

Sharad-Hemant '95

Respiratory Care
Special

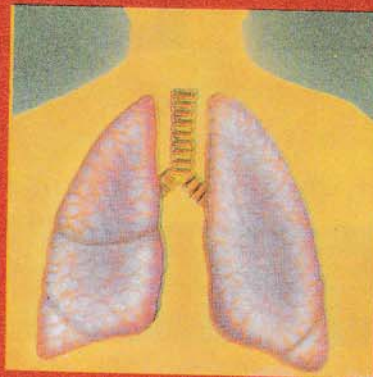
Jeevaniya

Bimonthly

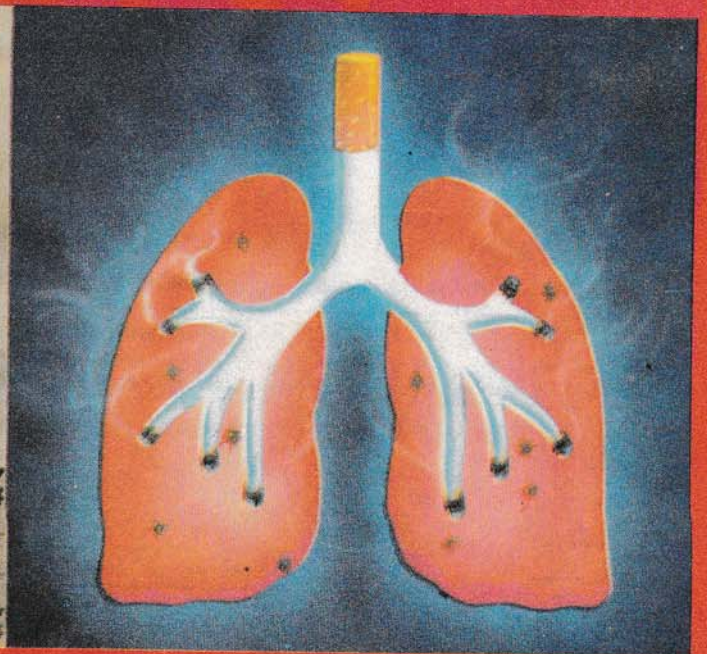
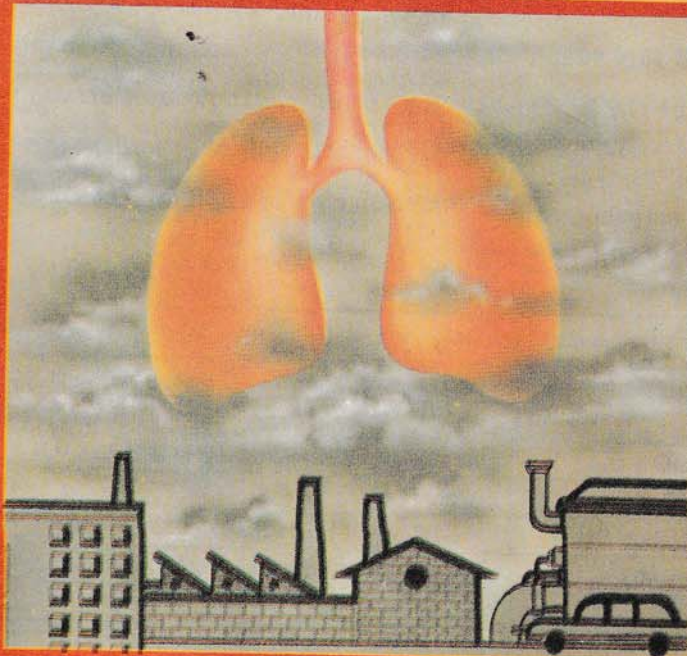
Health Care Magazine

Rs. 15

FOR HEALTHY LUNGS
AVOID SMOKING & POLLUTION



- ❖ Smoking & Respiratory Diseases
- ❖ Respiratory Diseases & Pollution



- I AM YOUR COUGH ❖ SORE THROAT
- TUBERCULOSIS OF LUNGS ❖ TONSILITIS IN CHILDREN
- CARE OF ASTHMA PATIENT ❖ LIFE STYLE FOR ASTHMATICS
- SIMPLE CURES FOR CORYZA ❖ WHOOPING COUGH IN CHILDREN

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Reliability of Indian Medicines

Standardisation of medicines of Indian Systems of Medicine (ISM) is an important problem, the solution of which is not only important for the efficacy of these medicines in various ailments but also for the growth of these systems. Problems of standardisation exist at various levels and their solution should be sought at all these levels. Manufacture of ISM drugs takes place at two levels - by local Vaidyas or physicians who prepare these drugs according to the requirement of patients and those manufactured by drug companies which are used in turn by patients themselves or on recommendation of Vaidyas. In the first case, non-availability of raw drugs in their area is the main problem. Besides this, sometimes problems may arise due to wrong methods of preparation or improper purification of these drugs. As Vaidyas themselves use these medicines, they can also take care of most of these problems.

In the case of drugs manufactured by companies, different problems exist. Since these manufacturers require huge quantities of raw drugs, identification of the proper drug or impurities in these dry raw drugs purchased from the market is difficult. Also because these medicines are manufactured for commercial purposes, use of costly ingredients is often avoided or reduced. In the absence of well defined criteria of their standardisation, judging the purity of these manufactured medicines is almost impossible.

Patent medicines of companies are often without any classical base and systematic studies of their efficacy are also not done usually. As pharmacopeia of Ayurveda and Unani are not complete, evaluation of these medicines can not be done even on that basis. Trained persons to examine registration and licensing of these drugs are also lacking. Since adequate laboratory facilities as well as mechanisms of supervision also do not exist in most states, due to lack of funds, it is urgently needed to pay attention to all these matters.

Recently, the Central Council on Health has passed a resolution suggesting for a separate Drug Policy for ISM. This resolution is a welcome step. It is hoped that the newly created department for ISM will take adequate steps for standardisation of manufactured as well as raw drugs. Sufficient funds for research, testing and training as well as for trained specialists are required to look into standardisation and licensing of these medicines. Unless these steps are taken, it will be difficult to give a sense of reliability to the medicines of ISM.



Readers' Forum

Dear Sir,

I am very happy to note that Jeevaniya Society is publishing a health care magazine and wall papers on primary health care. I appreciate your great contribution and efforts for promoting science communication. In my opinion the wall papers are very useful for popularizing and conserving medicinal plants campaign for rural school students.

P. Mani, Tamilnadu

We are glad to know your comments on our publications on health care. Besides, wall papers on medicinal plants we have some wall papers on a few common diseases also. You can have more information from our office.

Editor

I have gone through your health care magazine Jeevaniya, and found it very informative. The articles published therein carry valuable information which is very helpful for me. These days I am associated with a herbal company.

Mr. G. K. Tripathy, Bhubaneswar.

I was a regular subscriber of Jeevaniya a year before the last year. I had to discontinue my subscription due to some reasons. Recently I have seen the magazine

in its entirely new form. Now I am eager to have all its issues.

K. Manickam, Dharmपुरi

I have been receiving Jeevaniya, a bimonthly health magazine regularly. In my opinion it is a very useful journal. I have a suggestion to make that is to continue publishing this magazine. I do not mind the delay in its publication. I want to become its life subscriber.

Mr. T. N. Kuppuswami, Delhi

We appreciate your interest in our magazine. You need not worry anymore for the delay in its publication. We hope that everything will be back on wheels very soon. For more information on life subscription you may see the latest issue of the magazine.

Editor

I have managed to see a copy of Jeevaniya. Since I have great interest in herbal medicines therefore I have found it a very useful magazine. Now I want to read all its issues.

Dr. S. M. Hussain, Thane

I am very glad to become the subscriber of this bimonthly health care magazine Jeevaniya. Really it is a popular science

journal. I extend my heartiest congratulations for publishing such an informative magazine. In my opinion it is a magazine which has the reading material presented in simple language.

Dr. A. Panigrahi, Pargana

We are encouraged by your comments. We would welcome your valuable suggestions also.

Editor

I am very much interested to know and learn the traditional system of medicine for the treatment of some common diseases. I came across a copy of Jeevaniya Magazine in a doctor's clinic quite sometime back. This magazine has really enhanced my interest and knowledge.

Mr. S. R. Deepti, Deoria

I have been reading the health care magazine by purchasing it from the stalls. But sometimes I fail to get it because of its nonavailability in the market. I believe it is a popular health magazine therefore I want to become its subscriber.

Dr. Rajendra Deshpande, Pune

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UN Policy to Reduce AIDS

A United nations programme with a budget of \$140 million has been developed to step up efforts to reduce the spread of AIDS in the world. Called UNAIDS, the new programme brings together six agencies so that conflicting policy advice does not go out on how to combat the rapidly spreading disease. Close to 20 million people worldwide have already been infected. It is estimated that there are 6,000 new infections everyday. By drawing on the strength of its cosponsors, UNAIDS can better help the world tackle the underlying factors that make people so vulnerable to infection, such as discrimination and subordination of women.

Fertility Rates in U.P.

Despite a steady decline over time, fertility rate in Uttar Pradesh is more than 40 per cent higher than in the rest of the country, according to the National Family Health Survey (NFHS) of the Union Ministry of Health and Family Welfare.

The survey said "at the current fertility levels, women will have an average of 4.8 children each during their childbearing years". The fertility transition has progressed much further in urban areas, where the total fertility rate is 3.6 children per woman in rural areas. However, fertility in backward districts (4.9 children per woman) is only slightly higher than overall fertility in the State.

Contraceptive knowledge is near universal in the State with 95 per cent women familiar with modern family planning methods. However, less than one in four women has ever used a modern method and less than one in five women is currently using a modern method.

Men's Breast Cancer

Alarming increase in the incidence of breast cancer among men has perturbed physicians, gynaecologists and surgeons of the country. As regards the causes, which led to increased breast cancer among men, medical experts, suggest that hereditary factor was the main cause of breast cancer among men. They inherited this from their parents, which in turn were ignorant about the existence of the disease.

Another factor was the changes in hormones,

malignancy in liver, food habits and the pollution. The acid oriented air, polluted by automobiles was also responsible for high incidence of breast cancer among men.

Two medical experts have stated this during their study, in which it came to light that men and women between the age group of 17 to 75 suffered due to breast cancer and most of them were the prey of environmental pollution, besides neglect of health care at early age.

Anti-Cancer Breastmilk

Women who think breast-feeding deforms their contours have something to worry about. Scientists in Sweden have discovered that human milk not only protects babies from infections but has an anti-cancer effect as well.

Hormones to Reduce Heart Risks

A major study has found that female hormones taken by women after menopause can significantly lower the risk of coronary heart disease. The three-year study, published in the "Journal of American Medical Association", is the first major clinical trial to examine the effects of sex hormones on heart disease in postmenopausal women.

Inferior Medicines to Developing Nations

German pharmaceutical companies are exporting a lot of inferior drugs to developing countries. Organisations trying to prevent this have not met with much success. According to 'Lancet', the prestigious medical journal, Buko, an organisation seeking to discourage unethical practices of drug companies, carried out a survey of drugs available in 26 developing countries in 1991-92 and found that 53 per cent of these drugs were "negative," it says.

These drugs did not meet the standards for efficacy, rational combinations, adequate clinical testing, acceptable risk/benefit ratio, adequacy of dosage and dosage form. Only 16 per cent of these exports were WHO-listed essential drugs, according to the journal.

It says the first survey carried out in 1989 forced

many companies to withdraw many of their drugs but the latest survey makes a "shocking revelation" that many second rated drugs were still being marketed.

Even the present survey has sent shock waves and many nations now buying medicines exported from Germany have become sceptical about the possibility of they being in a position to market those drugs in face of adverse criticism. In fact many nations are on the verge of deciding that Germany withdraw the drugs that have been marked sub-standard.

Hiccups are Symptoms of Underlying Ailments

Usually, hiccuping is an entirely benign, nevertheless, annoying phenomenon. Any number of mundane circumstances can trigger off hiccups in susceptible people. Perhaps, the most common is swallowing air-usually from eating too fast, chewing gum or drinking carbonated beverages. Some people hiccup in response to alcohol or spicy foods and drinks. Stress and excitement are also possible instigators.

For various reasons - not all of which are well understood - different stimuli can prompt the diaphragm to contract, drawing air rapidly in through the nose and throat. Within a split second, a structure called the glottis closes off the windpipe, producing the characteristic sound of a hiccup. The diaphragm then relaxes for a short interval, until the next spasmodic contraction. The cycle continues until the stimulus abates. Or, the hiccups can just run their course and stop as mysteriously as they began.

Everybody has a pet remedy for hiccups. However, a few tactics make sense and may be based on both physiology and hearsay. One strategy is to increase carbondioxide level in the blood, which may decrease the sensitivity of the vagus nerve centre in the brain. It is a nerve which is the longest in the body and sends branches to many muscle groups, including those in the diaphragm. As for boosting carbondioxide in the blood level, rebreathe for a few minutes the air you exhale into

a paper bag. Or, slowly sip a glass of water without pausing to take a breath.

Stimulating or numbing the back of the nose and throat also seem to inhibit the vagus nerve. You can do that by drinking ice water, stroking the back of the throat with a soft swab or by swallowing a teaspoon of dry table sugar. Sometimes, victims often find relief by stuffing a finger into each ear, a manoeuvre that may affect a branch of the vagus nerve. When hiccups persist for several hours despite all efforts to stop them, one must consult a physician. If hiccups persist for more than 24 hours medical attention is definitely in order.

New Approach to De-addiction

A multi-modal approach to rehabilitate the drug addicts by involving their family members as well as the community had yielded positive results, according to Dr S R Parkar, Head of the Department of Psychiatry of the G S Medical College.

The approach was to take the patient gradually and naturally to a non-addict stage in the same way as the patient took to addiction, This involved pharmacotherapy, deterrent behaviour therapy, occupation therapy, recreation therapy, family and community group therapy and psycho-education.

Since addiction was part of the human behaviour, it was important on the part of the family and the community to help and prevent the person, whom they suspected to take to destructive habits, to do away with it at an initial stage, she said.

Dr Parkar said stress is on to maintain the dignity of the patient and admit them again and again when they feel necessary. According to him, the patients were admitted in the ward for initial detoxification and were treated with pharmacotherapy for upto 21 days.

The report says during the detoxification process, concepts of rehabilitation and psychoeducation are gradually introduced, and prior to discharge, the patients are counselled regarding continuing treatment follow up, rehabilitation and relapse prevention.



Cardiologists Decry Margarine

Margarine is bad for health and its continuous intake could prove to be fatal, say cardiologists. They describe margarine as a synthetic fat of which the human body had no experience. Dr (Col) K. L. Chopra, chairman of the Heart Care Foundation of India (HCFI), says that margarine, which was very widely advertised as being 'better than butter', 'ready-to-use low cholesterol,' and 'good for the heart' etc, was actually bad for the system as oil was changed to margarine by saturating it with hydrogen, partially or completely. Thus people did not know that they were consuming a new synthetic fat of which the human body had no experience in the past.

Instant Test for T.B.



Scientists here have developed a near instant diagnostic test for tuberculosis (TB), thousands of times more sensitive than existing tests which take at least three weeks to confirm the diseases, report PTI. The new test, devised by a team led by Venkatraman Sriharan at the Anna University, can detect TB bacteria in a clinical sample of blood or sputum even if there are only 10 microbes in it.

Although X-rays can suggest TB, the only sure method of TB diagnosis is to culture TB bacteria from a sample and wait until they reproduce to form a colony of several million, a process that takes many weeks. This test has been made possible through a technique called Polymerase Chain

Reaction (PCR), said Sriharan, who began this work while at the Harvard School of Public Health in the United States three years ago. The PCR test significantly reduces the time lag between sample collection and diagnosis and offers promise for early diagnosis and faster, more effective cures.

Cradle to Test Hearing

In a highly portable Auditory Response Cradle (ARC)-which resembles a brief case, hearing of all newborns can be quickly tested. The just-fed baby lies in the cradle, and a range of audio signals are transmitted through earphones. The baby's responses are picked up by the sensitive mattress and head unit, and are measured by computer-recorded behavioural reactions. The test takes only few minutes. However, babies who have "passed" the early detection tests will still need the standard screening tests at other stages of their development.

Component Therapy to Check Blood Waste

More than half the people who die for want of blood can be saved. Experts feel there is criminal wastage of the life-saving fluid in the country.

The blood administered to one needy person at present can be divided among three patients with the use of component therapy. An expert committee constituted by the Indian Red Cross Society (IRCS) has suggested optimum use of blood by using this therapy.

At present there is a big gap between demand and supply of blood. The country gets only half of what it requires. While the annual requirement is six million units, just about three million units of blood are collected. Of this too, 50 per cent is of suspect quality, coming from commercial blood banks and collected from professional donors.

While advocating component therapy, the experts have stressed on enforcement of testing and screening procedures to weed out infected blood. They have also emphasised on strict quality control at each stage, from donation to transfusion.

WHO Meet Stresses on Health Education

Health education should be included as a subject in the curriculum of degree courses of the Indigenous Systems of Medicines (ISM) as it would help in raising awareness on health throughout the country, as per the recommendations made at the end of a five-day-long World Health Organisation sponsored training course in health education organised by the Central Health Education Bureau (CHEB).

In one of its major recommendations to the Central Council of Indian Medicine, the group has urged the inclusion of health education as one of the subjects under "Swastha Vritta" in Ayurveda and "Hafze Sehat" in Unani courses. CHEB Director, V. S. Singhal said the workshop was a unique attempt in which an integrated approach had been tried for the first time to propagate health messages. He further added that it was emphasised that folklore had been contributing significantly to health care delivery systems and therefore should be supported by modern scientific studies so as to make them credible and acceptable to a large section of population.

The workshop felt that the ISM practitioners would feel more involved if, along with the set package of health education, propagation and use of locally available herbs and natural health practices as mentioned in Ayurveda and Unani texts were also encouraged through all health education rendering agencies. The workshop, he said, also emphasised on revival of old traditions relating to disease prevention and health promotion and their practices.

Beware of Herbal Cosmetics

Some plants contain chemicals which sensitise the skin to sunlight and if an individual comes in contact with such plant and simultaneously gets exposed to sunlight, he is likely to develop hyperpigmentation according to a skin disease specialist.

According to Dr. J.S. Pasricha, skin disease

specialist of the All-India Institute of Medical Sciences (AIIMS), New Delhi there were signs of inflammation, but occasionally the patient might develop blisters as well. He said a similar reaction could also be produced if the person gets exposed to perfumes present in cosmetics, or similar compounds present in the purified extracts of plants and oils used for the hair and skin.

If the person was exposed directly to the leaves of the plant when he was lying on grassy plots along swimming pools or sea beaches, the pattern of pigmentation might resemble the shapes of the leaves of that plant, he said.

Dr Pasricha said that linear streaks might be produced if the perfume flows down from the area of application. "In case the cause was a perfume present in a cosmetic, the pattern of the lesion would correspond to the areas where the cosmetic was applied", he added.

In case a hair oil was responsible, the pigmentation was more around the forehead, ears, sides of the face and the upper central part of the back which was not covered.

In all these conditions, it was important to find out the causative agent and advise the patient to prevent further exposure to the same as well as other similar agents, he said and added "in case there is no clue to the causative agent further exposures to all kinds of plants/perfumes must be stopped and the skin protected from sunlight."

Antimalarial Chinese Herb

Chinese herbalists use extracts from the shrub wormwood *Artemisia annua*, to treat fever, and the active compound is showing great promise against drug-resistant malaria. The discovery of how this compound, called artemisinin, kills the malaria parasite could lead to a series of new antimalarial drugs.

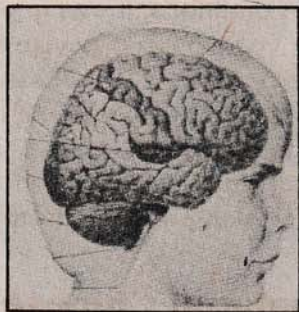
Across large parts of the tropics, alkaloid drugs such as chloroquine and quinine are becoming less and less effective against *Plasmodium falciparum*, the organism that causes malaria. So far, the parasite has not evolved resistance to artemisinin, but the drug is difficult to synthesise, so chemists would like to find simpler drugs with similar effects.

Lowly Mice Colonised the World 900,000 Years Ago

Genetic investigations of the Indian wild mice have led to an interesting discovery that the house mice (*Mus musculus*) originated in northern India from where they migrated 900,000 years ago to colonise the rest of the world.

The discovery that the Indian subcontinent was the cradle of the species has been made jointly by a team of scientists of the National Institute of Immunology (NII) in New Delhi and Pasteur Institute in Paris after comparing the genetic make up of Indian wild mice with that of mice found elsewhere. "The finding will greatly benefit medical science" says Dr Rajesh Anand, head of NII's Experimental Animal Facility, "because biologists can now look forward to having a genetically superior mice as animal model for their research."

Magnet to Study Brain



For the first time in India, scientists aided by a powerful magnet have produced images of the human brain functioning in real time. A team from the All-India Institute of Medical Sciences (AIIMS) here has joined the elite club of about half-a-dozen groups worldwide which have studied the brain in action using a technique called magnetic resonance imaging (MRI).

The AIIMS team conducted its studies on volunteers whose brains were imaged as they squeezed a sponge at quick intervals of 10 seconds inside the magnetic chamber. The scientists found that a specific area in a portion of the brain called the motor cortex became active when the volunteers

squeezed the sponge. They reported that during activity, this area was stimulated with increased blood flow and oxygen supply to the activity.

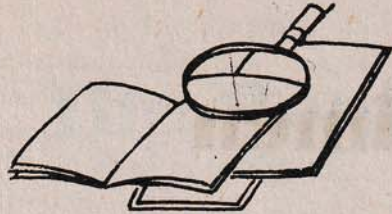
In a similar manner, it is possible to map exact areas in the brain that become stimulated while seeing, hearing, talking and learning, according to the AIIMS scientists. The technique may be vital to brain surgery as it can help surgeons know whether a tumor is present in a region of the brain linked to an important function.

Contamination Monitor

Scientists in Britain have developed a new technique to measure skin contamination through the use of chemicals. Contamination may be caused by chemicals, such as pesticides, either landing on unprotected skin or leaking around the edges of protective clothing. The Fluorescence Monitor, detects a harmless dye added to the chemical using ultra-violet light. The glowing dye shows where the chemical has splashed, the intensity of the glow indicating the extent of the contamination. The monitor is useful in showing workers whether their clothing is being properly used and maintained.

The technique has been developed by Britain's Health and Safety Laboratory at Sheffield, northern England. The Fluorescence Monitor has been used to illustrate the possible contamination from unguarded machinery which may be responsible for considerable numbers of workers being affected by cutting fluid dermatitis.

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Breast Milk is Valuable

The importance of mother's milk to the health and nutrition of infants is universally recognised. Breast-feeding is associated with reduction of infectious diseases, improved survival, better nutrition, reduced development of allergic illness, improved psycho-social bonding and overall better health in the infant and young child.

Breast milk production capacity is the estimated volume of breast milk which could be produced if all women lactated fully. Taking a conservative lower daily production estimate, it is assumed that an Indian mother would produce about 600 ml milk per day during the first six months, 500 ml per day during seven to 12 months and about 400 ml per day during 13 to 24 months. Thus, over two years, production would be 346 litres per child.



From the production capacity and the surviving number of children in each age group is calculated the total theoretical production capacity that is roughly 8,000 million litres per year. This capacity is diminished by the small percentage of women who could not lactate, which would give an annual potential production of 6,800 litres. However, not all women who can, do lactate, and the production is further diminished by the percentage of women who actually do not breastfeed their child. Calculated separately for rural (70 per cent of the population) and urban (30 per cent of the population), the total

annual realistic production is 4,411 million litres. Even this production is further reduced by the simultaneous use of supplementary milk formula or top feeds.

Based on various studies, it is found that 50 per cent of children are given additional bottle feeds during the first six months and nearly 70 per cent or more from that age onward. This is assumed to result in a loss of breast milk production as a result of decreased breast stimulation. As frequent sucking usually continues, even in these cases, we assume a reduction in breast milk production (for mothers who give milk supplements) of 25 per cent in the first six months, 50 per cent in the second half of infancy and 75 per cent in the second year. Breast milk production loss associated with unnecessary top feeds is estimated at nearly 1,100 million litres. Thus we estimate the grand total of breast milk produced annually in India at 3,316 million litres per year. This contrasts with a potential production of more than twice that amount costing billions of rupees.

Health Ministry to Study New Women's Contraceptive

The Health Ministry is actively considering launching pilot studies on quinacrine, a new contraceptive for women. The main attraction of quinacrine is that it is non-hormonal, permanent, low-cost, and can be inserted in the uterus without surgery. The Ministry might go in for extensive, phase III clinical trials later. After one year, if the trials are successful, quinacrine might be introduced into the national family planning programme.

Quinacrine pellets are inserted with the help of a modified IUD inserter at the opening of the fallopian tubes. The drug causes the formation of fibroids which block the openings. Six weeks after insertion, everything, including the uterine lining becomes normal. Side effects during the six weeks are minimal and reportedly mild stomach pain, slight bleeding and vaginal discharge.

According to Network, a magazine published by an American organisation, Family Health International (FHI), the risk of cancer due to quinacrine sterilisations has not yet been conclusively ruled out. In 1989, long-term follow-up studies (supported by FHI) detected eight cancer cases among the 572 Chilean women who had undergone the quinacrine sterilisation method during earlier clinical trials.

Sharad Regimen

After rainy season comes Sharad. In this season, the Sun is still hot and the vitality of all the beings is medium. Pitta is vitiated due to which blood is also polluted and diseases related with Pitta and blood occur frequently. Sharad Ritu occurs during Ashvin and Kartik months (16th September to 15th November).

Vitiation of Pitta

After Varsha, when the sky is free of clouds, due to hot rays of the Sun, the Pitta accumulated in the body gets vitiated. Blood also becomes polluted due to excess of Pitta. In this season fevers, boils and abscesses or the ailments related to Pitta and blood are of common occurrence, skin diseases like scabies and prurigo are also frequent.

The season has been considered to be the best for Rakta Mokshan (blood letting therapy). By this, the amount of polluted blood in the body is reduced, new blood forms and body gets rid of many diseases.

Recommended Diet and Practices

During Sharad Ritu, food should be taken only when one is really hungry. The food should be sweet, light and enriched in bitter taste. Preferably such food should be taken which destroys Pitta. Use of Harad (Chebulic myrobalan) is especially beneficial in this season. Harad should be taken with sugarcandy and coriander. Aonla (Emblica) with sugar is also beneficial.

