

## MARUTHUWA VIVEKAM

Wisdom from the world of medicine



Fractures – Doctor or Vaidya?

#### Also:

Hazards of self-medication Getting your life back after a heart attack

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Chief Editor - Dr. Manoj. B Associate Editor - Dr. Chandrasekhar February 2005 Vol:1

#### From the Chairman's Desk

Dear friends,

It gives me great pleasure to introduce our first healthzine from the "World of MIOT". Our medical fraternity will be writing on topics which will improve your knowledge about your body and how to keep it fit! They will guide you in your day-to-day activities, advise you on the do's and don't's of healthcare and tell you how to detect health problems at an early stage- before they turn into an emergency.

In this competitive world, we have no time to think about ourselves. We find ourselves in situations where we're forced to choose between our aspirations and the price we have to pay to achieve them - hence, we neglect our health. It is imperative to remember that "prevention is better than cure". Therefore, you must make the right choices in life to be "healthy, wealthy and wise."

We trust you will find this newsletter informative and interesting. We welcome your suggestions - and any queries you may have for our specialists.

Good luck and good health!!

Mrs. Mallika Mohandas

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## Fractures: Doctor or Vaidya?

#### Professor Dr. P. V. A. Mohandas

the "father of modern orthopaedics" on some of the myths surrounding fractures and their healing.

Many people ask when they meet me socially, "Doctor, how does the fracture heal? How is it that the native Vaidya's (Puttur doctors) are so successful and so popular in this age of technology? After all, most of them treat the fractures by applying green leaf paste and using bamboo sticks and a bandage."

The truth is – it's Nature that heals the fractures. You may have seen injured dogs with fractures, running about on the roads. After some time, the fractures heal and the dogs are alright.

Opposite the General Hospital, we often see beggars with big bandages, following fractures in the leg. After sometime, we see that they've thrown away the bandages and their fractures have healed.

#### How fractures heal

Scientifically there are various stages in the healing of a fracture:

- 1. Stage of Hematoma
- 2. Stage of Granulation Tissue
- 3. Stage of Pro Callus
- 4. Stage of Callus
- 5. Stage of Remodelling of Callus



So, whether by applying a green leaf paste or the white of an egg, using bamboo sticks or a bandage soaked in oil, or applying Plaster of Paris, the fractures will heal. You'll find the common factor is rest to the injured part, and rest to the fracture site. If you rest the fracture, the fracture automatically goes through the various stages of healing and unites.

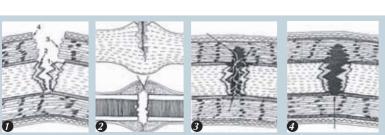
#### A doctor's contribution

But what is important in fracture healing is:

- a) The quality of fracture healing
   the fracture should unite
   without causing any deformity.
- b) The fracture should unite in the shortest possible time, so that it does not cause stiffness of the joints.

So the aim of a modern doctor (Orthopaedic Surgeon) is to heal the fracture in the shortest possible time without causing a deformity and stiffness of joints. The modern surgeon aims at stabilizing the fracture internally or externally and at the same time mobilizing the joints, so that there will not be residual loss of function of the limb.

In modern days, we have so many implants made of highly specialized materials like Titanium and specialized alloys of stainless steel. Implants are available to fix these fractures in the correct position, very rigidly, which allows the joints to be mobilized at the earliest possible time. This prevents deformity and stiffness of limbs in patients.



- Fig 1: Fracture:Damage to periosteum, bone cells, tearing of muscles, nerves and blood vessels and outer skin damage
- Fig 2: Formation of clots
- Fig 3: Fibrovascular tissues replace clots
- 4: Cells in the outer layer proliferate to reconstitute the periosteum (membrane covering the bone)



## Before you pop that pill.

Health is the most precious thing we have and we are all interested in staying healthy. The purpose of medication is to keep us healthy and provide relief during illness. The same medication can be hazardous, when consumed without consultation with doctors.

#### Why self-medicate?

Reasons vary from - "no time to go to a doctor", "doctor not affordable", "doctor prescribed the same drug on previous consultation", and more.

