

Shishir '96
**Food & Nutrition
Special**

Rs. 15

Bimonthly
Jeevaniya
Health Care Magazine

- Diet & Cancer • Truth of Vegetarianism
- Food Adulteration • How to Avoid Obesity ?



- Nutrition in Indian Foods
- Ayurvedic Principles of Nutrition
- Gandhiji's Opinion About Food
- Empty Stomachs & Packed Godown:

JEEVANIYA Bimonthly

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— Editor

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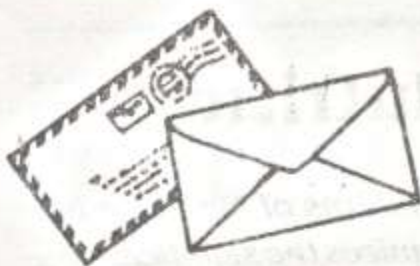
Reality Behind Science of Nutrition

The importance assigned to food and nutrition in the Indian Systems of Medicine is probably still lacking in the modern medical science. The latter recognizes the significance of food chiefly with respect to energy (carbohydrate and fat) or nutrition for body building (protein). However, during the current twentieth century the importance of salts and vitamins has also been recognized. On the other hand, in Indian system, the food has been held important not only as a source of energy and nutrition but also as being Panchabhautik (comprising five elements) and comprising Rasa, Guna, Veerya and Vipak. Based on these properties, there are instructions to vary the food during different seasons and times of the day. Besides the concepts of Pathya-Apathya (prescribed-proscribed), food according to one's temperament and pathological condition have also been accorded extreme importance in the Indian Systems. Moreover, the concept of Anupana (excipient, vehicle) presumes that substances act differently with different vehicles and attack different diseases. Indigenons medical systems have understood the relationship of food with medicine very deeply indeed. The modern medicine and pharmacology have endeavoured to understand this relationship since the last couple of decades only.

Besides the Ayurvedic concept of properties of food according to the six tastes (Rasas), their being either Sattvik, Rajas or Tamasik in unique. Accordingly, the variation of food according to one's occupation or stages of life (such as Brahmacharya, Grihastha, Vanaprastha and Sannyasa) is unparalleled.

It is the speciality of this classification that has explained the different qualities of various oils, proteins and carbohydrates, whereas the classification of food into carbohydrates, fats and proteins in modern science of nutrition has upto recently remained limited. Recently, efforts have been made to classify further in detail the carbohydrates, fats and proteins and find out their properties. Though these discoveries have helped to understand the properties of food materials more minutely but they have to admit changes very often in the light of new discoveries. On the other hand, the properties of substances as described in Ayurveda (Rasa, Guna, Veerya, Vipak, Prabhav) are eternal and need no change even after thousands of years such as in the present context.

The concept of totality does not have to change on account of minor researches and day to day discoveries because the total (body) to total (substance) relationship does not change. Probably the modern medical science has to realize the fact clearly yet that if it wants to assimilate the traditional knowledge then it should change itself accordingly.



Readers Forum

Dear Editor,

I have been an intensive reader of Jeevaniya health magazine for the past few years. I have even tried some of the simple tips for prevention of common diseases. I have found it very good and useful magazine. Recently, I have noticed that you have started giving a wide coverage to news items. For some diseases modern concepts are also well covered in a few special issues.

Prem M. Dhavahhana, Gujarat

I got an opportunity to read Jeevaniya when on my request you sent me its two back issues. I have noticed little difference in the contents of English and Hindi version. Is the Hindi version of Jeevaniya the original one? I have curiosity to know this.

Ramesh, Orissa

We plan both Hindi and English versions simultaneously. Sometimes we receive articles from our authors in both the languages. We always try to cover all the important reading material in Hindi as well as in English.

Editor

I am a postgraduate student of Siddha Medical College, I came across Jeevaniya in my college

library. Although it was a very old issue but I have found it very informative. I believe it will serve as a valuable reference material for my academic purposes. Now I want to have all its issues.

Dr. S.K. Halliga, Tamilnadu

I have gone through a copy of your magazine. I have found it a very informative magazine for the Library. In my opinion it is equally useful magazine for each household. Its articles give complete information on the prevention of a disease.

D. N. Nath, Ayurveda College, Karnataka

I am very much thankful for sending me the latest issue of the magazine. The layout of the coverpage of the magazine is highly appreciable. I have liked the quality of paper, the type of printing and above all the subject matter. The presentation of reading material is scientifically analysed. In my rating Jeevaniya is an invaluable health care publication. I believe it is the part and parcel in the daily life of physicians of the traditional systems of medicine.

Kaviraj Sushil Kumar Marjet, West Bengal

We have always been encouraged by the comments of our keen readers. We would definitely welcome your suggestions as well.

Editor

Recently I got a chance to read Jeevaniya. I have found that it is really doing a great service to suffering humanity. Its content provide simple tips to prevention and treatment of some of the common diseases.

R. K. Swamy, Bihar

I am very happy to note that Jeevaniya Society is publishing a health care magazine and wall papers on primary health care. I appreciate you for this 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 for 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 if you so desire.

Editor

I have gone through the health care magazine Jeevaniya. I have found it very interesting. 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, Bhubaneshwar

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Red Meat and Colon Cancer

It is worth repeating that red meat and animal fat increase the risk of colon cancer. A study conducted by Brigham and Women's Hospital in Boston, USA, confirms this. This massive study involved almost 90,000 women. The conclusion was that women who consumed the highest amounts of red meat and animal fat were more than twice as likely to develop colon cancer. This may be due to the bile acids which help digest fat in the colon. Vegetable fat or dairy fat did not seem to add to the risk.

The study also concluded that using fish and chicken instead of red meat and consuming plenty of high fibre fruit may lower risk of colon cancer. While this study only used women subjects, the findings are applicable to men as well.

Beta Carotene to Fight Cancer

Daily doses of yellow or orange coloured fruits and vegetables can keep the dreaded malaise - cancer - at bay, says a new study. Carrots, oranges and even tomatoes are a good source of the cancer fighter called beta carotene. Nutritionists have discovered beta carotene to be rich in vitamin 'A' which has shown convincing results as an anti-cancer agent.

Along with Vitamins C and E, beta carotene, which converts itself into Vitamin A inside the body, has been recognised as potential fighters of the two most dreaded ailments - cancer and cardio-vascular diseases. Researchers R. Manorama and C. Rukmani from the National Institute of Nutrition have pointed out that Vitamin A helps fight blindness apart from its anticarcinogenic nature.

In fact, the US National Cancer Institute recommends a daily dose of six milligrammes of beta carotene, which amounts to five or six helpings of fruits and vegetables in a day.

For Overall Fitness

Your Body fat percentage tells you more about your overall health than your weight. Because muscle is 25 per cent denser than fat. Some hints on how to use that knowledge : Eat three hours before a workout and give yourself time to digest. Concentrate on carbohydrates with a minimum of fat, which normally takes up to six hours to digest. And avoid sugar at least one hour before a workout.

Nutritionists recommend eating one gram of

carbohydrates per pound of body weight within four hours of working out. Your post-workout meal should restore the carbohydrates that your muscles used as fuel. Orange juice, bananas, cornflakes, grapes, oatmeal, baked potatoes and bread contain carbohydrates that raise blood-sugar levels at the right rate.

While you sweat away, your body efficiently cools itself. But sweating during workouts impairs your endurance and thermoregulation if that liquid is not replaced. Water with two to 10 per cent sugar is an ideal energy drink during this time. Fruit juices and sodas contain more than the recommended 10 per cent sugar. Hence these should be consumed after adding water.

It's a myth that you can boost your workout performance with amino acid-and protein powders. They're erroneously believed to be natural alternative to steroids - building blocks that generate protein and thus increase muscle mass. In reality the recommended protein requirements for an adult and even for an athlete, are more than liberal.

Obesity May Cause Disability

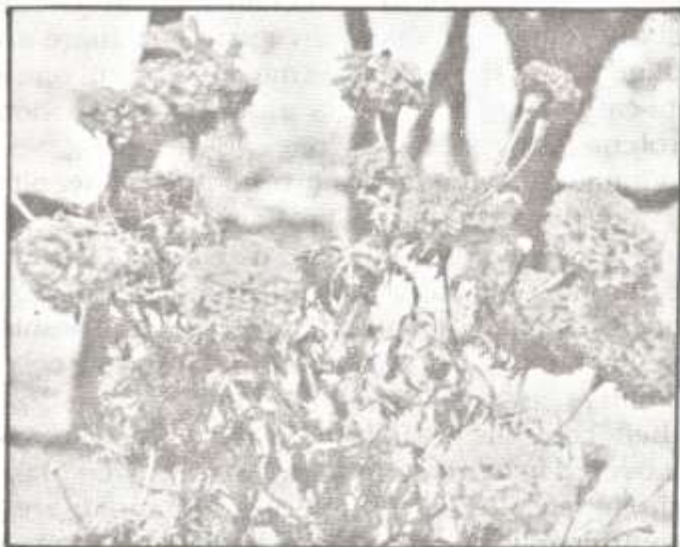
We already know that severe obesity leads to a host of health problems and early death. But what if moderate overweight, which is more common? A team of Finnish researchers studied a nationwide sample of 51,000 people between 25 and 65 years. They also took into account occupation, smoking habits and place of residence and came to the conclusion that moderate overweight may not lead to early death, but it does lead to mobility problems and early work disability.

Wonder Plant to Cure Malaria

The Central Drug Research Institute (CDRI) has developed a drug from plant extract of Chinese plant *Artemisia annua*, regarded as wonder plant. The Plant extract Artemisium was developed into drug called Arteether.

This drug has been tested as injection in eight Centres located in high endemic areas of Bihar, Orissa, Assam and Delhi, A total of 306 Patients of uncomplicated and complicated *Plasmodium falciparum* malaria were treated and most of the cases became parasite free within 72 hours. This drug was found to be well tolerated and without any side effects.

Mosquito Killer Marigold Flowers



Delhi based Institute of Nuclear Medicine has developed a bio-degradable mosquito killer from marigold flowers which is safe for the environment. Alfa-T and Enithrocin-3 found in flowers kill larva of both anophillis and qulex mosquitos. Anophillis causes malaria and qulex causes encephalitis and Elephantiasis. Preparation of this insecticide is easy. It can be prepared by crushing marigold flowers in alcohol. After evaporation of alcohol, the insecticide remains in the form of yellow residue. This insecticide becomes effective in sunlight and kills larva and pupa of mosquitos. This insecticide is bio-degradable hence it does not create any health problems like other chemical insecticides.

Walking Walker

A computerised device can enable certain paraplegics to stand, walk short distances and sit down. Called the Parastep System, the device includes a microcomputer worn on belt and a set of electrodes attached to nerves and muscles in the thigh and below the knee. When the patient flips certain switches on the walker, it sends impulses to the electrodes, which trigger standing, stepping and sitting.

The system has been used on 200 patients in 27 rehabilitation hospitals or clinics in the United

States, Europe and Canada, but is expected to become more widely available. It's not a replacement for a wheelchair. But for trauma patients who are in otherwise good health, it can permit short periods of walking in the home or office.

Skeletal Structure & Cancer

A comparison between 67 women with breast carcinoma and 59 healthy women has shown very significant difference in the skeletal development of the two groups. This conclusion was reached by a medical team in Milan.

When comparing women who had the same height and length of lower limbs, it was found that those with cancer had shorter femurs and longer tibiae and fibulas than those without the disease. Most interesting, women with benign nodules in the breast had skeletons similar to healthy women's. Since skeletal structure develops long before the possible insurgence of a tumour, these findings can be useful in prevention, allowing the early identification of high-risk women and the concentration on them, especially in the event of a suspicious lump in the breast, of the necessary resources and surgical treatment.

These findings also suggest that breast cancer may be linked to a genetic mechanism, and that the use of hormones, such as those found in oral contraceptives, may be scarcely relevant.

Magnesium to Protect the Heart

Magnesium has been found to reduce deaths from heart attacks. Research at England's Leicester University and Leicester Royal Infirmary involving 2316 patients admitted with a suspected heart attack has shown that a slow transfusion of magnesium salts reduced deaths by nearly a quarter. One theory as to how it works is that the magnesium dilates the blood vessels, reducing the chances of blood platelets clumping together and forming dots. But a dose of magnesium stomach medicine would be of little use. Dr. Kent Woods, consultant and senior lecturer in clinical pharmacology, who led the research, stresses that "given by mouth, magnesium doesn't have the same effect as when fed intravenously".

Count on ACE for Health

ACE is attracting the attention of medical and scientific researchers. In essence, these are the precursors to Vitamin A (called betacarotene), Vitamin C and Vitamin E. Together, these nutrients form a powerful alliance that can protect the body from many diseases and also forestall the ageing process.

These vitamins are present in many types of food and are found naturally in fruits and vegetables which we can consume in plenty, especially when they are in season, whereas the taking of drugs in comparison is fraught with side effects and they are no match to natural nutrients. In fact, extensive research is being carried out in this direction, supported by WHO and other Food and Agricultural Ministries.

There have been numerous studies into the extraordinary powers of beta-carotene, Vitamin C and Vitamin E. Studies have revealed that lung cancer, angina and other heart diseases are much less evident and longevity is established by a liberal intake of ACE vitamins.

Although ACE vitamins help combat the effects of free radical damage, air pollution also reduces the supply of these vital nutrients. Studies have established that city dwellers who breathe in polluted air have lower levels of antioxidants. This leaves the body short changed and dangerously low in supplies of ACE vitamins. When this happens, free radicals take over and 'oxidative stress' occurs.

We stand an increasing risk from free radicals in our food. The main source is fats (such as cooking oils when they are heated to high temperatures). As fats are heated, their chemical structure breaks down to form peroxides. These, then, further break down to form the dangerous hydroxyl radical. This form of radical is highly reactive and causes great damage to cells and DNA.

Poly-unsaturated fats such as sunflower and safflower oil are least stable at high temperatures. These become oxidised more quickly than mono unsaturated fats such as, olive oil.

Beta-carotene works in two different ways. First, it is converted into Vitamin A by the body and the left over beta-carotene functions as an antioxidant. It is important not to confuse betacarotene with Vitamin A as the two are separate substances. There

are two main types of Vitamin A. One is found in foods derived from animals, such as meat and milk, their is called retinol. The other are the carotenoids that are found in fruits and vegetables. There are around 600 of these, but the most important one is beta-carotene. The body is able to convert beta carotene into Vitamin A.

Vitamin A is needed for growth and for keeping the body tissues healthy. One of its most important roles is to reinforce the protective envelope or membrane that surrounds all our cells. It also protects the mucous membranes. It is fat soluble. Fish liver oils are the richest natural source of Vitamin A.

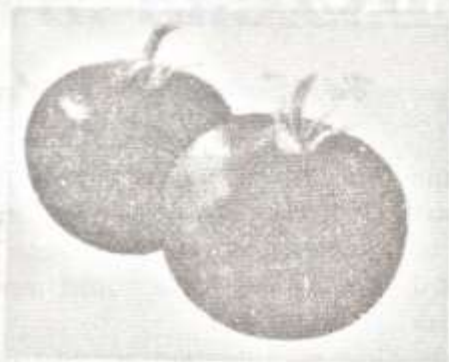
Beta-carotene is a natural plant dye and was first discovered in carrots, hence the name given to the entire family of carotenoids. The carotenoids are a colourful range variety of paint box colours that we see in nature. Beta-carotene is a deep shade of red-orange and the main pigment in yellow and orange fruits and vegetables. Dark colored vegetables of deep green also contain carotene but because of chlorophyll, the yellow or orange is masked, but sometimes the masking is not quite overbearing like in the case of bitter gourd.

Beta-carotene is one of the most powerful antioxidants that prevent plants from burning up in the ultraviolet rays of the sun - nature's perfect antidote. Fruits and vegetables that contain beta-carotene are : melons, apricots, peaches, mangoes and carrots, parsley (raw), sweet potatoes, spinach, watercress (raw), spring greens, tomatoes, asparagus and broccoli.

Vitamin C (ascorbic acid) possesses many extraordinary properties. Without it, we are liable to many infections and can even die of scurvy. Chemically speaking, Vitamin C is one of the simplest vitamins. It helps in the growth and repair of body tissues and gums, blood vessels, bones and teeth. It is involved in the immune system and helps the body to fight off bacteria and viral infections.

Vitamin E is a fighter against free radicals because it protects every cell in the body. It is the virility vitamin because it plays an important role in human fertility. It strengthens the immune system by strengthening the white blood cells and helps to prevent heart diseases.

Tomato Cures Dental Caries



Dr. Julian of Gaze Hospital, Britain has developed antibody filled tomatoes to prevent dental caries. Dental caries are caused by *streptococcus gintas* bacteria and scientists are trying to develop vaccine for its prevention. Doctors have been successful in developing its antibodies through tissue culture. They wanted to use these antibodies in tooth paste and mouth gel for prevention of dental caries. Dr. Julien, while experimenting found that plant cells easily develop antibodies. Prior to application of this method on tomato experiments were made in tobacco plants.

Mending Damage

Growing new heart tissue to replace damaged cells was thought to be impossible. But new research at the New York Medical Centre indicates that mending damage caused by heart attacks or heart failure may one day be possible. Animal studies show that new heart cells may be generated by the multiplication of healthy cells. Dr Anversa and his colleagues reported at the University of Missouri in Columbia. They found that healthy cells surrounding the damaged tissue contained a chemical necessary for DNA replication, an essential step in cell proliferation. This process can reduce morbidity and mortality in the elderly.

High Level of Toxic Chemicals in Singhara

The Pleasure of eating trapa fruit (singhara) are no more unmixed. The fruit has toxic effect due to the presence of pesticide residue in it, say the scientists. The singhara, a very popular fruit, cultivated extensively in tanks, lakes and ponds throughout India, particularly in Uttar pradesh, Madhya Pradesh, Bihar and Orissa, can cause various

diseases of liver, lung and heart due to this toxic effect.

In a joint research, Assistant Director of National Botanical Research Institute, (NBRI) Dr BS Dikshit and senior scientist Mr. R Banerji have found out the presence of carbofuran residue in singhara. Further research is going on at the Industrial Toxicology Research Centre, (ITRC).

Dr Dikshit said that previously villagers used neem mixed with ash as a pesticide. This pesticide was effective and harmless too but later the DDT was used to protect the fruits from pests as they had become immunised to the traditional neem pesticide, he said.

After the DDT pesticide was banned by the WHO for its toxic effect, which persists over a period of 40 years, it was substituted by other pesticides like carbofuran, especially, for the aquatic plants, he said.

The toxic effect of the carbofuran pesticide persists over a period of ninety days. The period between flowering and the maturity of Singhara takes approximately two months and as, immediately after maturity the fruits are plucked and transported to markets for fresh selling, the toxic effects remain and pose a health hazard to the consumer, Dr Dikshit disclosed.

Doctor Onion



Housewives often suffer from bad smell and tears while chopping onion but these are indication of its medicinal properties. Scientists from Biochemistry Department of Kerala University have found a sulphur containing amino acid which is effective in treatment of diabetes and blood fat. The pungent smell of onion is also because of this amino acid. In the treatment of diabetes, this 16% as effective as compared to 26% of insulin and 25% of glibenclamide while its effectiveness in reducing cholesterol is equal as compared to above mentioned drugs.

Shishir Regimen

Ud. S. A. Khan, Lucknow

Shishir is the advanced winter season, the second healthsome season of the year. The 'intake period' begins with this season, during which depletion of Rasa occurs among living beings and plants, resulting in depletion of strength. The Tikta or bitter taste (Rasa) is generated in the atmosphere. Tikta (Rasa) is produced by Vayu and Akasha Mahabhootas. So the effect of Vayu remains predominant in this season which induces roughness in the skin and increases Vayu in the body. The seasonal effect causes accumulation of Kapha in the body. The enhancement of Vayu helps to prevent the accumulation of Kapha. Because if Vayu and Kapha both grow more then Pitta would naturally become too weak. This would weaken all the 13 fires inside the body which would result in severe illnesses and ultimately in death.

Due to excess of cold and cold winds, temporary vitiation of Vayu and Kapha also occurs, so that various Vataj and Vatakaphaj diseases like coryza, headache, rheumatism, pneumonia, cough, Vatakaphaj fever etc. During this season also the moon remains powerful. Consequently, the sweet taste (Madhur Rasa) is enhanced, resulting in increase of Kapha, strength, semen and force.

During this season also the digestion remains stronger but not as strong as in Hemanta, because as the Shishira advances and accumulation of Kapha takes place, the hunger is reduced.

During this season also diet has to be nutritive, heavy, unctuous and warm. Cold and winds are to be avoided. The food and behaviour should be subsiders of Vata and Kapha, such as wines, meat, fish, egg, tea, coffee, musk, saffron almond etc. which should be freely used. Head, hands, feet and chest should be covered with woollen clothes.



Sesame products are useful in Shishir

Vata and Kapha-subsiding things like ginger, asafoetida, black pepper, *Piper longum*, garlic, basil, black sesame, cummin, fenugreek, nutmeg, wintercherry etc. should be used. Vata increasing substances like red chilli, leafy vegetables, lentil, millet, corn should not be taken consecutively. But fenugreek and atriplex without stems may be used freely. Among fruits pomegranate, guava, papaya almond, cashew, pistachio, walnut and among vegetables

potato, tomato, brinjal, carrot, beetroot etc. are wholesome. Use wheat, rice, kidney-bean, ghee, milk, fat, butter and sweets of Khoya.

Regular exercise and massage with mustard oil are necessary. Sweet, salty and sour things are usable. The eating should be on time. Breakfast should be taken in the early morning, because the nights being long the food eaten in the night is digested completely by the morning. If one keeps the stomach empty for long then his digestive fire will be vitiated.

Bathing should neither be done with chilled water nor very hot water. Lukewarm water is good for bathing. If the water is too cold it would condense the Vayu and cause harm. If the water is too hot it would open up the pores of the body very wide and air and cold would enter subsequently and create problems. Wash with lukewarm water after massage and rub the body dry with a towel.

Food and behaviour must be according to the temperament. Persons of Vataj and Kaphaj temperament should use hot substances. Kaphaj-temperamented people should take more nutritious things. Pittaj-temperamented persons should not use a lot of hot things so that the season does not affect them adversely.