During this season preparations of wheat, millet and cow's milk, curd, butter, ghee, cream, Shrikhand etc. are preferably eaten.

Amongst vegetables leafy vegetables, bottle gourd, Taroi, cauliflower, radish, spinach, should be used. Use of lentil pulse and beans is recommended. Among fruits pomegranate, banana, etc. are considered to be good for health.

For the non-vegetarians consumption of meat of wild animals and birds is good, especially the meat of owls, rabbits, goat and fish could be used. Cold items like raisins, fruit of lotus (Kamalgatta) etc. which act as Pitta reducers should also be made a part of the food. During this season use of items with astringent, sweet, and salty tastes and cooling effect is beneficial.

Breakfast

The breakfast should be light, enriched with snacks of sweet taste (Rasa) and easy to digest. A glass of milk can be taken. Wheat porridge (Dalia) in the morning breakfast is beneficial. Roasted bread with butter can also be eaten.

Mid-day Meals

In the mid-day meals chapati, lentil pulse or Masur dal, rice, vegetables like bottle gourd, cauliflower, beans, parval, fruits like banana and pomegranate should be used. Non-

vegetarians may take fish or meat of goat or rabbit.

Evening Tiffin

Take banana, sweet apple or pomegranate etc.

Dinner

Should be light, easily digestible and freshly prepared. Stale food, should be avoided.

Prohibited Food and Regimen

Because the Pitta and blood is polluted during this season, the food and activities which pollute Pitta should be avoided. Very hot, pungent and bitter food should not be taken. Keeping awake till late night and sleeping during day time is bad for health during this season. Tiring work or heavy exercises should be avoided but normal exercise should be continued. One should not sit in the sun for long and excess of sex should be avoided.

During Sharad Ritu, use of buttermilk is considered to be harmful. Garlic, brinjal, bitter gourd, asafoetida, black pepper, Pippali, mustard oil etc. should not be used frequently. Heavy items made from Urad should not be consumed. Sour and pungent preparations and Kadhi should be included in the food only rarely.

A person observing above mentioned Sharad Regimen enjoys a good health and a happy state of mind.

The Regimen of Hemanta

Everybody all over the world, wants to remain healthy. The primary function of Ayurveda is to conserve the health of the healthy. A person is fully healthy only when he is physically as well as mentally and emotionally healthy. For physical health we should practice exercise and follow the prescribed daily and seasonal regimen and for mental health practice good behaviour, which is an elixir in itself, says Charaka.

Broadly speaking there are three main seasons in a year namely Summer, Rains and Winter. The ancients have divided the year into six seasons namely Hemanta (Winter), Shishir (Autumn), Vasant (Spring), Greeshma (Summer), Varsha (Rains) and Sharad. We observe seasonal changes in the animal and plant kingdoms also. Such being the case, we human beings also undergo seasonal changes because we are also one with nature. To preempt the ill-effects of seasons, Ayurveda has prescribed different codes of conduct from morning till night for all seasons. By observing these, one will stay healthy in all seasons.

The Hemanta season falls in Agahan and Pousha (15 Nov. to 15 Jan.). This is the best season of Visarga Kala as because in this season the Pitta accumulated during the preceding Sharad season gets smothered, and no other Dosha is vitiated. The

atmosphere being mild, the plants are full of Rasa (juice, sap, essence). Animals also stay hefty and as such, their milk is more nutritive in this season. Apart from the produce of animal and plant kingdom being most nutritious during this season, the digestive fire residing in our body is also extremely acute. Therefore, human beings eat more, look happy and healthier in this season as compared to other seasons.

Diet in Hemanta

The digestion being excellent, even heavy diet is easily digested in winter. If diet is forgone for long or if the quantity is less or it is rough, bitter, pungent and astringent then the digestive fire starts digesting the Dhatus after digesting the ingested insufficient food. So every person should decide the quantity and quality of food for himself according to his age, sex and occupation etc. In winter the food should predominate in sweet and sour tastes. Consume proper amount of sweets prepared with Ghee, oil, butter, groundnut, sesame, jaggery, Sugar etc. Wheat, rice, millet, maize & soyabean among cereals, moong, arahar, black gram, lentil among pulses; fenugreek, spinach, bottlegourd, pumpkin, carrot, tomato, cauliflower, potato, beans, peas among vegetables, and guava, banana, pomegranate, aonla, sugarcane, apple, lemon among fruits are salutary.

Do not take cold, stale and rough food. Cold drinks, ice, ice-cream, chilled water, sour curd, tamarind, powdered mango are all harmful. Hot drinks like tea, coffee are salutary. Curd, Aonla and lemon may be used as souring agents. While preparing meals, black pepper, Piper longum, dry ginger, cardamom, clove, Tejpat & Dalchini should be freely used. These things not only enhance the taste but also smother Kapha & Vata.

Proper Behaviour

Rise early in the morning. Go to the open spaces for walking. Early sunrays are healthsome and should be used. Healthsome postures should be practised. Regular practice of Yoga postures lessens the extra fat and makes the body symmetric and hefty. Also practice Yogic breathing.

Cracking and dryness of skin are the common complaints of winter. To preclude this, oil massage should be practised daily. This keeps the skin lustrous and gleaming and makes the flesh muscles strong. Olive, mustard, sesame or coconut oil may be used for massage. Thereafter apply unguents and wash with tepid water. Wear woollen clothes to protect the body from cold winds. Especially protect the children from cold winds. Do not sleep during the day and do not keep awake till late hours during the night.

Vamana Karma and its Utility

Vamana (vomiting) is the chief method among the five methods of Panchakarma. The word is frequently used in vernaculars in the sense of vomiting. However, here we are using the word in a technical sense. Ayurveda acknowledges 'Vamana' as useful in ejecting the afflicted Kapha (phlegm). The method of Vamana is very popular in the Ayurvedic treatment of asthma. It is very effective in drawing out the scum of Kapha from the bronchial tubes, resulting in the oxygenation of the blood and relieving symptoms of asthma, and providing solace to the patient.

Thus the rectifying action by which the afflicted phlegm is drawn out through the upper track is called 'Vamana Karma'.

Method

The method of 'Vamana Karma' as described in Ayurveda comprises some actions meant to achieve or accelerate Kaphotklesha (affliction of Kapha) and some others to establish the Vamana Karma itself. Generally, the patient is made to drink milk after the administration of oleation and fomentation therapies and thus trimmed for Vamana Karma. The method is applicable only after achieving 'Kaphotklesha'. The action has been classified as best, median or base according to the number and intensity of the resulting vomiting. The decoction of emetic substances like emetic nut etc.

are used for the Vamana Karma. Vamana is also possible by the decoction of sub-emetic substances like liquorice.

It would be apposite to mention here that the substances used for oleation, fomentation and affliction of Kapha are to be used only when the symptoms of Kaphotklesha have become apparent in the patient. If the symptoms are already there, as it generally happens, the patient may be directly subjected to Vamana Karma.

Several Acharyas and commentators while commenting upon the formula of treatment '*Tamake tu virechanaih*' stated in Charak Samhita have assumed Vamana and Virechana (purgation) both by the plural form '*Virechanaih*'.

Symptoms of the thoroughly vomited :-

Symptoms of properly vomited have been given to ascertain whether the patient has been thoroughly vomited or not. Among these, just one symptom seems to suffice, which is Katukasyata i.e. bitterness in the mouth. It is so because there may be sweetness in the mouth due to Kapha only, so bitterness in the mouth is the surest symptom of its absence and the thoroughly vomited.

We have made certain reforms in the above classical method on the basis of personal experience and the practical wisdom of treatises other than Ayurveda.

Based on our studies and



Prof. Shiv Kumar Mishra,
Lucknow

research we in the decade of 1980s found that in order to administer Vamana Karma to a patient exactly as described in texts requires 75 Rs. per patient, which might have gone up to Rs. 150/- by now. However in order to by pass this expenditure we may use warm saline water and no harm ensues if Vamana is induced by this method for a short duration i.e. 5 to 10 times. We have been using this method as our patent method for the last 20 years on patients of asthma with nothing but benefits to them.

We have also tried the decoction of liquorice for inducing Vamana and found it efficacious and harmless too. It also is a part of the classical method.

Among the Shatkarma methods of Yoga, the method of Kunjal i.e. drinking plenty of water and then ejecting it by Yogic actions is also a satisfactory Vamana Karma.

'Vastradhouti' action also provides almost all the benefits

of Vamana, though this method dispels the afflicted Kapha of the upper intestine only.

Uses

- In the context of asthma, especially and as a management of Kapha, Vamana is an extremely useful method. It is also corroborated by experience. The modern medical science also believes that the use of small quantities of emetics causes expectoration.

Ailments of Vamana and their Avoidance

Excess of vaman Karma can cause certain defects in the body. The classical method is useful in avoiding these and establishing the useful part thereof. However we in the interest of the public at large and in order to allay the fears of the Vaidyas undertook taking saline water regularly in the morning for 10 years during 1979 to 1989 for vomiting and experienced that no particular changes occur. There is no need to be apprehensive about it.

Among the ill-effects may be enumerated defects of digestion, roughness in the body, anaemia, dyspepsia, confusion etc. In order to preclude these the juice of Amalaki or its pulveratum - 5 gm. should be taken in the mornings and evenings. Moreover consumption of green leafy vegetables, fruits and salad should be increased. If this is not feasible then tonics containing iron, folic acid and vitamic C may be taken.

Magnetic Therapy of Asthma

Magnetic treatment comprises contact of diseased limb with the north and south poles of a magnet of sufficient strength. This results in immediate or gradual removal of the harmful effect or element in the limb. To achieve this a magnetic belt is tied on the diseased limb.

In order to remove the inflammation, stiffness and tenseness of the bronchus and its surroundings or remove any undesirable foreign matter such as the collection of bacteria or phlegm therein, the north pole of the magnet is kept on the right upper side of the limb and the south pole is placed on the lower left side. The contact is maintained for half an hour thrice daily. The first contact is established in the morning one hour prior of bathing or just after bathing, the second contact is applied in the afternoon between 2-4 p.m. and the third contact is established at bed time. The severeness of asthma being acute the belt is kept tied around the throat or stomach and the patient enjoys sound sleep. The patient is not allowed to eat or drink cold things from one hour before to one hour after completion of the treatment.

Alongwith this magnetic contact the patient is also made

to drink magnetic water. To prepare magnetic water the ordinary drinking water is boiled and cooled and then taken in bottle, corked and placed for 12 to 24 hours alternatively on north and south poles of a magnet, this will make the water magnetised. This water cures cold, cough, coryza, stomachache, abdominal worms, skin diseases, abdominal gas and all urinary diseases. This water is administered in the dose of 150 ml at every one hour.

Regimen

- Light and oilless, spiceless food. Dinner to be taken at least 3 hours before bed.
- Kidney-bean, cauliflower, potato, rice, fried things and hot things are not allowed.
- Fresh vegetables are to be used. Avoid chilled things.
- In the mornings, noon and night take one spoonful Aonla powder with hot water.
- Keep the spine straight while sitting, sleeping & standing.
- Perform light exercise.
- Keep away from smoke, foul air and polluted atmosphere.
- Tobacco, smoking and intoxicants not allowed.

Surya Namaskar : Sustainer of Life

Pt. Madhavacharya, Lucknow

Though with advancing age it is advised to take up lighter and less strenuous exercises only, but Surya Namaskar is a series of such Yogic postures which could be variably less or more strenuous according to age and capacity. While young persons are asked to complete the various postures of Surya Namaskara quickly and as many times as possible (15-25 times) older persons need to do these postures slowly and four or five times only. The most salient feature of Surya Namaskara is that during old age one can remain smart and energetic by just practising this and doing no other exercises. However, women should forgo these activities during pregnancy and menses. In backache also, the Namaskara could be undertaken only under the guidance of an expert.

Surya Namaskar is not just postures and exercise but as the name itself suggests, an important branch of ascetism. By getting up in Brahma-muhurta (early morning) and with the spirit of saluting the original source of energy i.e. the Sun, these postures should be practised. The 12 postures of Surya Namaskara exercise all the limbs of the body.

Surya Namaskar should be always practised in a clean and ventilated open space without getting tired. One should relax a while, if tired. While performing

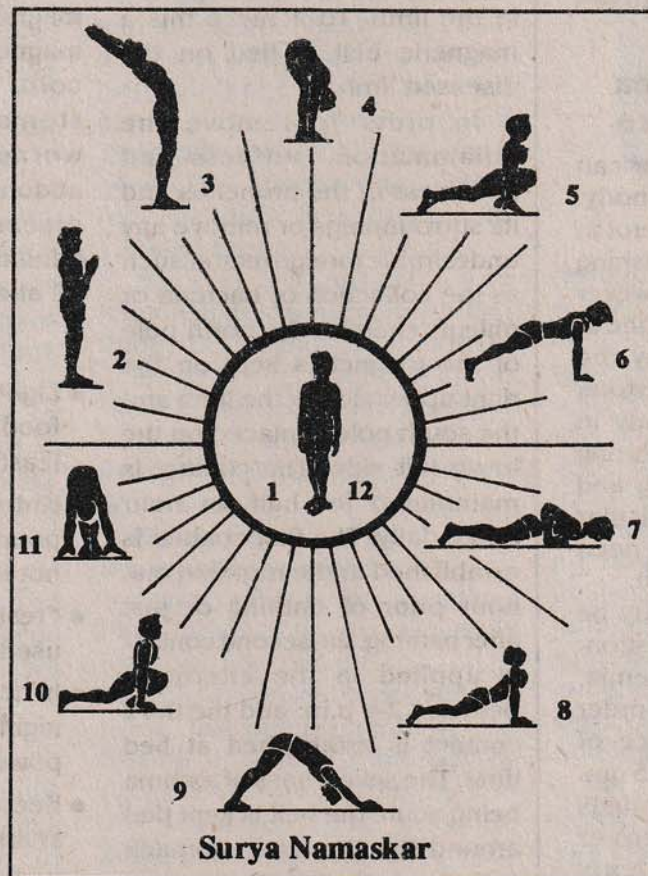
Urdhweshana (looking above), fourth is **Tulitavapu** (keeping the body in a balanced state), fifth is **Sashtanga** (prostration), Sixth is **Kasheru Sankocha** (constricting the back), Seventh is **Kasheru Vistara** (straining the back), eighth is again **Urdhweshana**, ninth the **Janunasa** and lastly it is **Awasthana** again.

Method of Surya Namaskara

1. At sunrise time, stand facing the sun with peace of mind and join your heels. The soles should be kept apart and hands should hang down. Stretch your chest and look straight ahead. This is known as Tadasana. (palm-tree posture)

This posture cures the ailments of waist. Back is strengthened. Feet become alert and power of concentration is increased.

2. Join hands in the posture of salutation, stick the thumbs to the chest. Keep the chest strained, draw your stomach in. Do **Kumbhaka** (retention of breath). This is called **Namaskarasan** (posture of salutation). This posture renders the voice pure and cures the diseases of throat.



Namaskar legs should be changed every time, so that the legs are properly exerted.

There are ten postures in every Surya namaskara. First is **Avasthana** (standing erect), Second is **Janunasa** (touching the knee with nose), Third is

3. Continue the Kumbhaka, lift your hands up as far as possible and tilt the body backwards. With open eyes look at the sky. This is called **Parvatasana** (mountain posture). This posture strengthens the nerves of eyes and shoulders are rendered free from any fault.
4. Bring both hands down, touch your toes with fingers without bending your knees. Make your nose touch the knee while quitting Kumbhak and doing Rechaka (exhalation) with its distinct sound. Expel the breath from nostrils only. This is called **Hastapadasana**. This strengthens hands, feet, fingers, chest and belly.
5. Draw in the breath with noise, advance the left foot, take the right foot back with the sole touching the ground. Knee should touch the ground. Next time do this with the other leg. Lift your head up as high as possible. This is called **'Ekpada Prasaranasan'**. This posture helps in constipation and ailments of liver.
6. Place your both hands firmly on the ground in front. Keeping the fingers pointing towards the front, lift your bottoms up while continuing retention of breath. This is called Bhootharasana. It cures the ache of knees, hands and feet. The waist becomes thin and almost all diseases of stomach are relieved.
7. While continuing Kumbhaka bring your total weight to bear on the hands by bending your elbow. In this posture your forehead and chest should touch the earth and the body should be in a plane with the ground. Nose and belly should not touch the ground. Do complete Rechaka (exhalation). This is called **'Ashtanga Pranipatasana'**. This strengthens the hands.
8. Take your head and chest up. Inhale, take the chest out and do Kumbhaka (retention). Body weight should be poised on hands. This is called **Bhujangasana** (snake posture). This posture regularises blood circulation, brightens the eyes, regularises menses of women. All defects of semen and menstruation are removed.
9. Continue the retention of breath. Place hands and feet firmly on the ground. Lift your bottoms. Press your chin to the chest. Stomach should be drawn in.
10. While sitting on the ground put the left foot forward and right foot backwards stretchingly. Try to touch the front feet with your fingers of hands. The throat should lie between the two arms and erect. Stomach should be drawn in. Bring the right foot forward and draw the left foot backwards stretchingly. Try to touch the front foot with fingers of both hands. This is called **'Ekpada Prasaranasana'**. This improves blood circulation, strengthens the feet and makes the spinal chord elastic.
11. Drawing the stomach in, join both legs. Touch the knees with your nose. Exhale with noise. This is called **Hastapadasana**. It strengthens fingers, hands, chest and stomach.
12. Inhale (Puraka) with noise. Stand erect and join feet and knees. Keep the hands folded and touching firmly your chest. This is **Namaskarasan** as described earlier.

Advantages of Surya Namaskara

- By practising Surya Namaskara in winter, you will be free from cold, cough and coryza.
- Eyesight is improved. Shoulders are strengthened and abdominal diseases are cured.
- The mind becomes steady and one-pointed.
- The spinal column becomes supple and muscles are hardened, blood circulation is accelerated and diseases of respiratory system are annihilated.
- Ligaments are strengthened
- Body becomes lustrous, vigorous and beaming.

We hope, all our readers whether children, youth or old, shall start practising Surya Namaskar regularly and enjoy sound physical and mental health and shall remain as bright and powerful as the Sun God, by His grace.

Test your Health by yourself

Every person has different ideas of physical health. We are giving ten standard tests of physical health. Full marks of each test are given. You can accordingly give marks to yourself. Add up your marks. Your health may be defined according to the totality of marks as follows:

- 100 - 120 marks : Your health is excellent. Please carry on with your exercise.
80-99 marks : You can improve your health. Exercise properly and regularly.
50-79 marks : You are negligent about your health. Select your exercise and do it regularly.
0-49 marks : You are inviting all sorts of diseases by not caring for your body. Select and begin your exercise today.



1. Stand erect with shoulders straight and inflate your chest. Measure your chest through your underarms. Now measure your waist. Your chest should measure about 5 inches more than your waist. Among women the difference should be about 10 inches.

Full marks - 25

Your marks :



2. Sit on the floor with legs stretched before you and keep a book 8 inches wide pressed between the knees. Now keeping the legs straight and touching the floor bend forwards and touch the book with your forehead.

Full marks - 10

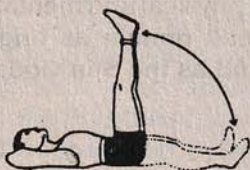
Your marks :



3. Stand on your toes, keep your heels close together eyes closed and hands horizontal from shoulders, Stand motionless in this state for 20 seconds.

Full marks - 15

Your marks :



4. Lie on your back with hands below the neck and make the legs vertical without bending the knees and then bring them down to the floor without bending the knees. Repeat this for 20 times.

Full marks - 20

Your marks :

Health Care



5. Lie on your side keeping the body straight and balancing it on one hand and foot. Place the other hand on the waist. Lift the upper leg horizontally without bending the knee. Repeat the action 25 times.

Full marks - 15

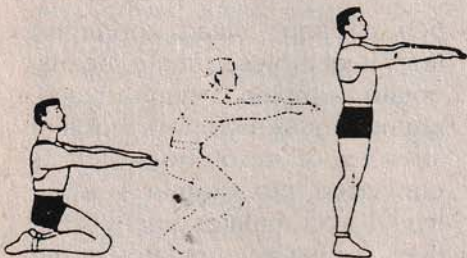
Your marks :



6. Lie on your stomach with face down. Keeping the fingers back at the neck and legs stuck to the floor, lift your face up till your chin is 18 inches high from the floor.

Full marks - 25

Your marks :



7. Sit on your knees so that your soles are pointing up. Keep the hands straight towards the front and pushing the hands downwards stand up jumpingly. Do not loose the balance and keep the legs close together.

Full marks - 10

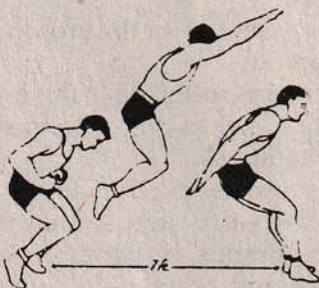
Your marks :



8. Lie on your back, keep the legs straight and hands behind at the neck. Now sit up. Repeat the act 25 times.

Full marks - 20

Your marks :



9. Stand erect and jump forwards. Do not run before jumping. Your jump should be equal to your height.

Full marks - 10

Your marks :



10. Run for 60 seconds with lifting your feet at least 4 inches up from the floor. Take 3 deep breaths.

Now hold the breath for 60 secs.

Full marks - 50

Your marks :

Contd.. from previous issue

Importance of Vitamins

This is a well-established fact that though vitamins do not produce energy, yet they are the chief ingredients of food and their absence or deficiency creates diseases in the human body. Vitamins are classified into two groups :

1. **Fat-soluble** - Vitamin A, D and E are the chief among such vitamins.
2. **Fat-insoluble** - Vitamin C, B complex and P are the important ones.

Vitamin A

Hopkins found in 1912 that

rats grew in a natural manner when given milk but when milk was replaced by other food, their growth was distorted. McMohan and Davish discovered this growth promoting stuff in eggs and butter and named it vitamin A.

Source and Absorption

This vitamin occurs in the fat of the living beings and so it is found in plenty in milk, cream, butter, cod liver oil, halibut oil, eggs and fish. It is almost nil in vegetable oils. In vegetables it is found as its precursor, the carotene. Carrot, turnip, spinach,



Dr. Pramod Malaviya, Lucknow

pea, cabbage, salad, coriander, leafy vegetables, tomato, beans, potato, pumpkin, banana, mango, papaya, muskmelon are the chief sources of carotene which is converted into vitamin A in the liver. It accumulates chiefly in the liver. It also accumulates in the lungs, breasts, kidney and skin in small quantities. It is soluble in fat and insoluble in water. Vitamin A can withstand heat but is discoloured and destroyed by ultraviolet rays and air.

Functions of Vitamin A

- It is essential for the growth of the body.
- It creates rodopsin in the eyes which makes one able to see in darkness.
- It protects the functions of epithelial tissues so that the membranes of nose, throat, eyes and respiration remain healthy and active.
- It obstructs the infection of bacteria in the body.
- It takes part in the synthesis of proteins.
- It protects the function of bone cells.

Supplementing Diet With Vitamin A

Everyone always knew that carrots were good for your vision—indeed, the association between vitamin A and good eyesight has been recognized worldwide, at least among the educated, for decades. Little known, however, was the fact that deficiency of vitamin A increases the body's susceptibility to infections of all kinds. Particularly in poor societies, a lack of vitamin A contributes to increased mortality among infants and young children. This data first came to light in a study in Indonesia nearly 20 years ago, and has been subsequently confirmed in field investigations across the world : most significantly in villages around Madurai where a 55 percent decline in child mortality was seen following the administration of weekly doses

of vitamin A. Such a dramatic effect, however, does not seem to hold true everywhere, for in villages around Hyderabad only a five percent mortality decline was noted. Nonetheless, in thousands of villages where vitamin A deficiency is a chronic reality, its provision, either through improved diet (green leafy vegetables, yellow fruits), or in the periodic administration of syrup or capsules containing high doses of vitamin A, offers a major strategy not only for preventing blindness but for reducing child mortality. While some experts have been concerned that high doses of vitamin A given periodically may cause a transient increase in fluid inside the brain, recent studies show that the pressure remains normal even with slightly increased fluid.

Health & Diet

- It protects the cell walls.
- It assists in the Dhatupak (Metabolism) of carbohydrates.
- Helps in healthy reproduction.
- Stops the formation of urinary stones.

Deficiency Syndromes

- Growth is retarded.
- Night-blindness, which mainly occurs among the children due to malnutrition.
- When one comes into a dark room from light then after some time he is able to see in the darkness due to dark adaptation. When Vitamin A is deficient then one is not able to see in the dark.
- Lacrimal glands degenerate.
- Degeneration of retina sets in.
- Skin becomes rough, thick and hard and degeneration of oil glands and sweat glands begins.
- Digestion becomes defective.
- Degeneration of the mucous membrane of the respiratory system occurs leading to various diseases of lungs and tuberculosis. It also may distort the other various mucous membranes so that infection becomes imminent. This vitamin is also called anti-infective vitamin.
- Nervous system begins to degenerate.
- Abnormal bone growth occurs.
- Reproductive system also is distorted.

However excess of vitamin A causes confusion, giddiness, headache, nausea and formation of scales on the skin. Tests have revealed that the excess of vitamin A hinders the production and absorption of vitamin K. In order to ensure the supply of vitamin A, tablets should not be resorted to and only its natural sources should be tapped.

Useful Leechcraft

Leechcraft comprises extraction of bad blood from the body by the application of leech. Leeches are found in water or marsh and they suck blood intrinsically.

In old days leechcraft was known to some barbers and potters. Seven years ago there were three old men including one woman in our area who were adept at it. They used to treat all skin diseases by leechcraft. The local tribal people used to avail of this facility. At present there is none in our area who practices it.

In order to resuscitate this craft, work was started at the Ayurvedic Department of Academy of Development Science, Kashele. During this project leechcraft was applied to various skin disease cases and all cases benefitted from it. Oozing cases were fast cured by this treatment. Even headache cases were immediately cured by the application of leech on the temple near the outside end of eyes.

Certain leeches are poisonous too and their application causes inflammation, severe itch, burning & unconsciousness etc. Such leeches should not be applied. Non-poisonous leeches are found in calm fountains and in ponds where lilies and mosses grow. These are 2 to 3 inches long and of shining red colour.

The leech should be kept in water to which turmeric powder has been added for sometime



Vd. Sanjay K. Dakhore, Kashele

before applying it. This purifies it. The spot should be made clean and punctured with a fine needle to draw out a drop of blood and then leech should be applied for the best results. During the sucking the fore part of the leech seems to be raised a little and its body seems to be rippling. A wet cloth should be spread over it at that time. After sucking for some time the leech drops on its own. If it does not drop on its own then turmeric powder should be rubbed near its mouth. After the leech has dropped turmeric should be rubbed over its body to make it vomit the blood it has sucked. If it is not done then it dies, therefore, it is a must. The leech should not be applied again for one week.

