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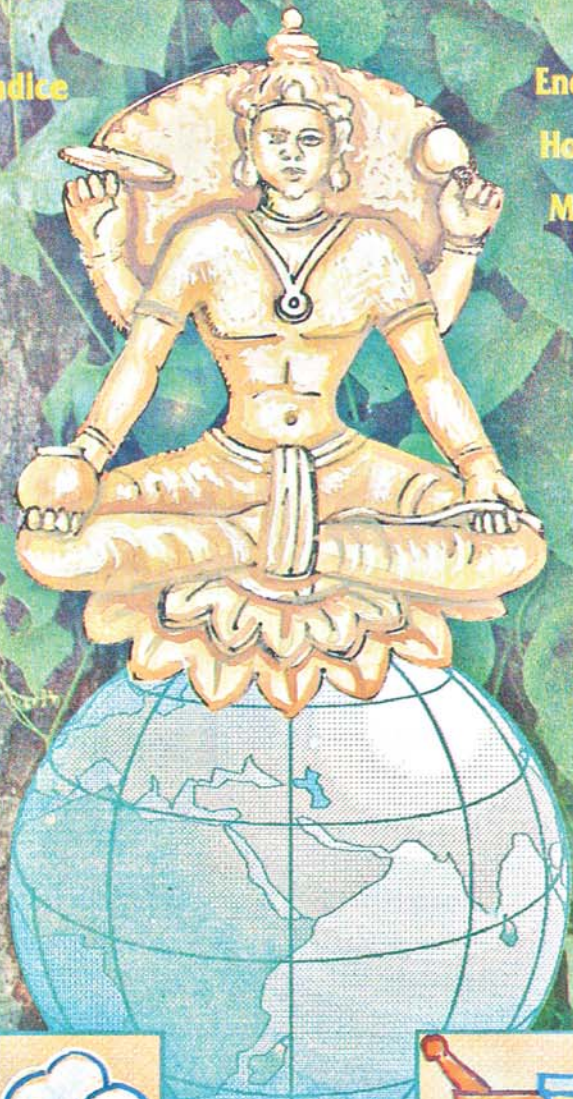
Bimonthly

Jeevaniya

Health Care Magazine

- Researching Indian Plants for Jaundice
- Panchakarma Therapy in Arthritis
- New & Emerging Infections
- Smoking - Related Deaths
- Naturopathy in Diabetes

- Endangered Medicinal Plants of India
- Household Remedies from Rajasthan
- Management of High Blood Pressure
- Relevance of Homeopathy in India
- Leucorrhoea : Causes & Remedies



■ Development of Ayurveda-Modern Medicine Interface

■ Potential of Alternate Medical Systems

With all Regular Features and Columns

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A Dialogue Between Ayurveda and Allopathy

There has always been an undercurrent of dialogue for technical exchange between Ayurveda, developed centuries ago, with Unani, Siddha, Tibetan and Chinese systems of medicine. On the other hand rural and tribal traditions spread all over the country have also enriched Ayurveda itself to a very great extent, through mutual exchange of knowledge and experience. However, if the growth of Ayurveda has remained under arrest for the last several centuries and if during the few recent decades its development has again catapulted, then both are due to, among other factors, the presence or absence of dialogue or exchange of knowledge with other disciplines and knowledge systems. Allopathy has moulded the modern science and the knowledge available in various therapies according to its needs and has adapted itself to the centralized production system for commerce. On the other hand, owing to the sense of insecurity fostered in Ayurveda due to the negligence and dearth of resources rendered to it, the bulk of its knowledge has become stagnant. Moreover, in the absence of a dialogue with other disciplines it has not assimilated modern science or its offshoot, the new technology.

In the face of above segregation, even if Ayurveda strives to develop, it will still remain limited, unaware of the wealth of modern science and technology. What objections could there be in using Electronics, Computers, Chemistry, Biology, Biotechnology and techniques like laser in Physics while following the fundamental principles of Ayurveda for its development? We must not be taken to compromise with the basic principles of Ayurveda while yearning for the dialogue.

If accordingly, the technology of quantitatively measuring pulse-examination, Dosha-Dushya, Rasa-Guna-Veerya-Vipaka etc. is evolved then it will certainly go into the development of Ayurveda. Similarly if biotechnology and genetic engineering could be used for the development of plants excelling in special Rasa, Guna, Veerya, Vipaka etc then it will certainly fortify the Ayurvedic diagnosis and therapy.

It should also be remembered that Ayurveda is the total knowledge of healthy life and not just a therapy or a diagnostic method. In order to develop Ayurveda and adequately reap its benefits, daily and seasonal regimen should be followed and corrective measures should be carried out. Ayurveda will make us wary about Pathyapathya (wholesome & unwholesome) and a change in life-style is necessary to fully benefit from Ayurveda.

In order to fully harvest the potential of Ayurveda, the basic tenets of Indian philosophy and overself must be taken care of and should be followed by mind, speech and action. However, Ayurveda cannot benefit by barring people desirous of making avail of Ayurvedic diagnosis and therapy. The Jeevaniya Society had recently organized a conference on the above crucial topic which is also reported in the present issue. We shall remain on the lookout for the reactions of our learned readers about the above topic for an intense and meaningful dialogue.



Readers' Forum

Dear Editor

I came across your magazine Jeevaniya. Since I am working for Rural Development therefore I believe that Jeevaniya will in no doubt assist me in implementing the programme of sustainable development of rural woman.

Mohammed Abu, Ghana

I have been a keen reader of Jeevaniya, I have always found it very informative. But the delay in its publication is really depressing. I am a well wisher of your magazine and I want to have the Jeevaniya regularly.

**Mrs. Chaharri Behl
New Delhi**

We really appreciate your concern and believe in close rapport with our readers. As an editorial information you may note that our publication is delayed only due to unavoidable circumstances. Our effort has always been to publish it regularly.

Editor

I have read your magazine. I am interested in subscribing this bimonthly health care magazine. Really, it is a magazine playing the role of popularization of the importance of health for the common people. I am very much

interested in reading other publications of your society.

Pavan Kumar, Bombay

We are glad to know your interest in our activities. We are encouraged by your comments. We would also welcome your valuable suggestions. Besides the health care magazine we publish wall papers on some medicinal plants and on a few common diseases also. We are sending you more information about our publicatory. A list of our publications is being mailed to you separately.

Editor

I happened to see your magazine and read it thoroughly. I found the simple tips given therein for the prevention of many diseases very useful. It gives good information on health as well as about various diseases. I am very much interested to get all its back issues.

Surendra Nath Behera, Puri

I have been a regular reader of Jeevaniya. I always appreciate the column 'Prescriptions of Granny', I am very much impressed by the household remedies and the tips which you publish in your magazine. I want to switch over from toothbrush culture to sustainable and

available indigenous traditions.

G. Mathur, Behar

Recently I got a chance to read Jeevaniya. Although it was a very old issue but I found it very informative. I am a research fellow in Unani System of medicine and I realize that this magazine is of great help to me.

Dr. Naseem, Hyderabad

I have seen your magazine in the National Library. Jeevaniya is not only a informative health care magazine but in my opinion this is the only magazine which is has the role of making common man health conscious. I wish you all success in future.

Kalyan Pal, Calcutta

Your comments are really a driving force for us. We simply want our readers to maintain positive health by relying more and more on our traditional systems of medicine based on locally available materials.

Editor

I came across one of the issues of your bimonthly health care magazine Jeevaniya. I want to become its regular reader. The other members of my family have also read it and we have all found it a highly useful magazine.

T. K. Joseph, New Delhi

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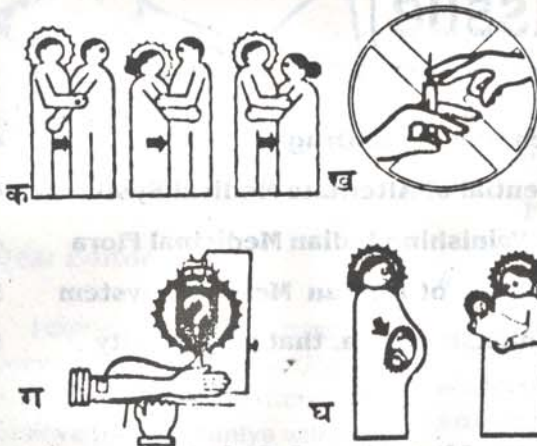
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AIDS-Test Using Saliva



Modes of AIDS Transmission

Based in Beaverton, Oregon, Epitope Inc. has received US Food and Drug Administration's (FDA) approval to begin marketing of the first test to use a saliva sample, rather than blood, to detect the presence of the HIV virus. The test, which comes as a kit and takes about two minutes to administer, is also the first to be cleared by the FDA for collection of oral specimens for diseases diagnosis of any type.

The test kit, called Ora Sure, has two components : a treated cotton pad on a stick to collect saliva and a specific test to analyse specimens for antibodies to HIV. It is expected to dramatically extend the range of HIV testing, especially among difficult to contact groups like the homeless and chronic drugs users.

Light-Cure for Throat Cancer

Patients who choke on cancerous throat tumours may soon get help from a therapy that destroys tumour cells with simple light. Photofrin, the first of a new type of cancer treatment called photo dynamic therapy, where patients get a drug to make their tumours light-sensitive. Light then kills the cancer cells.

In this therapy patients remain vulnerable to

very severe sunburns until the drug wears off, in about 30 days. Patients are injected with Photofrin. Several hours later, doctors insert fiber-optical sensors into the oesophagus and shine bright light onto the tumour. The light switches on Photofrin, making it produce substances called free radicals that kill cells.

Although patients experienced a high quality of life because they could swallow again on their own, further researches are needed in this field.

Dwindling Sperm Count

In 1992 a Danish paediatric endocrinologist Niels E. Skakkeback, published a report in the British Medical Journal which concluded after 61 studies from round the world, that the sperm count of healthy men had dropped more than 40 per cent in the last 50 years. Moreover, a high percentage of the sperm was of poor quality, immobile or abnormal with two heads and no tail.

During an orgasm millions of sperms charge towards the oviduct for fertilization. About one lakh sperms arrive at their destination and only a few dozen attempt to bore a hole in the protective membrane of the egg. Finally one sperm, penetrates egg and causes conception.

Falling of sperm count means decline in power of procreation of man. Use of female hormone oestrogen seems to be the cause of this phenomenon. Oestrogen is used in shampoos, skin creams and birth control pills. A human male exposed to just a fraction of oestrogen could develop reduced fertility.

Diabetes Genes Discovered

Two interactive genes, both unlikely suspects of adult-onset diabetes, have now been found. The findings are reported in the British journal "Nature" by two overlapping multinational teams of scientists, both led by Prof. Graeme Bell of the University of Chicago's Howard Hughes Medical Institute.

The new finding makes diabetes a more complicated disorder, but also suggests new ways of treating it and opens new avenues of research. Diabetes is one of the world's most common inherited diseases. It afflicts three people in 100.

Vaccinating Bananas to Save Money



The vaccinating bananas are currently being engineered in the laboratory. Biotechnologists at the Boyce Thompson Institute for Plant Research at Cornell University have genetically engineering a banana to produce an antigen found in the outer coat of the hepatitis B virus. Vaccinating bananas will cut down the cost of vaccination in developing countries, claim the scientists.

Last year, the team showed that hepatitis B antigens produced by genetically engineered potatoes triggered an immune response in rats. But because potatoes are not eaten raw, and cooking them would destroy the vaccine, they are unsuitable for vaccinating people.

Clot-dissolving Drugs for Paralysis

Clot-dissolving medicines are an effective emergency treatment for acute paralysis. If instituted within three hours of the initial symptoms of paralysis, the victims are at least 30 per cent more likely to recover with little or no disability after three months, says Dr. (Col) K. L. Chopra, Head of the Department of Medicine and Cardiology, Mool Chand K.R. Hospital.

Stroke, according to the doctors, is the third largest cause of death in the country after diseases of the heart and cancer and communicable diseases. Though elderly people account for the vast majority of paralytic deaths, stroke ranks third in the causes of death in middle-aged people.

The warning signals of stroke are sudden

weakness or numbness of the face, arm or leg or one side of the body; loss of speech; trouble in talking or understanding speech; loss of vision in only one eye; unexplained dizziness or sudden falls.

About 10 per cent of strokes are preceded by mini strokes. Clot is transient in ischemic attacks. These can occur days, weeks or even months before a major paralytic stroke. The symptoms of mini stroke are similar to warning signals, occur rapidly and last a short period of time, usually from a few minutes to several hours. Mini strokes are extremely important warning signals for oncoming paralysis and should not be ignored, warn doctors.

Genetic Vaccines to Cure Cancer

Genes present in tumour cells might offer a revolutionary, new procedure for fighting cancers, according to British researchers. A team of scientists at the Southampton University who are presently developing a set of genetic vaccines against cancers said these genes can provoke the body into attacking cancer cells, reports the London Press Service.

Genetic vaccines are very much like normal injections. These injections normally rely upon exposing the body to protein molecules from organisms like bacteria and stimulating an immune response. The antibodies thus produced destroy disease-causing micro-organisms when they invade the human body. In the same way cancer cells have their own type of proteins on their surfaces.

Inexpensive Test of Oral Cancer

Inexpensive test to detect oral cancer has been developed, which strikes primarily tobacco users and heavy drinkers. Because there is no commercially available test for oral cancer, it is usually detected through a physical examination. However, by the time the cancer is visible, it has often already spread to other parts of the body. A dentist in Washington developed a test that makes use of toluidine blue, a dye that is used to colour textiles but that has been put to medical use.

Maternal Mortality



The number of women who die each year during pregnancy and childbirth is 20 per cent higher than previously estimated, and the primary cause for the malnourishment of South Asian children is the maltreatment of women. These are just two of the startling conclusions drawn by the 1996 UNICEF report "The Progress of Nations".

It is pointed out that for every woman who dies, an additional 30 infections and disabilities often go untreated. Reducing these problems requires high-quality family planning, and a greater emphasis on basic obstetric care that could fit into existing facilities, especially in developing countries.

The report points out that low birth weight indicates that infant was malnourished in the womb. "The proportion of babies born with low birth weight therefore reflects the condition of women, particularly their health and nutrition, not only during pregnancy but over the whole of their childhood and young lives, the report said.

It is also concluded that South Asian women, who also suffer high rates of anaemia and typically eat less than the male family members.

It also notes, that progress has been made in India, especially by groups organised by women. Report hopes that "The closing years of the 20th Century may eventually come to be seen as an inflection point in the graph of women's status and well being."

Herbal Gene Bank

The Tropical Botanical Garden and Research Institute (TBGRI) at Thiruvananthapuram is emerging as a major player in the fierce competition to tap the huge global market for herbal drugs, even as it attempts to protect the country's interests in the new patent regime. The institute has attracted international attention following the development of several drugs based on medicinal herbs mostly found in Western Ghats. As the co-ordinating unit for the all India research project on ethnobiology, TBGRI has set up a sprawling conservatory garden and a gene bank for tropical medicinal and aromatic plants. It has established cryopreservation facilities and is currently engaged in the development of a DNA library.

A precious gene pool of over 1000 species of commercially important wild plants has also been established. Scientists are collecting 50 to 100 gene variation samples representing each species. The institute has simultaneously launched a project named "Herbs for all, Health for all by 2000 AD" to revitalise local health traditions and promote participatory management of biological resources involving tribals and local communities.

Scientists at TBGRI have also developed a herbal sports medicine which is capable of boosting the performance and stamina of sportsmen helping to extend the frontiers of human physical excellence. The drug has the advantage that it is free of steroidal effects.

Another product which has attracted attention is a herbal health care kit based on local medicinal plants. The kit consists of 15 scientifically-validated drugs in granule, tablet, powder, capsule, ointment and oil forms. It is designed to tackle all the common ailments including fever, headache, cold, cuts and wounds, diarrhoea, dysentery, inflammation and burns. The institute has also developed antipsoriasis and anti-diabetic drugs.

The herbal nature of the drugs eliminates the risk of side-effects besides affording cheap, eco-friendly remedies especially in rural areas where modern medical facilities are not available.

Bees to kill pests

Scientists at the US Department of Agricultural Research in Tifton, Georgia, have worked out a way to use the honey bee to target pesticides more precisely on crop-damaging pest larvae. The bees are coated with a naturally occurring virus, Helithis nuclear polyhedrosis, and deliver it to flowers in their unending search for nectar. Each bee flies some 500 miles during its 15-20 day life.

The heart of the new development is a tray attached to each hive, designed so that foraging bees pass through a talcum powder containing the virus. The approach has been tested against the corn earworm and tobacco budworm. The virus-coated bees killed between 74 per cent and 87 per cent of corn earworm larvae, compared with a natural death rate of upto 14 per cent.

Malaria Parasite

The fight against malaria, which was never an easy task, seems to have become more difficult, following a recent finding that another strain of malaria parasite has also developed resistance to chloroquine. Hitherto, drug resistance had been found only in *Plasmodium falciparum*, the malaria strain, which was the most pernicious. Now, experts of Malaria Research Centre, an apex institution under the Indian Council of Medical Research, have found that *P. vivax*, the strain, which was till now considered easy to tackle with chloroquine, has also developed resistance to the drug. Now they also have to worry about *P. vivax*, particularly since 1.2 to 1.5 million new cases of *P. vivax* occur every year in India.

Crab to Repair Cracked Bones

Crabs have been shown to be a rich source of granules of a mineral that may solve the problem of repairing cracked bones in humans. British researchers recently isolated tiny granules (less than 5 micrometers in diameter) of calcium phosphate. They are found in crabs' liver cells and are also excreted in large quantities by them. The researchers have also made synthetic forms of this

bone precursor and are testing their use in repairing cracks in human bones or in hip-replacement.

Gas-Mask to Ears

Defence scientists have developed a gas mask containing a mixture of carbon dioxide and oxygen, which helps reduce hearing losses in industrial workers and defence personnel working in extremely noisy environments.

The special mask contains five per cent carbon dioxide and 95 per cent oxygen. Exposure to the carbogen mixture for 10 minutes before starting work helps reduce hearing losses and other adverse effects of loud noise, such as irritability, sleeplessness, emotional disturbances and heart disorders. It will benefit industrial workers operating in ordnance factories, blast furnaces, metallurgical and machinery units, as well as military personnel such as tank crew, air maintenance crew, pilots in airfields, gunners and riflemen, who are often exposed to noise levels above 120-140 decibels. Long exposures to noise of 110 decibels for one to ten weeks also increases cholesterol. Prolonged exposure to noise leads to greater formation of blood clots that do not dissolve easily, increasing the risk for heart attacks.

Noise constricts blood vessels, including those supplying blood to the ear, affecting hearing. Giving five per cent carbon dioxide reverses the effect by dilation and 95 per cent oxygen meets the additional energy demand of specialised receptor cells in the ear that pick up the noise signals.

Allergies Come Cheap

Nickel allergy is a common form of allergic contact dermatitis. Further contact can result in an unsightly and uncomfortable rash.

Nickel sensitivity can develop at any time of life, often triggered by wearing cheap jewellery containing the metal, especially in sensitive areas of the body such as the ears. Consequently, many women become sensitive to nickel when they have their ears pierced and, as a result, one in ten adult women are allergic to nickel.

Regimen of Spring

By the time spring arrives, it already starts becoming warm. The winter would be completely gone. Spring season is the second season of the intake period. It lasts from around 16th March to 15th May. Vayu remains predominant during this season, and due to this the atmosphere becomes charged with astringent taste.

The sun rays and winds extract water from the plant and animal bodies during the intake period. Therefore, they become weak. The Kapha accumulated in the body during Hemant and Shishir seasons becomes aggravated. The sun rays melt them. This Kapha returns to its origin i.e. stomach, resulting in diseases of Kapha-dyspepsia, inappetance, cough, tonsillitis, headache, coryza, phlegmatic fever etc. Roughness grows in the body and skin.

In order to prevent the above diseases, it is necessary to remove the accumulated and aggravated Kapha from the stomach. It can be achieved by vomiting and snuffing. For inducing emesis, 2-3 emetic nuts should be powdered and taken with rock salt and honey in the morning on empty stomach. Have hot water to drink after that. Alternatively, prepare decoction of Neem leaves, Bakain leaves, Parval leaves and add powdered *Piper longum*, rock salt and

honey and make the patient drink it. If vomiting does not occur, then again administer the same. Subsequently, two or three vomitings would follow. For snuffing, fine powder of Kayphal may be inhaled. Alternatively, juice of bitter Tumbi may be infused in nostrils. These measures induce sneezes and phlegm is expelled as a fluid from nose. In order to remove the roughness of skin, oil massage, exercise, and hot water bath and subsequently light meal with minimum of unction should be taken.

In order to avoid the ill effects of the aggravated Kapha, powder of 6 Harads (myrobalan) should be taken with equal honey on an empty stomach in the early morning and also in the evening after dinner and hot water drunk subsequently. Similarly, as appetiser and digester, drugs should also be taken regularly such as ginger, *Piper longum*, asafoetida, Ajowan, Narsar, lime etc.

In meals, take old barley, wheat, rice, lentil, Moong, Bottle gourd, brinjal, carrot, parval, bitter gourd, rock salt, buttermilk, vinegar, Kanji, Aonla and cauliflower. Sweets prepared with jaggery and paste, heavy dishes sweet-meats of Khowa and fried things should be avoided. Meal times should be observed. Food must be warm and fresh, clean, tasty and light.

One should eat less than one can. If you are Kapha-temperamented then sit erect for 10-15 minutes after meals. If you are Vata or Pitta temperamented then you should lie down on your left side for 10-15 minutes. This will help to digest the ingested food. Possibility of dyspepsia is always there in the spring season. Get up an hour before sunrise and go for morning walk. Siesta is to be avoided. If you are a meat-eater then you may eat the flesh of wild birds and animals roasted without fat. Similarly, you can take fish without lubrication.

To preclude dyspepsia take 2 tablets of Chitrakadi Vati with hot water, twice daily. For coryza take Naradiya Laxmivilas Ras-2 tablets with betel juice and honey. Chandraprabha Vati may be taken with honey or milk.

Pregnants, children and patients of stomach, intestinal ulcer, and heart should not undergo vomiting. They should be given Kapha-subsiding medicines only. Vata-temperamented persons should not take bitter and astringent things consecutively for long. Kapha-temperamented persons should not take excess of sweets, sour and heavy diets. Otherwise Kapha, which is already aggravated, shall be increased and create severe problems.

Summer Regimen

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. 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. 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.