Vd. Bhalchandra Purushottam Nanal

Interviewed Dr. N.N. Mehrotra



(Vd. Nanal with his late wife and a grandson)

Simple, soft-natured Vaidya Bhalchandra Purushottam Nanal completed 70 years last November 29, 1995. He was born on a full moon day in the month of Margashirsha. His father, the late Vaidya Purushottam Nanal was a renowned vaidya of Pune, who established the three famous institutions, namely Tilak Ayurved College, Tarachand Ramnath Ayurvedic Hospital and Ayurved Kasa-shala, which are even now significant as pillars of Ayurveda. Ayurvedic atmosphere was so palpable at home that not only his elder brother, the late Vd. Mahadev P. Nanal and two sisters studied and practised Ayurveda but his children too have all attained renown in the study and practice of Ayurveda. His nephews Vilas and Ramesh are famous vaidyas of Pune and Bombay, respectively. His sister's sons are carrying forward the banner of his Ayurveda at Pune. The entire Nanal

family has always stood behind the Jeevaniya to help encourage it.

Vaidya Bhalachandra, who has practised Ayurveda for the last half a century, is popular at Pune as 'Bapu'. He has kept the flag of practising uncontaminated Ayurveda high, though he has nothing against the modern medical science. Even now at the age of 70 he personally supervises the preparation of medicines and is associated actively with all possible endeavours for the development of Ayurveda. Not only has he done several important researches in the field of Ayurvedic pharmacy but he has also successfully treated hopeless cases of cancer even. Every year umpteen patients even from foreign lands flock to him to attain health. Recently, the executive editor of Jeevaniya, Dr. N.N. Mehrotra conversed extensively with Bapu Nanal at Pune, excerpts of which are given herebelow.

Dr. Mehrotra : Bapu, what is the secret of your active and healthy life ?

Vd. Nanal : I have always led a disciplined and regulated life. I get up before sunrise, take massage and exercise, eat vegetarian food sparingly and have complete trust in the God. I have never worried, angered or sorrowed unnecessarily nor taken any elixir etc.

Dr. Mehrotra : Has the study and practise of Ayurveda goaded and helped you to lead a life as such ?

Vd. Nanal : Ayurveda, which is a part of Indian philosophy describes shatayuvaya (centurion life) and advocates a special life style to achieve the same. Daily regimen and seasonal regimen have been emphasized. The life-style, prescribed and proscribed diets are all based upon one's

temperament, season, habitat and time. The quantity of food should be regulated as related in Charaka i.e. one-third part of intestine to be filled with food, another one-third for water and the remaining one-



(In his chamber with records)



In his lawn showing a medicinal plant

third to be kept vacant. Nowadays, we want to forgo this direction and eat at will. This results in not only abdominal diseases but other diseases as well.

Dr. Mehrotra : What are your suggestions to promote a healthy regimen ?

Vd. Nanal : Our problems proliferate due to our endeavours contrary to nature. A newborn child suckles according to his hunger and leaves off as soon as he is satisfied. But mothers due to lack of knowledge and doting feed the baby frequently and make him habitual of overeating from the very beginning. This should never be done. Moreover, physical and mental urges should never be subdued.

Formerly, there were arenas everywhere that have closed now. There must be special arrangements for massage and exercise. Early to bed and early to rise, eating limited meals at regular hours and being close to the nature are doubtlessly healthsome. Walking barefoot on clayey soil is good for health but walking barefoot on hard floor is harmful for the body. At least once a day one should stroll barefoot over clean clay, sand or lawn for half an hour.

Dr. Mehrotra : Don't you think your suggestions are rather going back on development & progress?

Vd. Nanal : This is confused thinking only. On the one hand canned food is becoming more and more popular here and abroad and on the other hand there are others who are being enamoured with fresh food. When I was in Germany in 1982, I found there at Rigenborg, at a professors house, that there were no chairs and tables and all have to be seated on divans or bare floor or short stools. Many of the German friends who have studied Ayurveda, massage and exercise regularly and use fresh and vegetarian food only.

Dr. Mehrotra : Bapu, what are the challenges before Ayurveda to-day ? And what are your suggestions for the development of Ayurveda ?

Vd. Nanal : Most of the people who are attracted towards Ayurveda think they can gain knowledge of useful medicines through it. They are not sufficiently mindful of the sources of the strength of Ayurveda. Theoretical and diagnostic aspects of Ayurveda are very important, special attention should be paid on these. For example. I have treated some special cases of incurable diseases like cancer. The Indian Council of Medical Research and Tata Memorial Cancer Hospital are eager to know as to how I treated cases of cancer. However, I contend that I know nothing about cancer. I treated them for the depletion of Dhatus (tissues) and Ojas and the patients derived benefits from the treatment.

Dr. Mehrotra : Vaidyaji, please tell me in detail about the patient of blood cancer whom you treated successfully, for which you were accorded a civic reception by the authorities of Tata Memorial Hospital and Pune University, jointly.

Vd. Nanal : As I stated before, I treated Dr. Agte who was a patient of depletion of Ojas, blood and marrow. The Tata Memorial people may have treated him for blood cancer and gave him some weeks, days or hours only, in March 1989. He was in such a torture and excruciating pain that he was not able to put on anything except a thin Dhoti and did not allow me even to touch his pulse, because he was so tender that the touch made him to writhe with pain. I made him to take medicated oil bath, so that his Vata Dosha may pacify and the patient was able to sit up on the third day and put on some clothes. Subsequently, I treated him for the depletion of Dhātu on strictly Ayurvedic lines. He was cured in about one month and is completely healthy even now.

Dr. Mehrotra : You must have treated other special cases as well ?

Vd. Nanal : People afflicted with all sorts of diseases come to me. However, during the last 7-8 years many cases of cancer (so called by modern



(With self prepared medicines and Son-in-law)



(Conversation with patient by phone)

medical science) have come to me and were cured as well. Cases from foreign countries have also come regularly. However, now I have started giving more time to compile my experiences for the benefit of Ayurved and people at large. I want to devote more time to research and writing. I don't want to see more than 5-6 patients a day now.

Dr. Mehrotra : Vaidyaji, what type of research should be done in the field of Ayurveda and what are its possibilities in your view ?

Vd. Nanal : Two types of researches are especially required now. Firstly, skilled Vaidyas must record in detail their patient's experiences according to Ayurveda. Medical experiences give many facts which would be reliable in the eyes of the modern era provided the experiences are recorded with minute details. I have had all the records of my each and every patient but some were lost in the sudden deluge of river Mutha due to the breakage of the panchhet dam in the year 1961. However, I do have the detailed thousands of subsequent records of my patients. I am trying to analyse them and I am on the look out for suitable assistants.

The second requirement is to tackle the challenge of changing environment, e.g. properties of drugs must have undergone a change due to the variation in the environment. Which indigenous or exotic plants may be used as alternatives to the extinct or almost extinct drugs ? What is the effect on the properties of drugs if certain things are used in their cultivation in different climatic conditions ? As an example, having lost several medicines in the deluge of 1961, I prepared some medicines by tincturing the remaining medicines with 1:10 milk of Magnesia, as in Homoeopathy and found them quite effective. Use of sucrose used to spoil the medicine due to moisture. Then I also used tapioca (sago) successfully, which I still use. My brother and father also experimented and nephews are carrying forward the banner of experimentation.

During the prime ministership of Morarji Desai, I was solicited to experiment with self-uropathy. I suggested that according to Vagbhata human & bovine urine being bitter may be studied in the treatment of obesity, wounds and Kapha. But the matter did not proceed. Such original researches are needed.

Dr. Mehrotra : Which of your students do you think are noteworthy ?

Vd. Nanal : Though having been professor and Head of the Department, Kayachikitsa, Tilak Ayurved college during 1956 to 1983, I came across umpteen good students, but Vd. B.V. Sathye, Dean, Poddar College, Bombay; Narendra Pendse of Pune, Vasant Lad, U.S.A. and Robert Soboda, Europe have distinguished themselves and shall do more good work in future as well.

Dr. Mehrotra : What are you doing nowadays and what are your future plans ?

Vd. Nanal : Presently apart from practising Ayurveda, I am the Dean of Tilak Maharashtra Vidyapeetha and as such I am busy in writing and teaching. I am compiling an encyclopaedia of Brihatrayee (Charak, Sushruta, Vagbhata) since last four years. University Grants Commission had sanctioned some grants for the same which has been fully utilised but the work is continuing still. Publisher is also being sought. I have also started research on the compilation of my experiences.

Dr. Mehrotra : Many many thanks Vaidyaji, I not only hope, but fully believe that you will be able to complete the great works that you have undertaken and you will be able to gather about worthy students to advance your mission.

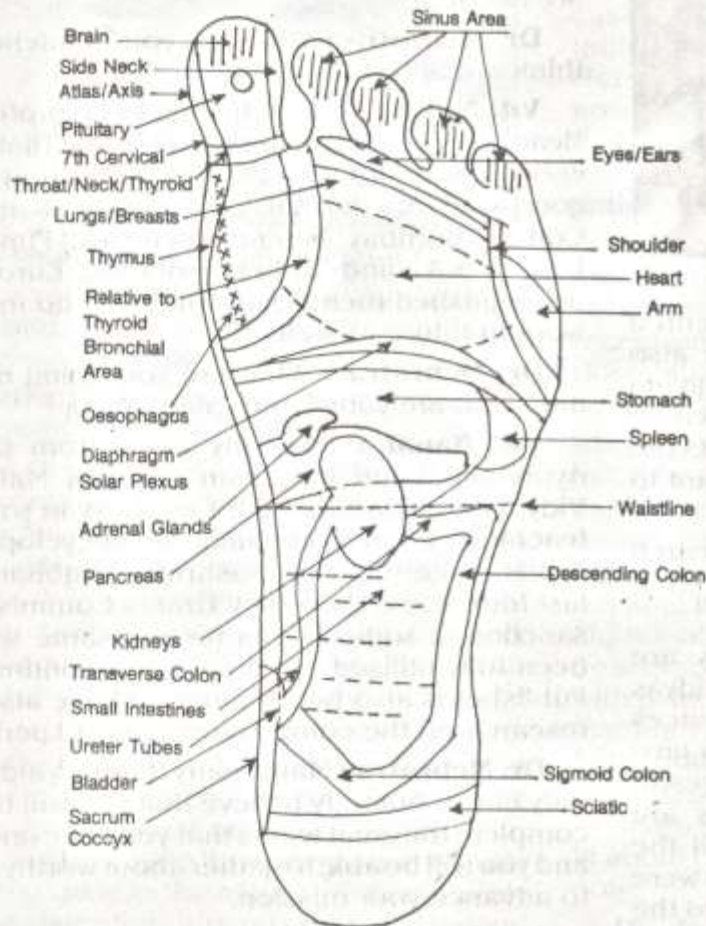
Vd. Nanal : Thanks Dr. Mehrotra, but at times I feel pangs of pain when I realize that even good students would not find good path in the cocktail of the present Ayurvedic education system because good teachers have become scarce. The government, medical industry and we all must pay attention in this regard.



(Reading Jeevaniya Publications)

Acupressure Cure

Dr. Renu Gupta, Lucknow



Left Bottom

The prevalent ignorance and neglect of health among the people nowadays is really startling. Such men who try to understand their body and health are rare. In fact, we have handed over our care of health to the medical science. From time to time, we come across the limitations of medical science. Those medicines which were effective in annihilating pathogenic bacteria till recently, are being proved ineffective now. For instance, it was believed that the discovery of chloroquine and

camoquine would eliminate malaria, but it did not happen. That is, stronger the medicine, greater the danger of its adverse effects. Medicines believed to be safe previously are being proved dangerous today. For example, thalidomide was believed to be a safe somniferous and phenacitin as an analgesic, but thalidomide causes the pregnant women to deliver deformed babies and phenacitin spoils the kidneys.

An acupressure therapist considers the body as an integral unit. According to this, no limb

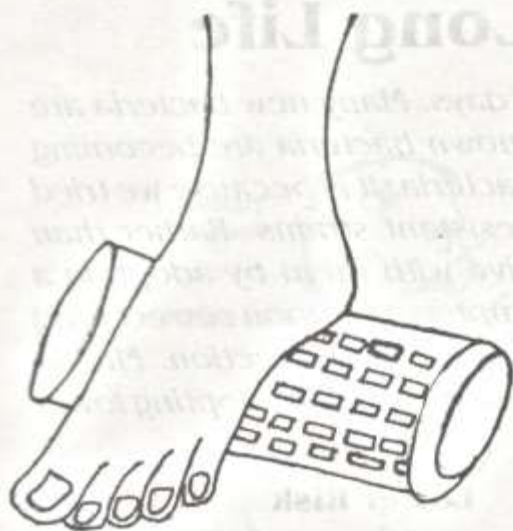
can be sick or healthy as an entity separate from the body. The acupressure therapist minds the treatment of the patient and not of disease.

In view of the above, if the immunity of the body is strong then the disease may be stopped or cured quickly. If we keep on following the laws of nature, our immunity would remain impregnable. Accupressure or Shivatsu is a miraculous simple system of treatment based on the laws of nature. By exerting pressure on certain points, internal limbs may be influenced to cure diseases therein quickly and completely.

The acupressure therapy is indigenous to India. It was prevalent 2000 years ago as marma chikitsa but became extinct later. When foreigners recognised this therapy then we also started copying them. Today the therapy is called Chinese even though it is really an Indian therapy.

The word acupressure implies application of pressure at certain points. The therapy is based on the fact that whenever there is a pain somewhere, we are apt to press it as a reflex reaction, whatever the nature of pain. The nature guides us to exert pressure.

Disease occurs when there is a collection of useless matter,



Acupressure Roler

which upsets the natural equilibrium. In this system of therapy, the remote control of body lies in palm and under feet. Our body is a machine. It is automatic, delicate, the best of all machines and equipped with a tough machinery. The heart and lungs are non-stop pumps, eyes are a wonderful camera or projector, ears are divine sound box, stomach is a powerhouse and nerves are telecommunication system and brain is an invisible computer with infinite potential. All these machines combined is called body whose switch lies in the palm and under feet.

The acupressure therapy completely cures diseases like high blood pressure, low blood pressure, insomnia, polyuria. The therapy creates glow in the skin. It cures the defects of the skeleton. It cures the defects of the nervous system and regulates the functioning of all endocrine glands. It can cure spondylitis, rheumatism, arthritis, piles,

gastric ulcer, migraine, slipdisc, lumbar and other complex diseases.

To practice self acupressure therapy a roller is available in the market. Anyone can stay fit with the help of this roller. It should be operated for 10 minutes everyday whereby one derives the benefit of having walked about three kilometres. The regular use of the roller precludes the accumulation of extra fat in the

body. Exertion of pressure over the underfeet makes the nervous system active and free of any disorder.

The greatest advantage of acupressure therapy lies in the use of roller whereby one can medically check-up himself free of charge everyday. For this, one needs 10 minutes every 24 hrs. The roller will warn you by showing red light.

Back Issues of Jeevaniya

Jeevaniya is not merely a magazine, it contains scientific information about health care which is the essence of many treatises and practical experience of our learned physicians.

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Healthy Life Style for Long Life

Mankind is suffering from various new diseases now a days. Many new bacteria are coming to the knowledge of medical science and many known bacteria are becoming drug resistant. It is not practical to totally avoid or destroy bacteria. It is because we tried to destroy bacteria that we have created stronger, drug-resistant strains. Rather than trying to destroy bacteria and viruses, we must learn to live with them by adopting a healthy life style. Indian systems of medicine have always emphasised upon correct food habits and regulated living. Western experts are also turning in this direction. Michio Kushi and Alen Jack in their book 'AIDS and Beyond' have recommended adopting lower risk methods in diet, life style and environment.

Higher Risk

- ↳ Meat, Poultry and Eggs
- ↳ Milk, butter, cheese, yoghurt and dairy, margarine,
- ↳ Salad dressings,
- ↳ Bread spreads
- ↳ Deep-fried and other oily, fatty foods
- ↳ Refined flour, yeasted bread, baked products
- ↳ Tropical fruits and juices
- ↳ Other soft vegetables like tomatoes, potatoes, egg plant etc.
- ↳ Sugar, honey and other sweets, chocolate
- ↳ Soft drinks, sparkling and distilled waters
- ↳ Spices and aromatic, stimulant herbs
- ↳ Coffee, tea, tobacco
- ↳ Strong alcohol and wine
- ↳ Canned, dyed, frozen or sprayed food
- ↳ Food containing additives, preservatives, or chemicals
- ↳ Vitamins, food supplements
- ↳ Irradiated food
- ↳ Genetically-altered food

- ↳ Microwave and electrical cooking/Non-stick cookware
- ↳ Bottle-feeding
- ↳ Caesarean section
- ↳ Sedentary lifestyle
- ↳ Antibiotics and prescription drugs
- ↳ Anaesthetics
- ↳ Vaccinations
- ↳ Marijuana and drugs
- ↳ Tonsillectomy, appendectomy, or other surgery
- ↳ X-rays, MRI and CAT scans
- ↳ Mercury amalgam fillings
- ↳ Radiation from computers, TV, cellular phones
- ↳ Synthetic clothing
- ↳ Promiscuous sex

- ↳ Unclean, disorderly home
- ↳ Hot, warm climate
- ↳ High temperature
- ↳ High humidity
- ↳ Spring and summer
- ↳ Urban environment
- ↳ Acid rain
- ↳ Ozone depletion
- ↳ Nuclear and toxic waste
- ↳ Air pollution and excessive CO2

Dietary

- ↳ Whole grains
- ↳ Beans, lentils and bean products like tofu, tempeh, natto etc.
- ↳ Vegetables
- ↳ Sea vegetables
- ↳ Sea salt, miso, shoyu and other natural seasonings
- ↳ Sesame, corn and other unrefined oils
- ↳ White meat fish
- ↳ Temperate climate fruits
- ↳ Seeds and nuts
- ↳ Snacks and desserts sweetened with barley malt, or rice syrup
- ↳ Spring or well water
- ↳ Non-aromatic, non-stimulant teas and other traditional beverages
- ↳ Organically grown foods
- ↳ Naturally processed foods
- ↳ Foods in season

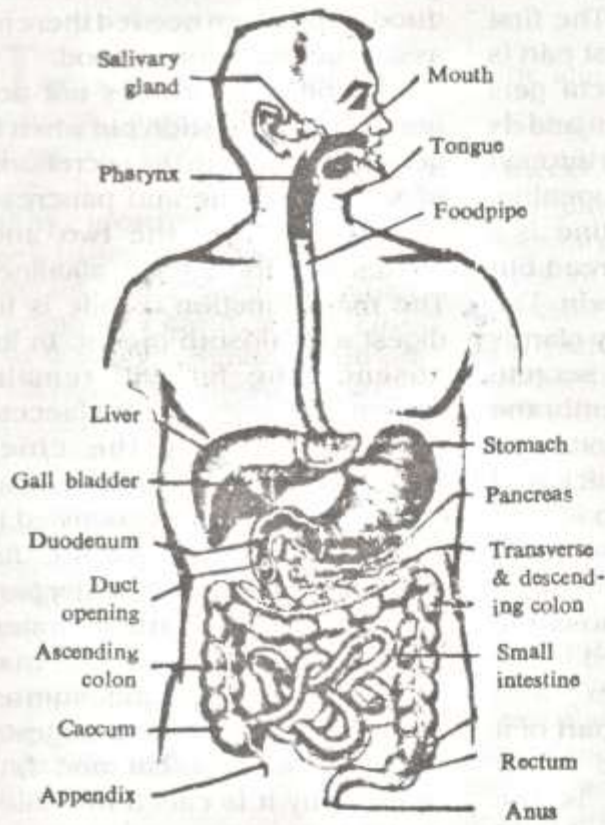
Lifestyle

- ↳ Gas and wood cooking
- ↳ Ceramic, glass and stainless steel cookware
- ↳ Breast feeding
- ↳ Natural Childbirth
- ↳ Active lifestyle
- ↳ Daily walking
- ↳ Light to moderate exercise
- ↳ Farming or gardening
- ↳ Massage or shiatsu
- ↳ Yoga, taiqi and other martial arts
- ↳ Swimming, sports and hobbies
- ↳ Meditation, visualization, prayer and self-reflection
- ↳ Singing, dancing, listening to harmonious music
- ↳ Reading books and poems
- ↳ Cotton, natural fabrics
- ↳ Safe sex

Environmental

- ↳ Clean, orderly home
- ↳ Cold, cool climate
- ↳ Low humidity
- ↳ Fall and winter
- ↳ Rural or small town environment
- ↳ Adequate sunshine
- ↳ Green plants indoors
- ↳ Fresh air and more oxygen

Limbs of Digestion



Organs of the digestive System

situated in the upper region of abdomen by means of alimentary canal. Between chest and abdominal cavities there is a muscle called diaphragm which separates the two. It has a hole to allow the alimentary canal to enter the abdominal cavity. The tube extending from mouth to anus is one, called alimentary tract, which has different names at different sites. The entire tract is about 30' long.



Vd. P. C. Jain, Lucknow

larynx which creates voice and speech. Alimentary tract is behind it, when we swallow food then the larynx palate lifts up and sticks to the back wall of the tongue, so that the food cannot enter the larynx and nose and goes into the intestine through the alimentary tract.

Salivary glands : Salivary glands are in three pairs in the left and right sides of the mouth. One pair is called parotid glands and is situated below the ear. One pair is above the pharynx and one pair is below the tongue and is called sublingual gland. The secretion of these glands is called saliva and assists the teeth in chewing, softening, tasting, swallowing the food and digesting the carbohydrate contents thereof.

Abdominal cavity : The abdominal cavity is divided into nine segments by one pair of vertical and another pair of horizontal imaginary lines, the upper three segments are epigastric, right hypochondrium and left hypochondrium, the middle segment are umbilical region, right lumbar and left lumbar.

The food we eat results in the growth of the body, reparation and nutrition of the limbs and energy for the various works that the body has to perform. After the digestion of the food eaten, the rejectable part is turned out of the anus as excreta. Thus the function of digestion starts at the mouth and attains completion prior to the anus.

Some of the digestive organs are situated in chest and most of them in the abdominal cavity. Above the chest are throat and mouth which receive the food. Inside the chest cavity there is alimentary canal. The food after being chewed, pulped and swallowed goes into the intestine

Mouth : The food is brought here at first, the mouth is endowed with teeth, tongues and three pairs of salivary glands, whose secretions help to convert the food into a smooth paste and swallow it and digest the carbohydrate.

Teeth : Teeth are 32 in number, they chew the food and make it fine and send forward to the throat.

Tongue : It propels the food and its papilla helps to perceive the taste.