In order to tame a leech it should be placed in water in an earthen pot and the mouth of the pot should be tied with a cloth. The water should be changed every two or three days. Thus the leech will live long. Medicinal leeches may be obtained from :

Geeta Padte (Leech farm),
Pradip Kunj,
Baroda, Gujarat

Taming the Typhoid

Mushrooming slums, inadequate water supply and poor sanitation are highly congenial to the growth of salmonella, the bacteria responsible for typhoid. *Salmonella typhi* enters the stomach of the unsuspecting victim via the faecal oral route and in three or four days, reaches the liver after swimming through the bloodstream.

Once there, the bacteria start incubating which results in bodyache and vomiting. If the problem is diagnosed at this stage, and if the patient is administered anti-typhoid drugs, the bacteria may not get to the intestines - their ultimate goal - where they form ulcers on the eighth or ninth day. Formation of ulcers in the intestines can complicate the matter for the patient as well as for the doctor as they can burst and lead to intestinal bleeding and perforation. It can even be fatal in some cases.

At the time when ulcers form in the intestines, the patient experiences abdominal discomfort, there is a decrease in blood count and the spleen gets enlarged. If the typhoid is not treated in time, the bacteria can cause severe chest congestion as early as two weeks after the patient starts getting fever. It can damage the kidneys, lungs or even lead to brain disorder.

Typhoid is common in the tropical and developing countries

where clean water and efficient sewage systems are non-existent. Some persons are the carriers of salmonella bacteria. Mostly such people have a previous history of typhoid. The bacteria live in their intestines and keep coming out along with their faeces. If the faeces are not properly disposed of then the bacteria spread in to water, milk and food items. Flies play an important role in their propagation. They settle on the rubbish, garbage, faeces and then on open foodstuff and thus carry the bacteria from the former to the latter. These bacteria can live in the gall bladder of the patient of typhoid for years and slowly get discharged through his stool. 10-15 days after the ingestion of polluted food by a healthy person, symptoms start appearing in him.

In the beginning bacteria flow in the bloodstream. Greater the number of bacteria or greater the circulation, greater will be the problem. After some days, the bacteria establish a settlement of their own in the lymph-tissues of the intestine. This causes inflammation, redness, abscess etc. these wounds heal up later. Sometimes blood oozes through the wounds. The main defect caused by this disease is the inflammation of intestines.

During the first week, the fever rises slowly. The fever fluctuates but it never relents. The fever generally stays higher in the

evenings. Weakness, pain in the limbs and head, giddiness etc are the associated symptoms. Cough and epistaxis also may occur. The pulse rate is slower during the rise of temperature.

During the second week, pink, sparse grains emerge in the lower part of the chest and back which disappear upon rubbing. These grains shine like 'pearls' and hence the disease is called 'Motijhara' in Hindi. These grains disappear in 2-3 days. Spleen is enlarged. Mild dysentery takes the place of constipation. Distension of stomach takes place the lower right portion of the abdomen becomes tender.

During the third week, toxic stuff increases in the patient's blood. Blood may come with faeces. The patient may be too weak and unconscious.

Under such conditions consult your physician. Apart from this give the patient complete bed rest & light meal.

Prophylactic Measures

- Ensure clean food and sanitary living.
- Ensure proper sewage disposal system.
- Do not use open sweets cut or overripe fruits and contaminated water.
- Fly is a storehouse of disease, let it not enter your house.
- Inoculate if there is an epidemic.

Herbal Management of Malaria

September and October are believed to be the months of diseases. Mosquitoes become rampant after the clearance of skies during the above months. This breeds fever, malarial fever, cough etc.

Fever is generally caused by the aggravation of Pitta. Vomiting may occur in this season at times. Bitter Pitta also comes out with the vomited matter.

Causes

The chief cause of malaria is collection of water in pits along roadsides in which mosquitoes grow. Malaria is caused by mosquito-biting. A certain mosquito, which rears up the bacteria *Plasmodium vivax* causes this disease. The life-cycle of *Plasmodium vivax* begins in the mosquito and attains completion in human beings. After entering the human body this bacteria shows its effect after 12, 24 or 36 hours and the fever likewise recurs after one, two or three days.

Symptoms

- Fever associated with shivering cold.
- Redness in the eyes.
- Pain all over the body.
- Body temperature around 104 degrees.
- Thirst
- Hunger after the fever has subsided.

Treatment

- The patient should chew holy basil leaves with black pepper twice daily.

- Take equal Giloy and Neem stems and triturate with water. Heat an earthen Sakora (Lamp-saucer) till it is red. Then take the lamp saucer out of fire and pour the previously prepared pulp of Neem and Giloy into it. Effervescence shall take place. After it has settled give the remaining liquid in two doses every day.

- Take one tablet of the following thrice daily - Mahajwarankush. Give 5 gm Sudarshan Churna with hot water before going to bed.
- Take Mahajwarankush 1 tab, Vishamjwarankush 1 tab with water thrice a day.

Prophylaxis of Heart Disease

H.D. Jalukar, Pune

The heart attack was placed in the ninth place of the death rate list of the World Health Organisation of the year 1980. It topped the same list in the year 1987. Now-a-days cancer and heart attack are vieing each other for the first place among the causes of death. In order to prevent heart disease it is essential to follow the regimen.

The quantity of fried things and sweets in the diet of an average middle income group Indian is gradually increasing nowadays. Especially those who are above 40 eat more for the pleasures of palate. Consequently grease grows on them. Moreover they do not exercise properly to digest the extra grease. Consequently the body gains in nourishment and fat, which is same as the rise of cholesterol content and enhanced body-weight. This

causes blood pressure. The blood-vessels harden. The flow of blood is obstructed. At times there is pain in the chest which is called angina and is the root of heart attack.

The present age is of fashion, which includes smoking drinking and eating without control. Exercise is given a wide berth. This provides a chance to the heart attack.

Meditation, contemplation, limited diet and the habit of walking on foot is very useful to stay disease-free and live long. Those who are above 40 should always examine themselves critically for the effect of the food ingested. Whether the body-weight is increasing? Whether sugar is accumulating in the body? If they constantly consider these points then they will preclude the possibility of heart attack.

Pranayama : A Sure Cure of Hypertension

Dr. A. K. Singh, Shimoga, Karnataka

Hypertension or high blood pressure is the condition when blood pressure is raised i.e. more than normal encountered generally under routine or casual circumstances of recording.

CAUSES : The trouble starts within the arteries themselves, the thick walled vessels that carry blood from the heart to the tissues of the body. The blood is driven by the main pumping chamber of the heart, the left ventricle, and a great deal of force is required to send the blood out of the heart again to be re-delivered to the arteries. Therefore, even under ideal conditions, the walls of the arteries are continuously under considerable stress.

If the pressure within the system is raised for any reason (an increase in cardiac output and peripheral resistance both) - a condition called hypertension - this stress is increased and paves the way for the development of arteriosclerosis.

Types of Hypertension

1. Essential hypertension (having no obvious precipitating factor)
2. Secondary hypertension (as a result of any disease).

WHAT'S NORMAL ?

The normal blood pressure reading is systolic 120 mm Hg by diastolic 80 mm Hg in young and middle aged adults written as 120/80. As the age advances, the upper reading, called systolic

increases. Usually it is age+120 but it should not be more than 160, yet, upto 170 a person leads a normal life having no symptoms (but diastolic reading should not exceed 90). If reading is 150/90, a person should go through frequent check-ups, while a reading of 160/95 is definitely high and requires treatment.

In essential hypertension, the exact cause is unknown, yet genetic factors, stress, excess salt consumption, obesity, smoking, alcohol consumption and a sedentary life play their role surely for it. The secondary or malignant hypertension is due to disorders of kidney, heart, brain, hormones etc. Psychological factors like stress and strain are very important in both types.

Blood pressure starts to raise when a person adopts a more "developed" way of life. But why does the behaviour of blood pressure change in this way? It is caused by stress, and there is considerable evidence that it is involved.

Although the average level of blood pressure in various groups has been found to tally with their average salt intake, it has been impossible to prove conclusively that a higher salt intake necessarily means a higher blood pressure.

Essential hypertension accounts for 90 percent or more of people with high blood pressure. Most of the remainder have kidney disease, leaving a

few with abnormalities of cortisone or adrenalin. Another condition that they cause high blood pressure is excessive secretion of aldosterone by the adrenal gland, fortunately, all these forms of high blood pressure will respond to treatment.

DIAGNOSIS

In most patients, high blood pressure is diagnosed accidentally, usually during a physical examination undertaken for some other disease or for an insurance policy, because uncomplicated hypertension is symptomless. Only headache may occur in patients with very high arterial pressure or hypertensive encephalopathy. The headache is usually occipital and present on waking. In quite a few patients, it is diagnosed only after one of its complications (for ex., chest pain, a heart attack, a stroke or kidney failure) presents itself.

In fact, high blood pressure produces no symptoms at all; at least not in the early stages. That is the reason why it is termed a hidden disease or a silent killer.

Also, no doctor can or should proclaim the verdict of high blood pressure to a person after a single measurement of blood pressure. The diagnosis of high blood pressure can only be made if the blood pressure is found elevated repeatedly on examination at regular intervals.

Endemic Goitre

Dr. Vidushi Tyagi, Lucknow

The term "goitre" refers to enlargement of the thyroid gland. It results from the high production of thyroid stimulating hormone (TSH) secreted from anterior lobe of pituitary gland (Master gland).

Thyroid Gland

This gland is anatomically connected with the upper respiratory passage but is physiologically quite separate. Its activity is largely controlled by TSH of anterior pituitary gland.

Deficiency of TSH leads to underaction of the thyroid gland, whereas excess may produce Hyperthyroidism. Iodine is an essential component of the active principle hormone of the thyroid gland, Thyroxine.

The thyroid is in close relationship with the other ductless glands. In health it enlarges at puberty, during menstruation, sexual excitement, pregnancy, lactation and in the presence of most acute specific fevers notably rheumatic fever. An unusual degree of enlargement at puberty is not pathological unless constitutional symptoms are present.

Causes

Endemic goitre : It is due to poor intake of iodine in water and food and is common in Himalayan areas.

Sporadic goitre : It results from failure to organify iodide. It is usually associated with congenital deafness. It may be congenital or as a result ingestion

of antithyroid plants or vegetables. Goiter may also develop due to hereditary defects in hormone synthesis.

Nodular Goitre

In this case thyroid is poorly iodinated & nodules formed may be benign or malignant lesions of thyroid.

Symptomatology

There are two opposite clinical conditions which may arise from disorder of the thyroid gland.

Hypothyroidism : In this condition there is a diminished action of thyroid gland. The symptoms of which are :

- Growth retardation
- Delay in closing of fontanelle.
- Delayed bone maturation
- Delayed tooth eruption
- Delayed motor development.
- Delayed mental development
- Mental handicap
- Muscular hypertrophy or Myopathy
- Precocious sexual development
- Protracted sexual infantilism

Hyperthyroidism : In this condition there is perverted thyroid action. The symptoms of which are

- Loss of weight inspite of good appetite & caloric intake
- Palpitation
- Restlessness, irritability emotional lability, hyperactivity, insomnia
- Intolerance to heat, excessive sweating preference to cold
- Muscular weakness

- Increased frequency of bowel movements and frequent bouts of non infective diarrhoea.
- Associated eye symptoms as undue prominence, grittiness or excessive lacrimation or double vision.
- Skin and hair changes - skin is fine thin tanned & may show vitiligo hair tends to be straight.

Treatment

The treatment can be divided under two headings

PREVENTIVE

- Rest & sleep are essential
- Diet should be of high caloric value to counteract the loss of weight.
- The iodine requirement of an adult is 100 - 150 micrograms which should be fulfilled.

CURE

"Goitre" is known as "Galgand" in Ayurveda and for its treatment following drugs are prescribed :

- Katphaladi Kwath
- Powder of "Shveth Aparajita" root mixed with pure ghee is used orally.
- Barhat Katphaladi Kwath
- Bhargi Mul Praleip
- Sarshapadi Praleip
- Fresh & warm ointment of lotus stem.
- Paste of Dash Moola powder prepared in water is used as local applicant and should remain till it dries.

Respiratory Diseases

Dr. Rajendra Prasad

Asstt. Professor, Deptt. of TB & Chest Diseases
K.G. Medical College, Lucknow.

Respiratory diseases are very common in our country and need no emphasis. Frequently encountered respiratory diseases in day to day practice are pulmonary tuberculosis, bronchial asthma, bronchitis, pneumonia, and lung cancer. Pulmonary tuberculosis is very common in our country. At present 14 million people are estimated to be suffering from pulmonary tuberculosis. Out of this, 3.5 million are suffering from infectious form of tuberculosis and spreading the disease in the society. It is a paradox that 5 lac people die due to tuberculosis every year in the country inspite of well known methods of diagnosis and treatment of tuberculosis.

Bronchial asthma is yet another common respiratory disease prevalent in our society. Asthma being a chronic disease, there are a lot of misconceptions and malpractices about the treatment of this disease. That is why knowledge about this disease is very essential.

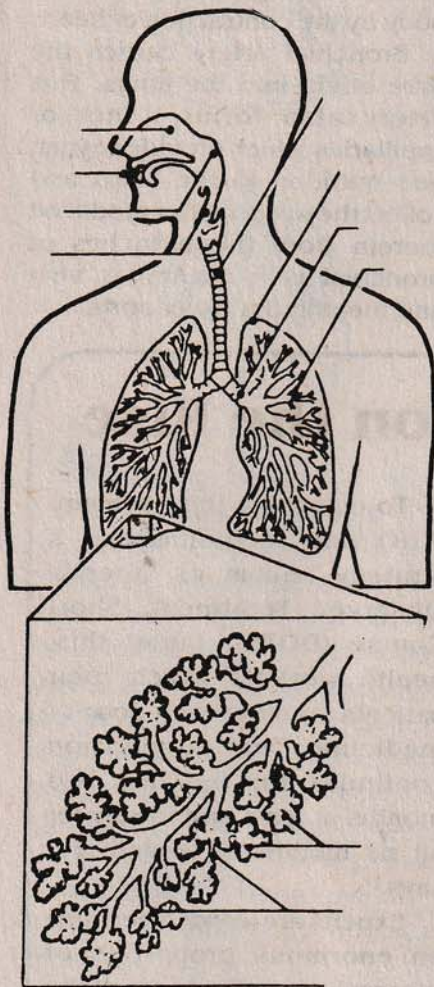
Lung cancer is another serious respiratory disease which was very rare 40 years back. Now it has become the most fatal cancer of human beings in western countries. 90% of all lung cancers are caused by smoking. If smoking is not checked in our country, lung cancer will also increase and it can assume epidemic proportions in near future.

Attractions of Next Issue

Food & Nutrition Special

- ☛ Ayurvedic Principles of Food & Nutrition ☛ Calculation of Food Value
- ☛ What is Malnutrition ? ☛ Are Indian Foods Nutritious ? ☛ Vegetarianism
- ☛ Use of Milk, Ghee & Curd - Different Opinions
- ☛ Food Adulteration ☛ How to Avoid Obesity ?
- ☛ Empty Stomachs & Filled Godowns
- ☛ Gandhiji's Opinion about Food

Our Respiratory System



All organs taking part in the function of respiration comprise respiratory system. This function brings the air from the atmosphere into the lungs of living beings where the blood capillaries of the lungs absorb oxygen from the air and send it to the tissues through blood circulation. Oxygen

performs Dhatupak (metabolism) of the foodstuff in the tissues whereby energy is generated for the various acts of beings and the body temperature is maintained constant. Dhatupak also liberates carbon dioxide as waste matter and it goes into the lungs via blood circulation and finally goes out into the atmosphere. The oxygen in the air is called 'Ambar Piyooash' and 'Vishnu Padamrita' in Ayurveda.

Organs of Respiration

The chief organs of respiration are the lungs. Air from the atmosphere is drawn in through the nasal cavity, nasopharynx, larynx, trachea and bronchi into the alveoli and after absorption reaches the capillaries of lungs. From there, oxygen is supplied to the entire body through the heart.

Lungs are two in number and are situated on both sides of the heart in the chest. The right lung is divided into three sections and the left lung is divided into two sections. The lungs are completely covered by two layers called pleura. The structure of the lungs is like beehives. It comprises numerous cells called air sacs. The air sacs resemble a bunch of grapes and are divided into umpteen cells which increase the area of respiration.

Trachea and Bronchi

The trachea begins below the larynx. It is 12 cm long and 2.5 cm wide. It is made of incomplete rings. The membrane of the



Vd. P. C. Jain, Lucknow

trachea is hairy and it moves towards the larynx. It does not allow the impurities of air to go forward. The trachea is divided into two parts in the chest and in the vicinity of fourth and fifth chest vertebra. The right branch goes to the right lung and the left branch to the left lung. After reaching the lung the branch is divided into various small branches called bronchi. After entering the lung the branch of bronchi is divided severally into primary, secondary and tertiary branches which are bronchioles of very minute diameter. The swollen part of each bronchiole is called vestibule from which many atria emerge. Every atrium opens up into 2 or 3 infundibulum and each infundibulum changes into innumerable alveoli which is the end of trachea. The structure beginning from trachea and extending upto the alveoli is called Respiration Tree.

The wall of alveoli is thin and made of a delicate layer of flat cells which are encircled by blood capillaries. Thus by diffusion exchange of gas occurs between the alveoli of lung and capillaries

Jeevaniya Respiration

of artery and vein. This is also called the purification of blood. The pulmonary veins carry this oxygenated pure blood into the heart from where it goes to the entire body through blood circulation.

Path of Air

The air of atmosphere enters nasal cavity and is pushed into nasal pharynx beyond the posterior nasal opening. The nasal cavity is full of dense and minute hair which arrests the accompanying dust particles, fibres, bacteria and other impurities.

The membrane of the nasal cavity being smooth the surviving dust particles, bacteria and other impurities get stuck to it and the air moving further goes after filtration only. The bones of the nasal cavity are made such that the area of the nasal cavity membrane increases and air passing through it becomes hot or cool as needed and also becomes moist due to the water vapours present in it. Sense organ of smell is situated in the upper portion of nasal cavity and blocks the progress of foul-smelling air.

The back portion of nose is nasopharynx in front of which is situated the larynx and tonsil on the posterior wall. The air coming through the nasal cavity is rendered more moist by the mucous membrane of the nasopharynx. The upper part of the trachea is called larynx wherein the nerves produce sound by the entry and exit of air. The air passes from larynx to trachea and subsequently to bronchi and bronchioles and finally enters the air sacs of lungs where exchange of gases occur and oxygen goes to tissues and carbon dioxide goes to air sacs.

This process is called respiration and it maintains the life of the living beings.

Nutrition of Lungs

The pulmonary artery carries the blood containing carbon dioxide from the right ventricle to lungs. This artery divides itself into branches inside the lungs and finally forms a network of capillaries and envelops the alveoli. Exchange of gas occurs between the minute walls of these blood capillaries and alveoli. Carbon dioxide passes into alveoli from the capillaries and the oxygen in the alveoli passes into the capillaries. It is called the

diffusion of gases. This is also known as the purification of blood. After purification the oxygenated pure blood comes into the 'Shirikas' mixed with capillaries which together form pulmonary veins. The pure blood goes into the left ventricle of heart wherefrom it goes to the entire body by the contraction of heart.

Bronchial artery carries the pure blood into the lungs. This artery also forms a net of capillaries which provide oxygen and nutrition to the lungs and collect the waste matter produced therein from the branches of bronchial vein as Azygos vein and meet in the lower aorta.

Spread of TB on the Rise

Tuberculosis is a disease which claims 1,300 lives every day in India. Nearly 1.5 million people get tuberculosis every year in India. In 1995 alone, half a million of these will die from tuberculosis, says the World Health Organisation (WHO). The WHO, while drawing a parallel of the disease with plague says: "The fact is that TB — like plague — spreads through the air. While plague killed 54 of the 876 patients in 1994, TB is killing 10,000 people in India every week."

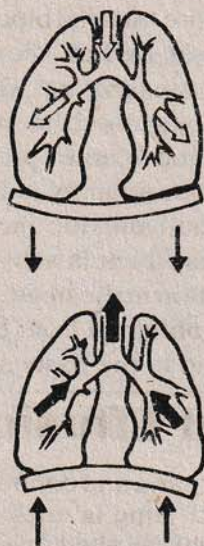
Experts say that given the fact that HIV is already an epidemic here, the number of those suffering from tuberculosis is bound to increase. The risk of becoming ill with tuberculosis increases 30 times in an HIV-infected person.

To overcome this problem, WHO has recommended a strategy known as Directly Observed Treatment, Short Course (DOTS). Under this, health workers watch their patients swallow each dose of medicine. This supervision continues for the first two months at least and ideally for all six months of treatment it says.

Experts are worried because an enormous proportion of tuberculosis patients are at the peak of their earning power. "Tuberculosis is weakening India's workforce and is draining its peoples' buying power. The escalating health care costs brought about by rising rates of TB is further damaging India's economy," says WHO.

How Do We Breathe ?

Dr. Pramod Malaviya, Lucknow.



Breathing is an essential function of the living beings. The nature has endowed different devices of breathing to various fauna. The beings of upper strata have lungs for this function. Among human beings lungs are two in number and they are situated on both sides of the heart inside the chest cavity. These are light, spongy and porous. Before birth these are heavy and shrunken but as soon as the baby starts breathing they become inflated.

Respiration

Healthy respiration comprises two actions namely inspiration and expiration. A healthy young man breathes 12-14 times a minute and during this time ventilation of 6 litres of air occurs. During a single respiration 500 ml. air passes in and out. Among the children respiration occurs

upto 33 times per minute and their ventilation happens to be 500 ml per minute whereas 15 ml air goes in and comes out during a single respiration.

Expiration is an active function wherein the chest cavity expands and air comes into the lung via nose, pharynx, larynx and trachea. The main muscle that does this job is diaphragm which divides the chest from the stomach. The muscle derives strength from the phrenic nerve. Expiration is an involuntary action whereby the chest cavity attains its original state. The chest cavity being narrow the air in the lungs is expelled via trachea, larynx, pharynx and nose. These two functions continue without break till the end of life.

Inspiration

During the inspiration the air comes down due to the contraction of diaphragm and increases the longitudinal hiatus of the chest cavity. Similarly ribs move up due to the contraction of the intercostal muscles. Moreover due to the rise of sternum the transverse hiatus of the chest cavity increases as well.

Lungs are covered by a cover of one or two layers which is called pleura. Both the layers remain moist due to a smooth liquid. During the inspiration the pressure between the two layers of pleura becomes less than the atmospheric pressure. The intrathoracic pressure also falls. As a result, the alveolar pressure falls and air enters the lungs wherein the pressure is below the atmospheric pressure, which happens to be around zero.

Expiration

Expiration is an inactive function. In this state the laxity of the diaphragm muscle lifts it up to its original level. The longitudinal diameter of the chest cavity becomes as before. The transverse diameter also becomes less as before. Due to this the intrathoracic pressure and consequently the alveolar pressure increases and becomes higher than the atmospheric pressure, so that the air in the lungs is expelled through the nose. via the respiratory tract.

Cause of Respiration

The chief reason is the difference in the pressures of the

Gas	Incoming Air	Outgoing Air	Alveolar Air
Oxygen	20.94%	16.4%	14.2%
Carbon di oxide	0.04%	4.00%	5.5%
Nitrogen	79.02%	79.6%	80.03%

Jeevaniya Respiration

air in atmosphere and the air in the lungs. Air moves from high pressure to low pressure. During inspiration the alveolar pressure being less than the atmospheric pressure air enters the lungs. Reverse of this occurs during expiration and air moves out of the lungs. The composition of the incoming, outgoing and alveolar air is given in table above.

Pressure variations

In the beginning of inspiration the alveolar pressure happens to be -2.5 m.m. During inspiration chest cavity, interpleural and alveolar pressure drops further to -6 m.m. During the negative pressure lungs are not fully inflated so the air has no obstruction in the nasal path. Inspiration blows the lungs up, the alveolar pressure happens to be -2 to -6 m.m. and the air finds no obstruction in entering the lungs. In fast inspiration the alveolar pressure drops to -40 to -50 m.m. of mercury.

At the time of expiration alveolar pressure happens to be $+3$ to $+4$ m.m. During fast expiration, muscle exercise, excretion of urine and faeces, coughing and sneezing the pressure increases upto $+40$ m.m.

The Purpose of Respiration

Every living being needs oxygen for Dhatupak. The Dhatupak function disintegrates foodstuff into energy and carbon dioxide etc. Energy enables the living being to perform various works by which his body grows. Lungs have a network of capillaries of pulmonary artery

and pulmonary vein around the alveoli. The oxygen of the alveoli goes in to the pulmonary veins and the carbon dioxide goes into the alveoli by the capillaries of the pulmonary artery. 100 ml. of pure blood going to the tissues contains 3 ml. oxygen as liquid and 19 ml. oxygen as a compound of haemoglobin. In arteries the pressure of oxygen happens to be 100 m.m. whereas the pressure is 35 m.m. oxygen in the venous blood. In tissues the pressure happens to be still less so the oxygen passes easily in to

the tissue through the blood capillaries for Dhatupaka.

After the Dhatupaka in the tissues carbon dioxide goes into the Shirikas due to the difference of pressure. Arterial blood has 48 volume of carbon dioxide and the pressure is 40 ml. whereas in the venous blood the same is 52 volume and 46 m.m. pressure. In tissues the quantity is higher so the carbon dioxide moves into the veins which is sent back for purification in the heart. Thus the oxygen obtained from breathing is utilised in the tissues.

Pleurisy and Pleural Effusion

When you breathe normally, the lungs expand and contract easily and rhythmically inside your ribcage. Each lung is enclosed in a moist, smooth, two-layered membrane, which is called pleura. The pleura lubricates the moving surfaces of the lungs and makes breathing easier. The outer layer of the pleura lines the ribcage. Between the two thin layers is a virtually imperceptible space, which is called the pleural space. It permits the layers to glide gently across each other. If either of your pleura becomes inflamed and roughened because of an infection, this seriously impedes the movement of the layers, and you have pleurisy, or pleuritis.

Pleurisy is actually a symptom of an underlying disease rather than a disease in itself. The pleura may become inflamed as a complication of a lung or chest infection such as pneumonia or tuberculosis. The inflammation can be due to a slight pneumothorax or a chest injury. Inflammation of the pleura sometimes creates a further complication by allowing fluid to seep into the pleural space. This causes a condition called pleural effusion.

