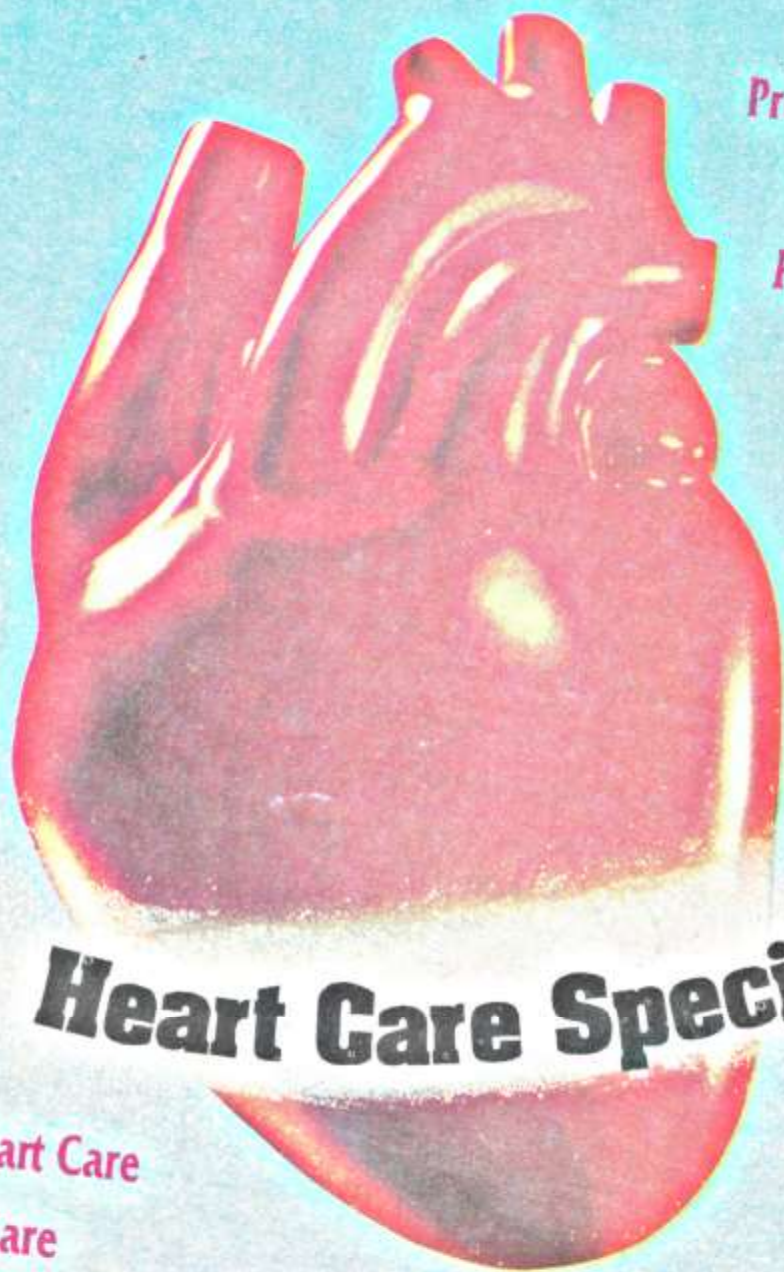


# Jeevaniya

Bimonthly  
Health Care Magazine

Rs. 15



- Prevention of Heart Diseases ●
- Angina and Cardiac Pain ●
- Heart Diseases in Children ●
- Prevention of High BP ●
- Yoga in Heart Diseases ●
- Stress and High BP ●

## Heart Care Special

Diagnostics in Heart Care

Surgery In Heart Care

*With all the regular features and many more useful articles*

### Honorary Editorial Board

Vd. Badloo Ram Rasik  
 Dr. B.N. Mehrotra  
 Dr. C.S. Saimbi  
 Dr. Hari Prakash Sharma  
 Pt. Kashinath Gopal Gore  
 Dr. M. P. Shukla  
 Dr. Paras Nath Mishra  
 Dr. Prem Sagar  
 Vd. Purna Chandra Jain

Dr. Renu Mahendra  
 Vd. Sultan Ali Khan

### Executive Editor

Dr. N.N. Mehrotra  
 Convenor

Pt. Madhavacharya

### Editorial Assistant

Ms. Veena Tandon

Mr. K.B. Singh

### Cover Photo

Anupam Kumar

### Art

Sri S. Sengupta

### Editorial Office

Jeevaniya  
 E-III/249, Sector-H, Aliganj,  
 Lucknow-226020  
 Phone : 0522-77568



Year 6, No. 1-2  
 16 May '95 - Sept. '95

Printed and published by Dr. N.N. Mehrotra on behalf of Jeevaniya Society. Printed at Prakash Packagers, 257 Golaganj, Lucknow and published from E-III/249 Sector-H, Aliganj, Lucknow. Editor-Dr. N.N. Mehrotra.

### Advisory Editorial Board

Dr. Bhartendu Prakash, Banda  
 Dr. Uma, Bangalore  
 Vd. B.V. Sathye, Bombay  
 Vd. N.S. Bhatt, Bombay  
 Vd. Ramesh M. Nanal, Bombay  
 Vd. Bhagwan Dash, Delhi  
 Dr. Geeta Bamezai, Delhi  
 Vd. Mayaram Uniyal, New Delhi  
 Vd. Vivekanand Pandey, Delhi  
 Vd. Ayodhya Prasad Achal, Gaya  
 Sri A.V. Balasubramanian, Madras  
 Dr. T. K. Razzack, Palakkad  
 Vd. Shiv Kumar Mishra, Pilibhit  
 Vd. Subhash Ranade, Pune  
 Vd. V.B. Mhaiskar, Vadodara  
 Vd. R.H. Singh, Varanasi

We acknowledge a grant from CAPART towards publication of this magazine.

*All legal matters concerning Jeevaniya will be under the jurisdiction of Lucknow courts.*

— Editor

### Annual Subscription Rates \*

Country/Category	India	Bhutan, Nepal, Pakistan, Bangladesh & Sri Lanka		APPU Member Countries		Rest of the World	
	(Rs.)	US \$					
INDIVIDUALS		Air Mail	Surface Mail	Air Mail	Sea Mail	Air Mail	Sea Mail
Annual	50	20	15	30	25	40	30
Biannual	90	35	30	50	45	55	50
Triannual	130	50	40	65	60	70	65
Life	500	N.A.		N.A.		N.A.	
INSTITUTIONS							
Annual	100	35	30	50	40	60	55
Biannual	180	65	60	80	75	90	85
Triannual	260	90	80	110	105	115	110
Life	1000	N.A.		N.A.		N.A.	

\* 10% rebate on subscriptions is allowed to LSPSS-members and voluntary organizations.

Please send your payment by M.O. or Demand Draft in favour of Jeevaniya Society, Lucknow. Outstation Cheques are not accepted.

Subscription includes despatch by ordinary post. Those desirous of getting their copy by Registered post should add Rs. 35 in these subscription charges.

## Contradictions of Modern Heart Care

*New researches in the field of heart treatment are clear indicators of great developments in Modern Medicine. Most of these developments are in the field of diagnostics and surgery. This has not only made possible precise diagnosis of different heart diseases but surgery has also been developed to such an extent that artificial heart or heart from a brain dead person can be easily transplanted.*

*However, there is another side to these developments in the field of surgery viz. Heart Surgery is very costly. Although it costs only about Rs 1 lac for such a surgery in India, it costs Rs. 10-15 lacs for a similar surgery abroad. We are not keen to go into the reasons of this high cost. It is clear that these amenities are beyond the reach of common man in most cases. Even the long term use of modern medicines for treating heart ailments is very costly. Second important reason is that after such a surgery, a person has to lead very careful life, curtailing many of his activities. At least these persons are not able to do physical labour. So, even if a person gets financial assistance from government for surgery, it will not be of much use as he will not be able to work hard for his living. Such a situation can not be good for a common man.*

*The third important factor is scarcity of these facilities. Common man also does not get benefitted from these services because of his inability to reach there in time. Only those having access to quick means of transport and communication can, therefore, derive benefit from these services.*

*It is not merely a matter of chance that these developments in Modern Medical Science have their focus on affluent society but because this class is able to afford such high costs of new developments. Therefore, it goes without any consideration for the health of poor section of people.*

*In sharp contrast to this, Traditional Systems of Medicine emphasize on prevention of heart diseases by taking regular vegetarian food, following principles of seasonal regimen and doing regular exercises. It must be noted and welcomed that Modern Medicine accepts the importance of these principles at least in case of heart ailments. Traditional Systems of Medicine have medicines that provide strength to the heart and which are available in the local flora and fauna. Modern Medicine has accepted the importance of Ayurveda by developing medicines like Reserpine, Digoxin, Clonidine, Morphine and Gugulip which were being used in traditional medicine. The responsibility of vaidyas and researchers of Traditional Systems of Medicine is all the more as we can not rely upon researches of Modern Medicine for cheap and effective drugs for heart care.*



## Readers' Forum

Dear Editor,

I have gone through some of the old issues of your magazine and found it an interesting health magazine. I want to become its life long subscriber.

*Sri P.S.K. Kanakaraj, Bangalore*

I came across a copy of 'Jeevaniya' magazine in a doctor's clinic quite sometime back. It was on 'Liver Diseases'. I really enjoyed the reading of all its articles. Now I want detailed information from all its back issues. Kindly help me in this regard.

*Mr. Johk K Miller, Thane*

*We appreciate your interest in seeking information about all the published issues of Jeevaniya. If you want to enjoy reading this health magazine in future also, you can subscribe to it.*

*Editor*

First of all I extend my heartiest congratulations for publishing such an informative magazine. I am very much impressed after going through its 'Bone Diseases' special issue. Since then I have been trying to have its other issues also but without success. Kindly help me in this direction.

*Mr. Durgadatta Padhi, Orissa*

*You need not to worry anymore now. What you have to do is to fill*

*up the subscriber's card published in this issue of Jeevaniya and send it to us by post. You will regularly get your magazine at your doorstep.*

*Editor*

I got an opportunity to lay my hands on the most valuable and precious publication Jeevaniya and the issue was Hemant, Shishra, Vasant '93-94. I was very much moved by its heart throbbing editorial. Really it was an interesting issue which had all the reading material in simple language.

*Mr. Sushil Kumar Marjit, Murshidabad.*

I happened to come across your health magazine 'Jeevaniya'. Unfortunately I could not read it thoroughly as it did not belong to me. I understand that you publish this magazine in both Hindi and English. Now I want to have Jeevaniya with me as early as possible.

*Dr. Frances, Thane*

I am a keen reader of your magazine 'Jeevaniya' and I always read it with great interest I have a suggestion to make, do start a regular column on hygiene and exercise. I have very much liked your regular column 'Your health Problems'

*K. Hanumantha Rao, Nellore.*

Accidentally I came across your magazine 'Jeevaniya'. I read it and felt that it is useful for all the members of lending library. Even though I had an old issue but I placed it for circulation among other members. It received a very good response and everybody appreciated its contents. Now it is in good demand and they want to read all the issues.

*Adoor Ajay, Kerala*

I have been a life subscriber of your magazine and read this journal with keen interest. Since long I have not received any issue and I am really at a loss. I have a suggestion to make that in your future issues try to include a few articles on Cancer. It will be good if you publish its remedies.

*C.P. Thampy, Ochira*

*We always welcome the suggestions of our readers. We would definitely try to publish a few articles of experienced practitioners of this disease.*

*Editor.*

I have been reading your magazine for a long time. I always wait eagerly for its new issues. I would request you to kindly make its issue available at due time. I am also interested in reading its back issues as well.

*Mohan, Bombay*

## In this Issue

### General Articles

Cure the Jaundice Completely	10
Indifferent Health of Younger Generation	12
Staying on the Right Track	13
Cure Against Stomach Ulcers	16
Sore Mouth	17
Fever is a Friend	18
The Beginning of Youth	19
Blood Circulation	21
Disorders of Blood	22
Cures by Bloodletting	23
Conversion of Rasa into Rakta	24
Grace Health Risks of Tobacco	25
The Crisis in Health Care	62
Health Services Threatend	63
Mother-Child Care Syndrome	66
Health Hazards of Working Children	68
Strange contraception Practices in Nigeria	70
Safety and Genetic Engineering	71

### Jeevaniya Heart

Structure and Function of Heart	26
Praphylaxis of Heart Diseases	28
Nature Care and Yoga in Cardiac Care	30
Home to Preclude Heart Attack ?	32
Lifestyles and the Heart	34
Diet in Low Blood Pressure	35
Diagnosis in Heart Diseases	36
New Life to Heart Non-Surgically	37
Angina Pecloris	38
Take Care of Heart Disease	40
Surgery of Blocked Arteries	41

Natural Way to Live Long	42
--------------------------	----

### Medicinal Substances

Arjun	49
Serpentina	50
Isapghula	51
Baelpatra	52
Pushkarmool	53

### Nutritional Substances

Haemogenic Spinach	54
Jamboo	55
Sweet Melon	56

### Regular Column

Health News	4
Research News	5
Abstracts	6
Biological Research	7
Summer Regimen	8
Rainy Regimen	9
Food & Our Health - Vitamins	20
Treasury of Knowledge - Heart Diseases	31
Field Work - HRIDAY	43
Prescriptions of Granny -	47
Prepare for Yourself	57
Nutritional Recipes	59
Jeevaniya Health Solutions	60
Jeevaniya Sciece Conundrum	61
Book Reivew	64
Astrology and Disease	64
Jeevaniya News	65

## Diseases Due to Pan Masala



Two and half crore people in the country are suffering from 'Submucous Fibrosis', thanks to the growing popularity of Pan Masala and Supari (*Areca catechu*). This finding has come in a survey conducted by Dr. R. M. Mathur, a dental specialist of K.G.M.C., Lucknow.

It has been found that patients of this disease in the Indian Sub-Continent were only 35,000 before the advent of Pan Masala. Nearly 13 to 15% patients of this disease develop cancer. Dr. Mathur is working on this disease since last 20 years. Upto the Eighties rarely a patient of this disease came to hospital in three or four months but the situation has worsened after popularisation of Pan Masala.

## UP Has the Highest Birth Rate

Population in the northern states is growing nearly one-and-a-half times faster than in the southern states. According to the latest birth rate figures released by the Family Welfare Department, Uttar Pradesh has the highest rate of 36.2 births per one thousand population. This birth rate figure is more than double the birth rate of 17.4 reported in Kerala.

The birth rate in other northern states is as high as 34.9 in Madhya Pradesh, 34 in Rajasthan, 32 in Bihar and 30 in Haryana.

In comparison, the rate in southern states is much lower. In Tamil Nadu it is 19.5, in Andhra Pradesh 24.3 and in Karnataka 25. The average national birth rate is 28.7. In the eastern region, West Bengal accounts for a birth rate of 25.7. Assam 29.5 and Orissa 27.2.

## Programme to Control Filariasis

Filariasis, the crippling disease which causes painful swellings in the limbs, is a major problem in tropical regions. The estimated global incidence of the disease is 120 million cases, with 1.1 billion people at the risk of catching it. India accounts for 40 million cases, having 12 States and five Union Territories endemic to filariasis.

The WHO has decided that 'mass distribution' programmes should replace 'selective treatment strategies.' In other words, the main shift will be from individualised treatment to community therapy, either using medicine fortified salt or suitable doses of drugs. Research into a new drug for filariasis called Ivermectin has revolutionised the face of treatment.

Diagnosis of filariasis has always posed a challenge. In the conventional microscopic method, night blood has to be taken and screened for the parasite. This technique will usually catch the parasite only after it has already been in the blood for a significant period of time. New antigen and antibody-based techniques, PCR and DNA-based methods are being developed to acquire better diagnostic tools.

The Centre for Biotechnology (CBT), Anna University, has developed a sensitive ELISA based immunodiagnostic test using recombinant DNA technology for early detection of lymphatic filariasis. The test can be carried out even using day-time blood samples. The antibody test has been standardised following field trials and evaluation of the recombinant antigens is going on, according to Dr. Kunthala Jayaraman, CBT director.

The main benefit is that the test can identify the infection very early, enabling the evolution of treatment strategies to prevent the progression of the disease. The potential for spread can also be nipped in the bud. The test will also enable the monitoring of therapeutic measures.



## Change Your Heart



**C**hange your heart if it has some problems. Dr. Dale Hooper, cardiac surgeon of Viden Shave hospital of Manchester and Prof. Salmons of the Department of Molecular Cell biology, Liverpool university have expressed the hope that in near future additional heart is possible from the Patient's own muscles.

In this experiment some chest muscles of heart patient are given the shape of a pear and implanted between heart and lung. This has to be Connected with a pacemaker for nearly two months, after that it works as an addition to original heart. This

technique has been tried successfully in 1985. Although in serious cases a heart transplant is required, it can work in other patients. This technique will start a new era in field of cardiac surgery. Similar heart has been developed by an Indian Dr. D.R. Baruah. It is hoped that this heart will be available to the patients soon.

## Therapy for Mentally Impaired

**H**ippotherapy introduced for the first time in India is the treatment of mentally impaired with the help of horse-riding. The Director of Tamana, Ms Mehreen Khosla, says it facilitates body co-ordination, body perception, balance through vestibular sensory input and improves emotional and psychological bonding. Recently introduced therapy includes a psychologist, an occupational therapist and special educators.

In this treatment children are put through various exercises on horse-back under the supervision of the instructors. Patience is required to make the children familiar to this new and unique form of treatment.

## Bloodless Cure for Brain Tumours

**A**ll brain tumours may not require risky surgeries now. Tumours for which surgeries had been ruled out for various reasons could now be saved with a fair amount of success rate, that too without spilling even a single drop of blood. No anaesthesia, no shaving of the head and no blood transfusion.

In the era of non-invasive procedures, select cases of the dreaded brain tumour, some of which may be very complicated, could also be "operated" without opening the head. The procedure is stated to be very simple and least risky. The patient can leave the hospital the very next day.

In this procedure called "stereotactic radiotherapy and radiosurgery," x-ray beams from a "linear accelerator" (LA) are collimated and focussed with absolute precision on the tumour in the brain. The irradiated cells get gradually destroyed and reduce in size. Over a period of 12-18 months, the cells die and further growth is arrested, curing the patient of the tumour and its ill effects.



## India's Health Secret

**T**here is universal agreement that public health is a basic need for all developing societies. So much has been written about the need for clean water and air, vaccination, and the control of killer diseases like malaria. But there is one public health issue which people are scarcely aware of. This is illegal abortion. India legalised abortion way back in 1969. Yet two researchers, Rami Chhabra and Sheel Nuna, estimate that around 6 million illegal abortions are performed every year, ten times as many as the six lakh legal ones.

We have around two million cases of malaria a year, causing upto 1,000 deaths per year. These numbers are in comparison with 6 million illegal abortions which cause an estimated 15,000 to 20,000 deaths a year. This constitutes an enormous toll on the health and lives of women, yet is scarcely recognised as such.

Why do women go for illegal abortions when these have been legalised? There are only 8,000 approved institutions for a population of 900 million people. Although the government wants all 20,000 primary health centres in rural areas to have MTP facilities, less than 2,000 do. There is a shortage of equipment and authorised physicians.

In the West, abortions are sought mainly by unmarried teenagers. In India they are sought overwhelmingly by married women who do not want another child. Many are seriously traumatised by unwanted pregnancy. The overwhelming majority of rural women go to untrained dais (village midwives), or quacks undergoing risks, damage and death.

What can be done? First, we should train dais and paramedics in abortion and change the law to authorise them to perform MTPs., at least for early pregnancies. This also implies a huge increase in equipment and medicines to all villages. Paperwork for legal abortions must be slashed to the bone.

Abortion is also a gender issue. Yet the right of

a woman over her body, in regard to sex within marriage as well as pregnancy, is rarely debated. However, the first step must be to educate the public on a health hazard whose dimensions most Indians are scarcely aware of.

Foreign aid agencies are today anxious to increase aid for public health, but most of them refuse to give a penny for abortions, because of the objections of the Catholic Church and right-wing religious groups in the US.

The biggest problem of all is data. When there is an epidemic of malaria or anything else, the newspapers carry figures of those affected and killed. But abortion takes place secretly, with no published data. This makes it difficult to build up public opinion. Yet the task must be done.

## 'Doctors to work for rural poor'

**A** group of surgeons has come forward to work in villages and devise practical ways of taking health care to the rural poor. These surgeons have high levels of specialisation. But they believe that health care in the country has remained inadequate because nothing has been done to use specialised skills to meet primary local needs. The Association of Rural Surgeons of India goes from village to village to help people. The challenge they have taken up is to put their medical skills to use in difficult conditions.

Dr. NH Antia, a community health expert, and vice-president of the association, says: "Specialisation is a necessary evil. It is not something to be proud of. It means you know more and more about less and less." He does not agree that there is a shortage of doctors in the country to attend to the rural health centres: "We are overproducing doctors. There are more doctors than nurses. There are almost a million doctors, of which 3,00,000 are allopathic doctors."

Rural areas do not have many basic amenities. "And what are we doing? We are giving vitamin injections to people dying of hunger. There is no difference between a drug pusher and a doctor who pushes these injections." "The rich are over-drugged and over-doctored. They are going through highly dangerous treatment in fancy hospitals. Intensive care units need intensively trained personnel. We only have instruments there. Only intensive instruments without human support."



# Fasting Does not Fight Obesity

**C**ontrary to popular belief, fasting is no answer to fight obesity, according to a recent study conducted by the Hyderabad-based Centre for Cellular and Molecular Biology (CCMB).

When a person fasts, his intestinal cells absorb more of whatever is available in the body (reserve food), as a result of which the weight-reducing mechanism does not work, according to Dr P D Gupta, leader of the CCMB study group. During progressive starvation, events like depletion of stored glycogen, increase in breakdown of lipid, ketogenesis (a kind of disease caused due to starvation) and irreversible glucose disposal take place, he points out.

Changes in metabolic processes during starvation ensure maintenance of adequate supply of glucose to tissues which have an obligation to keep the performance of vital functions of the body intact during the fast, Dr. Gupta says. The "brush border membrane" (BBM) of the intestines, responsible for absorption has a highly specialised function. Its metabolically active cell surface plays an important role in digestion and active transport of nutrients, he explains.

Morphological studies of fasting animals have revealed a marked reduction in total surface area of these finger-like processes of the intestine. No information, however, is available on the structural and physiological aspects of the membrane, which absorbs the digested food during starvation and re-feeding (breaking of fast) conditions, Dr Gupta says. The CCMB study examined the effects of progressive starvation on functional aspects of BBMs on intestinal cells. Parameters of BBM, like surface area membrane fluidity and glucose transport through intestinal cell membranes of rats, were undertaken for the study. The results showed that during starvation the membrane system became more active for transport of glucose by changing its surface area and fluidity. However, following re-feeding, these membranes initially became more active, and reverted to well-fed conditions.

Dr. Gupta points out that the surface area of membranes which absorb digested food increase by 20 per cent in addition to the increase in membrane fluidity, leading to absorption of more

nutrients.

Dr. Gupta explains that the intestinal cavity is lined by cells called "intestinal cells", the surface of which forms thin cylindrical membrane folds, which are projected in the lumen. These vibrating projections are the sites for absorption of food material. The surface area of these structures increases during starvation.

Pyrene, a type of fluorescent dye, was used to study the fluidity of BBM. The incorporation of the dye indicated the condition of membrane whether they were rigid or fluid. In starved rat membranes, uptake of the dye was maximum on the sixth day of starvation. On re-feeding, after two hours it went up. However, after some time it came back to normal well-fed level, according to Dr. Gupta.

As expected, the study showed enhancement of glucose transport during progressive starvation, which reached its peak value on the sixth day of starvation. Elevated levels of enzymes, which breakdown stored glycogen, increased and provided more glucose to the system. However, the mechanism underlying the increased uptake of glucose during starved conditions was not well understood.

The study shed some light on the mechanisms of higher uptake of glucose during starvation conditions. This could be accomplished either by an increase in the absorptive area or by a change in the BBM so as to facilitate increased transport of glucose. In the membrane fluidity study, it was found that the membranes became more fluid during progressive starvation. The maximum fluidity of these membranes was recorded on the sixth day of starvation.

Membrane fluidity was affected during various physiological conditions like ageing and cell division and following treatment with various chemicals such as alcohol, hormones specific to males (testosterone) and females (estradiol).

The study showed that starvation brought fluidity changes in the BBM which, in turn, facilitated enhanced glucose transport across membranes, Dr. Gupta says that occasional fasting was good for general health, but was not good for reducing obesity.

# Summer Regimen

Dr. (Smt.) Sangeeta Singh, Lucknow

It is generally witnessed that with the advent of summer, diseases of abdomen, eyes and skin proliferate. Among the gastric diseases, cholera, diarrhoea, nausea and stomachache are commonly seen. Among the eye diseases, viral and allergic conjunctivitis happens to be widespread wherein eyes become red, burning, running, itching and swollen. Due to the intensely hot sun, the skin turns black and burning and prickly heat appears all over the body. Sunstroke is also common, inducing high fever. Therefore, in summer we should observe the summer regimen prescribed by Ayurveda to obviate above problems.

In summer the diet needs to be largely liquid. Water should be drunk copiously and more salt and sugar should be used in the meals to take care of these problems due to profuse sweating, lack of water, salt and sugar occurs in the body due to which one feels limp, sleepy and weak. Meals should be fresh, light and easily digestible. By just using boiled and cooled water for drinking purposes, one can preclude the possibility of cholera, dysentery and nausea etc. Excessively spicy and tart edibles like Poodi, Paratha, Pakoudi, Kachoudi and Samosa and the like are best avoided in summer. Stale, malodorous and open things are to be religiously avoided. The cut fruits sold in the bazar and also rotten or overripe fruits should not be eaten.

Similarly, the market ice, kulfi and bottled cold drinks are proscribed because these are the sources of contagious diseases and the cold drinks contain harmful chemicals. It is much better and safer to drink homemade syrups of lime, mint or bael, Lassi, buttermilk, Pana of raw mango, Jaljira, Sattu etc. Use these things as much as you like. Bread, pastry and the like items from bakery should be avoided because decay sets in very soon in them. One or two hours of siesta in summer is highly salubrious.

**Breakfast :** For breakfast, syrup of bael, lime, apple or orange, buttermilk with salt and cumin powder, Lassi, sprouted grams, milk, tea or soup of vegetables are prescribed.

**Lunch :** Lunch should consist of bread prepared from fresh wheat, barley or gram, pulse of Moong or Arhar, old rice, green vegetables and salad of cucumber, Sattu may also be used as staple food.

**Snacks :** Watermelon, muskmelon, apple, cucumbers, grapes, pomegranate and other fruits should be used in the afternoon as snacks.

**Dinner :** The night meals should consist of fresh bread and bottle gourd, bitter gourd, luffa, Parval, pumpkin or ladies' finger. Homemade ice cream, Kulfi and cold drinks are also recommended.

**Summer Proscriptions :** In summer, wines are proscribed. One should not put on gaudy

coloured clothes. Polyester clothings are not good or comfortable in summer. Don't go in the sun without a cap and umbrella. Also don't go on an empty stomach. You must have light snack and sufficient water in your stomach to go out, otherwise sunstroke is feared.

**Nausea and Dysentery :** The diet should not be discontinued. Infants should be continued on mother's milk. Boiled and cooled water alone should be used for drinking. Add 2 spoons of sugar, a pinch of salt, one spoon of lime and mint juices to a glass of water and give little by little from time to time. This treatment obviates dehydration. Pulse soup, rice water, buttermilk, and ripe banana, coconut water should be given. Infants should be given the powder of the inner portion of Ativisha tuber, 200 mg twice a day with breast milk. This improves digestion and provides rehydration.