The truth is people think that medicines are the same whether prescribed by a doctor or self-administered. But, there is a serious difference.

For instance, you may not realize the seriousness of your illness. You may take Gelusil for heart attack thinking it is indigestion. You may take vitamins for cancer thinking you are weak. You may take Crocin for life-threatening Dengue fever.

#### **Masking the symptoms**

Every ailment starts in a mild form and is curable. Self-medication suppresses the symptoms and allows the disease to progress to a more severe, life-threatening stage, resistant to all medicines, by the time you reach your doctor.

Self-medication leads to emergence of drug resistant diseases and poses serious health hazards. Instead, by reaching the doctor at an early stage, you can get a correct diagnosis and start effective treatment.



How many times have we reached for a Saridon, borrowed a Crocin or swallowed a Gelusil without a second thought?

Dr.Muthu Lakshmi

would like us to consider the hazards of self-medication – before we do it again.

#### Warning:

Every medicine has the following words typed on its label- "Warning - To be sold on the prescription of a registered medical practitioner only."

This is a warning to chemists that selling a medicine without a prescription is a violation of the law.

It's also a warning to the public. For every medicine there is a way of taking it, which can be prescribed by a medical practitioner only. The doctor advises you on:

 Whether to take the medicine on an empty stomach or after food

- Interactions with other drugs taken at the same time
- Side effects, that can be avoided with additional medication
- Dosage changes
- Any changes in diet/daily habits that may be required

In this modern world, with new advances in medicine, nothing is incurable - but proper timing and administration of treatment is very essential.

#### A typical example

A busy executive, 45 years old, had chest discomfort with sweating after his regular exercise in the morning. "It's hunger", he thought and had a delicious breakfast before setting off to work. Around 10.00 a.m. he had chest pain again. This time he took a Gelusil thinking that his heavy breakfast was giving him indigestion. His pain continued to worsen. "Probably a muscular pain due to my exercise", he thought and swallowed a Brufen. By afternoon he had developed difficulty in breathing and was rushed to a hospital where his ECG showed that he had suffered a massive heart attack.

So, by the time you reach your doctor, unrelieved of your symptoms after self-medication, your life could be gone. The choice is yours.

DR. MUTHU LAKSHMI Department of Critical Care

# Are Computers Affecting Your Eyes?

Do you work at a computer for more than three hours a day? As wonderful as this technological advancement is – there is a downside. And our bodies are paying the price!

Dr. Harshitha Bakshi takes us through some symptoms and solutions.



#### **Headaches**

Headaches are the primary reason most people seek an eye exam. Visual related headaches most often occur at the front of the head during the middle or end of the day. They don't appear on awakening and don't produce visual hallucinations (like dancing spots).

#### Solution

There could be many causes for a headache. Do undergo a complete eye examination followed, if required, by a routine medical checkup.

#### **Dry or Irritated eyes**

You blink about 22 times each minute. When you are at the computer you only blink about 7 times! Infrequent blinking causes important eye moisture to evaporate, making the eyes dry and uncomfortable.

#### Solution

Easy! Try to blink more often while using a computer.

#### **Blurred Vision**

Blurred vision can result from something as simple as a dirty screen, poor viewing angle, reflected glare or a defective monitor. However, it can also result from refractive errors like long sight, short sight, astigmatism, vision loss due to aging or improper prescription of lenses.

#### Solution

Glasses are the most likely solution. In most cases standard reading glasses are not accurate because viewing a computer is usually at a different distance (18"- 28") than reading distance (16"- 21"). It is important to determine your correct computer working distance and get appropriate eyeglasses prescribed.

#### **Slow Refocusing**

When you focus on close objects for extensive periods of time without taking breaks, your eye's muscles begin to adapt to that range of vision. This makes objects appear blurred when you look away - from near to far. This is most often a temporary

condition but indicates a future vision problem - so if it persists, consult your doctor.

#### Solution

Make sure you take adequate rest breaks, following the 20/20 rule: every 20 minutes, take a 20 second break. During the break, look far away if doing near work and close up if doing far work. Eye exercises can help to increase your ability to focus, but consult your doctor if you are over 40.

