnoea and obesity hypoventilation.

## C. What is the possible benefits of program?

1. Improved Exercise Capacity.
2. Reduced perceived intensity of dyspnoea.
3. Improve health-related QO.
4. Reduced hospitalization.
5. Reduced anxiety and depression.
6. Improved limb function.
7. Benefits extend well beyond immediate period of training.

## A Consequences of Advanced Chronic diseases

1. Peripheral Muscle dysfunction.
2. Respiratory muscle dysfunction.
3. Nutritional abnormalities.
4. Cardiac impairment.
5. Skeletal disease.
6. Sensory defects.
7. Neuro cognitive dysfunction.
8. Psychosocial dysfunction.



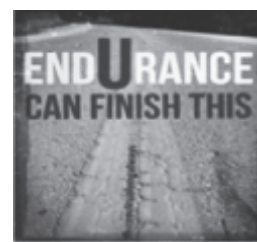
## D. Our Philosophy



## E. We Believe



## F. Our Goal



## G. Our Program, 360degree wellness

“A journey from illness to Wellness”



## H. What are the components of pulmonary Rehabilitation?

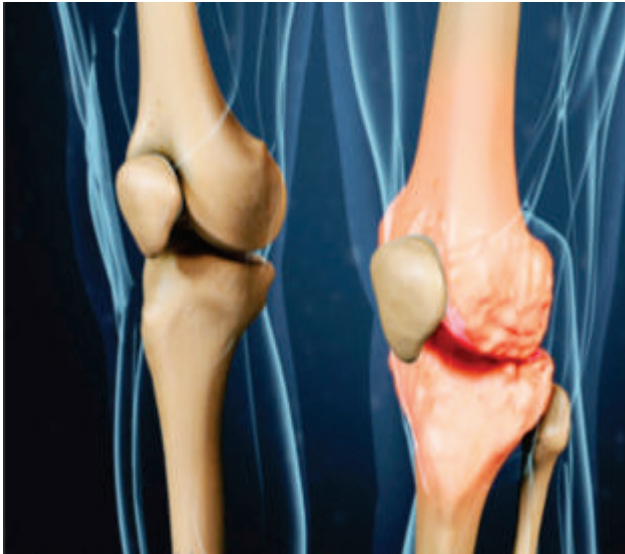
1. Exercise Training.
2. Psychosocial/behavioral intervention.
3. Nutrition assessment.
4. Breathing techniques.
5. Medications, devices & Specific therapy.
6. Outcome Assessment.



# Management of Knee Arthritis

-Dr. Manoj Kumar, Senior Consultant Orthopaedic Surgeon

One of the common major ailment affecting the advanced stage of life is arthritis leading to painful restriction of movements of affected joint. Arthritis can involve any joint but most commonly involved joint is knee joint.



## What is Arthritis?

Arthritis is a group of symptoms and can be caused by many reasons. Arthritis causes pain, painful restriction of joint movements, deformity and instability of joint. It affects day to day life of a person. Patient cannot even walk/ use stairs properly. In severe cases patient becomes bed ridden. Immobility can lead to other medical problems or make them worse. Patient will gain weight, leading to obesity. The inactivity also leads to development or worsening of high blood pressure or diabetes.

## Modalities of treatment

**Preventive** – Truly speaking osteoarthritis is a life style disorder in large number of patients. Prevention is most important part of management of knee arthritis. If one takes all due measures well in time, It is possible to

avoid/ delay the onset of arthritis. The various aspects of prevention includes:

- a) **Weight control** : It is a very important aspect of management. Cutting down the weight will cut down the load on the knee joint leading to improvement in pain.
- b) **Plan your exercise schedule** : Talk to your doctor before starting an exercise programme. Periodically follow up with your doctor. If you experience knee pain, talk about possible diagnosis and treatment options.
- c) **Treatment of underlying medical conditions** like Hypothyroidism, Diabetes mellitus.
- d) **Diet** : control your diet. Avoid fried food/ white sugar / rice. Take high fibre diet and say no to sugary juices and canned food.

## Use of diagnostic modalities in the management :

X-Ray is the basic investigation in the knee management. It gives us lots of information. MRI plays an important role in those cases when you do not get the proper response to conservative treatment.

## Therapeutic management

In the cases, when person is symptomatic, he should consult an orthopaedic surgeon on urgent basis. In initial stages basic treatment can help to a great extent.