Infants above six months should be given 1/2 spoon ginger powder, 1/2 spoon jaggery and quarter spoon of clarified cow's butter, twice a day as a pill. In eye sickness, wash eyes with rose water and borax powder dissolved in pure clean water.

In skin trouble, mix pure borax powder with any talcum powder and sprinkle over the affected part. Application of sandal paste or turmeric powder mixed in ream and lime juice is also highly soothing and complexionable.

# Rainy Regimen

Vd. Ramanand Mishra, Lucknow.

**A**yurveda has formulated dietetics and regimen, which if followed, preclude pathogenesis, without spending any extra money. One who always takes wholesome meal and observes salutary regimen, whose efforts are only after much forethought, who is not attached to the objects of sense-organs, such a one does not get ill. Wholesome diet and regimen should be according to the person's temperament and seasons. Such wholesome regimen and dietetics, which if observed in the rainy season, keeps one free from the rainy-seasonal diseases. This is called Varsha Ritucharya (The Rainy Regimen).

The seasons affect plants, men and other beings in various ways. Due to this their biological functions are subject to change affecting their health. According to these changes they remain healthy or become sick.

**Diseases of the Rainy Season:** The rainy season predominates in humidity. Cool, easterly winds blow, quantum of water is enhanced, the sky remains overcast. Due to these reasons Vayu remains exacerbated and Agni are emaciated. This diminishes the human immunity against the diseases. Due to this diminishment and proliferation of worms, bacteria and viruses the man may be prey to a number of diseases, e.g. Amavata, Sandhivata, Vatajwara, Vata-Kapha-Jwara. And the Agni being uneven diarrhoea, dysentery,

plague, Pravahika, dystension burning, jaundice, worms; the atmosphere being humid and cold Shwasa-Kasa, coryza, Arochaka, laziness, bodyache and boils and various skin diseases appear. Among these many become contagious. The number of diseases occurring in the rainy seasons exceeds all other seasons. To avoid these Ayurveda has prescribed seasons bound dishes and regimen as well as dos's and don'ts.

**Diet :** In the rainy season light appetizing and easily digestible things like told rice, wheat and Moong should be taken. Non-vegetarians may take the meat of forest fauna like deer, cock, pigeon etc. after condimenting them with oil, dried ginger, *Piper longum* and black pepper and vegetarians should also use the same condimenting materials. The diet should be sour, salty and lubricated (with oil or clarified butter). Punarnava, Lata Karanj, brinjal, Parval, Bael, Rasna, garlic, onion, asafoetida, cumin and ginger should be included in the meals. Honey should be freely used. So much so that it should be added to all the dishes. On predominantly rainy and windy days dry, light, hot, lubricated, salty and sour things should be taken. Well and pond water should only be used for drinking purpose after boiling and cooling.

**Vihar or Regimen :** During burning sensation in stomach and other signs of Pitta, purgation should be resorted to. If the Pitta

does not subside then it vitiates the blood and consequently diseases of blood like Mukhapaka, Netrapaka, bad breath, skin diseases like ring worm, Visarp, Vidradhi, itching, boils, rashes, Charmadad, Vatarakta, weakness, headache, burning after meals, some bleachings, tiredness, hoarseness, laziness and sleepiness occur. To avoid these Rakta-Pitta destroying devices like purgation, fasting and blood-letting should be adopted. To avoid the skin-diseases body should be dried by scrubbing with a dry towel. Wet clothing should not be put on. Oil massage and bath should be taken, flower garland and scented things should be used. Aloe incense sticks should be burned and walking is to be avoided. The place of living should be free from infestation of snakes, scorpions and centipedes. The living rooms should be smokeless. Light, dry and clean clothings should be put on.

**Prohibitions :** Sattoo (coarsely ground parched grains, grits, especially of barely) is forbidden in the rainy season. Sleeping during daytime, sleeping, sitting and waling under the open sky while dew is falling is harmful. Drinking the river-water or bathing in it, exercise, sitting in the sun and frequent intercourse are prohibited. By following the above rules the rainy diseases could be obviated.

# Cure the Jaundice Completely

Ayurvedacharya Sultan Ali Khan, Lucknow

*Readers of Jeevaniya are well acquainted with Vd. Sultan Ali Khan. He is a veteran author of Jeevaniya. Khan Saheb has immense faith in Ayurveda and he prepares pure Ayurvedic cures for various diseases. Here Khan Saheb has described his patent cure for obstructive jaundice. Those readers who want more information may contact him on the following address :*

**Vd. Sultan Ali Khan, Mushtaq Manzil**

Kachcha Hata, Near Krishna Coaching, Aminabad, Lucknow (Tel.No. : 229489)

Editor

**J**aundice occurs due to the growth, aggravation and vitiation of Pitta in the body. Gall bladder, liver, blood and duodenum get affected in this diseases. There are two types of it.

## Shakhashrita Kamala

The symptoms resemble those of obstructive jaundice. In this ailment obstruction of Pitta occurs and consequently the digestive Pitta does not reach duodenum (intestines) from gall bladder. And hence the food is not digested in the normal way. Due to this reason the stool of the patient loses its yellow colour which is due to the yellow colour of Pitta. The stool consequently acquires white, brown, clayey, black or the colour of the food ingested. Obstruction may occur in the following sites due to a variety of causes :

- In the tube joining liver and gall bladder. This may be due to some excrescence or twist. Pitta (bile) is formed in the liver.
- Obstruction or constriction in the tube carrying bile from gall bladder to duodenum.
- Stone in gall bladder, which

obstructs bile from going into the duodenum.

- Inflammation in gall bladder or bile-carrying above said both the tubes due to the vitiation of either blood, bile or virus.

The bile continues to accumulate due to the above obstructions and from here it gets absorbed by the blood-carrying channels and spreads to the entire body by vitiating the blood. That is why eyes, skin, nails, urine, tongue turn yellow.

The accumulation of bile in gall-bladder due to obstruction tends to form stone in it. As because it becomes denser and denser here, crystallization sets in and stone is thus formed in the gall bladder.

## Symptoms

- Absence of hungriness.
- Loss of taste
- Light fever
- Nausea or vomiting bile and the taste of the mouth turns bitter.
- Tiredness and extreme weakness.
- Heaviness or slight pain below

the ribs on the right side above the stomach.

- Paleness of eyes, skin and urine.
- Constipation or distention
- Heaviness of heart.

## Koshthashrita Kamala

In this type the function of liver and spleen are disturbed. The liver of the Pittaj temperament people gets contaminated due to bile-promoting diet and behaviour. Jaundice weakens the blood corpuscles or the spleen and liver become affected due to the use of synthetic drugs, toxic chemicals or diseases like malaria and consequently start producing large quantities of bile. At times, sudden change of season or virus induces the liver to produce bile in plenty. This bile being vitiated vitiates the blood, which produces excess of scum (bile). It should be noted that the scum of blood is bile.

The bile enhanced, vitiated and aggravated by above reasons reaches the entire body and colours stool, skin, eyes, nails, urine and flesh yellow. It reaches

the duodenum in plenty and creates defect in it so that initially the appetite is increased and after some days dyspepsia occurs. Yellow motions occur frequently in this condition.

### **General Symptoms of Koshthashrita Jaundice**

- Yellow colouration in skin, eyes, urine, faeces etc.
- Dyspepsia, indigestion
- Weakness
- Giddiness
- Burning in hands, feet and body
- Loss of taste
- Anaemia etc.

### **General Causes of Jaundice**

Overuse of bitter, hot and pungent things, excess intake of bile-increasing things like mustard oil, fried things, vinegar, wine, meat, egg, fish, alkali, salt, red chillies, pickles, living in sunshine and heated places, use of polluted water and food or wakeful nights aggravate the bile and forces the liver to produce more bile. Similarly overuse of too cold, constipative and heavy, sweet and rough things also causes jaundice.

### **General Prophylaxis**

- Do not take putrid water and edibles.
- Do not take edibles sold open in the market.
- Do not take fruit juice from the market.
- Do not take stale or fridge food. Freshly cooked food is the best.
- Do not use modern medicine on your own.
- Take your diet according to temperament, age, season digestive power etc.
- Do not take edibles having

chemicals in them.

- Do not work more than your capacity. Avoid anger and dudgeon.
- Avoid excess of bile-promoting food.

### **Treatment**

It is a well-known fact that jaundice cannot be cured by modern medicine which imparts symptomatic treatment. This treatment comprises veinous glucose drip, giving mozambique and sugarcane juice to increase the quantity of urine to remove the bile from blood circulation by which the colour of eyes and urine becomes dim. Glucose removes weakness from body, but the obstruction remains. The patient wrongly feels that he is cured. But

the disease remains uncured and relapses again and again. Consequently diseases of liver e.g. inflammation of liver, cancer of liver occur. Stone gets formed in the gall bladder, even cancer might occur there.

Therefore I aver in the public interest that please give Ayurvedic or Unani treatment to jaundice. Do not indulge self-medication.

### **Herbal Drugs Useful in Jaundice**

Harad, Bhui Aonla, Triphala, Neem, Daru Haridra, Kasani, Vishakhapara, Giloy, Ghusiyari fruit, Aonla, Karanja, Mooli, Makoy, Nagarmotha, Pitta papra etc. are useful in Jaundice.

## **Special Empirical Treatment for Obstructive Jaundice**

**W**e have described above how obstruction is the root cause of jaundice in some cases. If we could remove this obstruction the jaundice would be cured.

We have found out an efficaceous treatment of Jaundice after many years of labour and research which directly removes the obstruction. Removal of obstruction sets in on the day of beginning the medicine. Consequently, the faeces gain in yellow colour, taste is gradually restored and the patient feels hungry. Normally, the jaundice is cured within one week. At times, in certain spoiled cases medicine may have to be given again after one week, but this occurs rarely only. The medicine is perfectly harmless.

The medicine is given only after proper consideration of age, sex, temperament, strength, status of Doshas in the body. Hence we are not disclosing the formula of the medicine here. I am giving this good news in the interest of the general public after successfully trying the medicine on over fifty patients.

# Indifferent Health of Younger Generation

Vd. Murlidhar Prabhu Desai, Sindhudurga, Maharashtra

Nowadays generally the elderly people are found saying - "The youth of today are indifferent towards their duties. They are found lacking in enthusiasm, glow, self-respect and other youthful qualities. Not only this, they have become slaves of various intoxicants so that criminal tendencies are growing in them."

In my opinion, the growing urbanization and industrial culture in the name of development and progress are at the root of this predicament.

Food, water and air are the three basic needs of human life. If these three are available in the pure and fresh form, then man would be healthy physically and mentally.

However, due to industrial development the freshness and purity of the above three basic needs have to be ignored. According to Ayurveda, nutrition varies directly as the food (i.e. food, air and water) '*Yatha swaireva pushyante dehe dravyagunah prithak*' that is, if the food is pure and fresh then it would exert favourable impression on the mind and body and if it is stale and impure then it would exert adverse impression on them.

**Food :** In our houses cooking and serving is performed usually by the mother, wife, sister or daughter, who do their jobs as a duty of love. While cooking and serving they have the feeling that the consumer should be gratified and nourished by the food. Consequently, the eater of such food attains happiness and gratification.

Nowadays people go to far-

away places due to industrialization to work and earn bread. Such people have to forego warm and fresh homely food. Such people often carry their lunch in aluminium lunch boxes. Such food naturally becomes unwholesome due to the action of the aluminium metal. Those who do not carry lunch boxes eat their lunch in hotels where cleanliness does not exist and stale food is also served after reheating.

Body and mind both receive nutrition through the food and the best means of keeping them pure, holy and healthy is pure and fresh food. It is said '*Sarveshameva shouchanam annashoucham vishishyate*', to wit, the cleanliness of food surpasses all other cleanliness in importance. Always eating in hotels may create mental disorder, as because the food in hotels may be always hot, but the cooks and servers of hotels entertain no feelings of the eater's health and well-being.

The milk is also not available pure, clean and sattvika. Bottled and pouched milk happens to be stale and pasteurised. The milk obtained from milkmen is also to some extent increaser of Tama as it is generally obtained by injection of hormones.

**Water :** Let other things aside, you would not get pure, clean drinking water even in towns. What you get is stale water processed with many chemicals. According to Sushruta the water which is covered, contaminated with mud and water-plants and untouched by the rays of moon and sun is polluted. The water coming from taps is generally as

such. It increases Tamadosha. It is said '*Na cha paryushitam deyam kadachit vari Janata*' i.e. never give stale water to drink to anybody. Such water creates distress of Amla and Kapha Doshas.

**Air :** Inhaling pure air is absolutely necessary from the point of view of health. Industrial advancement is causing increased pollution day by day. It exerts fatal effect on people's health in the long run, little by little. The havoc it can create when in limitless quantity was illustrated by the Bhopal gas tragedy.

Pure and fresh air creates happiness of mind and enthusiasm and its absence makes the mind sick, this fact is experienced by ail. Due to development of cities and growing industrialization the natural state of the three essentials of human life, namely, food, water and air is receding and due to this, one is becoming mentally weaker and weaker.

Today the various means of pleasure and entertainment, availability of umpteen means of earning livelihood and the desire to excel in life is attracting the village youth towards the cities. And due to the non-availability of pure air, water and food there, he is becoming a prey to many evils.

There is only one solution to this problem and that is to stop the migration of the youth to the towns from the villages. To achieve this the government should keep the villages in the centre of all developmental works. Local health traditions should be nurtured and planting of trees should be accelerated.

# Staying on the right track

*Dr. M.C. Gupta, New Delhi*

**L**ifestyle has emerged during the last two decades as a major modifiable determinant of health and disease. The peculiarity of this determinant is that control mechanisms have to be applied not in the external environment but within one's internal mental domain. The adoption of a particular lifestyle is, therefore, a direct reflection of inner control or will power.

From the point of view of health, the following seven aspects of lifestyle can be listed.

- Dietary intake including beverages like tea and coffee.
- Alcohol intake
- Drug addiction
- Smoking
- Sexual behaviour
- Physical fitness and
- Spirituality.

The relation between lifestyle and willpower has been mentioned. It is in this context that spirituality has been included as one of the seven components listed above.

That diet determines health is well known. What is equally important is that lifestyle and attitudes towards life determine diet. Common examples relate to intake of salt, sugar, tea, coffee, fibre, leafy vegetables, fat, meat and eggs. We often allow our dietary likes and dislikes to be dictated by two desires. First is the desire for taste. Second is the desire to avoid work which in this case, means effort involved in procuring, cooking or eating

(chewing) of food. These desires govern our dietary lifestyle in such a way that we are prone to several diseases.

Eating more sugar and refined carbohydrates impairs glucose metabolism and can lead to diabetes and dental caries. Too much salt is bad for people with high blood pressure. Taking too much tea, especially black tea, in contrast to green tea, predisposes to gastritis and cancer of the oesophagus or food pipe. Chewing pan and pan masala, especially if it contains tobacco, causes precancerous lesions in cheeks and tongue leading to



cancer.

Excess energy intake in the form of fat and sugar leads to overweight with all its other complications. Excess fat intake is also associated with certain types of cancer, such as that of breasts and large intestine. A general is-

sue is the intake of nonvegetarian food. The U.S. government is now officially advising U.S. citizens to cut down their intake of sugar, fat and animal protein. Once these are cut down in diet, there is concomitant increase in fibre intake through cereals, pulses, fruits and vegetables. Recent findings suggest that the carotenoids and bioflavonoids in fruits and vegetables, especially green leafy vegetables, prevent against various types of cancer.

The effect of alcohol-related lifestyle upon health does not need much elaboration in view of the well known harmful effects of

its consumption. Alcohol damages health in all its three dimensions i.e. physical, mental and social. Besides being irritant to stomach and causing acute gastritis, long term alcohol intake leads to cirrhosis of the liver, a condition of irreversible liver damage leading to liver failure, coma and death. Mental impairment is reflected in the condition of chronic alcoholism. Alcohol addicts suffer from loss of memory, impairment of judgement, hallucinations and suicidal tendencies. As regards

social health, alcoholics are prone to accidents, sexual indiscretions and violence. It has been rightly said that "everything can be preserved in alcohol except dignity."

Addiction to various types of psychotropic drugs, usually

known as smack, is a scourge which is spreading all over the world. Smack addicts adopt a lifestyle characterised by dependence on drugs, which they must take at any cost. Their total life gets ruined, they live as pathetic creatures, devoid of all vitality. Drug addiction is very much a burning problem about which much is being written these days.

Smoking is a major public health problem. According to data from the U.S., smoking is the number one cause of premature death. It kills more people every year than alcohol, heroin, cocaine, homicide, suicide and AIDS combined. According to published data, 58,000 deaths in France in 1985 were directly or indirectly related to smoking. Of these 29,000 were due to cancer, 17,500 due to cardiovascular illness and 7,000 due to chronic respiratory illness. Data from India on similar illness is not available, but is likely to reflect the same trend.

It is obvious that lung cancer is only one of the ways in which tobacco smoking injures health. It affects the body system adversely, including the nervous, gastrointestinal and reproductive systems. Even the skin is affected: smoking reduces blood flow to the skin causing early wrinkles. Smoking during pregnancy causes low birthweight and foetal death. Smoking increases the risk of ectopic pregnancy and infertility. It is also related to an increased risk for cervical cancer due to interaction of the cancer causing agents in tobacco smoke with the HPV virus. The other well known problem for women who smoke is the

interaction with oral contraceptives in increasing the risk of heart disease. Women who are over 35 years, who smoke and take the pill are more likely to have a fatal heart attack than women of the same age who do not smoke and don't take the pill.

In addition to active smoking the harmful effects of passive smoking need to be recognised. Passive or involuntary smoking has been recognised as a definite health hazard. A passive smoker is a person who is exposed to tobacco smoke exhaled by a smoker in the vicinity - home, work place, cinema and public transport.



According to a report from the National Academy of Sciences, 3,800 lung cancer deaths in the U.S., representing three per cent of total lung cancer deaths, were attributable to passive smoking.

Nonsmoking wives of smoking husbands have 30 per cent higher risk of lung cancer than wives of nonsmokers. This risk is multiplied 7-10 times when the husbands are heavy smokers.

Nonsmokers exposed to 20 or more cigarettes a day at home have twice the risk of developing lung cancer compared to those not so exposed.

Children of smokers have

greater chance of developing colds, bronchitis, pneumonia, chronic cough, ear infections and impaired lung function.

A certain amount of physical exercise is essential for keeping the body fit. The advantages of a fitness regime go beyond the physical domain. There is enough evidence that physical exercise helps achieve mental health as well.

Moderate weight bearing exercise helps in prevention of osteoporosis and reduces the risk of fractures.

Exercise helps in regulating glucose metabolism. Control of diabetes becomes easier with the addition of regular exercise.

Middle aged men and women following a physical fitness regime have less risk of premature death than their sedentary counterparts.

Exercise, in conjunction with low calorie diet, helps prevent obesity. Brisk walking, swimming, bicycling which increase heart rate, improve cardiorespiratory function.

Exercise strengthens muscles which, in turn, support the joints. Stabilisation of joints permits one to bend and move freely. Osteoarthritis gets worse in the absence of such joint support. Regular exercise helps in lowering blood pressure. It tends to lower blood cholesterol levels.

Physical exercise and fitness programmes tend to make a person more self-confident and relaxed with less tendency to depression. Regular and frequent exercise is the key to physical fitness. If exercise sessions are



missed for more than two weeks, a decline in fitness becomes apparent.

The term 'spirituality' is used here in its wider sense for lack of a better word. It is not intended to have any religious connotations in the present context. The spiritual character as shown in thoughts and actions, "The word spiritual is defined as "characterised by or suggesting predominance of the spirit." It is now well known that physiological function can be influenced by mental process. This is the basis of psychosomatic medicine, a well established discipline.

Transcendental meditation, yoga and biofeedback are already being used by modern medical scientists for management of hypertension. Positive thinking-filling the mind with energetic, happy, enthusiastic, creative thoughts - does help in achieving physical, mental and even social health. Development of positive thinking is promoted by two things. First is regular physical exercise. Second is closeness to peaceful natural surrounding, such as seaside, riverside, lakeside, a walk in the garden or, even, listening to the rustle of leaves in a breeze.

Just as the aim of exercise is physical fitness, similarly the aim of spiritually fit person is to control various parts of his body and use them easily and efficiently. Similarly, a mentally fit person should have control over his thoughts and emotions, his desires and aspirations. Only then can he use his various mental faculties to his best advantage for achieving physical, mental and social health. "Spirituality", "will power" or "positive thinking", by whatever name we call it is the most important determinant of

lifestyle. A little reflection will reveal that it is basic to the other six components, which pertain to indulgence in food, alcohol, drugs, tobacco, sex and lethargy respectively.

As a matter of fact all the seven components listed above have one thing in common - they reflect deviation from nature. Man has developed a capability to interfere with nature and go against the innate instincts and behaviour pattern of all other mammals. As regards dietary intake, it is only man who stores and processes food, overeats and becomes obese.

As regards intake of salt, sugar, alcohol, drugs and tobacco, these are obviously human distinctions. As regards sexual behaviour, it is only man, among all mammals, who indulges in year round sex (other mammals have seasonal sex corresponding to oestrus cycle) and consciously perpetuates homosexuality.

Industrialisation has been a major factor responsible for introducing "unnaturalness" in man's environment. Machines have decreased the need for physical energy expenditure by man, leading to obesity. Mechanical sifting of flour has resulted in decreased fibre intake, with all the diseases associated with this condition. The relation between diabetes and refined sugar intake is well known.

The large number of chemicals responsible for several preventable cancers, are the direct result of industrialisation. Most of these chemicals are foreign to the human body and lead to allergic conditions. According to recent reports, trends in modern life are responsible for an increase in prevalence and severity of asthma.

It is a sobering thought to remember that a large number of human ailments can either be prevented or managed better by adopting a healthy lifestyle. These include such serious diseases as cancer, diabetes, heart disease and AIDS. The key lies in adopting a lifestyle as close to nature as possible. After all natural style is the best style.

### **Hospital existed 900 years ago**

A full-fledged hospital was in existence in a village of Tamil Nadu on the banks of the confluence of three rivers at least 925 years ago.

Inscriptions on the eastern interior wall of a Vishnu temple, which stands at the confluence of the Palar and its two tributaries, the Vegavati and the Cheyyar, reveal that a 15-bed hospital employing nurses, physicians, surgeons and compounders had been in vogue during the reign of the Chola king Virarajendra. The inscription dated 1069 A.D. give an extensive detail of the medicines stored in the hospital, their procurement, salary for the hospital staff and the types of ailments treated.

The inscriptions also list out the medicines stored in the hospital. One of the medicines was for improving the memory, sharpening the intellect, removing fatigue and giving strength and longevity. There were also medicines to treat among other diseases, jaundice, haemorrhage, lung disorder, fistula and haemorrhoids. A detailed study of the inscriptions could probably give some insight into the making of the medicines which could be put to use profitably even now.

# Cure Against Stomach Ulcers

Until this bacteria was discovered most people thought that ulcers of the stomach are caused largely due to acidity. The drugs that were given to treat ulcers were also essentially antacids, compounds that will stop the secretion of acid by the stomach cells, or compounds that would inhibit the pumping of the acid across the stomach cell membrane. The discovery by Marshall and Warren added a new dimension. It suggested infection to be an important cause and hence the use of antibiotics to treat and cure gastritis and stomach ulcers.

Now, this is an important lead, considering the fact that gastric infection is very widespread in the world. Four out of every five people in the developing countries suffer chronic stomach affliction. Complications even lead to stomach cancer in several instances. Thus, early and definitive treatment of the illness is called for. Ever since the Marshall-Warren discovery, doctors have prescribed a double course of action, namely antibiotics to handle the infection and acid release inhibitors to handle the high acidity.

While this dual treatment is more satisfactory, it is not quite acceptable on two counts. One is that the antacid drug is expensive (a tablet of ranitidine is almost two rupees), and you need at least two a day; and a tablet of omeprazole is even more expensive. Often the very thought of the expenses itself is a source

## The Bacteria

Scientists at the American Society of Microbiology have successfully identified the bacterium in contaminated drinking water which may be responsible for creating stomach ulcers. Known as *Helicobacter pylori*, the bacterium is known for causing of stomach ulcers. According to epidemiological studies, it increases the risk of stomach cancer. Though the bacterium has not been identified in the environment, epidemiologic studies strongly point out how drinking water is a potential lurking place for these germs. On the basis of some preliminary results, Dr. David B. Schauer, and his team found the bacterium *Helicobacter pylori*, in drinking water in Barino, Colombia, where there is a high incidence of helicobacter infections.

of mental stress, which confounds and aggravates acidity! The second is the fact that the microbe can 'beat' the antibiotic drug; mutant strains of the bacteria emerge rather rapidly, which are resistant to the antibiotic drug that is used, making for a catch-22 type situation.

The way out of the impasse is vaccination, which would offer

the long-term strategy for prevention and possible treatment of the disease. Vaccination operates by identifying a molecule or a similar characteristic tab or 'signature' of the invading organism and mounting a defence response by the body which would neutralise the 'alien' and get rid of it.

It now appears that a vaccine can be developed against the ulcer bug *Helicobacter pylori*. The group of Dr. Rino Rappuoli of the Immunological Research Institute at Siena, Italy, have pioneered these studies. Their latest studies published in 'Science' provide us with a mouse model of this infection which mimics the human disease.

## Lime for Stomach Ailments

Vitamin-rich lemon juice can destroy bacteria that causes enteritis, an inflammation of bowels and of the small intestine.

This is the result of a scientific research reported in *The Lancet* that lays down how citric acid in two tablespoons of lemon juice for every litre of water is enough to destroy germs responsible for creating various stomach ailments within 30 minutes. It is an effective alternative to other tested methods of sterilising drinking water supplies during epidemics of water-borne enteritis. If the water is alkaline, then a higher concentration of lemon juice should be used. This rule, however, applies only to potable drinking water.

## SORE MOUTH

Dr. P. Ali, Kerala

**M**outh is the 'Gateway' of the digestive system. All the derangements in this system will manifest proportionate signs in the mouth also. Hence on examining a patient, the doctor will not forget to have a look into the mouth.

APHTHAE is a common form of sore mouth generally seen on the mucous membrane of the mouth, under lip, internal surface of the cheeks, and sometimes on the corners of the mouth. In children, if teeth are not erupted, aphthae will appear on gums also. It is always painful and hence, children refuse nursing. Sometimes these little ulcerations extend to throat, oesophagus and stomach also. When they occupy the throat and downwards, swallowing becomes extremely difficult. In this stage, vomiting and hiccough may start in some cases.

A very rare, but fatal transformation of aphthae is GANGRENE. Gangrene of the mouth is rare in adult and still more rare in infants.

STOMATITIS is the term used to indicate inflammation of mouth. The inner membrane and surface of tongue are inflamed. It starts as white dots and later these dots unite to form little patches. These patches thicken more and more and finish by exfoliating or detaching themselves, leaving in inflamed surface.

Sore mouth is a clear indication of digestive derangements. The causative factors will be dif-

ferent in different patients. In some cases the fault will be with the food items or feeding habits. In some other cases, it is seen that, some medicines taken by the nursing mother will cause stomatitis to herself as well as to the child. It is termed as 'drug-induced stomatitis'. The gold salts (Myochrisine, Solganal etc) and Penicillamines (Cuprimine, Depin etc) used by Allopaths in the treatment of Rheumatoid Arthritis may induce stomatitis as a side effect. In such cases when these medicines are stopped, stomatitis will disappear by itself. Then you have to treat the RA with your harmless medicines.

### Homeopathic Treatment

Homoeopathy, with its Wholistic approach sees the patient as a whole and considers all the subjective and objective symptoms with different modalities, aggravation, amelioration, desire and aversions; and then only the most suitable remedy for each case can be selected.