Symptoms & Risks

If you have pleurisy, it hurts to breathe deeply or cough. You may also have severe, but one-sided, chest pain. These symptoms are accompanied by others that are associated with the underlying disorder. The pain will disappear if pleural effusion occurs as a result of pleurisy, because fluid will prevent the roughened or inflamed layers of the pleura from rubbing against each other. If this happens, you may become breathless.

Pleurisy and pleural effusion due to infection have become rare disorders. This is because they now can be very effectively treated with antibiotics. Pleurisy is four times as common as pleural effusion. In most cases the risks of pleurisy are the same as the risks associated with the underlying cause. Advanced pleural effusion can compress the lungs and cause severe breathlessness. Pleural effusion may also lead to empyema.

Bronchial Asthma

Dr. Rajendra Prasad, Lucknow.

Bronchial asthma is a disease of lungs in which the patient complains of recurrent attacks of breathlessness. Approximately 10% of our population is supposed to be suffering from this disease, although the exact statistics is not known.

It can occur at any age starting from childhood to adult life. Childhood asthma is usually an allergic disease but asthma which starts in adult life may both be allergic or non-allergic.

Allergy can be due to many factors like pollen grains, spores, house dust, animal dander, foods, drinks or drugs, which can provoke asthma. Sometimes repeated infections of the lung, air pollution, smoking or emotional factors can also precipitate asthma.

When asthma is allergic, most of the times it is preceded by cold and sneezing. Initially asthma attacks occur either in the night or early morning. Later on when disease becomes chronic, it may become continuous in nature. Allergic asthma is usually seasonal and occurs every year during the same season. During an attack, patients complain of sudden breathlessness with cough and wheezing. By history, allergic factors can be found out but at times it is very difficult to elicit the causative factors.

Diagnosis of asthma can only be made by detailed history taking and examination. Various modalities of investigations only help in confirming the diagnosis.

From the treatment point of

view asthma is not curable but treatable. Drugs can relieve symptoms and prevent the severe attacks associated with asthma. Mild to moderate forms of asthma are usually treated with inhalers and tablets whereas the severe form of asthma requires hospitalization and injectable drugs with oxygen supplementation. Treatment is usually started with inhalers in mild to moderate asthma but if there is poor response or if patient is not able to use inhalers as per specification then oral tablets are substituted. Inhalers are preferred over oral drugs due to decreased incidence of side effects and they can be used for prolonged

periods.

The drugs used in treatment are essentially bronchodilators and steroids, available in injectable, oral and inhaled forms.

Hyposensitization has also been tried in asthma, but is only helpful in allergic asthma. Hyposensitization may be helpful only if a correct diagnosis of allergic asthma has been made.

Though patients with bronchial asthma can go in for life threatening emergencies, it is usually treatable and patients with bronchial asthma can lead a normal life if they take the medication regularly, according to the physicians advice.

Asthma and Environment

The causes of asthma may be genetic but the disease develops and persists as a result of changes in the environment and lifestyles. Asthma is therefore predicted to increase worldwide with growing urbanisation and industrialisation. It is believed that attacks were triggered by allergens.

Allergens are substances in the home or the workplace to which victims are allergic, such as dust, household pets, particularly cats, feathers, smells, tobacco smoke, pollutants. Stress too can cause an attack, it is added.

In the workplace alone, employees are exposed to some 200 substances that have been shown to be linked to asthma.

In Japan, for instance, "15 per cent of asthma in men is due to occupational exposure." Even worse, developing nations expose workers to risk "through unregulated occupational hazards," it is observed.

Asthma is an affliction of the air passages of the lung that makes breathing difficult, leaving sufferers coughing and gasping for air. In severe cases, air passages may shut off altogether. When that occurs, asthmatics inhale anti-inflammatory drugs to open passages.

Asthma is more prevalent in children than in adults, and more in boys than in girls. Although asthmatic conditions may subside when children reach puberty.

Homeopathy in Bronchitis

Dr. P. Ali, Pattambi, Kerala

Inflammation of the bronchial tubes is termed as Bronchitis. When the acute inflammation affects the trachea also, it is termed as Acute Tracheo-Bronchitis. Sometimes the inflammation spreads to the small bronchioles also. This condition is seen in Pneumonia.

ETIOLOGY : The causative irritant may be bacterial, mechanical or toxic. Bacteria like Pneumococcus, Streptococcus, Staphylococcus etc may sometimes cause bronchitis. Acute bronchitis may appear as a complication in many types of infectious fevers, e.g. in the early stage of typhoid. Poisonous gases, dust, steam, chemicals etc are capable of producing acute bronchitis when inhaled prolongly. Chronic bronchitis is affected as secondary to some pathological conditions of the heart, nasal sinuses or lungs, especially in people dwelling in damp areas. It is also prevalent in workers of dusty atmosphere like flour mills, tobacco factories, cement factories etc.

SYMPTOMS AND COURSE

The first symptom appearing in bronchitis is a rise in body temperature. In non-infections bronchitis, the temperature will be normal. General weakness and a dry or wet cough appears. This severe cough leads to dyspnoea and chest pain. In wet bronchitis profuse expectoration will be there. In dry bronchitis,

auscultation of the affected lung reveals dry rales whereas in wet bronchitis we get moist rales. Auscultation can determine how far the condition has spread. The nature of the sputum gives us a clear account of the type of inflammation. The sputum may be mucus, sero-mucus or sero-purulent. In advanced cases the sputum will be bad-smelling. It is putrid bronchitis.

Acute bronchitis due to mechanical or chemical factors will be relieved soon after the cause has been removed provided the bronchial wall is not too much affected. Chronic bronchitis, if not properly treated, may go on for years leading to emphysema or tuberculosis.

HOME CARE : The patient should be put to bed when his temperature rises. The restful position often reduces dyspnoea and gives relief to coughs. The room should be well-ventilated to get fresh air. The patient should be well-covered and not subjected to cooling. Smoking must be avoided. Hot drinks and hot milk can be provided.

HOMEOPATHIC TREATMENT

Homeopathy is very rich in the armamentarium for the treatment of bronchitis cases in all stages and types. The doctor takes the case in detail by considering all the variations in the patient, subjective and objective, giving weightage to all the modalities, aggravations, ameliorations,

desires, dislikes etc and determines the remedy according to the totality of symptoms, which will cure the patient within the shortest time without any harmful side effects.

Some of the often indicated Homeopathic remedies in bronchitis cases are Aconite, Bryonia, Kali bichromicum and Antimonium tartaricum.

Aconite : This remedy is prepared from the entire plant; *Aconitum napellus*, except the root, gathered during the flowering season. It grows on the higher Alps of Central Europe in damp shady fields. Its common name is Monkshood. Aconite is very useful in the early stages of Acute bronchitis. If this medicine is taken in time no other remedy is required in this case. Aconite is useful in the first stage of inflammation where the tissues are not much affected. It is the catarrhal stage. In the second stage of inflammation, where it is localised, Aconite has no action.

Bryonia : *Bryonia alba* is also an European plant. Its common name is Wild Hop. The medicine is prepared from the fresh root of this plant. This remedy is often required in the second stage of bronchitis where swelling is established in the bronchi. Intense thirst for large quantities of water at long intervals and aggravation by motion can be considered as the characteristic symptoms of this remedy. The

patient who requires Bryonia will be lying in his bed motionless, because the slightest motion will aggravate his chest pain, cough etc. Bryonia comes in after the Aconite stage. The Aconite patient is extremely restless and he will be tossing about in bed, whereas the Bryonia patient is quiet.

Kali Bichromicum : It is prepared from the Bichromate of Potassium which comes in large, orange-red transparent crystals. Homeopathic mother tincture (10% solution) is prepared by trituration and dilution. This remedy is useful in bronchitis when excessive secretion of tough mucus is seen. The tongue will be thickly coated. It indicates that the catarrh has involved the alimentary tract also. It is highly effective in chronic bronchitis where the sputa come up in long strings of opaque white mucus.

Antimonium Tartaricum : Its common name is Tartar Emetic. It is Tartrated Antimony. It comes in colourless transparent rhombic crystals which become opaque on exposure to the air. The Homeopathic tincture is prepared by trituration and then one part by weight dissolved in 99 parts of distilled water. Further dilutions made by succussion in alcohol. The main characteristic of this remedy is the large accumulation of mucus in chest which causes much rattling. The cough sounds loose, but no phlegm is raised. In chronic bronchitis, when this symptoms is present, Antimonium Tartaricum will cure the patient.

ARSENICUM ALBUM,
MERCURIUS, SILICEA, SULPHUR,
IPECAC and CARBO VEGETABLES
are some other remedies
occasionally indicated in
bronchitis cases.

Lifestyle of an Asthma Patient



Padmasana

Asthma patient must lead a regular life. Food, working hours and rest hours must be at regular time and any abrupt change in the routine of patient should not be made, abrupt change may increase patient's problems. Morning walk for asthma patients is good. If morning walk is not possible, he must do light exercise at home. Asthma patient should not smoke and avoid inhalation of smoke otherwise also. Smoke and suspended particles in the smoke may result in various other respiratory diseases. Drinking and smoking together increases the risks manifold. Asthma patient must avoid overeating.

Bed room of Asthma patient should be clean and airy. Bed room must have only minimum furniture so it can be cleaned daily. Any unnecessary articles should be avoided in this room.

Bedroom should be protected from outside noise.

Asthma patient should avoid air pollution and must take prescribed medicines at proper time. Asthma patient must avoid not only physical fatigue but also mental tension. He must not pile work for himself and avoid worry and tension.

Breathing Exercises

Muscles of respiratory tract get constricted in asthma patient, reducing lumen of respiratory tract. Besides this, inflammation of mucosa further constricts the lumen. This results in difficult breathing and peculiar whistling sound while breathing. Inhalation of air in asthma patients is easy but exhalation of air from lungs becomes difficult. So asthma patient must concentrate his attention on inhalation of air. He must make maximum use of stomach muscles and diaphragm for exhalation rather than chest muscles. Keeping head higher while sleeping and inhaling by constricting stomach is beneficial for asthma patient.

Asthma patient may practice Padmasana, Makarasana and Shavasana. Surya Namaskar, Jananetidant Sutraneti are also beneficial for asthma patient.

Diet for Asthmatics

Asthma advances in a definite preordained manner. Cold and coryza occur at first and then inflammation occurs in the bronchial tube and asthma settles thereafter without any premonition. Breathing, especially exhalation becomes torturous. When the attack becomes severe the patient starts panting and fighting with it. The patient is able to hear the sound of the wind arrested in his chest struggling to come out.

During the beginning, the attacks are fearful for the patient and painful for his family members. During this stage medicines are given to the patient to relieve his pain. Some medicines affect the bronchial tube directly and afford some relief but the relief is shortlived.

Actually there is no medicine that can cure asthma. Of course, there are medicines and measures that provide some relief and subside the symptoms to some extent but if these are taken incessantly then there would be no hope of exterminating the disease.

A patient having breathing problem should defecate more than he eats. For this the patient should undertake fasting. The emptiness of bowels helps greatly during a severe attack of asthma. During fits, vomiting occurs whereby the stomach becomes empty and then the patients feels relieved. If during the beginning

Bronchial Asthma : Prophylaxis & Treatment

- Avoid pollens wafting in air. For this, keep away from garden and open fields.
- Observe strictly the rules of diet. Do not eat anything that might cause allergy.
- Avoid too cold and too hot places. Do not live in a damp house.
- Try to keep your body temperature constant.
- It would be better to avoid hot water bath during the winter.
- Do not drive a scooter. Try always to avoid dust.
- Use fruits and vegetables after washing only.
- Avoid wine, smoke and cigarette.
- Perform such exercises that help to keep the process of breathing in proper order.
- Practice breath control. Have your meals at fixed regular hours only.
- Eat only those things that you can digest. Avoid indigestion by all means.
- Use nasal filter.
- Be cautious during the change of seasons.

of asthma the stomach is full with heavy diet then usually a fit sets in. So fasting immensely helps. The fasting should last three days to be effective. Relief will be directly proportional to the degree of emptiness of bowels. The fasting will test the will power of the patient and the test would be more severe while ending the fast and resuming food. Voracious eating after three days of fasting renders the fasting futile. It will do more harm than good and may help in creating fits of asthma.

It has been observed that in above circumstances eating single item diet proves beneficial. The patient should select a thing which agrees with his system and eat it a little. Potato, flour with bran or any other similar substance should be chosen. Eating should be done just to alleviate hunger. Any fruit or vegetable may be selected which may be followed by a protein substance like milk or curd. It would be better to take fruit for breakfast, bread and vegetable at noon and curd-vegetable fruit-milk at sundown.

Greasy heavy things and sweets prepared from derivatives of milk are extremely harmful to the asthmatic. Simple things that have to be chewed well are good for the asthmatics.

Dietary Control of Asthma

Vd. R.M. Nanal, Bombay

Balanced diet plays a very important role in the onset and cure of diseases. If balanced and regulated diet is practised, many diseases get cured or prevented by it, especially asthma. In Ayurvedic texts, it is clearly mentioned that stomach is the root cause of all the 5 types of Shvasarogas (asthma). Hence balanced diet is essential to be healthy and happy.

Pathya

(Good food)

Grain : Wheat, barley, red rice.

Vegetable : Ladies finger, brinjal, snake gourd.

Pulse : gram, lentil.

Meat : Cock, goat, rabbit.

Fruit : Pomegranate, grapes, lemon.

Milk products : Ghee, butter.

Salad : Ginger, onion, garlic, coriander, raw turmeric, radish, carrot.

Others : Cinnamon, clove, almond, sesame, black pepper, honey, asafoetida variety of liquors.

Apathya

(Bad food)

Grain : Maize.

Vegetables : Drumstick leaves, pumpkin; potato

Pulse : Beans, peanut.

Meat : Fish, sheep, duck,

Fruits : All fruits other than those mentioned under the Pathya.

Milk products : Curd, butter.

Salad : Cucumber, tomato.

Others : oily substances, tamarind, spicy food.

Preventive Measures

- Always eat fresh and hot food.
- Do not drink water liberally with meals and take water after half an hour of meals.
- Use warm water for drinking.
- Water boiled with ginger should be taken
- One table spoon honey, half spoon ginger juice, a quarter tea spoon of black pepper powder mixed together should be taken after meals.

Betel leaves should be taken with fennelseeds, clove, cardamom, arecanut catechu and lime after meals. Kapha accumulation during digestion is prevented by this.

- To minimise the accumulation of liquefied Kapha barley should be used regularly. As the barley is dry, it reduces the unctuous Kapha.
- Wheat and red rice should be used regularly during dry coughs in asthma.
- Cinnamon, garlic, ginger, cardamum etc. should be used in vegetable curries regularly. This makes the food tastier and is also good in asthma.
- Drakshasav, Mridvikasav, Madhvasav etc. should be sipped in thirst instead of drinking water.

- Radish, coriander, raw turmeric, onion etc. may be used as salad daily.

Chest and Gastric Troubles

Congestion in chest : 4 ladies fingers, 2 cloves & 1 spoon of celery should be boiled with 4 cups of water till 2 cups water remain. Cool and then filter. Take 2-3 times daily.

- Onion and celery should be ground together and foment chest and back with it.
- 1 tablespoon honey should be taken 3 times a day. Nothing should be taken for half an hour afterwards.
- Taking ginger, garlic, black pepper, Indian 'peppermint ground together in the form of chutney during meals is beneficial.
- Whenever congestion occurs in chest, one should sit on the chair and massage with sesame oil and rock salt the chest and back.
- Do not get exposed to wind and keep the body covered with woollen clothes. Hot water should be drunk. Vapours of clove, celery, turpentine or eucalyptus oil are beneficial.
- Taking a little ghee in the decoction of celery is good.
- Taking Drakshasav by mixing some asafoetida in it gives instant relief.

Asthma and its Treatment

Dr. Ananta Kumar Acharya, Orissa.

Asthma is nothing but difficulty in breathing. Most asthmatic attacks are mild, last for a couple of minutes to hours. It may be an independent disease or symptom of ailments. In this respiratory difficulty particularly expiratory wheezing and prolonged laboured expiration is manifested clinically. The respiratory rate is greatly increased but most notable is prolonged expiration which indicates the obstruction to the outflow of air created by the secretion. According to Dosis theory of Ayurveda Svasrog occurs due to aggravated Kapha (phlegm) with the combination of Vata dosha (air).

It is the disease of Pranavah Srotas (Respiratory tract). But according to Vagbhatta it is the disease of Pranavah Srotas as well as Annavah Srotas (Gastro intestinal tract). When agni or digestive fire becomes vitiated the excretion of people increase beyond proposition and gives rise to different diseases.

Mandagni is the commonest cause of Svasrog. In Mandagni or lower digestive fire less amount of Pachak Pitta (hydrochloric acid) is secreted in the stomach. So it hampers the digestion of food and creates the Amaras. This Ama takes vital part in Svasrog. It is seen in Asthma patients that if they take heavy diet or proteinous diet, asthma starts vigorously. In British Encyclopedia it is described "As the commonest cause of indigestion, an

Asthmatic is deficient in secretion of HCl." In modern point of view vagus nerve is supplied to stomach, duodenum, heart, lungs etc. If there's indigestion or gastric distraction it may irritate the vagus and so set up a reflex bronchial spasm.

There are many predisposing factors for asthma. Some of them are:

Age : It affects people of all ages. But the majority of cases are seen before the age of 25 years and after 50 years.

Climate : Patients usually feel better in dry climate and reverse in cold climate or coastal climate.

Hereditary : Asthma runs in families and has got a hereditary predisposition.

Allergy : Hypersensitiveness to a foreign protein. Some other foreign substances such as bacteria, certain drugs, animal emanation or vegetable products chemicals etc are known as allergy which create the asthma.

Reflex : Reflex irritation of vagal centre caused by particular food causes asthma; cutaneous reflex due to urticaria, eczema, are associated with asthma; Genito-urinary condition in women i.e. ovarian and uterine disorders may induce asthma.

Contributory Factors : A wide variety of agents such as gasoline turpentine fumes, smoke, emotional stress and physical trauma contribute onset of this attack.

Ayurveda emphatically states that this disease is the outcome

of indulgence in Mithya Ahar-Vihar unwholesome or unhealthy foods and activities which elevate Vata-Kapha. Being vitated it hampers the functions of the vital organs i.e. bronchus, heart, liver, intestine, nerve etc. We identify asthma as related to the organ accordingly.

Treatment

The patient should avoid the causative factor of the disease.

- Extract juice of *Euphresia prostrata* (Dugdihika) in the dose of half ounce daily is helpful in the disease.
- Anterdhoom Ark Bhasm (The ash of *Calatropis procera* in Anterdhoom process) 1-3 gm with honey 4 times a day has good effect.
- The powder of Karkat Shringi (*Pistacia integerrina*) dose of 5 gm twice daily acts better in late stage of asthma.
- Dasmul, Puskarmul and Vasa decoction in dose of 30 ml should be taken daily.
- Swas Chintamani dose of 250 mg with endosperm of *Terminalia bellerica* should be taken.
- Vyaghriharitiki in the dose of 5-10 gm, Swas Kuthar Ras in 250 mg twice daily as well as Kanchanar 15 ml with equal amount of water twice after food has good results.
- In Asthma, to eradicate

Jeevaniya Respiration

Agnimandya, after completion of lubrication and sudation therapy, emesis (Vaman Karma) is done to eradicate Kaphadosha.

- Lavanbhaskar and Kapard Bhasma in the dose of 5 gm is taken with hot water after food.
- Vrihat Sunthi Kand 5 gm twice daily should be taken with hot water.

Regimen for the Patient

- The patient must prefer pure air in an open field. He can walk in the morning for an hour, facing towards the mild sun. This process may be avoided during the rainy or cold weather.
- The practice of deep respiration through one nostril for 12 times and the same through other (Pranayam) is the best practice for asthma.
- Asanas such as Sarvangasan, Padmasan, Baddhapadmasan, Janu Sirshasan which have effect on abdomen and chest help.
- The water kept in green bottle should be taken by the patient in acute condition after keeping it in the sun for 12 hours. Similarly the oil prepared in red bottle should be taken for the massage of the chest.
- Besides, in early stages of the occurrence hot lemon juice with honey is taken to be relieved from congestion.
- Head bath, Souna bath, exposure to cold should be limited at one's best.

Homeo Treatment of Dyspnoea

The human life is going awry due to the rising crisis of environment or pollution, whereby the number of diseases and patients is going up. The main cause of breathing troubles is allergy. Allergy is caused by food and also by the particles of dust present in the atmosphere. It is necessary to find out the cause of allergy and then avoid it. Then only treatment can be effective.

In homeopathic treatment the chief medicines for breathing problems are **Aconite, Arsenic, Grindalia Antim tie, Lobelia, and Digitalis.**

Homeopathy provides complete cure in pneumonia among the children. Even in adults if the disease is of recent origin and has not become chronic then homeopathy gives satisfaction. The satisfactory point about homeopathy is its efficacy when the precise cause is known.

Most of the homeopathic medicines have no harmful side effects. Moreover these

medicines cure the disease completely.

Allergy may be caused by food, drinks and just by smelling. Allergy is nothing but the way of driving something out of the body that is not acceptable to the body by way of disease. The best way of protection is to avoid the thing. Whether it is an item of food or drink, or some atmosphere, some contact, some fragrance that causes an attack of dyspnoea or asthma. Allergy has become a very common disease nowadays. The problem of pure environment has come up in cities and the air is mostly polluted. This pollution has caused many diseases and one of them is dyspnoea. Destruction of forests and human tampering with the environment are the chief causes. The flora has to be preserved not only from the point of view of environment but also from the point of view of treatment and health.

Sore Throat

Vd. A. P. Achal, Gaya

Throat is a very sensitive limb of the body. Tonsil and adenoid glands are situated herein. It is made of flesh. Its inflammation, burning and being wounded is termed sore throat, hoarse voice, throatiness, inflammation of throat etc. Whenever we misuse the throat, we have to suffer for it in the form of sore throat.

Sore throat may vary in its intensity. When it is acute it refuses to function at all. And then neither we are able to speak clearly nor we can swallow anything easily. We feel mild pain and prickly feeling at the throat. Sore throat can become chronic if neglected. Then it becomes complex and hard to cure.

Causes of Sore Throat

Sore throat may be due to one or many of the following reasons:

- Misuse of voice such as made by singers, speakers and shouters of slogans
- Excessive consumption of chillies, spices, pickles, vinegar and other burning substances
- Use of extremely hot tea, coffee.
- Taking cold things just after hot things and vice versa such as taking ice-cream after coffee or otherway round
- Smoking and drinking wines
- Inhaling of stimulating or obnoxious fumes and vapours advertently or otherwise
- Drinking too cold drinks such as fridge water, iced syrup, aerated drinks or just after becoming too hot in the sun

- Sudden exposure of throat to cold
- Defects of Tonsil, Adenoid, Trachea etc.
- Hurt or infection
- Allergy or Asatmya (non-agreement of any substance)

Signs and Symptoms

Initially there is redness in the larynx, pharynx and in their vicinity. Mucuous membrane is swollen. Difficulty in swallowing occurs. Tingling feeling in the throat, light cough exists.

These symptoms, upon being neglected, take, serious turn. Initially the cough is dry but later phlegm appears. Throaty voice is produced. The voice emerges with difficulty. At times, voice almost vanishes for some days altogether. Burning and dryness is felt at the throat. Difficulty in swallowing solid substances. Sometimes it really aches.

Treatment

In Ayurveda, the first and foremost treatment comprises avoidance of the causes of disease. If the cause persists, no treatment would do. If you would use the throat with discretion, you would not be a prey to the disease. But it does not happen like that. It is quite usual to loose sense when in heat. To loose all control in eatings and drinkings is a fashion nowadays, especially among the neo-rich people. So sore throat is becoming quite common.

If you have come under its spell then immediately follow the following instructions :

- Give complete rest to the throat
- Take simple, light diet especially in the form of liquid
- Do not take food and drinks likely to cause burning in the throat
- Gargle three times a day with warm salted water
- Inhale warm vapours. Add a pinch of camphor or vaporub to the water for better results
- Foment the anterior throat externally
- Give up smoking and drinking wine
- Give up allergy causing things

It is just possible that your ailment would disappear by these simple measures. If the trouble has rather increased then chew little pieces of Kulanjan, liquorice, Khadiradi vati, Karpooora vati etc. Swallow the juice thereof. If no relief ensues consult a competent physician.

The Wonder Drug for Alcoholics

Yes, just that is what the new medicine is expected to do effectively-eliminate the lust for alcohol.

Extensive testing have established its effectiveness beyond doubt and the USA Food and Drug Administration (FDA) has already licenced the medical product, naltrexon, for treatment against alcoholism.

This is the first time that a medicine against alcohol problem has been approved since the only other product for such a purpose, antabus, had been introduced.

The Crazy Coryza

Coryza is an ordinary sickness but becomes painful by negligence. This is a disease of digestive system, symptoms of which appear in the mucuous membranes. Inflammation in the large intestine, mucous in faeces, chronic dysentery etc. are nothing but the consequences of chronic coryza. The coryza of throat and nose expands to ears.

Causes

Not wearing proper clothings in winter, in summers going out in severe sunshine and returning after being drenched in sweat and immediately drinking fridge-cold water, partaking of cold and stale meals, drinking water just after eating greasy things, eating things sold open in markets, using the hanky of someone who is suffering from coryza are some of the chief causes.

Having caught cold, the pores of the body (Srotas) become blocked. Due to this the waste matter inside the body is not able to come out through them. Then nature distends the membrane of the nose and thus the polluted matter comes out as water with the phlegm; which phenomenon is called coryza.

Symptoms

This is a contagious disease which begins with the children of the family and subsequently attacks the elders. Sore throat, coated tongue, blocked nostrils, running nose, dryness in throat, palate and lips, itching, aching temples, hoarseness in voice,

thirst, temperature, heaviness in the head, loss of smelling faculty and occasionally bleeding through the nostrils, sneezing, reddening of eyes and flow of water through them, increased pulse rate, loss of appetite, bodyache and dry cough are the chief symptoms.