#### **Double Vision**

The two eyes co-ordinate properly for us to see just one image instead of two. When the coordination system breaks down, as it can when you work at close distances for extensive periods, you may experience double vision.

#### Solution

Proper eye glasses or exercises can solve this problem. Double vision could also be a symptom of a deeper problem, therefore do consult an ophthalmologist.



#### **Neck and Backaches**

Nature has made our visual system so dominant that we often alter our body's posture to accommodate any deficiency in the way we see. If our visual system isn't seeing properly we may assume awkward positions to compensate, which can lead to neck and back pain.

#### Solution

Correct your posture! Make sure that your eyesight isn't causing you to sit improperly. Uncorrected eye conditions can also cause the same problem. So make sure to get your eyes examined regularly.

Fortunately there is no evidence of permanent damage from prolonged computer use. Tests have shown no relationship between computer use and cataracts, inner eye damage or short sight. However, by taking some simple precautions we can minimize the strain to our eyes.

#### TEN TIPS TO AVOID EYE STRAIN WHILE WORKING ON A COMPUTER.

- 1. Position your monitor so that other light sources don't reflect on the screen - you can also put an antiglare shield on the screen.
- 2. Position your monitor 20 to 26 inches away from your eyes and at about 10 to 20 degree angle below eye level.
- 3. Make sure your glasses are focused at the proper working distance. Consider computer glasses.
- **4.** Turn up the contrast to minimize strain on your eyes.
- 5. Don't work in the dark. The contrast between computer-generated light and the lack of background light strains the eyes. Light your work area well. Use full spectrum bulbs. They duplicate natural sunlight and are easier on eyes.
- 6. Don't forget to blink. Blinking keeps eyes moistened.
- 7. Keep the screen clean and properly focused.
- 8. Take frequent "eye breaks". Take a 20 second break every 20 minutes and just stare into the distance keeping your eyes off the screen.
- **9.** Keep frequently used paper documents in a holder attached to the monitor. This keeps your eyes from having to move up and down.
- 10. Get up and move around every two hours. It gives your eyes a break as well as the rest of your body.

DR. HARSHITHA BAKSHI Chief, Ophthalmology

#### LAUGHTER IS THE BEST MEDICINE

A couple when celebrating their 50th marriage anniversary were asked whether they had ever considered divorce during their long married life.

"Divorce no, murder yes!", promptly replied the wife!

A pretty young woman steps into a crowded bus, and sees that all the seats are taken. She asks, "Would one of you gentlemen make room for a pregnant woman?"

A middle-aged man quickly stands up and gives her his seat. After she is seated he solicitously asks her, "How long you been pregnant?" " For about fifteen minutes", she replied, "and God am I tired!"

A woman receives a report from the school.

"Your little boy is very intelligent" says the teacher's note accompanying the report card. "But he spends entirely too much time playing with the girls. However, I am working on a plan to break him off the habit."

The mother signs the report and sends it back with this note "Let me know if it works and I'll try it out on his father."

## Warning Bells? Mobile Phones and Brain Tumour



"DO MOBILE
PHONES CAUSE
BRAIN TUMOR?
Neurosurgeon
Dr. U. S. Srinivasan
answers this billion
dollar question.

According to a recent article, 1.5 billion people around the world use automobile phones. About 650 million more mobile phones are likely to be sold in 2005. The turnover of the mobile phone industry is a whopping \$ 100 billion a year ( INR 4600 billion per year), which is more than our country's foreign exchange reserve! Now that we've established how widespread their usage is, let's see how a mobile phone works.

Mobile phones work by emitting Electromagnetic Field (EMF) radiation. They are given as low intensity pulsed microwave radiation. How does that impact biological systems? To understand that, we must first get familiar with SAR. SAR is a measure of the rate of radio energy absorption in the body tissue and the SAR limit recommended by the International Commission of Non-Ionizing Radiation Protection is 2 W/kg. Most mobile phones emit radio signals at SAR levels of between 0.5 and 1 W/kg. Recently around the world including India, third generation 3G phones that emit higher rates of radiation than earlier models are being marketed. (By now you're probably trying to call us on our mobiles to say "Thanks for the physics lesson, but can you get to the point!")