**MERCURIUS SOLUBILIS**: This remedy is indicated in sore mouth when accompanied with profuse salivation. The tongue is covered with a thick yellow moist coating. All symptoms are worse at night.

**BORAX**: Homoeopathic preparation of this remedy is prepared from the Sodium Borate found natively in California. It is used by Homeopaths almost as a specific for aphthae. The child will cry on nursing as the white fungus like

ulcers are painful when they come in contact with the nipple. Intolerance to downward motion is a characteristic feature of this remedy. When the nurse puts the child down, it awakens and expresses the fear.

**ACID NITRIC**: It is prepared from Nitrate of Soda by distillation with Sulphuric Acid and water. It is another valuable remedy often used in sore mouth when the symptoms agree. Painful pimple-like ulcers are seen on the sides of tongue and soft palate with sharp splinter-like pain. The inframaxillary glands are swollen.

**AURUM TRIPHYLLUM**: This remedy is prepared from Indian Turnip. A well experienced Homoeopath can prescribe this medicine on just seeing the child, without asking any question. The nostrils, lips and corners of mouth are ulcerated. The discharge from nose being acrid, excoriating has made little dirty cracks around the nostrils and the upper lip, and the child is constantly picking the nose until it bleeds.

Gangrene of mouth can be successfully treated by Homeopathy by selecting suitable remedies according to the totality of symptoms. ARSENICUM ALBUM, LACHESIS, and SECALE CORNUTUM are some of the often indicated remedies in Gangrene cases.

## Fever is a Friend

**F**ever itself is not an illness. It's how the body uses its immune system to defend against infection. Few people realize that fever itself is rarely dangerous, and by treating it aggressively with aspirin or paracetamol, they may actually slow down recovery. An unwarranted fear of elevated temperature - is called "fever phobia".

The normal temperature is actually a range rather than one single number. And there is a great deal of individual variation. The body's natural circadian rhythms prompt daily temperature fluctuations of about one degree Fahrenheit, but some people have oscillations as wide as 2.4 degrees. Children tend to have slightly higher normal temperatures than adults and are more likely to run high fevers in response to infection. Elderly people tend to have lower body temperatures than younger adults.

Ordinary actions can raise temperature viz., digesting a big meal, being in the sun, prolonged crying in babies, exercise etc. But body temperature rarely rises higher than about 106.5 degrees - with two main exceptions : a trauma or tumour that damages the hypothalamus (the part of the brain controlling body temperature), and, more commonly, heat stroke, which must be treated immediately to prevent damage to body organs, or death.

### Mechanism

When white blood cells recognize an intruder, they release

proteins that travel to the hypothalamus and prompt it to raise the body's temperature control. The body reacts to this by generating heat, often through shivering. Many immunological functions appear to be more efficient at a higher temperature. And some bacteria and viruses don't grow as well at higher temperatures. Recent studies show that when animals are exposed to bacteria but prevented from running a fever, many die of infections they might have otherwise survived.

Fever does good, but it also can cause real discomfort usually beginning at around 101.5. If a fever is making you achy and miserable, many doctors recommend taking a medication such as aspirin, paracetamol, or ibuprofen. Never use aspirin to treat fever in children or adolescents, since it increases the risk of the rare, but potentially fatal condition called Reye's syndrome.

A fever may or may not be a serious illness. It is better to watch the patient's condition instead of relying only on the thermometer.

This is particularly important with newborns and the elderly, since their immune systems may not be fully functional and they often won't run a fever even when very ill. Fortunately, nature gives other indicators of infection. A sick infant may stare and have greyish skin or cold limbs. In the frail elderly, look for lethargy and change of mood.

High fevers rarely cause brain damage or death. A temperature

needs to soar over 106.5 degrees, and that is unlikely, before there is risk of brain damage.

To find out if you have a fever caused by illness, wait until you've been quiet for an hour or so before using a thermometer. Rectal temperatures are the most accurate and recommended for young children; oral temperatures are preferred for older children and adults.

Sleep is very valuable to someone who is sick. In fever, however, you don't need to stay in bed. Sleep if you want to, but don't feel compelled. Getting in bed and covering yourself with blankets can accentuate a problem. While it's good to rest and avoid undue fatigue, being supine isn't necessarily beneficial. Rather than forcing yourself or your child to lie still, just relax quietly around the house.

Call your physician when an infant three months or younger has temperature of 100.2 degrees or more; a baby between three and six months has a fever of 101 degrees or greater; a child older than six months has a fever of 103 degrees. For adults, call the doctor if the fever is 103 degrees or more; a temperature of 101 degrees lasts more than three days - even if there are no other apparent symptoms; a low-grade fever continues for several weeks.

Also call a doctor for fever accompanied by; severe headache or stiff neck, mental confusion, sore throat, bad aches and



# The Beginning of Youth

Dr. Akhilesh Kumar Garg, Lucknow

In childhood we have no responsibilities, but with the beginning of youth the nature starts moulding our body and mind to enable us to shoulder the responsibilities of life. The length of the body starts growing fast and between the age of 14 to 21 we attain the maximum height and then the growth stops altogether. The growth of females is arrested sooner than the males. The onset of youth begins between the age of 13 to 15. Till then the males and females both have under developed genitals and immature semen and ovum respectively. The main changes are as follows:

## Physical changes in females

- The genitals start becoming stronger; the womb, the vagina and the breasts grow.
- Hair starts growing on the pubis and under the armpits.
- Menstruation starts and monthly periods occur.
- The maximum growth takes place in the year of menarche.
- The hormones engender sexuality.
- Formation of pimples takes place.



pains, coughing that brings up sputum or blood, inconsolable irritability or excessive sleepiness, rashes or vomiting, difficult breathing and bloody diarrhoea or blood in stools.

Have your infected wounds examined promptly. Consult a doctor about fevers over 102 degrees when infections are evident.

Drink plenty of fluids to avoid

- The growth of bones is fast accomplished. The process of joining the ends of bones begins.

## Mental changes in females

Shyness sets in, they tend to hide themselves, they cannot mix freely with the boys, though they are attracted towards them.

## Physical changes in males

Genitals start becoming strong. The scrotum, the vesicula seminalis, the various parts of the channels of the semen, the prostate glands the radix gland and the penis becomes strong and capable of sexual intercourse, the flow of semen begins.

Beard and moustache are the special symptoms of the beginning of youth among the males. Apart from this, growth of pubes and hair in the armpits occur.

Till the beginning of youth males and females both have straight hair line from one end to the other on the brow. After the beginning of youth the border hair line recedes on both the temples.

Apart from this hair becomes profuse on hands and feet.

The secretions of the fat glands of skin are increased. The swelling of these glands causes pimples which occur during the beginning of youth. The skin becomes strong and its colour turns pink. The males tend to collect fat above the navel region.

The tone of the boys becomes shrill and with the advent of youth the voice becomes rough and deep. Sometimes loss of voice occurs. The voice becomes suddenly manly.

The muscles become tough and powerful. Male hormones accelerate the metabolism. The body weight begins to increase, blood is produced more. Due to the growth of bones length of the body increases and the bones become stronger day by day. Between the age of the 18 to 21 the ends of the bones meet and thereafter the growth of the body is arrested.

If above changes do not occur during the beginning of youth or if such changes are very mild then we must have their hormones examined.

dehydration. This is particularly important for children and elderly people, who have a greater risk of complications, such as stroke, when they are dehydrated. Drink frequently enough to pass clear urine every two hours. But heart and kidney patients should check with their physician before forcing fluids.

Eat moderately. It's wise to avoid heavy meals, but you should eat if you're hungry. If you

have diarrhoea or have been vomiting, avoid dairy products and stick to bland foods like rice and dry toasts.

Try a gentle sponge bath. Children with a 104 degree temperature or higher may be more comfortable if their fever is lowered with a sponge bath. Use lukewarm water, since cold water can cause shivers and elevate temperature.

# The Jeevaniya Vitamins

Dr. Pramod Malaviya, Lucknow

**T**he main function of vitamins is the protection of the body. Lack of vitamins creates various deficiency diseases. Vitamins neither provide energy to the body nor they help in the growth or replenish the loss, even then their presence keeps the body healthy and their deficiency engenders diseases. That is why vitamins are called Jeevaniya substances.

Vitamins are chemical substances produced in the plant kingdom. The living body comprises innumerable cells. Each cell uses the received nutrient with the help of various enzymes. Various chemical actions of the body are also due to various enzymes which are produced with the help of vitamins.

According to Ayurveda, the diet must be Panchbhautik (comprising all the five elements) and endowed with all the six tastes. In such a diet the vayaviya and akashiya substances are subtle and act fastest. Vitamins may be included among these. Similarly among the edibles of six tastes plants, fruits and vegetables are light, fast-acting and capable of protecting the body. This action is due to their vitamin content. Columbus observed during his voyage that his sailors though ate dry and nutritious things yet were attacked by many diseases. Their gums were swollen and bled, their skins were blotched, some complained of nightblindness and extreme

weakness. After reaching west Indies they ate juicy fruits, green vegetables and milk and then all complaints were removed. Thus he arrived at the conclusion that green vegetables, juicy fruits and milk contain substances which are essential for the growth and protection of the body. Scientists named these substances as vitamins and made them a part and parcel of balanced diet.

## Classification of Vitamins

Vitamins are classified into two main groups -

**Fatsoluble :** Vitamin A, D, E and K belong to this group.

**Water-soluble -** Vitamin B complex, C and P belong to this group.

All edibles contain more than one vitamins and these accumulate in plants and animals. Men get these from balanced diet but industrious persons, pregnant and breast-feeding women and grown up children require these in excess. Various vitamins act on specific tissues. Therefore, deficiency of a vitamin creates defect in a certain specific tissue and not in other tissues.

## Production of Vitamins

Many vitamins are produced artificially in the body. Carotin which is found in carrot and green vegetables is converted into vitamin A in the liver. Vitamin D is produced by the action of the

ultraviolet rays of sunrays upon the ergosterol which is present beneath the skin. Synthesis of vitamin K occurs in the colon by the action of bacteria. Liver also produces this vitamin. Vitamin E is also produced in traces inside the body. There are many substances in the vitamin B group. Many substances of this group are synthesized in the colon by the bacterial action. Some substances are produced by the amino acid. These are also formed in the liver. Vitamin C is not generated in the human body and hence its deficiency immediately manifests deficiency symptoms.

## Function of Vitamins

Vitamin A precludes nightblindness and gall bladder stones and protects the mucous membrane of the respiratory system. Vitamin D helps the development of bones and its deficiency causes ricketts in the infants - Vitamin E precludes sterility and dystrophy. Vitamin K promotes coagulation of blood and thereby stops bleeding. Vitamin B helps in the making of blood and Dhatupak and oxidation of carbohydrates. Its deficiency creates beri-beri, ulceration in the digestive system palagra, anaemia etc. Vitamin C protects the decay of blood vessels and its deficiency causes scurvy. Vitamin P also protects the blood vessels.

(to be continued)

## Blood

# Blood Circulation

*Dr. Sunil Dutt Sharma, Jamnagar*

**B**lood circulation inside the body is an important function brought about by the heart and blood vessels. The detailed account of the diagnosis and treatment of heart diseases described in Ayurveda indicates the extensiveness of the occurrence and understanding of heart diseases in ancient times. In modern era, however, the disease has proliferated like anything.

## Genesis of Heart

It has been told that Kapha and Rakta Dhatus unite to form flesh in the foetus from which heart is produced. It is averred that heart is produced by the almost exclusive influence of mother, which implies that the disease being rampant in the mother's clan may be inherited by the child.

The heart becomes active in the third month of pregnancy and remains incessantly active till the end of life. Mother's blood enters the placenta to provide nutrition to the baby in the womb. Wherein there happens to be the Rasarakta of the foetus as well. The two are separated by a thin membrane. Oxygen and nutrition from mother's Rasarakta goes into the Rasarakta of foetus and the scum and carbondioxide produced by Dhatupaka of the Rasarakta of the foetus goes into mother's Rasarakta. Thereafter the Rasarakta of the foetus which is combined with oxygen and nutritious substances is carried into the liver. Digestion occurs in the liver and then it comes into

the heart. The heart pumps it into the arteries whereby the entire body receives the nutrition.

## Structure of Heart

The heart is situated inside the chest. On the both sides of it there are lungs. Below on the left side there is spleen and on the right side are liver and gall bladder. The heart is shaped like a closed lotus-bud. It is a fleshy organ. The flesh has the property of expansion and contraction by the instigation of Vyana Vayu. Inside the chest the base of the heart happens to be upwards and the apex downwards.

The wall of the heart is made of three types of Dhatus-The external membrane made of a fibrous Dhatu, the fleshy thick wall at the middle and its internal covering made of a mucus membrane. The external covering is termed pericadium, The mucus membrane covering internally the fleshy wall of the heart protects the Rasarakta from impacts. The internal cavity of the heart is divided into two parts by a wall along its length. The two parts are again partitioned into two parts each by valves. Thus there are four compartments in the heart which are termed the right auricle, the left auricle, the right ventricle and the left ventricle.

## Functions of Rasarakta

Circulation of blood, exhalation and inhalation, digestion etc are involuntary functions and also are essential for life. The heart

has the virtue of expansion and contraction. It expands and contracts lifelong. It does not get tired by the ceaseless effort. This is due to the Ojas which resides in it. Depletion of Ojas results in the loss of activity of the heart and even death. The Avalambak Kapha residing in the heart makes the heart efficient. Rasadhatu helps the Avalambak Kapha in its function so that the Avalambak Kapha and Rasa Dhatu are also called Ojas.

During the expansion and contraction of the heart, the coverings of the heart are protected from attrition by the intermediate mucus.

## Circulation of Blood

The impure blood from the entire body comes into the right auricle through the vena cava. From there it goes into the right ventricle and subsequently into lungs through pulmonary aorta. From here carbondioxide goes out through the throat and oxygen comes into lungs and subsequently into the Rasarakta. The pure blood from lungs goes into the left auricle of the heart and subsequently into the left ventricle. The left ventricle contracts and throws it out into the aorta. The walls of the arteries being elastic, expand during the flow of the blood and contract as before after the flow. This creates the pulse. The Rasarakta goes into the Rasavaha channels through the arteries, where 'Sarana' forward motion of Rasa, Ojas, blood and other tissue - building substances occurs

and these things reach the tissues and molecules. The forward motion takes place at arterial ends of the channels. Thereafter the forward motion of Rasadi matter, scums produced by Dhatupak and carbondioxide occurs inside the channels. This impure Rasarakta goes into the right auricle of the heart. This function goes on endlessly. The total Rasarakta, which happens to be about 5-6 litre circulates the entire body and returns back to the heart in just one minute.

### Heartbeats and Pulse

There are four valves in the heart, namely (1) the right auricle ventricle valve (2) the left auricle ventricle valve (3) Pulmonary aortal valve and (4) Aortal valve. The contraction of auricles opens up the valves and the blood passes into ventricles. When the ventricles are full of blood they contract to let them pass back into the auricles but just then the auricle-ventricle valves close to stop it. A sound is produced at this juncture which is called the first heart beat. Thereafter the Rasarakta passes into the pulmonary aorta and aorta. After expelling the prescribed amount of blood, both the ventricles start expanding. That the expelled blood tries to come back into the ventricles to stop which the pulmonary aortal and aortal valves close. Just at this point another sound is produced called the second cardiac sound. Thus one contraction and one expansion of the heart creates two sounds. Both of these constitute one heartbeat. A healthy person has 70-80 heartbeats per minute. It increases with labour, anxiety, fear etc and decreases with rest.

## Disorders of Blood

Dr. V. N. Pandeya, Dr. K. D. Sharma, New Delhi.

'Satmya' is the term by which Ayurveda implies 'compatibility with the temperament of the body.' There are three types of it, namely, Desha Satmya, Kala Satmya and Oka Satmya. Compatibility of a food item attained by virtue of the habit is called Desha Satmya, that attained by virtue of the season, Kala Satmya and that attained by virtue of its regular use is called Oka Satmya.

Method of eating has been elaborately described to attain these. If the prescribed food and behaviour are followed, the food juice created thereby yields pure blood. It is pure blood which imparts superior strength, glow, happiness and full age and it is such blood that forms the basis of life of the beings. It is also the cause of creation, maintenance and dissolution of life and it should be protected by all means. Blood is life and is called 'Jeeva'.

### Symptoms of Pure Blood

Clarity of complexion, happiness and interest the objects of sense-organs, proper digestion, natural tendency of the urges of nature, general happiness, nutrition, strength, delicacy, intolerance towards heat, redness, smoothness and glow in ears, eyes, tongue, nose, lips, palms, underfet, nails, brow and penis are the signs of a person with pure blood.

### Sites of Blood

Liver and spleen are the sites of blood. That is why Sushruta advocates the drinking of hon-

eyed blood, or eat the raw gall bladder and liver of goat in severe emaciation of blood : *Atinihsrutarakto vaa Kshoudrayuktam pibedask. Yakrdwa bhakshayedajam aamapittasamaayutam.*

Liver and spleen are described as storehouse of blood, root of the blood-carrying channels and liver also as the site of the Ranjaka Pitta.

### Diseases Caused by Aggravation of Blood

The following diseases are believed in Ayurveda to be caused by the aggravation of blood : Stomatitis, redness of eyes, stinking odour, tumour, visarpa, Raktapitta, Pramelaka (incessant worry), Vidradhi, Raktameha, Pradara, Vatarakta, Vaivarnya, Agnisada thirst, heaviness of body, fever, excessive weakness, loss of taste, headache, Vidaha, sour belches, salty mouth, Klama, excess of sweating, shivering, loos of voice, laziness, excess of sleep, darkness before the eyes, pruritis, abscess, pimples, leprosy, ring-worm, leucoderma, Pama, Raktamandal enlargement of spleen, jaundice, Neelika, Vyanga, loss of hair, excess of anger etc. According to Sushruta the emaciation and proliferation of Dhatus depend upon the state of blood.

The emaciation and proliferation of Dhatus both can cause disease. The equity of Doshas and Dhatus are possible

Contd on Page 33



# Cures by Bloodletting

Dr. M. Mahadeva Shastry, Bangalore

*In toxic conditions of extraneous causes, when there is no time for general treatment, bloodletting has often yielded quick relief. Here are some cases which were cured by bloodletting by the author,*

## Case-1

*Name-M. Age 26, Male, Prakriti - Pitta.*

It was the month of May, the summer was at its peak. M was exposed to the splash of Bhallataka - *Anacardium indicum*, while splitting ripe seeds. There was no immediate reaction. By that evening pain, induration around the site of splash were felt which lasted mildly for about 3 days. In the evenings too much itching and signs of inflammation gradually developed. External applications, oilbath and internal medicines did not give any relief. On the tenth night itching was intolerable. Inflammation and loss of sleep persisted. Bowels were normal.

On the eleventh morning, I applied one leech below the left clavicle and another on the shin of the right leg where the indurations were prominent. The leeches slowly sucked blood for about half an hour and fell out by themselves. The bleeding points were thoroughly washed with clean water and plasters stuck up. In the evening, itching, irritation and pain subsided and there was no recurrence and the indurations gradually subsided.

## Case-2

*Name - S. Age 22 years, Male, inflammatory swelling on the left ankle joint.*

One fine morning in the month

of March, S suffered from acute pain in his left ankle joint. The cause was unknown. Analgesics did not have any effect except for a short interval. S had to limp to move about within the house. Screening of the joint under X-ray did not reveal any disorder.

I examined his condition and found only inflammatory symptoms of acute type. I drew about ten c.c. of blood from the nearest vein where he had no pain. By the evening pain abated and the patient slept in the night. Next morning pain almost subsided and swelling reduced. Kaolin poultice was applied to the swollen area. After a couple of days he was able to walk three miles from home and return home by foot.

## Case-3

*Name-G, Male, 65 years, complaint abrasion with blood clot on the back of the right hand.*

At midnight G, woke up by some bite on the right hand and was afraid whether it was a rat, scorpion or worse still a snake. There was acute shooting pain. On examination I found scratches and blood clots. I assured the victim that it was not a cobra or a scorpion but a rat. I scratched the clot and drew out five c.c. blood from the point. The pain stopped. I administered Bilvadi Vati internally and externally as well.

## Case-4

*Name-R, Age 48 years, Male,*

complaint stagnation of blood on the right foot after an accident at about 10 P.M.

R fell down from an autorickshaw and hit a stone. There were bruised wounds on the forearms, left knee and generalised pain all over the body. He got first aid from a doctor. Five days later pain on the right ankle joint increased and he could not walk with ease. I drew 5 cc blood from a small vein near the joint. There was immediate relief in pain and he could walk easily but occasional strain on the foot. I advised one day rest.

In all the above cases Rasa-Rakta was the Dooshya, and one or the other Dosha aggravated. In the case one, Bhallataka oil is an irritant and that provoked Pitta and Kapha Doshas in Pittaprakriti and Samana Dosha during summer. Kapha being antagonistic to summer heat aggravated only in the late hours of evening coinciding with kaphakala. The application of leeches removed the main Dosha and as a result Kapha in Rasa also had no place to itch.

Vata Dosha was prominent in case-2 and with the draw of blood from the congested area, normal state was restored.

In case 3-The scratch on the skin caused a scare and as the blood was removed, satisfaction replaced.

# Conversion of Rasa into Rakta

Dr. S. M. Sathye, Poona

**T**he Hridaya or the heart situated inside the chest is the organ through which circulation of Rasa and Rakta takes place in the body, for which Vyanavayu is responsible. Vyanavayu occupies the entire body : 'Vyanah Sarvasharirajah' as it has to perform various functions of the body besides the circulation of Rasa-Rakta.

All movements of body such as running, walking, jumping and involuntary actions like closing and opening of eyelids are the functions of Vyanavayu.

The Rasadhatu is thrown out of the heart, from the left lower chamber of the heart into the aorta or Maharohini. Maharohini supplies the Rasa to all the tissues of the body and subsequently the Rasa comes back along with Mala to the right upper chamber of the heart and goes through the right lower chamber or Dakshin Javanika to the lungs for purification.

The Vikshepan or throwing of Rasadhatu as described above, out of the lower chamber of the heart called Vama Javanika is due to the Vyanavayu. The Rasa reaches everywhere inside the body. That Rudhir (blood) is Vishuddha means it is very pure as it has come duly purified from the lungs, taking plenty of oxygen. This pure blood is responsible for the strength, complexion,

pleasures and longevity of the being.

The life of the living being goes hand in hand with the blood. The oxygen is the Pran (life) of the individual. Because it is impossible to live without it for any length of time. The oxygen goes to all the tissues of the body along with the Rasa. During the process of respiration i.e. inhalation and exhalation, at every moment the blood gets purified.

## **Sira (Vein) and Dhamani (artery)**

The Rasa remaining after gratification and nutrition goes to the heart, through the Sira. This Rasa happens to be Malin (impure). The blood flowing through the veins lacks oxygen and hence it is Malin. The Venous blood contains excess of carbon-di-oxide. For the functioning of cells oxygen is supplied via blood flowing through the arteries. The Dhamanis carry the blood containing excess of oxygen.

The movement of Rasa through the Dhamanis is a function of the Vyanavayu. Cardiac efficiency test in a normal healthy individual reveals the condition of Vyanavayu in his body, i.e. whether it is proper or otherwise.

For the cardiac efficiency test the individual is thoroughly examined. His pulse and blood pressure are recorded and then he is

made to climb up and down 2 or 3 wooden steps 3 to 4 times and then again his pulse and blood pressure are recorded and inferred accordingly.

## **Rasavaha Srotas**

According to Charaka it extends from Dhamanis to Siras. The Rasa flowing through the Dhamanis spreads throughout the body and reaches the cells through the capillaries. The cells are innumerable in number and so tiny that they cannot be seen by the naked eyes and are called Paramanus (atoms).

According to Sushruta there are two Moolasthanas of Rasavaha srotas i.e. the heart and the arteries through which the Rasa flows. This Rasa can be identified with blood. Because this a nutritious and gratifying Rasa. This Rasa supplies nutrients to the cells as oxygen, glucose etc.

The Rasa changes colour from white to red within a week and part of it becomes red (rakta). The red colour of the blood is due to red corpuscles present in it.

The Rasa is white on the first day of its formation and on subsequent days turns to the colour of pigeon, green, yellow, lotus, Kimshuka (Bastard teak) and finally to that of sealing wax. Thus, after one week, the Rasa is converted into the Rakta Dhatu by the heat of Ranjaka Pitta.



## Grave Health Risks of Tobacco

*Bharat Dogra, New Delhi*

**I**t is tragic that while there is increasing recognition of very serious health hazards associated with smoking (and other forms of tobacco use), smoking as well as these other forms of tobacco use are going up in many poor countries including India. An extensive and long-term study in the UK, the results of which have become available only recently, has found that smoking can kill in as many as 24 different ways, specially through various types of cancers.

According to the WHO, smoking is responsible for most of the cases of lung-cancer. There are nearly one million new cases of lung cancer in a year. The risk for smokers of contracting lung cancer is 15 times the risk faced by non-smokers.

The risk of getting laryngeal cancer for smokers is 20 to 30 times the risk faced by non-smokers. Similarly, the risk is many times more in the case of mouth and pharyngeal cancers. There are several other types of cancers for which smokers face a much heavier risk - cancer of the bladder, cancer of the pancreas and cancer of the oesophagus. Chewing of tobacco (and related products like pan masala), common in India, is a major cause of oral cancer.

Smoking is a major cause of coronary heart disease. 15 to 30 per cent of all heart attacks in the USA are caused by smoking. Smoking also increases the risk of stroke. Both these risks are high for women.

Smoking is a very important

cause of bronchitis and emphysema. Most of the deaths from these diseases can be attributed to smoking. Smokers face a much heavier risk of stomach ulcers. Smoking also contributes to decay of teeth and gums, unpleasant breath and stains on fingers.

Cigarettes contain nicotine which is a poison and in addition it is highly addictive. It also increases the work-load of the heart. Tobacco tar contains many toxic components that can lead to cancer and respiratory diseases. In many poor countries tar and nicotine content of cigarettes are known to be much higher than in the rich countries. In addition, cigarettes contain carbon monoxide, hydrogen cyanide and many other hazardous chemicals.

Effects of smoking on women includes lower resistance of infections of the reproductive system, heightened susceptibility to cervical cancer, delayed menarche and early menopause. Dr. Veena Aggarwal told a workshop that smoking in conjunction with the use of oral contraceptives increases the chances of heart attack and paralytic strokes with the risk factor going up by eight times.

Similarly smoking can be very harmful when small children get hooked on cigarettes. Yet it is a tragic fact that smoking among women and children has been increasing in several countries.

A WHO survey conducted between 1980 and 1985 in 20 countries revealed that in Uruguay in the 15-24 age group, 72 per cent

of the females were smokers compared to 66 per cent among the males. According to another survey in France in 1984, 12% of 12 to 13 year olds and half of 16 to 17 year - olds smoked.

It has been estimated that if a man smokes 20 or more cigarettes a day at home, the risk of his wife getting lung cancer is doubled even if she does not smoke. Further, non-smoking wives of smokers are three times more likely to suffer heart attacks than those married to non-smokers. Children of smoking parents are several times more exposed to the risk of chest infections and respiratory diseases.

The tobacco multinationals are pursuing aggressive, market gains in poor countries (which can least afford the heavy health costs) to make up for the loss in developed countries. Their great future market is expected to be in developed countries, specially in Asia.

According to an international panel of experts reporting to the World Conference of Tobacco and Health held at Perth in 1990, at present nearly 3 million die each year from smoking (33% in the poor countries) but around the year 2025 these deaths are likely to go up sharply to 10 million (nearly 70% in poor countries).

Thus a great human tragedy is building up in the form of higher tobacco use in poor countries, a tragedy that can be checked only by broad-based action taken up with a sense of urgency.