Irritating Constipation

Constipation may be a symptom of any chronic disease or a disease in itself. Generally, the condition called constipation is said to exist when the frequency of passing stools is less than three times per week. A normally healthy person should pass stools twice a day. Evacuating bowels only once in a day is also not considered as constipation for it depends more or less on our food habits and the contents of it.

The Process of Evacuation

When we take food, it passes through the food-pipe, the stomach and the small intestine. With the help of strong digestive juices, which are acidic, these food items are changed into soft souplike consistency. Proper digestion and absorption takes place in the small intestine with the help of chemical substances called enzymes.

The muscles of the intestines contract and relax in rhythmic fashion resulting in a wave-like movements called 'peristalsis' which pushes the food and the waste matter forward. After absorption of the digested food, the waste matter along with large quantities of water enters the large intestine which is also known as colon. By the time the undigested food reaches the end of the large intestine, most of the

water is absorbed and stool is formed. The waste matter is collected in rectum, the last part of the large intestine, which is eased out through the outer opening of the digestive canal called 'anus'. The stool is passed from the rectum by coordinated activity of the nerve and muscles of the anus and the rectum. Thus the stool in the intestine and the rectum is passed out.

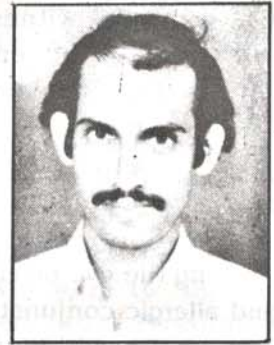
Features of Constipation

1. Difficulty in passing stools.
2. Hard consistency of the stool.
3. Any other colour for the stool than the normally expected colour, i.e. the colour of hay.
4. Any foul smell to the stool.
5. Excessive straining while passing the stool.
6. Heavy or full feeling in the lower abdomen.
7. Feeling of incomplete passing of the stool.

Types of Constipation

1. Simple : Commonly found among some people, especially among those who follow sedentary life, children the aged and the sick. It is usually due to inadequate and or improper diet and lifestyles. Relief may be got by improving or correcting the diet and/or use of substances that increase volume of the stool.

2. Severe or Chronic Constipation : This condition may be the result of different



Dr. T.K. Abdul Razack

physical and mental conditions in different types of people and persons of different age groups. Many sufferers do not get relief even after improving their diet. This type of constipation has to be managed under the supervision of a physician.

Causes

1. Irregular food habits and life style.
2. Low fibre content in the food.
3. Inadequate fluid intake and water drinking.
4. Lack of proper exercise or movement of the body.
5. Habitual ignorance of the natural urge to pass stools.
6. Travelling; and sleeping during the day-time.
7. Taking some kind of antibiotic medicines.
8. Some major disease condition of the body or mind.
9. Abnormalities in the structure of the anus or rectum.
10. Pregonancy or old age.

Attendant Complaints

Constipation may result in physical complaints such as "gas trouble", a feeling of fullness in the stomach, lack of appetite, irritability anxiety, lack of concentration, headache, blurred vision, giddiness and emotional disturbances.

Treatment

Constipation demands proper and prompt management, otherwise it may result in many other disease conditions and complications. Treatment for constipation consists of mainly the following items :

1. Diet : Diet should be so changed as to increase the volume of 'roughage'. Dietary fibre should be increased. Wheat, corn, oats, barley, peas, beans, seeds, nuts, fruits and vegetables are food items with high fibre content. Food items such as refined wheat flour (Maida) fried food, sticky substances, sugar, tea, coffee, condiments, bakery items, readymade drinks like 'Horlicks', ice-cream, fish and meat and too much starchy items etc. should be avoided. Vegetables and leafy vegetables should be taken in sufficient quantity. Raw-vegetables-salads may be also be included in the menu. Vegetable soup may be good.

2. Drinking of Water : One should drink 8-10 glasses of water everyday. Drinking at least 2-3 glasses of water as soon as you get up in the morning relieves constipation. But we should not drink water with meals as it dilutes stomach

juices essential for digestion. Drink water half an hour before or one hour after the meals.

3. Water therapy :

1. Enema : A warm water enema is very useful in getting relief from constipation. Enema helps us to pass the hard stool located in the lower part of the large intestine. Sometimes good oils may be used to lubricate the rectum and make the stool pass out smoothly.

ii. Wet Packs on Abdomen: Placing a wet pack (a folded cloth dipped in cold water) on abdomen increases blood circulation, improves digestion and forms normal consistency of the stool. This should be done 3 hours after the meals.

iii. Hip Bath : Sitting in a tub full of water for 20 to 30 minutes daily morning is effective for constipation.

iv. Mud Packs : A smooth paste of pure clay obtained from about 10 cms. below the surface of the earth is prepared in warm water. This paste is applied on a strip of cloth. Then it is folded in the form of a pack (which is called 'mud pack') of 20 cms long, 10 cms wide and 2½ cms. thick and is placed on the abdomen covering it with a blanket. The usual time for application of this pack is 20 to 30 mts. It helps to reduce 'heat' from the abdomen and break down of morbid matter in the abdomen.

v. Massage : A partial massage of the abdomen or full body massage is very useful for relief from constipation. It stimulates peristalsis, tones muscles of the abdomen and helps evacuate the stool

smoothly. Abdominal massage should be done only after 2 hrs. of the meals. Massage should not be given to patients suffering from hernia, inflammation of the female reproductive organs, stones in the kidneys, bladder or gall bladder, ulcers, high blood pressure and during pregnancy.

vi. Exercise : Persons who are given to sedentary activities should undertake some physical exercises regularly. Walking 3 to 4 kms. is sufficient for those who do not do any other exercises. Regular practise of Yoga is also effective.

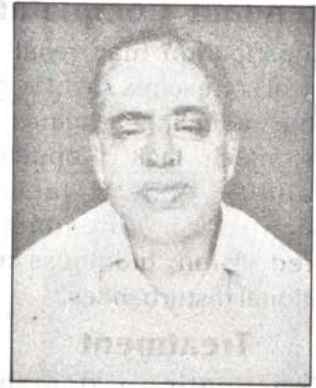
vii. Regular Habits : Regularity not only in the habits of evacuating bowels but also in taking food, drinking water, is very important for a person to keep himself away from constipation. Whether we get motion or not we should attend to the call of nature at regular times daily. We should also spend sufficient time in the toilet, instead of just going and coming out.

viii. Carefree Life : Persons suffering from constipation should avoid all kinds of mental tensions and stress. They should lead a carefree happy life. Regular practice of meditation or concentration is also effective. Listening to music and reading interesting books are also found useful.

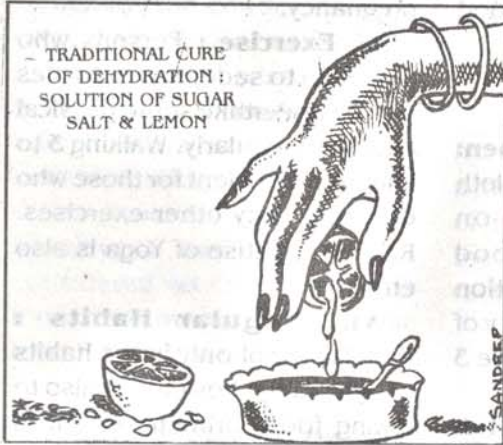
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Prevention from Monsoon Diseases

Dr. S.C. Rai, mayor of Lucknow city, is a renowned surgeon. He has illustrious career as health policy maker and administrator. At present he is fighting for health of Lucknow city to make the saying true 'Smile as you are in Lucknow'.



Dr. S.C. Rai



Many diseases become prevalent in different seasons. It is important to know about them so that they are diagnosed and treated early. Acute diarrhoea, dysentery & cholera are some of the diseases that frequently catch us in summers and the monsoon seasons.

Diarrhoea

This may be caused by virus, or bacterial infection. Enterotoxins are produced by bacteria like *E. coli*, protozoal infections like *Entamoeba histolytica*, or giardia. Diarrhoea may also be caused by worm infestations like hookworm or round worm. In some cases, diarrhoea may occur due to psychological disturbances.

The patient complains of passing watery stools at frequent

intervals. The other symptoms may be fever, headache, loss of appetite, nausea, vomiting and malaise and muscular cramp. It is better to diagnose to ascertain the cause. Stool examination must be done to exclude presence of bacterial parasites and worms. When necessary, bacterial culture may be done to identify particular bacteria. Examination of rectum (proctoscopy) is done in patients with bloody diarrhoea. In cases of severe fluid loss, estimation of serum electrolytes is essential.

Management

The patient should be given rest. Fluid intake must be encouraged. In addition to water, electrolytes should be given. There are number of electrolyte combinations available in the market like electoral powder, or other oral rehydration powders. In absence of these a pinch of salt may be added to glucose or sugar solution and may be given at frequent intervals. Specific treatment may be given according to the cause (specific bacteria, protozoa or worms). In severe cases the patient may be hospitalised and given

intravenous fluids under medical supervision in case of dehydration. Indiscriminate use of antibiotics should be avoided.

Dysentery

It is acute inflammation of large intestines. Patients suffer from diarrhoea with blood and mucus in stools. This may be caused by bacterial infection (Bacillary dysentery) or *Amoebiasis* (Amoebic dysentery). This is found all over the world but in crowded localities with poor sanitation it can take the epidemic form.

Bacillary Dysentery - It is caused by bacilli of the *Shigella* group. Its spread may occur by eating contaminated foods or by flies. The commonest cause is due to contact by unwashed hands after defecation. In mild cases, there may be passage of loose stools and mild colic pain. In moderately severe cases, the patient suffers from diarrhoea and lower abdominal colic. Stools may contain blood and pus with little faecal matter. There may be fever, dehydration and weakness. Severe infections may even cause death within 48 hours. Diagnosis is made by

stool examination including culture.

Treatment - Patients should be given fluid or semi-fluid low roughage diet. In severe cases water and electrolyte replacement has to be done. Antibiotics may be given under supervision of physician.

The disease can be prevented by isolation of patients and identification of carriers. Food, water and milk should be free from contamination. Hand washing must be enforced strictly after defecation and before taking food.

Amoebic Dysentery - It is caused by intestinal amoeba *Entamoeba histolytica*. They are ingested in water or uncooked food which has been contaminated by human faeces. There may be occurrence of diarrhoea alternating with constipation. Patients usually pass mucus and sometimes blood in stools which has bad odour. Treatment is effective if it is started early. Precautions may be taken by eating cooked vegetables and boiled water.

Cholera

This usually occurs in epidemic form. It is caused by organism called *Vibrio cholera*. This is present in stools and vomit of the patients. Transmission is through drinking of infected water, contaminated food by flies and unclean hands. Due to effective steps there is substantial decline in cholera epidemic.

Incubation period : It is the dormant period of disease when no symptoms are apparent. It may

be few hours to four or five days. Patient suddenly suffers from diarrhoea and vomiting. Patient may get effortless gush of fluid from mouth and bowel. In several cases, patient loses huge amounts of fluids and electrolytes.

Dehydration may set in early and patient develops severe muscular cramps. Limbs become cold and clammy, skin loses its shine and may become wrinkled. The eyeballs get sunken. In very severe cases there is fall in blood pressure and pulse may not be felt. Patients may die if not treated well. Diagnosis can be established by stool examination including culture

Treatment - Replacement by fluid and electrolytes should be started as early as possible and patient is kept on intravenous diet. Progress is monitored by assessing the pulse, blood pressure and urinary output. Accurate records of fluid lost and fluid replaced should be maintained. Electrolytes must be replaced by giving appropriate fluids. Different electrolyte combinations are available in market. Antibiotics must be started under the advice of physician.

Precautions - Strict personal hygiene must be maintained. Water must be boiled or effectively chlorinated. Flies must not be allowed to contaminate the food material. Infective discharges and soiled clothing must be disinfected. Hand washing is a must after each handling.

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Household Remedies from Rajasthan

Soma Sen & Amla Batra

Surveys were carried out within Jaipur district to find out household remedies of various recipes were collected which can be used against some common diseases, like earache, headache, etc. The following paragraphs summarise some of these household remedies in brief:

Earache

- 2-3 cloves of garlic are put into mustard oil and heated. Then, it is cooled and 1-2 drops of this preparation is put in each ear. This is particularly used in winter.
- Mustard oil is heated, cooled and 1-2 drops poured in each ear. It is not necessary to heat the oil in summer.
- Leaves of the Plant 'Sudarshan' or (*Crinum defixum*) are collected and heated. Juice is squeezed out of its leaves and 1-2 drops are poured in each ear.
- Young buds of 'Kair' (*Capparis decidua*) are collected and ground. Its juice is squeezed out and strained, 2-3 drops of the juice are poured in each ear.
- Juice of leaves of Tulsi (2-3 drops) are to be poured in each ear.
- Leaves of Aakra (*Calotropis procera*) are slightly heated and its juice is squeezed out, 1-2 drops of this juice is poured in each ear.
- If pus formation occurs, juice of Gwar patha (*Aloe barbadensis*) may be put in

each ear.

- Calve's urine, heated and cooled, may be put in each ear (1-2 drops).

Running Nose

- Black Cumin needs packed in a piece of cloth and given to the patient to smell.
- Black cumin seeds put in mustard oil, heated & this oil is massaged under the feet (in case of children).

Headaches

- Kaiphal (*Myrica esculenta*) is ground & given to the patient to inhale.
- 4 pieces of almonds (*Prunus amygdalus*) are kept immersed in water overnight. In the morning it is ground & mixed with honey and given to the patient to take in empty stomach.
- Deshi Ghee is massaged on the forehead and the patient is made to lie down quietly for 15-20 minutes. The head is covered with a cloth.
- Leaves of Aakra are warmed & tied over the forehead. Care should be taken that the milky secretion does not get into the patient's eyes.

- Kaiphal is ground and put on 'sira' (Sira is prepared by mixing porridge of wheat, water & jaggery) and given to the patient to eat. Then the patient is put to bed.
- Garlic is put into mustard oil & heated. The oil is then massaged over the forehead of the patient.
- Sonth (dried ginger) is ground in water & the paste is applied over the forehead of the patient.
- One coconut is taken and a hole is made into it. 100 gm of Kaiphal powder & 100 gms of seeds of opium are put into it and then sealed. Wheat flour is mixed with water to form a dough and put around the coconut. It is then put into fire for roasting then the coconut is unpacked (the dough removed) and is crushed & ground alongwith the same weight of jaggery as that of the coconut. Balls are then made out of this, weighing at least 50 gms each. One ball is to be taken during the morning & one in the evening.
Hot food should not be taken with this medicine.

Leucorrhoea : Causes & Remedies

There are 4 types of secretions produced in the genital organs of ladies. First coming from vulva is an alkaline mucus secreted in small amounts. The second secretion comes from vagina (vaginal secretion) which is normally acidic, opaque & viscid. The amount varies within normal limits i.e. it is increased during sexual intercourse and is excessive throughout the menstrual cycle & the period of gestation. In the post menopausal period it is noticeably diminished & even absent often. The third secretion is that of cervix, which is again the mucous, though transparent and viscid like the white of an uncooked egg. It is alkaline in nature and its amount increases in pregnancy. The 4th secretion comes from uterus. Normally it is seromucous, slightly alkaline, thin & transparent. Secretion is increased throughout the menstrual cycle.

When the secretion of the genital organs departs from normal either in amount, colour, consistency, odour or irritability, it is, then termed as the leucorrhoea. However, this term implies any abnormal vaginal discharge other than blood. It's a symptom not a disease and an indication of some kind of functional or organic disorder in the body.

The leucorrhoeal discharge may be white, creamy or viscid, yellow, watery and even foul smelling. A blood tinged

discharge, occurring late in life is highly suggestive of the presence of cancer.

Causes of Leucorrhoea

Ayurved describes several causes, which are responsible for the occurrence of this disease these are :

- excessive reproduction.
- increase in weakness.
- excessive labour.
- disorders in menses and taking excessive or long bath during menstrual cycle.
- extraordinary laziness.
- excessive intercourse.

Alongwith these, uncleanliness of the genital organs, anemia, worms in digestive tract, and persistency of a genital disease may constitute its cause.

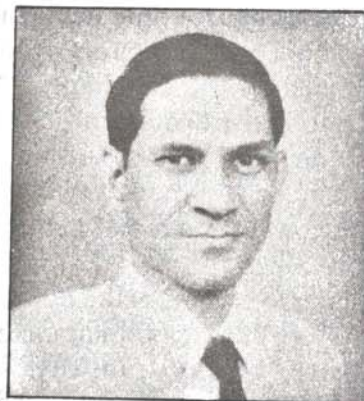
Symptoms of Leucorrhoea

Initially patient does not feel any remarkable symptom but few or all of the following symptoms appear :

- loss of appetite constipation & gas troubles.
- loss of facial lustre & decrease in weight.
- Palpitation, headache & aches in back & waist.
- Body becomes warmer during the night or even low fever.
- Biting pain in vagina accompanied with itching.
- A decrease towards sexual urges.

Treatment of Leucorrhoea

The treatment of leucorrhoea may be either palliative or curative. The former treatment



Umesh Pande

consists of vaginal douches while in the latter case the same is treated by giving curative medicines.

In palliative treatment, for an irritating discharge, soda douches (1/2 ounce to 2 quarts of hot water) may be taken; for odorous discharges potassium permanganate mixed with water in the ratio of 1:1000 is taken and in other types of discharges simply taking douche with hot water containing a little common salt is sufficient. In case of infected vaginal walls douches and swabbing with antiseptics should be taken. Ayurved prescribes to take any of the following douches in leucorrhoea:

- Douche of mixture containing nearly 10 gms of alum in 400 c.c. of water, should be taken twice daily.
- About 500 gms of the leaves of 'Neem' are boiled in 3 litres of water for about 20 minutes. Taking douch of this water is quite beneficial in leucorrhoea.

- Douche of mustard oil twice a day is also beneficial.
 - Vaginal douches may stop secretions for time being but do not have any effect on the cause of the discharge. To get the permanent cure, alongwith local cleansing of the genital organs any of the following treatments, should be taken :
 - Four to six gms of the powder of dry emblica (Amla) mixed with equal quantity of powdered sugar may be taken daily for 15 days with water, early in the morning.
 - A mixture of the powdered "Shwet-ban-haldi, Acacia gum (unfried) & "Koonja mishri" in the ratio of 4:5:4 by weight when taken, relieves leucorrhea. The mixture is taken for a week with cow milk & its 5 to 6 gms quantity constitutes a single dose.
 - About 12 gms of the bark of Ashok-tree (*Saraca indica*) is added in about 250 ml of the cow milk and then it is boiled and cooked sufficiently. The material is then filtered. To the filtrate, 1 teaspoonful of honey is added to be taken early in the morning for few days.
4. Light laxative should be taken from time to time to avoid constipation.
 5. Momordica (Karela), Brinjal, Urd, Toower & Bajra are beneficial in leucorrhoeal cases.
 6. Excessive walking in sun, warm water bath & excessive intercourse should also be avoided.

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Wastage on Tonics

According to a survey, Indian people consume tonics worth Rs. 1900 crores annually and so-called health foods worth over Rs. 50 crores.

This is an irony that a country whose 30 per cent population goes without potable water, balanced diet and a shelter worth the name, spends so much uselessly. And we are repeatedly told to believe that a vegetarian diet is an inferior diet as it is devoid of proteins. This stand is a falsity. Cereals, pulses, green-vegetables, oil-seeds, tubers, fruits and milk do comprise a balanced diet.

We are all used to have a different kind of dish everyday. Vegetables and pulses are prepared in so many different ways that have their own different distinct tastes and flavour. If you are consuming all this and if your digestion is right then you need no other tonic to supplement it. Perhaps if you have taken Becozyme, B-complex etc. sometime then you may have observed that your urine had turned yellow. It means that the tonic was ejected after being digested by

the body as it was of no use to it. You just had lost your money and exerted your liver, intestines and kidneys and benefitted the manufacturers without deriving any benefit whatsoever for yourself. Even the physicians add one or two tonics to their prescriptions as a rule. Every year we pass Rs. 1900 crores of rupees as tonics with our urine and also pressurize our organs to work more.

Our Indian foods are optimum and potent according to our climate. We eat a balanced diet by consuming wheat, rice, pulses, milk, curd green leafy vegetables, raw vegetables and fruits. If you are taking those and your digestive system is in proper shape then you do not need Boost, Horlicks, Protinex, Complan or Threptin biscuits at all. They may be needed only when you are convalescing from some disease. Even then you need it for a few days only. What is the sense in swallowing a capsule worth a rupee and then pass it as yellow urine after one and a half hour?

DO'S & DON'TS IN LEUCORRHEA

1. Always take balanced diet, cold and wet in temperament.
2. Avoid chillies, oil sauces, garlic, excess of salt & "Heenga." (asafoetida)
3. Proper exercises accompanied with walking & cycling should be regularly done.

Smoking-related Deaths

Martin Khor

A new report by the World Health Organisation (WHO) reveals shocking estimates showing that smoking related deaths in developing countries are expected to spurt from one million a year in the early 1990s to two million by the year 2000 and to seven million within two to three decades.

According to the report, 'The Tobacco Epidemic : A Global Public Health Emergency', tobacco products are causing more than three million deaths a year worldwide. Unless current smoking trends are reversed, the figure will rise to 10 million deaths per year by the 2020s, with 70% of those deaths (or seven million) occurring in developing countries.

There are now an estimated 1,100 million smokers in the world, about one-third of the global population aged 15 years and over. There are 800 million smokers in developing countries, and 300 million in the rich countries. Most smokers are men. Overall, 900 million men and 200 million women are smokers Globally, about 47% of men and 12% of women smoke. In other words, one out of every two men is a smoker, despite all the publicity about the dangers of smoking.

South Korea tops the list, with smoking rates of 68% for adult men and 7% for adult women. The Bahamas is the most smoke-

free : only 19% of men and 3% of women smoke.

The prevalence of smoking among adult males in the early 1990s was 48% for developing countries as a whole, 61% for China, 40% for India, 54% for other Asian countries, 41% for the Middle East, 25% for Sub-Saharan Africa and 40% for Latin America and the Caribbean. In the developed countries as a whole, the rate was 42%.

What is most worrying is that although the overall rate of smoking seems to have stabilised in the past decade, people are smoking less in the richer countries but smoking more in the developing world. In other words, the smoking threat is shifting from the North to the South.

According to WHO, 'Consumption has decreased in developed countries since 1980-82 but this decrease has been counterbalanced by a comparable increase (of 1.4% a year) in less developed countries. As a result, global cigarette consumption remained steady at about 1,650 cigarettes per adult from 1980-82 to 1990-92.'