#### The radiation theory

Here goes. Initial reports stated that mobile phone radiation caused headaches and nausea by heating up body tissues. Later reports claimed that prolonged mobile use could affect the brain and cause memory impairment. But are these effects permanent and can they lead to brain tumors?

A close look by the researchers at the medical records of 1600 patients, with tumors who had used mobile phones for up to 10 years before diagnosis found that the more mobile phones were used, and more years they are used, the higher the risk of brain tumors.

Is this a coincidence? Like for instance the data that demonstrated a direct correlation between the numbers of cars produced in a country and its birthrate? Medical researchers found that spending more than an hour on a mobile phone a day increased the risk of a brain tumor known as acoustic neurinoma by 30 per cent. This type of tumor arises from the nerve for hearing in the brain and this can lead to deafness in the affected ear.

#### They also found that this tumor was on the side of the head that the user held the phone.

Wasn't this tumor present in human beings prior to mobile phones? Yes. "Then how can one blame mobile phones for this tumor?", clamoured the powerful mobile phone lobby. As a result researchers took an even closer look into the incidence of this tumor and undertook an epidemiological study. They found the incidence increased from one in 100,000 population in 1980 i.e. before the advent of mobile phone to one per 80,000 today, whern mobile phones are in frequent use.



#### Genetic mutation?

A study conducted by 12 research groups in seven European countries studied the effect of radiation on human and animal cells. They found that after being exposed to electromagnetic fields that are typical for mobile phones, the cells showed a significant increase in single and double strand DNA breaks i.e. the basic gene which contains the DNA itself is damaged. The cell could not always repair this. DNA is De-oxy



Ribonucleic Acid and this carries the genetic material of an organism in its different cells. Damage in DNA means, that a change had procreated leading to a genetic mutation producing different type of cells from the existing normal cells. These mutated cells are seen as a possible cause of cancer. The radiation used in that study was at SAR levels of between 0.3 and 2 watts per kilogram. Most phones emit radio signals below SAR levels So what did the researchers conclude?

They concluded that radio waves from mobile phones harm body cells and damage DNA in laboratory conditions but this does not prove that mobile phones are a risk to health. They further stated that more research was needed to study its effects outside a lab.

## Children and mobile phones

Anxious grand parents wondered whether the abnormal mutated cells would affect their grand children. Children may be more vulnerable as their nervous system is still developing. They may have a greater absorption of energy in the tissues of the head and they would have a longer lifetime exposure than adults. How to prevent this? Should we turn back the clock and revert to using landlines?

Researchers instead suggested that children use mobile phones with a low SARS value for short periods of time. They recommended that children use Text instead - i.e. SMS.

How did the Fortune 500 mobile phone companies react? They quoted widely the report by the American Health Foundation, which stated that there did not appear to be any link between mobile phones and brain tumors or brain damage. What was cost of the above project? A whopping US \$ 28 million. Who funded it? The answer is the cellular telephone industry.

#### New technology will save the day

At this point I can sense the questions in your mind. "Have the mobile phone industry used their money power to suppress evidence?" "Should I jettison this convenient and



comfortable mode of communication?' The answer lies in new technology - like Blue tooth. Essentially, this is a wireless headset that enables you to place the cell phone up to 30 feet away from your body while making calls. This is more than sufficient distance to minimize any dangers of EMF. Even now you can minimize radiation by using a "hand's free" or wired headset and keeping the phone away from your body while it is in standby mode-(keep the phone in a purse or clipped to your belt instead of in a pocket). German manufacturer G-Hanz has already announced a new type of mobile phone that it claims has no harmful radiation, as a result of shorter bursts of the radio signal.

The final answer for our billion dollar question? Let's enjoy the new technology and "jingle all the way" to newer and safer advances in mobile phone technology.

DR. U.S. SRINIVASAN Chief Neurosurgeon

# A Fishy Pneumonia From Seychelles



For 4 years Mrs. Cecle Maria 53, had been suffering from a persistent cough coupled with episodes of bronchial asthma and wheezing.