Treatment

- Boil 4-6 cloves of garlic in a cup of water fill tender, strain. Add salt and a pinch of ground black pepper. Drink as soup to ease congestions in the nose.
- In the south, tamarind-pepper Rasam is a standard prescription for cold. To make it, heat a teaspoon of ghee and add half a teaspoon of black pepper powder. Before the pepper chars, add very diluted tamarind water to the pan and boil for a few minutes. Throw in a few coriander leaves. As one drinks this steaming hot Rasam, the nose and eyes water. This is followed by sweating and the breathing becomes much easier.
- An excellent remedy for a dry, hacking cough with or without cold, is a thin version of halwa made with semolina, desi ghee and jaggery. Drink hot at bedtime. Not to be followed by a drink of water or exposure to night air.
- Few drops of fresh ginger juice in a teaspoon of honey licked slowly, helps an irritated throat.
- For dry cough, boil 250 gm chopped ladies finger in water and sip the liquid.
- The chronic cold patients should soak 5 almonds in water in the night and peel and eat them in the morning.
- Massage hot mustard oil on the underfeet at bedtime.
- Boil a cup of water add a pinch of powdered turmeric and salt and drink thrice daily. The cough will vanish in two days.
- Gargle with warm saline water several times a day. This will remove the phlegm stuck in the throat and nose.
- Boil finely chopped half kilo spinach leaves, 250 gm carrot, 250 gm tomato, 10 gm ginger and some leaves of green coriander in one litre of water for half an hour. Strain and drink in three instalments in a day. This will clean the bowels.
- Take to fasting for 24 hrs as soon as attacked by cold and coryza. Lick as many cut limes as you can or squeeze it in ordinary water in summer and rains and hot water in winters and drink as many times as possible during the fasting. Next day take juicy vegetables and their soup in breakfast and lunch and take plenty of orange, mozambique, grapes, pineapple, pomelmoose etc. Boil raisins in milk and drink the milk while chewing the raisins simultaneously.

Nature Cure of Coryza

The proper cure of cold, coryza is by cleaning of the body. For this, bowels should be cleaned by taking enema with warm lime juice water. The enema should be repeated till the body is free from all scum and the abdomen has become clean.

The nature cure advises fasting and fruitarianism till all the symptoms of coryza are subsided. If fasting is not possible then live on fruit juice for two or three days. Take fruit juice in the morning, evening and noon and take bed rest and drink hot water whenever thirsty. Take enema daily to cleanse the stomach. Within three days one will be completely cured.

A patient of coryza should cleanse his nostrils and throat by Jal-Neti and Sutra-Neti and thereafter perform Kapal Bhati Pranayam.

Hot water bath of the feet cures even the most chronic coryza. For this immerse the feet in hot water for twenty minutes. Take water in a bucket. Sit over a chair and dip your feet upto the knee in hot water.

The above treatment dilates the arteries of the feet which now need more blood. So wherever there is obstruction in the circulation of blood that will be removed and consequently pain in that part will be reduced. The obstruction may be in the form of asthma, headache or jabbering due to Vayu however the hot bath of the feet will relieve it.

Wholesome

- Take one glass of warm water

in the morning to which one lime has been squeezed and two spoon full honey and one spoon full ginger juice have been added.

- For breakfast take any one of the following fruits-grapes, apple, guava, orange, papaya, cheeku etc.
- As lunch take boiled

vegetables or fruits (except banana).

- At 4-5 P.M. take vegetable soup or fruit juice.
- At night take fruits only.

Unwholesome

Milk, butter, cheese, chocolate, coffee, tea and dishes made of Maida and white sugar.

Watch out for Danger Signals

The first symptom of asthma in children is only coughing that occurs at night-time and persists over weeks or a season. This may not be accompanied by wheezing or breathlessness. The physician may label it as bronchitis or allergic bronchitis, either because he has not deciphered its true nature or is not inclined to reveal to the parents the true identity of the disease.

In older patients - those in whom the symptoms occur for the first time after the age of 40 - cough with phlegm which is difficult to bring out and breathlessness on exertion are the main symptoms. The attacks of breathlessness that occur in adults are not common among older people. Further, sometimes, it is difficult to recognise asthma in older people because other lung

disease such as chronic bronchitis and emphysema in smokers produce symptoms very similar to those of asthma. Even some of the heart diseases, such as those that occur due to high blood pressure, may cause symptoms akin to asthma.

Coughing, wheezing and breathlessness - the key symptoms of asthma - are caused by the allergic reaction that occurs within the body because of interaction between a foreign substance, the allergen, that enters the body and the antibody immunoglobulin E (IgE) produced in abundance in those who have inherited the tendency. The allergen-antibody reaction releases substances that affect the inner lining and the walls of the lungs' bronchi.

I am yours truly, cough

Vd. Ayodhya Prasad Achal, Gaya

Though I am known among the common folk as cough, Ayurvedic people lovingly call me Kasa. It seems the name is due to my voice, which resembles that of cracked bronze (Kamsya). From the point of view of extensiveness, my name should be high up in the list of diseases, if not at the top. I do come solitarily as well, but I also accompany other diseases. I am related as body is to the skirt with diseases like cold-coryza, asthma, tuberculosis etc.

I never attack by stealth as do some mean diseases. It is not in my nature to attack clandestinely. I always attack openly. When I approach someone, then not only that person but all the persons around him become aware of my presence. At times my voice is so sharp and harsh that everyone who is around is dismayed. And sometimes it is so mild that only he knows who is possessed by me.

There is no fixed time of my arrival. I reach anyone anywhere at any time according to my own sweet will. I pester rather more when I arrive at nights. Due to this reason people get irritated with me. I cannot help it. I am bound by my nature.

Sometimes when I arrive at embarrassing moments people try to snub me. The more they try to suppress me, the more uncontrollable I become.

Though the experts of Ayurveda talk of five types of yours truly such as Vataj, Pittaj, Kaphaj, Kshataj and Kshayaj, but generally people know me by two varieties (i) dry cough, wherein a lot of noise is produced but

nothing is produced and (2) moist or wet or phlegmy. In the latter variety, phlegm emerges with the attack of coughing. In some cases phlegm is associated with blood as well. It happens generally in Kshataj and Kshayaj Kasa. Even the physicians give some importance to these two forms. Two more of my forms are interesting from the point of view of treatment. The senile cough of old age and whooping cough of childhood. I am so attached to old people that I never quit some of them till their end. Among the children I go only to those who have not had triple antigen inoculation and whose parents do not take proper care of them. I generally quit them as soon as the parents are alerted. I have a weak heart for the children.

It seems you consider me as your enemy. That is why you are treating me in an ungentlemanly way. So far you did not ask me as to why I take the trouble of coming near you. What is the purpose of my visit. And what is the route of my arrival. And how do I depart. How much trouble I have to take in arriving and departing.

Ho! you are silent still! There is a limit to unkindness. Well, you may keep silence. But I shall not depart without having my say.

The first thing is that I am your friend and not an enemy. I am your sympathizer. Whenever I approach you it is to release you from some mishap. This mishap may be internal or external. The chief external elements are dust, smoke, vapours, particles of food in the trachea due to carelessness while eating etc. The chief internal elements are the semi digested

juice propelled by wind towards the mouth, phlegm stuck to the throat, trachea etc. If these things are not removed well in time then they concentrate and block the respiratory tract.

I arrive in order to accomplish this task. Sometimes I feel it my duty to warn you against your enemies such as tuberculosis wound, cancer, tumour, pleurisy etc. If you take the cue and are alerted then you may be saved from some forthcoming calamity. Otherwise if you do not heed it or ignore it then may God help you.

At times, when you speak in a strident voice for a duration longer than your strength would permit you to and thus torture your throat, I come to oblige you to desist from it. When you are tired after working beyond your strength even then I have to come perforce to protect you. Now decide yourself as to whether I am your friend or foe.

Now a question must be flashing in your naughty mind that how can an ordinary and insignificant personage like me, of the extensive realm of diseases can perform such an important job. Perhaps you are not aware that when dust, smoke, bacteria, infection etc. enter the respiratory track and vitiate the oxygen then its duty of doing its regular work is rendered difficult. The defects created inside the body also create such obstructions. At such times Pranavayu and Udanavayu try to expel these antibiotics out of the respiratory tract by force. And the foreign bodies resist their efforts as best as they can. Pranavayu exerts more strength. In this tug-of-war production of

noise is but natural you must have seen labourers working. Whenever they exert force they do so with a slogan 'zor laga ke haiyya !' The same is done by Pranavayu and Udanavayu to exhort each other. Ayurvedic people have compared this noise with the sound of broken bronze 'Khon-Khon', 'Thon-Thon'.

Whenever I come near you I come after warning you of my arrival. Dryness in the throat, delicate pricking, slight pain and sometimes difficulty in swallowing are the premonitions that should alert you of my imminent arrival. Even then if you do not heed it is not my fault.

At times, no sooner than I arrive, I find you frowning and start taking powders, tablets, syrups etc. on hearsays like illeterates so that you could shake me off. This is no way to get rid of me. You must give me some time at least to tell my story.

Take any step you like only after knowing the purpose of my visit. If you are not able to perceive it then consult a competent physician. He may be able to diagnose correctly. He may be able to raise the curtain and reveal the secrets.

It seems you have not learnt the tricks of controlling women. To control me you have to identify my weak spots. The sites where I reside hiddenly. It is too much ! I have to reveal them as well. My weaknesses are - brain (centre of cough in the meninges), throat, chest and lungs. Control them, make them pure and spotless - and I shall be controlled easily. However, you need proper guidance in this as well. Otherwise you may again be deceived.

I hope, you will never neglect me henceforth and you will not consider me ordinary. Well, good-bye!

Why Does One Pant ?

The number of the patients of cough and breathing problems rises with the beginning of October. The asthma may begin during infancy or at about the age of fifty. During this season patients mostly complain of bronchitis and Bronchial asthma. Maximum patients complain of cough and breathing trouble and some patients complain of whistling sound during breathing. Some patients complain of coryza round the year. Many patients complain of running nose and some complain of blocked nose while still others say they feel some fleshy excrecence inside the nose. Some patients complain of incessant and profuse sneezing and some say they have itching and redness in the eyes. Many patients say they have had coryza since long time which has now taken the form of dyspnoea.

Some patients complain of pricking, burning, rustling, rattling defect in the throat and even coughing. Some patients complain of being out of breath in a particular season, mostly winter, and others complain of being out of breath round the year. But the latter say that their problem becomes more acute during the beginning of winter. Many patients get up from sleep at midnight or small hours and rush to their physicians.

The bronchi of the patients of asthma happen to be more sensitive than that of normal persons and become extremely constricted with change of season or contact of hot or cold air, dust, smoke, pollen grains, minute worms and dust of furniture, curtains, cooking gas, fragrant snow and powder, vapours released during frying fibres of grass, jute or wool, feathers of birds etc and start ejecting plenty of mucus. The mucus membranes get swollen as

well. According to modern research, the main defect is the inflammation of bronchi. Due to swelling, the air is not able to enter and exit freely through the passage within the tubes and breathing troubles ensue.

If the patient suffers dyspnoea all round the year and does not take proper medicine, or is careless about it then the size of the lungs increases so that the right lung gradually grows in size, the liver also gets enlarged and the patient complains of pain in the upper portion of stomach, indigestion, gas formation, constipation, distention of stomach, weakness, inflammation in the legs, urine deficiency, etc.

Many patients with breathing problem go to bed in a normal way but get up about 5 A.M. with a severe attack of cough and breathing problem. Some go for walking in the morning and return home after some time with panting due to the contact with cold air. Some patients have their breathing problem aggravated after taking some eatable like kidney bean pulse, rice, curmd, buttermilk, egg etc.

The first symptom of breathing sickness is cough. Many patients start taking cough syrups and other cough remedies in the absence of any problem of breathing.

Many patients of asthma complain of stiffness lightness, heaviness and mild pain in the chest and also of frozen phlegm. They usually exert much force to eject the phlegm, inhale vapours or take expectorants. They say the phlegm is frothy and white; whereas after bacterial infection it turns thick, yellowish green and foulsmelling.

Tonsillitis in Children

Pt. K. G. Gore



The tonsils are a pair of rounded structures present at the back of the throat. They form part of the lymphoid system - the defence system of the body. The body has a fool-proof security system that constantly looks out for all intruders and invaders. The security guards of this system are the lymphocytes. The lymphocyte is a small, innocuous looking cell which nevertheless has immense potential. These lymphocytes are aggregated in some places to form lymphoid organs. The tonsils are one such pair, they act as local watchdogs in the throat checking any infection that may choose to enter through the oral route.

Enlargement of the tonsils does not always mean they are diseased, they may just be fighting an infection. However, at times they get infected - this is called tonsillitis and calls for treatment.

Tonsillitis is most common between the age of three and

seven. At this age the entire lymphoid or immune system is on the alert as the child is just getting acquainted with his environment.

Tonsillitis should always be treated. The organism could well conceal a streptococcus with its attendant dangers of rheumatic fever and kidney disease.

The big, worrisome question that faces every parent is whether the tonsils should be operated upon or better left alone. Tonsillectomy or surgical removal of tonsils does neither decrease the frequency of colds, sore throat nor does it improve growth in children. In fact, we may well be removing an important defence system of the body. Tonsillectomy is definitely advisable if the child suffers from severe infections repeatedly.

First signs

1. Pain in the throat, especially on swallowing.
2. Redness in the throat.
3. Sometimes the child may complain of pain in other organs like the ears or the tummy.
4. Fever, headache.
5. A small child will be feverish, fretful and pull at his ears.

First Steps

- Try to bring down the fever
- Cover the child's neck with a warm muffler.
- Lozenges are soothing
- Salt water gargles are a positive help if the child can manage them.
- Take the child to the doctor.

Practicalities

The child should be given lots of warm fluids to drink.

Do not force solid foods as swallowing is painful. Liquid diet is advisable.

Follow the advice of doctor

Be careful of the complications that might develop a couple of weeks later. Is the child overtired lethargic or sweating hard? Does he complain of chest pain?

Anti-bacterial Lemon Juice

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

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

Smoking and Breathing

Dr. Rajendra Prasad, Lucknow.

The most common factor predisposing one to various respiratory illnesses is smoking. The increasing incidence of female smokers and of passive smoking has added to the rising prevalence of various respiratory diseases. Smoking can lead to cancer of the lungs, oral cavity, pharynx, oesophagus, kidney and urinary bladder. It can also lead to chronic bronchitis, emphysema, pancreatitis, peptic ulcer and an increased risk of ischaemic heart diseases.

Tobacco smoke contains over 3800 constituents all of which have potentially detrimental effects on the smoker. It is estimated that in India roughly 50% of adult male population and 5% of female population smoke one or the other forms of tobacco.

Smoke being an irritant, causes chronic bronchitis in early stages and may lead to emphysema as time progresses. Development of chronic bronchitis depends on various factors viz. duration of smoking, amount of tobacco smoked per day and the method of smoking. A person who starts smoking at an early age or who smokes for a longer period is more likely to develop chronic bronchitis. Siblings of smokers have an increased incidence of respiratory illnesses.

Patients with chronic bronchitis are usually male aged forty years with a long history of smoking. The illness is characterised by cough with sputum on most of the days for 3

consecutive months. Later on, patient develops breathlessness with exacerbation of symptoms in winters. As disease progresses further these attacks become more frequent and patients remain breathless throughout the year. These symptoms should warn them about the impending danger. They should stop smoking and must consult a chest physician. If a smoker gives up smoking early, before the onset of breathlessness, prognosis is good. Although, lung once damaged will not recover, further deterioration of lung function is prevented.

Lung cancer is one of the most malignant tumour of the body. Bidi and cigarette smoking is by far the commonest cause of lung cancer. 78-94% of lung cancer deaths are attributable to smoking. Smokers are 8-20 times more likely to develop lung cancer than life long non smokers. The risk of death from a lung cancer is also related to the number of cigarettes/Bidis smoked, age of starting and duration of smoking. Those who start smoking at young age have a higher risk of lung cancer than those who start smoking later in life. Furthermore bidi smoking seems to be as harmful as cigarette smoking. The risk of developing lung cancer declines progressively with time following cessation of smoking. It has also been shown that not only active smokers, but also passive smokers have a high risk of lung cancer.

Development of new symptoms or worsening of

previous respiratory status in a chronic smoker should arise the suspicion of cancer. The symptoms of lung cancer are - decreased appetite, loss of weight, cough with or without sputum, blood in sputum, hoarseness of voice, difficulty in swallowing, sudden onset of breathlessness, severe chest pain or swelling over face or chest wall.

Prognosis is generally poor, death occurs, usually within 2-5 years even with treatment. The surest way to prevent death from lung cancer is to prevent lung cancer itself by stopping cigarette smoking. It is appropriate, therefore, to say 'you may have either life or cigarettes; you can not have both.'

Headband For Headache

A headband for migraines? The idea came from patients pressing on their temples to help ease pain, said Dr Nazhiyath Vijayan, a neurologist and headache specialist in California. He developed the band - made of elastic and secured with Velcro - as a way to apply continuous pressure. Firm rubber discs can also be inserted to put more localized pressure on areas of maximum pain.

According to a recent study, the band eased 87 percent of headaches experienced by 23 patients. "There's some dilation of blood vessels during migraines," Vijayan said, "Applying pressure compresses the vessels and helps alleviate the pain."

Pulmonary Tuberculosis

Dr. Rajendra Prasad, Lucknow.

Tuberculosis still remains a major public health problem especially in India, in spite of more than 100 years after the discovery of the causative agent of this disease and even 50 years after effective diagnosis and treatment became available for this disease.

Hundred million people are infected with *Mycobacterium tuberculosis* every year in the world. Out of them 20 million develop active disease annually. Three million people die every year because of tuberculosis in the world. Out of these 3 million deaths, 2/3 are from Asian countries. 14 million people in India are suffering from tuberculosis. Out of these 3.5 million are sputum positive and are spreading disease to the others. Five lakh persons die every year due to tuberculosis in India. As tuberculosis primarily effects adults in their most productive years the economic loss due to the disease is phenomenal.

Causative agent for tuberculosis is *Mycobacterium tuberculosis*. This disease can occur at any age, it can affect any sex. Disease is more or less equally distributed in urban and rural areas. Poverty, illiteracy, ignorance, overcrowding, poor sanitation, malnutrition and repeated pregnancies are the non specific determinants of tuberculosis.

Symptoms of tuberculosis are fever, tiredness, night sweat, loss of appetite, loss of weight and amenorrhoea in females. Cough

with minimal expectoration, hemoptysis and chest pain are also common symptoms in most of the cases.

Sputum smear examination for AFB is good standard test in the diagnosis of pulmonary tuberculosis. Sensitivity of this test is 45 - 55% and specificity is 99.5%. Radiology is suggestive of pulmonary tuberculosis but not specific.

There is no role of bed rest and extra nutritious diet in the management of tuberculosis. Hospitalization is required in specific conditions such as (a) tuberculosis associated with emergencies e.g. hemoptysis, pneumothorax, tubercular

meningitis, corpulmore (b) Tuberculosis associated with empyema and diabetes mellitus (c) difficult resistant cases (d) Diagnostic dilemmas. Multiple drugs (2-4 drugs should be used to prevent resistance and it should be administered in single dose for optimal duration. Treatment should be continued upto 1.5 - 2 years in long term treatment or 6 - 9 months in short course treatment.

It is a well known fact that tuberculosis is 100% curable disease today provided good treatment is prescribed by doctors and prescribed drugs are taken by patients regularly for adequate period.

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Causes of Pulmonary Tuberculosis

M. Ahmed, R. K. Sharma & P.C. Tripathi, Calcutta

Rajayakshma is a chronic debilitating disease of Pranavaha srotas characterised by Kasa, Urahsada, Sosa, Rakta-sthivana etc. The features are identical to those of pulmonary tuberculosis.

Sushruta has described Rajayakshma as Kulaja-roga. Persons of Vataj or Vatakaphaj Prakriti are more prone to contract this disease as such persons have minimum immunity.

Inhabitants of hilly regions are found to become susceptible to it when they come down to plains to live and earn their livelihood. Masons, quarry workers, knife grinders and costermongers are more liable to contract this disease.

Hospital staff and social workers who have repeated contact with tubercle bacilli run the risk of contracting this disease. Persons who have to talk much carry heavy weights, read much, travel much also become prone to it.

Pulmonary Tuberculosis

A man who has become sick of pulmonary tuberculosis gradually turns weak, coughs and expectorates and spits blood and eventually quits the world for heavenly abode. If the pulmonary tuberculosis goes undiagnosed in the beginning then it may also cause other complications like pleurisy, meningitis etc.

This is a contagious disease. When the germs enter the body the body cells create a wall of defense around it so that the germ does not spread the disease. The structure thus created is called a tubercle. If the germs survive inside the protective wall then it is called arrested lesion and if the germs die and fibres are formed in the infected part and calcium settles on it then the spot is called healed lesion. But if the bacteria do not stay arrested inside the wall but spread beyond it then it is called active lesion and the site becomes a centre of contagion.

No symptoms are revealed in the initial stage. Lack of appetite, loss of body weight, light fever—especially in the afternoons, weakness, frequent cold and coryza occasional pain in the chest and throat etc. indicate this disease.

The bacteria are so tough that it is very difficult to destroy them. The germs stay alive for six months after the spitton has dried up. In water and butter they flourish even longer and in the milk they stay alive as long it is drinkable. That is why the spitton of the sick and cow's milk are the best and infallible means of spreading the disease.

The disease attacks the poor with more felicity than the rich as the former can ill afford nutritious diet and healthsome living and as

such lack in proteins, fat, vitamins which impart immunity to the body.

The best pathy to treat this dread disease is the modern pathy wherein besides medical treatment it is always possible to remove the diseased tissues by means of surgery.

Pulmonary tuberculosis is no longer an incurable disease. As soon as symptoms become evident, it should be properly diagnosed. One should not indulge in self-medication in case of persistent cough. The medicine may suppress the symptoms without eradicating the disease.

Do not stop medicines as soon as the symptoms disappear. The patient must observe those rules which preclude the spread of the illness.

The nasal secretion, spittle, urine and faeces of the sick are infested with germs which should be destroyed. The patient is advised not to swallow his sputum nor to spit anywhere on the floor because the germs live for months in the sputum and enter anyone's breath with a gust of wind.

It is imperative to cover your mouth while sneezing and coughing so that saliva does not fall on the ground and its particles enter somebody's nostrils by being air-borne.

Terror of T.B. in India

According to a report of WHO at an average 720 people die of T.B. everyday in India. Here only 10-25 percent cases get treated and the rest freely mingle with the healthy people of the society. Mostly the sick people generally work as domestic servants, ayah, labours, midwives and waiters.

The state of children is worse still. Primary complex is now very common among the rich as well as among the poor alike. Working women feel carefree after consigning their children to some tuberculous Ayah. The future of such children is bleak whose parents have no time for them.

The root cause is a bacteria called *Mycobacterium tuberculosis*. It passes from the coughing mouth of a patient of T.B. into a healthy person's body through his breath. The invention of streptomycin injection made it curable. Invention of the B.C.G. inoculation engendered the hope of its eradication. Now we are again facing the danger of this disease.

Pulmonary tuberculosis has caused havoc in this country. It is called primary complex when it occurs to children. If not treated properly it takes the form of pulmonary tuberculosis. Due to this decay, shrinks and abscesses are formed in the lungs which occasionally burst as well.

Bleeding cough is a sure sign of tuberculosis. Generally people do not go to a physician for chest pain cough, fever etc. They go to a physician only when they are in a wretched condition. 25 to 30

percent patients spread the germs in the atmosphere through his spittle.

Drinking polluted milk may cause the tuberculosis of intestines, constipation, frequent bouts of dysentery, gas formation and distension of stomach, rising of windball etc. are its symptoms. If it is not treated properly then obstruction, contraction and perforation of intestines may occur. In such contingencies the only way is the surgical one.

Tuberculosis : Reversal in Decline

The reversal in the decline of tuberculosis during the past few years has been widely publicised.

The World Health Organisation has declared a global emergency in light of the rising incidence of the disease in developing countries, where the interaction between tuberculosis and AIDS can be devastating. In Zambia for example, two thirds of patients who are diagnosed as having tuberculosis are HIV positive. But the problem is not confined to developing countries.

In some American cities rates have risen alarmingly and strains resistant to multiple antibiotics have emerged. Notifications of tuberculosis have also risen in Britain since 1987, with drug resistant isolates increasing from 8% in 1987 to 14% in 1991.

Bathing for Cure

Courtalam in southern Tamil Nadu enjoys a special place in the tourist map due to its waterfalls which not only have medicinal properties but are also said to be the only place all over India where one can directly bathe under cascading heavy water columns.

There is even a belief that the water of these falls helps in curing mentally retarded persons. In fact, the authorities of one or two asylums which have sprung up here, take their inmates for regular bath to these falls.

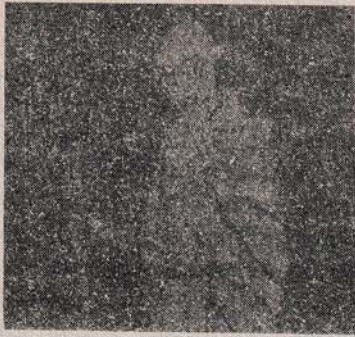
But on the realistic plane about the medicinal properties, it is said that a batch during the season will drive away even the

severest cold a person is afflicted with. "A person constantly sneezing due to cold can safely take a bath here, not only once but as many times as he likes, thanks to the medicinal properties of this water."

A heartening thing about at least five of the falls here is that even in dry seasons of April and May, there will be water in them.

The beauty and the therapeutic value of the place during the season time, which reaches its peak in later part of June, July and August, ensures that the number of visitors to this picturesque picnic spot crosses at least one lakh per day during Saturdays and Sundays.

TOBACCO, THE TABOO



Tobacco has simply wreaked havoc among mankind. Once caught in its tangle, it is rare to find anyone get out again. The use of tobacco is prevalent all over the world in one form or another. Tolstoy has called it the worst of all intoxicants. This verdict of that great man should command our attention and respect. He had freely indulged in the use of tobacco and alcohol in his early days and was familiar with the harmful effects of both. I must admit, however, that in spite of this, I cannot talk about the evils of tobacco with the same authority and knowledge as in the case of alcohol and opium. But I can certainly say that I am not aware of a single advantage accruing from the use of tobacco. Smoking is an expensive habit. I know of an Englishman who used to spend five pounds, i.e. seventy-five rupees on tobacco every month. His monthly earnings were twenty-five pounds, so that he smoked away one-fifth of his monthly income !

Tobacco smokers become callous and careless of others' feelings. Non-smokers generally cannot bear the smell of tobacco smoke, but one often comes across people in railway trains

and tramways who just go on smoking, heedless of the feelings of their neighbours. Smoking causes salivation and most smokers have no hesitation in spitting anywhere.