In the rich countries, the average yearly adult consumption rose from 2,860 cigarettes (in 1970-72) to 2,980 (in 1980-82), then fell to 1,590 (in 1990-92). In the same period, the rate rose from 860 to 1,220

to 1,410 in the developing countries.

The rise has been most dramatic in China, where the average annual consumption was 1,900 cigarettes in 1990-92 compared to only 730 in 1970-72, a rise of 260% in two decades.

In India, average consumption rose from 1,010 cigarettes in 1970-72 to 1,310 in 1980-82 and slightly more to 1,370 in 1990-92.

For the rest of Asia, the average consumption rose from 780 cigarettes in 1970-72 to 1,130 in 1980-82 to 1,190 in 1990-92.

Health Effects

The WHO report also gives the latest findings on the health effects of tobacco. In the developed countries, 1.4 million men and 476,000 women died from these ailments. The shocking fact is that smoking is responsible for 36% of all deaths of men aged 35 to 69 years. The situation in developing countries is going to be even more explosive. The numbers of dead will rise dramatically into the next century. 'Deaths caused by smoking in developing countries will rise substantially due to the massive increase in cigarette consumption over the last few decades.'

'Unless a very large number of current smokers quit smoking in the next few years, by the time

the young smokers of today reach middle and older ages (by the 2020s and early 2030s), smoking will be causing a looming public health catastrophe in developing countries.'

It is also well-known that smoking is the major cause of cancer. In 1995, smoking accounted for 17% of all deaths and 30% of all cancer-related deaths in developed countries. In 1990, 13% of all cancer deaths in developing countries were due to smoking.

North to South

One major obstacle to reversing the upward trend in developing countries is the aggressive sales promotion of cigarette companies in these countries. In this, they are aided by the northern governments which on one hand take more stringent measures to curb smoking in their own countries, but which encourage their companies to sell more in the South.

Some years ago, the US government pressurised several Asian countries (including Thailand, Taiwan and South Korea), with threats of using economic sanctions under the US Super 301 trade legislation, to open up their markets to imported cigarettes on the ground that restrictions were against free trade. Unfortunately, this aspect of the problem is hardly touched on in the WHO report.

However, other studies have decried the use of the free trade

principle by Northern governments to push the deadly tobacco. One magazine article called this the 'New Opium Wars.'

The WHO report ends by advocating many tobacco control measures. From 1970 to 1995, the World Health Assembly (the most important forum comprising the world's Health Ministers and health ministry officials) adopted 14 resolutions to curb smoking.

A 1986 resolution entitled "Tobacco or Health" (and which is still widely used today) urged governments to adopt a comprehensive tobacco control strategy with the following nine elements :

- Measures to protect non-smokers from exposure to tobacco smoke, in public places, restaurants, transport and places of work and entertainment.
- Measures to promote abstention from smoking to protect children and young people from being addicted.
- Measures to set a good example in health-related premises and by all health personnel.
- Measures to eliminate socio-economic, behavioural and other incentives that promote the use of tobacco.
- Prominent health warnings on cigarette packets.
- Educational programmes, including on how to stop smoking.
- Monitoring trends in smoking

and health effects.

- Promoting economic alternatives to tobacco production, trade and taxation.
- Establishing a national focal point to coordinate the above activities.

The WHO says these goals are still the most relevant, and its report provides concrete measures to implement them.

The facts and figures on smoking and its effects are becoming clearer and more frightening, and to call the tobacco epidemic a 'public health emergency' is certainly not an exaggeration. It is time for each country to quickly phase out the conditions that maintain and promote smoking as a fashionable habit.

As society becomes less tobacco addicted and more healthy, the economic gains from being smoke-free will greatly outweigh the benefits of the tobacco industry.

(Courtesy : Third World Resurgence)

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The Fatal Heart Diseases



The biggest killer in India is likely to be coronary artery disease. The arteries which supply blood to the heart start getting occluded by fat deposit which causes obstruction in these arteries. The blood flow in the heart may be sufficient normally, but sometimes—such as while exercising or playing games or getting excited, the blood supply may increase by five times—such obstruction can cause problem. This is called ischaemic heart disease or coronary heart disease. Those who faint at such times are called suffering from angina. At times, it can also get complicated and can cause blood clots which obstruct the arteries and the patients get a heart attack.

After a heart attack, part of heart is damaged. If lesser amount of heart muscles are affected, the longevity of the heart is not much affected. Unfortunately, during the last 20

years there is a 20 per cent increase in coronary heart ailments. The main reason for this phenomenon is that we are not health conscious. We have high risk factors in our life style responsible for heart diseases.

An effort has to be made at the national level to prevent smoking and drinking. The other major reason for heart ailments is hypertension. If we can be mindful of family history, basic abnormalities of fats, tension and food habits, many risk factors of heart ailments can be avoided.

If a person feels heaviness in the chest or a little discomfort, it can be pain in the head, neck or chest. Sometimes, it may be a choking feeling in the throat. Sometimes, it might be pain travelling down the arms. If one has any of these symptoms persistently for about half-an-hour, one should not neglect it. These may be symptoms of heart disease and one should consult an expert doctor.

Angina pain does not last long and can affect any part of the body. Those who feel exercise, pain and perspiration should stop their work and allow the pain to subside.

Role of Surgery

The first human heart surgery was done by Dr. Christian Bernard in Capetown, South Africa on December 3, 1967. The patient was Wash Kinsky (55) and he lived for 15 days thereafter.

The first Indian transplant was done on February 17, 1968 at Bombay. The surgeon was Dr. P. K. Sen. He operated upon Bodan Chittan (27) who could survive only three hours after the operation. However the first successful heart transplant was done by Dr. S. Venugopal of All-India Institute of Medical Sciences, New Delhi.

Today rapid developments achieved by Indian surgeons have made it possible to replace many blood vessels with synthetic materials. Similarly, heart valves can also be replaced. A few heart transplants have been done successfully. Efforts are on to replace the real heart with artificial heart.

Repeated respiratory infections in childhood, which are frequent in undernourished children may be a major factor in causing permanent deleterious changes in the lungs and air passage, resulting in bronchitis and emphysema thus leading to secondary involvement and failure of the heart. Congenital heart disorders can be detected at school clinics and could be cured by surgery which has been much advanced. If rheumatic fever occurs in children, they require regular medication to prevent rheumatic heart disease for a long time of 10 years.

Coronary heart disease and high blood pressure often coexist. Many causative factors

are common to both of these cardiac ailments, the most important being smoking, hereditary and occupational hazards. Over ambitious persons who are under severe stress all the time are also prone to heart attacks. Incidence of cor-pulmonale are rising in persons working in mines and factories. Cor-pulmonale is due to the marked difference in day and night temperature, high humidity, dust and chemical fumes. This disease can be prevented by better working conditions.

Cardiovascular disease is the third largest killer disease in India and is likely to become the most dreaded one by the year 2000 unless preventive measures in terms of all embracing changes in life style are adopted.

Indians, especially from the north-western part of the country are genetically pre-disposed towards cardiovascular disorders such as heart attacks and strokes. The primary causes of these are far more common among Indians than Westerners. Even among the Indians, Gujaratis are the most vulnerable ethnic group, followed by Punjabis and others from North-West India to contract heart ailments.

While 3,00,000 people die every year in India due to heart attacks, 3-4 per cent of the population above 30 years suffers from coronary heart disorders. The figures are likely to go up twenty times by 2000 A.D. Finland has the highest mortality rate due to cardiac disorders.

Bereavement is an aggravating or precipitating factor in the occurrence of coronary thrombosis.

Studies sponsored by the Indian council of Medical Research and carried out on rabbits at S.N. Medical College, Agra have confirmed that gram pulse (Chane ki Dal) can prevent heart attacks. The pulse of gram converts the cholesterol into waste and ejects it out of the body.

Alternatively, eating a raw onion with meals can prevent heart ailments. Dr. N. N. Gupta of King George's Medical College carried experiments on volunteers who were fed on fat-rich diets, supplemented with a raw onion and found that the volunteers did not show adverse effects of fatty foods.

A recent European study conducted on 552 Dutchmen suggests that consumption of tea and apples reduces the chances of stroke. Long-term consumption of black-tea, the kind that most Europeans and Americans drink, as well as other foods containing

chemicals called 'flavanoids are useful'. Flavanoids are vitamin like compounds that are naturally found in tea and apples besides other fruits and vegetables. They make blood cells less prone to clotting and also act as antioxidants, countering the artery-damaging potential of highly reactive-free radical.

However, the day is not far when human beings will be offered transplants using hearts and kidneys from genetically altered pigs. Cambridge scientists have succeeded in transplanting transgenic pig hearts into monkeys, thus bringing new hope to thousands of patients.

The breakthrough in October last year is regarded as the biggest advance in transplants since the introduction of a drug that suppresses organ rejection ten years ago in various cases of organ transplants.

Heart (and kidney) transplants using the pig organ will be offered for the first time in Britain next spring provided the research continues as per plan.

Cardiovascular Ailments on the Rise

A study, conducted by the National Congress on Health and Dietary Fats (NCHDF), says on an average each hour accounts for 91 deaths due to heart diseases and 68 because of cardiovascular strokes in the country. The study also established that most of the people with coronary problems belonged to the higher income groups in urban areas. On the intake of dietary fats, a wide variation was found between the rural and the urban populace with the affluent sections consuming about 30 per cent of the total fats in the country. According to a national sample survey, per capital consumption of fats in the high-income groups was 139 gm daily while the figure was just 10 gm for lower socio-economic strata.

High Blood Pressure

Despite a remarkable improvement in the detection and treatment of hypertension during the past decade, questions on drug treatment regarding when to start, when to stop, and how to balance the drug regimes with non-drug therapy remain debatable. Medical practitioners and patients have realised the dangerous consequences of untreated hypertension, even mild.

The WHO, in its expert committee report on hypertension in 1978, has defined hypertension in adults as a systolic pressure equal to or greater than 160 mm of mercury and diastolic pressure equal to or greater than 95 mm of mercury. The readings should be consistently high, at least on three occasions.

Patients are at an increased risk of cardiovascular disease, whether symptoms are present or not. Persistent resting level of diastolic blood pressure (DBP), between 90 and 150 mmHg; or systolic blood pressure (SBP), between 140-180 mmHg whether or not associated with DBP of 90-105 mmHg is mild hypertension in adults. Borderline hypertension is defined as a diastolic blood pressure between 140-160 mmHg.

The sitting position is always

recommended for measuring blood pressure.

Hypertension is divided into primary (essential) and secondary. When the causes are generally unknown and increase in blood pressure starts after 40 and occurs in families, then we call it essential hypertension. This is the most common form of hypertension accounting for nearly 90 per cent of all cases. It is secondary when there is a treatable or curable cause, for example, renal artery stenosis and endocrine problems. Women can get transient hypertension during pregnancy. Causes of hypertension are modifiable or non-modifiable. The modifiable causes are obesity, increased salt intake, saturated fats, alcohol, lack of physical activity and environmental stress.

Hypertension itself implies a disorder initiated by tension or stress. It is an accepted fact that psychosocial factors operate through mental process, consciously or subconsciously to produce hypertension. Overactivity of sympathetic nervous system has an important role to play in the development of hypertension. Intake of oral contraceptives is another important cause for secondary hypertension. The other causes are protein cholesterol, diabetes and a sedentary lifestyle. The non-modifiable factors are age,

gender and a family history of premature cardiovascular diseases.

The goal of treating patients with hypertension is to prevent morbidity and mortality associated with blood pressure and to control blood pressure by the least intrusive means possible.

This can be achieved by lifestyle modification and drug therapy, both being used serially or together.

Lifestyle Modifications

- Lose weight if overweight
- Limit alcohol intake
- Exercise regularly
- Reduce salt intake
- Maintain adequate dietary potassium, calcium and magnesium intake.
- Stop smoking and reduce dietary saturated fat and cholesterol intake for overall cardiovascular health. Reducing fat intake also helps reduce calorie intake, important for control of weight and diabetes.

The decision to initiate individual patients is based on the severity of risk factors. Reducing blood pressure decreases the incidence of cardiovascular mortality and morbidity. If blood pressure remains high over a 3-6 month period despite vigorous lifestyle modifications, anti-hypertensive medications should be initiated.

The important factor is salt intake. About 60 per cent of hypertensives may respond to the reduced level of intake.

A number of reports have documented that while mild salt restriction has little direct action in blood pressure, it significantly potentiates the efficacy of nearly all anti-hypertensive agents thereby allowing blood pressure control with lower doses of drug and reduced side-effects. Man's requirement of salt has been debated since the beginning of medical practice. Intake of as little as 3 g./day is probably both safe and adequate for healthy adults.

In primitive societies where the intake of salt was less than 2 g/day, hypertension was a rare phenomenon, whereas in societies where the salt intake is between 10-20 g/day the disease occurs more often with severe consequences such as stroke and heart disease. Since taste for salt is an acquired habit, it is possible to cut intake gradually and maintain it thereafter.

Indians are in the habit of consuming 10-15 of salt per day in the form of added salt. This is much higher than the amount of salt naturally present in foods. Preparations high in added salt; Pickles, chutneys, sauce and ketchups, papads, chips and salted biscuits, savoury items, cheese and salted butter, canned vegetables, readymade soup packets and dried salted fish should be avoided by the hypertensives.

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.

Some copies of following issues are available for all those inquisitive readers who would like to have them.

Topic	Year	Prices (Rs.)
Communicable Diseases	1997	15.00
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Eye Care	1992	10.00
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*The prices mentioned above are inclusive of postal charges. We offer a rebate of 15% on all orders of more than Rs. 100/- However, if you want to receive the same by registered post, kindly add Rs. 10.00 to the total. Please send your Money Order/Demand Draft in favour of **Jeevaniya Society**, payable at Lucknow at the following address :*

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AIDS : The Bye Product of Adultery

Dr. R. P. Tiwary & Dr. S. M. Thatte

While the WHO was setting up its aim of providing Health Care to All by 2000 A.D., thereabout the same time the horrendous disease AIDS raised its ugly head in African countries in 1979 and spread into Asian countries via America and Europe.

The first patient of AIDS was identified in 1986 in Mumbai. By now, within a decade the number of AIDS cases have gone up to 3000. According to a notification of AIDS Research Centre 1.3 million Children have died globally of AIDS at the tender age between two to five months.

AIDS is a bye product of unnatural sex and adulterous living. It is caused by a virus called Human Immuno-deficiency Virus (HIV) which depletes the immunity of the body against all ailments and consequently symptoms of many diseases start appearing simultaneously. The group of symptoms is called Acquired Immuno-deficiency Syndrome, i.e. AIDS. The symptoms can appear within 6 to 10 months of the entry of the virus into the body.

First Stage

After the entry of virus into the body antibodies are formed within two to 14 weeks. Generally this process takes three months time. That means, if the blood is tested for HIV during this period then the result

is negative. If the person donates blood during this period then the probability of the receiver getting HIV is ninety per cent. That means it is asking for it to receive blood from someone about whom there is no precise information.

Second Stage

After three months blood test reveals the presence of HIV in the blood, however the symptoms of AIDS are absent. During this stage, the human being is a carrier of diseases and imparts it to his sexual partner. If he is given an injection and thereafter another person is given an injection with the same needle then the latter is extremely likely to contract HIV infection. So it is courting death to have sexual intercourse with unknown persons for one and his or her family.

Third Stage

AIDS occurs after the immunity of the body is destroyed. Loss of body weight, diarrhoea, cough, fever, skin diseases etc. appear and persist.

Main Symptoms

Loss of more than 10% body weight without any cause, diarrhoea & continuation of fever for over one month in spite of treatment are the main symptoms of AIDS.

Secondary Symptoms

Persisting cough since over one month, swelling in all

lymphatic glands, skin ailments, herpes, oral candidosis etc. are secondary symptoms.

Treatment

No effective medicine is so far available to cure AIDS, though AZT and some of its combinations have some effect to contain the disease. The modern pharmaceutical industry is trying to develop newer drugs and vaccines against AIDS, some of which are under clinical trials. However, Ayurvedic medicines are extremely helpful in symptomatic treatment. Some of the effective herbal drugs are - Bhoomyamalaki, Kooshmand, Tulsi, Mandookparni, Brahmi, Haridra, Daruharidra, Rasyanas. Alongwith medicines, good conduct, behavioural elixir and practise of yogic postures helps to a great extent.

Prophylaxis

Religiously avoid extra marital sex. Prostitution should not be even dreamt of. Use disinfected syringes and needles only. Encourage blood donation and discourage blood mongers. Keep regular hours of sleeping, rising & working. Practise yogic postures and have nutritious diet and give up addiction.

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Panchkarma Therapy in Arthritis

Vaidya H. S. Kasture

Arthritis is a term, applied for joint diseases. In modern science many joint diseases are included under this heading. In Ayurveda many Vata related diseases are included under 'Sandhigata Vata' the diseases pertaining to joints may be named as follows :

1. Amavata
2. Vatarakta
3. Urusthambha
4. Vatavyadhi
5. Joint disorders affected by trauma or injury to 'Marmas'.

Amavata is mainly diagnosed by general body pain, Aruchi that is anorexia, thirst, fatigue, heaviness, pyrexia, Indigestion and swelling & inflammation.

Madhukosha has noted that wherever Ama is circulated in the body that part is always painful. When Ama is located in the joints, then it will be always painful.

Vatarakta Urusthambha (stiffness in the hip joint), traumatic conditions of the Marmas are diseases nearer to Sandhigata Vata. Ayurveda has studied the joint pain in great detail. Following diseases under Vatavyadhis produce joint pain like Amavata.

1. Gandhigata Vata (Vata located in joints)
2. Mamsagata Vata (Vata located in muscles)
3. Medogata Vata (Vata located in muscles)
4. Snayugata Vata (Vata located in tendons)

5. Gridhrasi (sciatica)
6. Vishwachi (brachial neuritis)
7. Khalli (pain in the legs)
8. Prishthagata Vata (vata located into lumbosacral region)
9. Parshwamarda (general pain in lumbosacral region)
10. Katigata Vata (Vata located in hip joints)
11. Ashthigata Vata (Vata located in bones)
12. Majjashtigata Vata (Vata located in bones & marrows)
13. Adhya Vata (Vata vitiated with kapha & adipose tissue or fat)
14. Manyashtambha (stiffness in neck region)
15. Hanusthambha (stiffness in mandible)
16. Vatakntak (pain in ankle joint)
17. Kubjatva (stiffness or bending of the part of the body or dwarfism)
18. Koshtukashirsha (severe synovitis)
19. Janubeda (pain in knee joint)
20. Avrutavata (overlapping of vata)

Panchakarma for practical application is divided into three steps. Step one is Poorva Karma which includes Pachana, Snehana and swedana.

Pachana digests Ama at every stage of Agni tissue from level upto the digestion in the alimental canal.

Sneha means oleation which

includes internal as well as external application of oily substances like oil, ghee, animal fat and marrow. Usually first two are more often used.

Sweda is basically of four types :

Tapa Sweda which is done by solid materials.

Unaha Sweda which is done by semi-solid materials.

Ushma Sweda which is done by vapor or gaseous materials.

Drava Sweda is done by liquid materials.

Vamana - use of emetics,

Virechana - use of purgatives,

Vasti - use of medicinal enemas,

Nasya - use of nasal administrations,

Raktamokshana - blood letting.

Step three is **Paschat Karma** or post operative procedure. It includes Peyadi Karma to restore Agni, and Shamana and Rasyana treatment.

Panchakarma in Arthritis

Diseases of joints may be divided into two types :

1. Which have predominancy in Ama called Sama.

2. Those which have little involvement of Ama may be called Nirama.

We say little involvement because there is no disease without Ama. Therefore, in every disease - Niramikaranam - Ama Pachana (to digest Ama) Chikitsa is given.

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Treating Arthritis Without Medicine

Dr. T.K. Abdul Razack

Rheumatoid arthritis is a chronic condition of the body caused by chronically impaired gastro-intestinal function. Modern medical therapy and drugs have not been found effective in the management of this disease. Temporary relief occurs, but it is essentially not due to the medicines, but only a phase of the disease itself.

No Medicine Therapy

'Do-nothing Therapy' is not merely a euphemism for nature cure. This is called 'Do-nothing-Therapy' since even water therapy, mud therapy and active and passive manipulations like physiotherapy, massage etc. are not necessary. It is found that

all these are not effective in the absence of proper and good food. Taking good and balanced food may not be considered as therapy since it is a must for the maintenance of a person's body and mind intact.

Why this condition ?

The basic etiological factor in rheumatoid arthritis has been considered as impaired gastro-intestinal function. So the solution to this physical problem should be focused on augmenting the functions of the gastro-intestinal tract. The pathogenesis of this disease revolves round the inherent susceptibility to enteropathy which can be rectified by diet. Enteropathy leads to the

malabsorption and impeded biosynthesis of protein resulting in excessive dissolution of collagen tissues. The fibrinoid changes are responsible for the arthritis and other collagen diseases. This process causes further damage to the intestine leading to the hypofunctioning of digestive mechanism which leads to incomplete processing of food. Various, psychological, dietary and other factors operate through the gastro-intestinal system leading to hypofunctioning of digestive mechanism.

What could be done ?

The essential pre-requisites for restoration of health in the above conditions are the following:

1. The organs of the patient should be stimulated to greater activity.
2. The patient should live in good healthy surroundings better, social and physical environment.
3. He should take adequate quantity of good, fresh natural food.
4. The patient must keep up right mental and emotional attitudes.

'No medicine' does not mean that the patient should take complete bed rest and observe absolute fast. Such an extreme measure can be taken only if the condition of the patient demands it. Otherwise he/she may do

Homoeopathic Seminar on Cancer

A National Homoeopathic Seminar on Cancer is going to be organized on 29th & 30th November 1997 at Amla Cancer Hospital & Research Centre at Thrissur, Kerala. Outstanding Homoeopaths and cancer specialists and scientists are expected to participate.

The seminar aims at discussing and complementing the Homoeopathic physician's experiences in the light of scientific methods and also establishing an interaction between various disciplines of treatment and research. A souvenir will also be published at this occasion.

For further details please contact :

Dr. P. Ramesh
Organising Secretary
National Homoeopathic Seminar on Cancer
Amla Cancer Hospital & Research Centre
Amlanagar, P.O. - Thrissur - 680553 (Kerala)

whatever work he/she does regularly and exercises he/she can do.

The food habits of the patient has to be thoroughly examined and changes if any must be made in accordance with nature cure rules and regulations. Graded fasting may be resorted to whenever necessary taking fruit juices and fruit pieces.