Pharynx : The food comes to pharynx as a paste. There are two tubes here, alimentary tract and bronchial tract. The upper part of the latter is called

The bottom segments are hypochondrium, left iliac and right iliac.

The various organs of the alimentary canal are situated in these nine segments.

Stomach : This is the broadest part of the alimentary canal, that swells when full with food, the upper opening is called cardiac opening and the lower opening is called large intestine opening. The stomach is situated in the region of epigastric and left hypochondrium and is 30-32 cm long and 10 cm wide. From within it is covered by a mucous membrane. There are many glands in it whose secretions help to digest the ingested food. The stomach can contain 1.5-2 kg of food which stays therein for about 45 hours.

Small Intestine : It begins at the large intestine opening and ends at caecum. This tube is about 6.5 metre long and 4 cm wide. Its initial part is bent like an incomplete cycle and is called duodenum. At the bend is situated pancreas. The digestion takes place chiefly in the duodenum. Bile comes here from pancreas and liver. The part ahead is the place of absorption of food after the digestion. For this, there are folds in the mucous membrane of the small intestine, there are finger-like protrusions in its glands which increase the area of the mucous membrane of small intestine by which the process of absorption takes place very well indeed.

Large Intertine : It is about 13 cm long. It begins at the termination of small intestine to form an incomplete cycle so that its three parts are called ascending, transverse and descending large intestine. The initial part resembles a sac and is

called caecum. A small and closed tube begins here called appendix, inflammation of which results in sickness called appendicitis. The last part of large intestine is divided into two parts. The first part is rectum and the last part is called anal canal. Excreta gets collected in the rectum and is turned out by reflex action through the anal canal and anal opening.

Inside the large intestine is a mucous membrane spread but without protrusions therein. The membrane has secretory glands in it but they do not secrete digestive juice. The membrane absorbs most of the moisture so that the excreta turns thick and bacteria impart colour to it.

Liver: Though the liver is separate from the alimentary tract even then digestion is impossible without liver. It is situated in the right hypochondrium and epigastric region, some part of it extends upto the left hypochondrium. Liver is the largest gland of the body, 20-25 cm long and 15 cm wide. It weighs

2-3 kilograms. There is a fossa below it wherein gall bladder is situated. The bile produced by gall bladder gets collected in the gall bladder and reaches duodenum when needed there to assist the digestion of food.

The bile singly does not act much in the digestion but when it gets mixed up with the secretions of small intestine and pancreas then it activates the two and makes the food juice alkaline. The main function of bile is to digest and absorb the fat. In its absence the fat will remain undigested to go out with faeces.

Pancreas : It is the chief structure found in the umbilical region. Charak has recognised it as the seat of digestive fire. Its internal secretion takes major part in the Dhatupak of carbohydrates and creation of energy. External secretion comes to duodenum as pancreatic juice and digests carbohydrate, protein and fat. That is why it is called the chief site of Agni.

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HOW IS THE FOOD DIGESTED ?

The food we consume, if balanced, makes up for the damage occurred to the body tissues, makes the body strong, healthy, growing and provides energy to keep the body active. A balanced diet is Panchabhautika i.e. comprises Earth, Water, Fire, Air and Space elements and all the six tastes namely sweet, sour, salt, bitter, pungent and astringent. In the jargon of modern terminology the food must be endowed with protein, fat, carbohydrate, water, salts and vitamins and provide the required energy to the body for its functions. The ingested food accomplishes these only after being digested and converted into substances that are compatible with the body.

Requirements of Digestion

The substances needed for the digestion are Pachak Pitta and Pachakagni. The latter resides in the former and brings about various digestive changes. In scientific terminology, these are called the digestive juices and enzymes. These are produced by the glands situated in the digestive organs. Some glands are situated in the mucous membranes of the alimentary canal and some are situated mainly in the liver and pancreas.

The digestive juices are carried to the alimentary canal by means of tubes for effecting digestion. The water, salts and vitamins are not digested and are used as such but proteins, carbohydrates and fats need to be changed into acceptable form

in the alimentary canal.

Stages of Digestion

Sweet Digestion : Digestion takes place at three sites of alimentary canal and of the three stages of digestion are called Awastha Pak accordingly.

The food is chewed in the mouth at first. Mastication of food results in release of saliva as reflex action by the salivary glands. Saliva is sputum which gets mixed up with food making it soft, chewable, greasy and easily swallowable.

Saliva contains an enzyme called ptylin which converts starch into maltose, the action takes place in the alkaline or neutral medium. Ptylin acts in the mouth and continues in the upper part of the intestine till the intestine reaction turns acidic. At this stage, boiled carbohydrate is converted into sweet maltose and hence it is termed Madhur Pak. The function occurs best at 40° c in the upper part of the intestine in alkaline medium.

Sour Digestion : The production of digestive juices starts up with the arrival of food in the intestine. The juice is acidic as it contains 0.2 percent of hydrochloric acid. Normally, after the lapse of half an hour after the arrival of food, the acidic reaction sets in. However, the digestion of carbohydrate by ptylin continues during this time. The digestive juice contains hydrochloric acid, pepsin, renin and enzyme lipase. Some glands in the mucous membrane produce the acid and others produce enzymes that act in the



Dr. Pramod Malaviya, Lucknow

acid medium.

The food, at first arrives in the upper part of intestine and subsequently moves ahead slowly due to the contraction of intestinal muscles. The gastric juice gets mixed up with the food thoroughly in the right side of intestine. Churning takes place which makes the food acidic and dilute. Generally, the food stays for 4-5 hours in the intestine and is semi-digested before going into the small intestine. It is also called the stage of semi-digestion.

Bitter Digestion :

This third stage occurs in small intestine. The small intestine is divided into two parts. The first part called duodenum is the main site of digestion. Here the food is completely digested and changed into consequential and inconsequential parts. The former is absorbed by the remaining section of the small intestine and sent into blood circulation for the growth and replacement of loss of the body. Waste products enter the large intestine where the mucous membrane absorbs moisture thereof and then the waste matter is turned out through the rectum.

Duodenum is the chief place of total digestion. Pachak Pitta or

digestive juices from three sites come here to complete digestion. Mucous membrane of the small intestine yields a digestive juice. There is pancreas below the umbilical region which yields pancreatic juice which comes into the duodenum by a tube and digests protein, fat and carbohydrate. It acts on both the cooked and raw starches. The liver produces bile which accumulates in the bladder and enters duodenum with the arrival of food due to the contraction of bladder. Bile helps in the digestion and absorption of fat.

Reaction of food in intestine is acidic but when food comes in intestine, its juice together with pancreatic juice and bile makes the food juice alkaline. Enzymes present in the three juices act in an alkaline medium.

Pancreatic Juice : Pancreatic juice acts on protein and fat. It creates the enzyme trypsin which becomes active in the presence of juice produced by small intestine and converts the remaining protein into peptone and lower peptides. Enzyme amylase changes the fat into fatty acid and glycerol. The bile helps it in this.

Juices of Small Intestine

Juices of small intestine effect the final digestion of food. Erapsin is a group of enzymes which convert the protein formerly digested by pepsin and trypsin into polypeptide and peptone into amino acids. Many enzymes of erapsin act on carbohydrates. Others convert the decomposed maltose into glucose which is absorbed by the small intestine. Remaining fat, if any, is digested by the lipase present in the juice.

Bile : Bile is produced by the liver and gets accumulated in the bladder. The bile is made of some salts and colouring matter. The

former are useful in the digestion and absorption of fat and colouring matter. The bile obviates putrefaction in the intestine.

The carbohydrates are

converted into glucose, fats into fatty acids and glycerol and proteins into amino acids after the digestion. These are the end products of digestion.

Nutritionists Fall Back to Nature

Margarine and vegetable oils are manufactured by a highly unnatural process involving great heat. That process changes the molecular structure of the oils. Studies on the effects of such changes are still inconclusive, but some suggest that a diet high in poly-unsaturated fats encourages the growth of cancer cells.

It seems logical, too, to restrict the intake of high cholesterol food, except that these types of food also happen to be rich in vitamins and minerals. Moreover, restricting the intake of cholesterol only plays a minor role in controlling blood cholesterol levels.

Changing Trends : As discoveries are made, the points of focus change and new trends emerge. At first, all that nutritionists were concerned about was protein, carbohydrates and calories. In the 1930s, vitamins entered the picture.

The focus shifted to saturated fats and cholesterol in the 1960s. Then, in 1970, Vitamin-C rose to the limelight when its role in preventing the common cold was highlighted by double Nobel Prize winner, Linus Pauling. Later, Vitamin-E, the "sex vitamin", came into vogue. Today, calcium and Vitamin-D are prime concerns.

Apart from changing trends, another outcome of new discoveries is controversy. This is because, despite the wealth of information, nutritionists still know very little about the role of various nutrients in the diet.

Take, for example, the vitamins, nutritionists have a fairly good idea about how vitamins A, B and C work. When it comes to, say, Vitamin-E, there is already considerable uncertainty and debate. With something obscure like Vitamin B-17, there is probably more controversy than knowledge. Today, nutritionists have identified more than 100 nutrients as being essential to us humans.

Looking only at food components, moreover, can be misleading. Just because a food item is high in cholesterol does not mean that it is bad for health. Nor is a fruit superior because it contains more Vitamin C.

Before we started tempering with our food, when we ate only what was naturally available, we never suffered the diseases that are common today - high blood pressure, diabetes, arthritis and cancer.

Then, food processing came along and, with it, the need to study nutrition. At first, this new science challenged nature. After 150 years, it is finally leading us back to nature.

Vegetarian Diet is the Best

Pt. K.G. Gore, Lucknow

With the beginning of life on earth it became essential that the living creatures receive energy to remain active incessantly. The creation is made of the five Mahabhutas (elements). So energy may be supplied to the Panchbhautika creatures through the five elements only. However, it was not feasible for the creatures to derive energy from earth, water, air, light or space directly to keep themselves always active. So the nature created plants and endowed them with the power to create a medium which could incessantly supply beings with energy. Plants take earth, air, light and water and prepare food for themselves, which supplies them with energy consecutively.

All living beings depend upon plants for food which is the source of energy. The vegetarians are evidently dependant upon plants for food and those who do not eat plants depend upon creatures who are vegetarians so it is clear that energy for living is supplied by plants only and food for living creatures is basically the plants. food not only supplies the body with energy but also develops and strengthens the body and satiates the hunger. The body may be maintained in health by just balancing the diet and also control of thoughts, emotions and behaviour.

Veg Vs. Non-veg Diets

This controversy is prevalent since time immemorial. Obviously non-vegetarians

belong to the next generation as compared with vegetarians, as because the former are dependant upon the latter. According to Darwin's principle, the non-vegetarians are more advanced because they belong to the subsequent generation. Moreover, non-vegetarian diet is indispensable in view of the total population of human beings and the limited productivity of the soil. Even today the settlements of the sea-coast are totally dependant upon fish. Some contend that food is needed to provide nutrition to the body. So non-vegetarian diet is the best diet for the nourishment of the body tissues because it can directly provide nutrition to them. It is also said that flesh eating animals are more powerful, more alert, faster, so from the point of view of proper nutrition non-vegetarian diet is better diet.

On the other hand, the votaries of vegetarian diet ask whether the human body is adapted to non-vegetarian diet? The nature has endowed the carnivorous animals with long and sharp teeth, which can easily tear flesh and cut it into small pieces, whereas the human teeth are made to only chew and masticate the food.

It may also be considered that the human beings do not eat raw flesh and they do not have to incise, tear and cut the meat.

The structure of human jaw is also specific. It moves up and down and sideways and thus helps in chewing and grinding the food. This produces saliva in the

mouth and starts the process of digestion. The jaws of carnivores move up and down only to help them cut and swallow the flesh. Because their digestion begins at the intestine. The human saliva is primarily alkaline and is useful in digesting carbohydrate. The quantum of carbohydrate in vegetarian diet is greater. The saliva of carnivores is mainly acidic, which helps to melt the flesh.

The quantity of hydrochloric acid in the digestion of carnivores is almost ten times than that of the herbivores, which is necessary to melt the meat. Non-vegetarian food accelerates the growth of various bacteria inside the body, to obviate which nature has provided them with too short intestines, so that the food does not stay there for long time and help in the growth of bacteria. Human intestines are too long so that the food may remain there for long the various nutrients may be absorbed. The size of kidneys in the carnivores is bigger so that uric acid produced from flesh may be neatly turned out. Non-vegetarian diet is prohibited and vegetarian diet is advocated on the basis of the above bodily specialities.

The principle of non-violence has always favoured vegetarian diet. In India, the Jain and Buddhist religions evolved on the basis of '*Ahimsa Paramo Dharmah*' (non-violence is the supreme religion).

Non-vegetarianism is a major form of violence. In western countries there are many institutions devoted to stop the cruelty against the animals. Thus all the protagonists of non-violence belonging to all religions and races completely deny non-vegetarian diet.

Recent studies have confirmed that the incidence of cancer in non-vegetarians is greater than in the vegetarians. Studies also indicate that the vegetarian diet minimises the dangers of atherosclerotic heart disease and cancer. Vegetarians are comparatively less obese and even smoke less. Meat contains urea and uric acid which are toxic. Kidneys have to put in more labour in order to get rid of them, so they slowly become weaker.

Usually medicines are given to the animals, which settle in their flesh. Most of these are harmful to the human body. The river water also contains lead, mercury, cadmium etc. which are found in the fish and are fatal to our bodies. These create various deformities and illnesses in human body when eaten. Usually many bacteria flourish in the animals. Many microbes of various types exist in the intestines, liver and stomach of the animals and keep on growing. These microbes or their eggs enter human bodies by way of non-vegetarian food and generate diseases and deformities. Studies have revealed that many cases of food-poisoning in the recent years were due to the presence of the bacteria salmonella in the non-vegetarian dishes.

The blood pressure and cholesterol of vegetarian people remains more normal than that of

non-vegetarians. Due to lack of fat in the vegetarian food, vegetarians suffer less from the cardiovascular disorders.

Apart from providing strength to the body, the food also affects the mind. After digestion, the ingredients of food reach the brain and generate neurotransmitters. These are of two types. Neuroinhibitory neurotransmitters which keep the brain cells calm. The other type is called neuro-excitatory neurotransmitters. An example of the former type is serotonin. This type of neuro transmitters are produced by food rich in carbohydrates. In the absence of serotonin, excitement mounts and sleeplessness occurs. Serotonin also minimises the sense of pain.

Food also affects the memory. Vegetarian food produces choline in excess which produces acetyl choline neurotransmitters, which sharpen the memory. Non-vegetarian diet produces acetyl choline in small quantities only and due to this the memory slowly dwindles.

Vegetarian food produces tyrosine amino acid which removes depression. Hence, vegetarian food is good for mentally imbalanced persons and even insanes. Thus a vegetarian diet promotes the virtuous tendencies like fortitude, courage, concentration of mind and devotedness.

Non-vegetarian food breeds aggressiveness in man. It has been seen that criminals on vegetarian diet had their criminal tendencies on the wane. Those who love animals are generally vegetarians. Vegetarian diet is comparatively cheaper too, hence it is more suited to the poor and developing countries.

It is argued that non-vegetarian food supplies the body with strength-giving cells and stoutens it. It is more suitable than vegetarian diet for those who have just recovered from illness and are too weak.

Shrimadbhagawadgeeta has described three types of food, which are Sattvik, Rajas and Tamas.

*Ayuh sattvabalarogya
sukhaprectivardhanah. Rasyah
snigdha sthira hrdayah Ahara
sattvikapriyah.*

'The foods favourite to the Sattvik souls are those that promote life, vitality, energy, health, happiness and cheerfulness and that are delicious, soft, substantial and agreeable.

*Katvmla lavanatyusna-
tiksnarookshavidahinah.*

*Ahara rajasasyeshta
duhkha shoka mayapradah.*

The foods that are dear to Rajasic souls are bitter, sour, saltish, overhot, astringent and dry, producing bodily pain and suffering and cause grief and disease.

*Yatayamam gatarasam
pootiparynshitam cha yat.
Uchchhishtamapi chamedhyam
bhojanam tamasapriyam.*

And the food that is dear to Tamasic souls is what is stale, what is left to remain for over three hours, has lost its flavour and is stinking, the remnant of meals and unclean.

If non-vegetarianism and vegetarianism are considered in a spiritual sense then the latter is always Sattvik and the former is Rajas and mostly Tamas. From this point of view as well, non-vegetarianism is inferior to vegetarianism.

Mother Cow or Milk Factory ?

Milk industry is using cow as a milk producing factory. A continual flow of milk is extracted from the dairy cow only by subjecting her to yearly pregnancies- starting from the age of two and each lasting nine months. In order to give higher yield, the cow is fed concentrated pellets of soyabean and cereal. But even then the demanded production of milk outstrips her appetite and she starts breaking down her body tissue to produce milk. The result is an illness called Ketosis. Another illness that she contracts early is called rumen acidosis which may result in lameness. This long suffering, sick cow is kept alive by antibiotics, hormones and other drugs- all of which come in the morning milk.

Each year 20 per cent of these ill cows are starved to death or sent to slaughter houses to provide beef for those that see nothing wrong in eating it. All the calves are separated from their mothers after three days. The male calves are tied up and left to starve to death into trucks one on top of the other and sent to slaughter houses for the veal. Eighty thousand calves are forcibly starved to death in tabelas of Bombay city every year. Every year, at least 40,000 mature buffaloes are slaughtered in the city as well.

Basic nature of the cow is to devotedly care for her young, quietly forage and ruminate and patiently live out her 20 odd years in harmony with nature. She is not a four-legged milk pump who is to be orphaned, bred, fed,

medicated, inseminated and manipulated for a single purpose- maximum milk at minimum cost.

Indian dairy custom of Phookan is still prevalent. As soon as the cow's milk starts getting less, a stick is poked into her uterus and manipulated causing her intense pain in the belief that this stress will lead to a gush of more milk in the udder.

Oxytocin is an injection used for women in labour. The effect of this drug is to increase contractions in the uterus and expedite childbirth. This powerful drug is used twice a day by milkmen into the cow in the mistaken notion that it produces extra milk. Do you know how utterly terrible labour pains are?

The injection renders the cow incapable of bearing calves within a few years. It is then sent to slaughter house- 10 years before its natural lifespan is over. Oxytocin filters into the milk which is particularly harmful for the eyes, specially in growing children. Other side effects of milk containing oxytocin are early sprouting of breasts, early or erratic periods, hairs in strange places on face and weakened sight and hearing.

It has been found that urea fertiliser is being mixed in the milk so it won't curdle by the movement of truck while under transportation.

(with thanks from "Heads and Tails" by Maneka Gandhi)

Is Milk "Perfect Food"?

There is a belief that dairy products give a lot of protein and iron. Most people who consume a lot of milk, specially vegetarians in North India, have been found to have iron deficiency causing anaemia. Milk not only provides no iron- it actually blocks its absorption. Vegetables are the best source of iron- for instance 50 gallons of milk are the iron equivalent to one bowl of

spinach.

A human being's total protein requirement is 4.5 per cent of his daily calorific intake. Nature has arranged her food in such a manner that even if you live on a diet of chappati and potatoes, you will still get more than that amount.

The alternative to dairy products is soya milk, which makes excellent dahi, paneer, ice cream etc.

Nutrition in Indian Foods

Mainly five types of nourishments are needed to maintain the body incessantly and efficiently active and moving. These are carbohydrate, protein, fat, vitamin and mineral salts. These substances are supplied by food and hence it is imperative that each nourishment is being supplied in adequate quantity. Otherwise the problem of malnutrition will arise and many illnesses, can ensue.

Carbohydrates : Carbohydrates are a must in the food to supply the body with requisite energy. It is classified into sugar and starch. The former is obtained from sweet sources and sugar, jaggery, sweetmeats, sugarcane juice, fruits (banana, mango, guava, grapes, beetroot etc.), while starch is obtained from wheat, rice, colocasia, sweet potato etc. The types of carbohydrates are three-mono saccharides (glucose, fructose, galactose), disaccharides (sucrose, maltose, lactose) and polysaccharides (starch, cellulose, glycogen).

Daily Energy Requirement

Type of work	Kilo Calories
For Man	per day
Light	2400
Medium	2800
Heavy	3900
For Women	
Light	1900
Medium	2200
Heavy	3000

During pregnancy and lactation extra 300-500 kilo calories are needed

Consumption of Energy

Lie at ease	1.0
Talking	1.4
Dressing/undressing	2.3
Bathing	4.2
Climbing down stairs	5.2
volleyball play	3.5
Cycling	4.5
Golf	5.0
Swimming	5.0
Gardening	5.6
Football	10.0

During digestion starchy substances are converted into glucose and then they blend with blood as such, since the starch does not blend with blood as such. Since the starch does not blend with the blood instantly it is called 'slow sugar'. Sugar obtained from other sources can readily mix with the blood, so they are called 'fast sugar'. Fruits and cereals are the best sources of carbohydrates. Non-vegetarian diet does not contain carbohydrates. So non-vegetarians have to be vegetarians in order to obtain carbohydrates whereas vegetarians have no need to non-vegetarian dishes.

Proteins : The unit part of protein is called amino acid. Protein is also indispensable for the body. Since the body is made of amino acids which are like bricks in the building. The body needs a continuous supply of proteins because there is incessant wear and tear of cells and protein replaces them. Protein also produces hormones and antibodies which protect the



Pt. K. G. Gore, Lucknow

body from diseases. Proteins also help in the formation of insulin. It also supplies some energy.

Sources of Protein

Hen's egg	13.3
Cow's milk	3.5
Meat	19.8
Fish	21.5
Corn	11.1
Rice	7.0
Wheat	11.8
Gram	22.5
Black gram / green gram	24.0
Yellow gram	22.3
Groundnut	26.7
Soyabean	40.0
Sesame	18.3

We obtain protein from plants and animals. The former is derived chiefly from yellow gram, black gram, green gram, lentil, soyabean, Rajma etc. Animal proteins are again of two types. One type includes milk and milk products like curd, cheese etc. and belong to the class vegetarian. The other type is non-vegetarian and includes egg, fish, meat etc.

Amino acids are of two types. The first type is obtained from milk, curd, cheese and various meats. Our body cannot produce this type of amino acids. The other

type may be produced by our body and its sources are groundnut, pulses and cereals.