*(NFS Features)*



# Structure and Function of Heart



Vd. P.C. Jain, Lucknow

## Chambers of Heart

Heart comprises four chambers namely right auricle, right ventricle, left auricle and left ventricle. These are separated by septa. The two upper auricles receive the impure blood from various parts of the body. The ventricles situated below send the pure blood to the various parts of the body. In order to control the inflow and outflow of blood there are gate-like holes in the septa. There are also holes in the blood-carrying blood vessels where they open up. For example, coronary sinus is also found in the right auricle apart from the gates of upper and lower aortas. There are holes in the pulmonary vein of the left auricle, in the pulmonary artery of right ventricle and at the spot of the opening of aorta in the left ventricle.

and pulmonary artery and left ventricle and aorta are protected by semilunar valves.

## Sound of Heart

The throbbing sound of the heart results due to the sound produced during systole and diastole which make the valves open and close the gates and is called cardiac sound. It could be heard through a stethoscope. Physiologically four types of sound occur in the heart, but normally only two are heard. The first is due to the shrinking of both the auricles during which the auricle-ventricle valves close with a sound. The sound is produced with the help of the waves produced by the apex-beat, waves produced in the aorta by the motion of blood and contraction of ventricle muscle. This sound is dull and long and just after this second sound is heard. The first sound is heard as 'Lubb' and the second sound which is acute and short is heard as 'Dub' and is produced by the closing of the semilunar valves. It occurs at the end of the ventricle closure and the beginning of diastole. There occurs an interval after the second sound and then again the first and second sounds occur and the process goes on like a cycle.

**M**an is extremely apprehensive about his heart. Whenever he has some doubt about the heart he feels he is seriously ill even if he is not a heart patient. At times we read in newspapers that a man slept in the night in the state of health but was found dead in the morning. Physicians call this sudden cessation of functioning of the heart. Acharya Charaka believes the heart to be one of the three major vital spots of the body. Let us see how does the heart function and why is it believed to be the major vital spot.

## Structure of Heart

Human heart is a fleshy structure resembling a clenched fist and upside down lotus bud. It is situated enclosed by pericardium in the chest cavity in the space between the two lungs in the domain of second to fifth ribs. It is normally 12 cm long top to bottom and transversally 8-9 cm at the widest spot and 6 cm along the sagittal direction. Among the males its weight is 280-340 gm and among the females, 280-320 gm.

## Heart valves

There are valves on the holes of the heart to monitor the flow of blood in the same direction. The valves are of different shape at the various openings. There are four groups of the valves of the heart. The hole between the right auricle and right ventricle is protected by a tricuspid valve, the hole between the left auricle and left ventricle is protected by a mitral or bicuspid valve and the holes between the right ventricle

## Palpitations of the Heart

The contraction of the heart is called systole and its slackening diastole. Contraction of the ventricles and auricles occurs simultaneously. At the time of the contraction of ventricles they send equal amount of blood in equal time and during their slackening, equal amount of blood enters the heart in equal time. If the contraction of auricles and ventricles do not occur at a time then such a condition leads to cardiac failure.

## Junctional Tissues of Heart

Eventhough there is no continuation of muscles between the auricles and ventricles, the palpitation impulse created in the heart induce the contraction of all the muscles of the heart. The impulse of the right auricle incessantly marches towards the ventricles. The motion of the impulse is accomplished by the tissues called Junctional tissues. These tissues create and transmit the cardiac impulses. Its various parts are as hereunder :

1. Sinoauricle node (S.A. Node)
2. Auriculo ventricle node (A. V. Node)
3. Bundle of His
4. Purkanj fibres

The entire system is responsible for the creation, conduction and rhythm of the heart impulses.

## Blood Circulation

Both the auricles function like a shrinkable store house and the ventricles function like a pump. 70 mm of blood is released by the contraction of ventricles for circulation in the lungs and tissues. Generally there are 5-6 litres of blood in the human body

and the heart contracts 72 times per minute. Thus the heart sends 5-6 litres of blood to the body for circulation. The circulation continues lifelong and provides blood, nutrients, oxygen, glucose, amino acids, hormones and immunizing matter to the various tissues and Dosha-Dhatu-Malas of the body. As a result of Dhatupaka in the tissues (metabolism) harmful waste matter is generated and sent by the heart to the excretory organs.

The blood is made to circulate the entire body, supply nutrients to all the tissues, collect all the waste products of the tissues and go to the heart through the veins. The impure blood of the entire heart comes to the right auricle of the heart through the upper and lower aorta and the impure blood of the heart comes through the coronary sinus to it. When the right auricle shrinks, the blood goes from the right auricle to the right ventricle. Shrinking of the right ventricle sends the blood to both the lungs through the pulmonary vein.

The process of respiration in the lungs causes the carbon dioxide of the blood to go out and the outside oxygen is absorbed by the blood. This is known as the purification of blood. The oxygenated pure blood is carried from the lungs by the pulmonary veins to the left auricle whose contraction sends it to the left auricle whose contraction in turn sends it to the left ventricle. The contraction of left ventricle pumps it through the aorta to the entire body where the body tissues are supplied with the blood and the waste matter of the tissues is collected by the blood and subsequently it returns to the heart through the veins. This process completes on cycle of blood cir-

ulation. This process was first described by Acharya Bhela in his Bhela Samhita about 2500 years ago.

## Supply of Blood to the Heart

The heart muscles do not get blood for themselves by the mere inflow of the blood from the entire body into the four chambers of the heart. The heart muscle receives blood for nutrition through the left and right coronary arteries that begin from the initial part of aorta emerging from the left ventricle. The right coronary artery supplies blood to the right auricle and both the planes of the right ventricle through a peripheral branch. An intraventricular branch emerges from its last section which provides branches to the both ventricles and joins with the intraventricular branch of the other side.

The branches of left coronary artery supply blood to the base of the left auricle and left ventricle. Ahead of this, a big intraventricular branch emerges which provides blood to the both ventricles and it subsequently is interlocked with the intraventricular branch of the otherside. The blood brought by these arteries for the nutrition of the heart is again sent by the veins of the heart to the heart after Dhatupaka. It is positioned as a hole in the right auricle between the lower aorta and right auricle-ventricle. This hole is mostly protected by a valve of coronary sinus. Acharya Sushruta also believes the heart to be the seat of consciousness.

# Prophylaxis of Heart Diseases

**H**uman heart is a hollow organ made of flesh. It is the site of Rasa and also the residence of mind and soul. It is not merely a pumpset to collect all the foul blood of the body and send pure blood to the body. Modern medicine, however believes it to be merely a pumping machine.

Everybody wants to be free from illness and stay fit for ever. In spite of all types of pollution and adulteration, the modern man desires to remain healthy, though he does not know the true meaning of health. It is not easy to say whether he is fool or wise. He is treading the road to hell but hopes still to reach heaven.

Who is healthy? Healthy is one whose Tridoshas (Vata, Pitta and Kapha) are in equilibrium, none of them being more or less or aggravated. All the 13 Agnis should also be equal. All the Dhatus (Rasa, Rakta, Mamsa, Meda, Asthi, Majla, Shukra) should also be equivalent. The waste products of the body (urine, faeces, sweat, expektoration etc) should be in the natural state, their functioning should be normal. And sense-organs, mind and soul should be happy. The functioning of mind and soul should be natural and defectless. Only such a man is healthy.

## Doshas

All the functions of the body are controlled by Vata, Pitta and Kapha. When these are in equilibrium a man stays healthy.

## Dhatus

The diet after digestion be-

comes Rasa. Rakta is produced from it, Mamsa is produced from Rakta, Meda is produced from Mamsa, Asthi is produced from Meda and Shukra is produced from Asthi, Ojas is produced from Shukra. Our body is made of these seven Dhatus and certain Upadhatus. For the state of health to continue, it is essential that all the Dhatus remain in their natural states. Now the question arises as to how and why the diseases do crop up?

When we throw the rules and regulations to winds and eat, drink and be merry, that is indulge in diet and behaviour contrary to temperament; do not care for the season, place, time age, strength, temperament etc. or use excess of rough, unctious, cold, hot, heavy, sweet, bitter, astringent, caustic salty dishes, eat before the previous meal has been digested; eat when not hungry; eat untimely; work beyond our capacity; stay awake at nights; use cold things just after hot things and vice versa; and indulge excessively in anxiety, fear, envy, evil deeds, sensuousness, anger, deceit etc. then the controllers of these functions, namely Vata, Pitta and Kapha become enraged.

These angered Doshas travel all along the body with the Rasa-Rakta. And wherever in the body there is a fault or weakness in a Dhatu or channel these Dhatus stop there and chemical action takes place between the weak Dhatus and Doshas as a result of which that part of the body becomes the site of the disease



Vd. S. A. Khan, Lucknow

and symptoms and premonitions are produced.

## Genesis of Heart Disease

When we act against the mind and soul and commit some immoral, anti-social, unlawful evil deed, say usurp other's rights to forge ahead, and become extremely afraid and worried about it. A sense of compunction, extreme sorrow, insult after insult, financial constraints, physical pain, unsuccess etc. causes silent trauma or shock to the heart. Each of such phenomenon causes a shock to the heart weakening it thereby. In other words when the aggravated Doshas send polluted blood to the heart the heart gets polluted and weakened.

When the furious Vata, Pitta and Kapha reach a heart weakened as above, they settle there and create various heart diseases. If we would live a pious, thiest, altruist, harmless, moral life so that our heart mind and soul would be happy ever and the heart would remain strong and the heart diseases would be precluded from our life definitely.

## Types of Heart Diseases

### Vataj

**Genesis :** Use of extremely rough, light, astringent, cold things in excess; consecutive use of pulses, red chillies, leafy vegetables; wakeful nights, hectic travels overexertion, lack of rest, sorrow, fear, evildeeds, sudden pleasure or sorrow, loss of a dear, unsuccess, insult, deceit, foul food and bad conduct makes the Vata furious causing Vataj heart disease by weakening the heart first.

**Symptoms :** The heart seems to be squeezed, pinpricked, churned, cut by scissors, sawed, chopped by an axe, and various other sorts of pains called colic pains. Obstructed respiration, lack of sleep, fear and vacuous feeling in the heart are present. The heart beats may be irregular.

All the above are due to the fury of Vata. Arteries of heart may be shrunk, their hollowness may be reduced. Arteries may be hardened. The walls and valves of heart may wither. The heartbeats might stop altogether. Angina pain is due to vata. People of Vataja temperament are prone to Vataj heart diseases.

**Management :** The causes of diseases must be given up at first. Unction, hot things, Ghee, milk, butter, Arjun Ghrit and other things good for heart should be given to control the Vata. Dashmoolarishta, Dashmoolghrit, Vatkulantaka rasa, Vatachintamani ras, Yogendra ras, Ashwagandharishta etc. should be used for treatment.

### Kaphaj

**Genesis :** It is caused by the

excessive use of sweet, sour, and heavy things made of Khoya, paste, meat of animals and birds of wet areas, fried things, lack of exercise, sleeping during the day, sleeping just after the meals, using curd at night, excess use of black gram etc. The Kapha gets excited in the spring season. Persons of Kaphaj temperament are likely to contract it.

**Symptoms :** Heaviness in the heart, excessive expectoration, rigidity in the body, tastelessness of mouth and dyspepsia are the chief symptoms. Excess of sleep, cough, running saliva, laziness etc may also be present.

**Treatment :** The causes must be given up. Bitter, pungent and astringent things should be used. Vomiting should be performed. Dyspepsia must be alleviated.

Arjunarishta, Arjun Twak churna, Ashwagandha, Pippali, Baheda, Aonla, honey, ginger, Praval Bhasma, Punarnava, Swarnabhasma, Yavakshar, Garlic, bark of Adhatoda or juice of leaves, Harad, Pushkarmool should be used.

Now-a-days serum cholesterol is gaining in importance in the context of heart diseases. Cholesterol is produced due to dyspeptics using heavy, unctious diet. Dyspeptics cannot digest Ghee fat and oils whereby Ama, Rasa is produced. Subsequently the grease gets separated from it which settles on the walls of heart, arteries and veins, causing obstruction in the circulation of blood. This cuts the supply of nutrition to the heart and the heart stops to beat. This is called myocardial infarction. It is not definitely established that cho-

lesterol is the cause of heart disease. The cholesterol problem is related with dyspepsia and not heart disease.

### Pittaj

**Genesis :** Use of very hot things, caustic, blood-polluting and Pitta-polluting things, such as mustard oil, putrefied and decayed meat, curd, Khoya, Rab, sunbath, wakeful nights, coitus, fierce anger, envy, sour things, pickles, wine, fried things etc.

**Symptoms :** Excess of thirst, burning in heart and chest. Feeling as if smoke is coming out while breathing. Giddiness and loss of consciousness. Excessive seating Dryness of mouth, fever, bitter taste in the mouth-eyes, skin and urine may be yellow. Tiredness is felt. Burning pain in the heart. Bile content in the vomit. Sour belchings.

**Treatment :** Giving up of causes. Use of sweet, bitter and astringent tastes. Use of Cold, Pitta-subsiding diet and conduct. Mild purgation. Use of various Pitta and Kapha subsiding drugs.

### Tridoshaj

All the three Doshas cause this type. Symptoms are giddiness, everything going dark before the eyes, inappetance, pain, withering, nausea, excess of sputum etc. Mixed treatment is advised.

### Krimij

Caused by Kapha-increasing and polluted diet and conduct. Symptoms are : inappetance, black eyes, inflammation and scabies.

Give up the causes. Treat the worms as well as the heart disease.

## Nature Care and Yoga in Cardiac Care

**T**he Heart is one of the five major organs of the body, the others being the brain, the liver, the lungs and the digestive system. Considering the amount of work that the heart does-it never stops till the death-it is subject to few disorders.

The tendency of heart to adjust to changes in the mode of living of its owner, is one of vital factors which prolong life in spite of maladies to which this king of organs is susceptible. This adjustment sometimes enables a person to go through life without suspecting the disease which invades the heart.

Like in other diseases natural cure for heart diseases is best except in case of congenital defects or in serious cases where surgery is required.

Heart patient should prefer a natural diet, which does not collect toxins in blood. His diet must include fruit and fresh vegetables. Bread of wholemeal flour is better than white flour. He must avoid saturated fats and artificial or junk foods. Use of freshly cooked food is better than tinned food. It is better to change to vegetarian diet but in case of patients preferring nonvegetarian food, steamed fish or boiled white meat may be used. Fatty portion of meat, particularly pork, should be avoided. Diet of patient must be restricted so it may not result in weight gain or overloading of stomach. Overweight patients should reduce their bodyweight. Ailments like indigestion should not be allowed to rise and heart patient should eat so sparingly

that he should feel hungry all the time. Last meal of the day should be taken at least three hours before going to bed. Enema may be taken in case of constipation.

A short walk in morning and evening is best exercise for heart patient. He must avoid stress, worry and excessive physical strain.

### Yogic Exercises

Many basic yogic exercises directly or indirectly affect the cardiovascular system in a positive way, establishing the role of yoga as a promotive and preventive approach to heart care.

Ashtanga Yoga namely-Yama, Niyama, Asana, Pratyahar, Pranayam, Dharana, Dhyam and Samadhi encompasses every aspect of physical, mental and moral development. Preventive and promotional heart care through mental relaxation following this yogic path is of immense importance.

Yogic asans bring steadiness of body and mind and flexibility of limbs. Siddhasan, Padmasan and Shivasan are of particular importance for heart patients. Heart patients should not practise Koormasan, Uttan koormasan, Dhanurasan and Mayurasan. Yoga Nidra when practised drives away fatigue.

### High & Low Blood Pressure

The treatment of high blood pressure includes restriction of solid and liquid foods specially meat extracts, alcohol, coffee and tea. Treatment of constipation, hot baths, hot packs, sweating pro-

duced naturally by exercise or by hydropathic treatment is beneficial. Haste should be avoided in lowering the blood pressure because the whole system has got accustomed to it and its sudden lowering may constitute a danger.

In case of low blood pressure massage, cold bath and nourishing digestible food are usually recommended but reasons for low blood pressures must be found. Intake of fresh fruits and green vegetables are advised. Constipation must be avoided without use of laxatives. Vitamins and mineral salt foods are also good.

### Obesity

Obesity invites heart disease like many other diseases. Mortality from heart disease is 40% more in obese persons. Obesity is due to overeating of foods rich in animal fats and sugars. Atherosclerosis is ten times more in obese persons which is the most common cause of coronary heart diseases. Animal fats, white flour and large amount of sugars is the chief cause of atherosclerosis.

### Cholesterol

According to Naturopathy when the liver is overcrowded with nutrients which can not be accepted by the general circulation of the blood throughout the body, it becomes irritated and inflamed, producing pathological by-products such as cholesterol and gall stones. Modern devitalized denatured,

*Contd. on Page 34*



# Heart Diseases

**M**odern medicine postulates three foundations of life viz., heart, lungs and brain. Among these the function of the heart is to collect the blood from the entire body and send it to lungs in order to enliven it and then receive it and supply to the body through the veins. The entire body and its limbs receive nutrition and energy through the blood only. That underlines the significance of heart. The heart functions on its own. The orders of brain are not applicable on the heart. It functions non-stop till the very end. Any obstruction to the functioning of heart is harmful. When any problem develops due to any cause it is called heart disease.

Heart is the organ situated in the chest. According to Ayurveda heart is made of the essence of blood and phlegm. This is a bunch of flesh muscles. It resembles a downward red lotus. Veins emerge from it and supply blood. The impure blood collects in the heart through the veins. Heart is the root of Rasavaha and Pranavaha channels. Vyana Vayu is situated in the heart. It is also the site of Ojas, soul and mind.

Most of the diseases of heart occur due to the obstruction in one or the other blood veins and if the obstruction develops and the flow of blood is stopped then the palpitation of heart would stop and immediate death would result. This is called the heart attack or the heart-block.

Heart diseases may be congenital as well but mostly it occurs due to the obstruction, or

inflammation of blood vessels. Human diet invariably comprises fat. This fat may be added separately or inherent with some article of the diet. It is obtained from animal substances like ghee, butter etc or plant substances like oil. It reaches the stomach with food where digestive juices digest it. It is absorbed by intestines and gets dissolved in the blood. It is used as energy. The excess of fat collects as such. The animal fat is called saturated fatty acid and the plant fat is mostly unsaturated fatty acid. Within blood it exists either free or combined with proteins as lipoproteins, which is soluble in blood. The latter has two kinds, alpha and beta. The alpha variety is comparatively less dense. Cholesterol is a type of animal fat. It has no fatty acids. It is not soluble in the blood. Lipoproteins carry it to various sites.

Cholesterol is also a necessary substance for the body as it is a component of brain and ligamentary system. However, the body needs it sparingly only. But the supply of cholesterol through food exceeds the need greatly. It is absorbed by Pitta and is excreted as acid through the body. Function of liver is to produce the required cholesterol, keep it preserved and destroy it. But when its concentration increases in the blood, liver has no hold upon it and the excess gets deposited in the walls of blood vessels, thereby reducing the space for the free flow of blood. Thus the cholesterol creates obstruction and causes heart disease. Its deposition



*Pt. K. G. Gore, Lucknow*

causes excrescency wound in the vessels and lack of space for the free flow of blood causes clotting of blood. Lack of flow of blood causes lack of oxygen. These are the causes of heart diseases and consequent death.

According to Ayurveda, improper food and behaviour are the root causes of heart disease. Improper food consists of spicy and greasy fried stuffs which are Rajas and have been forbidden as such. Sattvik food provides less fat and precludes the danger of extra cholesterol. When the stomachic fire is burning bright the fat gets properly digested.

Ayurveda lays great stress on regular exercise as well. In its absence the fat inside the body does not get properly digested. Therefore regular exercise has been recommended for the proper functioning of heart, lungs, liver & spleen etc.

Ayurveda deems necessary the happiness of mind as well for maintaining proper health. If instead of happiness, the mind is engrossed in worry, sorrow, fear or pressure then the limbs of the body would not function properly.

*Contd. on Page 35*

# How to Preclude Heart Attack ?

The various heart diseases might cause the heart attack. This occurs mainly in coronary thrombosis, cardiac infarction and coronary occlusion etc. In coronary thrombosis there may be an obstruction in any one branch of the coronary artery or there may be a localized inflammation of pericardium. Coronary occlusion occurs due to the coronary arteries being atheromatous. In this condition obstruction in the branches of coronary artery is very easy. The other causes of heart attack are obstruction in the coronary arteries which have become thin due to syphilis and infective pericarditis.

## Causes

Tests have revealed that the overuse of fatty diet increases the blood cholesterol and causes arteriosclerosis whereby the ends of the branches of coronary artery and their holes shrink. In this the ascending branch of the left coronary artery is affected mostly. This causes the development of infarction in the left ventricle. There may be localized pericardial filament inflammation as well. Alternatively, there may be aneurism and rupture due to the extension of coronary artery. Sensualism, alcoholism, smoking and lack of exercise are the contributory factors of the diseases.

## Symptoms

The disease occurs mostly to those who are above 50. These have a history of pain in the chest.

In diseased state suddenly severe pain shoots up in the chest behind or below the sternum. The pain may extend up to both the arms, throat or stomach. The patient may also complain of dyspnoea, nausea and vomiting. The pain is lasting and may last from few hours to several days. The patient suffers from extreme restlessness, loss of peace and complexion, too much of sweating and blueness in the lips and nails due to paucity of oxygen. ECG does not reveal any disorder in the beginning. Pulse becomes weak i.e. 90-100 and the blood pressure drops. The systolic pressure is reduced to 100 mm or even lower. The cardiac sound seems to be coming from very far and the palpitation and rhythm become abnormal.

Some patients exhibit fullness in the veins of throat, blueness in nails and lips and inflammation of liver. In some patients the disease may originate from coma associated with pain. In the beginning the body temperature is raised and remains as such for 3-4 days. The blood test reveals an increase in the number of white corpuscles, E.S.R., S.G.O.T. and S.G.P.T. In a day or two rub may also be present. In severe conditions shock and retention of urine may occur. The disease is identified by the results of E.C.G. wherein variation of R.T. section occurs. If the disease persists then other complications like congestive heart failure, pericarditis, cerebral thrombosis, venous thrombosis and



*Dr. Pramod Malaviya, Lucknow*

pulmonary embolism may take place. Immediate medical attention increases the possibility of survival.

## Treatment

Preclusive treatment is more important in the management of heart diseases. Care is taken to obviate coronary thrombosis and if at all it develops then it is not allowed to recur. After attaining the age of 50 one should so discipline himself such that the disease does not occur. According to Ayurveda the main preclusive step is to give up the causes. For this, use of excessively unctuous dishes, use of extremely sour, piquant and spicy things, drastic purgatives and enema, incessant drinking, tobacco and use of other intoxicants, persuasion of inactive and sensuous life, consuming food of more than requisite calories for daily activities should be given up. Diseases like diabetes, kidney and liver disease should not allowed to develop which abet heart diseases. If such diseases befall, they should be promptly treated forthwith.

**Diet**

The diet should be such as to supply the necessary amount of energy for the activities of the individual and no more. Obesity should be reduced. Diet should not abound in unctious, milk should be skimmed before use, buttermilk should be used. Butter, ghee and sweets of Khoya, Dalda should be given up. Mustard oil is best for use. Green vegetables should be used. Things which minimise the fat in the blood should be used such as Guggulu, onion, garlic, buttermilk and curd. These things are useful to keep the blood in the fluid state, digest the food, clean the bowels and carminate the wind. 10 gm of guggulu taken daily after purifying it with the decotion of Triphala reduces the apprehension of heart attack.

**Medical Management**

In case of heart attack, the patient should take complete bed rest. For relief in the acute pain morphine injection should be administered. Restlessness, pain and dyspnoea gets subsided by the use of oxygen. Keep hot water bottle under the legs of the patient. Glucose drip could be given on doctor's advice to keep the blood pressure constant. After the restoration of normaly any of the following prescription may be used as per vaidya's suggestion.

- Vishweshwar Ras 1 decigm, Nagarjunabhra 1 decigm. Mukta pishti 2 decigm with honey 3-4 times daily.
- Manikyadi Yoga 1 decigm. Hritchintamani 2 decigm. Muktapanchamrita 2 decigm with honey 3-4 times daily.
- Yogendra Ras 1 decigm. Nagarjunabhra 1 decigm. 3-4

times daily with honey.

- Trailokya chintamani 1 decigm, Brihatvatachintamani 1 decigm. 3-4 times daily with honey.

If the pulse is fast 4 decigm Arjuna bark powder may be added to above.

If there is distention of stomach take Hingwashtak churna 4-6 gm twice daily and 25 ml Draksharishta with equal water for digestion daily two times.

In case of stomachache take Makardhwaj 1 decg Brihat vata chintamani 1 decigm. Shringbhasma 3 decigm 3-4 times a day.

Those who have a weak heart due to one heart attack are always in an apprehension of another attack. They should take or 2 decigm Jawaharmohra, Arjun Kshirapak in the mornings and evenings with honey.

*Contd. from Page 22*

in the best state of health only. Therefore the physician should maintain the equilibrium of Dhatus by making the patient follow the rules of hygiene. An adept physician can infer the happiness or its absence by just observing the face of the patient.

**Genesis of Blood diseases**

The blood vessels become vitated by blood-aggravating food and behaviour and also by mental causes like anger. This causes diseases. For example if the food and behaviour aggravates the malodour of Pitta then the vitiated blood putrefies and creates skin diseases like leprosy, ringworm, Visarpa etc. If the liquidity of Pitta is aggravated then the blood does not coagulate in cases of wound etc causing scurvy. If the acute-

ness of Pitta is aggravated then confusion, sleep, diseases of head, redness of eyes result.

Acharya Vagbhat says that those diseases which do not yield generally to cold, hot, greasy and rough treatments carried out methodically should be deemed as diseases caused by blood. He implies that the vitiation of blood is caused by food and behaviour that increase Kapha.

**Treatment**

In diseases caused by blood, symptomatic treatment provides temporary relief. Generally Rakta and Pitta subsiding actions, Pitta-purifying and subsiding treatments, vomiting, purgation etc. are carried out.

**Prescribed**

Bitter things, old Shali rice, barley, green gram, lentil, gram,

yellow gram, sugar, honey, candy, sweet meat Aonla, banana, water melon fannel seeds, cuddappa almond (Chirounji, Priyala) Bael, white gourd, cold water, ginger, water caltrop (singhada), jack fruit, pomegranate, coconut, dates, raisins, sultanas, cow's and goats milk, buffalo's ghee, oil massage, bath and cleanliness of body.

**Proscribed**

Sour things, salty, hot, caustic and pungent dishes, sesame, horse gram, beans, mustard vegetable brinjal, genetic, card, well-water, jaggery, wines, betel leaves labour, exercise, sunbath, fire, smoking sexual intercourse, anger, worry sorrow etc.

# Lifestyles and the Heart

*Dr. Peeyush Jain, New Delhi,*

**W**illiam Osler, the famous physician, was not far from reality when at the beginning of this century he concluded that coronary heart disease (CHD) predominantly affects the better-off members of the society. Therefore, the accepted view is that in India, CHD is more common among the relatively affluent. Those lower down in the socio-economic ladder do not consume animal fat in significant quantities; nor have the acquired sedentary habits due to the physical demands of their vocations. Tobacco abuse, however, is widespread among the poor. But these are, at best, informed guesses. In fact, the prevalence of high blood pressure and high cholesterol among the economically backward social classes is not well-documented.

Affluence brings in its wake changes in dietary habits and the level of physical activity. Many parts of India are nearing the level of industrialisation that the West had witnessed in the middle of this century. This development is likely to narrow class differences and lead to lifestyle shifts towards relative affluence. With such social re-organisation taking place, the prevalence of CHD is likely to increase.