Important Do's and Dont's

1. Never eat till you really feel hungry.
2. Eat slowly, chewing the food thoroughly.
3. Never overeat and eat little much rice.
4. Single course meal and simple meal without spices and pickles etc.
5. Eat in a happy mood.
6. Don't eat when under emotional stress or when extremely fatigued.
7. Eat raw vegetable salad at least once a day and always eat the salad first.
8. Sour food stuff should not be used at the same meal with foods consisting chiefly of starch such as potatoes, bread and cereals.
9. Fats should not be used with food consisting largely

of starch or protein.

10. Take twice or thrice - regularly one cup of carrot juice with one spoonful of pure honey.

In the management of rheumatoid arthritis, time factor is very important. Being a chronic disease it takes months to alleviate the physical problems faced by the patient without medicines. So patients should have the will to enough to wait for the inner healing power in the body to operate work. He should not lose heart. Relief will come at long last.

Contd. from page 24

In joint diseases if we first apply Deepana, Pachana - then Snehana, Swedana and then elimination - the results are better and then Shamana effects more powerfully.

In the first step we always give Deepana, Pachana - and oleation therapy. There are two methods for using this.

- a. Trikatu - Choorna
- b. Kalpataru - Rasa
- c. Panchakola - Choorna
- d. Shivakshar Pachana - Choorna

are the best Deepana-Pachana medicines. Seeing the signs and symptoms of Paka, Snehana with pure ghee with increasing dose is given and in the last three days fomentation by vapour (Ushma Sweda) is applied; followed by Virechana.

Vamana is usually not applied in Arthritis, on the other hand Virechana is seen more useful according to practice as well as

classical reference. "By Langhana, we do not intend to keep only on fasting-but Alpa Ahara (light-food) can be given.

For Virechana, Draksha- 30 to 50 ml or Aragwadha-Haritaki Fanta or Trifala Kwatha with castor oil can be given. Drastic Purgatives are usually avoided.

After Virechana, Basties are given to all patients which are very effective in Arthritis. It is mentioned in classics that Basti is fifty percent of therapeutics in Kayachikitsa.

Ayurveda mainly describes that the Ama produced by wrong dietetic cause and behaviours, circulate through Kapha Sthana (joints etc.), mixing with vitated Rasa and Dosha, obstructs the capillary pores and produces the joint disease, where the obstruction is situated. Therefore, Langhana, Deepana, Pachana is able to digest the excessive Ama, separate Dosha and make them from level of

Srotas. Elimination removes such impurities from body and makes all channels clean and clear for circulation.

Basti has manifold actions; like pacification, nutrition and elimination and Prabhava to control Vata. Acute swelling & pain is seen well responding to above treatment and chronic pain, chronic swelling, deformities of joints, wastings, bendings, contractures are responded to oleation and fomentation together with internal medicines. According to their degree of involvement and chronicity, original seat of dosha is Koshta. They travel and reach to cellular level, and get obstructed by Ama filled in Srotas. Such doshas cause to produce disease. Panchakarma is the only treatment to bring them in original place and eradicate them from the body.

Emergence of New & Infectious Diseases

During the past 20 years, at least 30 new diseases have emerged, for many of which there is no preventive treatment, cure or vaccine. The uncontrolled and inappropriate use of antibiotics has resulted in increased antimicrobial resistance and resulting in return of common diseases like tuberculosis, malaria, cholera, dysentery and pneumonia in dangerous forms.

Emerging infectious diseases are those whose incidence in humans has already increased or which threaten to increase in the near future. The term also refers to newly-appearing infectious diseases, or diseases that are spreading to new geographical areas - such as cholera in South America and yellow fever in

Kenya. It also refers to diseases that were easily controlled by chemotherapy and antibiotics but which have now developed anti-microbial resistance.

The diseases spread by all the major modes of transmission i.e. from person to person, by insects or animals, or through contaminated water or food.

The most dramatic example of a new disease is AIDS, caused by the human immunodeficiency virus (HIV). The existence of the virus was known only 15 years ago. Since then it has infected an estimated 24 million adults worldwide, and the number could grow to 40 million by the year 2000.

A new breed of deadly haemorrhagic fevers, like Ebola has struck in Africa, Asia, the

United States and Latin America. The United States has seen the emergence of hantavirus pulmonary syndrome, characterised by respiratory failure and a case fatality rate of over 50%. Since it was first recognised in 1993, this type of hantavirus infection has also surfaced in Argentina and Brazil. Other hantaviruses have been recognised for many years in Asia, where they cause haemorrhagic fever with renal involvement.

Epidemics of food-borne and water-borne diseases due to new organisms such as cryptosporidium or new strains of bacteria such as *Escherichia coli* have hit industrialised and developing countries alike. One strain of *E. coli* was first reported in 1982 and has since then been implicated in many serious outbreaks of diarrhoeal illness, sometimes leading to kidney failure. The strain has been linked to undercooked hamburger, beef and unpasteurised milk.

A completely new strain of cholera, appeared in south-eastern India in 1992 and has since spread to other north and west areas of India, into western China, Thailand and other parts of South-East Asia.

The threat of a new global influenza pandemic is increasing. Major shifts in the make-up of influenza viruses

Is interface between Ayurveda & Allopathy possible ?

Interface between Ayurveda and Allopathy is the need of hour to help ailing humanity and reaching the target of 'Health for all upto Year 2000'. We are presenting various articles under Interface on this important subject. We want to continue this dialogue with our readers especially practitioners, teachers and policy makers. We will feel happy to receive comments from persons working in rural areas for promotion of Local Health Traditions to assess impacts of this interface at grassroot levels.

Editor

occur every 20 years or so, triggering large epidemics in many parts of the world, and causing many thousands of deaths. The next such shift is expected to take place very soon.

The exchange of genetic material between influenza viruses produces new strains, leading to epidemics of human influenza, each epidemic being due to a different strain.

Usually people get immunity after one infection but new strains of cholera and influenza etc. affect all age groups, since older people have not acquired immunity to them from previous infection.

The emergence of drug-resistant strains of microorganism or parasites is promoted by incomplete or improper antibiotic treatments that do not result in complete cure.

Changes in lifestyle, behaviour (including injecting and non-injecting drug use) and cultural or social values are behind the emergence of some infectious diseases such as syphilis. Increases in the number of sexual partners have been the main factor in the spread of HIV infection and other sexually transmitted diseases.

Travel, including tourism, also plays a role. Today, the introduction of HIV in many parts of the world is due to greatly increased human mobility.

The practices of modern medicine may also contribute. The spread of viral hepatitis is related in part to techniques such as kidney dialysis and

multiple blood transfusions.

Relaxation in immunisation practices can quickly result in the resurgence of diseases. New animal diseases pose potential food-borne risks to human health like bovine spongiform (mad cow disease). Fears have grown that the infectious agent responsible may be passed through the food chain to cause a variant of the incurable Cruetzfeldt Jakob disease in humans, in which the brain is attacked. The reasons for outbreak of new diseases, or sharp increases in those once believed to be under control, are complex and still not fully understood.

Despite the emergence of new diseases in the last 20 years, there is still a lack of national and international political will and resources to develop and support the systems that are necessary to detect them and stop their spread.

Antimicrobial Resistance

Resistance by disease-causing organism to antimicrobial drugs and other agents is a major public health problem worldwide. It is making a growing number of infections virtually untreatable, both in hospitals and in the general community.

Antimicrobial resistance is not a new problem, but it has worsened dramatically in the last decade. The increase in the number of drug-resistant bacteria is no longer matched by a parallel expansion in the arsenal of agents used to treat infections.

In this situation, doctors and their patients are more and more helpless. All age groups are affected. The elderly, the very young, the chronically ill and people whose natural defences are weakened by disease or medical treatment such as surgery are at greater risk. The continuous use of antimicrobial agents encourages the multiplication and spread of resistant strains.

There is strong evidence that a major cause of the current crisis in antimicrobial resistance is the uncontrolled and inappropriate use of antibiotic drugs. They are used by too many people to treat the wrong kind of infection, in the wrong dosage and for the wrong period of time.

The pattern of excessive or inappropriate use and the development of resistance has been repeated after the introduction of each new antimicrobial. More than half the total production of all antimicrobials is used in farm animals. Drug-resistant bacteria are passed through the food chain to the consumer, where they may cause disease or transfer the resistance to human pathogens.

Pneumococci and ***Haemophilus influenzae*** are the most common bacteria causing acute respiratory infections in children, particularly pneumonia. Both of these organisms are becoming more and more resistant to drugs. Strains of pneumococci, once uniformly susceptible to

penicillin, are currently resistant to it. They are becoming resistant to many other commonly used antibiotics, including cotrimoxazole, the drug recommended by WHO for treatment of pneumonia.

Salmonella typhi, the bacterium, responsible for typhoid fever, has developed resistance to antibiotics commonly used in the past for treatment. Resistant strains have caused outbreaks of the disease in India and Pakistan in recent years. Without effective antibiotic treatment, typhoid fever kills almost 10% of those infected. In South-East Asia, 50% or more of the strains of the bacteria may already be resistant to several antibiotics.

Malaria presents a double resistance problem: resistance of the plasmodium parasites, which cause the disease, to antimalarial drugs; and resistance of the anopheles mosquitos, the vectors of the disease, to insecticides. The arsenal of antimalarial drugs is limited. Most of them act by killing parasites when they are multiplying in the blood stream of the human host. Drug resistance is particularly important in falciparum malaria, the most severe form of the disease. Resistance to chloroquine has been found.

This serious obstacle to malaria control efforts is further complicated by mosquito resistance to insecticides. Many mosquitos are reported to be resistant to insecticides including pyrethroids.

Strengthen Jeevaniya Movement

Jeevaniya magazine is a part of Jeevaniya Movement which wants to spread message for disease free life by following healthy life style. We have appealed to our readers and well wishers to become Life Subscribers of Jeevaniya Magazine to strengthen the Jeevaniya Movement.

Responding to our call, several individuals have taken our life subscription. We sincerely thank our readers for reposing confidence in the Jeevaniya Movement. Address of some of our Life Subscribers are given below :

Maharashtra Prabodhan Seva Mandal, Mumbai, Sri V. V. Malla Reddy, Anantpur, Smt. N. Seth, Lucknow, Dr. C.S. Shanti, Lucknow, Uttama Giravani, Auroville, Dr. Anil D. Shah, Mumbai, Dr. T.D.J. Nagabhushan, Secundrabad, Delhi Voluntary Health Association, N. Delhi, Kerala Voluntary Health Services, Kochi, Mr. A. Kuber Singh, Imphal, Dr. Sreelekha Raj, Tripura, Mr. D. G. Bhat, Guwahati, Karnataka Voluntary Health Association, Bangalore, Meghalaya Voluntary health Association, Shillong, Tamil Nadu Voluntary Health Association, Madras, West Bengal Voluntary Health Association, Calcutta, Myrada Plan, Dharampur; Mr. Rajeeva Geenbaj, Mumbai, Sh. Satyabrata Das, Keonjhar, Dr. R. H. Godhka, Mumbai, Sh. S. S. Suresh, Mumbai, Sh. T.V. Ramkrishna, Kamata, St. James High School, Saranam, Dr. S.V.S.K. Reddy, Hyderabad, Mr. S. Lakshmanan, Mumbai, Mr. Jacob Daldzid, Ahmedbad, Dr. Navin Khanna, Delhi, Dr. V. B. Maihskar, Vadodara, Vd. V.P. Khadivale, Pune, Dr. Zafarullah Chowdhary, Dhaka, Mr. K. Ashok, South Kannada, Mr. Yogesh Rawal, Noida, Vd. B.S. Lunawat, Satara, Mr. S.J. Nallappan, Mumbai, Mr. Umesh Jaipuria, Calcutta, Nucleus Softwares, Madras, Nucleus Softwares, New Delhi, Dr. V. N. Joshi, Baroda, Foundation for Revitalisation of Local Health Traditions, Bangalore, Dr. M. Sudarshan, Mysore, Mr. Saurabh Navabia, Nasik.

Other readers are also requested to become Life Subscribers.

International Ayurveda Conference - '97

An International Ayurveda Conference-97 was organised by Jeevaniya Society on 1-2 Feb. 1997 to develop an Interface between Ayurveda and Modern medicine at Sanjay Gandhi Post Graduate Institute of Medical Sciences (SGPGI), Lucknow. This Conference was sponsored by Bio-Ved Pharmaceuticals Pvt. Ltd., & School of Health Sciences of Pune University and Central Drug Research Institute of Lucknow. The Conference was attended by noted Vaidyas, doctors, scientists and researchers from different parts of our country and abroad. Following is a brief report of the conference.



Present at inaugural function Dr. Manju Sharma, secretary Dept. of Bio-technology, Gol, Ms Deepa Chitre and Mayor Dr. S. C. Rai

Ayurveda, the traditional Indian system of medicine is all set to dominate the global health scene, was the dominant opinion of a large number of luminaries from Ayurveda as well as modern allopathic medicine who had gathered at the prestigious SGPGI to debate on an 'Interface between Ayurveda and Modern Medicine for Futuristic Medicine'.

Dr (Mrs) Manju Sharma, the secretary to GOI in the Department of Biotechnology,

while inaugurating the conference said, "A holistic approach on scientific principles towards health care, taking note of the latest technological advances and the ancient and traditional systems of medicine offers a pragmatic and desirable strategy to attain the goal of **Health for All by 2000**". She, however, cautioned the large gathering of scientists from across the country, and a few from USA, that the future medicine must be made available to people at affordable

prices to ensure that all the people have access to such effective medicine.

Highlighting the importance of conserving our medicinal plants in his presidential address, famous plant molecular biologist, Dr.P.V. Sane, the Director of the National Botanical Research Institute wanted the industry and the government to take collective measures to use modern tissue culture methods to cultivate the plants required in large quantities, lest more species disappear from the earth. He also wanted the therapeutic knowledge of tribal and village communities from the developing countries to be thoroughly investigated to unravel this treasure for human welfare.

Famous paediatrician from California and a faculty member of the Stanford University, Dr.Deepa Chitre wanted the safe and efficacious medicines from Ayurveda to be standardized and validated by modern toxicity and clinical studies in order to gain global acceptance. As medical director of Bio-Ved, the company sponsoring the conference, she



At the concluding function from right to left Vd. B.P. Nanal, Prof. S. R. Naik, Dr. V. P. Kamboj, Dr. S. S. Agarwal & Mr. Barry Wald

expressed her commitment to develop Ayurvedic drugs of such standard as would be acceptable even to the Food and Drugs Administration of USA.

The famous immunologist and the then director of the Sanjay Gandhi Post Graduate Institute, Dr. S.S. Agarwal joined several prominent Vaidyas from the country, including Vd. B.P. Nanal of Pune, that care has to be taken to ensure that the holistic philosophy of Ayurveda should be emphasized rather than merely thinking of taking effective 'drugs' from this system. Earlier, Dr. S.C. Rai, the Mayor of Lucknow, himself a famous surgeon, welcomed the experts and exhorted the scientists to work for developing an interface with Ayurveda in the land of Rishi's where Ayurveda had developed.

Speaking at the first scientific session, Dr. M.D. Nair, the Vice-President and incharge of

Pharmaceuticals in SPIC, pointed out the strengths and weaknesses of both Ayurveda as well as Western allopathic medicine. Despite increasing R&D expenditure, the rate of development of new drugs from modern medicine was declining and hence people were looking towards alternate systems like Ayurveda with a lot of promise. Indicating various impediments to development of Ayurveda at global level, he cautioned that partial adoption of the system may be dangerous.

While Vd. V.N. Pandey, former director of the CCRAS recounted some of the earlier attempts at integrating the two systems, he wanted the future attempts to take due cognisance of the strengths of the basic philosophy of Ayurveda. Dr. Nitya Anand, the former director of CDRI wanted a deeper study into the fundamentals of Ayurveda which could offer a lot to

development of modern medicine.

The illustrious Vaidya from Hyderabad, Vd. I. Sanjeeva Rao outlined various areas of possible interface. He tried to explain the mechanism of action of some Ayurvedic drugs with the help of modern scientific understanding of biochemistry, molecular biology and immunology. The panelists at a discussion agreed to the urgency of developing this interface and wanted modern tools and techniques of science to help further develop Ayurveda in facing the challenges of modern times. The panelists wanted collaborative research projects to be undertaken to outline the common grounds in a few selected areas.

Explaining the contours of immune system, Prof. S.S. Agarwal of SGPGI highlighted that the immunomodulators could be of general as well as specific type to either enhance or suppress the immune system. Prof. Agarwal lamented that none of the immunomodulators currently in use are from plants and hence wanted those from Ayurveda to be investigated in depth. Dr. Shakti N. Upadhyay of NII presented his data about the efficacy of some immunomodulators from Ayurveda in experimental systems and animal studies.

Highlighting the concept of Vyadhikshamatva in Ayurveda Prof. R.H.Singh of Varanasi felt that it was the intrinsic strength (Bala) of the body to maintain homeostasis. Comparing the immunomodulators to Rasayanas, Prof Singh opined that nutrition and immunity were linked and the concept of Ojas was akin to that of general-innate immunity. The speakers and panelists alike felt the need to investigate the Rasayanas from Ayurveda as immunomodulators of general type. Giving the chairperson's remarks Prof. G.P. Talwar of ICGEB and Vd. I. Sanjeeva Rao opined that immune system and the concept of immunity had a lot of commonalities with 'Vyadhikshamatva' and hence practical application of Rasayanas to induce 'Bala and 'Ojas' can be linked to raising general immunity after conducting requisite experimental studies.

While Dr. Arun D.Bhat of Hindustan Ciba Geigy described the classification of arthritis, he also briefed about the etiology and pathogenesis of the disease, besides highlighting the problem areas in the management of the disease. Vd. N.S.Bhat of Ajanta Pharmaceuticals gave an overview of more than 200 Ayurvedic preparations used in the management of arthritis. Dr. Bhat and other panelists also

explained how Ayurveda emphasized on the role of Sanshodhana therapy involving Panchkarma alongwith the dietary control and use of Asanas and local applications in management of the disease.

Dr. Arvind Chopra of Pune presented the data about a placebo controlled double blind clinical trial conducted by him in 182 patients of rheumatoid arthritis using an Ayurvedic

formulation developed by Bio-Ved team. A team of Vaidyas and modern rheumatologists from Lucknow comprising Vd. S.N.Vidyarthi & Prof. R.K.Mishta and Drs. Siddhartha Das and Amita Agarwal presented detailed case histories, examinations and investigations on two patients of arthritis who were independently assessed and diagnosed by them. The discussion with panelists and the

Magic in Plants

There always has been magic in plants. From the time man first started looking for medicines to cure illness, through the subsequent development of herbal remedies, to the current excitement about herbal petrol, the plant world has provided surprises at every turn. While much of the mystery relating to plants remains to be unravelled the scientific quest for herbal therapies and experimentation with genetically engineered plants go to show that man's dreams of finding answers to the problems of poverty, hunger and disease still hinge on plants as they did in the past. The latest investigations in molecular biology are also helping find some unusual solutions for problems of health and environmental pollution. Taxol is a natural product with potent activity against a variety of cancers including ovarian and breast cancer. It was originally extracted at a great expense from the bark of the Pacific yew tree. Industrial World there are vast tracts of land poisoned by chemical industries and mining operations which have allowed toxic metals to penetrate deep into the soil. Scientists at Oxford University led by Dr. Andrew Smith of the Department of Plant Sciences have found a possible answer to the problem by producing cabbages, cauliflowers and Brussels sprouts and their wild relatives genetically engineered to soak up toxic metals. Such plants could cleanse polluted soils at a fraction of the cost involved in chemical treatments currently being used. Then the toxic loaded plants could be harvested, burnt, and the metals extracted for recycling. While we may not be able to eat such metal hungry plants, they would certainly be extremely useful in cleaning up the environment.

house brought forth the commonalities and differences in the approach of Vaidyas and modern rheumatologists in looking at the same case. The experience could help in devising experimental protocols for study of such conditions.

A round table discussion was conducted by Dr. Nitya Anand with an illustrious panel comprising Vaidyas B.P.Nanal, S.K. Mishra, N.S.Bhat, modern clinicians Drs. S.R.Naik, R.C.Srimal, B.N.Dhawan, A. Chopra and scientists Drs Sukh Dev, N.N.Mehrotra and Bhartendu Prakash to identify possible areas of intervention for future research, study or clinical practice.

In the concluding session, the President of Bio-Ved, Mr. Barry Wald reiterated his company's commitment as a catalyst to continue to support this dialogue with a hope that it would help in delivering futuristic medicine for the mankind. Developing his Valedictory Address, Vd. B.P.Nanal pointed out at the complexities of Ayurveda and underlined the need of sincere studies with the help of modern science and technology to tackle the challenges facing humanity. Dr. V.P. Kamboj, the Director of CDRI, in his presidential address emphasised the need for standardization of Ayurvedic Medicines to ensure their better acceptance at global level. Some

of the prominent Vaidyas, doctors and scientists with significant contributions in this field who were honoured included Vd. B.P.Nanal, Prof. Sukh Dev, Dr. Nitya Anand, Vd. V.B.Mhaikar, Vd. H.S.Kasture, Vd. S.N.Vidyarthi, Prof.B.N. Dhawan, Dr. H.P.Sharma and Vd. I. Sanjeeva Rao. Dr. Bhushan Patwardhan and Prof. S.R. Naik

outlined the plan of follow-up for future action as the meeting has opened up new vistas of research and clinical studies. Dr. M.M.Godbole, the head of department endocrinology of SGPGI, the co-convenor of the conference gave a vote of thanks.

Recommendations of IAC'97

The recommendations emerging out of the two days of deliberations at the International Ayurveda Conference-97 were presented by Prof. S.R.Naik as follows:

1. The group unanimously felt that Ayurveda, practised in India since several centuries, and modern medicine have both a lot to offer to humanity and it is therefore essential that practitioners of the two systems of medicine must create an interface urgently. Practitioners of other indigenous branches of medicine may also be invited to join the dialogue at appropriate time.
2. Such interface can be created best through a process of education; which could begin first in an informal fashion, but should eventually culminate in formal education. An expert group should be formed to work out the details to devise institutional structures necessary to achieve this.
3. The Indian laws governing patenting of products must be formulated with great care so as to prevent misuse of the national heritage and resources of drugs derived from principles of Ayurveda and other Indian Systems of Medicine.
4. To make it possible to interpret Ayurvedic terms and principles correctly in terms of modern medicine, it is essential to initiate basic, pharmacological and clinical studies using inputs of modern science and technology.
5. Standardisation of Ayurvedic preparations is important to ensure quality control. In this connection it is required to have appropriate drugs of ISM, while differentiating these from newly developed drug combinations.