Tobacco smokers' mouths emit a foul smell. Probably tobacco kills the finer feelings and perhaps it is to this end that men take to smoking. There is no doubt that tobacco is an intoxicant and for a while under its effect one forgets one's worries and misfortunes. One of Tolstoy's characters had to do a ghastly deed. Tolstoy makes him drink liquor at first. The man was to murder someone. In spite of the effects of liquor, he hesitated to do so. Lost in thought he lights a cigar and begins to smoke. As he watched the smoke curling up he exclaimed, "What a coward I am! When it is my duty to commit this murder, why should I hesitate to do so? Get up, go ahead, and do your job." Thus his wavering mind finally decided to commit it. I know, this argument is not very convincing. All smokers are not bad men. I know that million of smokers seem to live ordinary straightforward lives. All the same the thoughtful should ponder over the above quotation. What Tolstoy perhaps means is that the smoker keeps on committing minor crimes which generally pass unnoticed.

In India people use tobacco for smoking, snuffing and also for chewing. Some believe that snuff produces a beneficial effect, and they use it under the advice of v aids and hakims. I think that it is

not necessary. A healthy man should never have such requirements.

As for chewing tobacco, it is the dirtiest of the three ways in which tobacco is used. I have always maintained that its usefulness is a mere figment of the imagination. I have found no reason to change my opinion. There is a popular saying in Gujarati which says, all the three are equally guilty : the smoker fills his house with smoke, the chewer dirties every corner and the snuffer his clothes.

Tobacco chewers, if they are sensible, keep a spittoon at hand. But the vast majority spit on the floor, in the corners and on the walls unabashed. The smoker fills his house with the smoke and runs the risk of its catching fire, and he who takes snuff soils his clothes. If there are any who keep handkerchiefs and thus save their clothes from soiling, they are exceptions that prove the general rule. Lovers of (or seekers after) health, if they are slaves to any of these evil habits, will resolutely get out of the slavery. Several people are addicted to one, two or all the three of these habits. They do not appear loathsome to them. But if we think over it calmly, there is nothing becoming about blowing off smoke or keeping the mouth stuffed with tobacco and pan practically the whole day long or opening the snuffbox and taking snuff every now and then. All the three are most dirty habits.

(From Gandhi ji's book 'Key to Health')

TOBACCO HAZARDS

India is one of the principal tobacco producing countries, next only to China and the USA. tobacco is cultivated over an area of 4 to 4.5 lakh hectares with annual production ranging from 450 to 500 million kg, forming 13 per cent of total world production in 1987, the average yield per hectare has increased from 750 kg (1960-61) to 1,099 kg (1987-88).

Tobacco products are an important source of foreign exchange earnings. During 1986-87, Rs 171.9 crores in foreign exchange was earned through the exports of unmanufactured tobacco, manufactured tobacco (i.e., beedies, cigarettes, chewing tobacco, snuff, zarda, scented tobacco, etc.), nicotine, sulphate and Tendu leaves.

Tobacco contains about 4,000 chemicals, of which 438 can produce cancer, the most dangerous being nicotine, and carbon monoxide. Tobacco-related deaths in India have been estimated at 0.8 million per year, the equivalent of twenty jumbo jet crashes per day! Even this is likely to be an underestimation in light of recent findings on mortality caused by passive smoking or inhalation of cigarette smoke by non-smokers.

Chewing of tobacco or a mixture of tobacco and like is largely responsible for oral cancer and pre-cancerous conditions. Dr. Bhatt, a prominent dentist in Bombay, has found this to be true in India and some Southeast Asian countries as well. Even pan

masalas are causing precancerous conditions in the form of oral sub-mucous fibrosis, a condition in which the patient gradually loses the ability to open his mouth. Although there are no surveys on the adverse effects of chewing tobacco, about 45 per cent of addicts are estimated to be prone to pre-cancerous conditions.

According to a dentist in Ahmedabad, the majority of mill workers in the region were found to be suffering from cancer of the mouth during an examination carried out under an oral cancer research project several years ago. The mill workers admitted that they chewed pan with tobacco and also consumed a mixture of 'quid and lime'.

According to WHO, India may be heading for a tobacco epidemic within five years, Nearly 50 per cent of the male population over the age of 15 smokes, one-fifth of the 28 lakh persons who die each year the world over due to tobacco-related diseases are Indians.

It has been proven that smoking has a deleterious effect on health and it has become the most prevalent form of drug dependence. Nicotine is an alkaloid that affects the central nervous system and is probably the cause of the smoker's dependence on the habit. When a cigarette is lit, the nicotine is transferred from the burning tobacco to the smoke, where it mixes with minute droplets of tar. As the smoke is inhaled the

nicotine is absorbed easily into the bloodstream.

The main cause of cancer in the composition of tobacco smoke lies in the chemical substances known as polycyclic aromatic hydrocarbons and n-nitroso compounds. Elements of the latter are regarded as a potential health hazard when they appear in food and if they appear in a ratio of one part per billion. N-nitrosomonocotine is present in unburnt tobacco and in the smoke. It has been reported that smokers who developed lung cancer were found to have higher concentrations of arilhydrocarbon hydroxylase than the cancer free controls.

There are irritant substances in the smoke which cause the bronchial glands to secrete mucus in greater quantities. Carbon monoxide forms 1 to 5 per cent of tobacco smoke. When absorbed into the blood, it blocks the transport of oxygen to the tissues, including the brain. In smokers with a history of angina, a heart condition associated with reduced oxygen supply, even a low concentration can further affect their capacity for exertion and exercise. It has been found that exposure to carbon monoxide can increase the permeability of blood vessels to cholesterol. Research has also shown the relationship between the levels of carboxyhaemoglobin in the blood and the presence of disease in the blocked vessels.

In a report of the Royal College of Physicians, Smoking and

Health Now, published in 1971, it was estimated that in countries where smoking is established and widespread it is responsible for 90 per cent of deaths from lung cancer, 75 per cent of deaths from bronchitis and 25 per cent from heart diseases in men under 65 years of age.

The most recent cause for concern is the large number of Indian women taking to cigarettes without recognising the drastic physiological changes that threaten them. About 25 per cent of women above 15 years of age smoke and it is estimated that over 50 million run the added risk of lung cancer or cancer of the throat, oesophagus, mouth, heart or cervix. There are no estimates yet on the effect of passive smoking. According to an ICMR study (1982-83) there is sufficient evidence to suggest that smoking affects regular menstrual functions.

Dr. Sobti, President of the Indian Society for Tobacco and Health, expressed his concern that pregnant mothers who smoked transferred nicotine to the foetus, making them susceptible to bronchitis and pneumonia. An increasing number of still births and abortions are also being associated with mothers who are smokers. Smoking might also result in prenatal deaths, making children who are 200 to 300g underweight, particularly vulnerable.

(With thanks from 'State of India's Health' published by VHA)

Beware of Tobacco Smoke

It has now been proven without any shadow of doubt that passive smoking is emerging as a very serious health hazard in modern society. A non-smoker inhales tobacco smoke produced by 'side stream smoke' (smoke produced from the burning tip of cigarette/bidi) and exhaled smoke (smoke exhaled after taking puffs of cigarette/bidi).

Non-smokers in close company of smokers have really no choice, but to breathe tobacco smoke. A basic indignity of having to smoke polluted air for no fault of theirs. For long periods, it results in irritation of the eyes, nose, throat and sensation of unpleasantness and nausea.

The Royal College of Physicians, UK, has found that people in small enclosed space as in railway compartment or in a small office in which there are many smokers inhale as much smoke as an average smoker directly inhales from one full cigarette.

Passive Smoking

Women : *Incidence of lung cancer in women whose husbands smoke more than 20 cigarettes a day has been found to be double in a study conducted in Japan. A study from California has shown that heart attacks in non-smoking wives of smoking husbands are three times more common.*

Sick Individuals : *Passive smoking in a patient suffering from allergies and asthma can trigger an acute attack and cause respiratory distress. In patients with coronary heart disease, the carboxy haemoglobin may rise and alter the cardiac functions in a patient.*

Foetus : *About eight per cent of the Indian women are smokers and their number is increasing with each passing year. Of these most are in the reproducing age group. During pregnancy, the foetus receives nicotine, toxic chemical, radioactive polonium and other substances through mother's blood. Spontaneous abortions are 1.5 times more common in pregnant mothers who smoke.*

Smoking during pregnancy not only retards foetal growth in the uterus, but also leads to preterm delivery of premature babies. Pregnancy also leads to increased risk of congenital malformations in the newborn. These startling facts have now come to light in carefully devised studies worldwide.

It has also been proven that if the mother quits smoking before the fourth month of pregnancy, the risk to the foetus becomes negligible.

Child : *The nursing mother who smokes excretes nicotine in her milk which the innocent newborn unknowingly drinks. Infants whose mothers smoke at home are more prone to bronchial hyper reactivity, and bronchial asthma. Such infants who spend their first year in such a smoky environment show retarded physical as well as intellectual development. If parents smoke regularly, their children will experience much higher incidence of cold, repeated respiratory infections, sinusitis, asthma and middle ear infections. Some of such children, who get repeated respiratory illnesses during childhood may develop chronic lung disease later on in their life.*

Respiratory Diseases and Pollution

Indian urban population is suffering from various diseases due to increasing pollution. Diseases of Lungs, Eyes, Nose & throat like Bronchitis, Emphysema, Sinusitis and Conjunctivitis are chiefly increasing due to air pollution, being spread by various industries and automobiles. Air pollution has increased so much that besides affecting humans it is now damaging historical monuments like Taj Mahal. According to Central Pollution Department, control the only way to avoid this is fully remove these solid, liquid and gas pollutants from atmosphere. Due to increasing industrialisation and urbanisation it seems impossible to completely remove these pollutants, however, their quantity must be kept within the limit.

Air pollution can result in serious diseases like lung cancer and birth defects also. Diseases of urinary tract may occur due to Sulphur pollution. Making a pollution free atmosphere is possible only with peoples' awareness and participation.

POLLUTANT	PRINCIPAL HUMAN SOURCES	EFFECTS	REMARKS
CARBON DIOXIDE	Fuel combustion for heating, transport, energy production.	No direct effect on people. Over time, may lead to increase in earth's temperature.	Normal constituent of atmosphere. Essential to plant life.
CARBON MONOXIDE	Incomplete fuel combustion (as in motor vehicles).	Deprives tissues of oxygen. People with cardio-respiratory diseases more sensitive.	Contribution of natural sources small. Smoking more significant for humans than exposure to traffic.
SULPHUR DIOXIDE	Burning of sulphur-containing fuels like coal and oil.	Combined with smoke, increases risk and effects of respiratory diseases. Causes suffocation, irritation of throat and eyes. Combines with atmospheric water vapour to produce acid rain. Reduces crop yields. Leads to acidification of lakes and soils. Corrodes buildings.	
SUSPENDED PARTICULATE MATTER	Smoke from domestic, industrial and vehicular sources.	Possible toxic effects depend on specific composition. Aggravates effects of sulphur dioxide. Reduces sunlight and visibility, increases corrosion.	Chemically, a most diverse group of substances. Natural sources include dust-storms, volcanic eruptions and sea spray.
OXIDES OF NITROGEN	Fuel combustion in motor vehicles and furnaces. Forest fires.	Possible increase in acute respiratory infections and bronchitis, morbidity in children. Produces brown haze in city air. Causes corrosion.	Nitrogen oxide and nitrogen dioxide are the two components.
VOLATILE HYDROCARBONS	Partial combustion of carbonaceous fuels, industrial processes, disposal of solid wastes.	React with other pollutants to produce eye irritants (acrolein, aldehydes). Ethylene is harmful to plants. Aerosol particles reduce visibility. May produce unpleasant odours.	
OXIDANTS AND OZONE	Emissions from motor vehicles. Photochemical reactions of nitrogen oxides and reactive hydrocarbons.	Cause eye irritation and impaired pulmonary function in diseased persons. Corrode materials and reduce visibility. Ozone is one of the most damaging pollutants for plants.	Mainly derivative products of atmospheric reactions between other pollutants. Ozone is a natural and essential constituent of the upper atmosphere.

(Courtesy : 'The State of India's Environment' published by Centre for Science and Environment, New Delhi)

Beware of Asthma

It is observed that rising pollution, tension and unhealthy lifestyles are pushing up the incidents of asthma, an incurable inflammatory airway disease in India, making tough demands on the health system. Vehicular emissions at crossings, increasing industrial pollutants, tension prone existence, incorrect medication—all such factors sketch out an ominous scenario.

The problem of researchers are accentuated due to the scarcity of data on adults and children to exactly gauge the cause and extent of prevalence of this disease.

According to reports, the number of asthma patients in the West increased from five to seven per cent two decades ago over 10 per cent as of now, says Dr. S. K. Chhabra, chest specialist and senior lecturer at Vallabhbai Patel Chest Institute.

The experts warn that the situation is likely to deteriorate due to bad dietary habits and polluted environment. "Bad diet and increasing pollution in collusion with already prevalent causes like infection, allergy and emotional stress due to personal and professional reasons precipitate an asthma attack," says Dr. K.P. Agrawal, a senior scientist at the INMAS asthma research cell in the same institute.

He says, "Normally it is the combination of all these factors that precipitates severe asthmatic disorder." Some other factors that could precipitate an asthma attack are cold air, atmospheric

changes, certain drugs like aspirin, and even cooking gas and jogging.

"Just six minutes of jogging can produce an attack in an asthmatic", says Chhabra. He adds "Morning jogging on roads is dangerous. The environment is never pollution-free even in hitherto clean areas.

Researchers handling chemicals in laboratories, housewives in kitchen, traffic policemen on crossings, and the work-force in cotton and other industries where fine dust particles emanate are also the vulnerable sections, he says. Even fine particles from skin of pets could lead to problems in some cases, warn specialists.

A report says that The nitrogen dioxide produced by cooking gas and vehicles paralyses the system of lung clearance, feeds the bacteria and makes the human

body more prone to infection. "Asthmatics are very sensitive to these pollutants and when they go to these heavily polluted areas, they can easily get an asthma attack", he says.

While the environment cannot be modulated or controlled easily, suitable diet does help in managing the problem to some extent.

Oil should be totally avoided because recent works at many institutes have shown that unsaturated fatty acids activate the blood cells which are responsible for inflammation of air-tracts.

On the other hand, ghee is apparently helpful. "The food taken should not be oily and spicy. While one need not avoid curds just because they are considered inherently cold, chilled food items should be avoided", he says.

WHO's Missing Target

The WHO's fight against measles is doomed to fail. It is believed that WHO will not be able to achieve its 1995 target of reducing the number of measles cases to 10 per cent of the levels before vaccination began in the 1960s. According to present statistics, about one million children die from measles every year, more than by any other disease which is vaccine preventable. The WHO's Global Programme for Vaccines, a joint project with UNICEF, is already short of funds. "We also need to have vaccination campaigns in city areas, where measles is easily transmitted," says John Clements of the WHO programme. In 1990, no less than 80 per cent of the world's children attaining one year of age received the measles vaccine but the figure fell to 78 per cent last year. According to Jong Wook Lec, director of the programme, "Once coverage reached 80 per cent, donors interest and support began to wane".



Respiratory Diseases



Vd. B. R. Rasik, Lucknow

Saraswati - O Granny! I touch your feet

Granny - Be happy, daughter! I have missed you for long, were you not here?

Saraswati - Yes Granny, We had gone to grandmother's home who is very sick of cough and painful breathing, plenty of expectoration. No relief. What to do?

Granny - Did you not try the medicine I had dictated last year?

Saraswati - I had forgotten my note-book here itself yet I gave your medicine from memory as follows - 10 Roosa leaves, 20 Latjeera leaves, Bhatkaiyya root 4 fingers, Guruch 4 fingers, Holy basil leaves 20, black pepper 10 and liquorice 3 gm crushed together and boiled with half litre water till a quarter remained then filtered and added 2 spoon full honey or sugar and used half in the morning and half in the evening. For meals Moong or Arhar pulse, Roti, Turai, Parval was given. Also gave 250 ml milk boiled with one Piper longum. Grandmother was cured in one month. And then I advised Chyawanprasha and now she is

Syrup for Cough and Respiratory Problems

Take 100 gm Roosa leaves, 100 gm Latjeera leaves, 100 gm Bhringraj leaves, 100 gm liquorice, 100 gm Belleric myrobalan, 100 gm Bhatkaiyya leaves, 100 gm Holy basil leaves and 50 gms each of Kakarasingi, Nagarmotha, Piper longum, Khatami, Gavjaban, Lasodha, Dalchini, Cardamom, Jupha flowers, Unnab, Makoy, Nausadar Koodi; pound together and soak in 10 litre water for 24 hours and then boil till quarter is left, cool and filter. Add 5 kg of sugar and again boil till a consistency of two wires is achieved, cool, strain and store in bottles. Give this one large spoonful 4 times in 24 hours. It cures cough and breathing troubles.

okay. Now she is aged 70 and still doing her chores.

Granny - Very good, now open your note-book and take down another prescription which is the best medicine of cough, asthma and other respiratory diseases.

Saraswati - I see, yes please. I am ready.

Granny - Take one kilo each of the five organs of Roosa, Bhatkaiyya, Latjeera, Bhringraja and dry them in the sunshine for about one week. Thereafter spread them over an open ground plastered with cow-dung and apply fire. Gather the burning things together and cover them with an iron pan leaving a little space for the air to enter. Within half an hour everything will be burnt out. After it has cooled, collect and add half parts of Godanti Bhasma, Seep Bhasma and equal parts of powdered liquorice and Belleric myrobalan and store in a glass phial. One gm of this should be given with honey four times a day. It works like a miracle and cures even chronic cough and asthma.

Saraswati - Well Granny. Now tell me the medicine for coryza.

Prescriptions of Granny

Granny - Okay, take down, Wheat bran one large spoon, 10 Lasodha leaves, rock salt one gm and boil with half litre water till quarter is left and then filter and make two doses one for the morning and the other for the evening. Within 3 days this will cure coryza, running nose, light fever etc.

Saraswati - Tell me what to do in the whooping cough, side pain, light or strong fever of the children?

Granny - Very good, write.

Babies of one month to one year should be given two flowers of saffron dissolved in milk thrice a day. After one year the flowers should be increased to 3.

Keep one large nutmeg handy. Whenever the children have running noses or light cough, light fever or mild dysentery, rub the nutmeg over a stone with water collect in a spoon add a little of mother's milk and give it to the baby, 3-4 times. The child will be cured.

Keep a piece of antelope's horn handy. Whenever the children have side pain rub it over a stone with water, collect the paste in a spoon, warm and apply to the sides of the baby which will cure cough and side pain.

For whooping cough take equal quantities of five organs of Latjeera and Roosa, burn in fire, collect the ash. Take 50 gm fried choukiya borax, powdered liquorice 50 gm and 50 gm Belleric myrobalan. Powdered & mix them well and store in a bottle. One gm of this taken with honey four times a day cures whooping cough.

Saraswati - Thank you Granny, Now I must go.

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Grow Cabbage

Sharad season has favourable environmental condition for cultivation of different types of vegetables, herbs, ornamental plants, fruits etc. During this season, nursery is prepared by sowing the seeds and planting material. We describe here kitchen gardening for cultivation of cabbage plants.



Language-wise Names

Hindi - Karamkalla, Pattagobhi, **English** - Cabbage, **Bangla** - Kob, **Gujarati** - Kamboli, **Latin** - *Brasica olerasia*.

It is an important vegetable. It contains vitamins A,B,C and different types of minerals which increase its nutritional as well as medicinal value. Its bud is used as vegetable all over the world.

Planting Season

It grows in the Rabi and Kharif seasons. Best period for its plantation is in September-October months, when the temperature and season are favourable. Plants are fully matured after the plantation, within 60-80 days. It grows best at 15° to 25° C.

Sowing

Best quality of seeds are Golden Anker, Sanker 10,20,30,40,50, Pride of India etc. For the sowing purpose, certified resistant variety of seeds are selected by which total yield or the productivity increases. Nursery is prepared by sowing 15 cm below the land surface. Seeds are sown into different lines, each line having 5 cm gap

between each other.

It grows rapidly after 25 days. When the plant reaches height upto 12-15 cm., then it is transplanted from the nursery into several rows, each row having a gap of 45 cm. from each other and the plant to plant gap of 30 cm. After the transplantation, water is supplied to each plant for irrigation purposes. After some time plant grows rapidly. When the flowing bud is mature then it is cut from the main plant and is utilized as a vegetable. The plant is procured for fruits and seeds are collected and preserved for next season, for the sowing purpose. Its buds are cut into small pieces and dried for several uses in unfavourable conditions.

Diseases & Control

Its plant suffers from several types of diseases, attack by which causes severe losses of this crop. Some diseases are given below.

Dimping Off : It is caused by "Pythium" fungus. After this attack, the plant shows Jhulsa disease, when the plant is rotted and destroyed. The xylem and phloem of the plant are blocked.

Earlyblight disease : It is caused by *Alternaria* species of fungi, after its attack, leaves and

buds show black colour. Concentric rings type symptoms are seen. It destroys the whole plant when the temperature increases.

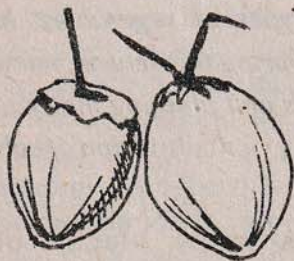
Viral disease : Different types of symptoms appear due to the virus infection, major symptoms are mosaic, curling, yellowing of leaf, vein cleaning etc.

Prevention and control of pathogens are very important for good yield of the crop.

Suggested control to avoid pathogens :

- Diseased plants are removed from the nursery and destroyed.
- Vector, Aphids, insects are controlled for prevention of viral transmission.
- Certified seeds and resistant variety of seeds and saplings are selected for sowing and planting.
- Fumigation/spraying of fungicides Brasiki Krepton (1 gram / 3ml. water) for one Hectare nursery field.
- For insect control, spray insecticide Thyodan or Neem derivatives such as Nimoline, Sallavin, Azadirachtin -A-H etc for biological control.
- Fumigation of leaf extract of *Catharanthus roseus* is effective for biological control of pests and insects.

Multipurpose Coconut



Coconut plant is a multi-purpose tree, all parts of which are useful. The nut is used both as a fruit and vegetable. Uses of the oil derived from the nut are also well-known.

Language-wise Names

Hindi - Nariyal; **Bangla** - Narkel; **Sanskrit** - Narikel; **Gujarati** - Nariyer; **Marathi** - Narel, **English** - Coconut, **Latin** - *Cocos nucifera*.

Coconut trees grow in the coastal regions of India, Ceylon, Burma and the eastern islands. The trees grow upto 50 feet. Dwarf varieties have also been developed.

Coconut is a fruit of economic importance. It is also used in religious ceremonies. The fruit has become one with the religious, social and economic life of South India. Hence it is called Kalpavriksha. The bole may be used as beam and girder. The fibrous strands covering

the fruit are used in making mattresses and stuffing cushions etc. Liquor is obtained from the top of the bole. The stick of the leaves is used for making brooms. Leaves are woven together and used as makeshift wall or thatch. Other parts of the tree may be used as fuel.

The kernel of the fruit is an excellent edible and is used in various south Indian dishes. The kernel contains protein, fat and sugar.

Before the formation of kernel the coconut contains watery liquid. The water gets transformed into kernel. After formation of the kernel, a little water still remains. The coconut water is an almost complete food just as milk. It contains vitamins A, B & C and calcium and iron.

In infantile diarrhoea it is the best thing to remove dehydration. In excessive bleeding it is extremely useful because the coconut water recoups the loss of water through the blood. This water is also useful in gonorrhoea. In dysuria it should be given to make the patient pass urine freely and subside the burning.

During pregnancy it is good for the mother and child in the womb.

Oil extracted from the kernel is used as edible oil in many parts, particularly in South India. Used as hair oil, it makes the hair soft and long. The kernel is an excellent diet but a little hard to digest. Old kernel is wormicide and destroys intestinal worms. It is taken with sugar as a sex tonic. Oil obtained from ripe fresh kernel by boiling with water is as good as cod liver oil for patients of tuberculosis.

The kernel and oil being replete with fat is not good for patients of heart and vascular system. In those areas where coconut is grown in abundance and used in plenty it is taken with garlic, onion and other vegetables which neutralize its harmful effects. The garlic besides improving taste provides copper, calcium, zinc, manganese, sulphur, vitamin A etc. Garlic precludes coagulation of blood in the veins and inhibits oxidation as well. Garlic is believed to be a natural device to reduce high

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Banana



Banana tree is found in almost all states of India. The tree withers after bearing fruits once. Thereafter, the underground bole or tuber sprouts to yield another tree. Leaves are long and soft. They are easily torn by gusts of wind. People eat meals off these leaves. Fruits are green before ripening. They become yellow after ripening. The Bombay variety, the chatim banana of Calcutta and champak variety are laudable. Parvati, Kala, Rajbhog and Cheeniya varieties are also believed to be superb. Scientists believe that it is a native of India or south east Asian islands. Its medicinal properties have been

described in texts like Charak Samhita and Bhav Prakash. Banana belongs to the family Musaceae.

Language-wise Names

Hindi, Bangla, Gujarati - Kela; **Marathi** - Kel, **Telugu** - Arahi; **Malayalam** - Pazham, **Tamil** -

Padam, **Kannada** - Bale Hannu, **English** - Plantain, Banana, **Latin** - *Musa sapientum*.

Chemical Composition

The ash of the tree contains potassium. Raw fruit contains tannin. Ripe fruit contains sugar, vitamin C, B, minerals (calcium, magnesium, phosphorus, copper, sulphur, iron). It contains 22-25 per cent of carbohydrate as starch, glucose and fructose. It becomes fragrant after ripening because of its amylose content. It is deficient in protein and fat. Apart from vitamin B complex it contains Vitamin H.

Properties and Uses

Ripe fruit is tonic and complexion promoter. It subsides Vata, Kapha, Raktapitta, Prameha and thirst. It is a medicine for Soma, diabetes, diarrhoea, hysteria, epilepsy etc. It is sweet, astringent and seminiferous.

Banana is given to patients of typhoid during convalescence as prescribed diet. 125 gm of ripe fruit pulp should be boiled with 350 ml. of water on mild fire till it is cooked then it should be filtered and given to the convalescent. It is beneficial in tuberculosis, coryza, cough, fever inappetance etc. In diarrhoea and dysentery it should be taken with curd. It is deficient in albumin so may be given to diabetics.

Banana Chips

To prepare chips, bananas are cut with a steel knife and soaked in acidic water and washed with fresh water. Thereafter it is fumed with sulphur dioxide and dried in the sun or machines

Nutritional Substances

at 60-63 degree centigrade temperature. Thereafter it is fried, salted and used. Chips contain 5.4% protein, fat 0.5%, carbohydrate 86.6%, moisture 1.5%, fibre 2.4% and ash 2.6%. One hundred gm banana yields 366 calories.