**DEVELOPED WORLD'S EXPERIENCE :** On the other hand, many developed nations are experiencing a continuing decline in the CHD death rate over the past 15-20 years after reaching the peak. Researchers attribute

this shift to better medical care as well as a primary prevention strategy based on systematic health education and mass-scale screenings to detect CHD risk factors like high blood pressure and high cholesterol.

These programmes are run on a national scale and lay strong emphasis on desirable lifestyle changes. The principal beneficiaries of such programmes, however, are the affluent who are better informed too.

## **IMPLICATIONS FOR INDIA**

These observations from the West have tremendous implications for India in the near future. Because they point to the prospect of the lower and middle-income groups facing an increased CHD risk in the foreseeable future, if the na-

tion's economy continues to grow at the current pace. What is needed now, therefore, is a practical and cost-effective primary prevention strategy at the national level.

Such a programme is as necessary as infectious diseases control, family planning and maternal and child care because it will be extremely difficult to control the CHD epidemic, once it breaks out. The West has spent several decades trying to control it. But, despite all the resources at its command, it has been only partially successful. So, it's time for the country so manage its future, and the easier way to do it is to take the route of primary prevention at the community level.

*Contd. from Page 30*

commercialised diets of so-called civilized world is major cause of high cholesterol. Intake of alcohol, tobacco, high protein and high carbohydrates in form of white bread, pastries, cookies, desert toppings, chocolate, carbonated drinks must be considered while treating for high cholesterol. Instead of taking these artificial foods use of fruits raw vegetables, salad, whole wheat and grain products, soyabean preparations, vegetable and sunflower oils, onion juice and garlic are always beneficial.

It must be remembered however, that lifestyle modifications may work as preventive measure and in non-critical cases. There is no alternative to surgery in critical cases of atherosclerosis or other heart diseases. Exercise programme in these cases may backfire because the patients generally have low exercise tolerance. Even in critical cases meditation and yoga can be used for relaxation before surgical operations.

# Diet in Low Blood Pressure

Dr. Chandra Shekhar Awasthi, Banda

**T**he constant pressure of blood over the blood vessels is called blood pressure. Generally it happens to be 120 mm Hg systolic and 80 mm Hg diastolic in healthy persons.

When the heart contracts blood, it is suddenly pushed into the arteries and the pressure is increased in them. The maximum increased pressure is called systolic pressure. During the expansion of the heart no blood comes into the arteries but the blood in them moves forward nonetheless so that the pressure in them becomes lesser and lesser. But the pressure never goes below a certain point which is called the diastolic pressure. When the pressure of blood is less in the arteries i.e. in low blood pressure the blood does not reach the various limbs of the body in required speed and amount.

Among the reasons of low blood pressure the main reason is the weakness of the heart muscles. This condition is observed in diseases like diphtheria, pneumonia, typhoid, inflammation of heart muscles etc. In low blood pressure the total quantity of blood is reduced. This condition occurs due to excessive bleeding, burns, severe diarrhoea, nausea, cholera, intestinal obstruction, diabetic acidosis etc. due to the removal of body water and electrolytes. It is found in constructive pericarditis, wherein the heart does not expand properly. Mental shock, anxiety, sorrow and imbalance of diet may also cause this disease.

According to Ayurveda, due to the slow motion of Vayu the flow

of blood in the arteries is reduced whereby its velocity is also diminished. Lack of blood circulation is the chief cause of the disease. Confusion, giddiness, weakness, apathy to work, paleness of body and tingling in hands and feet are the symptoms observed. The head seems to be empty. At times unconsciousness occurs. The pulse is weak and can be easily compressed with fingers.

In sudden low blood pressure black mustard or dried ginger should be ground with water and applied on the underfeet and hands. The patient must have mental and physical rest. He should be wrapped in a rug. His head should not be raised while sleeping.

During the initial stage the patient should daily take the tea of ten Holy basil leaves, black

pepper 4, clove 2 and cardamom 1. Also take shringbhasma-2 Ratti, Rasa Sindoor- 2 Ratti, Abhrakbhasma- 1 Ratti twice daily with honey.

The patient must take easily digestible and nutritious diet. Let him have green gram, fresh fruits like apple, papaya, fig, mango in plenty. Milk and things made of pure ghee, almond, pistachi, cashewnut, walnut etc. clove, the greater cardamom, black pepper, Indian cinnamon, cinnamon bark, dried ginger, asafoetida are healthsome. Green vegetables are extremely useful in this sickness. Use extra salt.

Cold things like ice, curd, buttermilk, cold drinks etc. are not allowed in this disease. Exertion, mental strain, going without sleep, frequent overeating are extremely harmful.

## Contd. from page 31

The following steps are to be taken to avoid the occurrence of heart disease :

- Eat only when you are hungry and sparingly only. Never eat to the fill.
- Food must be predominantly vegetarian.
- Minimise animal fat such as cream, butter, ghee etc. in the food.
- Also use the plant fat sparingly only. The total content of the fat should not exceed two little spoonfuls.
- Give up eggs and non-veg dishes.
- Minimise salt and sugar as well.
- Do not smoke.
- Perform light exercise daily.
- Sleep early in the night and

rise early in the morning.

- Keep your bowels always clean by taking to fasting or by taking purgatives.
- Avoid over-exercise and over exertion.
- Form the habit of morning walking.
- Try to free the mind from worries, tensions, frets, anger and dilemmas.
- Never act in haste, keep your equanimity.
- Keep the body weight under control. Do not grow fat.
- Indulge in breath control and meditation regularly.

The above wholesome devices will not only preclude heart diseases but all other diseases as well.

# Diagnosis in Heart Diseases

*Here are some tips to routine tests and equipments used therein to diagnose some of the common Heart Diseases.*

## Chest X-Ray

Chest X-Ray can be used for identification of heart size and shape, conditions of aortic and pulmonary vessels and the lung fields.

## Stethoscope

Although Stethoscope is the most common equipment of doctors, it can be used to note heart beatings and experienced doctors may also detect anomalies in heart beatings, particularly in emergency where other diagnostic equipments are not available.

## Electrocardiogram (ECG)

Electrocardiogram is common equipment which records electrical impulses produced at the time of contraction of heart and distributed throughout body through skin. With the help of a small printer it prints these signals on a sheet of graph paper. Technological inventions have developed ECG into a small portable & reliable equipment. ECG is useful for diagnosis of heart disorders and defects of conduction, myocardial damage, coronary heart disease and enlargement of cardiac chambers.

A exercise ECG has also been developed which is attached to a exercise bicycle or treadmill and records while a person is doing exercise. This equipment is very useful in the patients who do not show any sign when resting.

A Holter Monitor is portable ECG which is attached to a pa-

tient's body. It is fitted with batteries and recorder and records patient's heart beatings for 24 hours. This is very useful to note patient's heart condition at different times of day and night and efficacy of drugs if they are being given to him.

## Echocardiography

This technique is based on the principle that sound waves are reflected from various body tissues in different proportions. High frequency sound waves are released and after, they get reflected from various structures of heart, these are recorded electronically in the form of images. Echocardiography is



useful for diagnosis of myocardial diseases, infection in heart valves and pericardial diseases.

## Angiography

This method provides inside view of heart and big vessels. A catheter is inserted in the heart through a small hole in big vessel. With the use of radio opaque dye and fluorescent screen, inside images of heart and arteries can be seen on the screen. This method requires use of tranquiliser and hospitalisation.

## Indigenous Pacemaker

Development of a compact cardiac pacemaker has been completed and the scientists are working on an implantable pacemaker which can be placed inside the patient's body. Sometimes the heart fails or does not work properly and an artificial pacemaker is needed.

A PC-based cardiac pacemaker was developed to provide proof-of-concept testing of the hardware and software, says Dr. K. V. Ramanasai,

Head of the on board Computer Division of the Research Centre Imarat (RCI), one of the key defence research units involved in missile development. Clinical trials were satisfactorily carried out on 130 patients using this device. A compact version, which would fit into the palm of the hand, was ready and clinical trials would begin shortly. Defence engineers were working on an even smaller and more power efficient model.

# New Life to Heart Non-Surgically

*Yashashri Shukla, Lucknow*

**C**logged coronary arteries laden with fat are unable to deliver enough blood and consequently oxygen to the heart, leading to a squeezing and crushing pain in the chest. This ischemic pain is the result of stenosis or narrowing of coronary arteries. Initially the patient feels pain in the chest only after an exercise called as, stable angina pectoris. In florid forms however the patient suffers from severe pain even during rest called as unstable angina which also heralds the entry of coronary heart diseases (CHD).

According to WHO, about 12 million people die every year due to coronary heart diseases, half of which are preventable as a result of alternation in living habits and modifications in psychosocial factors. Smoking, hypertension, hyperlipidemia, truncal obesity, physical inactivity and *Diabetes mellitus* prove to be the main risk factors contributing to coronary heart diseases.

A condition of unstable angina called Myocardial Infarction (MI) wherein the patient may suffer a heart attack any time is usually the stage when a definite treatment - be it a coronary artery bypass or percutaneous transluminal coronary angioplasty (PTCA) commonly known as balloon angioplasty is recommended.

The extent of the disease i.e. whether it involves one or many arteries usually determines the procedure to be adopted. If more than one vessel is affected or if a single vessel with diffuse involvement is present, surgical proce-

dures like coronary artery bypass graft (CABG) is prescribed.

In order to decide whether a patient has to go in for balloon angioplasty or a bypass surgery an accurate diagnostic aid called angiography is applied. Here a catheter is introduced through the groin artery and advanced to the coronary artery via the aorta (the biggest artery). On reaching the root of the coronary artery a dye is injected which reveals its internal anatomy on the X-ray monitor.

This investigative procedure paves the way for a non-surgical non-operative balloon angioplasty. The procedure is similar to angiography except that here an assembly of balloon catheter with a guide wire is progressed to the root of the coronary artery. The guide wire is passed beyond the stenosed segment and the deflated balloon is also positioned accordingly. The balloon has gold marks on it which makes it visible on the X-ray monitor and also enables proper placement. Dye is filled in the balloon and alternate compressions and inflations in the desired stenosed segment stretch the arterial wall to a considerable extent. By using balloons of different sizes, the desired lumen of the artery is obtained and the patient can leave for home in a couple of days.

Prof. M. Hasan, K.G.M.C., Lucknow while talking about Ischemic Heart disease in India during a Medical Conference organised as part of 'Mission to India'94 (sponsored by Cromwell

Hospital, London) revealed that PTCA was introduced in India in 1989 and the number of cases using this procedure has risen from 1100 (1989) to 4187 (1993). But the complications following PTCA, mainly abrupt closure of vessels or restenosis have led to serious implications. As part of the strategy to use PTCA without thrombolysis a new technique using stents has been devised.

Doctors in India have recently introduced a new non-surgical technique to clear clogged arteries known as Directional Coronary Atherectomy (DCA), this technique uses a miniature drill like instruments to literally "shave off" the fat deposition along the arterial walls. DCA is more effective than PTCA in many cases and shows a success rate of over 97% with very low recurrence according to Dr. Ashok Seth, Senior Cardiologist and in-charge of Catheter Laboratory and Angioplasty at the Escorts Heart Institute.

The only limitation in these techniques is the large size of the devices used as the coronary arteries are extremely narrow and follow a circuitous path thereby increasing the risk of rupturing the artery wall. Indians however have yet another impediment to face - reports claim that Indians are at a greater risk regarding coronary heart disease owing to an anatomical feature of smaller coronary arteries, the exact cause of which is not yet known.

However, with the adoption of such novel techniques, the human heart can provide years to our lives and life to our years.

# Angina Pectoris

Vd. Braj Bihari Mishra, Lucknow

**A**che of the heart is called angina pectoris. It is a fatal disease. According to Ayurveda, the vata obstructed by Kapha and Pitta aggravated due to improper food & behaviour gets mixed up with Rasa and goes into the heart, settles there and causes pain, due to which the patient's exhalation becomes extremely blocked. The pain shoots up from the chest and goes into the left hand internally till it reaches the tips of fingers. At times, the pain is felt on the back of the neck at the left side. Generally, this condition occurs after some defect has set in the blood vessels of heart and subsequent lack of oxygen. Difficulty in breathing is the chief symptom of angina pectoris.

According to modern science this disease is more common among the males than females. The patient's arteries are hardened. This disease occurs due to vata, syphilis, diseases of blood vessels, diseased kidneys, gout, obesity, excessive drinking, excessive smoking, anxiety, worry, extreme physical labour, passion and sometimes heredity.

## Identification

Excruciating pain in the heart, increased rate of pulse, increase of blood pressure, distention of stomach and plenty of urination after the attack has subsided.

## Main Symptoms

Severe pain arises at the site of heart. It suddenly shoots up at

night while sleeping. The intense pain that shoots up suddenly gets slowly subsided. Pain is felt on the fore side of the chest but sometimes it may occur at the back or left side. The pain is so intense as if cutting and tearing is being done. Sometimes burning also is present. Dyspnoea, at times dripping of water from eyes and nose, nausea, occasional vomiting, irregular pulse, aggravation or too weakening of palpitations etc. are the main symptoms.

## Consequences

The patient may die during the attack of the pain or thereafter due to the failure of heart. Death is possible even during the first attack. After the attack, the patient breathes with force. Usually yellow urine passes; belchings occur and the patient writhes in pain. Charaka has enumerated rigidity and coma as the special symptom of Vatik heart disease.

*Vepathur veshtanam  
stambhah pramohah  
shoonyatadarah.*

*Hrdi Vatature roopam jeerne  
chatyarthavedana.*

Heartache and coronary thrombosis are the specific symptoms of Vatik heart disease. The pain and symptoms of both are at variance :

## Treatment

The patient of angina pectoris should not be allowed to do any work involving hard labour. Ask him to be free from worries and take absolute rest. Give him complete rest after meals. Protect him from cold. In winter, cover his chest with proper warm clothings. If the heart is too weak then let him pass urine and have motions without leaving the bed. Even after he has improved, he should not climb stairs or run about. The following medicines provide benefit if properly taken under the direction of a physician.

250 mg. Shringa Bhasma and 125 Abhrak Bhasma should be licked mixed with honey.

Prepare a dose of 125 mg Ras Sindoor, 125 mg Prabhakar vati and Hridayarnava 125 mg, add 500 mg Pushkarmool and Rudraksha powder, mix with honey and let the patient lick it, thrice daily.

Mix 1 gm Shringa Bhasma with 3 gm cow's hot ghee and prepare two doses of the same and give in the mornings and evenings.

Add 250 ml water and 12 gm Arjun bark to 250 ml milk and boil till the milk only remains, then add sugarcandy, strain and give to drink.

### Angina pectoris

The attack follows labour, emotional impulse or meals. The patient stands still,

### Coronary thrombosis

The attack occurs at night while sleeping. is afraid of moving his face



### **Experienced use**

My centenarian grand father Pranacharya Mannoo Lal Mishra used to give the following medicine to the patients of angina pectoris which was invariably successful :

1 Ratti Rasa Sindoor, 2 Ratti Nagarjunabhra, 2 Ratti Shringa Bhasma, one gm pushkarmool powder, 5 gm *Piper longum* powder and 1 gm Arjuna bark powder comprises one dose. The patient is to lick the medicine mixed with honey and subsequently take Arjunadi Kshir pak.

### **Wholesome**

Light, cold, quickly digestible, nutritious food. Keep the patient in a clean place. Keep him away

from worries, sorrow, anger and other passions.

### **Unwholesome**

Tobacco, wine, tea, coffee, heavy and lately digestible food are not to be given to the patient.

### **Defect in the Heart**

The heart has three chief parts and usually these become defective in heart diseases. The heart acts as a pump, which does not function properly when the valves are defective, similarly when the valves of heart are defective then the heart does not function smoothly. There are many forms of heart disease, such as congenital (defect in the structure of heart) disease and diseases of valves and muscles of heart, shrinkage or stoppage of

coronary veins. In such conditions a part of the heart goes without proper blood circulation, which causes heart attack. It is a fatal disease. It is conclusively known that certain fatty substances flowing in the blood circulation settle on the inner walls of vessels and thus constrict them. Certain substances flowing in the blood like fibrin and calcium settle over the fatty substances and thus the blood circulation is further reduced or stops altogether. Due to lack of blood the electric flow in the heart muscles is disturbed and consequently the functioning of heart becomes defective. A disease called angina occurs due to deficient blood supply to the heart muscles.

Vaidyaratnam P.S. Varier's

## **ARYA VAIDYA SALA, KOTTAKKAL**

Arya Vaidya Sala, Kottakkal is synonymous with Ayurveda in the country. A renaissance that took place in Ayurvedic science in the small village "Kottakkal" years ago has now become a legacy for others to imbibe.

Founded in 1902 by the late Vaidyaratnam P.S. Varier, the institution is famous for its traditional-Superior quality-Hygenic-Health Care Products and its unique treatment centre-the Nursing Home Complex at Kottakkal.

### **Ayurveda-Science of Sages-Adapted to Modern Ages**

#### **Branches :**

Kozhikode, Palakkad, Tirur, Ernakulam, Thiruvananthapuram, Aluva, Madras, Kannur, Coimbatore, New Delhi - 49 and 700 authorised agencies.

Phone : 2216-2219, 2561-2564, 2571 2572 (STD Code. 04934)  
(EPABX, TDBX 200 Lines) Fax : 04934-2210

*For details, please write to :*

**The MANAGER**  
**ARYA VAIDYA SALA**  
KOTTAKKAL - 676 503

# Take Care of Heart Disease

Two million people in the United Kingdom suffer from angina, and more than 300,000 have a heart attack each year. Although in the younger age groups, those under 45, the incidence is falling, coronary heart disease remains the single largest cause of death in the country. A heart attack is still the most often quoted reason for premature death.

The accusing finger is often pointed at the diet in general - lack of fresh vegetables, for example, can be an important cause in blocking up your coronary arteries.

The emphasis is increasingly against thinking of individual dishes as being good or bad, but reviewing the diet as a whole. This means balancing the entire menu over a period of weeks - the occasional treacle pudding, for instance, can be traded off against grilled fish, tomato and peppers.

More emphasis is being laid on what can be eaten without anxiety, rather than on condemning those foods which have to be viewed with caution, and taken only in strict moderation.

The ideal is to have a helping of five different vegetables or fruits daily. Sprouts, spinach, broccoli, peas and beans are as good for you as nanny insisted. Carrots, peppers and tomatoes are rich in carotenoids and other flavonoids, as well as anti-oxidants which are thought to preserve the health of the lining

of the coronary arteries, thus preventing the deposition of atheroma and lowering the blood pressure.

Vegetables contain a wide mix of anti-oxidants, which account for the dietician's belief that eating the natural product is more effective than taking a pill (which usually contains only one). Lettuce, however, may add colour to a salad but is almost totally devoid of any food value.

## Obesity

Obesity is associated with diabetes, hypertension, heart attacks and heart failure. Obesity is particularly dangerous to the cardiovascular system when the excess weight is at the mid-line, when the patient has a protuberant belly and chest but spindly limbs. People with legs like tree-trunks and arms like a wrestler's, and a thorax and abdomen to match, tend to have less heart disease. Patients look rather surprised when their doctor acts like a tailor, produces a tape measure, and compares the girth of their abdomen with their hips. The waist should measure less than the hips.

In order to help their heart, the aim of all those who are overweight should be to lose 2 lb a week, regularly and steadily, until the ideal weight is achieved. Losing weight too quickly may alter the body's metabolism, so that any future weight loss is more difficult, and weight gain once the diet is abandoned, too easy. A

low-fat diet - but not a non-fat diet, for some fat is an essential part of a healthy diet - will help reduce cholesterol levels of those who are at risk.

Fat should not provide more than 35 per cent of the total daily calories count, and less than half of the fat intake should be in saturated form. Saturated fats are found in dairy produce, meat and eggs. Margarine should be made of unsaturated fats, preferably mono-unsaturated fats such as rapeseed, rather than polyunsaturated fats. In normal weather the salt intake should be restricted to not more than the equivalent of one teaspoonful a day, including that already present in cooked food.

## How to Lose Weight ?

Have three meals a day; Maintain the same pattern of eating; this also helps intellectual concentration. Eat in the dining room or kitchen.

Avoid biscuit, high-calorie soft drinks, crisps, chips, ice cream, chocolates and junk foods. Don't eat between meals. Don't drink alcohol at lunch time.

**CALORIE WATCH :** Use low-fat spreads. Beware of unspecified cooking oils - use only those made from mono-unsaturates, like olive or rape-seed oil, or polyunsaturated. Avoid frying whenever possible - grill or steam instead. Substitute skimmed or semi-skimmed milk for whole milk.

# Surgery of Blocked Arteries

It is necessary for the healthy heart that arteries, through which blood flows, remain healthy and without blood clots. Our arteries also show symptoms of ageing with our growing age, their lumen gets narrower day by day due to deposition of atheroma, a sticky substance on their inner walls. Sometimes this deposit becomes thick resulting in narrowing of lumen to such an extent that it affects blood flow. This blockade is known as 'plaque'. In this condition heart does not get proper blood supply resulting in Angina or Myocardial Infarction. There are several reasons for this described in other articles also.

If the changes in the heart due to Angina do not appear in normal ECG then an exercise ECG is taken while patient is doing some physical work. As the changes appear, patient is told to stop exercise and take rest. For final examination Angiography test is done in which a thin catheter is inserted through big artery near thigh towards heart. Inside pictures of artery can be seen on a monitor. This gives correct location of 'Plaque'.

## Angioplasty

If in a patient quantity of plaque is not more and his artery is not otherwise damaged, a balloon is inserted through a catheter and blown at the place of narrowing. This inflated balloon does not constrict after inflation, resulting in smooth blood flow through artery. Angioplasty has not been successful in India in comparison

to west due to the reason that arteries of Indians are narrower and usually infected by other diseases. In this condition, after removing the plaque, a thin tube called stent is placed at the narrow place for smooth blood flow. These methods do not give a permanent solution for which bypass surgery is resorted to.

## By-pass Surgery

Permanent and effective treatment of this malady is by-pass surgery in which a new passage is made surgically for smooth blood flow. A part of leg vein or artery is taken for this and attached prior to blocked space and connected with coronary artery.

Sometimes by-pass surgery does not give desired result because a person does not change his bad habits or due to hereditary or other reasons blocks begin to appear at other arteries. In these patients clot-removing drugs like Streptokinase and tissue plasminogen activators are given. A method has been devised to directly supply blood from heart to heart muscles by making thin holes by a type of needle or laser.

## Discovery of Indian Surgeon

In 1969 famous cardiac surgeon of Bombay Dr.P.K.Sen devised this technique and made holes in heart using a thin needle. He found that outer openings of holes close themselves and blood supply to heart muscles continue. This type of surgery is being done at other places of India also. Recently some American surgeons have started the practice using laser for this purpose.

## Artery Surgery Using Laser

An American company has devised a catheter with laser. When this catheter is inserted through big artery near thigh and reaches at the place of blockade (found by using X-Ray opaque dye) laser ray of appropriate strength is thrown to dissolve the clot. Although this technique is in developing phase it has immense potential. There are some problems also like clots in a narrow artery where inserting a laser catheter is not possible.

## Subscribe for Jeevaniya

*Jeevaniya is not merely a Magazine, It contains scientific information about Health Care which is the essence of many treatises and practical experience of our learned physicians. Every issue of Jeevaniya is as good as a reference book on primary health care of a given aspect, organ. Subscribe for Jeevaniya in English or Hindi at merely Rs. 50 per year to ensure healthy living in your family.*

# Natural Way to Live Long

Promilla Chauhan, Aligarh

**D**espite decades of medical advancement, heart disease remains a killer of millions. While super drugs and miracle surgery are vital in a crisis, a more effective weapon (alongwith medical treatment of course) is carrots, calcium and plenty of love and compassion.

High blood pressure can be lowered by changes in the diet, say the latest American Heart Association reports which testify that vegetable diet and compassion were making headlines as much as bio-engineering of genes was which helped arteries from reclogging.

Generations back, the average Indian did not swallow tonics and vitamin tablets that come in attractive packages. The main tonic was good food, fruits and specific herbal plants which had rejuvenating properties that helped tone up the system irrespective of caste, colour or appearance. He or she swallowed what was good for health. There are several foods containing calcium, potassium and magnesium. They will help normalise blood pressure and protect your heart and overall health. Potassium may help counteract the effects of sodium.

It is noted that there is something in a vegetable diet that makes people live longer. Also, people who eat more vegetables and fruits enjoy better mental health according to research done at the University College of Swansea in Wales. Increased intake of vitamins and minerals tend to

remove depression but it is said that this applies more to the women than to men.

**Here are a few health secrets :** Drink buttermilk daily if possible, as it is rich in yeast and lactic acid and is also fat-free. Butter-milk is the best beverage for rejuvenating the system and increases flow of urine, improves digestion and enriches the body cells.

Those with a weak heart should take plenty of dates after soaking them overnight in water. This could be taken at least twice a week. This will strengthen your heart and remove tiredness and nerve exhaustion. Besides this, lotus flower petals can be boiled in water and mixed with an equal quantity of milk and taken once in a while for toning up your heart.

For cardiac problems hibiscus petals can be boiled in water, mixed with milk and sugar and taken on an empty stomach. Grapes too act as a rejuvenator. Grape juice is a good heart tonic.

Figs are extremely useful to build up body resistance and increase blood formation. One or two figs a day act as effectively as high potency vitamin for vitality.

Fresh vegetables such as fenugreek leaves and bitter gourd help in blood formation.

Those suffering from cardiac trouble due to high blood pressure should have a dose of fenugreek seeds in water and a drink of buttermilk with lime juice to help reduce blood pressure and cholesterol.

Garlic, onions and rock salt are rich in magnesium sulphate. Eat plenty of high potassium fruits (bananas, oranges, apples, cantaloupes), leafy vegetables and whole grain products. Potatoes, tomatoes, spinach are all good potassium foods.

Calcium is also good for controlling blood pressure. It helps to relax muscles in blood vessels, letting blood flow through more freely thus reducing the pressure on artery walls.

Research at the City of Hope National Medical Centre showed that magnesium helps prevent the formation of blood clots that lead to heart attacks and strokes. Magnesium also helps to relax muscles in blood vessels, letting blood flow through more freely, thus reducing the pressure on artery walls. Magnesium also helps to normalise erratic heartbeats (arrhythmias) in both healthy and heart patients and also prevents heart enlargement.

The clue lies in the intake of vitamin and mineral rich foods. It is also important to use unsaturated cooking oils like gungelly, mustard and groundnut or sunflower rather than ghee and dalda.

A very important aspect of maintaining good health is to avoid all junk food, take regular exercise, avoid stress and strain and maintain good hours of sleep. It is equally important to avoid overeating.