A resident of Seychelles,

Mrs. Maria had done the round of doctors and treatment in her native island which included a bronchoscopy and surgery for hernia. After every round of treatment the patient would improve transiently, only to relapse again. Finally on November 30, 2004 she came to MIOT Hospitals, Chennai.

#### A puzzling case

At MIOT, Mrs. Maria was subjected to a detailed examination and a battery of tests. Her chest x-ray showed evidence of pneumonitis of the right middle lobe. A bronchoscopic guided biopsy of the affected lobe showed evidence of chronic inflammation. The bronchoscopy also revealed a suspicion of a cancerous growth/ foreign body in the right middle lobe bronchus. (The aspirate tested negative for malignancy). Plain and contrast spiral CT scan of the lungs showed up a calcified lesion at the origin of the right lobe middle bronchus.

#### Treatment begins

After an intensive course of antibiotics and antifungal drugs, the patient was reviewed by the Chief Cardio Thoracic Surgeon, Dr. V.V. Bashi. In view of the

persistent and chronic infection with collapse of the middle lobe, he did a right middle lobectomy to prevent infection spreading to the other parts of the lung.

The surgery was done on 3rd December 2004. At the time of surgery it was found that the right middle lobe was totally collapsed. When the middle lobe bronchus was divided, a fish bone was found inside it! The fish bone along with the middle lobe was removed and patient had a complete and uneventful recovery.

#### Something fishy...

Four years ago while Mrs. Maria was dining out at Seychelles, she choked on a sliver of fish bone from her tasty mackerel dish. She thought nothing of it at that time, but within her body *the fish bone had slipped through her* 

### windpipe and impacted at the entrance of the middle lobe airway.

This festered a chronic infection that ravaged the middle lobe of her right lung. Her frequent bronchitic attacks put such a strain on her that she developed hiatus hernia, diabetes, hypertension and asthma attacks. She had undergone a major surgery to correct the hernia and spent a large sum of money on treating her associated medical problems for four long years.

#### Happily ever after

It was sheer good fortune that brought her to MIOT Hospital where her problem was diagnosed and her ailments cured in one shot. Aspiration of foreign bodies is invariably down the right lung into the lower lobe segments. Middle lobe aspiration is extremely rare and a clinical curiosity. A very grateful Ms. Cecle Maria is back in her kitchen at Seychelles, cooking boneless dishes hereafter, and is full of praise for the "MIOT miracle" that has transformed her life.

From the case files of

DR. V.V. BASHI Cardio Thoracic Surgeon





## **Getting back your life after a Heart Attack**

**Dr. Manoj** our Interventional Cardiologist, tells you how to cope with a heart attack and most importantly, how to prevent another one.

Heart attacks affect millions of people around the world. A heart attack can be a frightening experience, especially if you have, until then, enjoyed excellent health. Most of the risk to life happens within the first few hours after a heart attack. Once the crisis passes most people feel less anxious. However, all of them have these questions to ask:

## How soon can I get back into my regular activities?

Within a few months (unless otherwise advised by your cardiologist). The amount of activity you can do will be based on the condition of your heart. For the first few days after your heart attack, you need to rest and let your heart heal. A few days later you may be asked to do some stretching exercises and walk. You'll gradually become more active based on advice from your doctor.

### Why is exercise so important?

Exercise strengthens your heart muscle and also helps you feel more energetic. It helps you lose weight. Exercise will also lower your blood pressure and reduce your cholesterol level. Each heart patient should have an exercise program designed specially for him by a healthcare professional after a complete evaluation including an exercise stress test. The programme should be gradual and your progress and health should be constantly monitored. Even when you are released from a cardiac rehabilitation programme you should continue to exercise in your daily life.

## What kind of exercise is good?

The best types of exercise are those that involve your whole body, such as walking, cycling or swimming.