Usually vegetarian diet is supposed to be inferior to non-vegetarian diet from the angle of proteins, because the latter provides sufficient amount of Lysine and Methionine amino acids. But this is an erroneous concept. Lack of Lysine in Roti is compensated by pulses and any further deficiency is made up by milk and curds. Fish and meat provide 20% of proteins whereas pulses provide 21-25 percent of the same. What is required is a balancing of various vegetarian dishes. Proper combination of vegetarian diet yields higher percentage of proteins than the non-vegetarian diet and the former is easier to digest as well than the latter.

According to a report of the National Nutrition Monitoring Bureau, on an average 55 gm protein is required in the daily food. One gets upto 52 gm protein from the daily vegetarian Indian meal. The daily average protein intake in Karnataka, where more pulses and milk are consumed was found to be 79 gm. In Kerala, where non-vegetarians are in the majority, the daily consumption of protein was found to 50 gm only. This proves the superiority of vegetarian food over the non-vegetarian one.

Fats : Fat is also unavoidable for the body. It energizes the body to the greatest extent. Each gm of fat yields one calorie of energy. It gets accumulated in the body and becomes a safe store of energy. Fat is also required for the production of hormones in the body. It retards the digestive process of intestine and thereby balances the rate of the blending

of glucose with blood.

Sources of Fat

Edibles	Fat
Ghee	18.3
Butter	81.0
Egg	13.3
Meat	13.3
Fish	3.3
Cow's milk	19.5
almond	46.9
Groundnut	40.1
Soyabean	19.5
Sesame	43.3
Dry coconut	62.3
Linseed	37.1
Mustard	39.7

The basic part of fats is called fatty acid. Fatty acids have maximum number of hydrogen atoms in their molecules and are called saturated fats for this reason. Fats which can entertain more hydrogen atoms in their molecules are called unsaturated fats. Generally animal products yield saturated fats and vegetables yield unsaturated fats.

Unsaturated Fatty Acids

Fat	Linoleic Acid
Ghee	2 per cent
Coconut oil	3 per cent
Vegetables	6 per cent
Mustard	20 per cent
Groundnut	28 per cent
Linseed	50 per cent
Saffola	75 per cent

Vegetable oils have the minimum of cholesterol and animal fats have plenty of it. Cholesterol is essential for the body but in small quantities only. animal fat provides cholesterol in excess. The surplus cholesterol obtained from the latter gets collected in various limbs. It gets collected in blood vessels and constricts them and produces heart diseases thereby.

The optimum ratio of saturated and unsaturated fats for humans is 10 : 90. There is no harm if the saturated fats are less than 10 percent. Unsaturated fat can be obtained from vegetable only, so vegetarian diet is a must for the non-vegetarians as well.

Fibre content of the food helps in the reduction of cholesterol. Fibres limit the quantity of food and keep the body weight in check. These also control the blending of glucose with blood and thus control diabetes. The fibre content is in plenty in vegetables. So vegetarian diet is better than the non-vegetarian diet.

Cholesterol Content

Edibles	Cholesterol
Butter, Ghee	280
Cheese	145
Cream	140
Milk	11
Hen's egg	478
Yolk	1330
Cock (chicken)	40
Kaleji	250
Fish	50

Our body cannot produce linolic fatty acid. In its absence skin loses the glow and body becomes unable to bear any strain. Its deficiency can cause blood pressure, constriction of muscles, neuro disorders etc. However, unsaturated vegetable fat compensates for the deficiency of linolic acid.

Vitamins : Vitamin is also equally important as energy and protein. Only food can supply it. Its deficiency diminishes immunity and breeds various diseases, if persisting for long, can cause death even.

There are two types of vitamins fat soluble and water-soluble. Vitamin A, D & E are fat-soluble and vitamin K is water-soluble.

Vitamin A helps in the production of protein and metabolism of carbohydrate, keeps the skin healthy, eyes bright, increases immunity and promotes growth. Its deficiency can soon cause night-blindness, dryness of eyeball, roughness of skin, itching, infection in respiratory system and stones.

Vitamin D helps in the metabolism of calcium and phosphorus and forming perfect teeth. Rickets occurs among children due to the deficiency of vitamin D. Decay of teeth and softening of bones are the consequences of vitamin-D deficiency. Vitamin D is automatically produced in the body by the falling of sunrays on it. We also obtain it from ghee, butter, cheese and milk. Children need vitamin D in plenty. During pregnancy it is required in excess so that foetus may grow properly.

Vitamin E is essential for breeding capacity. Its function is to help the growth of muscles. Its deficiency causes disorders like depletion of muscles, anaemia, nervous debility, physical weakness and sexual weakness. Vitamin E can be had from milk, wheat, beetroot and green vegetables.

Vitamin K is anti-haemorrhagic. It produces prothrombin in the liver which helps in the coagulation of blood. Its deficiency can cause weakness due to bleeding and even death. We can get it from cauliflower, spinach, cabbage, tomato, soyabean etc.

Vitamin B is water-soluble. Vitamin B₁ is necessary for the metabolism of carbohydrate. Its deficiency causes disturbed digestion, loss of body weight, disturbed blood circulation and extreme deficiency causes beri-beri. It is found in sprouted wheat, rice bran, pulses and green

pea. It is found in plenty in sprouted pulses. Vitamin B₂ helps in the metabolism of fat. It helps in the growth of the body and reparation of wear and tear in the cells. It is obtained from milk and cheese. Vitamin B₃ helps in eliminating the toxic substances collected in the liver. Its deficiency causes gripes in feet during pregnancy and burning in the feet during old age. It is found in milk, wheat, pea, khand etc.

Deficiency of nicotinic acid under the vitamin B group causes skin diseases, redness in the tongue, indigestion, diarrhoea and psychological problems. It is found in bran, green vegetables, pea, beans, tomato, wheat and milk. Biotin helps in the metabolism of carbohydrate and fat. Its deficiency causes pallor and inflammation in the body. It is found in cabbage, pea etc.

Folic acid is essential for the production of blood. It is found in green vegetables and is required particularly during pregnancy.

Vitamin B₁₂ is the only vitamin which is not found in vegetables. However it occurs in plenty in milk and curd. Idli, Dosa and Dhokla are rich sources of the same. Its deficiency can cause weakness, tiredness, giddiness, paleness, panting etc.

Vitamin C keeps the blood vessels healthy. It engenders immunity and helps to heal wounds. It helps in the development of bones and teeth. Its deficiency causes scurvy, anaemia, swollen gums and malfunctioning of digestive system etc. This vitamin cannot withstand heat. Fresh fruits and vegetables are its sources. Orange, lime, tomato, pineapple, guava and myrobalan are its good sources.

Mineral Salts : Deficiency of mineral salts in the body causes

caries and weakness of bones. Lack of iron causes anaemia, weakness, headache, increased palpitation etc. Lack of magnesium causes gripes in legs, weakness of muscles, nervousness etc. Zinc deficiency causes delayed healing of wounds, deformity in hair and skin and loss of immunity. Sulphur deficiency causes deformity in the skin and obstruction in the growth. Manganese deficiency causes weakness of mind, increased palpitation etc. Similarly, the deficiency of sodium, potassium, iodine, chlorine causes other diseases. All of these salts are obtained from food. Actually these salts and minerals are required in traces only and can be easily had from vegetarian food. Spinach has calcium and iron both. Bathua is also a good source of iron. Gram pot-herb is also a good source of iron. Soya, Kulfa, radish, Choulai, mustard pot-herbs are all beneficial. If these are used properly the body will receive all it requires.

Vegetarian diet is cheap, tasty and provides more energy. It is easily digestible and removes toxicity. Chlorophyll in the potherbs cures the diseased cells and produces new cells. It subsides excitement and keeps one in peace so that one is safe from various mental disorders. Vegetarian diet is best for the physical and mental health. Vegetarianism is the best means of human well-being and key to longevity. In India, the use of rice, wheat, gram, pulses, fruit, potherbs and other vegetables, milk, curd, butter and Ghee has been prevalent since ancient times till today. What is needed is that we use potherbs, fruits, milk, curd etc. properly according to our temperament, constitution and season.

Ayurvedic Principles of Food & Nutrition

India has a rich tradition of health care systems which have been in vogue for thousands of years. It is perhaps in the area of Food and Nutrition that quite often one comes across dramatically differing perceptions when one views it from the viewpoint of Indigenous Systems of Medicine (ISMs) when compared with the Western system. Very often ISMs are closely associated in our minds with Pathya and Apathya - namely prescriptions and proscriptions of food based on individual needs, disease conditions etc. There are some who state a preference to allopathic medical treatment since "it does not impose any food restrictions", at least in comparison with ISMs.

At some level this only reflects the fact that allopathic medicine has till now shown very little awareness of the profound effect that food can have on the course of our health and illness. Since the turn of the century, there has been a greater realisation of the importance of food in Western Medicine - since the discovery of "deficiency diseases" caused by the absence of specific factors in food. However, there is very little awareness of the varied properties of different foods, their impact on health and disease and the influence of numerous parameters such as age, state of growth, individual idiosyncrasy, season etc. on foods and their intake.

Local Health Traditions

The vast majority of scientists,

researchers and field workers who receive their training in the area of Nutrition or related disciplines of Community Health, Biochemistry etc. have no awareness of the rich heritage of ISMs. The varied Indian traditions of health care, our Lok Swaasthya Paramparaas have a great deal of understanding of concepts like

- What is balanced diet ?
- Food values of commonly used foods
- Dietary advice for special needs such as the care of pregnant or lactating mothers
- Therapeutic diets
- Seasonal regimens
- Variation to suit individual requirements based on one's Prakruti etc.

These can be very well understood and appreciated based on our classical sciences such as Ayurveda which express the scientific principles underlying these practices in a systematic way.

The five Mahabhoothas (Prithivi-earth, Ap-water, Tejas-fire, Vaayu-wind and Aakaasha-space) and three Doshas (Vaata, Pitta and Kapha) are the basic groups which are responsible for both the existence of living beings and also their conditions of health and disease. While the Mahabhoothas are the physical basis of the body, the three doshas are their biological representatives responsible for Prakruti (physiological functions) in the state of homeostasis, and Vikruti (pathological disorders) in the state of imbalance. The

composition of drugs and food and their properties are described on the basis of Mahabhoothas. While their properties are described on the basis of Mahabhoothas, their action is described on the basis of Tridoshas.

Tridosha Siddhaantha

Parts of these Mahabhoothas when in a living body (along with Aatmaa) manifest as

Doshas - Vaayuvaakaa-shadhaatubhyaam vaayuhu, aagneyam pittam ambaha prithiveebhyamm sleshma (Ash. San., Sut. 20/3)

Prithivi + Ap - **Kapha**
Aakaasha + Vaayu - **Vaatha**
Tejas - **Pittha**

Defining the three doshas, it is said.

Slishu aalingate utpadyate iti sleshma - that which causes the attachment or keeps together is sleshma (Kapha), (Cha. Sam. Vim. 1/5).

Tap santape iti pitta - that which is hot and is responsible for any type of heat in our body is Pitta (Sus. Sam., Sut. 21/5) and *Vaagathigandhanayoharithi vaatha* - that which causes all movement is vaata, (Sus. Sam., Sut. 21/5)

Rasa

The food or drug is called the Dravya or the substratum for the Rasa, Guna, Veerya etc. i.e. the Rasa etc. are present in a Dravya. Rasa denotes different things in the context of Ayurveda itself. Rasa generally means taste. It also means the product of

digestion and is one of the saptadhaathus. But in the context of properties and action of food, rasa is taken as taste. There are six tastes - Madhura, Amla, Lavana, Katu, Tikta, and Kashaaya.

Madhura, Amla, Lavana, Katu, Tikta, and Kashaaya, Katu, Tikta, Kashaaya are Vaatakara and Kaphaghna. Kashaaya, Tikta, Madhura decrease Pitta and Katu, Amla, Lavana increase it.

Paanchabhowtic composition of the six rasas-

1. Madhura - Prithivi + Ap
2. Amla - Prithivi + Tejas
3. Lavana - Jala + Tejas
4. Katu - Vaayu + Tejas
5. Thiktha - Vaayu + Aakaasha
6. Kashaaya - Vaayu + Prithivi

Vipaaka

The six rasas are to be digested, assimilated and metabolised before they show their final action on the body.

Effect of Vipaakas : According to Charaka

Vipaaka	Guna	Dosha	Dhaathu	Mala
1. Madhura	Snigdha Guru	Kapha increasing	Shukra increasing	Laxative and Diuretic
2. Amla	Snigdha Laghu	Pitta Increasing	Shukra Decreasing	Laxative and Diuretic
3. Katu	Rooksha Laghu	Vaata increasing	Shukra decreasing	Constipative and Anti-Diuretic

Vipaaka has been classified into two by Sushruta viz. Guru and Laghu on the basis of the two final actions effects on our body-Bruhmana and Langhana. The Guru Vipaaka can be compared to the anabolic metabolism and Laghu Vipaaka to the catabolic metabolism.

Guna

The Guna of a drug or diet

speaks of its quality and property. Guna is the inherent/inseparable quality of a Dravya.

Guna becomes a very essential parameter to assess the food we take. It supercedes Rasa and Vipaaka, as the effect of Guna over-shadows that of Rasa. Also Vipaaka itself depends to a certain extent on Guna.

For example : which is Madhura in taste has a tendency to increase Kapha, but when taken warm - Ushna, it proves to be otherwise. Here the Guna "Ushna" of the water has superceded the Madhura rasa and its Kaphakara quality. Food that is taken in, is digested by the "jatharaagni".

Charaka Samhita states that Agni is responsible for life span, complexion, strength, health, enthusiasm, corpulence, lusture, immunity, energy, heat processes and praana. One dies when the agni extinguishes and lives long

of the Mahabhoothas). Out of these, Jatharaagni can be considered as the most important, as it is responsible for the increase and decrease of other Agnis. Naturally Agni is of four types:

Mandaagni, Teekshnaagni, Vishamaagni and Samaagni.

Aama

Aama is the accumulation of undigested material. Aama actually means unripe, uncooked or undigested food. It is the end product of hypo-functional agni on Aahaara and is an essential synonym for the word "disease" which is Aamaya.

The jatharaagni Maandya leads to the improper digestion of Aahaara Rasa which in turn results in the improper formation of the initial end product i.e. Aahaara Rasas. Therefore, its absorption becomes sluggish and it is retained in the stomach for a longer time. Due to this retention it gets fermented and putrified- such an Aahaara Rasa is called as Aama.

Diet According to Prakruti

In day to day routine we find that certain people are healthy while some others are not, even while they are using the same set of foods and drinks. This indicates that there is some factor in people which is responsible for the foods and drinks to be wholesome or unwholesome for the maintenace of health. To give an example- two persons apparently having identical heights, weights, surface areas etc. may differ in their food and water requirements and also the interval between the two intakes. Also we see that given a constant amount of nutrition and

Diet According to Prakruti

Foods	Vaata	Pitta	Kapha
1. Sweet, sour and salty tastes	Yes	No	No
2. Light, dry, rough and cold foods	No	No	Yes
3. Oils, sesame, corn and peanut	Yes	No	No
4. Beries, mango and papaaya	yes	No	No
5. Hot, sour and salty food	Little	No	Little
6. Curds	Yes	No	No
7. Butter, Ghee and cream	Yes	Yes	No
8. Pork	Yes	Yes	No
9. Seafood	Yes	No	No
10. Spices (like chillies, cloves and cinamon)	Little	No	Yes
11. Unctuous, heavy oily food	Yes	No	No
12. Orange, pineapple, plums, banana and grapes	Yes	Yes	No
13. Beans (all varieties except urdad dal)	No	Yes	Yes
14. Urdad dal	Yes	No	No
15. Carrot, sugar beets, garlic, onions	Yes	No	Yes
16. Chicken, turkey	Yes	Yes	Yes

exercise two people would show different rates of growth or aging. The activities of a person may differ from the others. In some individuals all activities are brisk and in some sluggish and some others unsteady.

Ritus (Seasons)

Ritu means season and Ayurvedic Acharyas have laid great stress on the Regimen to be followed during each season. All the Acharyas have given in detail the do's and dont's in every

season in the chapters on Ritucharya. The seasonal changes also have a significant effect on the quality of agni (i.e.) jatharaagni.

In Hemanta and Shishira Ritus, all the bodily Agnis are pushed inwards by the external cool breeze/air and get concentrated in the Koshtha and accumulate in the abdomen. This kindles the jatharaagni and makes it stronger. In such a situation, if one does not give adequate amount of fuel or food, the agni tends to burn away the existing tissues and also slowly extinguishes due to lack of fuel i.e. food. The same Agni, during the Greeshma and Sharad Ritus is so weak that when given too much fuel i.e. when food is eaten in large quantities, is unable to digest them and the Jatharaagni tends to die, just as a small fire, smothered with large amounts of firewood, dies away.

(From 'Ayurvedic Principles of Food and Nutrition' published by L.S.P.S.S.)

Attraction of next issue

Rasayan Special

- ❖ Useful Rasayana for Women
- ❖ Rasayan Cure for Chronic Disease
- ❖ Rasayana and Ayurveda
- ❖ Ideal Rasayana Therapy
- ❖ Rejuvenation Therapy
- ❖ Principles of Rasayana
- ❖ Rasayana in Surgery
- ❖ AIDS and Rasayana
- ❖ Aachar Rasayana
- ❖ Pippali Rasayana

Empty Stomachs and Packed Godowns

Despite lot of development after independence in various fields problem of hunger still remains in our country due to various reasons. Root cause of this lies in socio-economic structures prevailing mainly in rural India.

Land inequalities are starting point of these inequalities. Concentration of various resources in and around villages is dominated by a few big landowners. Majority of the villagers at the bottom have very little access to land and water and they also do not have access to other sources which can yield income to them for buying food. Developmental funds pouring into the village for various sectors but a large portion of money reaches the pockets of corrupt officials and their collaborators among the influential villagers while the poor get minimum benefit.

The rapid industrialization causes unemployment amongst poor urban dwellers due to introduction of new technologies causing displacement among millions and gifting pollution.

Industrialists are exerting pressures that more land and water should be used for growing crops or trees needed by them as raw materials and equally strong are the pressures being exerted to increase farm exports to pay for not just the country's essential imports but also many non-essential and harmful imports.

Cereal preparation is most important food throughout India. Cereal mixed with pulse or vegetables is mainly consumed with

additions like sugar, jaggery, salt spices and cooking oils. To all this modest quantity of milk may be added specially for children and mothers.

If adequate quantities of these basic foods can be made available to all people in India then the problem of malnutrition would be solved. The quality of the traditional Indian diet is all right. The problem is to give an adequate quantity of these traditional foods to all people.

India's production of most basic food items falls short of the objective of self-reliance. The most basic problem is the lack of purchasing power among the majority of people which precludes them from buying even that food which is available, on the other hand a minority has enough purchasing power to support massive wastage of scarce food through their lavish eating style.

Agribusiness ignores and hinders the basic task of making available nutritious food to the maximum people. Instead it not only allows but also strives for massive wastage of nutrients despite developed processing methods to avoid this waste. The most nutritive portion of our grains are peeled off and sent away to cattle and poultry feed production for animal feed production, largely consumed by well fed rich. Till recently, the cooking medium in most Indian homes consisted of edible oils or desi ghee. But in recent years hydrogenated oils have emerged as a very big cooking medium. On the basis of an

extensive study of the loss of nutrients and other damage due to chemical processing in manufacturing of hydrogenated oils (Dalda or Vanaspati) can be summarised as below-

It deprives us of nutritionally essential constituents present in vegetable oils like phosphatids, sterols, unsaturated and poly-unsaturated fatty acids or essential fatty acids. It increases to dangerous proportions the quantity of saturated fatty acids.

Due to deprivation of essential nutrients and increase of harmful substances one runs the risk of developing serious diseases like athero-sclerosis and cardiovascular diseases. It opens the door of adulteration of desi ghee by unscrupulous merchants.

The product is contaminated with nickle which may be toxic.

Previously cereal crops were intercropped with legumes but these practices are being replaced and pulse cultivation is going down alongwith oilseeds cultivation. Pulse crops are source of natural fertilisers because bacteria in their roots causes fixation of nitrogen. Thus reduction in pulse cultivation increases the dependence on artificial fertilisers.

Production of minor cereals like millets, Jau, Sanwa, Kodon etc has reduced and reached to an insignificant level. It is noteworthy that these crops were ideal in rainfed areas and required less input in the form of fertilisers etc. Nutritional values of these crops are not less than superior

cereals.

There are many drawbacks of green revolution, while the use of irrigation water, fertiliser, electricity, machinery and implements has been increased so rapidly in green revolution areas, the rise in agriculture productivity is not of same level. Rapid mechanisation in agriculture sector has increased unemployment of rural poor resulting in their migration and poverty. Land degradation and massive water pollution also are results of uncontrolled use of pesticides, insecticides and chemical fertilisers. Fertiliser industry has launched massive advertisement campaigns for proving so called superiority of chemical fertilisers over natural fertilisers.

It has been found in U.S.A that five time more fertiliser is now used to get the same yield. Alarming deficiency of micro-nutrients like zinc and iron is due to result of over emphasis on chemical fertilisers. Micronutrients although required in minute quantity, regulate important functions in plants, thus reducing the yield and premature rotting of fruits etc.

In some areas groundwater has been badly depleted due to excessive exploitation by tubewells for agriculture.

Large scale deforestation in India has had many adverse consequences mainly diminishing availability of edible fruits, flowers, roots, tubers, seeds etc. to tribals and villagers living in and around forests. These are highly nutritious and were available to them freely. In Bastar district of Madhya Pradesh alone 22 types of fruits, 8 flowers, 14 leaves, 29 roots and 11 seeds were availa-

ble to forest dwellers as nutritious food free mainly in lean periods when the need for an alternative or substitute to cereals is most urgent. Apart from these there are several other food related benefits from forests like fuel & fodder, plant based utensils (dona and patta) and herbal medicines. These natural forests are destroyed to make room for teak and eucalyptus cultivation. Even where natural forests remain the fact that some of the important food items of tribals (like mahua) are now being procured by large industries resulting in diminishing availability of traditional food.

In India several people can not buy the essential grains while a few can spend extravagantly on expensive food. So a subsequent share of the grain crop is fed to meat animals, milk animals and poultry birds to increase the production of dairy products, meat products and eggs. Specific technological and organisational changes have resulted in depleting nutrition of poor.