# HRIDAY

**H**ealthy living style is the foundation of sound health and keeping diseases at an arm's length. If the children are imparted proper and interesting knowledge regarding 'healthy living style' during their primary education then they can become better citizens of future. Some doctors and medical students of Delhi have established a voluntary organisation called 'Hriday' with the above object in view. The name is an acronym for Health Related Information Dissemination Amongst Youth-HRIDAY provides information on the following topics :

- (a) Diet and Nutrition
- (b) Physical exercise and protection from stress
- (c) Tobacco and other intoxicants and
- (d) Environment

The 'HRIDAY' has prepared extremely attractive, illustrated and informative posters for use in schools on the above topics. It has also published a cartoon booklet captioned 'Happy Birthday' and a book



**रोकथाम के उपाय**

- ✓ धूम्रपान न करना
- ✓ संतुलित आहार लेना
- ✓ अधिक मात्रा में नमक, चर्बत और चीनी का इस्तेमाल न करना
- ✓ शारीरिक रूप से क्रियाशील रहना
- ✓ तब धूप, तबत कार्बोहाइड्रेट और ड्रायब्रिडज को नियमित रखना
- ✓ उचित शारीरिक वजन रखना
- ✓ तनाव पर रोक

**रोग के कारण**

- X धूम्रपान
- X उच्च रक्त कोलेस्ट्रॉल (अधिक चर्बतयुक्त भोजन)
- X अनियमित उच्च ब्लड प्रेशर (रक्त घब)
- X व्यायाम में कमी
- X अनियमित ड्रायब्रिडज (समूह)
- X मोटापा
- X तनाव

**हृदय का कहना है :**

आप दिल का अच्छा खयाल रखिये, दिल आपका अच्छा खयाल रखेगा।

Health Related Information Dissemination Amongst Youth

Supported by Rajiv Gandhi Foundation

**LIFE CAN BE A SMOOTH JOURNEY IF YOU FOLLOW THE TRAFFIC LIGHTS !**



Health Related Information Dissemination Amongst Youth

Supported by Rajiv Gandhi Foundation

titled 'Healthy Living Style' to propagate the said messages. The posters published by 'HRIDAY' are intensely useful for the students, teachers and guardians. Some of the matter published in these books are quoted here below briefly.

Healthy Living Style means forming good, sound habits and not adopting harmful habits or giving them up. For this, apposite behaviour, regular and balanced diet, regular exercise, regular sleep, healthy atmosphere and avoidance of smoking and drinking etc. are essential.

**Right Food**

Each and every person should take cereals, pulses, fruits, vegetables, meat etc. according to his/her activities age. Overeating engenders obesity which breeds several diseases. Try to maintain your body-weight index between 20 to 25 according to the formula

# मोटे नहीं! चुस्त रहिये!



**हृदय का कहना है:**  
हृदय रोग, मधुमेह, और उच्च रक्तचाप से बचिये, पूरी तरह स्वस्थ रहकर जीवन का पूर्ण आनन्द उठाइये।  
गोल-भटोल रहने के बजाय लम्बाई के अनुपात में उचित शारीरिक वजन रखिये, खासकर उस नुकसानदेही तौल से बचिये।



Health Related Information Dissemination Attempts Youth

Supported by Rajiv Gandhi Foundation

Action	Active impetus	Healthy muscles	Elasticity	Weight Control
Active Dance	●●●●	●●●	●●●●	●●●
Badminton	●●●●	●●●	●●●●	●●●●
Basket ball	●●●●	●●●	●●●●	●●●●
Excercise (weight, lifting etc.)	●	●●●	●●	●●
Balling	●	●	●	●
Cycling	●●●●	●●●	●●	●●●
Golf	●	●	●	●●
Jumping	●●●●	●●●	●●●●	●●●●
Martial arts	●●●	●●●	●●●	●●●
Soccer	●●●●	●●●●	●●●●	●●●●
Squash	●●●●	●●●	●●●	●●●●
Swimming	●●●●	●●●●	●●●	●●●
Table tennis	●●●	●●●	●●●	●●
Tennis	●●●	●●●	●●●	●●●
Walking	●●●	●●	●●	●●

● Excellent ● Very good ● Good ● Less

$$\text{Body-weight Index} = \frac{\text{Body Weight (KG)}}{\text{Length (metre) x Length (m)}}$$

## Should you be Above 18 years

Body weight Index	You are
Less than 20	Weak
20 to 25	healthy
25 to 30	obese
Above 30	too obese

Fresh fruits, vegetables, fibrous edibles like bread prepared from wholemeal and pulses should be in your diets. Meat (especially red meat), fat (especially animal fat), salt and sugar should be sparingly included in the diet. Preserved food and useless edibles such as cold drinks should not be taken.

## Sufficient Exercise

Regular exercise strenthens heart, lungs and muscies. It also improves mental health and engenders enthusiasm so that one can better enjoy life. Exercise reinforces the bones and protects them from osteoporosis. Yogic postures help to reduce tension. You can select your exercise from the following chat according to your daily routine.



## कहीं आपको कैंसर न दबोच ले...

- तम्बाकू (किमी के रग से) ● वायरस ● ओजोन परत में कमी (जो कैंसर बढ़ाता है)
- वायु प्रदूषण ● हानिकारक रसायन ● मर्दिरा ● विकिरण ●
- भोजन में वसा या नमक की अधिक मात्रा ●

**हृदय का कहना है:**  
कैंसर को रोकथाम के लिए आवश्यक है

- ✓ तम्बाकू एवं मर्दिरा का निषेध न करना
- ✓ अधिक मात्रा में पकड़ी हुई मांसपेशियों का निषेध (जैसे लवंग, अजमायोजन, अम्ल, कुसुम)
- ✓ वायुमय में प्रदूषण को रोकने के लिए सावधानी बरतना
- ✓ स्त्रीकरण को रोकना
- ✓ सुशुद्ध उपकरणों का उपयोग करना
- ✓ न्यूक्लियर इंधन में सावधानी
- ✓ हानिकारक माध्यमों में सावधानी

Health Related Information Dissemination Attempts Youth

Supported by Rajiv Gandhi Foundation

## Proper Environment

Environment is an important determinant of health. It directly affects the temperature, light, quality of air and indirectly affects the soil, crops, forests, rain, food etc. and thus affects our health. Try to keep the environment around you in proper order and educate others regarding this and obtain their collaboration in keeping it in excellent condition. With this end in view, try to minimise the use of paper, protect the ponds and rivers, save electricity and water, preserve the trees and plant fresh trees, help to recycle the tin containers etc. by transporting them to recycling centres, avoid sound pollution, save petrol, walk as far as possible and use public conveyance, prepare manure from home garbage, skins of vegetables etc. for using it in the kitchen garden and engender awareness about environment among your friends and neighbours.

## Quit Harmful Habits

The best way of keeping fit is not to indulge in smoking. There are more than 40 harmful chemicals in the tobacco smoke. The harmful effect of smoking on the body cannot be offset by any medicine, exercise or food, the only way is not to smoke.

## HELP!!!

The tobacco monster is attacking!

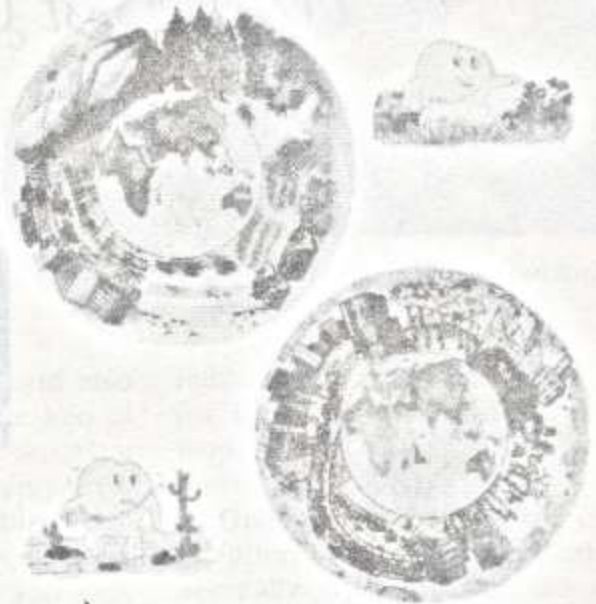
T O B A C C O	KILLS	THREE MILLION PER YEAR GLOBALLY
	CAUSES	CANCERS, HEART ATTACKS, LUNG DISEASES
	HARMS	PASSIVE SMOKERS INCLUDING CHILDREN
	ROBS	FAMILY INCOME FROM ESSENTIAL NEEDS
	DESTROYS	LIFEGIVING TREES FOR ITS PRODUCTION



**HRIDAY SAYS**  
Save yourself, your family, and the environment  
Help to free the world from the tobacco monster.  
Health Related Information Dissemination Amongst Youth

# environment

*we still have a choice!*



**HRIDAY SAYS**  
We must decide the future of our environment...  
for the environment will decide our future!  
Health Related Information Dissemination Amongst Youth  
Sponsored by Rajiv Gandhi Foundation

Resisting the temptation of smoking and giving up the habit, in case, one is habituated is the best course.

Use of tobacco, by other modes is equally bad. Tobacco chewing may cause the cancer of mouth, oesophagus, stomach and urinary bladder.

Wine is also detrimental to health. Regular drinking makes one habituated to it, which in turn induces change of behaviour and thereby annihilates social life. Most of the road accidents are due to driving after drinking. Apart from this, it can cause high blood pressure, heart diseases, mental slackness, cancer of throat and stomach, cirrhosis of liver, neuralgia and obesity.

Other intoxicants like heroin, smack are extremely harmful. Giving up these needs strong will power, medical assistance and family support. For detailed information, please write to the following address :

**Dr. K. Srinath Reddy**  
Professor, Department of Cardiology  
All-India Institute of Medical Sciences  
New Delhi - 110029.

*With Best Compliments from :*



# **Nucleus Software Workshop (P) Ltd.**

8, Daulat Sagar Appt.,  
Nehru Road  
Santacruz East  
Bombay - 400 055. India  
Ph. : 91-22-6118794, 6130205  
Fax : 91-22-6115237

713, Anna Salai  
Carex Centre  
Madras - 600 006. India  
Ph : 91-44-8522417, 8523555  
Fax : 91-44-8523280

35, Thyagraj Nagar  
Near Lodhi Colony,  
New Delhi - 110 003. India  
Ph. : 91-11-4620675, 4623083  
Fax : 91-11-4620872





## Treating Summer Diseases



Vd. Badloo Ram Rasik, Lucknow

**Saraswati** - Hello Granny, bless me.

**Granny** - Be happy dear. You have come very early in the morning. Take this glass of Bael Sherbet. It will make you cool, you will be able to better tolerate the sun and heat, the stomach will remain in order, motions will be clear and if you have mucuous in the faeces, it shall be cured. Taking this syrup in the mornings and evenings in the months of Chaitra to Ashadha cures all the disorders of stomach.

**Saraswati** - How do you prepare this sherbet, do you add sugar to it?

**Granny** - No baby, I do not add sugar to it. The bael pulp is sweet on its own, so sugar is not necessary. Take 25 gm of the pulp and 1 glass of water in a vessel and macerate well with hand and thereafter throw away the seeds and squeeze pulp. The sherbet is ready for one. If one is sick of mucuous or irregular motions or inappetance then he should take it consecutively for 4-5 days in the mornings and evenings. So much so that even patients of Sangrahani who pass 8-10 stools associated with mucuous a day shall derive benefit if they take it four times during the day and night. The patients of Sangrahani

should take it 4 times and also should take at least one kilo of buttermilk with one spoon of the powder of 50 gm. dry ginger, 50 gm cumin and 50 gm black salt and eat the Khichdi of green gram.

**Saraswati** - Thank you very much. Now tell me what sherbet could be given in the weakness of brain, eyesight, headache, general weakness, excessive thirst, burning during micturition and improper clearance of bowels.

**Granny** - Take down dear, Take 50 gm each : Kernels of Kaddoo seeds, Petha seeds, Tarbooz seeds, Kheera seeds, Kulpha seeds, thin fennel seeds, rose flower, cardamom, black pepper, Mundi seeds and pick them clean and mix together. Soak 25 gm of this every evening in water. Grind them over a clean stone slab in the morning with water. Collect it in a cup and filter with a fine cloth. Add 2 spoon sugar and one cup of milk and take in the morning daily during the 3-4 months of summer. This will remove all complaints and make one strong as well.

**Saraswati** - In villages we find certain young men who go mad in the months of summer and roam away at nights and spend their time in abusing, quarrelling and

fighting. Tell me some medicine for these as we have 2 such women and 4 or 5 such young men in the village.

**Granny** - O.K. write the prescription which is tried and tested severally on hundreds of patients. Sarpagandha - also called locally as Dhawalbarua and Chandbarua that grows in mango groves abundantly, grind its fresh root 5 gm on a stone slab with water filter and one spoon sugar and give it to the patient in the early morning and at 10 p.m. before going to bed. If wet root is not available then purchase from the grocer 100 gm then pound, grind, sieve and store it. Give this powder one gm with honey or sugar as above. It is seen that patients of madness have their stools dried up and they do not have motion for 4-5 days. For that take Jawasa 50 gm. Mundi 50 gm., rose flower 50 gm, Nisoth 50 gm, Fennel 50 gm, pulp of Amaltas 100 gm and pound them together and soak 50 gm. of the powder in one litre water in the night and boil in the morning till quarter is left. Cool and strain. Add two spoon sugar and give to the patient. Motions will start after 2 or 3 days which will be watery and contain knots of faeces. This medication will cure the madness. Also give the

following preparation so that madness does not recur. Pound together 100 gm Shakhapushpi, 100 gm Balchhad, 100 gm Ustkhoodos, 100 gm sweet Vacha, 100 gm Brihati & 100 gm rose flower, add 4 litre water, let it soak for 12 hrs then mount it on slow fire, take down after a quarter is left, filter and add 1.5 kg sugar and make into a syrup and store. Give 25 gm of this with milk in the morning and evenings.

**Saraswati** - During the summer prickly heat occurs all over the body which itch and make one miserable. Some children have large boils initially red which ripen and then burst. Let me know the cure for both types.

**Granny** - Those who eat regularly hot things like salt, vinegar, pickles, eggs & Jaggery they have excess of prickly - heat. The cure is Multani clay which is available in the market. It should be soaked in water and applied over the prickly heat. Alternatively, massage with mustard oil and then bathe with one bucket of water to which one spoon of rock salt has been added by scrubbing thoroughly. For the red boils of children take the inner red bark of Neem and rub it with water over a clean stone in to a paste. Apply the paste 4-5 times a day and also give one spoon of it internally. This treatment cures the boils and purifies the blood as well. Apart from this, 5 gm flowers of Neem may be taken with 2 gm sugar daily twice for 5 days.

**Saraswati** - Some people have nose-bleeding also known as epistaxis during the summer, what is its remedy ?

**Granny** - Epistaxis occurs to those who eat plenty of raw mango. They should stop eating raw mango. Whenever nose-

bleeding occurs a stream of cold water should be made to run over the head of the patient for 15 minutes and the patient should also draw water with his nostrils. If the bleeding does not stop under the above treatment then give pea-size pure camphor internally. This will mostly stop it.

**Saraswati** - Those who have to attend marriage ceremony during the summer have their stomachs upset and suffer from dysentery and vomiting. Tell me the remedy for this problem.

**Granny** - Yes, this is a very important problem. Take 10 gm pure camphor, 10 gm peppermint and 10 gm essence of Ajwain in a phial. The three will become one after some time, this is Amritbindu. In dysentery or vomiting 10 drops of this should be given with a pinch of sugar every

half hour four times. The patient should also be given the life saving solution at short interval. Have you taken down ?

**Saraswati** - Yes granny, now tell me what to give in sunstroke?

**Granny** - Take four unripe mangoes boil them and peel to collect the pulp in a stainless steel vessel. Add 5 gm green mint leaves, 2.5 gm salt, 2.5 fennel, 2.5 gm dry ginger, 10 gm black salt, 2.5 gm black pepper and one gm fried asafoetida. Macerate and add one glass cold water. Give quarter glass of this Pana of mango at an interval of one hour. In case of thirst 10 gm this powder should be taken add 20 gm sugar and one litre water and give to drink.

**Saraswati** - Thank you granny. I have exhausted the note book. Good-bye.

## CIMAP Develops Anti-Malaria Compound

Scientists of the Central Institute of Medicinal and Aromatic Plants (CIMAP) have successfully converted artemisinic acid, the most abundant metabolite, into artemisinin - an anti-malarial compound using an efficient methodology, which will boost production of anti-malarial drugs in the country.

According to CIMAP sources artemisinin belongs to a new class of antimalarials which is active against chloroquine sensitive as well as multiple drug resistant to malaria.

The potential role of artemisinin and its derivatives for the treatment of malaria is well recognized now. Thousands of patients have been successfully treated in China and

Burma but outside these countries the drug is generally not available.

The currently available drugs in the market based on quinine are proving to be ineffective due to resistance developed by several species of plasmodium, therefore research efforts are now directed towards replacing quinine based drugs because of increased resistance to them they said.

The sources said the drug is in the IIIrd phase of clinical trials. No toxic and hazardous gases are produced or emitted during the process. The provision has been made in the process to recycle most of the solvent and adsorbent to economise the process.

# ARJUN



This tree is found throughout India, especially on the banks of rivers, due to this reason it has been referred as 'Naditataja' in many books. This has been found throughout India upto the height of 1000 meters except in dry regions of western India. These are abundant in mixed deciduous forests.

Its tree is 40 to 50 feet high with 3 to 6 inches long leaves like guava, arranged in opposite or alternate position on twigs. Its flowers are small and yellow in colour. Its flowers are five faced-2 to 3 cm long, oblong, hairy brown or dark brown coloured.

It is a big tree and its bark is thick smooth and brown or whitish pink in colour. Its bark is used for the medicinal purposes and is also available in the market. Once removed, its bark reappears on the plants.

### Language-wise Names

Its names are different at different places due to change of language. In Hindi it is known as Kahu, Kovha, Arjun and Indradrum in

Sanskrit. It is known as *Terminalia arjuna* in Latin.

### Medicinal Properties

Its taste is pungent and its bark is Stambhak. It is useful in fever, fractures and internal injuries. It is very useful in Heart ailments.

### Medicinal Uses

Make powder of bark of Arjun tree. Take this powder 2 to 4 gm. and cook in equal quantity of milk and water and prepare Ksheerpak. Using this Ksheerpak twice in a day regulates the heartbeats and is beneficial in other heart ailments also.

### Arjunghrit

Take 4 Kg. bark of Arjun and break it in fine pieces then boil it in 16 litres of water. When water remains one fourth, add Arjun Kalka 50 gm and Ghee of cow 250 gm., continue to heat until become thick. This Arjunghrit is very useful in all heart ailments. It stops Raktapitta also. It is useful in the cough of tuberculosis when given with Juice of Vasa (*Adhatoda vasica*).

**Dose:** It may be taken 6 to 11 gms.

# Serpentina



**S**erpentina is used in Ayurvedic medical system since last 4000 years. It has been referred in Charak Samhita written 2500 years ago. Its Latin name is based on the name of a sixteenth century German botanist and physician Leonard Rawolf. Roots of Serpentina are used in various diseases. It has been found throughout India. It is abundant in Himalyan valley and lower hills of eastern and western ghats. It also appears in the plains of Bengal, Bihar, Uttar Pradesh, Maharashtra etc. It is commonly found in mango orchards. It is also cultivated in several parts of the

country. Alkaloids found in serpentina have been manufactured chemically in some foreign countries. Annual consumption of serpentina in India is nearly 12,000 quintals.

**Cultivation :** Its plants are cultivated using the roots. Forest reaserch centre at Dehradun has been able to collect seven quintal roots per acre after two years. One must take care while collecting roots that root bark must not be damaged. Collection of roots in Sharad season is good.

**Description:** Serpentina is a shrub, 30 to 75 Cm. in height. Several leaves are

attached in circular way at each node. Leaves are 8 to 20 Cm. long and narrow at the base. Flowers are 1.5 cm. long with white or pink petals, peduncles are dark red in colour and are present in the branches. Outer petals are very beautiful and dark red in colour.

## Language wise Names

**Hindi** - Chota Chand;  
**Sanskrit** - Chandrika; **Urdu** - Dhanbarua; **Kannad** - Sarpagandha; **Tamil** - Chuvannalpori; **Telugu** - Patalgandhi; **Bangla** - Chandra; **Marathi** - Harkapa;  
**Latin** - *Rauwolfia serpentina*

## Medicinal Properties

Roots of serpentina contain several alkaloids. They reduce blood pressure, result in sleep and sedation. These are growingly used now a days in the treatment of mental diseases and high blood pressure. Its sedative effect is very slow so it is not very useful in serious condition of disease. Roots of serpentina are useful in fever and diseases of stomach. Its leaf juice may be dropped in case of eye inflammation.

*Contd. on next page*

# Isapghula

Isapghula belongs to the family Plantaginaceae. It has a prominent place in the indigenous medical system. It is cultivated in India as an important medicinal cash crop. It is of foreign origin and was in use in France, Egypt etc since ancient times. In India it was introduced by the Moghuls. The word is derived from two persian words - Asp = horse and Gol - ear, meaning horse's ear.

## Language-wise Names :

**Hindi** - Isabgol; **English** - Isapghula; **Sanskrit** - Ishadgol, Ashwakarna; **Latin** - *Plantago ovata*.

## Botanical Details

The stemless plant is 30-45 cm in height. Leaves are thin and furry. Seeds are found in bunches. Seeds are boat-shaped and grey in colour and have a white pellicle looking like bran.

It grows in abundance in temperate climate. Its cultivation is chiefly carried out in the spring season. The appropriate time for sowing is during November-December. The crop is generally ready for harvesting by the middle of March. Plants

emerge after 60-70 days of sowing.

In India it is mainly cultivated in Punjab, Rajasthan, Gujarat, Haryana, Uttar Pradesh and Bihar. After harvest the husk is separated through machines. The seed is used for feeding the cattle. 6-10 quintal seeds are obtained from one hectare which yields 30% of husk.

In Gujarat and Rajasthan, it is cultivated in a large scale and exported. Annual export is 10,000 tons worth 600 crores of foreign currency.

## Medicinal Uses

The medicinal properties are due to the albumin content and mucilage. It is efficacious in chronic and bacillary dysentery, and constipation. It is also used in dysuria, gripes and fever.

Essence of the plant is used in wounds, abscesses, cracked lips and parts of the body, hurts and toxicity.

Isapghula husk is hygroscopic. It soaks water and becomes sticky and is used with various vehicles in the treatment of various diseases.

It reduces the increased

blood cholesterol. The seeds contain 50% Linolic acid which is useful in arteriosclerosis.

The dose of seeds is 10-20 gm. and that of husk is 5-10 gm. Before taking, the seeds must be washed with water and a large spoonful of sugar should be added and equal amount of sugar should be added to the husk. After taking Isapghula, warm milk should also be taken for best results.

*From Previous Page*

## Medicinal Uses

- For reducing blood pressure, 2.5 to 5 Rattis roots of 3 to 4 year old serpentina plant may be used.
- For the induction of sleep, 5 to 15 rattis of Sarpghandha roots may be used.
- In hysteria upto 3 Masha Sarpghandha root may be used.
- Soak 1-3 gm serpentina powder in 50 gm rose essence at least for 3-4 hours. It is better to soak it for 12 hours. Shake well before use or it may be crushed like Thandai. Mishri may be added, if desired.

# Baelpatra

Umesh Pandey, Indore

**B**engalquince (Bael) is a common plant whose leaves are meant for worshipping God Shiva. 'Shiva-Pooja' is considered incomplete without the leaves of Bael.

It is called 'Bael' in Hindi, Bangla, Marathi and Punjabi, 'Bilwa' in Sanskrit, 'Beeli' in Gujarati, 'Bilpatre Hannu' in Kannada, 'Bilwamu' in Telugu, 'Kuvilam' in Tamil, and *Aegle marmelos* in Latin.

It belongs to the family 'Rutaceae' of the plant kingdom. The bark, leaves, its fruit pulp and roots of this plant have medicinal value. Out of these; fruit pulp has the maximum medicinal uses as it is rich in mucilage, pectin, sugar, tannins, few volatile oils and elements like sodium, magnesium, silicon, calcium and iron in form of their compounds.

Few very simple medicinal aspects of Bael are being described below :

- Many persons suffer from badsmelling sweat, as a

result of this disease, no one likes to sit near them. Such people should massage their body once a day with the juice of Bel leaves for one week.

- The worms in the alimentary canal can be killed or finished simply by taking about 4 to 5 ml., of the juice of fresh leaves. The treatment is followed at least for 3 to 5 days.
- The marmalade (murubba) of Bael is a very good remedy for chronic dysentery. Only 10 gms. of this is sufficient per day and the treatment is to be continued for few days to get good results.
- Those who suffer from lack of hunger can take 5 gms. of the powder of unripened fruits of Aegle with 1 gm. of the powder of 'Sonth' (dried ginger). This combination also increases the appetite sufficiently.
- The powder, prepared by drying and pulverising the pulp of unripe fruits of

Aegle, when taken with 'Khand' (a kind of sugar) in the ratio of 1:1 by weight, cures dysentery and diarrhoea.

The fresh juice of the leaves 3 ml. should be taken with about 5 gm. of honey three times a day for 3-4 days to combat fever. This not only cures fever but also removes constipation.

The extract of Bael pulp is a very good medicine for piles. For this purpose about 5 ml. of the same is taken daily for few days. The extract is prepared by the distillation of the pulp of Aegle.

The scorpion bite can easily be nullified by applying the paste prepared by rubbing its root with water. The same paste can also be applied over the dog, monkey or any other mammalian bite, as aid.

Soak Bilwa powder in oil of sesame for 7 days, filter and store. Use it to massage the body before bath and underfeet. It has a soothing effect.

# Pushkarmool

**P**ushkarmool belongs to the compositae family. It occupies a prominent place in Ayurvedic treatment. Its medicinal properties are described in Charak Samhita.

## Language-wise names

**Latin** - *Enula racemosa*;  
**Hindi** - Pushkarmool, Pu(O)hkarmool; **Sanskrit** - Pushkarmool; **Gujarati** - Marathi and Kashmiri - Poshkarmool.

## Botanical Details

It grows in abundance in the snowcapped western Himalayas at altitudes 5000'-14000' and in Kashmir at altitudes 5000'-7000' where there is constant moisture or a source of water. It can also be cultivated in such places.

It is a multiannual plant. Leaves vary in length from 8"-18" and in breadth from 5"-8". Leaves are shaped like sword. Flowers are fragrant and yellow like sunflower having seven petals. Seeds resemble sunflower seeds. Roots are hard and yellowish white. Roots are used in medicine and also in the manufacture of face pow-

der and fragrant cosmetics.

The plant withers and dies during snowfall only when the roots are buried alive under the earth. When the winter is over and the snow melts, the plant slowly sprouts and attain maturity in a matter of a few days only.

## Medicinal Properties

It is pungent and bitter in taste and light in digestion. Being hot in temperament, it is useful in disorders of Kapha, Vayu and digestion. It reinforces the heart muscles. It is used in cough, respiratory problems, pain in the ribs, indigestion and diseases of gall-bladder. It purifies the blood.

## Medicinal Uses

- The root powder of Pushkarmool mixed with equal amount drumstick-seed powder taken with honey cures the intestinal worms.
- The powders of equal quantities of Pushkarmool, camphor and Aonla taken with 5 gm honey helps in asthma, cough and

hicough.

- In aching ribs, take 3 gm powder of the Pushkarmool with the juice of betel leaves three times daily.
- In kidney pain and burning stomach, take it with half part rock salt and quarter part fried and powdered asafoetida with hot water.
- In tetanus, Pushkarmool 1 gm, Harad 500 mg, Nepali coriander 500 mg and fried asafoetida, rock salt and black salt 1 gm each should be taken with barley water thrice daily.
- In clinking hands and feet, Pushkarmool powder 1 gm and fried asafoetida 500 mg should be taken with the decoction of Dashmool.
- In cough of long-standing, 1 gm Pushkarmool powder and 1 gm Sitopaladi Choorna should be taken with honey, four times in a day.

# Haemogenic Spinach

Sushila Devi Jain, Delhi

**S**pinach is an extremely useful vegetable from the point of view of health, as it is matchless in beautification. The vegetable is easily available all over India. The plant is about 1-1.5' high. Leaves are smooth, fleshy and thick. Leaves are oblong and somewhat triangular. Stems are long. It generally grows in winter.

Spinach contains calcium, sodium, chlorine, phosphorus, iron, mineral salts, proteins, vitamin A and C etc. Iron is predominantly present in it. It imparts immunity to the red corpuscles of blood and reduces. Lack of iron engenders anaemia and jaundice, in which the face and limbs become pale. The paleness is especially observed in the face, nails, palms and eyes. The lustre of the body is lost and deadliness becomes apparent in the body.