Banana Powder

Ripe banana is mashed and dried. It is subsequently powdered sieved and used with milk.

Banana Flour

Fresh fruit yields 12.5 to 27.5 percent flour. Flour

contents are 79.6-83.3% carbohydrate, 2.8-4.6% protein, 0.4-0.6% ether extract, 0.7-1.4% fibre, and 10.2-10.6% moisture.

The flour is a tonic. Banana is used as follows :

- It is mixed with wheat flour to make bread and biscuit.
- The pulp and skin is used in the preparation of alcoholic beverages and vinegar.
- Bole juice is used to cure impurities of blood, skin diseases and disorders of

ear.

- It brings perspiration and quenches thirst. Banana juice is applied on poisonous insect bites.
- Banana flowers are used as tasty and tonic vegetables.
- Bole is used in the manufacture of tissue paper, stencil paper, craft paper and other superior papers.
- The fibres are used to prepare fishing nets, ropes, mat and thick paper. For deriving fibre the tree is cut and layers are separated from the bole immediately. Fibres are washed and allowed to dry. Fibres become brown on drying in the sun. The colour is not easily removed. The fibres are processed with a one per cent solution of potassium carbonate and sodium carbonate to make them soft.
- Ash of leaves, bole and fruit skin are used in dyeing. The colour happens to be fast. Leaves and stems are dried and burnt. The ash is used as soap for clothes.

Contd. from page 54

blood pressure, because it inhibits the contraction of arteries, control the pulse and heartbeats and removes the disorders of breathing and digestion.

Regular intake of raw kernel and coconut water helps the patient of epistaxis. To cure hiccup, coconut fibre should be burnt and the ash mixed with honey and taken several times in the day.

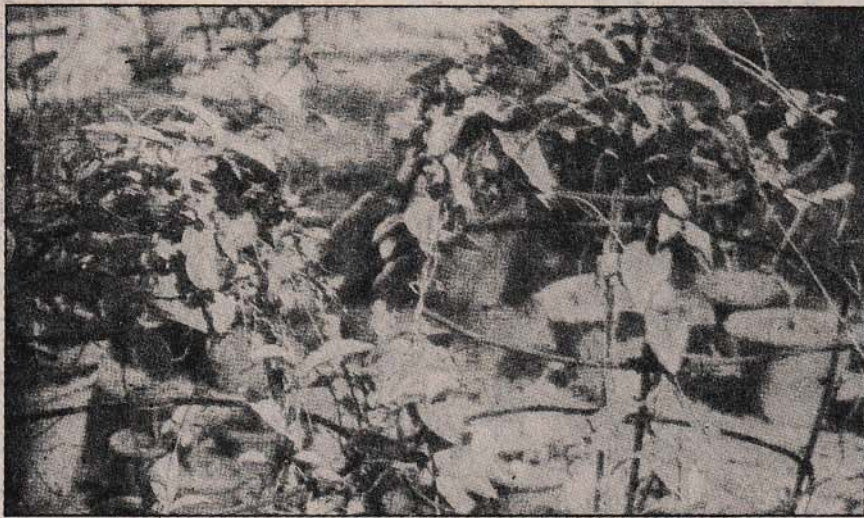
In sore mouth dry kernel should be chewed, twice or thrice in a day. In dry cough, boil finely cut 5 gm of dry kernel with milk,

add sugar and take.

In hurts and sprains, finely powder old coconut, add one spoon turmeric powder and foment the affected part with it to subside pain and inflammation.

Boil 10 litre of coconut water till it is as thick as honey. Add 3 gm powder of nutmeg, dry ginger, black pepper, piper longum and mace each. Patients of acidity should take this 10-15 gm daily twice.

The Asthma Plant



Tylophora indica, more simply known as the asthma plant is nature's gift for the long suffering asthmatics. It is called 'Antrmul' or 'Jungli Nikwan' in Hindi; Antrapachini, Pittavalli, Gandhan, Mularasna in **Sanskrit**; Antomul in **Gujarati**; Khadkirasna in **Marathi**; Nalapallai in **Tamil**; Kurinja in **Telugu**; Beripala in **Malayalam** and Vomiting swallow in English.

It is a twining creeper that can easily be grown in a pot on the balcony. It has fleshy leaves with a light velvety fur on the surface. It is a perennial plant and stays green most of the time. It is propagated by runners that appear along the roots in the pot or by seeds. You have to ensure that there is plenty of bright sunshine, as this plant does not enjoy shade. You must also ensure

that it is watered well every day.

The leaves and the roots of the plant contain the alkaloid tylophorine. The dosage for treating asthma sufferers during the period when the asthma is active or during an attack is one freshly plucked leaf to be taken each day over a period of 5 consecutive days. Wake the patient up at five in the morning pluck one healthy leaf wash it clean and ask the patient to chew the leaf slowly and go back to bed. Even if the patient complains of the leaf taste, do not allow the patient to partake of any liquid or water. An hour later the patient may be given light tea or water. This should be repeated over five consecutive days.

There are two important factors to be considered. One, some patients may suffer a

severe attack after partaking of the first leaf. This is normal, there is also some loss of taste during the treatment and this should also be considered normal. If the patient complains that there is no salt in the food then thank God that the plant treatment is working.

Chronic asthma cannot be cured overnight and though this plant is nature's gift to man, repeated doses are necessary. And over months and years of taking the leaf, the attacks will become less intense and less frequent. And eventually the patient will be cured for good.

Tylophora indica is also a good cure for whooping cough, bronchitis and other respiratory problems. For curing these, three leaves should be given every four hours during the day.

It is best to use this plant in cases where the asthma attacks are severe or frequent. The use of allopathic drugs and inhalers should be avoided during the course of this treatment.

Long and plentiful use of the leaf can cause dystentery, slackness, weakness of the heart and even paralysis, hence it should be used under physicians direction only.

AGUSTYA



Agustya plant grows all over India. Mostly it is found in South and Bengal in large scale. In North India it is grown for beautiful flowers in the nurseries and gardens. Seeds are sown during rainy season for cultivation.

Leaves, flower, bark, roots are used as Ayurvedic medicine. Both Rajnighantu and Bhavaprakasha mention the various uses of Agustya plant as medicine. Its flower and leaves are used as vegetables and pickle. Due to presence of vitamin A and other minerals, it is used as a source of protein.

Introduction

It belongs to the family Leguminosae. The plant grows approximately 15 to 20 feet. Leaves are compound, 6 to 12 inches in length, arranged in parallel series, flowers are white and red boat-shaped, 2 to 5 inches long. Flowering season is Septmeber fruits are

legume 15-20 inches long.

Regional Names

Hindi - Agustya, Sanskrit Agastya, **Bangala** - Vaka, Bakphul, **Gujarati** Aghathiyo, **Telegu** - Avisi, **Tamil and Malayam** - Agathi and **Kannada** - Agasemar **Latin**-*Sesbania grandifolia*

Medicinal Properties

It is cold and dry and its Vipaka is bitter. Based on these Ayurvedic experts conclude that it can reduce Pitta and Kapha and induce Vata, It will be effective in cough and cold, phlegmatic conditions like pneumonia and bronchitis. It is effective in eruptions in body and other skin diseases and jaundice.

Uses

- In treatment of congenital cold and bronchitis, 2 drops of leaf juice mixed with eight drops of honey is applied over the fontanelles

of the infant. Take four tolas of its leaf or flower and four tolas of *Adhatoda vasica* leaves, boil in four glasses of water and reduce to half. Take one cup of this decoction, three to four times a day with a little honey for treatment of cough, pneumonia, sinusitis and other phlegmatic problems.

- In rheumatic swellings and healing problems make a paste of its root with Dhatura root, apply externally. Swelling and pain will disappear soon.
- In catarrah and headache, infuse 2 drops of juice of its flower or leaves into each of the nostrils.
- In blurred vision, put 2 drops of flower juice into each eyes.
- In Leucorrhoea, mix the juice of flowers with an equal amount of juice of raw turmeric, add equal amount of warm water and drink twice a day.
- In skin problems, finely powder its flowers and add buffallo milk to it. Prepare curd of the same, churn out butter, apply it externally and internally for quick relief.

Abhrak Bhasma

Vd K. K. Pandeya, Lucknow

Abhrak Bhasma is greasy, extremely cold in temperament, sweet and excellent for longevity. It provides nutrition to hair and skin, appetises, is lactescent, aphrodisiac and a stabiliser of body. It also precludes fever, tuberculosis, Rakta Pitta etc. It also creates happiness in the mind, removes laziness and imparts efficiency.

Abhrak (mica) enters our body through plant kingdom and is found in the various organs of our body. Its content is maximum in the lungs. Hence it is very useful in the pulmonary diseases such as tuberculosis, cough and respiratory diseases. It is also good for cardiac problems.

Use of Abhrak Bhasma

- Abhrak Bhasma taken with turmeric powder, piper longum powder and honey cures Prameha.
- Abhrak Bhasma taken with Suvarna Bhasma cures tuberculosis.
- Abhrak Bhasma taken

with Rajat Bhasma and Suvarna Bhasma is an excellent tonic.

- Taken with Haritaki powder, Jaggery, cardamom and sugar, it cures Rakta pitta.
- Taken with Trikatu, Triphala, Chaturjat powders, sugar and honey cures piles and jaundice.
- Cures Prameha taken with the essence of Guduchi and sugar.
- Cures Meha and dysuria taken in the morning daily with cardamom, Gokhru, Bhoomi Amalaki, Sugar and curd of cow's milk.
- Cures chronic fever taken with piper longum powder and honey.
- Improves eyesight taken with honey and Triphala powder.
- Taken with the essence of Doorva cures wounds.
- Taken with cow's milk and Vidarikand, provides immense strength.
- Cures piles taken with purified Bhallataka.
- Cures Vatavyadhis taken with dry ginger,

Pushkarmool, Bharangi, Ashwagandha and honey.

- Taken with Chaturjat and sugar cures diseases of Pitta and with Kayaphal, piper longum and honey cures the diseases of Kapha.
- Taken with cow's milk and sugar, annihilates diseases of Pitta.
- Taken according to the instructions with proper vehicle and prescribed diet cures wrinkles, greying of hair and provides longevity.
- Taken with Vayavidang, dry ginger, black pepper, piper longum and clarified butter cures tuberculosis, jaundice, Grahani, Shool, skin diseases, respiratory diseases, Prameha, inappetance, severe cough, dyspepsia, stomachache and all diseases of Kapha.
- Taken with Rasa Sindoor cures ordinary fever and chronic fever when taken with piper longum powder and honey.

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Some Uses of the Gular Fig

Vd. R. K. Mani, Kanpur

The Gular fig, also called country fig and glomerus fig belongs to the group of Peepal and banyan trees. It is a thick, big and famous tree. It rises to the height of 6-9 metre. Its branches are dense. The bole is white and rough. Root, root bark, bark of bole, latex and fruits are used.

Languagewise Names

Hindi - Gular, ;
Sanskrit - Udumbar,
 Jantufala **Bangla** -
 Yajnadumar; **Marathi** -
 Umbar; **Gujarati** - Umbaro,
Latin - *Ficus glomerata*.

The fruit is soft and pulpy. It does not have a hard shell as covering but has a thin filmy covering. Upon breaking open the fruit we find umpteen white seeds within it and also insects or worms. That is why it is called Jantufala in Sanskrit. Incision of the bole, branches and fruits yields a white latex. Raw fruit is green, insipid and slightly

astringent in taste.

Medicinal Uses

- Application of the latex and sticking cotton to it cures the stiffness of any organ of the body.
- Eating ripe fruit with honey or jaggery provides relief in Raktapitta.
- In conjunctivitis apply the latex over the eyelids.
- Application of latex and sticking a paper over it cures wounds.
- Instil 5-6 drops of latex into a Batasha and eat in Amatar.
- The gular fig root water provides relief in Raktatar.
- Eating ripe fruits with sugarcandy in the morning during the summer keeps one cool and fresh.
- Gular juice sweetened with sugar candy relieves the heat of smallpox.
- The pregnant should be given gular-root water in diarrhoea.
- The gular-root water sweetened with sugar should be taken in Pittajwara (biliary fever)
- Give gular juice internally in cholera.
- The latex sweetened with sugar should be taken internally to cure burning.
- The infantile sickness of passing mucus stools gets cured by internal administration of 5-6 drops of latex sweetened with sugar.
- In severe cough the latex should be smeared over the palate for relief.
- Washing wounds with the decoction of bark cures them fast.

Medicinal Uses of Crotalaria

Dr. Ramesh Chandra Arya, Meerut

Crotalaria is a wild plant belonging to the family Leguminosae. It is cultivated to obtain fibre for the manufacture of ropes, gunny and rough clothes.

The plant grows straight up to 3'-4'. It is endowed with many branches having four striations. Leaves are 1"-2" long and obliquely rectangular and have short stems.

Flowers are blue or yellowish in colour, 1.5"-3" in length and sprout in bunches of three to seven. Pods are about an inch long and encase a dozen or more of seeds. Seeds and leaves are of medicinal importance. Crotalaria grows in the tropical regions of Indian peninsula.

Language-wise Names

Hindi - Jhunuk, Jhunjhuniya, Ghugharia san; **Gujarati** - Ghughro; **Marathi** - Khulkhul; **Sanskrit** - Shanapushpi; **Tamil** - Vellakkilukiluppa; **Malayalam** - Kilukiluppa; **Bangla** - Jhunjhan; **Latin** - *Crotalaria verrucosa*.

Properties

Crotalaria is rough, acute, pungent, bitter and astringent in taste and easily digestible. Charak has called it a Vamanopaga (mildly emetic) substance. It destroys disorders of Kapha and rectifies Pitta as well.

Medicinal Uses

In inflammatory disorders of skin

accompanied with itching, scabies leaves are ground into a paste and applied. In suppurative wounds, poultice of seeds either subsides them or cracks them.

Decoction of leaves retained in the mouth for some time cures sore mouth, inflammation of throat and tonsillitis. Internal use of decoction cures disorders of blood, and rectifies disorders of skin. In dysentery and diarrhoea juice of leaves should be taken 5-10 ml twice in a day.

For emesis, root powder is taken with hot water.

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Herbs Useful in Sharad

In this column we describe here collection of some medicinal plants which are found in our surroundings during Oct. - Dec. in large quantities. In this season we must collect and preserve these for further use. Some major plants which are found in our locality are given below.

Dron Pushpi

October month is the best season for collection of this plant. It generally grows during rainy season and is available until the cold season. It grows around grasslands, agricultural farms, roadside and forests etc. Plants are 22cm. - 45cm long in height, stems are quadrangular in size, solid, and hairy. The leaves are arranged in opposite direction of each flower. Flowers are rounded, showing verticelaster inflorescence, flowering season of this plant being Sharad. Plants have a special type of aromatic smell on rubbing.

For its collection and preservation whole plants are dried under the shady conditions and then it is utilized for the preparation of drugs in any season. Plants are naturally destroyed at the end of Sharad so its collection is very important.

Botanical Description

Hindi name : Gumma, Goma

Latin name : *Leucas cephalotus* & *L. lavandulse folia*

Family : Labiatae

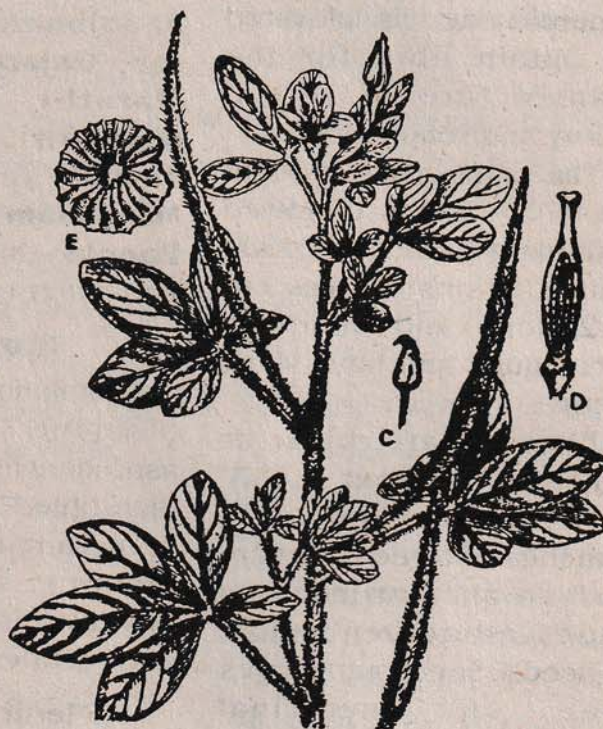
Collection season - Oct.- Dec.

Parts used - Whole plant, Leaf, Flower

Medicinal uses - Jaundice, Headache, Fever, Cold and Cough and Respiratory diseases.

Hur Hur

October-December months are the best season for its collection and preservation. It grows in rainy season around the grass lands and road side with plants having special types of aromatic odour. Generally, two types of plants are known as "Hurhur".



One of them is white flowered, known as *Gynandropsis gynandra* and the others are yellow flowered, known as *Cleome viscosa*. Whole plants are covered with glabrous hair which contain aromatic compounds. Fruits are rounded, compressed and attached with long pedicel and the seeds are small, rounded just like Rai.

The whole plant is cut into small pieces, seeds are separated from it and finally preserved into polythene packs after drying into a shady place.

Botanical Description

Hindi name : Hur Hur Safed

Herbs Collection

Latin name : *Gynandropsis gynandra*

Hurhur Peela

Latin name : *Cleome viscosa*

Family - Capparaceae

Parts used - Seeds and whole plant

Medicinal Properties - Sweat generating, stimulant, antimalarial, wormicidal etc.

Sahdevi

It grows on a large scale around roadside, grasslands, fields etc during rainy season to winter. It is collected when the condition is favourable. Best period for collection is when the plant is showing flowering condition. Plants bears violet colour flower. Flowers are arranged into head or capitulum inflorescence. Whole plants are 3 to 8 feet in height and bear hair. These plants are very important for medicinal uses.

Whole plants are collected during winter in the months of October-December, when the plants are fully mature and bear flowers. For the preservation, the whole plant is cut into small pieces and dried in a shady place and finally preserved into airtight, moisture free containers or polythene packs.

Botanical Description

Hindi name : Sahadevi

Latin name : *Vernonia cinerea*

Family - Compositae

Parts used - Whole plant, Roots

Collection period - December-February

Medicinal uses - Fever, Cold and Cough, Menstrual disorders, wormicidal etc.

Sarphunkha

It grows during the Rainy Season and the plant bears violet flowers. Plants are approximately 2-5 feet high. Leaves are similar as Trigonella leaves. When detached from plant, they show just like "Punkh" (fan) so this plant is known as Sarpunkha. Flowers are arranged into pink and red colour inflorescence. Fruits are about 5 inch long, each legume contain 6-10 seeds.



For its collection and preservation, October-November is the favourable period. Whole plant is cut into small pieces, seeds are separated from it and finally preserved into moisture and air proof containers of polythene and utilized for several preparations.

Botanical Description

Hindi Name : Sarphunkha

Latin Name : *Tephrosia purpurea*

Family : Leguminosaceae

Parts used : Seed, Root, Whole plant

Collection period - October-November

Medicinal uses : Cough and Cold, Blood purifier, Bile problems, Diuretic, Diarrhoea etc.

Nutritional Recipes

Of all the tastes, the most popular is sweet. We have a wide variety of sweets - different types of sweets are made to celebrate different festivals and in different seasons. In each part of the country people cook sweets mostly to celebrate a happy event and there is an array of specialities in the states of India. Given below are some recipes of delicious sweets. You can try it yourself and do write to us your observations.

Mysore Pak

Ingredients :

Besan - 1 cup
Sugar - 2 cups
Ghee - 2 cup

Method : Make sugar syrup with two cups of sugar, adding little water. Boil the syrup until it attains a one string consistency. Add besan into this, little by little. Also add ghee slowly while cooking. When it becomes fluffy and frothy, pour on a greased plate. When cold, cut into small square pieces.

Besan Barfi

Ingredients :

Besan - 1 cup
Milk - 1 cup
Grated coconut - 1 cup
Sugar - 2 cups
Ghee - 1 1/2 cups

Method : Add the above ingredients in a pan and cook on slow fire. When it becomes thick pour on a greased plate and cool it. Cut into pieces and store.

Badam Kheer

Ingredients :

Badam - 50 gms.
Sugar - According to taste
Milk - 1 litre
Kesar - 1/4 teaspoon

Method : Soak badam in hot water for 3 to 4 hours. Peel them and grind in a mixer, adding milk. Add this paste to the rest of the milk and cook. Bring it to boil. Cook the remaining milk with 1/2 cup of sugar and 1 tablespoonful of butter. Keep on stirring (over low heat) till the milk becomes quite thick.

Now add the small square baked pieces into the kheer. Cook for another 2 minutes. Remove it from fire. Allow it to cool. Garnish with sections of orange and apple pieces. Serve cold to your guests.

Banana Pudding

Ingredients

3 bananas (ripe)
2 litres milk
1 cup sugar
1 tablespoonful butter, orange sections and apple pieces for garnishing.

25 gm custard powder

Method :

First of all peel and mash the bananas in a shallow vessel. Now add a cup of milk, custard powder and 1/2 cup of sugar to it. Keep on beating the mixture till it is fluffy. After this bake over moderate fire for 20 minutes. Now allow it to cool and when it has cooled, cut into small square pieces.

Alcohol and Diseases

Certain skin disorders have now been demonstrated to be affected by alcohol misuse, in particular psoriasis and discoid eczema, rosacea and nail disorders.

Psoriasis is one of the commonest inflammatory skin disorders among Indians. Psoriasis frequently presents as visually impressive, bright red or salmon pink hued, sharply outlined patches covered with thick silvery white scales. The hallmark of the disease is the rapid diversion of the epidermal cells in the Psoriasis patches : cell turnover at affected sites is increased approximately 10 fold compared with the adjacent normal skin. Although the precise cause of psoriasis is unknown, many causative factors are recognised which play a fundamental role in its occurrence.

Nummular (discoid) eczema is a distinctive form of endogenous eczema that occurs sometimes on the limbs of middle-aged or elderly men. It is characterised by well defined, coin-shaped plaques of eczema which tend to be chronic and require super-potent topical steroids for control. A recent study has identified a strong association between discoid eczema and heavy drinking.

This common disorder is most usually seen in middle age, especially in middle aged women. The salient feature of the condition are patchy redness, dilatation of superficial blood vessels on cheeks, chin and ears, formation of pimples on cheeks which sometimes contain pus.

Name of Book

Pest Control and Disease Management in VRKSHAYURVED

Publishers :

L.S.P.S.S., Coimbatore

Book Review

Dr. K. Sadasivan Pillai, Tamil Nadu

Lok Swasthya Parampara Samvardhan Samithi's (LSPSS) sincere attempt for promotion and rejuvenation of indigenous health care systems and traditional practices is well appreciated. Pest Control and Disease Management in Vrکشayurveda by K. Vijayalakshmi and K. M. Shyam Sundar is yet another similar attempt of LSPSS. Somehow, I feel that this monograph of LSPSS is an over-amplified and impractical disease management in Vrکشayurveda.

For treating Vathaja Diseases, it is suggested to irrigate with flesh, fat, ghee etc. One of the treatments suggested for treating Pittaja diseases is fumigation with sugar, honey and ghee. I do not want to ask the authors whether they have any scientific data on these treatments, but I really would like to say that had the authors spent few minutes in thinking the practicability of these treatments in a country like India, where the majority of the population is still below the poverty line, perhaps they would not have suggested such treatments.

The chapter, 'Farmer's practices for Pest Control' is an informative one as pesticides of plant origin have gained considerable importance in the pesticide industry, in recent years, such as the neem based pesticides.

At the cellular level, there are

similarities between plant and animals, barring few cell constituents. It does not mean that treatments prescribed for animals can also be made applicable to plants. I wonder, how the authors would extrapolate photosynthesis in plants to any physiological functions in animals or *vice versa*.

We all are happy the way Ayurveda and traditional

practices gain prominence in our country. Let us not be over-excited on this. Today, we have achieved several milestones in biotechnology, e.g. bringing out insect-resistant and disease resistant plants using cloning. I believe, the noble intention of LSPSS was to popularise Vrکشayurveda by publishing the book, but I am doubtful whether this book would serve the purpose.

Rural Surgeons Perform Operations

A survey by the Rural Surgery Committee of the Association of Surgeons of India (ASI) reveals that 45 per cent of the surgeries taking place in rural areas are carried out without a qualified anaesthetist. Worse still, 63 per cent of rural surgeons do not have access to blood bank facilities. Yet, they are performing highly complicated operations like hysterectomies (removal of the uterus) and transhiatal oesophagotomy (a sophisticated Japanese surgical procedure for the treatment of oesophageal cancer).

In the survey, 68 per cent of the rural surgeons reported that they worked without a qualified radiologist or a pathologist, and 32 per cent laboured without access to both specialists and essential facilities like an assured supply of blood.

In the absence of an anaesthesiologist, a rural surgeon either has to train a general practitioner or a nurse to perform this delicate task, or has to master

the craft of being surgeon and anaesthetist at the same time.

These odds, however, haven't prevented rural surgeons from doing the impossible. According to the survey, 96.4 per cent performed abdominal surgery, 81 per cent urological surgery, 80.2 per cent obstetric and gynaecological surgery, 68.3 per cent orthopaedic surgery, 29.5 per cent thoracic surgery, and 15.5 per cent ENT surgery. And 66 per cent of the surgeons, unlike their super-specialist urban counterparts, have acquired skills to perform at least three of these procedures.

With the health-care budget accounting for a mere 2.9 per cent of the GDP, there is little that the Government can do. The challenge, therefore, is to attract a section of the 600-plus surgeons who graduate every year to the rural areas. Seventy per cent of the country's health-care needs, after all, are met by private practitioners."

Jeevaniya Science Conundrum

The reactions of readers to the conundrum published in the previous number of Jeevaniya have increased our enthusiasm and we hereby resolve to make it more interesting and expect more correct solutions. It has been observed that Vaidyas also send in their solutions which are not acceptable to us. The conundrum is meant for the general readers. However, Vaidyas are requested to send their experiences which we would publish.

First Prize : Free Jeevaniya magazine for two years.

Second Prize : Free Jeevaniya magazine for one year.