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मुख्यमंत्री, उत्तर प्रदेश

राष्ट्र निर्माण के पाँच दशक स्वर्णिम भविष्य पर हमारी दसक



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उत्तर प्रदेश के सभी ज्ञात-अज्ञात शहीदों को विनम्र श्रद्धांजलि



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“अच्छे विचारों से ही विकास शुरू होता है। आज के युवाओं को चाहिए कि वे अपने देश के विकास के लिए जोर दे सकें।”



“आज के युवाओं को चाहिए कि वे अपने देश के विकास के लिए जोर दे सकें।”

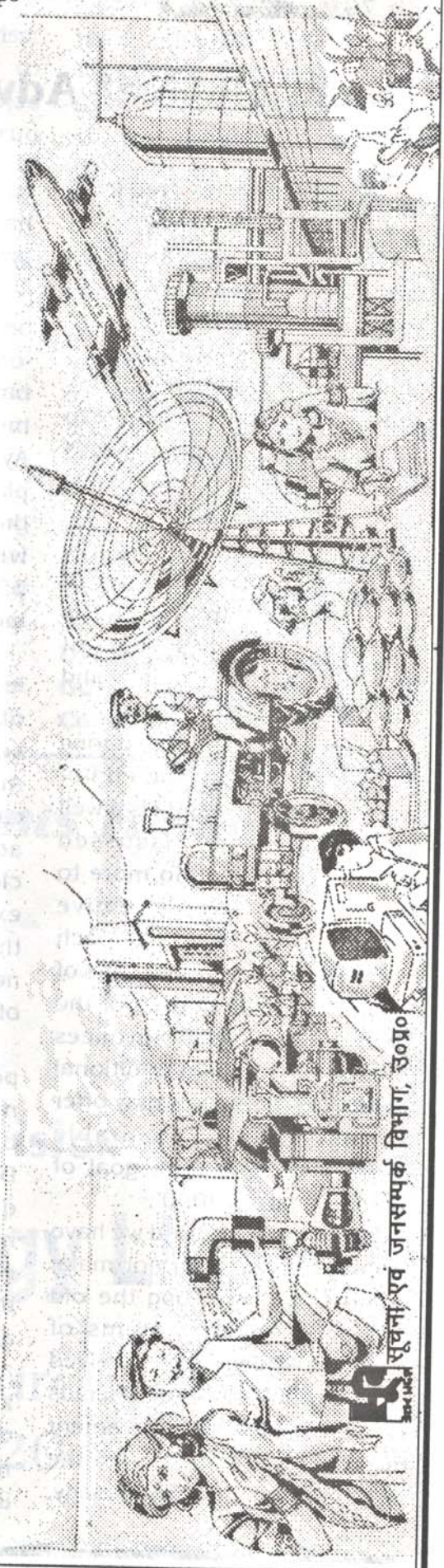


“आज के युवाओं को चाहिए कि वे अपने देश के विकास के लिए जोर दे सकें।”



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पूरे हुए सपने शहीदों के आज हुआ प्रदेश में खुशहाली का राज



सूचना एवं जनसम्पर्क विभाग, रायपुर

adkmack

Technological Advances and Traditional Medicine

Dr. Manju Sharma

Ayurveda is referred to as the 'Science of Longevity' which has been practised in India since 2500 Years. As most of the literature in Ayurveda is available in Sanskrit, it is essential that this knowledge is made available to general public in local languages and for scientific communities, more and more publications are brought out in English. Incidentally, the University of California Press from U.S.A. is bringing out a series of publications on Ayurveda and Tibetan Medicine.

Though it lost its glory during the British rule at the end of 20th century, Ayurveda is a well known and well discussed subject worldwide, no more to be referred only as 'native medicine'. A holistic approach based on scientific principles of health care, taking note of the latest technological advances and the ancient and traditional systems of medicines may offer a pragmatic and desirable strategy to attain the goal of 'Health for all by 2000'.

In the modern world we have realised that we can not make progress by rejecting the old and time tested systems of medicine which have survived for thousands of years. There is certainly a need to supplement these ancient systems with the modern biomedical technology,

to achieve the best. This process has started and the results are promising.

Plants as Source of Traditional Medicine

The use of plants forms the basis of traditional systems of medicine all over the world. Ayurveda has more than 8000 plant based remedies and is still the main source of health care whereas there are around 35,000-70,000 plant species in India alone.

The nature of active principle in these plants and mechanism of their action needs to be scientifically understood. Attempts at isolation, purification and characterisation of active principles as well as cloning, characterisation and expression of genes encoding the active principles could open new vistas in the scientific usage of traditional plant products.

Plant biotechnology is a very powerful tool to supply large number of uniform plants, breaking the time barrier. Difficulties in securing adequate quantities of proper planting materials can be overcome by employing tissue and cell culture methodologies. Systematic application of biotechnological and genetic engineering strategies coupled with conventional breeding methodologies could also help in augmenting production of the

active principles in these plants.

The herbal formulations have to be subjected to rigorous physiological/pharmacological evaluations to determine their safety and efficacy. The shelf life of these preparations are to be studied with regard to efficacy and phytochemical profiles. In order to guarantee the standards of quality and safety, stringent quality control measures are to be adopted.

According to WHO, about 21,000 plant species have the potential of being used as medicinal plants, of these about 5,000 species have been investigated. We possess about 8% of estimated global biodiversity with around 0.126 million species. Out of about 400 families of flowering plants, at least 315 are represented in India.

Looking at the availability of our natural resources and ancient knowledge of Ayurveda, we should seek solutions to some of the major diseases for which modern science has no medicines. Plants could act as a feedstock for development of a health care system which is environment friendly, low-cost, affordable and which is based on the holistic approach as conceived by Ayurveda.

Western system of medicine isolates single active ingredients from herbs and then

synthesises them. Thereafter, these are subjected to mechanistic model of the body. Ayurvedic pharmacology (Dravyaguna) utilises the synergistic co-operation of substances as they co-exist in natural sources. It uses either single plants, or more often, mixtures of plants whose effects are complementary.

Such concepts are gaining consideration in western medical reaserch. Presence of different substances in microquantities alongwith the active ingredients are believed to be useful in terms of promoting the action of latter and/or limiting the side effects. Ayurvedic remedy *Rauwolfia Serpentine* (Sarpagandha) is the

source of reserpine. Likewise, Brahmi has given rise to Bacosides, Neem has given rise to anti-inflammatory drug nimesutide, Gum guggul has been the source of gugulip and so on.

While Ayurveda can help in the development of herbal products, modern medicine and the latest biophysical/biochemical techniques can help in the precise identification and early diagnosis of diseases. A proper disease surveillance system can be developed using the classical epdemiological methods and the new approaches of molecular epidemology.

With the holistic approach of Ayurveda, the human beings can

lead a healthy life without depending on medicines. At the same time, if there are some chronic disorders, it would be desirable to cure through the Ayurvedic system, after the initial diagnosis has been made. The modern medicine can continue to contribute towards life saving efforts, but in combination with Ayurvedic systems. Probably, while saving the life, the combination can ensure a healthier human being, not to depend always on medicines.

Based on the inaugural speech by Dr. (Mrs.) Manju Sharma, Secretary to the Department of Biotechnology GOI at International Ayurveda Conference '97.

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Development of Ayurveda-Allopathy Interface

The efforts to integrate Ayurveda with allopathy, or rather assimilate the technical advances made by the basic sciences like physics, chemistry, biology etc. date back to 1930 or so. The idea was to achieve a better understanding of the Ayurvedic principles. The idea was revolutionary but the subsequent implementation in the form of curriculum etc. was heavily biased in favour of Allopathy. This, in the course of time, resulted in a generation of physicians called integrated Ayurvedic practitioners disliked both by the orthodox and the scientific communities.

Every practitioner, many a times comes across with certain situations which are inexplicable to him. Perhaps, the set of scientific rules he has studied are not enough. Sometimes the individual competence leaves much to be desired. Then the ego is projected as a scientific lacuna and not as a personal shortcoming. In such cases a fresh look or insight at the same situation from a different angle, more often than not, suggests a solution.

Thus, the need to accost Ayurveda has befallen the modern medical science, which has failed to control stress on its own. Stress is the inability of the body to cope with a sudden change of environment, internal or external. The unnatural pace of life, increased psychological

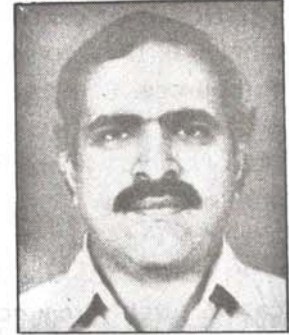
interactions, insecurity-emotional, social, financial, professional etc. contribute towards stress, which then manifests as physical, psychological or psychosomatic disease.

The thrust of oriental sciences like Ayurveda, Yoga, Music etc. is on establishing harmony with nature. It is done effectively by realising one's own limits and staying within them, as a sure way to obviate stress. All efforts to overreach, cause frustration resulting in disease. This fact is now being realised and a rational approach of understanding human pathophysiology is evolving and due consideration is being given to it in the management of diseases.

In order to develop an interface between Ayurveda & Allopathy, the basic tenets of Ayurveda should be accepted without prejudice and condescension and with humility.

Secondly, insistence on evidence gleaned by direct perception through sense organs will not do. Inference, simile and even the word of a master or scriptures will have to be taken as valid proofs of knowledge.

Judgement of an individual can be clouded, affected by multiple factors such as mental state, preoccupation, personal involvement, distance of the object, weakness of the senses,



Vd. Vilas M. Nanal

magnitude of the object etc.

Principles of physics, chemistry, biology e.g. friction, temperature, osmolarity, pressure, molecular weight, adhesion and cohesion, capillary action etc. could be made to shed light on the Ayurvedic principles. Role of fluids and fats as solvents etc. could prove to be a very important but basic step in the right direction.

We must select a team of like minded, dedicated experts of impeccable academic background, with a lot of zeal but without hang ups and leave this task to them. Since many a general practitioners have already found an integrated approach to disease management, this issue has to be now taken up at rigorous scientific level without which it will also meet the fate of similar earlier attempts.

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Some Leads on Ayurveda - Modern Medicine Interface

Prof. A. B. Vaidya,

Ayurveda and 'Modern' Medicine share several interfaces : the interface in clinical care, has live interactions, in view of this relief of human suffering. The academic interface, is a challenge to the universities, faculties and students, as to the contents and implementation of the curriculum. Thirdly, the research interface has an immense opportunity for mutual enrichment by an exchange-based on a scientific understanding of the fundamental principles and useful practices of both the systems. So the clinical interaction, academic challenge and research opportunity have to be prudently evolved in an incremental manner. One says 'incremental' because earlier attempts at integration or 'hybridisation' have often failed. The failure may partly be ascribed to the leaders of each system zealously guarding their own pet world-view.

A worldview is based on a culture's central ethos. It is a cliché that science is universal. Those of us who have dedicated a life-time in sciences, emergent from different cultures know better. Science too is culturally conditioned and based on a world-view. Prof. Maarten Bode of the Medical Anthropology Unit of the University of Amsterdam has

succinctly summarised these world-view differences as - "**Ayurveda** : Lived-in body (Intersubjectivity, organic time); function (physiology); treatment of person (individual balance); interpretation of cases on the basis of the classical texts; interaction of ingredients of Ayurvedic medicines". Non-drug management and Karmik basis of diseases these all explain the efficacy of Ayurveda as a system catering to millions of Indians for many centuries.

In contrast, Bode has following to say for modern **medic** "**Allopathy**: Objectified body structure (organs cells); treatment of diseases based on statistical data and parameters; efficacy of medicines explained by an isolated chemical substance". Hence the interfaces of Ayurveda and Modern Medicine do have genuine problems of communication. These world-views are usually defended for one's psychological security and the comfort level.

However, any institution or person, intending to work at the interfaces, should first be painfully aware of the partiality and cultural bias of the respective worldview. Then the humility, consequent to that awareness, would make a sustained apprenticeship with the masters of the alien system

possible and easier.

For quality work at the interfaces, we have to initially build bridges of understanding and trust across the academic territories. Several interactive educational programmes, at different levels of expertise are needed to be evolved for clinical diagnosis, prognosis and management for taxonomically agreed upon clinical entities. Such a programme needs live clinical case discussions. Watching beneficial results by alternative systems of medicine is an experiential sharing of the world-views. This should precede any attempts at conceptual understanding.

After this clinical experiential stage, an exploratory stage of mutual education of concepts and practices on shared clinical grounds can be started meaningfully. This stage needs excellent clinical records and documentation of stepwise learning. Only later, clinical or basic studies/investigations with experimental designs, proper controls (historical or inter-system) can be embarked upon. If some specialists of modern medicine and their commercial sponsors feel that they can right away take an Ayurvedic formulation and emerge, after a clinical trial, with a marketable product, they are mistaken. The clinical trial methods for the

single chemical entities cannot be unthinkingly extrapolated to Ayurveda. This may only be possible with very potent Ayurvedic formulations.

A paradigm shift at the interfaces of Ayurveda and Modern Medicine is required. Clinicians and investigators, with a dual background of education in both the systems of medicine, should form a vanguard group for the clinical interface. Top priority should be on clinical documentation of efficacy and safety of Ayurveda in the field situation in a large number of patients. Once critical leads are identified experientially, more resources can be devoted to a multilevel, multidisciplinary and well-orchestrated clinical - experimental research programme. Vd. D. S. Antarkarji and our group, over the last 27 years have founded this shift in the paradigm of 'Reverse Pharmacology'. It has been a very cost-effective approach. Several leads have been provided - *Mucuna pruriens* in Parkinsons' disease, *Picrorhiza kurroa* in viral hepatitis, *Curcuma longa* in oral precancerous lesions, *Rubia cordifolia* in eczema, *Saraca indica* in dysfunctional uterine bleeding, *Commiphora mukul* for arthritis and several plants in malaria. Others have also taken up these leads and are bringing them to fruition. A national programme with a tightly run research management may lead to a renaissance at the interfaces of Ayurveda and Modern Medicine.

Unani System of Medicine

Doctors specially of modern medicine system (allopathy) are aware of Hippocratis as Hippocratis oath is taken by them at the time of completion of medical education. The same Hippocratis is known as Hakim Bukrat in Arabic. Hakim Bukrat was the founder of Unani System of Medicine. He is also known as 'Father of Medicine', because he separated medicine from magic, religion and philosophy and gave it the original shape. Although Unani Medicine has mainly developed in Arabia, it was continued to be named as Unani on the basis of place of origin. Greek, Islamic, Ayurveda, Jewish and syrian effects are found on Unani Medicine.

Arabs had assimilated knowledge of Physics, Chemistry, Botany, Anatomy, Physiology and Surgery besides knowledge about medicine prevalent in those days in this system. Abu-Ali-Ibn-Sina (Avicena) also basic contribution to made development of Unani System of Medicine. Several famous vaidyas from India visited Arabia during tenure of Khalifa-Harun-Al-Rashid and Unani System was enriched by their experience also. Ayurvedic Books were translated into Arabic and medicines also were taken from India.

Although Unani has taken much from all the systems, it did so only after testing it on basic principles of Unani Medicine. This system had come to India with people from Arabia and Persia. Unani is almost dead in the country of its origin but it has made India its second home. Largest number of Unani physicians (Hakims) are in India besides a large number of educational and research centres. Arab Hakims have written several books on medicinal properties and uses of Indian plants according to Unani system. Central Council of Research in Unani Medicine (CCRUM) is looking after Unani clinics, education and research in India. Unani and Ayurveda are similar in many aspects. CCRUM has established several centres of standardisation of Unani drugs where modern instruments and methods are applied. Council is also working in the field of conservation of medicinal plants.

Relevance of Homoeopathy in India

Although Homoeopathy was originated in Germany by Dr. Samuel Hahnemann, popularly known as its father, it has spread to cities and even remote villages of India. Dr. Hahnemann had coined the word Allopathy to give separate identity to his system.

Homoeopathy works on the principal of *Similia Similibus Curantis* which means that symptoms produced by a medicine when given to healthy person is cure of same symptoms in morbid man. In Ayurveda it is *Samah Samam Samayati*. Study of symptoms in healthy person after giving a small dose of medicine is called *Proving*. Unlike Allopathic medicines, Homoeopathy medicines often do not produce serious side effects unless medicine is given in very high potency or for a long time. These medicines preserve vital force and do not result in another disease or weakness.

The recent researches in the field of neuroimmunology have shown that mental states like depression, fear, worry etc. reduce the body immunity and increase the chances of catching diseases. Homoeopathy treats each individual as a separate identity treating both his body and mind. There may be one medicine for various symptoms at a time. Sensation of patient also plays an important role in selecting the medicine. Similarly

weather or time of day or night is also important. Homoeopathy has also recognised role of food and lifestyle in prevention and cure of diseases. If similar symptoms appear in two individuals of different constitution, medicines will be different according to constitution. This principle seems very near to Ayurvedic principle of *Purusham Purusham Veekshya*.

Homoeopathic medicines may be of herbal, mineral or animal origin. Most of the medicines are, however, of plant origin and identification of active ingredients, toxicity tests and standardisation are being done like those of allopathic medicines. Homoeopathic medicines do not get expired and can be kept on normal temperature. These medicines are alcohol based and are used in the form of sugar pills or powder. Homoeopathy has reached to remotest villages despite the fact that very little funds are provided for its research in comparison to allopathy. Many new Homoeopathy colleges are being opened and they are giving degrees and diplomas but most of them do not have facilities like allopathic colleges.

Homoeopathy can spread 'Health for All by 2000 AD' to the remotest villages. Homoeopathy medicines are cheaper in comparison to Allopathic and

Ayurvedic medicines. Previously these were much cheaper but now prices are increasing due to various reasons. Certain policy decisions are also resulting in price increase, besides attractive packaging and distribution networking like allopathic medicines. Increase of duty on the alcohol for medicine manufacture and certain changes in Drugs and Cosmetics act also have adverse effects.

It is no secret that many unnecessary pathological tests are often referred due to unholy nexus between doctors and diagnostic labs. Homoeopathy being symptomatic does not require costly diagnostic equipments. It can effectively prevent and cure various infectious diseases, diarrhoea, dysentery etc in different seasons. Previously, Homoeopathic medicines were prepared from foreign plants but Indian doctors have proven many indigenous plants. If medicines are produced from indigenous plants, these will be cheaper and easily available. Homoeopathy also helps in preservation of environment as fewer plants are needed to produce Homoeopathic medicines than Allopathic or Ayurvedic medicines. There is rich heritage of knowledge about medicinal plants in Ayurveda. So effective interaction between Vaidyas and Homeopaths is need of the hour.

Harmony Between Ayurveda & Modern Medicine : Is it Feasible ?

Ayurveda is the science of life, by which we gain the knowledge of human span of life, longevity and its appropriate state. Ayurveda studies and determines all aspects of human life. Life is not just the continuity of consciousness but is rather the union of body, mind, soul and sense organs. Therefore, Ayurvedic study includes the study of various concepts of body, mind, sense organs, soul and their inter-relations. Soul is a witness and changeless and only body and mind are the seats of disease being executive. Thus, Ayurveda is not just medical science or medicine, rather it is called *Karma-Purush-Chikitsa* or psychosomatic medicine.

Ayurveda Versus Modern Medicine

Modern medicine is a system of western medical science by which diseases are diagnosed and treated. Subsequently, it has been possible to include prognosis, aetiology, pathology etc. into it.

The object of Ayurveda and modern medicine both is to keep the man in a healthy state. Therefore, if these two understand each other properly and use the other well to keep the man healthy and to dispel disease, then they may be able to achieve their end in a very short time. This is what Charak

has called the object of Ayurveda, namely the preservation of the health of the healthy and subsidence of the ills of the diseases.

Development of Therapeutics

Both the sciences can supplement each other in the conservation of health and cure of diseases of human beings. Ayurveda is supposed to be derived from Vedas. The ancient sages have developed Ayurveda chiefly by the observational method comprising observation, inference, speech of the truthful and stratagem. A wide range of varieties and points of view are found in the Ayurveda during the Sangraha Kala. Subsequently, after this epoch the processes of observation, examination and research retarded so that the knowledge and literature of all branches other than Kayachikitsa gradually dwindled. A Vaidya remained an adept of kayachikitsa only and his interest in other branches gradually died out. The invention of Rasavidya made the Vaidya completely subservient to Kayachikitsa he became duty and bound to treat all diseases through drugs only.

The modern science on the other hand has made unsurpassable progress in the field of surgery. Surgery is an art and may be said to be the boon



Vd. P. C. Jain

of the modern epoch. Ayurveda should develop this art without which it can never achieve perfectness.

Need of Union

India was a rural nation in ancient days. Even the cities were like modern suburbs. The thinkers had set down elaborate rules of daily acts, seasonal rules and rules of transitional period and rules for the conservation of Ojas for the obviation of diseases. A succinct description of counteracting the impairment of space, time, air and water due to the abundance of cities has been given under the chapter Janapadodhwamsa. It is the need of the day to attend more and more to the diseases of city-dwellers and for this the ancient knowledge should be united with the achievements of modern science.

Precautions

The various branches of Ayurveda could be fostered and updated by the help of modern

science, so that the preservation of human health could be feasible by the minimal use of expedients and expenditure. In this context one fact should be kept in mind most. Ayurveda has its own principles on the basis of which it is redeeming the humanity from pain and preserving the health of the multitude since thousands of years. Should we deviate from these principles or forget their use desiring modernity, we would go astray from Ayurveda. Use of medicines, instruments, inventions etc in consonance with Ayurvedic principles would make Ayurveda relevant to the current times and will also ensure its proper development.

Ayurveda has always conformed with the epoch. Charak has acclaimed that the facts which have been examined in various ways and established cogently by reasoning and cold logic are called principles. Reasoning had been accepted as a proof in Ayurveda. Acharyas have ordained the examination of treatises and then that of the teacher and disciple so that the disciple may entertain no doubts regarding the treatise.

Need of the Hour

All over the world, research work is in progress the field of modern medical science. However, the inferences drawn from researches done outside India when applied to India do not reproduce the benefits exactly as elsewhere. As because, indigenous food and medicine happens to be particularly good to a people

living in a particular country. This is what Charak describes as Hitakar Ayu.