#### **Exercise alert!**

Call your doctor right away if you have any of the following symptoms during exercise:

- Shortness of breath
- Chest pain or pain in your arms, neck, jaw or stomach or upper back
- · Weakness, dizzy spells
- Cold sweats, pale or splotchy skin
- Very fast or an irregular heartbeat Swelling or pain in your legs

## How can I prevent a second heart attack?

- Quitting smoking: Evidence suggests that this rapidly reduces risk of a subsequent heart attack.
- Taking the prescribed medication: These generally include:

Aspirin or any other clot-preventing medication. Beta-blockers, to protect the heart and/ or aid in the control of blood pressure.

- Lowering your cholesterol
- Controlling your blood pressure
- Following the Mediterranean diet and eating more fish
- Reducing stress. Spending time with family and friends has been linked to better survival rates
- Participating in a cardiac rehab program
- Moderate wine drinking (1 to 2 glasses a day)

## What can I do to speed up my recovery and stay healthy?

Follow your doctors advice on lifestyle changes, diet changes and

practice relaxation trchniques and deep breathing. Your doctor may ask you not to do things that take more than 3 or 3.5 METs right after your heart attack. . MET stands for "metabolic equivalents. "The higher the MET Level, the more energy the activity takes..

Activities	MET
Sitting in a chair	1.0
Sweeping the floor	1.5
Driving a car	2.0
Ironing	3.5
Showering	3.5
Sex 3.7	- 5.0
Golfing	4.0
Gardening	4.5
Playing tennis	6.0

## When can I go back to work?

Within 1-3 months of your heart attack. Depending on the condition of your heart and how strenuous your work is.

#### What about sex?

You can probably start having sex 3 to 4 weeks after your heart attack. As with other types of activity, you may need to start out slowly and work your way back into your normal patterns.

#### Facing the future

After a heart attack, during hospitalization and recovery, patients have the chance to think about their lifestyles. For many patients, life after a heart attack can be even better than it was before!

Dr. MANOJ.S.
Interventional Cardiologist

## **Blemish Free Skin – A Reality**

Skin is in the news. Glycolic peel or Chemical peel? Microdermabrasion or Laser? **Dr. Meera** take's you through the newest treatments and their results.









"Beauty is skin deep." Most women will agree. Who does not covet clear glowing skin, free from unsightly scars and blemishes?

Teenage acne leaves behind its legacy of scars and open pores. Hormonal imbalances, sun and allergies add to the damage. With age almost all of us develop fine lines and wrinkles.

In a society that glorifies youth and beauty, scarred and blemished skin can cause a lot of psychological distress. Fortunately dermatology has progressed by leaps and bounds. Let's review the most popular options available to get rid of these blemishes.

#### CHEMICAL PEELING

Here, one or more exfoliating agents are applied to the skin, resulting in destruction of a portion of epidermis (upper layer of skin) and/ or dermis (deeper layer) with subsequent regeneration of new tissues and rejuvenation of skin. Peeling can be done up to varying depths depending on the type of chemical used. The common ones are - Glycolic acid, Trichlorocetic acid and Phenol.

**Pros:** Simple, inexpensive, office procedure, which gives very good results. To be repeated at intervals for

**Cons:** Most important precaution to be taken is to avoid the sun and use sun block for a few days. Post-peel hyperpigmentation may be seen, especially in dark complexioned people. Other rare side effects include keloid formation, Herpes virus infection, allergic reactions and scarring.

#### **DERMABRASION**

This consists of sequential abrasion of the skin to a desired depth with either electrical or mechanical abraders like wire brushes, metal tipped abraders, diamond fraises etc. so that new skin, free of blemishes, is formed.

**Pros:** Excellent cosmetic improvement. Can remove growths simultaneously.

Cons: General anaesthesia and hospitalization required. Sun avoidance is compulsory for three months. As in peeling, post procedure hyper and hypo pigmentation is a risk. Other adverse reactions are similar to chemical peeling.

#### **MICRODERMABRASION**

This is a new technique where the skin is bombarded with aluminum oxide crystals in an abrasive action. Injury to the skin is superficial and complications are negligible when compared to traditional dermabrasion.

**Pros:** Advantages include fast results, no anaesthetic requirement, safety and rapid recovery time. Prolonged sun avoidance is not necessary. This procedure is highly cost effective and economical with least discomfort and good cosmetic benefit.