In the earlier days a lot of milk used to be converted into ghee at village-level. A by product called Chach (butter-milk) was obtained free by the poor, adding significantly to their nutrition. Now with increased marketing facilities for milk and cream extraction machines have ended this source. Increasing production of milk products like chocolates, ice-creams, milk powder etc has increased the price of milk beyond the reach of poor. Barley traditionally used as Sattu by poor people and as flour for making chapati has gone beyond their reach due to manufacturing of beer, whisky, industrial alcohol

etc.

Export of agricultural products is adding to agony as spread of export crops diverts area away from a much needed food crop. The export of wheat and rice is an undesirable trend. Piled up stocks of wheat and rice are no argument for exporting them, if we keep in view the fact of hungry and malnourished people unable to purchase them due to lack of purchasing power. Similarly, the increasing exports of fruits, vegetables and pulses have a harmful impact on its local availability. Tobacco exports, where India is major partner, results in ruining the land which can be used for cultivation of useful crops. It also results in loss of huge volume of wood burnt for curing the tobacco.

Permission of big trawlers in coastal areas has consequently resulted in poverty of coastal fisherman and reducing availability of rich nutrition for poor people. Bottom trawling operations known to be highly destructive of all marine life have been ruthlessly carried out in the inshore zone in scant disregard of the livelihood of traditional fishermen and considerations of sustainable development or maintaining marine resources. This has resulted in nonavailability of few fish varieties.

Export of meat has not only resulted in skyrocketing price of meat in domestic markets but increasing use of foodgrain for animal feeding also. Dependence on exports of certain agricultural products may play havoc for farmers in case of market fluctuations.

(Based on the book of same title by Bharat Dogra)

Malnutrition in India

It was initially observed in 1964, in the World Food Conference that 'Protein Malnutrition' is the principal problem of developing countries, which if not brought under control, then the future generation coming after 20 years would not be healthy, physically as well as mentally. The lack of adequate quantity of protein in the diet is called 'Protein Malnutrition'.

Subsequently in 1983 it was posited in the Nutrition scientist's convention held in Delhi that the Indians are heading slowly towards delinquency due to the lack of balanced and nutritious diet. Studies of Indian Medicine Research Bureau have revealed that 83 per cent Children of the age group 1-5 years are prey to serious malnutrition. Moreover, 76 per cent of children of 1-5 years and 50% above 5 years, 15-25% men and 50-80% women and 70-90% pregnant women are anaemic.

According to the Bureau, average healthy Indians require 2400 calories of energy and people of only five states get the requisite calories, which are Haryana 2400 calories, Himachal Pradesh 2474 Calories, Punjab 2429 calories, West Bengal 2477 calories and Karnataka 2711 calories. People of Bihar, Jammu and Kashmir, Rajasthan, Sikkim and Tamilnadu get below 2000 calories.

In India, the number of malnourished women is many times greater than that of men. Care is not taken of their food. Often women are pleased with whatever is left for them after men have had their meals. Whereas women need more nutritious diet than men, to do all the work they do apart from rearing children. The consequences of the malnutrition

of women have to be faced by the children they bear. Conceiving at a tender age, multiple child bearing and conceiving at short intervals exert their ill-effects upon the nutrition of children.

According to the Bureau, pregnant women need 2500 calories of energy and 55 gm protein everyday whereas they get only 1420 calories and 19.3 gm of protein. As a result, of the total over two and half crores of children that are born on an average yearly, only 13 per cent become healthy adults.

The cause of malnutrition is not the lack of availability of cereals. The people have no money to buy them. Those who have the money do not know the meaning of balanced and nutritious diet. They presume costly and greasy things as

nutritious. Whereas nutritious diets are comparatively cheaper than the non-nutritious ones.

The problem of malnutrition can be solved by cheap and balanced diet only. To attain the solution we must stop the marriage and child-bearing of the girls at a tender age. Nutrition of women must be taken care of. Pregnant women must have extra helpings of nutritious diet. And during the times of breast feeding also they must have nutritious diet in adequate amounts.

The need of balanced and nutritious diet can be fulfilled by the inclusion of pulses, green leafy vegetables and replacement of sugar by jaggery in our daily intake of food. Skimmed milk is cheaper and more nutritious than the whole milk.

Blindness Due to malnutrition

Every year on an average at least 40 thousand children lose their eyesight in India due to malnutrition and about 80 thousand children become visually very weak. The disease strikes the children of one to two years mostly. It is called Xerophthalmia. The disease is caused by vitamin A deficiency.

Deficiency of Vitamin A may occur due to minor diseases like cough and dysentery. Frequent occurrence of these diseases results in the depletion of vitamins.

Its deficiency at first results in night blindness. Subsequently soily spots occur in the conjunctiva. If vitamins are not supplied at this stage even, then the cornea starts degenerating and starts getting dried up. Wounds appear in the cornea.

Xerophthalmia occurs mostly in developing countries where people do not care for sanitation due to poverty and ignorance.

Prophylaxis : Prevention of disease is always better than its cure. Children must get nutrients right from the moment when they are conceived. Pregnant women must get vitamin - rich food. When the child has grown a little he must be given green leafy vegetables, yellow fruits, egg, milk etc.

According to the prophylaxis table for the children upto 5 years issued by WHO, newborn children must have 50 thousand units of vitamin A once in six months, older children must have two hundred thousand units in six months. These doses of Vitamin A are dissolved in solvents and are administered with a dropper or spoon. Ten such doses preclude any apprehensions of Xerophthalmia.

Misconceptions On Nutrition

Nutritionists have done much to raise public awareness about the link between diet and disease. Thanks to them we have a much better idea of how to eat well in order to live well.

The science of nutrition, however, has one major drawback-it looks at the chemical components of food, rather than food in its totality. By focusing on the parts, nutritionists have gained a better understanding of how food either nourishes or harms us. But, in the process, they sometimes miss the larger picture.

Justus Von Liebig, who laid the foundation of the science of nutrition some 150 years ago, identified only three components of food :

- Carbonaceous or energy-giving food (Carbohydrates and fats) that generate heat in the body.
- Nitrogenous foods (proteins) that build muscles.
- Mineral salts that build bones and teeth.

Given such limited knowledge, it is excusable that some of the things he said about nutrition were not quite right. What is inexcusable that some of his mistaken ideas are still widely believed today.

Firstly, Von Liebig said that vegetables grown with chemical fertilisers are just as good as that grown on manure or compost. Today there is strong evidence that organically grown vegetables are healthier and the use of chemical fertilisers erodes the quality of the soil. Yet this evidence is largely ignored in favour of what Von Liebig said on the basis of very limited

knowledge 150 years ago.

Secondly Von Liebig glorified meat as the most important food for man because, he said, meat protein is superior to its plant counterpart. Even this notion is popular today though it is not true. Most books on nutrition continue to list meat as "essential" food and nutritionists often describe a vegetarian diet as dangerous." The common observation, however, is that vegetarians are generally healthier than non-vegetarians.

Dairy products are also said to be "essential", yet large sections of the world population, for instance the rural people of North Asia, the mediterranean and most of Africa are healthy although they cannot digest milk. The Americans who consume plenty of milk and dairy products daily are not necessarily the most healthy people in the world.

The emphasis on meat and

dairy products reflects a western bias in the science of nutrition. This bias explains another popular misconception about proteins and meat- that we need to eat large quantities of both.

Carl Von Voit, a student of Von Liebig did research on how much protein, we humans need. By observing his laboratory assistant, who was a hefty fellow with a hearty appetite, Von Voit concluded that a man doing light work would need about 125 grammes of proteins a day, and this would come from about 760 grammes of meat.

Today the nutritionists believe that even 30 gms of protein a day may be more than enough. Moreover, those who take protein in the form of raw plant food (such as nuts) require only half as much as those who consume protein in the form of cooked meat.

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CERTAIN PROVISIONS COMING
INTO FORCE IMMEDIATELY



Hindustan Times

RAJENDRA PRA FIRST PR

Unanimot
Hindustan Times, 28 January 1950

INDIA GOES G

Rajendra Prasad Assume
Presidency

LARGE WITNESS CEREMO



पी.टी. नरसिंह रा
प्रधानमंत्री

THE CONSTITUTION OF INDIA

WE, THE PEOPLE OF INDIA, having solemnly
resolved to constitute India into a SOVEREIGN DEMO-
CRATIC REPUBLIC, and to secure to all its citizens
JUSTICE, social, economic and political
LIBERTY of thought, expression, belief, faith and
worship;

EQUALITY of status and of opportunity
and to provide among them all
FRATERNITY assuring the dignity of the individual
and the unity of the Nation.

IN OUR CONSTITUENT ASSEMBLY this twenty-
sixth day of November, 1949, do HEREBY ADOPT,
ENACT AND GIVE TO OURSELVES THIS
CONSTITUTION.

राज्यपाल ने लोगों की समस्यायें
सुनीं विकलांगों, बीमारों की दशा
मलिन बस्तियों के लिए महत्वाकांक्षी योजना
कानून-व्यवस्था कर द्रवित हो उठे बोरा
च-दरुस्त करना
मेरी सर्वोच्च प्राथमिकता

ताल बोरा
नागरिकों से रुबरु होना
एवं दुनी व मौके पर
जरियों
निर्देशित
प्राज
भवन से
रु होकर

यता कर
भोवित के
सरकारी
धोम उगे है।



अंतरप्रदेश
सूचना एवं जनसम्पर्क विभाग

BLICAN

पारदर्शी शासन- स्वच्छ प्रशासन

असमानता और अन्याय, अथवा एक वर्ग या समूह द्वारा दूसरे के शोषण के आधार पर किसी भी निर्दोष और स्थायी समाज का निर्माण नहीं किया जा सकता।

--- जवाहर लाल नेहरू

January 1950
AD INDIA'S
SIDENT

Y ON REPUBLIC DAY

Parliament Session Begins
Today

M.P.s TO TAKE NEW OATH



मोतीलाल बोरा
राज्यपाल, उत्तर प्रदेश

हमारा कोई भी धर्म हो, हम कोई भी भाषा बोलते हों और हम चाहे किसी भी राज्य में रहते हों, हमारा राष्ट्र एक है- हम एक हैं।

--- इन्दिरा गांधी

Food Processing & Adulteration

Dr. Anvita Shaw, Lucknow

Various chemicals are being used since time immemorial for the preservation of taste & nutritive value of edibles. In the present era their use has proliferated due to the changing conditions of living. Working women nowadays purchase readymade pickles, jams, syrups, chutney, jelly, marmalade and 'instantmixes' of Gulab jamun, Jilebee, Dosa, Idli etc. from the bazar.

Preservatives are used to store large quantities of edibles for future use, various methods of preservation such as natural and artificial drying, cold preservation, canning, radioactive radiation, adding of chemicals etc. In India even now the average per capita use of chemicals is much less as the rural people do not use them. However free use of preservatives by the urban people presents a different picture altogether.

It is not possible to become self-reliant by just producing food items sufficiently. Its distribution and preservation must also be ensured, otherwise some of it will go waste.

Prevention of Food Adulteration Act and Rules 1954 and 1955 controls the use of preservatives in our country. Under this act the list of various approved chemicals and their dose has been defined.

Chemicals used in the food preservation are of three types-preservatives, ornamentals and technically essential chemicals. Preservatives are also

of three types insecticides, that are used to preserve the food grains from insects, worms and fungi; preservative chemicals that may be used freely such as common salt, sugar, dextrose, spices, vinegar, honey and edible oils and preservative chemicals that may be used in the prescribed dose only. Uses of some of such chemicals are as given here below :

- Benzoic acid and its salts are used in the preservation of syrups, fruit juices, jelly, marmalade, pickles, chutney and sauce etc.
- Sulphurous acid and its salts are used to preserve the various fruits, syrups, sugar, khandsari, glucose, flour, tinned food and various readymade mixes.
- Sodium nitrite, potassium nitrate, sodium nitrate and potassium nitrate are used to preserve various meats.
- Ascorbic acid and its salts are used to preserve cheese, parched fish, flow and chapaties.
- The niacin antibiotic is used to preserve cheese.
- Propionate, methyl proyl hydroxy benzoate and sodium diacetate are used to preserve various flours.
- Antioxidants are used to prevent oxidation, which putrefies food items. According to law antioxidants other than Lecithin, ascorbic acid and tokeferol are proscribed for use in edibles.

However prescribed quantity of certain approved chemicals are permitted to preserve oil and Ghee.

- Ornamental chemicals are used to attract the customers. It is noted that they are also used to present an inferior edible as high class and earn profits. Ornamental chemicals are of two types - colouring and aromatising.

Natural and synthesized chemicals both are being used in food. In order to impart red colour Anthocyanin is used, for yellow colour turmeric, carotenoid and for blue and green anthocyanin and chlorophyll are used. Generally, these are obtained from the skins of mango, grapes, oranges and various vegetables and plants. These colours may be used freely in food provided it is stated on the label that the food is artificially coloured.

Artificial colours are called coaltar colours and may be used in prescribed quantities (0.2 gm per kilogram of food) only. Inorganic colours are totally proscribed except titanium dioxide which is used in chewables.

Aromatizing chemicals are generally added to improve the taste. Rosewater, Kewra and Khus are such aromatics.

The law gives a long list of usable chemicals. It includes edible gum. Some of the chemicals are for restricted use and some are to be used in a

particular foodstuff only. Anticaking agents are used in salt, onion, fruit and soup powder only.

Use of sweetening agents is the technical need in some foods and in some others essential for the use of diabetics. Law has permitted the use of saccharine only.

It is obvious that the balanced and permitted use of various chemicals may be necessary but generally edible colours and artificial sweeteners are being used freely for making money. May be the misuse of these are going on due to the ignorance of confectioners and housewives.

According to a survey conducted by Industrial Toxicology Research Centre, in the rural areas of U.P., 20-80 percent harmful colours are being used in sweetmeats. As an instance metanil yellow (extremely harmful colour) is being used to colour Laddu, Jilebi, Burfi etc. The government has provided several statutory cautions in the use of such chemicals such as proclaiming it on the labels of such foodstuffs. Under a recently passed law, various edible colours and certain chemicals may be sold only after certified by the Indian Standards Organisation (BIS). It would be advisable to follow certain cautions:

- While buying edibles read the label very well. Note the date of manufacture and the Agmark to be sure.
- Whenever you buy a tinned food ask for a cash memo so that it may be used, if necessary, against the merchant for adulteration.
- As far as possible, do not purchase excessively coloured snacks and sweetmeats.

Advertising Health



According to a survey, Indian people consume tonics worth Rs. 1900 crores annually and so-called health foods worth over Rs. 50 crores. The advertisements play a pivotal role in this. Kapil Dev, the great cricketer drinks Boost for playing cricket and advises all to do likewise to perform miracles. The energy required to win the boat-race of Kerala comes from Glucon D and Complian is required by the children to grow, study and play the various games.

This is an irony that a country whose 30 per cent population goes without potable water, balanced diet and a shelter worth the name, spends so much uselessly. And we are repeatedly told to believe that a vegetarian diet is an inferior diet as it is

devoid of proteins. This stand is a falsity. Cereals, pulses, green-vegetables, oil-seeds, tubers, fruits and milk do comprise a balanced diet.

We are all used to have a different kind of dish everyday. Vegetables and pulses are prepared in so many different ways that have their own different distinct tastes and flavour. If you are consuming all this and if your digestion is right then you need no other tonic to supplement it.

Perhaps if you have taken Becozyme, B-complex etc. sometime then you may have observed that your urine had turned yellow. It means that the tonic was ejected after being digested by the body as it was of no use to it. You just had lost your money and exerted your liver, intestines and kidneys and benefitted the manufacturers without deriving any benefit whatsoever for yourself. Even the physicians add one or two tonics to their prescriptions as a rule.

Our Indian foods are optimum & potent according to our climate. If you are taking a balanced diet and your digestive system is in proper shape then you do not need Boost, Horlicks, Protinex, Complian or Threptin biscuits at all. They may be needed only when you are convalescing from some disease. Even then you need it for a few days only. What is the sense in swallowing a capsule worth a rupee and then pass it as yellow urine after one and a half hour?

Diet and Cancer

One of the most dreaded ailments of modern times is cancer and a sense of hopelessness and fear engulfs one when one even thinks of it. But the question arises can we prevent cancer? Many studies on the habits of people all over the world suggest that cancer deaths may be related to what we eat, drink and smoke. Studies show that a nutritious, low-fat, high fibre diet can prevent cancer.

Our daily diet should have variety and not be monotonous. Consumption of a variety of vegetables and fruits may produce a synergism among various compounds present in them and thus produce its anti-cancer effect. So plan a diet which is low in calories, low in fat, high in fibre and has a lot of vitamins A, C and E. Such a diet should include whole grain bread, cereals, lean meats, beans, fresh fruits and vegetables and low fat dairy products.

Keep a watch on your weight

Obesity increases the risk of many diseases including heart attacks, high blood pressure, diabetes and cancers of the colon, uterus, gall bladder and breast. So aim at keeping your weight down by taking a low-calorie diet which is nutritious at the same time. Plan your life so that you daily take exercise. This may be in the form of walking, swimming, running or playing some game.

Eat fresh fruits & vegetables

According to studies available from different parts of the world, the incidence of cancers of the colon, rectum, breast, prostate, stomach and lungs is

significantly lower among people who eat lots of green and leafy vegetables.

Vegetables like cabbage (cauliflower) dried beans, cereals, chick peas and fresh fruits containing vitamin A and vitamin C act as protection against cancer. Vitamin A is found in whole milk, dairy products, egg yolk, fish, liver, while carotenoids are found in deep yellow fruits and vegetables (apricots, carrots, yellow pumpkin, ripe mangoes, sweet potatoes, papaya, tomatoes, peaches) and in deep green vegetables (spinach, broccoli) etc.

Vitamin C is known to help in warding off cancers of the food pipe, mouth, colon, stomach, rectum and cervix. So consume adequate quantities of foods which are rich in vitamin C. Foods rich in vitamin C are mangoes, oranges, amla, guava, tomatoes, strawberries and red and green chillies. Many foods are a good source of both vitamins A and C and these include peas, sweet potatoes, watermelons and various green vegetables like spinach, methi, coriander leaves, mint, curry leaves, amaranth leaves etc. So one can choose amongst the various fruits and vegetables.

Eat a fibre-rich diet

High fibre diets are safeguards against cancers of the rectum and colon. A fibre-rich diet helps in the propulsion of food through the intestines and out of the body thus promoting a healthy intestinal tract.

So choose your foods from diets rich in fibre like brown bread, wheat, cereals, rice, corn, oats,

peaches, apples with skin, spinach, peas and tomatoes. Avoid foods which have poor fibre content like white bread rolls, pastries, cakes etc.

Dietary fibre also lowers body cholesterol levels since fibre-rich diets are low in fats as well. On an average the amount of fibre per 24 hours should be between 20 to 30 gm. When it exceeds 35 gm, it has its own deleterious effects.

Eat low-fat diets

Cancer of the colon, ovaries, prostate, lymphomas, etc. is more amongst people who consume rich diets having a high fat content.

Avoid rich fatty foods like cream, red meat, cheese, butter, cakes, nuts etc. Choose cooking methods which involve less use of fats. To make food more tasty, season it with spices and herbs rather than with ghee and butter. Do not overheat the cooking oil since that will have a deleterious effect. Oils get decomposed during overheating and go rancid. The result is the production of unidentified polymerised products which are potentially carcinogenic.

Stop smoking, chewing paan and chewing tobacco

Smoking is one of the greatest ills of the present day. Smokers run a heavy risk of getting lung, bladder and stomach cancer in addition to various other ailments.

Paan-chewing, consumption of paan masala and tobacco-chewing have their own deleterious effects putting the person at a high risk of cancer of the mouth and throat.

Control Your B.P. With Diet

Vd. R.M. Nanal, Mumbai

Dozens of drugs are available to lower blood-pressure. And now when most doctors and patients talk about high blood pressure, the first thing they think of is pills, not the behavioral changes and food habits. 'Progress' has left us with a list of modern menaces. Potato chips, liquors, cigarettes, eight hour long sitting jobs and environmental pollution, all threaten to drive up our blood pressure. Tension suddenly shoots us down with stroke, kidney failure or heart attack-often without ever knowing what hits us.

blindness are difficult to control and harder to predict, since everybody reacts differently to medicine.

Besides, it has been proved now that blood-pressure medicine for many people may not be giving them the protection they think it is. According to a study in the American Journal of Medicine, diuretics may lower your blood pressure but they do not necessarily reduce your chance of heart attack.

This story is from the famous American magazine 'Prevention' By this story one can easily follow certain things.

But why should we backtrack and rethink our whole life style particularly when we can cover up the after effects with a little pill? After all, taking a pill which will help our body shed excess salt, which drives up blood pressure, is a lot easier than laying off the saltshaker.

But the experience should tell us that anything that is easy has got to have a catch. And here's one for the record - the same diuretic responsible for washing away excess salt may drain your body of potassium as well. Potassium is an important mineral (necessary for the functioning of many body tissues-including the heart). Luckily, this drawback can be overcome with potassium supplements or by giving special 'Potassium sparing' diuretics by physician. But there are other side effects from blood pressure lowering drugs which are not that easy to avoid. Complications like depression, impotence, dizziness, headache, insomnia, muscle weakness, nausea, diarrhoeas, palpitations and

Luffa acutangula (Shirali)
Luffa pendendrea (Ghosali)
Amaranthus gangeticus (Tandulja), *Amaranthus spinasus* (Mathlal), Coriander seed (Dhane), Cumin seeds (Jeere) Mint (Pudina), Cucumber (Kakadi), Ash gourd (Kohala), Wheat (Gahu), Rice (Tandul), Green gram (Mung dal), Coconut, Jinger, fat free milk, honey, buttermilk these are the things to be kept in a day to day diet. It will serve the best, if you form a habit of taking those things only.

At the same time if you follow the few tips given below you will get the best results.

Take your food at the proper time every day

Suppose you are taking your food twice a day at 12.00 P.M., and at 8.30 P.M. try to maintain these timings as far as possible. (It will be better if you can manage to take your dinner at 7.00 P.M.)

Do not overfeed yourself

If you are having a good appetite of consuming 8 chapatis, then take only 6 at that time.

Use fresh, freshly prepared and bland food

Your diet should contain fresh things like Salad, Raita, Chatni. The food should not be stale or reprocessed (i.e., reboiled or recooked). Do not use more spices, or any other things like vinegar, tamarind etc. It can irritate your digestive tract within no time and this might give rise to sudden uplift of your blood pressure.