- | Rest to the affected joint.
- | knee support.
- | Avoid squatting/cross leg sitting.
- | Local gel application.

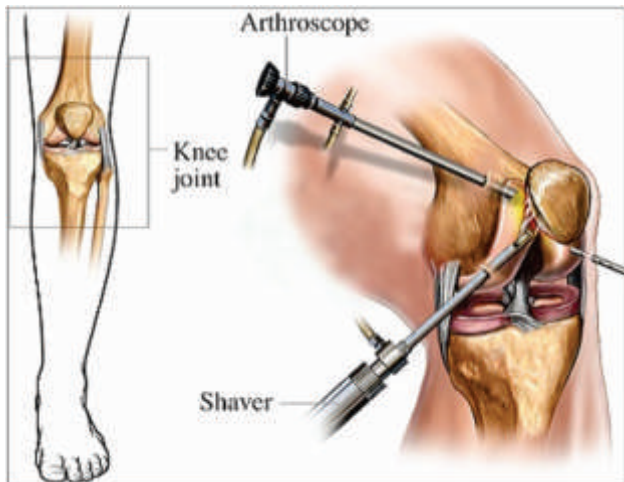
- 1 Use of anti-inflammatory drugs.
- 1 **Physiotherapy** plays an important role in the management of painful knee conditions. Strengthening / stretching exercises help in the faster recovery.

**Role of operative methods:**

**Arthroscopic Surgery:-** Those cases in which, there is no response to medications / physiotherapy and MRI shows meniscus tear/ ACL tear/ Loose body/synovitis- **arthroscopic surgery is the boon for such knee cases**

It is a day care endoscopic (keyhole) surgery. All mechanical symptoms caused by meniscus tear / ACL tear / Loose body can be treated quite efficiently.

**Total Knee Replacement Surgery:**



Considerable advances have been achieved in the management of the painful knee. Total knee arthroplasty has come a long way in the last few decades. In the early seventies knee joint prosthesis were available only as hinges but results of surgery were not satisfactory and movements were restricted. It could not stimulate normal knee movements such as roll back and rotation, they soon got out of fashion.

It must be realised both by the surgeon and the patient, joint replacement is essentially a



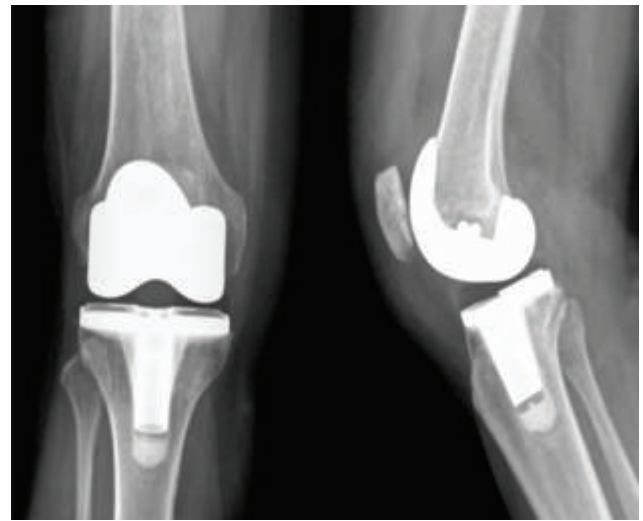
salvage procedure and relief of pain is the main indication of this procedure. The lack of pain relief after adequate conservative treatment, the presence of severe deformities and presence of persistent night/ rest pain are the absolute indications. The majority of the cases fall in the rheumatoid or degenerative arthritis variety, but it can be done in gouty / tubercular arthritis.





With better understanding of bio mechanics of knee joint and advances in metallurgical technology, modular knees has come to stay. Modular knee system has got different components --- femoral, tibial & tibial articular surface which act as module. They are interchangeable and one can choose the component according to the need of an individual on the operation table after trial reduction. The modular knee joints provide gliding movements, roll back and little rotation. Only the terminal flexion is restricted. One can tackle the knee with severe deformity and marked instability. Recovery after replacement surgery is quite faster and remarkable. Patient can start

walking on 2<sup>nd</sup>—3<sup>rd</sup> day. He can start using stairs after 5-7 days. It changes the life of the pt completely and he can lead a pain free / independent life.



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