Terms and Conditions

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

The Editor,

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

1. Complete the following sentences :
 - (a) Use of honey in rainy season is _____
 - (b) The percentage of water in the body is _____ per cent
2. The supply of water to the body is twofold. Give details thereof.
3. The out-turn of water from the body occurs in many ways. Please write the general amount of the following :
 - (a) Urine
 - (b) Perspiration
 - (c) Lungs
 - (d) Faeces
4. Generally how many calories are necessary for the pregnant women.
 - (a) Protein
 - (b) Carbohydrate
 - (c) Fat
5. The overuse of which part of the brain is likely to create tension and why ?
6. Write the names of chief bones of the head
 - (a)
 - (b)
 - (c)
 - (d)
 - (e)
7. Generally what is the weight of the brains of men and women ?
8. Give details about Medulla.
9. Write the symptoms of schizophrenia.
10. Write the names of five varieties of delusion :
 - (a)
 - (b)
 - (c)
 - (d)
 - (e)

Taurus and Health



Pt. K. G. Gore, Lucknow

This constellation extends upto the entire pleiads (Krttika) cluster of stars minus the first quarter part, entire Rohini cluster of stars and first half part of the Mrigashira cluster of stars. It is situated in the external and internal mouth of the Kala Purusha. The master of Taurus constellation is Venus and its sex is feminine. Its temperament is stolid. This constellation predominates in the element earth. It exerts a rough influence on the complexion. Its colour is white. Moon lies in this constellation at apex from part first to the third part and from the fourth part to the end lies in the original triangle. It engenders short stature, attractive features, luxurious tastes, big mouth, thighs, back and chest and fortitude. The constellation is Kapha-predominant. Taurus influences neck, throat, larynx and oesophagus. The temperament being licentious many disease are likely to occur. So one who is under the influence of Taurus should take care to follow regular regimen and practice exercise. Light food is desirable. Heavy and fatty substances can create problems no sooner than consumed. Taurus can affect the heart as well so avoid haste and excitement. Being Earth-predominant Taurus is rough and cold too. So those who are born under the influence of Taurus would greatly benefit from medicines made of drugs composed of Water and Earth elements.

L.S.P.S.S. News

Convention of Traditional Vaidyas

A convention of traditional medical practitioners was organised on 28, 29 and 30th March 1995 in Khundia at Kangra District of Himachal Pradesh. The convention was organised by Era and L.S.P.S.S. On March 28, the function was Presided by Sri Kanwar Durga Chand, Deputy President of Small Saving Advisory Board, Govt. of India In the evening a discussion by the Vaidas and Dais took place.

On March 29th traditional Vaidyas collected herbs from local forest and discuss about diagnosis of diseases from these herbs. In the afternoon Sri Kulbushana Upmanya of Chipko movement spoke about forest conservation. Editor of Jeevaniya Dr. N. N. Mehrotra gave a lecture on traditional concept of health.

Valedictory function took place on March 30th. 100 Vaidas and Dais participated in the convention. Among them many were experts in bone setting and Poisonous bites treatment.

Vd. Nand Kishor told in his speech that our Traditional Medical system is getting neglected due to the invasion of Modern medicine. Our Vaidyas of H.P. have tremendous knowledge of Herbal medicines.

Dr. Arun Chandan in his speech told that the research is going on in Ayurveda not only in India but also abroad, and efforts should be made to bring down the cost of Ayurvedic medicines to make it available for common man. He also told that plants of the habitat where the patient are living is best suited for healing. He expressed thanks to LSPSS for their support and cooperation for this convention.

Dr. Chandan in his speech told that knowledge about Herbal Medicine is deteriorating because most of the Vaidyas don't expose their knowledge to others. For this reason conventions of this kind are very needed.

Kasmir Singh Rana the former MLA told that many Vaidyas without knowing the Ayurvedic properties of a drug are also practising it successfully. It is very important to document their knowledge. Sri Harichand Nayak told that Mental disorder is more dangerous among all. He claimed to have effective medicines for toothache and abdominal disorders.

Global Warming and Other Threats

This article has been taken from the 'Encyclopedia of Development, Environment and Welfare' prepared by Sri Bharat Dogra, a Delhi based free-lance journalist, who has written for most of the leading newspapers and magazines in English and Hindi on development and Human rights issues. This 300 page Encyclopedia has been prepared on the occasion of 10th anniversary of N.F.S., India, a monthly news and feature service.

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New Delhi - 110063. Phone : 5575303

Perhaps the most significant feature of the 20th century, particularly the second half of this century, is the very rapid escalation of environmental crisis. Till 1960 the world had added only 20% to the pre-industrial level of greenhouse gases but by 1990 we were 40 per cent above the level. It has been estimated regarding the accumulation of greenhouse gases that the accumulation during 1960-90 has equalled all the earlier accumulation since the industrial revolution. The ozone depletion threat is entirely the making of just six decades. The use of CFCs which led to this crisis was unknown till 1930. Within the six decades 1930-90 as much as 18 million tonnes of CFCs had been produced, causing grave harm to the ozone layer.

As for air pollution over 1.25 billion people already live in cities with unacceptable levels of suspended particulate matter, while 600 million live in urban areas where sulphur dioxide levels exceed WHO guidelines.

A very large number of people face shortage of water - the most basic need of all - either because of the depletion of water sources and/or their pollution. Several millions of people who lived close to nature and met most of their basic needs directly from nature

in the not too distant past are now faced with an uncertain, distressing future due to deforestation, soil-erosion and massive diversion of land and water on which they were dependent to other uses.

The flip side of rapid economic growth and the fast introduction of many new production processes as well as consumer goods has been the neglect of safety and environmental aspects. The grave damage done by CFCs was realized - that too more by chance than as a result of any careful monitoring system - when this had come quite close to endangering our survival. In this case at least some timely steps could be taken at international level to phase out CFCs by the year 2010, although we are still not sure of how effective this solution will ultimately prove. But what about the very large number of other new chemicals and other products whose use increases very fast in the modern world once high profits appear likely.

Russel Train, former chief of the Environmental Protection Agency in the USA warned some years back, "We know in fact very little about health effects even of the 30000 chemicals already in commercial production. We have no way of systematically screening the

chemicals that go into production, we have no way of knowing precisely which chemicals go into production, every year, in other words we not only don't know whether what is going on out there is dangerous - we don't even know what's going on out there. We have, however learned one thing - it is what we don't know that can really hurt us, even kill us."

This danger of new, untested products and crops will increase specially in the context of the genetic engineering industry. New internationalist magazine reported recently in a cover story on this subject. "An estimated 3400 pharmaceutical companies world wide are conducting research and development in genetically engineered products and the industry predicts that by the year 2000 over 1000 genetically engineered new products will be on the market. Mistakes are bound to happen. And with something as powerful as genetic engineering, one mistake could have powerful and wide ranging effects."

Quite apart from specific hazardous, products or chemicals, however, there is the threat from the overall increase of pollutants in a rapidly growing (demographically and economically) world. The population of the world is

Debate

increasing at the rate of about 90 million people in one year - and this trend is likely to be maintained for the next three decades or so. The same United Nations projections say that by the year 2025, more than half (around 58 per cent) of the population of the world is likely to be based in urban areas. This implies that the problem of air pollution can get much worse unless very determined efforts to keep our air tolerably clean are made.

What is particularly worrying is the global warming trend related to the accumulation of greenhouse gases (by far the largest share being that of carbon dioxide), as this is linked also to an increase in many types of disasters and rising sea levels, submerging some of the world's most densely populated habitations. In 1990 the intergovernmental panel on climate change (IPCC) estimated that an immediate 60 per cent reduction in emissions of long-lived gases would be required to stabilize atmospheric concentration, implying matching reduction in the use of fossil fuels.

Sir John Houghton, one of the most renowned authorities on this subject, affirmed in 1995 that as far as scientific facts are concerned, he still stands by the statement that a 60 per cent cut in emissions is needed to stabilize the climate but at the same time he admitted that politically this is not possible. What matters, he says, is not that global warming is happening, because that is inevitable, but that it must be slowed down. The minimum requirement according to him is a 20 per cent cut in carbon dioxide emission by the industrialized countries by the year 2020. This,

he said, would allow developing countries to double carbon dioxide emissions without adversely affecting the planet. At that sort of pace, it would take 50 years before carbon dioxide emissions dropped below today's levels, and at least a century before climate could be stabilized. This is because carbon dioxide remains so long in the atmosphere. Even this 20 per cent reduction by the year 2020 is unlikely to be achieved by industrialized countries.

Although at times higher reductions have been considered - for example in Britain the all-party House of Commons Select Committee on Energy prepared a report that called for specific policies to achieve cuts upto 50 per cent in carbon dioxide emissions-by and large the current official thinking is very much behind the scientifically laid down target of a quick 60 per cent cut in emissions. This increases the possibility that global warming will proceed at a rapid destructive pace leading probably to many disasters and much worse weather extremes. Poor countries such as Bangladesh, Egypt and Vietnam will suffer greatly from the resulting rise in sea level. Ten million people live within 1 metre of the high tide level on the river deltas of these three countries alone.

If we want to avoid these disasters in the next few decades then the only acceptable solution is to shift the focus from economic growth to redistribution. Instead of forever increasing total industrial (or other) production, we should stop further increases and instead concentrate our attention on redistributing the existing wealth to meet the basic

needs of all people. Such a basic shift of priorities is essential if levels of pollutants and in particular the greenhouse gases are to be kept below tolerable norms. According to United Nations data at present the richest 20 per cent of the world's people receive more than 150 times the income of the poorest 20 per cent people. Given such a high level of inequality, it is possible to meet the basic needs of all people by redistribution rather than by further economic growth. As this requires basic changes in the life-style of the richer sections, energy-saving aspects should be emphasized in the course of these changes. Curbing all harmful consumption and wastage and supporting pollution-minimizing technologies will have to be accorded a lot of importance. Educational campaigns and ideas which encourage and inspire people to voluntarily seek a life based on 'needs' rather than 'greed' will play an important role in this restructuring of existing economic thinking to make it compatible with the protection of environment.

Global Concerns

In 1989 research teams found that the ozone layer over Antarctica was reduced to only 50% of its 1979 level.

With a one meter rise in sea level partly due to global warming, Bangladesh could see its land area shrink by 17%. Germany and the Netherlands lost nearly 60% of their wetlands between 1950 and 1980.

At current rates of loss, up to 15% of the earth's species could disappear over the next 25 years. Source : HDR 1994.

The Third Outbreak of Ebola

Ebola is a virus deadlier than the HIV causing AIDS. It was identified initially during 1976 when it killed 400 victims in Zaire and Sudan. Its second attack occurred in 1979 in Sudan when 275 lives were lost.

The third attack occurred in Zaire in April 1995. A 36 year old young man was admitted in the Kikwit hospital for treatment who complained bleeding through eyes, nose, ears, gums and anus. The bleeding was uncontrollable. The young man expired on the fourth day. The day he died two nurses attending him began exhibiting the same symptoms and they too died after a couple of days. This caused a panic in the hospital which spread to the entire country. A SOS was sent to the WHO. WHO experts visited the hospital and concluded that the Ebola has struck again. This attack killed 48 people.

The death caused by Ebola happens to be extremely painful and gory. The virus is as small as smaller than one thousandth of a millimetre. It is a worm-shaped filovirus, straight or U-shaped. Its victims rarely recover and 90% die. During the initial three days symptoms of flu are observed. Excruciating pain is felt in the back and front of the head. Subsequently terrific backache fever and dysentery follow. Vomiting may occur too. This state may continue for one week. During this period dead blood cells congeal in the patient's arteries. After a week, bleeding through all the openings sets in. The patient vomits black glands.

His skin gets unstuck and starts peeling. On the ninth day he succumbs to death.

The Ebola filovirus is native to the rain forests of Central Africa also the home of HIV. Ebola related filoviruses were first isolated from cynomolgus monkeys (*Macaca fasciculais*) which were imported into the United States of America from Philippines in 1989. Most of those monkeys died and at least four were infected.

Ebola spreads through body fluids and secretion or direct contact with infected persons. Hospital-acquired Ebola infections are common and many health care workers have been infected while attending to patients. In the 1976 Zairean epidemic all Ebola cases were linked to contaminated syringes and needles.

The ecological balance between man and microbes often gets disturbed due to changes in the environment and human activity. With the result that man is getting infected by hitherto unknown viruses. These viruses undergo genetic mutations that result in increased virulence.

According to the World Health Organization, two of the three previous outbreaks originated in hospitals with poor hygiene. The third outbreak was caused by African funeral rituals that involve cutting open a dead body.

When scientists examine patients in Kikwit and areas where the infection may have spread, they wear hoods and special lightweight coveralls made from

non-woven material that does not allow penetration by viruses and other microbes. They are also equipped with battery-powered devices to filter the air. Virologists at the center in Atlanta don space suits in the laboratory where they are extensively testing the first set of 22 samples from 16 patients, using laboratory techniques that were not available at the time of the earlier outbreaks.

Prostate cure with Laser

Each year, thousands of men have surgery for benign prostatic hyperplasia (BPH), an excessive growth of prostate tissue that causes obstruction, a weak urine stream and frequent urination. The standard operation to clear the blockage, transurethral resection of the prostate (TURP), is currently considered the most effective remedy - but it can cause complications, such as the inability to ejaculate normally. For older men with heart disease, the procedure can also be especially risky.

In 1990, studies began to test a new technique - transurethral, ultrasound-guided, laser-induced prostatectomy (TULIP). During the procedure, an instrument containing the laser is inserted into the urethra to a spot adjacent to the prostate. Using ultrasound pictures, the surgeon can see beneath the urethra to accurately aim the laser and destroy excess prostate tissue. Early results show TULIP can lead to shorter hospital stays, and fewer side effects, including significantly less bleeding during the operation.

(Charlene Laino in Medical World News)

Jeevaniya Society in Pulse Polio Programme

Pulse Polio Immunisation Programme has started in the state as a Mass Campaign since 30th August. This campaign was started by the then State Health Minister Shri Praveen Singh Airon by giving polio drops to 11 children in a function held at Tilak Hall (U.P. Secretariat), Lucknow. Function was presided by Mr. Jagdish Chandra Pant, Secretary family welfare Government of India. Speaking as chief guest, Sri Aron told that WHO has decided to eradicate Polio from world by the year 2000 and the state is starting the campaign towards this end.

Mr. Airon appealed to voluntary institutions like Rotary Club, Lion's Club and others to come forward and spread the message to remotest villages to eradicate polio curse. He made it clear that this programme can not be fulfilled by the government machinery alone and people's participation is necessary to make it into a mass campaign. Otherwise complete eradication of polio from state will not possible.

He called upon the press and media to spread the message not only as advertisements but also in form of articles, editorials and views, success of Polio eradication campaign throughout India depends on Polio eradication from U.P. also.

Mr. Jagdish Chandra Pant assured that adequate quantity of vaccines will be provided to the state. He appealed to the guardians to bring their children upto 5 years of age on December 95 and 20th January 1996 for giving polio drops at the various centres to be created for the purpose.

Dr. N. N. Mehrotra, Secretary Jeevaniya Society also participated in this function. He assured full cooperation of Jeevaniya Society in this programme. Society is going to publish propaganda material and campaign for this programme.

Directory of Medicinal Plants

Jeevaniya Society is going to publish a Directory of Medicinal Plants found in Northern India. This directory will be based on surveys describing availabilities and possibilities of cultivation of medicinal plants. Aim of the publication is to educate and inform health workers and others about various medicinal plants, so that they can use them. This can also help in conservation and cultivation of rare and endangered species. Rural Development Ministry of Government of India is encouraging agriculture of these medicinal plants so that the farmers can get sufficient price for their products and drug manufacturers can get good raw drugs.

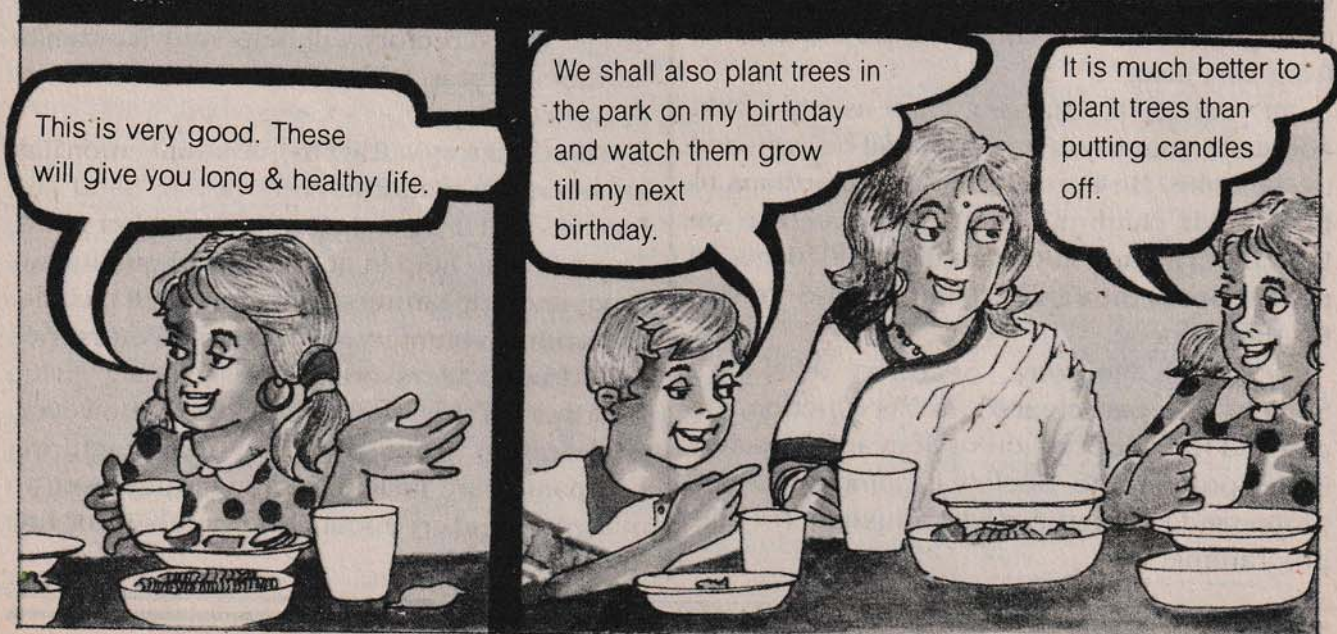
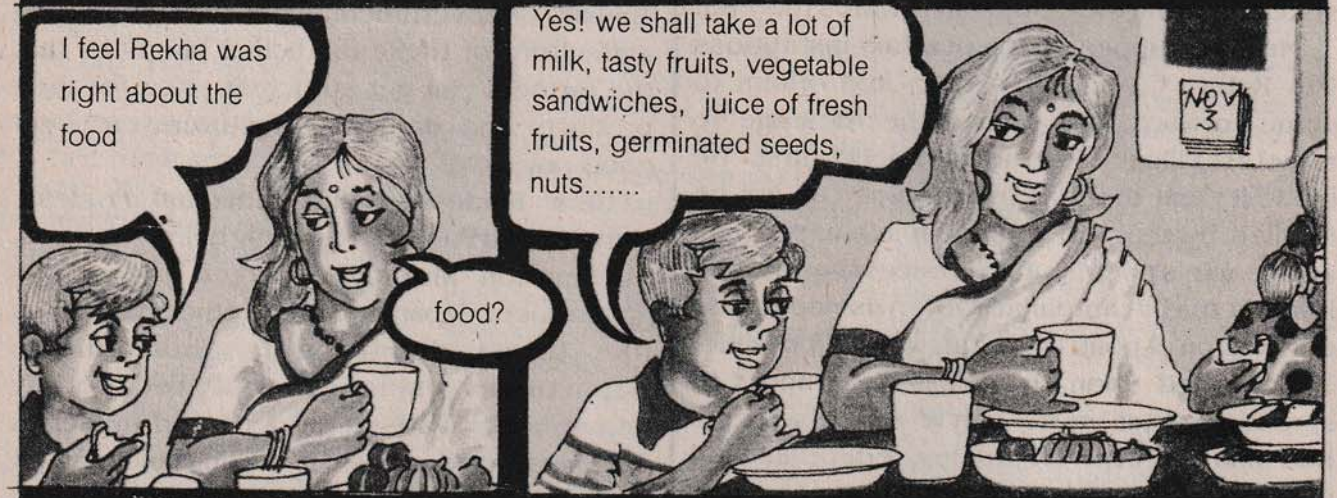
Uttar Pradesh, Delhi, Himachal Pradesh, Haryana and Punjab are mainly being surveyed. Information already collected by various government departments and other institutions like forest department, horticulture department, science and technology department, various gardens and nurseries are being included besides making independent surveys of commercial centres selling raw drugs. This directory will help Vaidyas, Health Workers, Research Scholars and manufacturers of our country.

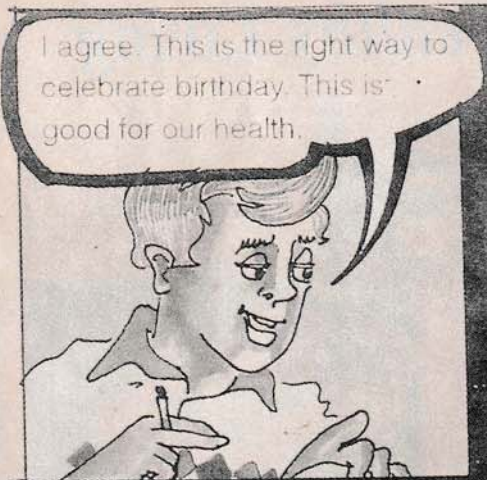
This directory will act as communication link between dry manufacturers at one hand and farmers and drug collectors at the other hand. This will also help in getting good quality raw drugs and help farmers to increase their income.

Various voluntary institutions, nurseries and drug dealers are enthusiastically giving information for this publication. However, cooperation from big drug manufacturing companies are lacking although they used to make hue and cry about non-availability of raw drugs.

Happy Birthday

(Continued from the last issue)

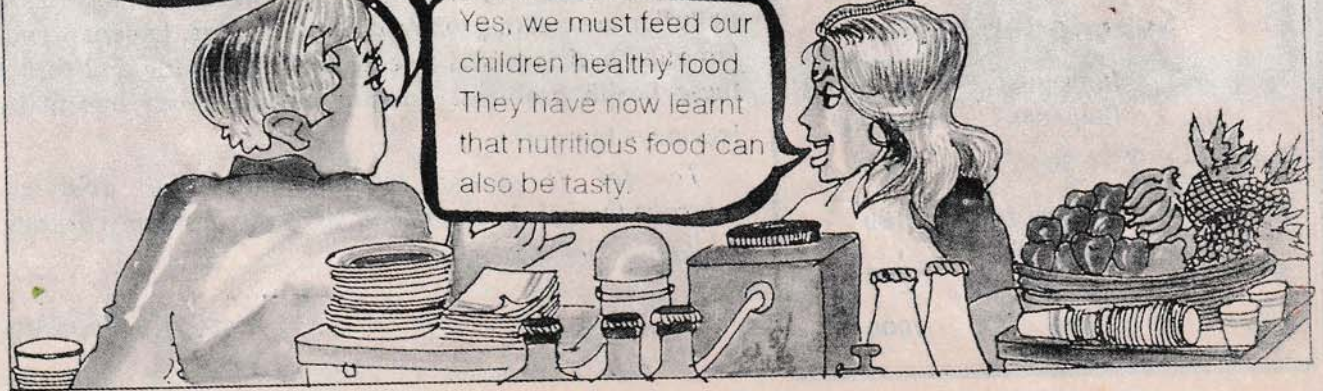
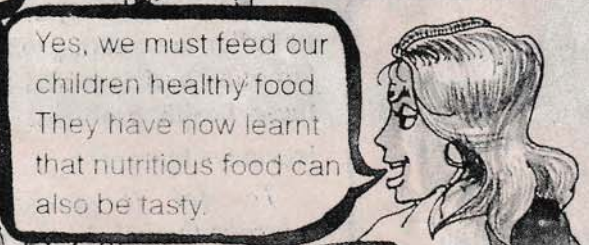
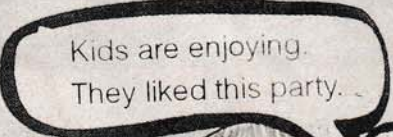




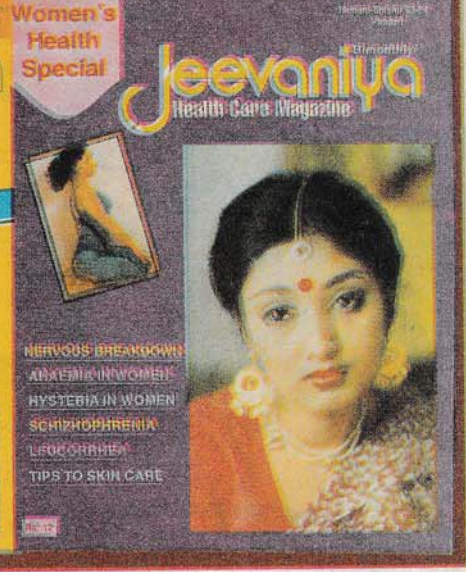
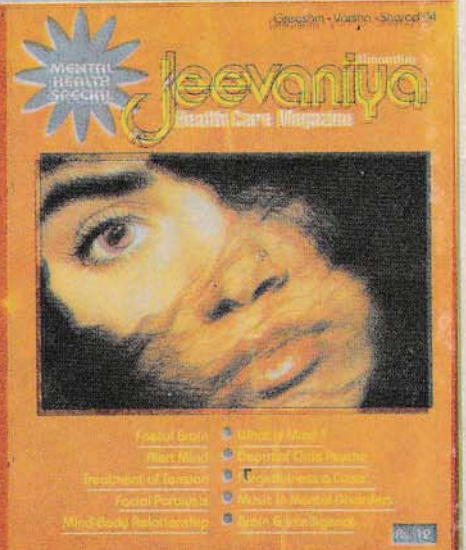
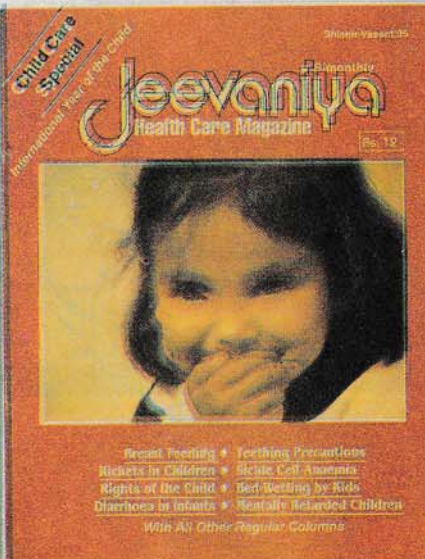
Papa, can you quit smoking for your and others' health in the family? This will be my best birthday gift.



Illustration: Chennai S. Mathad
Story & Script: K.Srinath Reddy



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