Control the intake of water

Many people are under wrong impression that more intake of water will cause more free

- Every case of Blood pressure can not be treated successfully with medicines only.
- The medicines which are used for High Blood Pressure are not the 'safe drugs'.
- Food habits and other factors are also of great importance in the treatment of High Blood Pressure.

Of all the three points according to my experience the food is the best reason and treatment for the High Blood Pressure. By taking the unsuitable food one develops the H.B.P. and by taking the proper food one can control the H.B.P.

It is very difficult to suggest a common diet for any type of blood pressure. But according to my own experience and the 'Nanal tradition of medicine', I can offer you some tips for the diet in High Blood Pressure.

Useful Diet

White pumpkin, Bottle gourd (Dudhi), lady's finger (Bhendi) Snake gourd (Padwal), Cabbage (Gobi), Kandori (Tondli),

urination and with this the blood pressure will come under control. But unfortunately this is a very bad habit of taking excessive water will definitely accelerate your trouble.

Attend natural urges first

One should always practice this. If you fail to do so all the bad consequences are bound to be there. These type of things happen to executive officers, doctors, lawyers, teachers etc. These people are too busy to attend to the natural calls of their own constitution and then suffer from High Blood Pressure.

Try to maintain the peace of mind

There is nothin in this world which changes by anger. Especially the people who are short or hot tempered they suffer more. Like that, constant fright or greed are also the factors which give rise to High Blood Pressure. For those people I would like to suggest the best way out that is the prayer or service to the almighty God.

Do those things along with the diet and you will get the full benefit as per my assurance.

Diet (Harmful) - Common salt, curd, meat, fish, jaggery (Gud) plantains (Keli), fridge articles like-custard, ice-creams, jelly etc. cold water, horse gram (Kuleeth), seasame (Til), roots like potatos, sweet potato (Ratalu), raddish (Mula), tapioca (Sabudana) etc. Urad (Udid), gulab-jam, etc, milk with fruits (i.e., milkshake, fruit ice-creams) Liquor (any type of alcohol) before or with or after or without food, deep fried things like cutlettes, puri, papad, pakoda etc. These things you must avoid for all the times. It will serve the best if you form a nausea (Disliking) for those things.

At the same time if you observe the things given below- it serves the only best.

- Irregularly irregular food

intake is to be avoided.

- Do not sleep in the afternoon and immediately after taking food.

- **Do not take the food which is too hot to eat :** Many people in Maharashtra community like too hot food (Which is called 'Pahilya Wapheche anna' in Marathi) to eat. This is very bad habit. Food should be hot but that to the palatable temperature.

- **Exposure to Sun is bad :** Many people cannot stand to this and they are fainted or troubled by sunstroke, for the person who is having blood pressure this can call for an emergency.

- **Do not exert till you exhaust :** You can do the routine work gently, you should never feel tired. And if you start feeling tired, you must stop all the activities at that moment and take rest for ten minutes atleast. While resting take a deep breathing exercise (not the pranayam).

- **Do not over-indulge in sex:** The researchers have found tremendous increase in the blood pressure at the time of the sexual act. Many people have suffered from the attacks of stroke and heart attacks at this time. Hence the person who is suffering from H.B.P. should always try to avoid such incidences.

Some Home Remedies for High Blood Pressure

The person who is a known case of Heart failure and High Blood Pressure must use these two things :

(A) Cabbage : 100 gms. of cabbage to be steamed in cooker. Asafoetida, rock salt and cumin seed are to be mixed with cabbage. This preparation is to be taken after the meals both times. 4 Ozs. of cabbage juice (Raw) with cuminseed powder 1/2 tea spoon is to be taken in the morning on empty stomach every

day. This remedy is to be continued for two months.

(B) Dudhi (Bottle gourd) : Dudhi Juice - 4 Ozs with 1/2 teaspoon of cuminseed powder and 1/2 teaspoon of sugar is to be taken every morning on empty stomach. After taking, this nothing is to be taken by mouth atleast for one hour.

- The person who is a known case of urinary failure and High Blood Pressure, must use the following remedy coriander seeds one table spoon with cumin seeds one teaspoon is to be boiled in 2 glasses of water till half the water remains. This to be taken 4 times a day at an interval of 3 hours, everyday for 2 months.

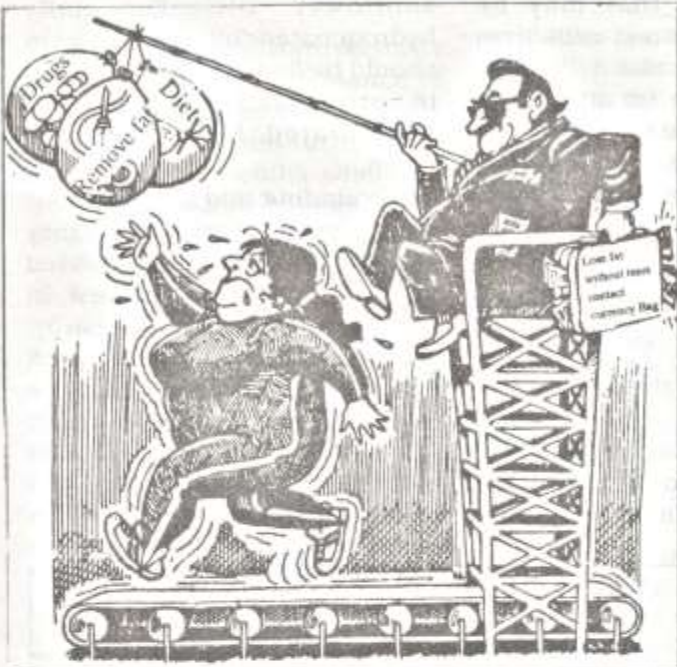
- The person who suffers from insomnia (sleeplessness) should try this remedy. Pure sesame oil 1/2 teaspoon is to be put in the navel (Nabhi) at the bed time. This oil should remain there for half an hour. After that a very gentle massage is to be given with the same oil, on the abdomen and on the spinal cord. This remedy should be continued for at least 10 days. At the same time one should apply 'Brahmi Oil' on the head, to get better results.

- The person who is suffering from heart ailment, High Blood Pressure should not use air conditioner for longer time. By using Airconditioner for longer time the peripheral circulatory resistance increases which can cause a sudden shoot up to blood pressure.

If one observes all these things religiously and with implicit faith in it, I assure for the best results, which he is bound to get. These remedies are only for the chronic condition and not in acute one and essential hypertension as well.

If a person does not find any change by the use of these things after using them for 10 days, he should consult a good physician.

How to Avoid Obesity ?



Obesity is the bane of modern age. With a profusion of rich diet and addiction to lethargic habits, people seem to be getting fatter than in earlier generations which set greater store by spartan ways of life.

Of all God's creatures it is the man who gets overfat. It is rare to come across over-fat animals, whereas overfat men and women may be seen everywhere. The fattest man reported in the world is Mike Walker of USA with a phenomenal 1188 pounds. He has written a book on the dangers of obesity. Super-obesity is caused by abnormality of hormones and glands particularly the disorder of the thyroid glands.

The rich food and lazy habits are responsible for unhealthy fatness. Fashionable people are taking resort to dieting which

restricted in infants younger than two years old. The general consensus is that to advice to reduce saturated fat and partly to replace it with unsaturated fat should apply only to older children and adults with the aim of lowering the risk of one of the biggest killers-coronary heart disease.

However some doctors argue that we have a better chance of getting used to a low-fat diet at the earliest possible age when our eating habits are moulded. Before the age of two years most breast-fed and bottlefed infants have already become habituated to a diet high in fat, saturated fat and cholesterol.

Ninety per cent of affluent city Indians are over weight for the simple reason - they constantly overeat foods like wafers,

sometimes is counter-productive as periods of semi-starvation are followed by bouts of overeating.

Most experts agree that a poor diet at a very young age can delay physical and mental development and affect future health. So all advise that fat intake should not be

pastries, chocolates, burgers, samosas or ice-creams. Poor people like plumbers, electricians and carpenters are slim and muscular in India.

Such snacks are seductive and virtually impossible to resist. See what happens when you pick up 3-4 wafers from a plate you can't stop after that. Your hand will keep reaching for the plate till it has become empty.

Natural food is never tempting. If you eat an apple you feel satiated and cannot eat more. However wafers, dalmoth do not satiate. They create a craving for more. One must realize that one big oily samosa replaces all the calories one burns in an hour of jumping around in a gym.

Wherever we go. We are pressed by people to eat and the food they offer is invariably fattening. No host offers you cut cucumbers, tomatoes, aguava or sugarless lime water. In fact in India a dieter becomes a target of overweight hosts who feel resentful that he reminds them of something they should be doing themselves.

It is the fat in our diet which makes us fat. In other words, 'The fat we eat is the fat we wear'. Traditionally potato and rice were believed to be fattening. Both of these are almost fat-free. However, they are rich in carbohydrates which are readily burnt as fuel to provide energy for our daily activities whereas the calories from fat are stored as body fat.

Fats are The most concentrated source of food energy supplying nine calories

per gram. Carbohydrates and proteins have few calories per gram. High fat foods are thus always high calorie foods. Such foods in turn increase the risk of cardiovascular disease, diabetes and other disorders. Fats are combinations of saturated fatty acids and unsaturated fatty acids. Saturated fatty acids carry all the hydrogen atoms they can hold and include butter, milk fat and the fat in meats. Two vegetable oils, coconut and palm oils are also saturated.

Unsaturated fatty acids do not have all the hydrogen atoms they can hold. If a pair of hydrogen atoms is missing, these fatty acids are called mono unsaturated. Olive, peanut and rapeseed oils are largely such. If two pairs or more of hydrogen atoms are missing the fatty acids are called polyunsaturated. Corn, safflower and sesame oil, are primarily poly unsaturated. Plants and fish are the important sources of unsaturated fats. These fats are generally liquid at room temperatures.

We need some fat to stay healthy. Fat supplies essential fatty acids, named 'essential' because the body can't make them and must get them from foods because they are crucial for proper growth and development. However we need not take any saturated fatty acids as our body makes all it needs. Fat also aids in the absorption of fat-soluble vitamins (A,D,E & K) and helps maintain healthy skin and hair.

Highly monounsaturated oils such as groundnut oil and rapeseed oil may not only help lower overall blood cholesterol level and artery - damaging LDL (bad) cholesterol, but also maintain the level of heart-healthy

HDL cholesterol. Highly monounsaturated oils are especially good for cooking. When overheated they develop fewer 'free radicals' that may be dangerous to human cells than polyunsaturated oils.

A diet high in fat affects the secretion of some sex hormones which might cause cancer in the reproductive organs. Moreover, high fat diets increase the amount of bile acids in the colon, which may be converted there by bacteria into carcinogenic byproducts.

Reduce fat intake so that less than 30 percent of all calories consumed each day come by fats. that translates to less than 66 gms of fat in a 2000 calory daily diet.

Less than 10 percent of our calories should come from polyunsaturated fats such as safflower oil, soyabean oil and sunflower oil. Especially hydrogenated oil consumption should be limited which is found in processed foods. Mono unsaturated fats should be taken.

Groundnut and rapeseed oils are the best choices because they are highest in monounsaturated fat and among the lowest in saturated fats.

Eat sensibly. Four or five small meals a day are better than two large ones. Cut down on extra fat. Drink skimmed milk. Buy lean meat. Eat less fried food. Make up the required calories with carbohydrates and exercise.

Cure Obesity

Dr. K.K. Pandey, Lucknow

Habitual eating of extremely nourishing foods, lack of sports and exercise and sleeping during the day are the causes of obesity. According to Ayurveda, the tasty food causes obstruction in the channels so that bone marrow and other tissues do not get nourishment and fat only grows. Obesity is a disease which may be hereditary as well. It can also be caused by certain steroids, insulin, contraceptives and anti-diabetic drugs and may occur during pregnancy, menopause and at puberty among females.

Symptoms : Efficiency loss, panting after slight exertion, thirst, laziness, drowsiness, sudden gasping, Extreme hungeriness, extreme sweating, smelly body, loss of vitality and loss of potency.

Obesity causes accumulation of fat at the breasts, stomach, hips, arms and thighs. The disorder of secretions of hormone of thyroid, pituitary and suprarenal may be the cause of the superobesity. Obesity

can cause high blood pressure, diabetes, heart diseases, cancer of the colon, arthritis, shortened life-span, stones, extreme sweating, breast cancer among women etc.

Cure : Avoidance of fatty food, Plenty of exercise like brisk walking, swimming, cycling, playing badminton, tennis etc. and complete renunciation of liquor are necessary.

The modern science has discovered an obe gene that causes obesity. It also has discovered a hormone, leptin which controls the accumulation of fat in the body. Leptin has been synthesized and it may be injected to reduce obesity.

In Ayurvedic treatment of obesity Mahayograj guggulu, mandoor, Arogyavardhini etc. are given with Trikatu (dry ginger, black pepper, piper longum) to minimise obesity. Ayush-55 the patent drug of the central council of Ayurved of Siddha Research has also been found extremely efficacious in reducing obesity.

Diet of Pregnant Women

Dr. Sunita Rani Vaish, Orissa

Diet and health are eternally inter-related. The importance of diet for pregnant women becomes doubled. Especially in the last three or four months when the growth of foetus increases the demand from the mother's body.

Only a healthy mother can deliver a healthy child. The child growing in the womb needs several nutrients. To supply all such nutrients it is not advisable that the pregnant should double her diet. Increased diet would increase the body weight which would create complications during the pregnancy and later as well during the delivery. The quantity should be such that it should engender happiness and not heaviness in the body and create digestive problems.

Nevertheless, if required nutrients are not supplied then the growth of the child in the womb is retarded and its weight at birth is less than requisite, and at times causes premature delivery. Such children remain generally sick, their death rate is higher and if their mental growth is also stunted then they may even be spastic, causing problem for the parents and society at large.

The child in the womb is totally parasitic, i.e. it draws the necessary nutrients from the mother's body, if it does not get those things from the mother's diet. For example, if it does not get the requisite amount of calcium from diet then it draws calcium from mother's bone, causing osteomalacia to her. Or if it does not get minerals then it takes them from mother's teeth,

so that her teeth become carious and fall. It may take iron from the blood of the mother causing anaemia to her. The mother becomes weak and sick which finally reflects on the child as well.

Nature of Diet

The diet of pregnant should be light, easily digestible, and endowed with sufficient calories of energy. It should be rich in quality containing apposite quantity of carbohydrates, minerals, vitamins and roughage. These things are supplied by flesh, fish, eggs, fresh and juicy fruits, milk of green vegetables. For roughage she must have flour with bran fruits with skin etc., so that constipation may be precluded. Fruits like papaya, dates and fig are replete with minerals and also help to keep the bowels clean.

Milk is by far the best diet during the pregnancy. It supplies lime as well. One litre of milk and 2-3 litre of water should be taken daily to remove the toxins from the body.

During pregnancy 2,500-3,000 calories are needed daily. During the last four months the requirement is more acute. Those who do manual labour need extra 200-300 calories. The required calories may be had from cereals, pulses, fruits and milk. Vegetarians should eat fruits daily. Tubers are rich in calories, green vegetables contain iron, vitamin and other minerals. Fruit juice helps in digestion and evacuation. Milk and its derivatives like curd, cheese etc. have calcium, phosphorus and

protein. Those women who do not relish milk, may take it as coffee or as advised by the doctor. Sugar and jaggery contains mainly carbohydrates and oil ghee is rich in fatty acids. Oils and ghee should be sparingly used otherwise they will increase the body weight and disturbs the digestion.

Quantity of Diet

The quantity of diet must always be according to the hunger. The food should give satisfaction and not make the body heavy and lazy. The pregnant should take balanced diet in several instalments. Excess of salt may cause swelling in the legs. She should not eat what she can't relish. In no case she is to take alcohol which is extremely harmful to the mother and child both. And smoking also is prohibited for her.

Pregnancy Anaemia

The incidence of anaemia among pregnant women in the world was the highest in India - higher than even Sub-Saharan Africa and countries with a lower per capita income, according to US-based Population Action International.

In a report prepared for the fourth UN Conference on Women in Beijing, on Women's Well-Being: Key Indicators on Women's Reproductive Health and Educational Status, it was mentioned that as many as 88 percent of pregnant women in India suffer from anaemia against 75 in Nepal, 62 in Sri Lanka, 57 in Pakistan and 51 in Bangladesh.

Diet in Diseases

We can keep the diseases at an arm's length by changing our diet according to the changing season and place of our living. We can also control the diseases by changing our diet. Never forget to ask your doctor what to avoid and what to eat in a particular disease. Some do's and don'ts in illnesses are given here:

Asthma : Do not use artificially coloured and flavoured edibles. Use minimum of meat, butter, cheese and milk. Use plenty of fruits, coconut and vegetables. During severe attacks, drinking concentrated coffee helps.

Cancer : Take plenty of fresh fruits and green vegetables. Do not take fried things. Cured and bread prepared from branny flour, roasted ground nut and peanut are wholesome.

Constipation : Bread prepared from branny flour, dry fruits and coconut are wholesome. Take porridge for breakfast.

Mental Tension : Eat fruits as much as you can. Use bananas and oranges particularly. Take plenty of branny bread, coconut, groundnut and green fruits.

Diabetes : Give up sugar and fatty things. Be a vegetarian.

Diseases of Gall-bladder : Do not take eggs, onions and pork, sweetmeats and greasy things are also unwholesome. Do not forget your breakfast. Take bread with kidney-beans and pean-uts, use fruits in plenty.

High Blood Pressure : Minimise use of grease. Avoid using salt. Take bread, potato, apple, banana, cabbage, pumela

(*Citrus maxima*) and pea-nuts in abundance.

Kidney Stones : Be a vegetarian. Drink water in plenty. Take more of wholemeal bread. Minimise milk, tea, coffee and sugar.

Rheumatism : Take

vegetables in abundance. Do not take fish, meat, milk, cheese, and butter.

Ulcer : Do not take hot food. Do not use bitter, spicy and chilly food. Give up wines, coffee & tea. Take milk.

Food and Mood

Judith Wurtman, who has a Ph.D. in Nutrition, is a scientist in the department of brain and cognitive science of the Massachusetts Institute of Technology. She has studied the relationship of food and mood for seven years, and has concluded that carbohydrates make you sleepy, protein increases your alertness and fat dulls your ability to perform physically and mentally.

What happens, as scientists already know, is that messages are passed from cell to cell in the brain by electrical impulses and by chemicals called neurotransmitters. Three of the chemicals dopamine, norepinephrine and serotonin - are manufactured by the brain from the food we eat.

The first two are alertness chemicals. When they are at work, you feel more motivated, more attentive. You react more rapidly to stimuli. Serotonin is a calming chemical. When it is at work, feelings of stress and tension are lessened and the ability to concentrate is enhanced. Serotonin also slows reaction time and Ms. Wurtman

explained, depending on the time of day, it may make you feel sluggish or sleepy.

It is known that eating protein sustains alertness when you are involved in mental activity, and that only three or four ounces are necessary at one meal. Protein in its purest form, with very small amounts of carbohydrates or fats, gives you the quickest shift to a more alert state.

Carbohydrates alone, whether simple, like those found in sugar, or complex, found in starches, have a calming, focusing effect when eaten. The complex carbohydrates include everything in the bread family, potatoes, rice, corn, barley and cereals. 1 to 1.5 ounces of carbohydrates is needed to produce the desired effect. Ms. Wurtman warns that doubling your intake of protein will not make you twice as alert, nor will doubling your intake of carbohydrates make you twice as mellow, and fruits and vegetables, with the exception of corn and potatoes, do not effect one's mood at all.

Food-stuffs that Fortify

Dietary fibre

Dietary fibre, a most neglected ingredient of food, is once again in vogue after about 40 years. It is now a well established fact that fibre supplements help maintain good health.

Fibre is the ingested vegetable matter which resists digestion in stomach and small bowel. Its chief components are cellulose, pectins, gums, alginates, and lignins. Their physical properties and chemical interactions in the gut differ from each other in several respects. Pectins, cholesterol levels, lack of the fibres in the diet can lead to increased incidence of cancer of the colon, diverticulosis coli, gall stones, diabetes and atherosclerosis.

Fibre in the diet increases the size and wetness of stool by imbibing the water to form a gel, and also by the osmotic effect of organic anions produced by the bacterial digestion of its polysaccharides. This reduces the transit time of stool and so less time is needed for organic anions to act on the villi of the colon. This reduces the incidence of cancer of the colon. The bulkiness of the stool reduces the force needed to evacuate the colon. This reduces the incidence of haemorrhoids, inguinal hernia, hiatus hernia and leg varicosities.

Fibres also slow the progression of atherosclerosis - a disease responsible for heart

attacks and strokes, says a report. The fibres in the diet bind both the conjugated and unconjugated bile acids and protect them from bacterial degradation. Thus fecal output of the biliary acids is increased diminishing their enterohepatic circulation. It requires further synthesis of biliary acids from cholesterol, in the process reducing the level of cholesterol in the blood. Lower cholesterol levels in the blood slow the progression of deposition of fat or cholesterol on the vessels.

Germinated Food

The nutritional value of 'sprouted food' is much greater than that of cooked food because cooking kills several healthy ingredients. Dalia (porridge) falls in the category of such food, it is easier to digest. It also possesses natural vitamins like Vitamin 'B' and Vitamin 'E' along with other body-building enzymes.

Sprouted wheat can be termed as 'health food'. The wheat germ contains more than 50 per cent of all vitamins, and is the only part of the grain which contains Vitamin 'A'. Such food contains almost all the fat of grains and has a high percentage of proteins and mineral salts. It protects the teeth from decay caused by the fermenting action.

The garlic bulb has a long medical history. Herbal physicians in Egypt and ancient Greece used it to fight infections,

caused by a whole variety of pathogens.

Medical experts, hope that garlic may help prevent the number-one cause of death: heart attacks and strokes caused by arteriosclerosis. There are acknowledged indications that garlic reduces blood fats, especially cholesterol, and perhaps even prevents its formation and incorporation in cell membranes. Furthermore, the blood is "diluted": blood platelets are less sticky and the clotting of coagulant proteins is inhibited.

Whey

It is extremely rich in several nutrients including proteins and vitamins, and may be used in a large variety of products, from biscuits and other confectionery & meat products, soft drinks as well as baby foods.

This dairy product is produced while processing milk into cheese and casein. Directly produced from milk, whey represents 50 per cent of its dry matter. It is, therefore, a first class milk product, exactly like cheese. The major component of whey is lactose, or milk sugar, accounting for around 75 per cent of its matter. Highly soluble and nutritional proteins form around 10 per cent. The remaining is made up of milk fat, mineral salt and hydro-soluble vitamin B.