Apart from this, lack of iron breeds various other problems like lack of strength, lacklustreness, lack of enthusiasm, laziness,

weakness, dyspepsia, inappetance etc.

In such conditions, spinach juice should be taken in the dose of 100 ml., three times regularly every day. If tomato juice and white goosefoot (Bathua) juice is also taken simultaneously then the body will be revitalized. It is written in Bhavaprakash :

*Palakya vatala sheeta shleshmala bhedani guruh.*

*V i s h t a m b h a n i madashvasa pitta rakta kaphapaha'* that is, spinach is wind-forming, cold, Kapha-increasing, breaker of stones, heavy, constipating and destroyer of respiratory problems, disorders of Pitta and blood and also of fever.

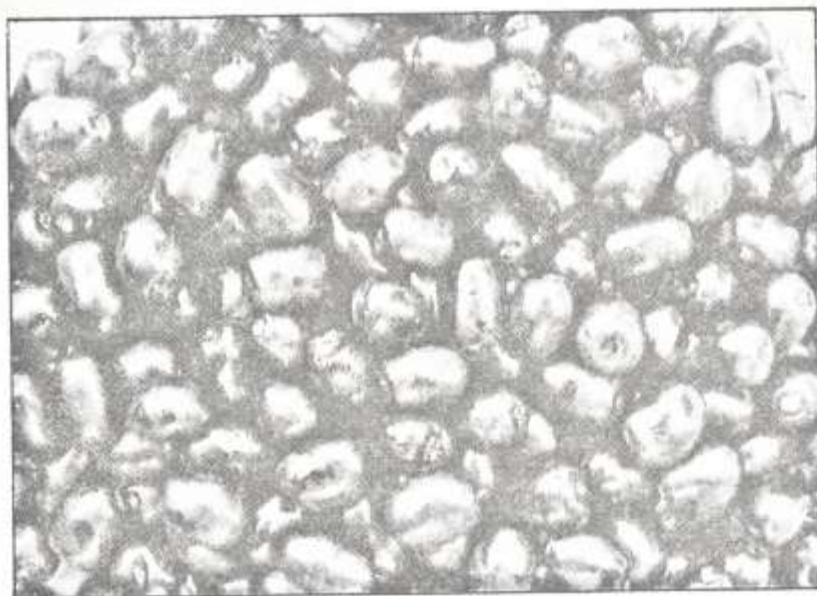
According to Unani system the spinach is easily digestible. It quenches thirst and vanquishes burning, purifies blood, removes the dryness of the body and cures waistache. Its daily use improves the complexion. For best results, it should be consumed raw.

Due to excessive bleeding during menses and delivery, depletion of blood occurs in the body which causes weakness, slackness, bodyache, aversion to food etc. In such conditions, regular use of spinach produces desired effects. It helps in removing the problems of blood and make the women healthy and beautiful.

Taking 400 ml. of spinach juice on empty stomach in the morning rectifies the bowels. Decoction of spinach is advised in febrile disease. Regular use of spiach is efficaceous in delayed healing of wounds, nightblindness, leucorrhoea, dyspepsia, indigestion, caries or pyorrhoea, eyeache, tuberculosis, falling of hair, headache, beri-beri, weakness, dysentery, giddiness, loss of blood, anaemia, jaundice, lack of mental power etc. It enhances the immunity of the body. Women and weak persons should use spinach regularly.



# Jamboo



**J**ambu fruit is a very popular fruit. Fruits become available in the market in the last week of June and continue till August. With the advent of rains the fruits start ripening and being more juicy, sweet and black.

The Jambu trees grow in the plains generally. In hilly areas they are rare. Generally, Jambu trees are found around evergreen or moist autumnal forests. They generally grow along the banks of rivers and streams. The forest department plants Jambu trees along the roadsides and also in gardens. Even in dry areas the planted trees flourish near sources of water. The fruits are very tasty, nutritious and also important as endowed with medicinal properties.

## Language-wise Names :

**Sanskrit** - Jamboohindi - Jamun; **Gujarati** - Jamboo; **Bangla** - Jam; **Tamil** - Shambu; **Telugu** - Neredu; **Kannad** - Nerale; **English** - Jamboo; **Marathi** - Jambhool; **Malayalam** - Yavel, **Latin** - *Syzigium cumini*.

The tree belongs to the species Myrtaceae. It is a large, perennial and multiannual tree. Leaves are 8.2 cm long and smooth, juxtaposed in twins. Flowers are clayey white, fruits are 1.5 - 4 cm long, elliptical in shape, initially violet in colour which become dark violet or black on ripening and have stones.

The Jamboo seeds are sown in the month of Ashadha (June-July). No special sort of soil is required. Trees may be planted anytime during rains. The

distance between the Jamboo trees should be 25'. Trees mature within 6 to 12 years.

## Medicinal Properties

Its leaves, bark, fruits & seeds are used in medicine. The bark is antidiarrhoeal and is used in diseases of throat, cough, asthma, diarrhoea, abscess and boils. Seeds are effective in purifying the blood, curing diarrhoea and diabetes.

## Uses

- Jamboo juice taken regularly with sugar candy helps in curing Prameha, vomiting, sometimes hard and sometimes loose motions, piles, cough, distention of stomach etc.
- Powdered Jamboo stone is especially effective in combating diabetes.
- In infantile dysentery decoction of Jamboo bark is advised.
- Bark juice taken with goat's milk cures Sangrahani.
- In problems of spleen, the leaves should be ground with milk and taken daily.
- Bad odour of the mouth and blisters thereof are cured by gargling with juice of delicate Jamboo-Leaves.
- Leave's juice is the surest cure of headache.
- Vinegar prepared from fruit juice cures Pitta.

# Sweet Melon

**S**weet melon is available all over India. It is cultivated chiefly in the tropical and sub-tropical region. It is a native of South Africa. In U.P. it is mostly cultivated in the low-lying wet areas. Sweet melon is a very important fruit nutritionally. It is available in the market during the summer. For a good crop, it needs to be sown along the banks of rivers. Usually with the blowing of hot winds it starts ripening. After the completion of ripening it becomes blotched, sweet and fragrant. It belongs to the family cucurbitaceae. The plant is like cucumber plant.

## Language-wise Names

**Hindi** - Kharbooza; **English** - sweet Melon; **Sanskrit** - Kharboojam; **Latin** - Cucumis melo.

## Properties and Uses

70% of the fruit is edible, the remaining 30% comprises the skin and seeds. It contains protein, fat, mineral salts, carbohydrate, calcium, phosphorus, iron, vitamin A and C, carotin etc. It quenches the excruciating thirst of the summer; provides nutrition and coolness to the body. Being fragrant

it provides freshness to the heart and brain. It is diuretic and cures jaundice. Chewing of sweet melon cleans and brightens the teeth. Its crushed pulp is applied on freckles to remove them. Its pieces are added to the meat while cooking for quicker

and complete cooking.

Its seeds are skinned, fried and added to various salty snacks. These are believed to be good for the stomach. These are also diuretic and provide coolness.

However, its unlimited use may cause dysentery.

## Back Issues of Jeevaniya

*Jeevaniya* is not merely a magazine, it contains scientific information about health care which is the essence of many treatises and practical experience of our learned physicians. Please, therefore, carefully preserve all your issues for future reference. Make use of the simple tips given in **Jeevaniya** and share with us your experiences about the same. We receive many enquiries about our old issues. We offer a rebate of 15% on all orders of more than Rs. 100/-

Following issues are available for all those inquisitive readers who would like to have them.

Topic	Year	Prices (Rs.)
Child Health	1995	12.00
Mental Health	1994	12.00
Women's Health	1994	12.00
Bone Diseases	1993	10.00
Youth Special	1993	10.00
Gastric Care	1992	10.00
Eye Care	1992	10.00
Yoga Special	1992	8.00

The prices mentioned above are inclusive of postal charges. However, if you want to receive the same by registered post, kindly add Rs. 7.00 to the total. Please send your Money Order/Demand Draft in favour of **Jeevaniya Society**, payable at Lucknow at the following address :

### Jeevaniya Society

E-III/249, Sector H, Aliganj, Lucknow - 226 024

Phone : 0522-77568

## Simple Preparations for Domestic Needs

Vd. Sanjaya R. Dakhore, Kashele

*The nature has created man and, therefore, he is related to it irrevocably. Whenever there occurs a deficiency in the human body, its recoupment is easily achieved by substances available from nature and natural substances ensure the well-being of man. The nature has created drugs useful for the human beings in their vicinity, but most of us do not recognize them. If we recognize such plants, know their qualities and action then we can put them to use whenever a disease may occur. If the disease is properly diagnosed and the proper use of drug is known, then the plant drugs show their effect within 12 hours. The fresh plants offer quicker relief.*

*If a disease has just set in and is not in a critical state, then it behoves us to resort to some domestic medicine instead of rushing to the doctor's clinic. If the disease does 'nt show signs of abating even after two days of taking domestic medicine, then only should one go to a doctor or vaidya. If this advice is followed, then many illnesses would be cured by exclusively in-house methods.*

*The use of medicines given below shall always provide relief, no harm can ever ensure through them. If these are kept in air tight bottles then they would retain their potency for 6-8 months Home-made medicines happen to be cheaper and purer than the medicines available in the market. Reliable and pure medicines provide better relief as well.*

### Ghritkumari Ghanavati

Wash and peel Ghritkumari (Aloe) leaves and extract juice from the pulp and heat over mild fire. When the juice becomes dense then prepare tablets of the size of gram.

**Use** - Useful in stomach-ache during menses and to relieve the constipation of children. Give them two tablets rubbed in water.

### Satyanashi Ghanavati

Take the entire plant of Satyanashi wash and cut in to small pieces and crush. Then Collect in a cloth and

squeeze out the juice. Boil the juice in an iron pan. The juice will split in some time like milk. Keep the liquid and throw the rest. Again boil the liquid in the pan. When it looks like Khova then apply ghee to your palms and prepare tablets and collect in an air-tight plastic bag.

**Use** - In case of cold and coryza; give one tablet with water four times a day.

### Krimighna Vati

Fry Karanjua (Pootikaranj) and take 5 gm kernel thereof. Add 5 gm Palashbeej, 5

gm Vayavidang, 5 gm pollen of Kabeela, 5 gm Kalajeera, and powder together by hammering. Add 5 gm Jaggery and prepare gram - sized tablets.

**Use** - Take 2-4 tablets with water in the night for 3 consecutive days and take 10-20 ml castor oil in half cup of warm milk in the morning. This treatment would destroy all worms of the stomach.

### Kutaj Ghanavati

Prepare a rough powder of the skin of Kutaj and boil in four times of water. When

half of the water has evaporated then cool and filter and again boil the decoction. When it turns thick, add Kutaj seeds powder and prepare gram sized tablets and cool in shade.

**Use** - Take 2 tablets with buttermilk four times everyday in dysentery, mucous in stools and gripe.

### **Malashuddhi Churna**

Take 50 gm of small Chebulic myrobalan, 5 ml castor oil, 20 gm dry ginger, 20 gm black salt, 20 gm rock salt and 50 leaves of senna. Fry myrobalans in castor oil and make it into a

fine powder. Powder the senna leaves as well. Powder the other ingredients, mix together and sieve with a fine cloth.

**Use** - Take 5 gm powder with hot water before going to sleep. You will have a clean bowel in the morning.

### **Oil for Injuries**

Take 100 gm Bhilawa (marking nut), 100 gm Ajwain, 100 gm garlic and 800 gm oil of sesame. Cut the Bhilawa into small pieces. Then cut the garlic. Prepare rough powder of Ajwain. Then boil the above in the oil of sesame, over

mild fire. When it is boiled well take down, cool, filter and store in bottles.

Beware that you don't expose yourself to the vapours while the oil is boiling, otherwise it will create itching blisters. In case, if you have exposed yourself to the vapours then apply the paste of leaves of coriander or Chakramard (Chakwad).

**Use** - Apply the oil and bandage over the fresh wounds which will stop the bleeding and heal the wound.

## Attractions of Next Issue

# Diseases of Respiratory System

- ❖ I am Your Cough
- ❖ Smoking and Respiratory Diseases
- ❖ Care of Asthma Patient
- ❖ Tuberculosis of Lungs
- ❖ Tonsil Infections
- ❖ Sore Throat
- ❖ Eosinophilia
- ❖ Whooping Cough
- ❖ Pneumonia
- ❖ Life style in Respiratory Diseases

# Nutritional Recipes

How does one keep cool in the long sweaty days of the months of summer season? A number of Indian foods and drinks are ideal for the hot weather. As summer approaches, one looks forward to heaps of melons, mangoes and litchies. However, fruits that can be peeled and eaten are better in terms of hygiene. At home wash all fruits that can be eaten without being peeled with plenty of running water.

And as summer approaches with the prices of aerated drinks touching new high, it is far more economical and healthy to prepare your own squashes. Contrary to popular belief, it is not tedious, but a fairly simple procedure. And now that all these fruits are in season, what better time to start squeezing and bottling to beat the summer heat? The method of preparation of the squashes given below is more or less similar with just fractional changes in ingredients and quantities.

## Orange Squash

### Ingredients :

One litre orange juice (about two kgs of oranges)  
Two kgs sugar  
One litre water  
Citric acid - 30 gms  
Potassium meta bisulphite - three-fourth of a teaspoon  
Orange essence - 4 teaspoonful  
A pinch of permitted orange colour

## Lemon Squash

One litre lemon juice (about 2 kgs of lime)  
Two kgs sugar  
One litre water  
Potassium meta bisulphite - three-fourth of a teaspoon  
Lemon essence - 4 teaspoonful  
A pinch of permitted yellow colour (no need to add citric acid as the lime juice will have the desired effect)

## Pineapple Squash

One litre pineapple juice

Two kgs sugar  
One litre water  
Potassium meta bisulphite - 3-4 of a teaspoon  
Pineapple essence - 2 teaspoonful  
Citric acid - 30 gms.  
(Colour is not required in this case)

## Litchi Squash

One litre litchi juice  
Two kgs sugar  
One litre water  
Citric acid - 30 gms.  
Potassium meta bisulphite - three-fourth of a teaspoon

## Mango Squash

One litre mango juice  
1.3 litres water  
1.7 kg sugar  
Alphonso mango essence - 30 gm  
Potassium meta bisulphite - three-fourth of a teaspoon

## Method

Put a pot with water and sugar on the stove. The sugar will dissolve in the water soon. Now, add citric acid and let it boil.

Remove the pot from fire, and filter the syrup while it is still hot. This is called sugar syrup or chasni. Allow it to cool down. Extract the juice from the fruit, add the juice and stir it for better mixing.

Dissolve potassium meta bisulphite in a little warm water. Add this to the solution. Bottle the solution, leaving one inch of space from the top of the bottle. Keep them in the refrigerator. Each one will yield a little more than two litres of squash.

**Note :** Remember to extract juice from the fruit only when you are ready to mix the juice in the chasni. That is, only after you have already boiled the sugar in the water, added colour and flavouring agents, filtered it and allowed it to cool. If you extract the juice long before use, it will oxidise and will lose much of its properties. For the same reason, it should not be added when the chasni is still hot.

# Jeevaniya Health Solutions

Vd. S. A. Khan, Lucknow

*I am 33 and yet wrinkles have formed on my face. Tell me the easy way to remove them.*

*Anuradha Gupta, Bareilly*

Wrinkles in young age implies depletion of tissues, especially of flesh tissues. The thawing of flesh makes the skin loose and wrinkles show themselves on the face. Use flesh-producing diet such as Kidney bean (Urad) pulse, meat, fish, milk etc. and massage the face which makes the skin taut. Medicine would not help you. If the digestion is defective then consult your physician and put it right, so that you may digest the flesh-producing recipes.



*I have completed 18 in the last April, but I observe that I am losing weight since several months. I want to know the right food and behaviour by which I may gain in weight.*

*Uma Shankar, New Delhi.*

There may be many reasons for losing weight and it is not easy to pinpoint the reason without examining you. Here are some general causes. Please act according to the cause applicable to your case.

- There may be some unknown sickness. If you feel sick then have yourself thoroughly examined and treated.
- Not taking Panch-Bhautik i.e. nutritious diet. In such a case, taking nutritious food will increase your weight.
- Overwork. If this is the cause,

then work less and eat nutritious food.

- Mental tension and worries. If this is the cause then try to stay happy and contented.
- Take milk, ghee, meat, fish, dry fruits, kidney bean pulse, banana and sweets of Khoya. Take food, drinks, sleep, wake, rest regularly at definite times. You will surely gain weight.



*My hair fall during the summer and rainy seasons. I am much worried by this I want to know the cause and remedy of it.*

*Vinod Sehgal, Kanpur*

Dear Mr. Sehgal, the cause of your falling hair seems to be the change of season. It affects all to varying degrees. So please do not worry. Stop using soap or shampoo. Wash your head with Aonla, Soapnut, Shikakai, Gram flour, curd or multani clay. Massage regularly the roots of hair with pure jasmine oil. Have Panchabhautika food i.e. comprising all necessary ingredients. continue this regime for several months, consecutively.



*You have cited the use of cinnamon to cure cataract. Please describe it in detail.*

*Girija Prasad Pande, Bandikai*

Take good and fresh leaves of cinnamon and powder it by pounding. Do not take old, delayed and withered leaves, then

grind it with rose water in a stone mortar till lather is produced. Now dry it in the shade and again grind in the mortar. The powder should be so fine that it should not hurt the eyes on application. Apply this at least twice a day with a clean stick to both the eyes. The treatment should continue for at least three months regularly. According to the benefit derived; it may be continued for 6 months or one year. The extent of benefit varies from person to person. Some are quickly benefitted while some others take time. So it is not possible to pinpoint the duration of Treatment



*My teeth are tingled by cold and hot water and sour things. Tell me some Ayurvedic tooth powder for this.*

*Padam Chand Jain, Rajasthan*

Finely powder equal quantities of Sambhar salt, Narkachoor, dry ginger, and Akarkara. Sieve with a fine cloth and store. Rub this with finger on the gums thrice daily.

Alternatively, have Dashan Samskar choorna from a reputed Ayurvedic pharmacy. Massage the gums with it for 15-20 minutes daily using the finger. Apply Lakshadi Taila with finger twice for 15-20 minutes. Fill the cavities with asafoetida or rub the gums with the essence of Ajwain, or get the tooth extracted. Take 100 mg. Rasa Manikya and Kaishor Guggul one tablet with honey, twice a day for three months at least.

# Jeevaniya Science Conundrum

Pt. Kashinath Gopal Gore, Lucknow

We are not receiving adequate response of conundrum from our English readers. We would very much appreciate receiving readers suggestions on any change in it which they feel will make it more useful.

**First Prize :** Free Jeevaniya magazine for two years.

**Second Prize :** Free Jeevaniya magazine for one year.

## Terms and Conditions

- There will be no entry fee for sending solutions of conundrum.
- Any reader can send the solution.
- Solution should be sent to us by post.
- One person is entitled for one prize only.
- In case no perfectly correct solutions are received, we reserve the right to award or not to award the prize.
- Editor's decision shall be final.
- Complaints, if any could be made to the Editor only.
- No legal claim could be registered anywhere.
- Only those solutions that are filled in on the page printed here and sent by ordinary post to us shall be considered. The solutions should be addressed to :

### The Editor,

Jeevaniya Health Conundrum  
E-III/249, Sector-H  
Aliganj, Lucknow - 226 020

1. Fill up the blank :

Vata - dominant tastes are produced in the atmosphere during..... season and hence the strength of living beings gradually..... On the other hand, due to the effect of times, moon becomes more powerful and so..... Dosha increases.

2. The possibility of Vataj and Vata-Kaphaj diseases in Shishir season is enhanced. Write the names of such diseases

- |    |    |
|----|----|
| 1. | 2. |
| 3. | 4. |
| 5. | 6. |

3. Correctly rearrange the proper Ayurvedic order of eating

- |          |              |
|----------|--------------|
| a. Salt  | a. Fruit     |
| b. Sweet | b. Edibles   |
| C. Sour  | C. Drinks    |
| d. Other | d. Chewables |

4. Various organs of plants vary in heaviness. Write the names of organs in ascending order of heaviness.

- |    |    |
|----|----|
| 1. | 2. |
| 3. | 4. |
| 5. |    |

5. Write the properties of fenugreek as mentioned in Ayurveda.

6. In which diseases goosefoot (Bathua) is believed to be highly wholesome (Pathya) ?

7. Write the ingredients like protein etc. of Soyabean with their percentage.

8. Write in brief the meaning of Anuvasan.

9. What is the meaning of constipation ?

10. What is the theory of Shepherd regarding 'Introns' found in genes ?

# The Crisis in Health Care

*Dr. Girija, Coimbatore*

**T**he news from the Western medical front is ominous. We who are used to looking westward for all kinds of miracle cures are in for a shock. It has been recently reported that antibiotics have become increasingly ineffective. Many of the bacteria known to western doctors are said to have developed resistance to several widely used antibiotics. In the U.S., in 1992 alone, 13,300 hospital patients died of infections that resisted every drug used. The crisis is serious enough for an American doctor to admit in a recent best-seller that Western medicine's "purported triumph over infectious disease has become an illusion."

Major diseases which once were eradicated through antibiotics are on the rise again in the west, tuberculosis for instance. The growing list includes malaria, meningitis and gonorrhoea. There is a great deal of overprescription and consumption of antibiotics all over the world. And we are warned that unnecessary consumption of antibiotics can make things worse. The more antibiotics you take the more you make the diseases resistant to them. Doctors in the west have recently discovered that there is only a single antibiotic which can control blood poisoning in surgical wounds.

In the west, there is not only over consumption of antibiotics, there is also abuse in human diseases as well as in cattle. This abuse is so widely acknowledged that milk in the U.S. is allowed to

contain a certain concentration of 80 different antibiotics. Taking such milk can have unexpected consequences, since one ends up consuming enormous quantities of antibiotics without being aware of it.

Even with such a crisis brewing, we continue to flounder in a disoriented manner, carrying on with our old habits. Doctors routinely prescribe antibiotics that have no effect on the disease. Antibiotics are prescribed even in so-called "viral infections" where they are known to be useless. Many young children with coughs, colds, and respiratory ailments are given a whole range of antibiotics, in high doses, for years together. This treatment does not give the child any relief.

How does the Indian tradition in medicine look at this issue? What solution does it offer?

In Ayurveda, the healthy state of the body is defined as a state in which the following conditions are fulfilled, the three constituents of the body Vata, Pitta and Kapha, also known as the Doshas, are in equilibrium; the digestive fire is steady; the tissue building and excretory activities are proceeding evenly and the consciousness, sensory organs and the mind are all clear. Disease strikes when the human body loses this internal equilibrium.

This equilibrium can be disturbed by various factors - food, seasons, activities of a person such as excessive physical labour, day sleep and suppressing the

calls of nature. As long as this equilibrium is maintained, the body is not susceptible to disease. This is why healthy people as well as the sick should observe discipline in food, work and regimen. The primary aim of Ayurveda is to maintain this equilibrium so that the field or the soil, namely the human body, does not become a fertile ground for diseases.

However, it is the equilibrium between the three Doshas which is of primary importance in Ayurvedic therapeutics. Once disease strikes, treatment consists of understanding how the equilibrium between Doshas has been disturbed and trying to restore their balance. In fact, the great Ayurvedic text Charaka Samhita reassures the physician that it is not important to know the precise name of each new disease. Since each disease is characterised by a certain imbalance in the Doshas, it is enough to understand the exact nature of this imbalance in order to treat the disease.

That is why Ayurveda does not advocate extermination of organisms external to the human body. Ayurveda recognises that vitiation of the physical environment, air, water, soil etc., can lead to epidemic and diseases in human beings. A vitiated environment causes a disturbance of the internal equilibrium in individuals. So a clean physical environment is essential to healthy living. However, it is the internal equilibrium of the body which is



## Health Services Threatened

Public health services continue to suffer for want of serious attention and funding from the Centre as well as State Governments. The urgency of eliminating this inadequacy has been heightened especially by the regressive trends observed of late in some areas, not to mention the challenge posed by new scourges like AIDS. The increasing incidence of a debilitating disease like malaria in parts of the country from where it was believed to have been eradicated decades ago is but one example of the slippages that have occurred. When cholera and gastroenteritis still reach epidemic proportions every year, it is evident that even simple, low-cost-per-head preventive measures are not in place. Trends such as these are a pointer to a developing health crisis. It has long been obvious that the goal of "Health for All" by the end of the century, which India ambitiously committed itself to 16 years ago, is a mirage. At present levels of expenditure on public

health services, it is increasingly difficult even to maintain the existing infrastructure on hospitals and primary health centres, woefully deficient as it is.

Undoubtedly some States are doing better than others but that is little consolation in the face of glaring disparities in health provision for the rich and the poor, for rural and city-dwellers. Moreover, it is impossible to maintain scattered oases of good health since backwardness in some areas will always threaten the gains made elsewhere. The solutions are well known. The problem is want of action. Public expenditure on health by the Centre and States taken together is abysmally low at 1.5 per cent of GDP and must be rapidly raised to five per cent of GDP as recommended by the World Health Organisation for meeting the target of universal health care. Simultaneously, there must be a reordering of priorities with greater emphasis on low-cost preventive measures targeted at those most

vulnerable to diseases as a result of malnutrition and congested and insanitary living conditions. In the pursuit of physical targets what is frequently forgotten is the quality of health provision. Primary health centres are often no more than empty shells, sans equipment, medicines and medical staff. The areas that have suffered the greatest neglect are those which have the utmost relevance to preventing disease: firstly, safe drinking water supplies and good sanitation; secondly, public health education.

The impetus for change must come out of the realisation that economic growth depends critically on the quality of a nation's manpower. The most crucial ingredient in the East Asian economic miracles of the last three decades was a healthy and educated workforce. India has yet to learn the lesson that major and widespread improvements in the standards of education and health are the essential requisites of success of economic liberalisation.

the primary condition of good health.

The current crisis of western medicine reveals a fundamental flaw of that system, its understanding of disease and its approach to treatment. In Western medicine, the origin of disease is always outside the body. Many of the common ailments are traced to various bacteria. Treatment consists of exterminating these organisms through a variety of antibiotics. This is a never ending process, since each new organism discovered calls for a new antibiotic to fight it.

Another major feature of Western medicine is that the theories and approaches to treatment are

continuously changing. Many of its major innovations have occurred only in the last 50 years or so. What is a revolutionary innovation today, may prove to be an extremely dangerous medicine with all sorts of side-effects. For instance, when cortisone was introduced as a treatment for arthritis, it was considered a revolutionary innovation and the physician who came up with this discovery received a Nobel prize for medicine. Yet today it is known that this line of treatment can result in debilitating side effects. Western medicine seems to have no understanding of this disease. Even today, there is a whole galaxy of diseases and symptoms

which continue to baffle western medical experts. On the other hand, Ayurvedic physicians have been treating all these diseases very effectively for many centuries and continue to do so.

The writing is on the wall. The current crisis in Western medicine ought to remind us that our blind and continued reliance on this alien system of medicine can only lead to inevitable catastrophe. The only way out of this morass is to beat a hasty retreat and take to our traditional and time-tested systems of health care and medicine which have stood us in good stead for thousands of years. We can ignore this simple truth only at our own peril.

## Book Review

<b>Name of Book</b>	: Atisar-Nidan & Chikitsa (Diarrhoea- Diagnosis and cure)
<b>Writer</b>	: Vd.Ramesh M.Nanal and Vd.Vilas M.Nanal
<b>Publisher</b>	: Gharkul Prakashan, Pune
<b>Language</b>	: Marathi
<b>Pages</b>	: 64
<b>Price</b>	: Rs.24

**V**d.Ramesh Nanal is a renowned writer on the subjects related to Ayurveda. His books are in Marathi language but he has written several articles related to Ayurveda in Hindi also.