Modern Indian medical scientists have done research work on several Ayurvedic drugs by isolating their alkaloids and having proven their utility included them in the modern medicine. However, the isolated alkaloids or their synthetic preparation gives rise to several side-effects on being used. This is what happened with the alkaloid of Sarpagandha termed Reserpine. Charak has announced that only that medicine is worth the name which does not create side-effects, while subsiding the disease under treatment. Moreover, there is no substance in the world which may not be used as a medicine.

The World Health Organization has upheld the task of providing health to all humans

by 2000 A.D. However, it also has asserted that aim could be achieved only by the active cooperation of indigenous systems prevalent in various countries all over the world. Col. R. N. Chopra realized in 1948 that we can better solve our therapeutic problems by the coordinated use of Ayurveda and modern medicine. China has solved her problem like this only. In their health services, the physicians of Chinese and modern medicine work jointly shoulder to shoulder. The physicians of every school are helping other by following their own tenets. There is a growing need to extend such facilities in India as well. Ayurveda can help the modern medicine on the basis of its own tenets and can grow richer by the use of modern knowledge and technology and be increasingly efficacious and useful to the public at large.

Elevating Prestige of Ayurveda

Kaviraj Gangadhar Ray (1789-1885) elevated prestige of Ayurveda and exercised great influence throughout the 19th century. He acquired legendary fame for therapeutic use of poisons and diagnosis by feeling the pulse. He wrote Sanskrit commentaries on 34 books and himself composed 41 books. His commentary of Charak Samhita known as *Jalpkalptaru* was a special contribution.

Gangaprasad Sen practised Ayurveda in Calcutta and showed special interest in preparation of medicines. He prepared medicines for sale in other countries and he was the first to export Ayurvedic medicines to Europe and America. He introduced fixed consultation fee which surpassed the fee of British physicians. He sold medicine according to fixed price lists and gave advertisement for them. He started first Ayurvedic magazine in Bengali language, *Arogya Sanjivani* with the purpose of upholding prestige of this Indian system. He opened Ayurvedic school (tol) in his home and gave free room to students. When he died in 1890, he was one of the richest persons in Calcutta.

Suicidal Affairs of Ayurvedic Education

Vd. S. N. Shastri

Here, by Ayurvedic Education we mean the education, instruction currently in vogue, enjoying government recognition all over the country. Allopathic elements are also incorporated in this genre of educational instruction. The educated class emerging from this system completely controls the Ayurvedic system of education, research and therapeutics. The task of preparing syllabi, awarding degrees, framing of medical service rules and legislation too has devolved upon scholars of this genre only. Hence it may be said without a shadow of doubt that these very people are mainly and directly responsible for the present state of indigenous sciences.

Those who have studied under the above mixed system generally nurture ill-will against those who have studied under the oriental system. The majority of these graduates project themselves such as to be called and treated not as "Vaidyas" but as "Doctors". The inevitable consequence of this inferiority complex is before us in the form that in cities and villages people are hankering after good vaidyas, asking everybody, "do you, by chance know a good vaidya?"

There are hundreds of institutions for manufacturing good vaidyas squandering

crores of rupees of hard-earned money of the poor, and yet the state of affairs is worsening day by day. What may be a matter of greater concern? The scholars, teachers and officers who are the architects of this pathetic state are never tired of calling themselves the uplifters, scholars and devotees of Ayurveda on all suitable occasions and yet are really prey to a terrible inferiority complex, false and suicidal exoticism and the idiosyncrasy of scientific bigotry. Many of these are those who have driven the chariot of progress of Ayurveda, right from the achievement of independence to the present day upto the abysmal pit of destruction.

Of course, it cannot be gainsaid that due to the policy of encouraging indigenous industry umpteen have been employed in the field of Ayurveda. However, those who have enjoyed all the amenities in the name of Ayurveda did not work with honesty and self-respect to benefit by the occasion. The growing respect enjoyed by Yoga and Ayurveda within and outside the country is mainly due to the merciful attitudes of these treatises and the problems created by the imbalanced use of allopathic medical science.

Following points emerge from the consideration of the causes

of the situation :

- The fundamental cause is the success, in the field of therapeutics also, of the policy of Lord Macaulay of creating inexorable opponents of Indian culture by the spread of English education. Due to this, a feeling of disdain against Ayurveda, Unani etc. was generated in the minds of Indian doctors and officers.
- The contemporary scholars and patriots had included certain elements of allopathy alongwith indigenous medical scriptures during the early days to make the government recognize them and arrange their regular studies and instruction, under the good intention that 'The graduates of this reformed syllabus would be more suitable than the traditional vaidyas'. They would assimilate the absent but useful things from elsewhere into Ayurveda, and thus make it stronger and more refined and as such Ayurveda would achieve the respectful status of a national medical system by the course of proper time. Unfortunately, the idea did not succeed. The indigenous medical science was neglected and disdained vis-a-vis the allopathy. The gubernatorial policy is also

responsible for the present state in a big way.

- The prescribed qualifications and the tests, prevalent in the country, especially in U.P. to be gone through to seek admission to the Ayurvedic colleges are such that it seems a certainty that the time of closing these institutions may come soon. The prescribed qualification is not only not related to Ayurveda, on the contrary, it is opposed to Ayurveda. The students studying Ayurveda, by virtue of compulsion emerge as graduates and spend their lives tarnishing the image of Ayurveda.
- The state of research being more deplorable is also due perhaps to the same reason that probably none of the researcher are bothering about producing something unique before the world. Consequently, the money and labour spent is proving a source of bread to a few only. The public at large is not deriving the benefits expected of them.
- The difference maintained in the facilities and amenities between allopathic and indigenous medical graduates being great, no wonder, really brilliant students of granite determination seldom seek admission in colleges of indigenous system. Therefore, the government should remove these inequalities at once.
- All the equipments necessary

for the students of Ayurveda should be arranged at once in all the Ayurvedic colleges. The staff of these colleges should be entrusted with the time-bound programme of delivering self-reliant, scholarly, Ayurveda-believing Vaidyas to the society. Institutions failing to do this should be closed and those which succeed should be duly awarded institutional and individual awards and prizes.

- All rights of admission and education should be vested in the concerned universities. The government interference in these matters must come to a stop forthwith, as this breeds disbelief and uncertainty instead of facility.
- If any beneficent institution desires to perform Ayurvedic instruction-education as per prescribed standards, then to prevent it from doing so is an indiscreet step. Nationalization has proved a failure in all spheres. Everybody is aware of the worthlessness and indiscipline spread by denying occasions to those who do virtuous deeds. The state of institutions taken over by the government is also open for everybody to see.
- The combined premedical test should be given up at once.
- The medium of instruction should be either the mother tongue, the national language or sanskrit at all levels. The

use of english language must be banned at all levels.

- Oriental Ayurvedic syllabus should be adopted at once and it should be endeavoured that the syllabus includes philosophy, Sanskrit, cultural history, natural geography compulsorily, as these are indispensable to comprehend Ayurveda. The present compulsories of scientific qualification for the study of Ayurveda must be jettisoned at once.
- All arrangement must be made to study and practice indigenous therapeutics in the concerned college itself.
- Upto the graduate level, the syllabus must be exclusively Ayurvedic for study and practice. Should the experts committee ever deem it necessary then at the post-graduate level a general introduction to all the various systems of the world may be introduced. Their recognition and form should be also determined by the experts committee.

I have submitted my opinions on the basis of my teaching experience of over 50 years, extensive deliberations made during travels inside and outside India, and my own thinking for reforming the said state of affairs, with the hope that those who are concerned will look into this and do the needful.

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Open Market of Allopathic Drugs

Indian drug industry has been successful to a large extent as indigenous and self-reliant industry. Positive policy interventions during decades of 70s and 80s gave much boost to this industry.

At the time of independence in 1947, Indian drug industry was totally under the control of multinationals. Kefauver Committee constituted by American senate had found that in 1950s drug prices were highest in India. Antibiotic production started in India only after establishment of Hindustan Antibiotics Limited in 1954 with cooperation of World Health Organisation and UNICEF. Later, Indian Drugs and Pharmaceuticals Limited was established with Soviet technology in 1961.

Prices of antibiotics came down by 60 to 70% with the establishment of public sector in drug production. Private Indian sector drug manufacturers also established capacity for large scale indigenous drug production in the decade of 1960. However, multinational companies were able to continue their hold on Indian market due to their strong sales network.

Indian Government constituted Hathi committee in 1974 to recommend about policies for drugs and drug

industry. Recommendations made by this committee were a milestone in the development of drug industry and drug policy for third world countries. Drug policies of Bangladesh and Srilanka were based on these recommendations.

Drug policy of 1978 and Drug price control order of 1979 were recommendations of Hathi Committee. First time a conclusive and slab based price control was promulgated with the intention of reducing the drug prices. This policy resulted in fast growth of drug industry and it attained manufacturing capacity for important drugs. United Nation's Development Organisation (UNIDO) accepted in its report of 1980 that India has achieved indigenous capacity to manufacture all the drugs.

During this period foreign drug industry in India remained centred in low technology areas and manufactured mostly non-essential drugs. These industries had not shown interest for bulk drug production and continued to produce drug formulations, playing the role of trade organisations. In this period negative tendencies to corner the public sector were also gaining momentum.

New drug policy was declared by the Government in 1986 in which several good provisions of

Drug policy of 1978 were dropped. Price Control was reduced, imports were facilitated alongwith removal of controls on production and collecting more profits in this scheme.

These changes have resulted in putting drug industry in service of rich persons who can purchase health services. On one side there is scarcity of cheap drugs while on the other side overproduction of costly drugs is continuing.

In 1994 another policy was declared in which continuing the changes made in 1986 all the positive aspects of the previous. Drug Policy of 1978 were overturned, reducing price and production controls to bare minimum and allowing to collect more profit. Companies with foreign equity upto 51% were to be treated like domestic companies, requirement of industrial license to manufacture drug formulations was abolished and controls on imported bulk drugs were also removed.

In this policy drugs reserved for public sector have been limited to only 5. Only 73 drugs have been put under price control while their number in 1978 policy was 378.

Public sector has helped in attaining self reliance and compete with multinational drug companies which are on the

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Potential of Alternate Medical Systems

Dr. Prem Sagar, Lucknow

The modern medical science has evolved mostly during the last couple of hundred years in the western world. Its development has run parallel to general spurt in scientific advancement. Some major scientific strides which have played an important role are : discovery of microscopic or submicroscopic disease germs ; the advent of the concept of chemotherapy and treatment by synthetic drugs ; development of antibiotics and diagnostic applications of X-rays; radio-isotopes, electro cardiography or encephalography and sonography and discoveries of anaesthetics.

In contrast most of the oriental medical systems came into existence thousands of years ago. They, however, became stagnant during the medieval period and could not derive much benefit from rapid growth of science during this era, particularly during the last century in which it grew exponentially. This apparently was due to several social, economic and historical reasons.

Amongst numerous non-allopathic medical systems, Ayurveda and Yoga originated in our own soil, while Unani and Homeopathy came from outside. Opinions, regarding their merits and demerits range between two opposite poles. The graduates of modern medicine and surgery

often regard all these systems as unscientific and backward. On the other hand there are some, who argue that a more authentic disease-diagnosis is attainable by expert Hakims and Ayurvedacharyas merely through the feel of pulse. However, such powerful knowledge did really exist in some vaid and Hakims, was probably more as an intuitive art rather than any science. In any case, it is fast becoming extinct in the absence of adequate documentation of its details and transfer from one generation to the other. Numerous non-allopathic practitioners also utilise the diagnostic tools of modern medicine if they are available and affordable.

Research in indigeneous medical systems (with a view to rationalise, update and improve them) found a prominent place with various Institutes. However, a lot of work undertaken so far, has failed to make any appreciable dent in the problem. Both the 'sceptics' and the 'believers' coexist even today and little pertinent scientific information has been added to settle the claims and doubts, while both the modern as well as ancient (or homeopathic) medicaments continue to be in human usage.

The reason of this lies perhaps in the fact that instead of adopting a pragmatic clinical

strategy, such studies have largely remained bogged down in an imitative approach, involving fractionation of the 'suspected' crude drugs and undertaking their tedious testing in experimental animal models. This *modus operandi* has been evolved mostly by the huge commercial drug manufacturing organisations of the west to examine the drug potential of the new synthetic compounds. Their direct trial on the 'precious human life of the affluent societies is obviously out of question while persons in poor countries or some friends being used as 'guinea pigs' for such trials.

However, 'promising' results in experimental animals provide no assurance of their success in human beings nor do the negative findings (in animals) rule out their potential in human ailments. Experimental appraisal of Ayurvedic and Unani medicines through animal testing is particularly complicated by lack of information as to whether they act through some single active principle or by synergistic action of several chemical entities present in the crude preparation. At the same time the claims made in the ancient materia medica regarding their utility in a variety of symptoms might not have undergone adequate testing in terms of modern

methods during evaluation procedures and their efficacy might also be getting influenced by changes in the life style, dietary habits and pollution. Efforts to test the efficacy of isolated fractions of such drugs in experimental animals thus, is like chasing the proverbial black cat in a dark room.

These drugs continue to find human usage and ample opportunity exists to directly apply the criteria and the methodology of modern clinical pharmacology in their case. Thus, using the modern techniques of diagnosis and

prognosis, and the methodology of administering placebo in parallel 'controls', can definitely help before adopting a chemical strategy. The only requirement for this is an unbiased scientific attitude and some cooperation between the patients and doctors using different pathies. This problem which should not be unsurmountable, provided a serious effort is made to organise such programmes. Such procedures of modern clinical pharmacology have in any case, to be applied to all newly synthesised drugs before they enter the market and the

element of risk to human health in such trials should obviously be much less in respect of the drugs which have been in voluantry human usage for centuries.

A still simpler strategy, which also can considerably help in establishing the efficacy (or otherwise) of these remedies is available in the form of retrospective statistical patient surveys through interviews and suitably devised questionnaires.

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threshold of a biotechnology revolution. Drug industry has been pleading for removal of restrictions due to falling of profits but this is not true. Sales and profit both had increased sufficiently even before declaration of the new policy.

Putting Drug Industry alongwith other consumer goods manufacturers will put people's health in jeopardy. Market patterns show that large Drug companies are not intrested in production of bulk drugs, instead they are intrested only in the manufacture of drug formulations. In these conditions instead of liberalisation in production, there is need for more rigorous controls.

Patients do not purchase medicines according to their choice or liking but on the advice of doctors who are allured by drug companies through medical

representatives. Drug prices have increased manifold after Drug Policy of 1994. At present, there are 60,000 to 80,000 brand formulations in the Indian market many of whom are useless, irrational or even harmful. There is almost no source to get unbiased and authentic information about drugs available in India. Majority of physicians rely on sales promotion literature provided by medical representatives.

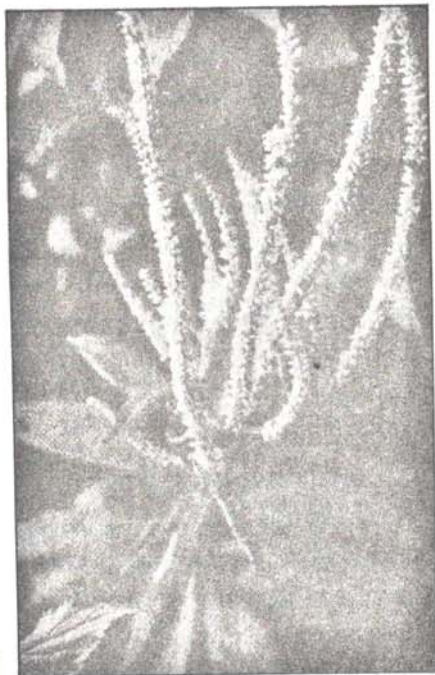
After establishing self reliance in drug production we are again loosing it resulting in dependence on imports in drug industry. It will be better to look again faults of foreign drug companies as mentioned in the Hathi committee report of 1975. Situation has actually worsened since then. Foreign drug companies are mostly responsible for manufacturing of

irrational and hazardous drugs. Development of indigenous drug industry was the result of restrictions on foreign companies in the 1978 drug policy.

Changing of Indian Patent Act according to GATT provisons will also result in skyrocketing drug prices beyond the reach of common man. Only those medicines are cheaper in Indian market which are beyond the purview of Patent.

Earlier, majority of Indian drug industry was opposed to changes in Indian Patent Act 1970 but few have changed their stand now. They are going to become junior partners of multinational companies. This may be beneficial in short term but in the long run it will put a question mark on the very existence of Indian companies.

The Vanishing Indian Medicinal Flora



active use as drugs in the two traditional Indian Systems. Thus, their dependence on plant sources is almost total. Drug collection activity is, therefore, age - old. Formerly, the traditional practitioners themselves collected most of the drugs they needed except for a few occurring in other regions. However, in recent times development of mass produced drugs has given rise to an overwhelming dependence on the herbal drugs market. This has resulted in large scale collections by professional drug collectors who are themselves ill trained towards environmental concerns. This phenomenon has been further aggravated by a growing market due to increased global interest in plant based drugs for various reasons. With little restrictions on export of crude drugs and the growing quantities collected, there has been a tremendous stress on our natural plant resources. As a result most often entire populations of particular plants needed are uprooted completely leaving little material for regeneration. This has greatly upset the natural balance of particular eco-systems.

Over exploitation of our natural resources has had a far reaching effect on the plant drug industry and practice of



Dr. H. P. Sharma

Ayurveda and Unani. A recent survey of important drug markets has revealed that several herbal drugs have become scarce and some have become inordinately costly thus indicating that many drugs are now under stress in their natural habitats. Some of the more notable ones of these are worth mentioning. Kutki (*Picrorhiza kurroa*) and Jatamansi (*Nardostachys jatamansi*) were easily available in the Garhwal Himalayas at around 3000 meters elevation but now even at higher elevations these can only be seen growing at places difficult to reach. Similar is the case with Salam misri and Salab panja - *Eulophia campestris* and *Orchis latifolia* of the family Orchidaceae respectively - have become extremely scarce in their usual habitat, the eastern part of U.P. Hills Dhoop (*Jurinea macrocephala*) and Mamiri (*Thalictrum foliolosum*) are two

Use of plants for medicinal purposes is as old as the very earliest stages of human society probably starting with the need to stanch blood during early hunting expeditions while man was still a hunter-gatherer. In India, the earliest mention of use of plants for medicinal purposes is found in the Rig Veda-the first compendium of knowledge existing in a diffused state at that time. Vedas are hence appropriately called "Smritis".

With the development of Ayurveda as a rational health care system, use of plants as medicine has continued to grow. It is estimated that presently around 600 plant species are in

more examples in this category. Another interesting example is that of Guggul (*Commiphora mukul*).

Drawing on the leads provided in the old Ayurvedic texts the Central Drug Research Institute, Lucknow carried on extensive work on this plant and discovered and isolated an active principle which was found to be responsible for its efficacy in hypolipidemia and related problems as described in the old texts. Accordingly, technology for preparing a potent drug from this was also developed and farmed out to one of the drug firms. However, adequate quantities of Guggul gum needed for large scale production of this drug were not available and hence could not be adequately marketed.

In yet another case *Embelia ribes*, the original source plant of Vidang has been almost completely substituted by another species, *Embelia robusta* with somewhat larger fruits. Even Chironji, *Buchanania lanzan* fruit formerly the common man's dry fruit has now become nearly as costly as the much fancied Badam or the almond. Again, Heeng samples sold in the market are nearly all synthetic. Similarly *Arnebia nobilis*, the original source of Ratanjot has now been replaced by other species. Some other examples are : Nagkesar and Kesar or Zafran, stamens and

styles, respectively of *Mesua ferrea* and *Crocus sativa* of which most of the market samples are adulterated or substituted by other substances. Similarly, Akarkara of which the genuine source is *Aanacycleos pyrethrum* is usually substituted with various parts of the plant *spilanthes acmella*.

Besides the above, many more examples of this type can be cited. Thus, while on the one hand raw materials for the traditional drug industry have become excessively costly, on the other hand dwindling supplies of genuine material of many herbal drugs has given rise to large scale substitution and adulteration, adversely affecting the quality of marketed drug formulations and prescription drugs. In earlier times, even though some of the drugs like the Ashtvarga group of drugs had become scarce, as recorded by Dallahan - the famous compiler of one the Nighantus, and the well renowned Soma plant even earlier - the way our plant resources have been plundered in the last two to three decades is nothing short of disease. There is, therefore, an immediate need for creating awareness among the policy makers. Some of the steps that need to be taken up urgently are listed below :

1. A total ban on export of crude drugs and all selected live

germ plasm should be enforced immediately. In the neighbouring ASEAN region even the tiniest country like Brunei has enforced such measures strictly.

2. In order to prevent extinction of the germ plasm of useful plants a national germ plasm collection project should be taken up with its centres in appropriate phytogeographical regions on the lines of the National Orchid Collection of the Botanical Survey of India.

3. A systematic cultivation of herbal drugs, particularly those under stress and those required in large quantities should be organized at the village level. At the same time endeavour should also be made to involve private industry in this direction.

4. Village level cooperatives should be organised for disposal of the crude drugs to minimise several layers of middle men so that the grower gets a better deal and the industry genuine drugs at reasonable prices and in adequate quantities.

5. Due to political division of the sub continent, drugs coming from border areas have become scarce. Sophisticated techniques like tissue culture and green house cultivation should be taken up to introduce and cultivate such plant drugs in India.

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Problems of Tibetan Medicine System

Tibetan medicine system was born in Tibet as a result of interaction amongst Buddhist philosophy and peaceful, atmosphere rich in flora and fauna. Ayurveda is germ plasm of Tibetan Medicine System (TMS) because origin of Buddhism had taken place in India. However, it was enriched in Tibet and was somewhat differentiated from Ayurveda. TMS has also done important work of preservation of many basic principles of Ayurveda when it was under decline in India.

TMS has also been rejected by Western science but it has not created feeling of isolation, and TMS is ready to enter into interface with Western medicine system on mutually beneficial grounds. HE Dalai Lama has observed that TMS is superior to Western Medicine System (WMS) in understanding the psyche but lags behind it in understanding of physiology due to certain prejudices.

Process of interface with WMS should be started by keeping an approach to both the system separately and without claiming superiority on each other. TMS does not claim magic cure for all the ills but in chronic diseases like rheumatoid arthritis and cases of multimorbidity it is much more effective than WMS. Tibetan

medicine takes a holistic view of disease and activates body's own capacity to heal. It keeps into account life style, psychological and emotional status more than WMS. Herbal and naturally available products are used for cure in this system.