Milk proteins are perfectly suited to the nutritional

requirements of the human body. Among proteins, albumins, rich in amino-acids, have a higher nutritional value than caseins. Very soluble, albumins go through the stomach without coagulating which makes their amino-acids quickly available. Thus whey proteins have excellent functional properties and a very high nutritional value.

Fruits

Scientists in U.K. have found that green bananas can be a "major protective factor" against bowel cancers. India accounts for about 14 per cent of the world's banana production. According to researchers of the U.K. Medical Research Council's Dunn Clinical Nutrition Centre in Cambridge, a diet rich in starch, not just fibre - namely green bananas, cold boiled potatoes and other sources of virtually indigestible starch - can provide particularly strong protection against bowel cancer.

Aedin Cassidy, Sheila Bingham and John Cummings of this Centre in Cambridge are the first researchers on an international scale to look for links between consumption of starch and cancer of the large bowel. After analysing diet and cancer rates from 12 countries, they found a strong association between starch consumption and cancer of the large bowel, colon and rectum. On an average, the more the starch consumed in a population, the lower the incidence of the diseases.



Sugar : The Sweet Danger

Umpteen diseases like pyorrhoea, diuresis, acidity, intestinal wounds, abscess, heart disease, high blood pressure etc. are produced due to the inclusion of sugar in our diet. Abdominal worms and caries in the teeth of children occur due to their attachment towards sugar in the form of chocolates and sweetmeats. The digestive system has to work more in order to digest sugar which results in the depletion of calcium, phosphorus and vitamin B complex. The mixture is found in sugarcane juice, beetroot, jujube, dates, carrots etc. which are digested with ease. But consumption of sugar results in the fall of hair, weakened teeth, dental caries, rough skin, heart diseases etc.

Sugar is not beneficial even if taken in small quantities. Lime, carbondioxide, calcium, phosphate (which is obtained from animal bones) and many other salts are used in the manufacture of sugar. A solution known as 'ultramarine blue' is used to clean and brighten the sugar.

The solution is poisonous, it makes the sugar harmful too. The sugar does not contain mineral salts, and vitamins. It contains only carbohydrate. The carbohydrate is the chief source of energy. But the digestive system has to overwork to digest the sugar which is nothing but a carbohydrate. Its digestion takes up much time so the sugar stays in the intestine for a long period and consequently the brain, the nervous system and bones have to bear its ill-effects.

Sugar and sugared sweetmeats join the blood circulation within a few minutes of consumption. The level of sugar in the blood gets increased. In order to balance this increased quantity the pancreas has to work harder and release more of insulin in the blood. This balances the sugar but reduces the quantity of glycogen in the liver and consequently diseases like tiredness, dejection, headache, nervousness, asthma, diabetes etc. are produced.

Confluence of Flavour, Taste and Health

Garam Masala

Garam masala, which is added to Indian dishes, makes them tasty, flavoured and also conserves health. All its ingredients are full of medicinal properties. But it should be used in small quantities only. Its main ingredients are described below.

Cinnamon Bark

It is called Dalchini in Hindi. Its Latin name is *Cinnamomum zeylanicum*. It is the internal bark of the branches and new shoots. Thickness varies from 0.2 m.m. to 1.00 m.m. It contains a volatile oil, 0.5 to 1.0 per cent. It is also a germicide.

Greater Cardamom

Its Latin name is *Amomum subulatum*. Its taste is sharp and good. It is a tonic for heart and liver. It is an appetiser. It makes one belch upon eating. Its skin is good for headache and teeth. It also cures stomatitis. Decoction of its seeds is used for the infection of teeth and gums.

Clove

Its Latin name is *Caryophyllum*. Actually cloves are dried buds. It is extremely fragrant. The aromatic oil obtained from it finds umpteen uses. It is stimulant and is chewed with betel leaves. It is used as Vatahara in medicines. It is a digestive substance and is also antiseptic and germicide.

Piper Longum

Piper longum is the botanical name for long pepper. It is a dry fruit. An alkaloid present in it is

bactericidal. It is a sialagogue. It has many medicinal properties. It is used in many respiratory diseases like cough, bronchitis and asthma. It is also Vatahara and Pitta-Virechaka.

Indian Cinnamon

Its Latin name is *Cinnamomum tamala*. The leaves are used as spice. It is vatahara and is used in stomachache and dysentery.

The bark of the tree is thicker than that of *Cinnamomum zeylanicum* and is used for adulterating the same.

Black Pepper

The Latin name is *Pipernigrum*. Black pepper is prepared by drying the fully-developed but raw seeds. It finds many uses. It is extremely piquant and fragrant as well. It is used as stimulant and anti-febrile.

Cumin Seed

Latin name is *Cuminum cyminum*. It belongs to the family umbelliferae. Cumin seeds are aromatic and bitter in taste. In

India, cumin seeds are added to almost all dishes. It is stimulant, digestive, astringent and alleviator of Vata. It is used in indigestion and diarrhoea. A volatile oil is obtained from it. It is also used in veterinary medicines.

Dried Ginger

It is prepared from tubers of *Zingiber officinale* by drying them. It has an acute flavour, which makes it highly aromatic. In medicine it is used as stimulant & alleviator of Vata and it also cures distention of stomach.

Nutmeg

Its Latin name is *Myristica fragrans*. It is used more as a medicine rather than as a spice. It is alleviator of Vata, stimulant, astringent and aphrodisiac. It is added to tonics. It is used in the initial stages of dysentery, stomachache, nausea, malaria, rheumatism and skin diseases. It also induces sleep.

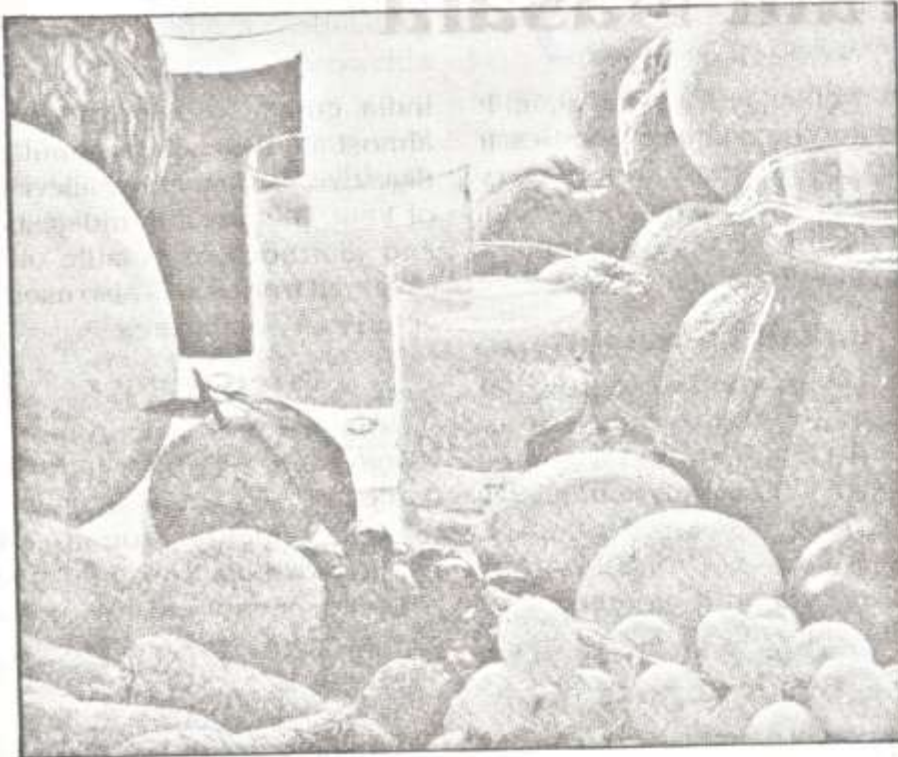
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Fresh Juice for Good Health



The fresh juice of vegetables and fruits is extremely good for the maintenance of sound health. Fruits and vegetables are replete with mineral salts, vitamins, enzymes, amino acids and other nutrients. If instead of eating them, he would drink the juice the body would be able to assimilate them.

Fruit juices contain certain easily essential oils which impart them flavour-these are appetisers and digesters too. The juices contain plenty of nutrients which help in reducing your diet. Moreover they are deficient in calories. The juices quickly act as well.

The juices of fruits increase the quantity of alkaline matter in the blood circulation. They activate the endocrine glands whereby the internal juices are produced in plenty. Fruit juice

acts like miracle for those whose digestive system is defective or spoiled, or who complain of burning sensation in the stomach. Uses of a few juices have been described here.

Apple Juice : During illness, drinking of apple juice provides many benefits, the juice is a storehouse of vitamins and mineral salts. It contains Vitamin A, B-1, B-2, B-6 and C. It also contains minerals like calcium, phosphorus, iron and potassium.

Taking apple juice in the early morning keeps the bowels clean and the blood pure. Infection of intestines is precluded and hunger is increased. The vitamin B-complex in it maintains your good health too.

Orange Juice : It has plenty of vitamin C, this vitamin protects our body from a disease called scurvy. It also contains calcium

and phosphorus. Drink a large glass of orange juice within an hour of the attack of cold and see how it cures the cold for yourself.

Lemon Juice : It contains Vitamin C and bioflavonoids. It also purifies the blood and cleans the bowels. Taken with honey it reduces obesity and is also helpful in influenza, sore throat, cough, cold and coryza. However it should not be taken in acidity and burning in the stomach.

Pineapple Juice : It is very popular due to its flavour and taste. It contains two enzymes, viz. Papine and bromaline. It contains many vitamins and minerals as well and it is useful in sore throat, tonsils, cold-coryza and defects of stomach.

Tomato Juice : Ripe tomato contains vitamin A and C in plenty and traces of several other vitamins and minerals salts. It activates the sluggish liver. It also helps to cure the complaints of liver, digestion and skin.

Cucumber Juice : It keeps the urinary system in the perfect orders, the juice is diuretic and ejects harmful substances through the urinary tract. It also helps to improve the complexion.

Beetroot Juice : It contains sodium and potassium salts which prevent the accumulation of calcium in the body. It is extremely useful for purifying the blood. Those who have defects of blood, skin and constipation should drink this juice regularly. It creates red corpuscles, hence is very good for the patients of anaemia. Drinking the juice of two large beetroots in the early

morning keeps you fresh and healthy.

Carrot Juice : Extremely good for blood-purification. Those who have acidity, infection of eyes or complaints of respiration, should try it. It contains plenty of vitamin A. Pregnant women should take it daily as it improves their health and also that of the child in the womb. It may be taken singly or mixed with milk or some other juice.

Spinach Juice : It is a good source of vitamin A and several minerals. It may be taken mixed with tomato or carrot juice. It is highly beneficial to those who have ulcer, anaemia, constipation, obesity, headache and complaints of eyes.

Onion Juice : It contains vitamin C and B, potassium, sulphur, calcium, iron and iodine. It purifies the blood. It should be taken mixed with carrot or spinach juice. Onion juice has beautifying and cosmetic properties. It removes any defects of skin and stops the falling of hair. For skin defects apply at the affected part and then wash after it has dried.

Fruit juices should be taken 2-3 hours prior to meals. However, vegetable juice should be best taken before meals.

Fats and Fibres

Fats contain fatty acids. Those fats that have maximum number of hydrogen atoms in their molecules are called saturated fats and those who can still admit some hydrogen atoms into their molecules are called unsaturated fatty acids.

Saturated fats are helpful in producing the disease atherosclerosis. So these have to be taken in small quantities only. Roughly speaking, fats obtained from animals have more of saturated fats and fats obtained from vegetables have more of unsaturated fats. Coconut oil and palm oil are exceptions having saturated fats in large quantities.

Clarified butter (Desi ghee), butter, cream, Khoya, coconut oil, palm oil, meat, egg yolk and Daida are the chief sources of saturated fats and groundnut oil, sesame oil, corn oil, soyabean oil, sunflower oil and olive oil are the chief source of unsaturated fats.

Most of the fats contain saturated and unsaturated fats both. Fishes have a special fat in them that reduces the cholesterol level in the blood. Salmon and herring fishes have such fat in

plenty.

Fibres

Fibres are parts of food obtained from plants that are not digestible in the intestines which help us as follows :

(1) these slow down the rate of absorption of carbohydrates by the intestines so that the level of glucose in the blood does not rise quickly, these help in controlling diabetes.

(2) these help to preclude atherosclerosis by reducing the blood cholesterol.

(3) These create the sense of gratification and fullness so that one does not overeat and help to reduce body weight.

Sources of fibre

Gram, Lobiya (cowpea), moong, Kulthi (horse gram), pea, soyabean, choulai (*Amaranthus polygamus*), methi (fenugreek) cabbage, carrot, Pudina (mint) carrot, colocasia, turnip, beans, bitter gourd, cluster beans, drumstick, coptic bean (Kamalkakadi), pumpkin, apple, guava, date, lemon, pomegranate, sesame, groundnuts, linseed, branny flour of wheat etc. are the chief sources of fibre.

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Gandhiji's Opinion About Food

Food can be divided into three categories - vegetarian, flesh and mixed. Flesh foods include fowl and fish. Milk is an animal product and cannot by any means be included in a strictly vegetarian diet. Medical opinion is mostly in favour of a mixed diet, although there is a growing school, which is strongly of the opinion that anatomical, and physiological evidence is in favour of man being a vegetarian. His teeth, his stomach, intestines etc. seem to prove that nature has meant man to be a vegetarian.

I have always been in favour of pure vegetarian diet. But experience has taught me that in order to keep perfectly fit, vegetarian diet must include milk and milk products such as curds, butter, ghee etc. I have been forced to admit the necessity of adding milk to the strict vegetarian diet. But I am convinced that in the vast vegetable kingdom there must be some kind, which, while supplying those necessary substances which we derive from milk and meat, is free from their drawbacks, ethical and other.

In order to get meat we have to kill. And we are certainly not entitled to any other milk except the mother's milk in our infancy. Both milk and meat bring with them the defects of the animal from which they are derived. Domesticated cattle are hardly ever perfectly healthy.

Man does not seem to worry much about his health. He

considers himself to be quite safe in his medical fortress in the shape of doctors, Vaidis and Hakims. His main worry and concern is how to get wealth and position in society. This worry overshadows all the rest. Therefore, so long as some selfless scientist does not, as a result of patient research work, discover a vegetable substitute for milk and meat, man will go on taking meat and milk.

Sieving of the flour should be avoided. It is likely to remove the Bhusi or the pericarp which is a rich source of salts and vitamins, both of which are most valuable from the point of view of nutrition. The pericarp also supplies roughage, which helps the action of the bowels. But machine pounding not only removes the outer skin, but also polishes the rice by removing its pericarp. The explanation of the popularity of polished rice lies in the fact that polishing helps preservation. The pericarp is very sweet and unless it is removed, rice is easily attacked by certain organisms. Polished rice and wheat without its pericarp, supply us with almost pure starch. Important constituents of the cereals are lost with the removal of the pericarp.

We are in the habit of dipping each morsel of the chapati in vegetable or dal gravy before eating it. The result is that most people swallow their food without proper mastication. Mastication is an important step in the process of digestion, especially that of starch. Digestion of starch begins on its coming into contact with

saliva in the mouth. Mastication ensures a thorough mixing of food with saliva. Therefore, starchy foods should be eaten in a relatively dry form, which results in a greater flow of saliva and also necessitates their thorough mastication.

All the delicacies of the world cannot equal the relish that hunger gives to food. A hungry man will eat a dry piece of bread with the greatest relish, whereas one who is not hungry will refuse the best of sweetmeats. Food should be taken as a matter of duty-even as a medicine - to sustain the body, never for the satisfaction of the palate. Thus, pleasurable feeling comes from satisfaction of real hunger. Therefore, we can say that relish is dependent upon hunger and not outside it.

Because of our wrong habits and artificial way of living, very few people know what their system requires. Our parents who bring us into this world do not, as a rule, cultivate self-control. Their habits and their way of living influence the children to a certain extent. The mother's food during pregnancy is bound to affect the child. After that during childhood, the mother pampers the child with all sorts of tasty foods. She gives the child a little bit out of whatever she herself may be eating and the child's digestive system gets a wrong training from its infancy. Habits once formed are difficult to shed. There are very few who succeed in getting rid of them. In the cities some people keep on nibbling from time to



Saraswati - Hello ! Granny

Granny - Hello ! Child, come, please sit down, how do you do ?

Saraswati - Granny, What should be the diet and regimen of pregnant women and what should be fed to infants ?

Granny - When a woman conceives then she is likely to be attacked by morning sickness. She would not be able to digest anything. Many women have loose motions during pregnancy and others get severely constipated and are not able to evacuate for a couple of days at all. The interesting part is they get used of these symptoms after the delivery. So pregnant women should be fed according to their temperament so that they may stay healthy.

Saraswati - Do you mean to say that pregnant women cannot have a uniform diet ?

Granny - Pregnant women should be given nutritious diet such as Roti, Dal, Rice, milk, green leafy vegetables, apple, pomegranate, carrot, banana, guava etc. They must take meals at regular hours. They should have porridge, sprouted gram, green gram, boiled green gram for breakfast. Those who cannot

Food & Nutrition



Ud. B. R. Rasik, Lucknow

Caution

Those who take pakoras, parathas, butter toast and tea or coffee in the morning and eat meal at 9.30 and go to office and again take samosa at 1 p.m. and again snacks at 4 p.m. and drink hot drinks 6 to 8 times a day and keep on eating every couple of hours will soon contract abdominal diseases and suffer for the rest of their lives.

Therefore, it is the duty of one and all to get up before sun is up, work, eat and sleep at regular hours and keep away from meat, alcohol, tobacco and other intoxicants to keep fit and healthy.

afford milk and fruits must take Roti, Dal, carrot, banana, green gram, khichri etc. Those who cannot digest meals and vomit whatever is eaten should be given lime, mozambique, carrot, banana, khichri, green gram pulse etc. Those who have loose motions or diarrhoea should be given khichri of green gram, curd, bael syrup, banana, guava etc. Those who have constipation and no motions for days together they should take light meals, leafy vegetables and one spoon of powdered little harad. Pregnant women should eat Ghee, oil and fried things sparingly.

Saraswati - Thank you Granny ! Now tell me what to feed the infants upto the age of one year ?

Granny - The newborn child must be given a little of honey which obviates the occurrence of small pox to them. Mother's milk is the best diet for the baby. Alternatively, it may have goats milk.

When the baby is six months old it may be fed green gram soup or yellow gram soup. Thin khichri may be given. Rice cooked in



Nutritional Recipes

In Karnataka legend has it that Nandi was so fond of peanuts that he used to graze in peanut fields at will. Later on request, he decided to wait at the Bull temple specially constructed for him. For 2 days in a year, as soon as the harvest is ready, he is flooded with offerings.

The greatest advantage with the peanuts of Raw, cooked, roasted you name the variety and it is available. People from far and near flock to the fair and eat groundnuts to their heart's content.

SALTY PEANUTS

Take half a kilo of peanuts with the shells. Wash well and soak in water for 10 minutes. Drain all the water and keep the peanuts aside.

Boil water in big flat vessel. The quantity of water should be enough to immerse all the peanuts. Add a teaspoon of salt to the water. Drop the peanuts into the water. Simmer and cook on a low fire for 15 to 18 minutes. As the peanuts cook, they absorb

the salt water and become soft.

After removing from the fire, drain all the water and serve hot or cold. Kids simply love to break the shells by themselves and eat the nuts. Mounds of salted peanuts melt in the evenings when the family gathers round - this is a typical treat in this season. Children find it very amusing when it apodreleases the excess water absorbed like a jet.

COOKED GROUNDNUT

Ingredients :

- 2 cups shelled peanuts
- 1/4 cup grated coconut
- 6 green chillies
- coriander and curry patta
- 1 lemon
- salt to taste

Method : Heat a little oil in a pan. Put in mustard, asafoetida and a little turmeric. As the seeds crackle, add the cut green chillies, curry patta and coriander. Then add the washed peanuts and sprinkle a little water and salt. Cover with a lid and simmer.

The nuts will be cooked soft and tasty after about 15 minutes

as they would have absorbed the taste of all the ingredients.

Remove from the fire and add grated coconut and lime juice. It can be served hot or cold. It is more tender when hot. During winters, it is very convenient to see people buying peanuts.

In the evenings when the family gathers round all the members enjoy. The simple peanut is an asset to any kitchen. It depends on how you use it - as an additive, supplement or a substitute. In whichever way you use it, the peanut comes in handy a handful of peanuts. Sometimes it is a real treat to the eyes to see various preparations of peanuts on the dining table.

The greatest advantage with the peanuts it can be eaten raw, cooked, roasted or fried. Since it is neutral in taste and flavour, it can be used in sweets as well as in salty and spicy preparations. It can be ground and mixed with condiments. Its versatile utility is too varied to list or write about.



milk may be given. Slices of banana, orange, seedless guava, apple may be given at an interval of two hours. During the teething, babies take whatever comes to their hands into the mouth. At such times, it should be given one whole dry date to chew. He will press it under the gums and open up the gums thereby and facilitate the teething.

It should be remembered that the babies must not be given Ghee in Dal or things fried in

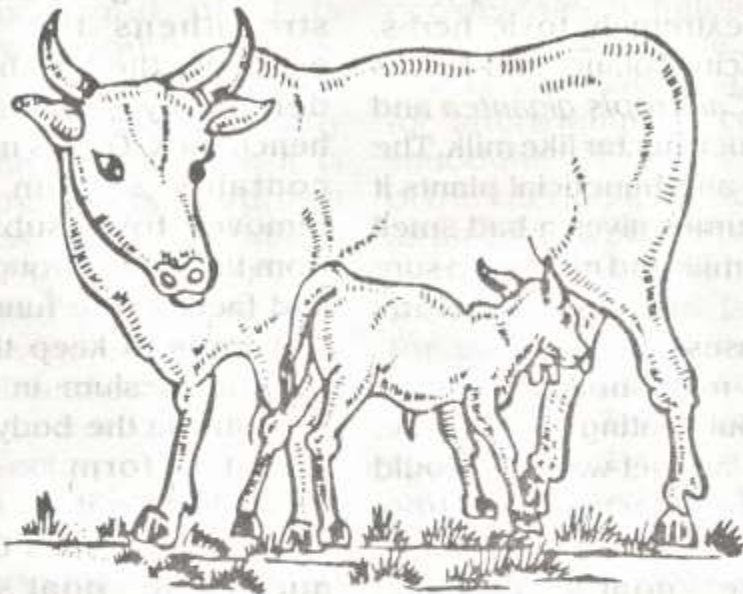
Ghee, which may induce diarrhoea and spoil their liver as well and may at times create fever. So they must be given greaseless food little by little.