This book is about diagnosis and cure of diarrhoea. The subject has been covered in detail in 16 chapters. Speciality of the book is that besides using standard terminology, these terms are also explained in simple language. This has increased readability of the book and its understanding by common man. The book has become more useful due to its description of subject in new style while basing on Ayurvedic treatises with a new style of description. This book has become useful to students also due to its easy readability.

While defining diarrhoea (Atisar) and its nature, reasons of Atisar have been given in detail. It has been emphasised that after knowing causes of Atisar, its diagnosis, cure and prevention will become easy. Besides this, prescription and proscription will also become easy.

The book has described in detail kinds of Atisar with the 'Poorvaroop' i.e. initial symptoms, reasons of Atisar (external & internal), body-mind relationship, Sama-Nirama, Dosha vitiations & with difference due to age of patient and stages of curability etc has been described in detail. Symptoms of Atisar have also been described according to Ayurvedic method with the medicines for different symptoms. Diarrhoea in children has been given special mention. In the medicinal preparations Churna, Awaleh, Decoction, Rasayan Bhasma etc have been included.

This book is very useful and it should be translated in other languages for the benefit of common man.

## Aries and Health



*Pt.K.G.Gore, Lucknow*

Three places are most important in the horoscope of a person. The Planet which is at the eastern horizon at the time of birth, is known as Lagna. Indian astrologers put this Lagna at the first place and prepare horoscope on this basis. All the calculations are based on this Lagna. According to some other astrologers, importance of Sun is more while others give prominence to Moon.

Every planet has its own shape, nature and effects. So in horoscope effects are calculated on the basis of position of different planets. These planets are responsible for diseases and cure according to their positions.

### Effects of planets on health are following:

**Aries** : This planet is red coloured and hot in temperament. Its master is Mars. Person feels happy even with a little food and he likes wandering, proudy, brave and is fearful of water. Abnormalities in nails and abscess on the head may happen due to this planet. Person of this planet is of strong body and courageous. This planet may result in the diseases of eye and brain, fever, abscess on the face and injuries due to fire.

Planet aries is motile and of fire prominence. Diseases thus produced due to effects of this planet should be cured by cold tempered and water containing medicines. Persons of this Rashi may feel healthy after taking full sleep, they must avoid any tension. These persons must take morning walk daily and take rest and work only in proper proportions.

## Jeevaniya Science Journalism Course Evaluation Workshop Concludes



Inaugural Session of the Evaluation Workshop

**Lucknow 20 May.** The first batch of Science Journalism Training Course of Jeevaniya Society concluded here today. An Evaluation Workshop for this course was organised at the Regional Science Centre, Aliganj on 19th and 20th May.

Shri R. K. Singh, Secretary Science & Technology, Govt. of Uttar Pradesh inaugurated the Workshop on the morning of 19th May and urged the Science journalists to not only report the developments from research laboratories but also to look for problems that people face across the countryside and in the slums. He wanted the trainees to regularly keep reporting these developments including ongoing programs which can be of relevance to people especially in the countryside.

Dr. R. C. Srimal, Director, In-

dustrial Toxicology Research Centre (ITRC), Lucknow presiding over the inaugural function. Congratulated the Jeevaniya Society for taking such an excellent initiative.

Prof. M. S. Sodha, Vice Chancellor of Lucknow University presented the certificates to the trainees and Dr. Bhandendu Prakash, convenor, Vigyan Shiksha Kendra, Banda presided over the concluding session on the 20th May, 1995.

The training course is conducted by the Jeevaniya Society in collaboration with the Lucknow University. It is being catalysed by the National Council for Science & Technology Communication, Department of Science & Technology, Govt. of India. Its course curriculum has been drafted keeping in view Science &

Technology Communication requirements of the people working in S&T Institutions/Departments. Scientists, journalists and other specialists in the field of communication from Lucknow and outside have given training to the trainees of this course which is the first of its kind in this region.

Dr. Deepak Kumar from National Institute of Science, Technology & Development Studies, New Delhi, Dr. Gita Bamezai of National Institute of Health & Family Welfare, and senior scientist of NCSTC Shri Manoj Patraia were amongst the outside faculty. Prof. V. D. Gupta of Department of Mass Communication in S & T of Lucknow University, Mr Augustine Veliath of UNICEF, U.P., Prof. S. R. Naik of SGPGI and senior journalists like M/s Sanjay Johari, Badri Prasad Gupta, Mohan Thapalial and Mr. Prashant Kumar apprised trainees on various aspects of Science & Technology Journalism.

In depth discussions about the utility of the course in providing an alternative scientific journalism were held with these senior journalists, scientists and communication specialists. Lot of suggestions and new ideas came up during the discussion in these two days of workshop which would be incorporated in the future course design. Trainees discussed their experiences and practical assignments done during this training course with specialists and were in turn evaluated on this basis.

# Mother - Child Care Syndrome

Miss Niti Shankar, Lucknow

*We are guilty of many errors  
and many faults,  
But our Worst crime is  
abandoning the children,  
neglecting the fountain of life.  
Many of the things  
we need can wait,  
the child cannot.  
Right now is the time,  
his bones are being made.  
And his senses are  
being developed.  
To him we cannot answer  
TOMORROW,  
Can't say to him TOMORROW,  
for, his name is 'TODAY'*

The person who came out with this thought had a simple motive i.e. making the world aware that caring and rearing of a child is the basic duty of humanity.

Mother and Child are the two sides of the same coin and merely caring for the child and neglecting the mother can never serve the purpose. We Indians generally categorize women in twin roles of home maker and worker but her great responsibility of child bearing and rearing is taken for granted. It is the mother, a worker who lays the foundation of a mentally and physically healthy child. Other contributing factors for kid's development and growth come after her.

It is not only in India where women and children are the suffering community but a survey conducted in about 40 developing countries projected the grim picture that the articulation of their needs is the call of the hour.

All those people whose have say in matters of framing laws, policies, programmes etc. fail to make a demarcation line between working women as mothers and mothers who go out and work. The consequence is lack of crystal clear laws or policies.

Although India has ratified the International Convention on Rights of the Child which includes appropriate pre and post natal health care for mothers and all-round development of child, it is still very essential for the legal system to adapt itself to make available maternity and child care support to all women and children. The child by reason of his physical and mental immaturity needs special safeguards, care and assistance plus appropriate legal protection, before as well as after birth.

Even our forefathers while framing the Constitution, under Articles 15, 32, 47 and 49 laid down the broad general principles regarding special provisions for women and children. It embodies clauses like protection of the health and strength of workers and of children at a tender age, just and humane conditions of work and maternity relief raising the level of nutrition, public health and the standard of living of people in general. Unfortunately, even to this day the mandarins of democratic framework sit around and ponder on the question-'Maternity and Child-care should be considered a part of labour legislation or as social welfare?' The

catchword is they should be mother-child friendly and targeted towards full, harmonious and righteous development of one's personality.

Though there is a decline in Infant Mortality Rate (IMR) from 146 in 1966 to 80 in 1990 and subsequently increased life expectancy from 31.7 in 1950 to 54.7 in 1980 (female child), the problems of women and consequently those of children remain unmitigated. The incidence of female infanticide and female foeticide are still prevalent and need some bold and concrete steps to curb them. The laws are either silent or woefully inadequate. Even mass media which can be a potent weapon employs very little of its resources in educating the masses and creating awareness among them. Even popular cultural forms such as songs, posters and folk media can be utilized to tackle this serious problem.

The mother and child relationship suffer not only due to poverty or a woman being a working lady but ignorance, eating and drinking habits, drug addiction and above all, environment in and around mother and child also acts as a great influencing factor.

Generally, in Indian scenario where both men and women work to earn their daily bread, it is the eldest girl child of the family who has to look after the younger siblings just as the eldest boy goes out into child labour. They not only get deprived of their golden

years of childhood and grow up prematurely but also are misfits as child rearers because a mother's love, care and instincts can't be substituted by anyone else.

In 1940 National Planning Commission recognized the need of 'Child Care Services' as an alternative to this grave social problem. This was basically formulated to address the needs of women, young children, and older children specially those who belong to the socially and economically disadvantaged sections of the society. The schemes and programmes were primarily concerned with health, welfare and development of mothers and children. The mushrooming of creches etc. are the extension of these services which promote an environment of health, nutrition, special care, fun in the atmosphere of happiness, love and understanding.

But have you ever got the chance to peep into a creche or so called child care programmes? Beneath the facade you'll come across children 'kept' in a room, too bored with vague expressions and counting moments when they'll be lucky to go back into the cosy confines of their home. Why talk about the children, even the workers supposed to be looking after them present a picture of carelessness and disdain. Taking care of your own child and lots of other children are like two different concepts and so trained, dedicated and committed workers are the basic requirement which governmental and non-governmental organisations should look after. The untrained workers can mar the sensitive mind of a child and make him juvenile delinquent.

'LOVE AND CARE' can never

be equated with monetary value but then financial support too is necessary for basic management of these child care services. A National Child Care Fund together with a network of State and Regional Child Care funds should be set up along with connecting all such centres and forming parents committee to look after them. This will make a major impact on the community involved in mother and child care services.

Government efforts should be supplemented with voluntary effort. Such programmes can be formed and implemented from the perspective of building people and have a holistic approach to the child.

A study conducted highlights the fact that a child in grandmother's care show greater intellectual development and social maturity than in maid's care, creche's care or even in the care of today's outgoing Mom's ? So in order to secure the future of our forthcoming generation which is bound to be affected by the impending social, economic and cultural pressures. Maternity and Child Care Services Act should be promulgated along with policy statement by the government.

Last but not the least, importance of breast feeding should be given top priority because today when milk substitutes and infant foods harping about their high nutritive contents are flooding the market, promoting the superiority of mother's milk has become very essential. Efforts should be made by Professional associations, academic institutions, NGO's, women's organisations, trade unions, media, business and industrial establishments and social activities to spread awareness and information about the issues related to Maternity and

Child Care in order to enhance support for development of women and children.

Child care involves mother, father, family, employers, community, state, nation and the universe as a whole so chalking out priorities will only serve as drops in the huge reservoir which needs downpour of love, care compassion, tenderness and devotion.

*(Based on, "Maternity & Child Care Services", M.S. Swaminathan Research Foundation, Madras)*

### **Metabolic deficiency causes birth defects**

Researchers have identified a metabolic deficiency that may be responsible for most brain and spinal cord birth defects. A report says that women who give birth to children with neural tube defects, or NTDs, have a flaw in an enzyme called methionine synthase, which plays a key role in the production of a substance that coats nerve cells.

NTDs occur between 20 and 24 days after conception when tissues fail to close into the tube that gives rise to the brain and the spinal cord. The most common defects are spina bifida, which causes paralysis in parts of the body, and anencephaly, a fatal condition in which the brain fails to develop normally.

The birth defects occur in about one per one thousand pregnancies in the United States.

The scientists report that while research in recent years has shown that high doses of vitamin called folic acid given during the first few weeks of pregnancy can prevent NTDs, the latest findings offer a possible explanation. The findings also suggest that adding Vitamin B-12 to either food or supplements can reduce the amount of folic acid needed to prevent NTDs.

# Health Hazards of Working Children

In 1975, the International Labour Organisation (ILO) had singled out India as having the largest number of working children in the age group of 10-14 years alone. The magnitude of child labour in our country varies according to the reports of various sources published from time to time.

Since the earliest times, children have been involved in and contributed to the economic life of their families. In many societies, incorporation of the children into the work activity occurs between the ages of 5 and 15 years, so that child work becomes a part of the integral process of socialisation and a form of family and community participation. But, work outside the family involves a rapid change of environment. The children may be prone to various types of occupational health hazards. There is a danger to children's life and health by their employment on hazardous jobs and by unsafe working conditions in many of the industrial undertakings and agricultural fields. The problem is essentially related to socio-economic factors and therefore assumes greater proportions in developing countries. Apathy on the part of everyone concerned have driven the working children into different types of health hazards.

Many occupations may not be hazardous by themselves but the environment makes them such. The various environmental factors such as ventilation, dust,

gases, fumes, odours, lighting, noise, humidity, crowding, vibrations and ionising radiations threaten the child's health. A few others may be considered safe but the vulnerability of children causes the hazards.

## Occupational Health Hazards

Any occupation which allows the working children to come in contact with harmful substances like chemicals, as in the balloon and lock industry or fire as in glass, match and fireworks industries or cotton puff and dust as in powerloom industry is termed intrinsically hazardous. Unfortunately, not enough attention has been paid to occupational diseases or to the combination of poverty, malnutrition and unhygienic living conditions of children.

In balloon factories, children are engaged in mixing chemicals, colouring balloons and testing each balloon with gas. A thick pall of dust and chemicals pervade the rooms which are small and ill-ventilated. Inhalation of acid fumes continuously for a long time can damage the epithelial lining of the lungs and cause pneumonia, broncho-pneumonia, cough, breathlessness and even congestive cardiac failure.

In match and fireworks industries, children mixing chemicals in the boiler room come in contact with toxic fumes which they inhale. They also face high intensity of heat and also

may be badly injured in fire accidents.

In lock manufacturing industry, most of the children suffer from pulmonary tuberculosis and other respiratory diseases. Children who work on electroplating plants often complain of breathlessness, asthma and acute headache.

In the glass industry, thousands of children literally play with fire every minute. Heat exhaustion, cuts, burns and lacerations are common health hazards. Heat rise & chemical fumes and dust obviously have a serious impact upon the health of workers. In bangle-joining units children sit in front of acetylene flames and inhale kerosene fumes for 10-12 hours at a stretch. They also cut and make designs on glass bangles and consequently inhale glass dust. Thus the working children are prone to heat strokes, conjunctivitis, skin diseases and respiratory diseases like tuberculosis and pneumoconiosis.

In slate industry, silicosis is a common occupational disease among the child workers. They are employed to cut slates into small pieces and this press emits dense clouds of silica dust, which enter the lung, forming silica patches resulting in silicosis. This causes fibrosis and reduces the lung compliance. As a result the vital capacity of the lung is reduced.

In powerloom industry, the child workers suffer from byssinosis caused by inhalation of cotton dusts which get

embedded in the lung and cause fibrosis of the tissue. This reduces the vital capacity of the lung. A patient of byssinosis is highly susceptible to bronchitis and tuberculosis.

In the agate cutting and polishing industries, the children are engaged in various operations like chipping, grinding and drilling the agate stones. They are exposed to agate dust which contains elements like iron, calcium, aluminium, copper, nickel, chromium and silica. These cause lung diseases like tuberculosis, pneumoconiosis, bronchitis and bronchial asthma.

Table given below summarises the health effects of children in other occupations.

In general, higher susceptibility to ill-health arises because children are generally deputed to undertake adult jobs and their immatured vulnerable body and mind become more stressful than those of adult workers. Most agricultural work entails prolonged exposure to sun and rain. In tropical countries the

climatological thermal load is considerable along with metabolic heat load due to strenuous agricultural operations. When the air temperature exceeds the body temperature, it would increase the heat through connective heat gain and thus heat-induced disorders are found amongst the agricultural child labourers. Moreover, the children are employed to operate modern powered agricultural machinery and they become vulnerable to mechanical injuries. Children are also employed in spreading fertilisers, pesticides etc. either by hand or with the help of indigenous equipment without wearing personal protective devices and the children become susceptible to the systemic toxic effects of such chemicals causing skin diseases like dermatitis and neurological complications through skin absorption such as local irritation and stimulation of the central nervous system resulting in hyper-excitability, tremor and convulsion. Parasitic infestations, specially intestinal

helminthiasis are endemic in the tropics and may be contracted in the course of agricultural operations. Bites of poisonous insects, snakes and injuries sustained while attending farm animals are important causes of morbidity and mortality of the agricultural child workers.

**Conclusion**

Thus health hazards are obviously of varying kinds and the degree of hazards varies. In some instances, the hazard is obvious and in other it is insidious. Though Article 24 of the Indian Constitution states clearly that children below 14 years will not be allowed in any hazardous employment, we are, if reality, a long way from exercising the law to its fullest extent.

**Working place**

**Health effects**

- Bidi industry* : Nicotine poisoning causes nausea, headache, blackouts and muscle fatigue, loss of eye sight
- Brass Industry* : Acid burns and tuberculosis
- Zari Industry* : Eye diseases, postural deformities and spinal problems
- Carpet Industry* : Poisoning from colouring agents, lung diseases from fibre dust.
- Domestic/Shop Workers* : Overwork, physical and sexual abuse, drug addiction, dependence often develops.
- Agricultural Workers* : Vulnerable to various types of injuries.

**Sale of human organs must be checked**

The RACKET in human organs particularly kidneys, would spread to the areas so far unaffected from this menace if the states failed to adopt expeditiously the transplantation of Human Organs Act, passed by both the Houses of Parliament this year, experts have warned.

The experts voiced serious concern at a meeting of legislators, medical professionals and social activists here over the delay in ratification of the central act prohibiting commercial dealings in human organs.

Experts favoured a minimum of 10 years prison term for those found guilty of trading in human organs.

---

# Strange Contraception Practices in Nigeria

Cash stripped Nigerian women, faced with a rising cost of living due to economic reforms, are turning to a myriad of cheaper traditional family planning methods. Sixty-five year old Yejide Ajibosu, who has practiced traditional medicine for 25 years, now specialises in family planning because of a marked increase in the number of women seeking her services.

Ajibosu says the women use a number of methods ranging from herbs, periodic abstinence and charms. At least 17 "treatments" as she calls them are widely used by Nigerian women although a particular method may be more common in one of the country's 250 ethnic groups than the others. For instance, the Yorubas in the south-west use 'Omolangidi' a curved medicated wooden doll which is placed under the bed to reduce fertility.

A parrot feather dipped in a concoction and the shell of a tortoise are also regularly used for the same purpose. Some communities believe a feather attached to the roof of a couple's bedroom will blow away children that might result from the union, while a tortoise shell placed upside down under a matrimonial bed is thought to prevent conception.

The Igbos in the east and the Hausas in the north mark a women's lap and stomach with blades to prevent pregnancy. However, Igbo medicine men say 'Ikechiafo' is difficult to reverse and causes permanent sterility. Medicated padlocks, lime in the cervix and drinking a concentrated salt solution are some examples of traditional family planning practices favoured by rural women, who form the majority of those using such methods. Only 8% of Nigerian women, who constitute more than 51% of the country's 80 million people, use modern contraceptives.

Health workers here say many women now resort to traditional methods because they are cheap, costing between US \$ 2 and 4 for a cure. With inflation topping 200 per cent, most women cannot afford oral contraceptives, which cost about 59 cents for a packet that lasts one month.

LLevbare Obaze, a doctor, says there is no documented evidence that traditional herbs and charms prevent pregnancies. "There are no research findings to speak of, and all we hear are testimonies from women who most probably also breast feed their babies for long periods", says the doctor. But Jacob Ayelaboogun, who has

practiced traditional medicine for 40 years, claims he has treated many women and most ended up with the number of children they desired. "My medicine is effective because my patients have confidence in me. The confidence has been built over time", says the 75-year-old traditional healer. Two house-wives here attest to the efficacy of traditional family planning methods given at Yejide Ajibosu's clinic. "I was introduced to Madame Ajibosu ten years ago and since then I have been using her medicine to space my children", says 38 years old Yetunde Oja "I stopped having children six years ago. Mama's medicine worked wonders for me - no abortion, no unwanted pregnancy," said the mother of three. Biola Adedayo, 32 used 'Oruka' a herbal ring worn by women to space two of her children. "But now, my husband and I use modern methods. Many of my friends suspected that the ring was some kind of voodoo and they avoided me. So I changed to Modern family planning methods", said Adedayo.

*(Courtesy 'Science for Villages Centre of Science for Villages', Magan Sangrahalaya, Vardha.)*



# Safety and Genetic Engineering

For several years bio-technologists have been using the new techniques of genetic engineering to move genes into organisms without regard to natural barriers. There have been bizarre reports of the introduction of genes from animals to vegetables such as chicken to potato.

Now the debate on genetic engineering is reaching a new level as several products of genetic engineering will reach a stage of commercial introduction within the next five years. Starting with a genetically engineered tomato with a longer shelf life, the food and pharmaceutical products industries in particular are gearing themselves for the introduction of a wide range of commercial products. The 'New Internationalist' magazine reported recently in a cover story on this subject, "An estimated 400 pharmaceutical companies are conducting world-wide research and development in genetically engineered products and the industry predicts that by the year 2000 over 1000 genetically engineered new products will be on the market. Mistakes are bound to happen. And with something as powerful as genetic engineering, one mistake could have powerful and

wide ranging effects."

The concerns about possible nightmarish consequences of genetic engineering are so strong that in the USA, which leads the world in this branch of science and technology, several prominent scientists (including Nobel laureates) have got together to form the Washington based Union of Concerned Scientists (UCS) to plead for caution in the commercial introduction of new genetically engineered products. Howard Ris, the executive director of UCS, said recently that they do not oppose continued research and development in this field, but insist that government approvals needed for commercialisation of transgenic crops should be halted until the government can assess and control the risks.

UCS has recently released a study by Dr. Jane Rissler and Dr. Margaret Mellon which has attracted widespread attention for what it has to say on the possible environment impact of genetic engineering in agriculture, specially in the context of the fact that by the turn of this century hundreds of transgenic crops and plants would have spread over a wide area. Among other things, the Rissler Mellon study warns

against the possibility of introduction of new viruses and diseases as well as proliferation of weeds. The possibility of harm will rise as the number and variety of these crops increases. Moreover the fact that a transgenic crop has been approved as safe in USA will not mean that risks do not exist in the different environment conditions prevailing in other countries.

As a lot of genetic genetic engineering research in agriculture is controlled by giant chemical companies, this has led to concern - which is backed by existing data on research trends - that new crops will be engineered to tolerate more chemicals produced by these companies. Apart from being environmentally more harmful, this will also greatly increase the grip of big companies of farmers. In fact many farmers can be wiped out of existence by the introduction of new attractive products of genetic engineering in the market.

On the other hand vegetarians are revolted by the fact that the vegetables or fruits they buy in future may have in them the genes of insects or animals. For example soyabean may have fish genes and potato may have chicken genes. (NFS India)

## Subscription Rates

	Individual (Rs.)	Institutions (Rs.)
Annual	50	100
Biannual	90	180
Triannual	130	260
Life	500	100

(Demand Draft or M.O. should be in favour of 'Jeevaniya Society', Lucknow. If you want magazine by Registered Post add Rs. 35.00 for every year).

## Subscription for m

I wish to be a subscriber of JEEVANIYA for One / Two / Three years / Life. I am remitting the Subscription amount of Rs. . . . . by Money Order/Demand Draft No. . . . .

Dated. . . . . Please send me the JEEVANIYA English/Hindi.

Name : .....

Address : .....

Postal Code :

Yours

(Signature)

# Happy Birthday !

Story : Dr. K. Srinath Reddy

Drawing : Chennu S. Mathad

Courtesy : Booklet of 'HRIDAY'

Tomorrow will be Ravi's Birthday, We must think, how to celebrate it ?

What is there to think ? As usual we'll bring cakes, Pasteries, Sweets, Chips and Ice-creams and enjoy with indoor games or cartoon films.

Dad ! Whether Birthday does not mean the day for wishing a healthy, long life ?

Yes Rekha ! You are perfectly right

Then we must arrange for nutritious food and outdoor games. I have learnt this in my school.


Never! I want the usual party. Otherwise my friends will not like.

Ravi sees Heart in his dreams that night and. . . . .

Oh you are heart! Please do come to my Birthday Party tomorrow.

I'll certain like to come and wish for your healthy life but . . .

What is the matter ?



Your sister is right. You must take plenty of nutritious food on your birthday.

You must take a lot of fresh




fruits and vegetables,




They will provide you with vitamins and minerals which will help you in fighting from germs and prevent you from fatal disease.

Like. . . .

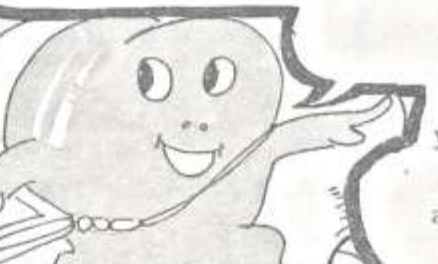


But what to do with tasty things which we have bought for the party?


Yes! You can take them occasionally but they are not nutritious which make you fatty now and ill later on.




But energy is also required



Yes, you require energy, You'll get energy by taking cereals and pulses. You must take bread, rice, chapati and boiled potatoes. Sweet pea, milk and cheese will also give you energy. You must take these things in adequate quantity but not too much.



What else should I do to remain healthy?



To remain healthy you must exercise daily. It will prevent various diseases like high blood pressure, diabetes, heart disease and obesity. It will also help to relieve mental tension and you'll perform better in the examination O.K., now I am leaving

(To be continued)

# Subscribe Jeevaniya for Healthy Living

**A new Look  
Yoga Special**

Special '92  
Year 2, No. 2

## Jeevaniya

Health Care Magazine

**NEW**  
• More Pages  
• Larger Size  
• A multi colour  
pullout Poster

Experiences of  
Prominent Physicians  
Herbal Cosmetics  
Biomedical News  
Mother & Child Health  
Do it Yourself  
Your Health Knowledge  
Modern Researches  
Book Digest  
News from the Bold



**Child Care  
Special**

Special '92  
Year 2, No. 2

## Jeevaniya

Health Care Magazine



Breast Feeding • Weaning Precautions  
Rickets in Children • Social Care Aspects  
Night of the Child • Self-Weaning by Nidra  
Diarrhoea in Infants • Mentally Retarded Children

With All Other Regular Columns

Special '92  
Year 2, No. 2

## Jeevaniya

Health Care Magazine

**MONTHLY  
HEALTH  
SPECIAL**



Brain Drain • What is HIV? •  
Brain Blood • Death of Covid-19 •  
Fad Diets • Food Safety & Control •  
Fad Diets • Food Safety & Control •  
Fad Diets • Food Safety & Control •  
Fad Diets • Food Safety & Control •

**Eye Care  
Special**

Special '92  
Year 2, No. 2

## Jeevaniya

Health Care Magazine

**Special Diagnostics**



**Highlights**  
Causes of  
Defective Vision  
Care of your Eyes  
Eye Care of  
Conjunctivitis

Prevention of Eye  
Disease by Yoga  
Eye Care in Infants  
Cataract

Free Multicolour Poster on Jaundice

**Gastric Care Special**

Special '92  
Year 2, No. 2

## Jeevaniya

Health Care Magazine

**Causes and Cure of Indigestion.  
Himalayan Herbal Environment  
Treatment of Diarrhoea  
Nature cure for Fever  
Asthma.  
Udarashoola or stomache.  
Digestive Disorders and Diet**



**Women's  
Health  
Special**

Special '92  
Year 2, No. 2

## Jeevaniya

Health Care Magazine



**NERVOUS BREAKDOWN  
ANAEMIA IN WOMEN  
HYSTERIA IN WOMEN  
SCHIZOPHRENIA  
LEUCORRHEA  
TIPS TO SKIN CARE**

## Subscription Rates

	Individual (Rupees)	Institutions (Rupees)
Annual	50	100
Biannual	90	180
Triannual	130	260
Life	500	1000

Modern life-style, irregular food habits and increasing pollution are creating many health problems. Experiences of famous Physicians and Scientists in preventing and curing these health problems are provided for your benefit by Jeevaniya bimonthly.

To get Jeevaniya regularly at your doorstep, subscribe through M.O. or Draft favouring 'Jeevaniya Society, Lucknow.' at following address:

**Jeevaniya Society**

E-III/249, Sector- H, Aliganj, Lucknow - 226 020