Dr. Walter and Elinor Christie of USA who took part in a 10 day course on TMS found it sophisticated in diagnosing various stages of chronic diseases.

Tibetan Medical and Astro Institute (TMAI)

The Tibetan Medical and Astro Institute which is called Men-Tsee-Khang in Tibetan language is situated at Dharmashala in Himanchal Pradesh of India. This institute was established in Lhasa, Tibet by 13th Dalai Lama. It was closed down by Chinese army authorities after Chinese aggression of Tibet in 1959. Present Dalai Lama reestablished this institute only with one

doctor and one astrologer in 1961. Main aim of TMAI is to promote Tibetan science of healing (known as Sowa Rigpa in Tibetan) and provide free medical assistance to old monks and nuns.

During April 1994 to March 1996 TMAI provided treatment to nearly 10 lakh people through its 36 branches and temporary camps, amongst these 90% are Nepali and Indians. In the year ending 31st March 1996, TMAI treated nearly 3000 patients by its unique mail consultation service. TMAI keeps close

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contacts with Allopathic doctors and Medical Institutions with the intention to further enrich TMS. In March 1990, with help from an American doctor named Carol Popp, introduced basic modern science in the curricula of its medical college.

It has held several courses of TMS for Allopathic doctors with very encouraging results. In February 1991 TMAI signed an agreement with All Russian Centre for Traditional Medicine to promote Tibetan medicine in Russia. Similar agreement has been made with Denmark. TMAI established an export unit in Delhi in August 1994.

Problems

TMAI at Himanchal Pradesh is registered as charitable cultural and educational system but Health Ministry of Government of India does not recognise TMS as independent medicine system, instead it is treated as 'Tibetan Ayurveda' within purview of Ayurveda. Western countries also do not recognise TMS. It is true that TMS has certain similarities with Ayurveda and Unani but there is much more which separates and gives it form of a separate medicine system. Western specialists and drug manufacturers are accustomed with allopathic principles so they remain isolated from TMS as it is quite different from Allopathy.

Environmentalists have put a charge against Tibetan medicine to use endangered plant and animal species for medicines. Exiled Tibetan government and Dalai Lama has contradicted

"While We ourselves live as refugees"

Dalai Lama

I believe that the Tibetan medical system can contribute substantially to maintaining a healthy mind and healthy body. Like the traditional Indian and Chinese systems, Tibetan Medicine views health as a question of balance. A variety of circumstances such as diet, lifestyle, seasonal and mental conditions can disturb this natural balance, which gives rise to different kinds of disorders.

In diagnosing these disorders the Tibetan physician employs his own senses to examine the patient's pulses, urine and general appearance. He assesses the individual's general balance of health as a whole. Treatment involves dietary and behavioural advice, medication and accessory therapies. Medicines are obtained from natural sources such as herbs, minerals and organic products and prepared under controlled conditions. These ingredients are inexpensive and easily available. The medicines themselves have few side-effects, are not symptomatic and have preventive as well as curative effect. Tibetan Medicine is deeply integrated with Buddhist practice and theory which stresses the indivisible interdependence of mind, body and vitality. The ideal doctor is one who combines sound medical understanding with strong realisation of wisdom and compassion.

The Tibetan Medical and Astro Institutes clinics that have been set up in India are open to all : Tibetans, Indians and visitors from abroad. The members of the Institute embark on a regular tour of many cities within and outside India. Their aim is to increase awareness of the science and philosophy of Tibetan Medicine and to offer members of the public the opportunity to consult Tibetan physicians. They hope to raise funds to support the Institute's important Delhi project, which is envisaged to include a medical centre, a museum, library, conference facilities and so forth. I strongly believe that our medical system is one of the means by which we Tibetans can contribute to the well being of others, even while we ourselves live as refugees.

these charges several times.

Traditional Tibetan medicine books speak of medicinal value of animal parts but this is all theory and presently these are not used practically. Effective herbal substitutes have been found much earlier. Only 160 medicines are in use now from nearly 1000 described in ancient texts. Putting blame of shortage of medicinal plants on TMS is not fair. There are several reasons of deficiency and destruction of medicinal plants and almost all medicine systems are affected by it. TMAI has made plan to

cultivate these medicinal plants. It includes training of Tibetan doctors and specialists in High Altitude Plant Physiology Centre in Srinagar (Garhwal) of Uttar Pradesh.

With the efforts of TMAI, Tibetan medicine is slowly coming out of its dogmatic cocoon to embrace modern concepts. This is a welcome step to provide health to mankind.

(Based on article of Pema Thinley in Tibetan Review of February 1997)

Vyadhikshamatva, That Is Immunity

Vd. V.B. Mhaiskar

Vyadhikshamatva is also called Bala. Bala means the capacity or power to resist anything harmful for the body. Bala depends on 'Ojas' which is the essence of all the Dhatus. It is the precious end-product of Shukra. It is also known as Teja, Prana, Sneha, Sara, Dhari, Bala etc. It is unctuous, soft, heavy, cool, smooth, dense sweet, stable viscous and clear. It supports life, forms the basis of health, provides vivacity and nourishment and gives rise to various feelings.

Ojas is a substance and Bala is abstract. Ojas is the cause and Bala is its effect. The former is matter and the latter is action.

There are three types of Bala- (1) **Sahaj** (intrinsic) : It naturally occurs in those who are born of strong parents. It also occurs in those who are born in lands (Desha) known for strong constitution like Saindhav Desh. (2) **Kala Krita Bala**: this type is related to time and season, such as winter. During the winter, nature itself imparts Bala to all living beings. People keep good health and resist illness. In the life of an individual Bala is linked to age. Youth is associated with maximum Bala.

And the third of Bala is called **Yuktikrita** which is developed by therapeutic measures like the methodical use of Rasayanas, strict observance of seasonal and daily routines. It has been

stated in Ashtang Samgraha that methodically built up Bala depletes all diseases.

Anger, excessive indulgence in Panchkarmas, grief, exertion, trauma and fasting result in the depletion of Ojas. According to Charak resistance to disease is lowered in those who are very obese, very lean and thin, those who do not have well-formed muscles, bones and blood, those who are fed on disagreeable or very little food, and those who have very weak psyche.

Charak has also said that luxurious living, lack of physical activity is the root cause of ill-health. Because such living is associated with all sorts of unwholesome foods and unhealthy situations. This affects the flesh, blood and bones. Muscles become flabby, joints become loose, blood loses its qualities, fat becomes liquefied, the marrow does not cling to the bones, semen is reduced and Ojas is depleted.

Alcohol and poisons have properties diagonally opposite to those of Ojas. Ojas is grossly affected in anaemia and diabetes mellitus. Immunity is adversely affected due to alcoholism, poisoning (tobacco), anaemia and diabetes mellitus.

Strength and life depend upon food. Those who are fed on food which does not agree with their constitution are poor in Vyadhikshamatva. Those who

get very little of food are also poor in immunity. Those who take all the six tastes with their meals in balanced form possess sound immunity. Persons born, brought up and living in Jangala Desh (woodlands) remain free of diseases. On the other hand those who live and marshy lands are likely to be riddled with diseases.

Blocking of Srotas (channels) causes disease. A perfectly healthy urinary bladder becomes the seat of infection as a result of an enlarged prostate obstructing the urinary passage, resulting in stagnation of urine.

Observance of daily and seasonal routines ensures good immunity. Rising before sunrise, daily bathing regular exercise and good, balanced diet and balanced sleep enhances immunity. Oil, ghee and honey are considered best to balance the three Doshas namely Vayu, Pitta and Kapha, respectively.

Timely use of elimination therapies (Panchakarma) especially Vamana, Virechana & Basti (emesis, purgation and enema) favourably affect the immunity. Observance of celibacy and not resisting the urges also promote immunity.

Use of Rasayanas including the Achara Rasayana and avoidance of anger, fear, worry etc. are helpful to the promotion of immunity.

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Saraswati - I fall at your feet Granny.

Granny - Be happy my child, what do you have in the bag ?

Saraswati - This is Aonla granny, I have it for pickle and jam.

Granny - But do you know the benefits of Aonla. It has been said in scriptures that - *Dhatri phalam sada pathyam kupthyam badari phalam* - i.e. Aonla is always salutary and jujube fruit is always unsalutary. Aonla has all the six tastes viz. sweet, salt, bitter, pungent, astringent and

sour. No other fruit has all the six tastes.

Saraswati - Tell me the method of preparing jam.

Granny - Take down, take fresh Aonlas in a steel vessel and add equal water and boil on a medium fire. When aonlas have become tender then cool and remove the stores and then filter away the fibres. Add equal sugar and bake over a mild fire. While baking, have a steel ladle and wrap a cloth over the hand so that if the liquid pops up, the hand is protected. When the



Vd. Badloo Ram Rasik

syrup is ready, set it down and cool. Now the jelly is ready. It should be taken in the morning and evenings daily in the dose of a large spoon. To make the jelly more energising : grind and mix into it 25 gm dry ginger, 25 gm asparagus and 25 gm Ashwagandha powder per 500 gm Jelly.

Saraswati - Yes, I have taken down everything you have said, now let me depart. Thank you so much.

Near Dugawan Police Post
Rajendranagar, Lucknow

Astrology & Disease

Libra

The Libra sign in the sky extends from the second half of chitra constellation i.e. from the last two quarters to the entire swati constellation and the initial three quarters of Vishakha constellation. The sign is situated at the navel of Kalpurusha. The sign is lorded by venus. The venus is believed to be in his own house when situated at the second half of the libra sign i.e. from 16th part to the 30th degree and is supposed

to become from original triangle from beginning to the 15th degree. Saturn is high from the beginning to 20th degree and the Sun is based from the beginning to 10th degrees.

The sign is Sheershodaya and Sajal. Libra affects especially the human beings. The sign is masculine and variable. Libra predominates in vayu, however a quarter of water also is included in it. It is cruel by nature. It is smooth. The sign is stronger during daytime. It is indigo coloured. Its direction is west.

Generally, there exists an

antagonism between the elements vayu and Jal. Since both are present in the sign therefore there is an incessant activity of contradiction in this sign. The temperament is likely to be fickle. Body may be lean and talk and the nose raised. The sign influences the naval and waist. This in turn affects the gall bladder and breathing. The sign also affects the skin. So possibility of dysuria, diabetes, skin diseases and waistache is more than likely. Medication combining the elements of water and fire proves to be useful.

Asatmya

Asatmya is that which does not agree with the user. It is said in Charak Samhita that - *'Shareerena sah yadatmatam aviktaroopatam na yati tat. Etena yadupayuktam prakrtroopopa gatakam bhavati tat asatmyam'*. That is, a thing which does not become one with the body, cannot become an ingredient of the body and on the contrary not being suitable to the body proves fatal so it is called Asatmya.

Sushruta Samhita defines Asatmya as - *'Abhyasa Satmyabhavah'* i.e. a thing which does not become assimilated or unified even after prolonged continuous use or is not absorbed by the body due to the lack of practice or is not assimilated due to having taken for the first time and proves harmful to the body instead of being useful to it, is called Asatmya.

If a certain habit is given up and a new thing is taken and due to the non-assimilation of the same some defect or disease ensues then that is called Asatmyaja. If one usually does not take a certain thing and all of a sudden takes it, then thing is not assimilated and causes defect in the body.

Asatmyata is not related to food only. It may be verbal, mental or physical as well. Actions speech or work which are not in one's practice if indulged in, may be Asatmya and

cause disease.

The union of Asatmya substances with the sense organs may be of three kinds - Ayogyia, Atiyoga and Mithya-yoga. *Asatmyendriyartham Samyoga* (association of Asatmya substances with the sense organs) can generally cause all diseases. It is said that *'Sarvavyadhisadharanam trividham nidanam - asatmyendriyartham samyogastaminnekam nidanam prajnaparadhashchanyou dwon'*.

To wit, there are three fundamental causes of diseases Asatmyendriyartham samyoga,



Pt. Kashinath Gopal Gore

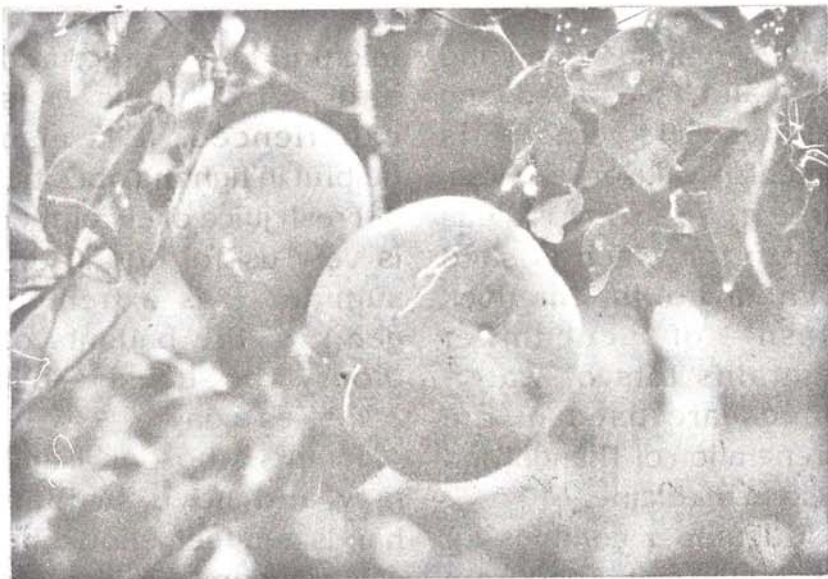
Prajnaparadha and Kala. Prajnaparadha means acting against the dictates of intellect and mind.

E-51, Mahanagar Extn.
Lucknow

Three Kinds of Asatmyendriyartham Samyoga

Sense Organ	Ayoga	Atiyoga	Mithyayoga
Hearing	deafness, deficient hearing	excess of hearing	hearing piercing sound, terrific sounds etc.
Touch	not touching, deficient touch	excess of touch	blow, poison toxic fumes etc.
Vision	not seeing, scant seeing	excess of seeing	seeing of minute, distant or too brilliant
Smell	not sniffing, scanty sniffing	continuous sniffing	object sniffing putrid foul, acute or overpowering odour.
Taste	not tasting or tasting a little only	excessive tasting	using tastes contrary to habit of that are unsalutary or proscribed.

Bael : Useful & Handy in Summer



Bael trees are found all over India, especially in dry hill areas and Himalayas up to the altitude of 4000 feet. In Sanskrit Bael tree is also known as 'Maloor' meaning 'ornament'. Old leaves are shed during Phalgun-Chaitra (March-April) and new leaves appear during Chaitra-Vaishakha (April-May). Flowers are sweet smelling & greenish-white. The tree bears fruits round the year.

L a n g u a g e w i s e
Names: **Hindi-** Bael; **Sanskrit-** Bilva; **Gujarati-** Bael; **Punjabi-** Bil; **Bangla-** Bael; **Kannad-** Bilva hannu; **English-** Bael fruit; **Latin-** *Aeagle marmelos*.

Chemical Composition

Pectin, sugar, tannin and oil etc are found in the fruit pulp. Marmelosin is the chief ingredient by virtue of which the latin name has been derived.

Bael is sweet, astringent, heavy, appetizer and good for the heart. Excessive use of the fruit creates foul-smelling farts. Bael has the marvellous quality of keeping the body fit and its regular use minimises the excrement and urine etc. Its regular use precludes the feeling of hunger and thirst and increases the one-pointedness of mind.

Bael Squash

Bael squash is a drink extremely suited for

Dr. Arun Prakash

summer to remove mental tiredness. To prepare this drink, break the hard shell of the fruit and take out the pulp. Keep it soaked in water for overnight. Cover the mouth of the vessel with a fine cloth. Decant the water in the morning and add sugarcane juice, jaggery or sugarcandy and drink. You may add the flavour of rose or Kevra to enhance the effect and taste.

Medicinal Properties

Leaves are useful in diabetes, foul-smelling perspiration, abdominal defects, constipation, inflammation etc.

- Juice of leaves taken 2 teaspoonful induces immediate relief in cholera.
- To cure breathing problems, juice of leaves should be taken with powdered dry ginger.
- Bael jam or raw bael pulp powder taken with water is an efficient remedy for dysentery.
- Ripe fruit pulp is nutritious. Stomatitis

Refreshing Cucumber

Cucumber is one of the nature's useful gifts. It is a well-known vegetable of India. It is mainly cultivated in U.P., Punjab and Bengal. The plant has hollow stem & thin heart-shaped leaves.

and oral blisters are cured by gargling with water in which raw bael has been boiled.

- When the summer is terrible, bael squash provides gratification and happiness.
- Heart patients should take bael powder with honey which tones up the heart and regularises the throbs.
- Oil derived from bael seeds subsides vata and hot in temperament.
- A y u r v e d i c compounds of Bael are - Bilvadi churna, Bilvadi Ghrit, Bilwa Panchak kwath, Bilwa taila, Bilwa Mooladi Gulike etc.

620, Naveen Subhedar
Nagar, Nagpur-440 024
(M.S.)

Fruits are long, round and bent and have raised long stripes. Its colour is greenish-white or yellowish-green. When raw, it has dense fur which is shed with its growth. The thick flesh of cucumber contains lots of water. Seeds are used in the preparation of Thandai and also in medicine.

Cucumber contains lot of sodium salt. Apart from this, it also contains calcium, phosphorus, iron, sulphur and vitamin B & C.

Languagewise Names

- **Hindi** - Kakadi; **Sanskrit** - Karkati; **Gujarati** - Konkdi; **English** - cucumber; **Latin** - *Cucumis maelo*.

Medicinal Properties

Generally in India cucumber is eaten raw. Salad and Rayata is also made from this. Cucumber is delicious to eat with salt, lemon juice and black pepper powder. It is also eaten raw but without spices which dilutes its properties. Its use subsides Pitta and nausea, burning micturition, obstructed

micturition etc are cured and freshness is experienced. It is also helpful in fighting obesity.

Fresh juice of cucumber is very useful during the summer. It is extremely good for the patients of dropsy who should take it 3-4 times a day.

Infants, who look ill and lazy and have swollen hands and feet, should be given cucumber juice for a few days which improves their condition to a great extent.

In prickly heat, massage with cucumber juice before bathing. Drinking cucumber juice is extremely helpful in the burning of palms, underfeet, eyes, urinary diseases and chronic intestinal ulcers.

Thin slices of cucumber should be pasted over the face for some time and then removed to tone up the beauty.

Any complaints of throat are cured by boiling cucumber leaves and eating them with the powder of fried cummin seeds.

Gular Fig Tree

Rows of trees along both sides of the roads provide cool shade, pure, fragrant and cool air and fruits and flowers to the wayfarers. Most of those rows of trees are no more. Deforestation has overtaken them. Only those trees are grown now that grow fast which do not give even sufficient shade to the wayfarers. There is a need to grow fast-growing, shady, flowering and fruiting trees endowed with medicinal properties. One such tree is the Gular fig tree.

The gular fig is similar to fig in many ways and has similar properties. The tree offers numerous fruits and sustains birds and fauna too. The tree grows in tropical region and attains full height within two years of planting. It grows up to 25-30 feet and casts its shadow upon a fairly large area.

Language-wise Names

Hindi-Gular; **Bangla** Yajnadoomar; **Marathi**-
Uthar **Sanskrit**-
Yajnanga, Jantuvriksha,
Udumbar; **Gujarathi**-
Umbari; **Malayalam**,

Tamil, Kannad-Atti; **Latin**-
Ficus glomerata, Roxb; **English**-The gular fig, glomerus fig.

The raw Gular happens to be astringent, anti-diarrhoeal, blood-coagulant and cures dysentery. Being cool it subsides thirst, burning, unconsciousness, Raktapitta, polyuria, bleeding and Raktapradar. The ripe fruit is sweet, cool, nutritive, mild laxative and expectorant. The latex is anti-inflammatory, and digester of humours. Buds and tender leaves are astringent, anti-diarrhoeal, expectorant and alleviators of thirst.

Mythologically it is believed that the Lord Dattatreya resides in the tree. So its wood is not used for burning except in Yajna. It is said that when Lord Narasimha killed the demon Hiranyakashipu his hands began to burn due to the contact of demon's blood. In order to alleviate the burning he crushed some Gular figs in his palm and rubbed his fingers in the pulp and then only his burning subsided.

The Gular fig bark, root, leaves and fruit are all useful medicinally. Leucorrhoea and epistaxis could be cured by eating the fruit dipped in honey consecutively for two weeks. Daily use of the fruit cures tuberculosis, nervous debility and psychosis. Regular use of Gular fig extract for two years cures diabetes. Using the fruit with salt and honey cures jaundice, bleeding through faeces and Pitta.

A dough prepared with wheat flour and Gular fig leaf juice bandaged bursts open a boil very quickly. The delicate leaves chewed eliminate stinking odour of mouth and stomatitis. Bark powder is a cure of piles and mucus in faeces. Use of bark powder with milk at bedtime makes one hefty. Bark decoction may be used to wash sores. This decoction is disinfectious.

The water obtained from root is almost a panacea. This water is used in South India in the preparation of Idli and Dosa as well.

Researching Indian plants for Jaundice

Dr. Anup Kumar

The liver in our body, besides its secretory and excretory functions, effectively controls numerous metabolic processes. It is actively concerned with the synthesis of plasma proteins, blood volume regulations, reticulo-endothelial activity. It detoxifies and actively participates in the metabolism of proteins, fats, carbohydrates, minerals and water. It also helps in production of blood cells. Any disease of the liver throws the entire human skin out of gear. If liver is damaged by sudden inflammation it results in the yellowness of the skin or jaundice. The word 'Jaundice' is derived from the term 'jaundice' which means 'yellowness'. Etiologically, jaundice may be due to infections micro-organisms like viruses, bacteria, and parasites, even though there are other reasons also like malnutrition, toxemia, drugs & alcohols, etc.

There are seven types of

hepatitis viruses involved in acute jaundice in man. They are:

i) 'Hepatitis 'A' virus producing infections jaundice spread by contamination of water. This virus has an incubation period of 15-40 days and affected person is completely cured of the disease.

ii) Hepatitis 'B' virus commonly produces serum jaundice due to parenteral source by blood transfusion, operation, injections, etc. It has a long incubation period ranging from 4 to 150 days. Some of the patients suffering from this virus develop complications in the form of chronic liver diseases and cirrhosis of liver.

iii) Others are C, D, E, F and the recently identified G virus. Lot is yet to be learnt in the years to come about these viruses.