Cons: All adverse reactions are similar, but very, very negligible in comparison with other procedures.

#### **LASER**

Laser is an acronym for `light amplication by stimulated emission of radiation'. In this procedure monochromatic photons are directed at the skin (or other tissues), and depending on their wavelength are absorbed by particular tissues or cells (epidermal cells, pigment producing cells, blood cells, hair cells, etc). The heat generated, destroys that particular tissue without damage to surrounding structures.

Lasers are used in dermatology for skin resurfacing, removal of growths, tattoos, pigmentation and for hair

**Pros:** No anaesthesia required and can be done as an office procedure. No risk of infection, bleeding and no damage to adjacent structures.

Cons: Minimal risk of hyper and hypo pigmentation and scarring.

This is a very expensive procedure. Though different types of lasers are available, one type of laser cannot be used for all types of skin problems.

A word of caution - in non-professional hands these tools can cause more harm than good.

Along with treatment, a well balanced diet, fruits, veggies and lots of water are essential for that elusive glow.

#### DR.MEERA

MD (Dermatology)

\*Photos courtesy Careoline Health-tech.



## BLOODLESS SURGERY Did You Know?

An innovative new scalpel called the Harmonic Scalpel makes bloodless surgery possible. The Harmonic Scalpel uses ultrasonic technology for cutting and coagulating tissues precisely. The machine has a generator which converts sound energy into mechanical energy. This allows us to do surgeries, especially Laparoscopic surgery, with less tissue damage and much less blood loss. After surgery the patient does not have much post operative pain and the wound heals wonderfully quickly.





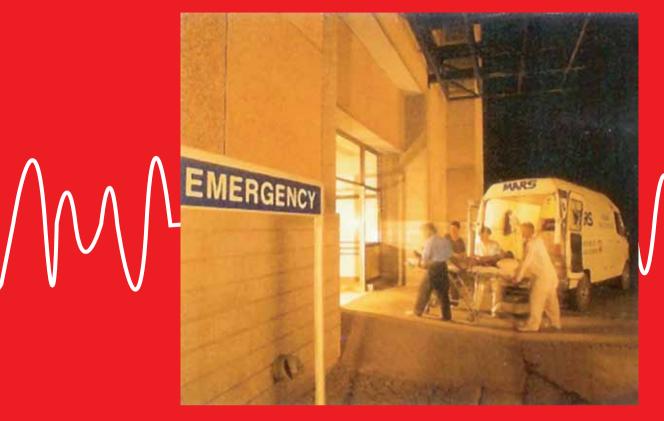
- India is the "World Capital" of Diabetes
- Diabetes affects Indians at least 10 years earlier than in the western countries
- Already 30 million Indians have been affected
- Diabetes is a "silent killer". most of the symptoms are silent
- Formerly called a "rich man's disease", Diabetes is now prevalent in all age groups

Contributed by DR. MUBARAK RAJA Diabetologist

#### Think Before You Eat!

- One small chocolate chip cookie (50 calories) is equivalent to walking briskly for 10 minutes.
- One hour of walking at a moderate pace (20 min/mile) uses about the same amount of energy that is in one jam doughnut (300 calories).
- · A fast food meal, containing a double cheeseburger, extralarge fries and a 24 oz. soft drink is equal to running 2 1/2 hours at a 10 min/ mile pace!

## In that split second between life and death WE MAKE THE DIFFERENCE



MARS

MIOT Accident Rescue Services (MARS) has been established by MIOT Hospitals to provide rescue services to accident victims. Our ambulances have already rescued over 500 victims in the last few years and rushed them to the nearest hospitals.

MARS Accident Safety Policy provides - free ambulance services, free treatment and compensation benefits for fatalties - all for a membership fee that could be as low as Rs 160\* per annum!

Next time you see a road accident or need help, call MARS.

MARS Ambulance Services: 103/105/710



MIOT ACCIDENT RESCUE SERVICES

4/112, Mount Poonamallee Road, Manappakkam, Chennai - 600 089.

e-mail : miot@vsnl.com

#### **Helpline/Policies**:

\*K.Adhikari-98410 99321/98412 66701