To cure jaundice, plant and mineral kingdoms have been utilized as the sources of remedy in the traditional systems of medicine and other

folklore medicine in various parts of the world as in China, Tibet, Africa and Sri Lanka, besides India. In spite of the tremendous strides in modern medicine, there is as yet no effective drug in modern system of medicine which acts against the entiological agents, protects the liver from damage and stimulates the functions of the liver.

There are more than 300 preparations in the Indian medicine systems, the Siddha, Ayurveda and Unani for jaundice. All the preparations are mixed preparations of a few of the following Indian medicinal plants and few minerals and other miscellaneous ingredients. The medicinal herbs involved are:

Phyllanthus niruri,
Andrographis paniculata,
Eclipta alba, *Swertia*
chirata, *Tinospora*
cordifolia, *Ricinus*
communis, *Picrorhiza*
kurroa, *Acacia nilotica*,
Lawsonia inermis,

Solanum nigrum,
Raphanus sativus,
Cichorium intybus,
Glycyrrhiza glabra etc.

Although there are several claims in the Indian systems of medicine about remedies for jaundice, yet none of the preparations have been analysed for their antiviral properties against the viruses producing jaundice except *Phyllanthus niruri*. Moreover, safety of these preparations for human consumption is also being evaluated in the labs.

To overcome above mentioned shortcomings two common medicinal herbs *Phyllanthus niruri* & *Eclipta alba* used in the Indian systems of medicine were undertaken in the Department of Microbiology PG Institute of Basic Medical Sciences, University of Madras by Drs SP Thyagarajan and S Subramanian.

Both the plants mentioned above were tested for their *in vitro* inactivation property of hepatitis B surface antigen (HBs Ag). Eight different crude extracts of these plants and the purified active principles when mixed and incubated with

HBsAg containing sera brought about *in vitro* inactivation of HBsAg.

It has been shown by these experiments that these herbs, especially *Phyllanthus niruri* may be possible anti-hepatitis - B virus agent.

Some of the popular Ayurvedic preparations in use are : Bhorngarijasava, Chndra prabhavati, Draksahadi Rasayan, Guduchi, satvam, Dhatriloham, Tapyadi Loham, Pipilyadi Loham. Unani preparatious are : Jawarish-e- Anilasada,

Jawaris-e-Amila Luluvi, Jawarish-e-Tabashir, Kurse-Gul, Rue-e-Amila, Gul-e-Nilofer, Bhoi-Amla.

The WHO in search for an alternative medicine has recognized Ayurvedic, Unani, Siddha and Chinese medicines as the traditional systems of medicine and is developing the sciences to take the best out of them. An approach with scientific temperament may yield the desired effect which would eradicate and effectively control jaundice.

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We shall try to provide you these medicines at very nominal costs. You may write to us for your specific needs, particularly in the context of traditional medicines described in our bimonthly magazine.

Editor

Medicinal Uses of Pigeon Pea,



Perhaps an important fact that 'there are medicinal properties even in foodstuffs' was initially propounded by Ayurveda. Accordingly, Ayurveda did intensive research and brought forth the medicinal properties of spices, pulses and vegetables before the world. Now-a-days medical scientists all over the world are on the lookout for medicinal properties in foodstuffs inspired by Ayurveda.

Language-wise Names

Hindi - Arhar; **Marathi** - Adahar; **Sanskrit** - Adhaki; **Persian** - Shakhu; **Arabic** - Shaaz; **English** - Pigeon pea; **Latin** - *Cajanus indicus*.

Pigeon pea is a pulse mostly used as a foodstuff. It takes much time in getting digested and causes wind and distension in the stomach. It causes constipation and is believed to be hot and rough.

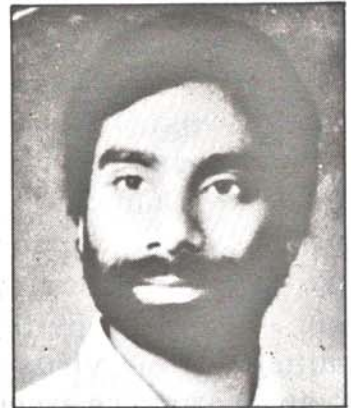
Herebelow are enumerated the medicinal uses of pigeon pea in certain ailments.

Stomatitis - Gargling with the soup of pigeon pea and chewing the leaves followed by their spitting provides much relief and eventually cures stomatitis.

Cuts - Grind the leaves of pigeon pea and make a poultice of the same over the site. This will stop bleeding and heal the cuts.

Itch - Grind the pulse with cow's urine and apply over the affect spot in the mornings and evenings. This should cure the itching in a couple of days.

Disintoxication - To disintoxicate an intoxicated person, grind the Arhar pulse with water, add more water, filter and let the fellow drink it. He will soon come to his



Dr. P. K. 'Alok'

senses.

Migraine - Extract the juice of leaves, add some cow's milk to it and infuse two drops in both nostrils. This will cure the pain.

Galactagogue - Cook the pulse well, add clarified butter and feed the same to the mother. This will increase the quantity of breastmilk.

Falling hair - Grind the pulse with water and apply over the hairless spot of the scalp thrice during the day. Next day scratch away the application, rub mustard oil and sit in the sun. This raises new hair over the hairless spot.

Piles - Take equal quantities of neem and pigeon pea leaves and grind them together and squeeze out the juice. Drink two - three times a day and enjoy the relief.

Linseed

Linseed is a grain - however it is mostly used as oil-seed. Originally, linseed is native of Egypt which is now in extensive cultivation in India, Russia, Holland, Britain etc. It was known in India since ancient days. Charaka & Sushruta have mentioned it. Manusmriti, Ramayana & Mahabharata have described clothes made of linseed fibres. However, it has medicinal properties as well.

Language-wise Names

Sanskrit - Alasi, Neela Pushpi, Kshuma; **Hindi** - Alsi, Teesi, **Gujarati** - Alsi, **Marathi** - Alsi, **Kannad** - Alsi, **Bangla** - Mashina; **Persian** - Tukhme Kattan; **English** - Linseed; **Latin** - *Linum usatatum*.

The seed of linseed contains 30-40% oil, 6% gum and 25% protein. It also has wax, resin, sugar, phosphate and a glucoside called limerine.

Plants are 1-4 feet tall. Roots go deep and the plant has few branches. **Stem and branches** : thin & twine - like. **Leaves** are grasslike. It is sweet,

pungent, hot in temperament and bitter and destroys vata. Flowers are blue and beautiful.

According to Charaka, linseed oil is sweet-sour, bitter in Vipaka, hot in temperament, destroyer of Vata and an enraging of epistaxis. It is used for fumigation purposes alongwith other substances. Sushruta believes it to be useful in goitre. In tuberculosis also it is claimed to be useful.

Medicinal Uses

For boils - Soak the linseed in water and blend with sour curd and smear the boil with it. This treatment will ripen and burst the boil. In case of extremely painful & burning boils, linseed oil should be smeared.

Alternatively the burning pain of boil subsides by the application of milk in which linseed has been deep-boiled.

Burns - Blend lined oil with lime water and smear over the burns which will subside the burning and heal burns.



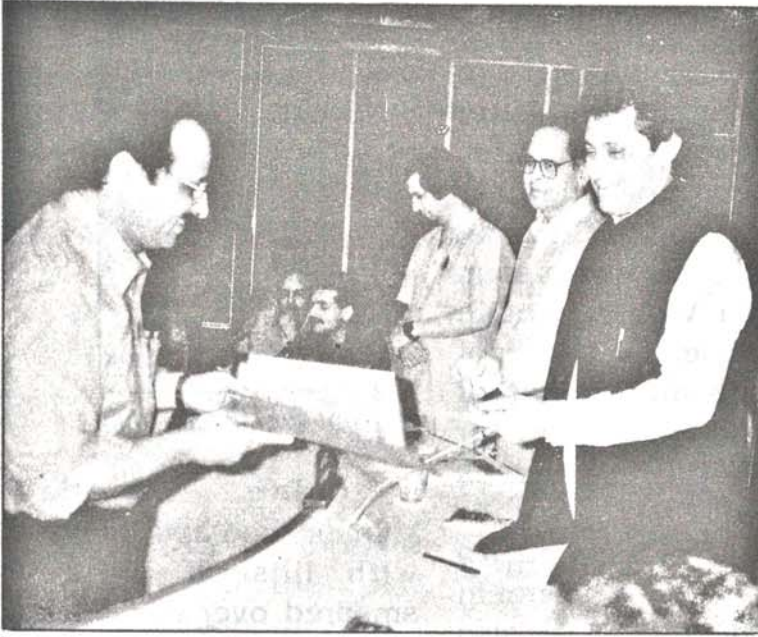
Vd. Ramakant Mani

Itching - Purified sulphur should be blended with linseed oil and smeared over the itching spots.

Backache - Linseed should be soaked in milk and then dried, powdered and fried in clarified butter. Separately fry gum of babool, dry ginger powder and wheat flour. Blend all ingredients with sugar syrup and prepare balls of 20 gm each. This, taken with milk, annihilates backache. Men may also take it with milk as vitalizer.

46/19 Vishnupuri
Kanpur

Jeevaniya Publication Awarded



Mr. Salim Sherwani, Union Health Minister presenting award to Dr. N. N. Mehrotra, translator of the Book

Mr. Salim Iqbal Sherwani, the honourable state minister of health and family welfare gave away prizes for the year 1995-96 to the Hindi authors and translators of medical books at Nirman Bhawan, New Delhi on March 26, 1997. Dr. Krishna Mukherjee, Prof. and Head of the Gynaecology and obstetrics department, Moti Lal Nehru Medical College, Allahabad was the recipient of the first prize of Rs. 25000/- for her original work entitled 'Kuch Paricharcha Swasthya Sambandhi'. The first prize for Hindi translation was not given to any book. Pt. Madhavacharya and Dr. Narendra Nath Mehrotra were jointly awarded the second prize for their English translation entitled 'Ahar Evam Poochan Ke Ayurvediya Sidhant'. In all twelve authors and translators were awarded for their nine books.

The Health and Family Welfare Secretary, Mr. Yogendra Nath Chaturvedi averred in his introductory address that out of the total 32 entries for the year 1995-

96. were adjudged meritorious. The honourable minister in his succinct speech greeted the awardee authors and translators and exhorted them to abolish the deficiency of Hindi books in the field of health and medicine. He expressed his satisfaction over the fact that Hindi authors were getting more and more interested in technical subjects like health and hoped that subsequently authors and translators would participate in this programme in a big way. This book was formally released by Shri Vinod Chandra Pandey, Director Uttar Pradesh Hindi Sansthan in Premchand auditorium of his institution on 8th April 1997. Shri Mohan Lal Gupta, Deputy director in the CAPART regional office felicitated translators of this book. Dr. N. N. Mehrotra, Secretary of Jeevaniya Society and one of the translators of the book, told about the book to those present on the occasion. Prof. S. R. Naik, President of the Jeevaniya Society and Head of the Deptt of Gastroenterology in SGPGI welcomed the guests. Treasurer of the Society, Mr. K. N. Mehrotra presented a vote of thanks. We are presenting a short review of the book for our readers.

The book under review is the Hindi version of 'Ayurvedic Principles of Food and Nutrition' written by Vaidya Radhika and Vaidya A. V. Balasubramanian and published by the Lok Swasthya Parampara Samvardhan Samity, Coimbatore. The English version is influenced by Tamil Culture and cookery as it is authored and published by Tamilians. The translators have taken some pains to incorporate values and needs of Hindi - speaking areas.

The book is divided into nine chapters. The first chapter is introductory and the second deals with various food-stuffs and principles of digestion.

According to Ayurveda, food-stuffs are made of the five elements (Mahabhootas) as all creation and the three humours vata, Pitta and Kapha are also made of the same. All food-stuffs interact with these three humours causing their fluctuation. The fluctuation causes on the one hand, nourishment and on the other, if deformed, causes diseases.



Mr. Vinod Chandra Pandey, Director U.P. Hindi Sansthan formally releasing the awarded Book

The food-stuffs exert their might through Rasa, Guna, Veerya and Vipaka. These properties of food-stuffs are dealt extensively within Ayurveda and the above chapter succinctly describes them.

The third chapter deals with Agni, especially Jatharagni which performs the function of digestion inside the body. Acuteness or dulness of Agni affects the digestion of food. The deformity of Agni causes maladies like constipation, indigestion and Aama. The fourth chapter is devoted to seasonal food and food suited to the temperament of the individual. If one eats what conforms to his temperament and the prevailing season then one shall ever stay healthy.

The fifth chapter expounds the rules of eating. Proper food must be taken in proper quality. If the quantity of food is not proper or not suited to the time and place then it can cause many diseases.

The sixth chapter deals with Pathya-Apathya (wholesome-unwholesome) food. Traditional medicine sets great store by Pathya and Apathya. The food which is healthsome to the body and pleasant to the mind is called Pathya. Observance of Pathya is essential for the healthy as well as the sick. According to Ayurveda 'no medicine is required for the observer of Pathya and medicine would be infructuous for the non-observer of Pathya.' This chapter prescribes the right food and right behaviour in many diseases like piles, Amavata, fistula, cough, acidity, menorrhagia, etc.

The seventh chapter comprises properties of

certain specialised foodstuffs like water, honey, milk, clarified butter etc. The eighth chapter deals with virudhahara (eating of mixed incongruous foodstuffs) and the cure of diseases caused by the same. Fasting and cookery are described and foodstuffs are classified according to their effects. It also describes the traditional methods of oral hygiene upheld as true by the modern science. Due to the observance of these rules an average Indian is found to have healthier mouth and denture as compared with other nationals.

The modern science examines the foodstuffs by breaking them into tiny constituents such as carbohydrate, protein fat etc. The dietary instructions of modern food science are beyond the comprehension of laymen, whereas the Ayurvedic dietetic instructions are intelligible to the common folk and traditions based on these are prevalent all over the country.

The traditional food consumed by Indians all over the country is complete and healthsome from all angles. Perusal of this book not only unfolds a view of our rich heritage as Ayurveda but it also whets our curiosity to read and learn more about it. In the conclusion, several appendices are added enhancing the value of the book to a great extent.



Mr. Mohan Lal Gupta Deputy Director CAPART Regional Office felicitating Pt. Madhavacharya, another translator of the book

Beware of Miraculous Gene Technology

Genes have never been complete masters of human destiny. Nor have they been humanity's servants. Commercial success of the slow-ripening tomato and milk yield enhancing hormone in cows, a new flock of genetically engineered products, has flooded the Western markets. They include a growth hormone for pigs and potatoes, that absorb less fat while frying; a virus-resistant squash; a cow whose milk contains human proteins.

These transgenic life forms are simply plants and animals modified by introducing certain DNA sequences from other organisms or which would change particular characteristics of the organisms in useful ways. Generally, manipulated micro-organisms are being used extensively in pharmaceuticals for human and veterinary use including human insulin, alpha interferon, human growth hormone, tissue plasminogen activator etc.

Biotechnology is focussed nowadays mainly on attempts to multiply existing yields of crops by altering their genetic structure. Currently, the molecular genetic improvement of plants is not limited by a lack of DNA transfer techniques but by the low number of agronomically useful genes that have been identified.

Most of the work has been

done on genes that confer resistance to insects, pests, viruses and broad spectrum herbicides. But the introduction of such low-cost technologies on a wide scale could immediately increase the amount of available food by ensuring that very little of it is destroyed.

Development of a gene taken from a fungus and engineered into plants may create an excellent barrier against insects. Inserting the enzyme cholesterol oxidase into plants has been lethal to insects that eat it. Genetic engineers have armed Atlantic salmon with the gene for winter antifreeze protein and have extended their range into colder waters. The same antifreeze gene has been successfully introduced in tomatoes, and the resulting fruit can be refrigerated for long periods without any loss of flavour. This characteristic could easily be replicated in other crops and this could be of enormous benefit to farmers and consumers in the developing world.

Many questions regarding the safety of genetically-altered organisms have not been taken seriously. Wisdom of introducing genetic products without first trying them out in a controlled environment over a lengthy period of time may have disastrous consequences. These plants, engineered to be

toxic to certain bugs may also harm soil bacteria, beneficial insects, birds or other organisms, pollen from herbicide-resistant crops may transfer the resistance to related wild plants, creating superinvasive weeds.

A major seed company which added a Brazil nut gene to a soyabean plant, recently withdrew its product on finding that the new soyabean causes a fatal reaction in individuals allergic to Brazil nut.

Studies have shown an increased incidence of mastitis, an infection of the udder, in cows which have been treated with the synthetic hormone. This infection is treated with antibiotics and there is evidence that these turn up in the milk. Prolonged exposure to such low levels of antibiotics can make individuals resistant to them. Critics argue that consumption of milk from treated cows could present risks of breast cancer in adult women and that foetuses and infants exposed to the growth hormone may later develop cancer.

Every new technology brings with it a set of promises and threats. The curses of genetic engineering - the possibilities for its abuse, and its threatened violation of taboos, of meddling with life itself - should in no way undermine its blessings.

Fibre-optic sensors

Fibre optic sensors are proving advantageous in medicine, particularly in angiology, gastroenterology, ophthalmology, oncology, neurology, dermatology and dentistry. New sensors being developed by researchers and health care companies worldwide improve the quantity and comfort of diagnosis, therapies and spare the patient's pain and trauma.

Health care sensors are of three types. Non invasive sensors are simply placed in contact with skin; mini invasive are the ones introduced inside the natural cavities of the human body (nostrils, throat and ears); invasive sensors are inserted into organs through small incisions, or through blood vessels.

Uncabled fibres are so small and flexible that they can be inserted inside very thin catheters and hypodermic needles, thereby ensuring highly localised and minimally invasive monitoring. They are non-toxic, chemically inert and intrinsically safe for the patient.

Actually, fibre optic sensors (FOS) are devices in which laser light guided by the fibre undergoes a modulation in response to an external perturbation. FOSs are classified according to the optical property of the guided light that is modulated - intensity, phase, wavelength, and state of polarisation.

Depending on the sensing mechanism, FOSs can be additionally classified as spectral, intrinsic and extrinsic.

Spectral sensors analyse blood, body fluids or tissues directly on the patient, without the necessity of taking a sample.

Cardiovascular and Intensive Care

Analysis of blood gases is a common diagnostic procedure in hospitals during intensive care or cardiopulmonary surgery. Current monitoring techniques involve blood sample handling and the unavoidable delay in therapy decision. Fibre optic sensors make possible continuous monitoring by inserting the fibres in the vessels, thus enabling consequent *in vivo* diagnosis and immediate decisions. Humidity sensors have been implemented for breathing condition monitoring.

In vivo monitoring of gut functional diseases is a primary requirement for the detection of oesophageal refluxes which are contributing factors to the gastric ulcer, gastritis, esophagitis, and the risk of gastric cancer. This can be measured by inserting the optical fibre bundle into the stomach or oesophagus via the nasal cavity.

Fibre optic sensors are being used in oncology for both therapy and diagnosis. Success of radiotherapy relies on on-line monitoring of the dose to which

a tumour and its adjacent tissue are exposed. FOS coupled to a radiation resistant fibre, has been used for continuous monitoring of radiation dosage in tissues.

Fibre optic thermometers find use in mapping the heat distribution in tissues during cancer phototherapy, patient monitoring during magnetic resonance imaging, and cardiac-output monitoring by thermodilution technique.

Head-trauma patients require continuous monitoring of intracranial pressure during post-operative and drainage monitoring phases. Non-political instruments are used traditionally for this but their main drawbacks are electrical-shock hazard, fragility and cost. Optic sensors being relatively easy to manufacture and are inexpensive & disposable, can overcome these drawbacks.

Early recognition of cataract onset by optic sensors is very beneficial. Current diagnostic measures can detect cataracts only when they have become so severe as to be nearly irreversible.

An inexpensive fibre optic refractometer has been developed for measuring hydration state and lipid content of skin, responsible for acnes & other ailments. Scientists have used fibre optic reflectance spectrometer to select materials for matching the colour of teeth.

MASTRAMJI



STORY : PANDIT KASHINATH GORE

ILLUSTRATION : SANDEEP SEN

..SO THAT THE LEFT HAND REMAINS CLEAN AND THE LEFT OVER FOOD DOES'NT CONTAMINATE IT.



"USE LEFT HAND WHILE TAKING CHAPATI FROM THE PLATE OR CURRIES FROM THE POT,"



TAKING FOOD BY RIGHT HAND MAY CONTAMINATE SPOONS ETC. WHICH MAY INFECT OTHER PERSON.



DO NOT TAKE WATER FROM THE UTENCIL IN WHICH SOMEBODY HAD ALREADY TAKEN WATER



VAIDJI, PLEASE TELL ME SOMETHING MORE ABOUT CLEANLINES & HYGIENE



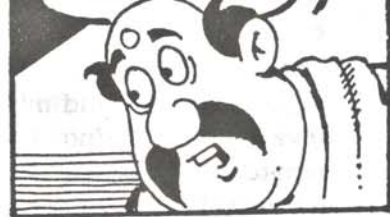
" THE UTENCIL FOR KEEPING FOOD MUST BE CLEANED WITH WATER



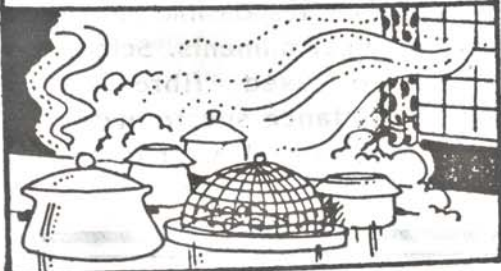
PEOPLE OFTEN WIPE UTENCILS WITH NOT SO CLEAN A CLOTH.



GERMS ON SUCH CLOTH MAY ATTACH ON THE UTENCIL AND CAUSE DISEASE..



" KEEP THE FOOD COVERED SO THAT DUST OR FLIES DO NOT SETTLE ON IT."

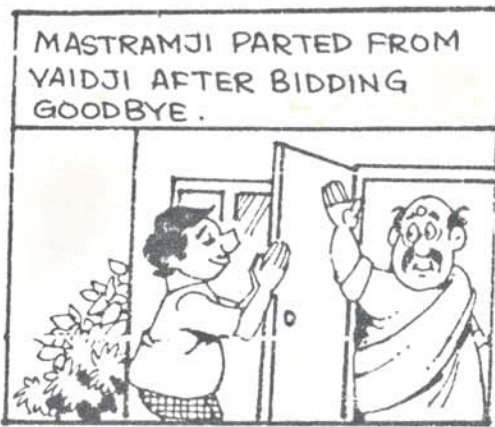


VAIDJI, CAN SITTING OF FLIES ALSO HARM?



MANY DISEASES SPREAD WITH FLIES ONLY..





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