Saraswati - Granny, now tell me in general what food is good for the poor people of our country?

Granny - Poor people who cannot afford milk, fruits etc., they should eat porridge, boiled gram, boiled green gram khichri etc. in the morning and go to

work. At noon they should eat Roti and sabji and Roti, pulse, rice for supper in the summer. 100 gm of jaggery will do for breakfast for a change sometimes. Sattoo is also a good substitute for breakfast. Many people eat boiled or parched grams and if available drink milk or butter milk. This is healthsome and one can work hard after such breakfast.

Cow's Ghee



The great sage Charaka has averred that of all Ghees, Cow's ghee is the best and sheep's is the worst. In Ayurvedic lore 'Ghee' means Cow's Ghee.

Language-wise Names :

Sanskrit - Ghritam, Sarpi;
Hindi - Ghee; **Marathi** -
 Toop; **Kannada** - Tuppa;
Gujarathi - Ghee; **Bangla** -
 Ghrit; **Telugu** - Neji;
English - Clarified Butter
Latin - *Butyrum depuratum*.

Medicinal Properties

According to Bhava Prakash the cow's ghee is endowed with following properties :

*Ghritam Rasayanam
 swedu Chakshushyam*

*Vaulideepamam.
 Sheetaveeryavishalakshmi
 papapittanilapahem.
 Alpabhishyandi
 Kantiyojaste
 jolavanyavrdhikrt.
 Swarasmritikaram medhya
 may ushyam balakrid guru.
 Udavarttajwaronmeda
 shoolanahavranam
 haret. Snigdham
 kaphaharam Vrshyam
 Kshayaveesarprakta i.e.
 Ghee is elixir, tasty,
 vision-promoting, but
 appetising, cold
 temperament, destroyer
 of poison, wretchedness,
 ugliness, sin, Pitta and Vata,
 slightly channel obstructing,
 and promoter of radiance,
 beauty, melody, memory,
 intellect and strength. It is*

heavy, greasy, Kapha-promoting and destroyer of Udarvarta, fever, insanity, ache, distention, wound, visarpa and deformities of blood.

Fresh Ghee is good to eat and old Ghee is used as medicine. The Ghee becomes old after one year. Ten year old Ghee is believed to be sufficiently old for medical purposes. As medicine the older Ghee is the better. A century old Ghee is called 'Kumbha Sarpi'.

Domestic Uses of Ghee

- In sore throat, add powdered black pepper to two spoons of Ghee, heat and cool and take after meals.
- In cracked lips apply Ghee with a pinch of salt on the lips and in the navel.
- Rub nutmeg rubbed in fresh Ghee over the eyelids to cure insomnia
- Take daily two spoonful Ghee with equal sugarcandy once to promote vision.
- Ghee is easily digested, taken seasoned with cooked pulse or at night with milk.

Goat's Milk : A Panacea

The body of the goats being short and light, their diet being plants of bitter and pungent tastes, their water intake being frugal and their exertion being too much, their milk happens to be a panacea says Charaka.

Goats' milk is astringent, sweet, cold-temperamented, appetising, light and anti-diarrhoeal. The jet-warm milk of a healthy young goat should be drunk for maximum benefits. Such milk happens to be anticonstipative, light, aphrodisiac, diuretic, alleviator of insomnia and roughness of brain.

A cloth soaked in goat's milk kept over the head induces sleep. Regular use of goat's milk cures internal and oral bleeding, Cough, phthisis, wounds of lungs, throat and bladder etc. Goat's milk contains sulphur and iodine, both of which are acutely aromatic and anti-infection by virtue of which it is beneficial in tuberculosis. Lambs and goats never contract tuberculosis.

Some people abhor goat's milk as it has an obnoxious smell. However, the smell is its speciality. If goat's milk is without smell then it is good for nothing.

Goats are created by nature to consume extremely bitter and extremely toxic herbs, medicinal plants and leaves like *Calotropis gigantea* and produce nectar-like milk. The toxic and beneficial plants it consumes gives a bad smell to its milk and makes it a sure shot against various diseases.

Its milk should be drunk without heating over a flame, fresh and jet-warm. It would be more effective if suck from the teats.

The goat's milk is deficient in fats and saccharides and is hence easily digestible. Whereas cow's milk takes two hours to get digested, goats milk takes half an hour. Hence the milk can be safely given to even a hopeless case of liver.

The fat in the goat's milk permeates the milk so that it does not get separated by churning. It being rich in iron is good for the growing infants. Goat's milk is beneficial to the asthma patients as well.

Goats' milk contains fluorine in plenty which is essential for the formation of teeth and their strength. Fluorine deficiency causes weakness of eyesight. Those who have complaints of eyesight should drink goat's milk regularly.

Goats' milk also contains magnesium, which strengthens the bones, especially the backbone. Its deficiency results in henchback. Goat's milk also contains sodium which removes toxic substances from the body through urine and faeces. The function of sodium is to keep the lime and magnesium in a fluid state inside the body, which would form stones otherwise. So if we want to obviate the stones then we must use goat's milk regularly.

The above milk is cold by temperament, sweet in taste, digestive, light, blood-purifier and tonic. Goats never contract tuberculosis. So its milk is always free from bacteria and could be taken raw without any fear.

Goat's milk alleviates all the three humours namely Vata, Pitta and Kapha. One can digest it even if he is suffering from indigestion.

Ayurveda had advised to cure tuberculosis by undertaking Ajya Kalpa i.e. using its milk, curd, butter, clarified butter, urine and meat. Goat-herds and goat-grazers never catch tuberculosis.

CASHEW NUTS

Cashewnut plant is a native of South America, but has naturalised in many parts of India, particularly near the coast where it is often gregarious. It is grown in areas receiving rainfall from 30" to 100". It flourishes in sandy soils & can even stabilise the coastals and dunes & is best suited to low country upto 1500 feet.

It is a small spreading evergreen tree with large leathery leaves & rough bark. The flowers appear from December to April & the fruits ripen from March to June. Trees grown far away from the sea coast do not bear flowers and fruits so profusely & regularly.

The fruit consists of a large fleshy, pear shaped stalk and a small kidney shaped grey or brown nut.

The seeds are collected during April & May show 83 % germination which starts within two weeks after sowing & is completed by about 50 days. It is called Cashewnut in English, Kaju in Hindi, Meruphal in Sanskrit, Kaju in Marathi, Kaju or Khaja in Punjabi, Hijuli in Bangala, Kollamavu Munthirit in Tamil, Jidimanidi in Telgu, Tarukageru in Kannad, Pariggi Mavu in Malyalam & in Latin : *Anacardium*

occidentale. It belongs to family Anacardiaceae.

It is very useful species for afforesting the coastal sanddunes & dry localities of the interior. It is also used as an underwood in palmira groves. The wood is brown, moderately hard & is used for packing cases and for boat building. It is also used as a fuel. The nuts are roasted and eaten. The pericarp of the fruit gives an oil called "Gardol" which is used as a preventive against termites. The trees yields a gum which is obnoxious to insects and is used for book binding.

Chemical Composition :

The Cashewnut contains 21.2% proteins, 22.3% Carbohydrates, 0.05% Calcium, 0.45% Phosphorus, 0.5% Iron, 0.7% Magneisum 1.3% fibres, 0.1% fats and remaining percentage of water and few other chemicals.

It contains carotene & thiamine also. It is to be noted that 100 gms of the nuts contain 10 IU of vitamin "A", 630 micrograms of Chimiun, 2.1 mg of Niacin & 190 micrograms of riboflovin. Because of this extrordnary composition, the cashewnut is a complete protein hence it



Umesh Pandey, Indore

can be used without any harm. It fulfils the protein-deficit in the body. Taking cashewnut powder, nearly 20 gms with milk for a week, not only abolishes weakness but also checks premature ejaculation.

Since it contains vitmin-B, hence it is much effective over the central nervous control and digestive mechanism.

It should be taken fearlessly under the conditions of nervousness & hunger. It abolishes depressions too.

Due to the presence of iron, it makes the blood healthy and increases haemoglobin in the blood.

Taking cashewnut, nearly 20 to 30 gms daily with "Kishmish" (dried grapes) increase body strength & stamina sufficiently. Person feeling headaches due to weakness and overtension must take nearly 20 gms of the nuts daily for few days.

Useful Buttermilk

Commonly the curd churned with appropriate quantity of water is called as Mattha or Buttermilk. The Quality of buttermilk depends on the process adapted in its preparation. If buttermilk is prepared using whole milk then its property will be to subside Vata-Pitta and Vitiates Kapha. However, to certain extent the buttermilk prepared with fatless milk without adding water is Kapha and Pitta subsider and vitiates Vata. If the quantity of water added during the preparation is 50% or more of the quantity of curd taken, then the buttermilk prepared vitiates Kapha and Vata and subsides Pitta. Similarly, if the quantity of water added to the curd is less than 25% and after thorough churning, when the butter is separated, the buttermilk thus prepared is called as Takra.

In Ayurved when there is any reference to the buttermilk, then this type of preparation is suggested. If buttermilk is prepared from a sour curd, it will be vitiating Pitta. If it is prepared from half settled curd, it will viliate Kapha and will be Abhishyandi (causing congestion).

The quality of the butter-milk also changes according to the quality of the milk from which the curd has been prepared.

The buttermilk which is to be used as food or medicine should be prepared from the curd which has been made from the milk to which no water has been added. Neither it should be too sour nor improperly settled. In its natural way it should be light, slightly sour, and tasty. Buttermilk should not be made from sweet (sugar added) and improperly settled curd.

Buttermilk can be compared to nectar for human beings. Regular use of buttermilk (except during a prohibited season) in accordance with our individual nature is very helpful in having a healthy body.

Butter-milk Prepared from Cow-Milk

It is best in quality. It is Tridosha-Nashak (subsider), appetizer as well as digestive. It sharpens memory. It is very beneficial in stomachache, diarrhoea, swelling in the intestines, piles and sprue etc.



Vd. S.A. Khan, Lucknow

In the sprue, when the digestion is disturbed, use of the buttermilk prepared from cow-milk is very beneficial. Because of its being Grahi, light and Deepan-Pachan in nature, it settles down the digestion, increases appetite and decreases excessive stool formation.

Ground Rules for Using Buttermilk

Persons with Pittaj temperament and those suffering from Pittaj diseases should use buttermilk after adding a little honey or candy sugar (Mishree).

Those with Kaphaj temperament and suffering from Kaphaj ailments should drink buttermilk after adding in it some Yavakshar, black cumin, dry ginger, black pepper, pippali, rocksalt etc. and should avoid it in the morning and night.

Those with Vataj

temperament or suffering from Vataj ailments may take buttermilk in either of the two ways mentioned above. If the person is very weak, consumption of buttermilk with honey or candy sugar is recommended. Still better for such persons will be use of curd in place of butter milk.

Those suffering from Tridoshaj diseases, should not use sour buttermilk. They should take fresh buttermilk along with honey and butter or along with some Tridosh Shamak medicine like powder of Amalki (*Emblic myrobalan*), Haritaki, rock-salt etc.

Use of Buttermilk in Various Diseases

Use of butter-milk in combination with honey or sugar and paste prepared from Amla seeds is beneficial in leucorrhoea.

Use of butter-milk along with Iron-wood plant (Nagkesar 1/2 to 1 gm.) gives a quick relief from leucorrhoea ailments.

Pulp of green bael, dry ginger powder and old jaggery in equal quantity (1 1/2 to 3 gms. each) mixed in buttermilk twice a day cures sprue.

Use of Harad (*Chebulic myrobalan*) powder mixed in buttermilk gives relief from piles.

In the treatment of sprue, depending upon the strength

of the patient and also the season, living only on butter-milk for 7, 10, 15 or 30 days, cures the disease completely.

In amoebic dysentery, if butter-milk is used along with regular medicines, then the amoebae from even that part of the large intestine, where usually the normal medicines fail to reach, are destroyed and the dysentery is cured. If this treatment is repeatedly given then the recurrence of dysentery with mucous is prevented.

Lassi

It is very commonly used in our country during the summer, curd is churned along with ice, sugar, essence of Kaldera bush (Kevda) or rose water and to this may be added sandal oil or some other scent or fruit

syrops. It is Vata, Pitta Shamak, digestive, light and Deepan in quality. Those with Kaphaj Prakriti should take it in small quantity and that too at day time during the summer. In the summer season it helps to avoid the effect of Loo (Sun stroke) and is, therefore, especially recommended.

Restrictions on Buttermilk Use

Use of buttermilk is not recommended during bronchitis, for those with a very weak constitution or suffering from some disease, in the Sharad Ritu, in Pittaj ailments like Rakta-Pitta, delusion, giddiness, Amla-Pitta etc. Similarly, those with Pittaj Prakriti should avoid use of butter-milk or should take it in small quantity and that too with discretion.

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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 always welcome to send their experiences which we would publish.

First Prize : Free Jeevaniya magazine for two years.

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- 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) _____

Herbs Available in Shishir

the whole plant is uprooted & washed and thereafter dried in the mild sun. All the five parts are separated and collected separately.

Language-wise Names :

Hindi - Dhamgajra, Pittapapra;
Sanskrit - Parpata; **Punjabi** - Shahtara; **Bangla** - Bansulpha;
Latin - *Fumaria indica*, **Family** - Fumariaceae

Collection time - February to April

Parts to be collected - Root, bole, seeds, leaves and fruits

Medicinal Properties - Blood purifier, antifebrile, appetiser, sweatmaking, purgative and used in acne, boils and wounds, liver disorders etc.

Urtajan

Urtajan is found all over India. In U.P. it grows in forests in abundance. The plant is annual and 2'-3' high. Leaves are 2'-5" long and hairy. Leaves generally emerge from internodes of the stem. Flowers are usually white and light blue coloured. Fruits are one cm long. The surface of fruits is smooth, lustrous and almond coloured. seeds are heart-shaped, flat and covered with thick hairs.

The proper collection time is during March and April. By then fruits turn ripe. Seeds are used in medicine. For this, entire plants are uprooted, dried and then

cudged to separate the seeds. The seeds are picked clean and collected in airtight containers of polythene packs.

Language-wise Names :

Hindi - Urtajan, **Marathi** - Utangan; **Gujarati** - Uteengan; **Bangla** - Shushani; **Latin** - Family - Acanthaceae

Collection time - March-April
Part Used - Seeds

Medicinal Properties - Aphrodisiac, mtive, Semen - astringent, Urative

Wild Fenugreek

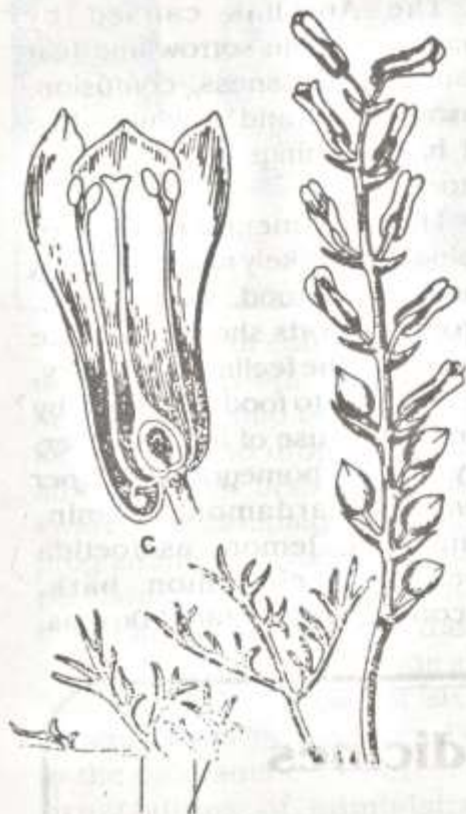
It grows wild in fields during the winter in large quantities all over India. The plant resembles fenugreek. Plants with white and yellow flowers grow in U.P. in excess. Pods are small, brownish yellow in colour, bending outwards, resembling cut nails, sickle-shaped.

The proper collection time is during March-April. Pods are gathered and stored for future use.

Language-wise Names :

Hindi - Van methi, Nakhoona; **Bangla** - Banpiting, **Latin** - *Malilotus alva*, **Family** - Leguminosae.

Medicinal Propeties - Tonic, diuretic, anti-inflammatory, healer of wounds, cures disorders of liver, spleen, intestine, uterus and paraplegia.



Pittapapra

It often grows wild in the fields of wheat and gram during the winter. Vaidyas of U.P. and Bihar call it Parpat. The plant is about one feet high, with multiple branches, some creeping on the ground and others erect. Leaves resemble carrot leaves. Flowers are white, rose red and violet in colour and 0.2 to 0.3 inch in length. Fruits are round and resemble.

The best time for its collection and preservation is during February to April. For collection

Arochak

Pt. K.G. Gore, Lucknow

The word Arochak is derived from the root 'Ruch' which means 'to shine', 'to look beautiful' and 'to be likable'. The prefix 'Nvul' makes it Rochak meaning likable. It is used with reference to taste. The word Arochak conveys the negative meaning of not likable.

In Ayurveda Arochak is a disease. In this condition, though one is hungry and willing to eat, is averse to food when it comes before one and if at all one puts it into the mouth one does not like it and becomes wretched. In short, not liking food is Arochak.

According to *Vrddha Bhoj*, there are three types of Arochak : (i) Aruchi, wherein one cannot tell the taste of the thing in the mouth (ii) Bhakta Dwesh wherein one is averse to the thought of food and one can not bear the sight of food and (3) Abhaktachchhanda - wherein the desire of food becomes extinct.

The diseases occur due to eating of humour-aggravating food or eating under sorrow, fear, anger, extreme greed or eating food which is hateful by looks or smell. In such conditions the angered Doshas enter the Annavaha Srota and heart and engender aversion to food.

There are five varieties of Arochak 1. Vataj 2. Pittaj, 3. Kaphaj 4. Sannipataj and 6. Manastapaj.

Vataj Arochak

Sour, sweet, hot and cold things hurt the teeth, the mouth goes astringent, pain in the heart

and body and bad taste in the mouth are the symptoms.

Pittaj Arochak

The mouth goes pungent (pepper), sour hot and tasteless, thirst, burning and unconsciousness occur.

Kaphaj Arochak

The taste goes sweet or salty, mouth is oily, heavy cold & stiff. Itching, secretion of phlegm, languidity of body, laziness, hoarseness of voice, difficulty in swallowing are the symptoms.

Sannipataj Arochak

The taste of mouth is absolutely bad and mixed symptoms of all the humours are produced.

Manasthapaj or Agantuk Arochak

The Arochak caused by sentiments like sorrow and fear causes restlessness, confusion, tastelessness and heaviness. Use of hateful things also produces Arochak.

The treatment consists of using things likely to create liking towards the food. In psychotic, Arochak efforts should be made to remove the feeling of self-pity.

Aversion to food gets cured by the judicious use of black pepper, dry ginger, pomegranate, *Piper longum*, cardamom, cumin, fenugreek, lemon, asafoetida rock salt, cinnamon bark, according to the vitated Doshas.

Jeevaniya Medicines

Many of our readers often write to us about non-availability of authentic raw drugs as well as prepared medicines. We, therefore, offer to provide you thoroughly examined crude drugs as well as medicines prepared by our physicians for your specific problems. We shall try to provide you these medicines at very nominal costs. You may write to us for your specific needs particularly in the context of traditional medicines described in our bimonthly magazine.

Plus Polio Campaign



First stage of countrywide plus polio campaign took place on 9th December. Like other places hundreds of polio booths were set up in Lucknow for giving polio drops to infants. Many persons affiliated with Jeevaniya society conducted an awareness campaign towards popularising this programme. They have educated poor and illiterate people about polio and effectiveness of polio drops in eradicating polio from the country. Jeevaniya society helped in registration and administration of polio drops to infants at six centres run under supervision of local doctors. People's participation in the programme was excellent and beyond the expectations of administration, resulting in shortage of vaccine at some centres. Jeevaniya Society shall encourage its participation in the second phase of programme on 20th January.

Second batch of Science Journalism course

The second batch of jeevaniya science journalism course started on 30-10-95. This course of ten week duration is sponsored by National Council of Science and Technology Communication (N.C.S.T.C.) of Department of Science & Technology Govt. of India and recognised by Lucknow University. Besides individual students candidates from science establishments like National Botanical Research Institute (N.B.R.I.), Central Institute of Medicinal and Aromatic Plants (CIMAP) and mass organisations like Nehru Yuva Kendra are participating in the course.

Curriculum of the course for this batch has been modified on the basis of experiences of the first batch and expert opinion expressed in the evaluation workshop of the first batch. Jeevaniya society intends to develop the curriculum so that it may be more useful for individual candidates. Society is developing a short term curriculum of one week for science communicators working in mass organisations. Society also wants to include various elements of audio-visual media so that candidates can be benefitted by growing popularity of audio-visual media.

Release of UNICEF Reports by Governor

Governor of Uttar Pradesh Shri Motilal Vora released two reports of UNICEF namely 'The State of World's Children-1996' and 'UNICEF in Uttar Pradesh' on 18th Dec., 1995 at Governor's House. On this occasion he assured that his government wants to create favourable atmosphere for children so that they can live and work peacefully without any exploitation.

He expressed his shock and dismay at the data given in the reports. Birth rate and child mortality rate, both are the highest in Uttar Pradesh in comparison to other states. Every fourth child born in U.P. dies before completing one year, that is one child dies 15 minutes and one woman dies per day. He told that despite 3 crores rupees spent per year on salary of teachers, one fourth of boys and girls do not attend the schools.

Governor expressed that these reports published by UNICEF will generate awareness which will result in reduction of child mortality rate and improve child health. He referred to plus polio programme in this respect.

UNICEF report also expresses reality of world's children. UNICEF while expressing condition of children in war torn third world countries declared a 10 point action programme. Banning production and sale of land mines, ban on recruitment of children below 18 years of age and giving education for peace to children are included in this programme.

State representative of UNICEF Ms. Sehba Hussain gave the welcome address. A film was shown about state of world's children. UNICEF project officer Dr. Suresh Joshi expressed vote of thanks. N.N. Mehrotra, secretary of Jeevaniya Society also participated in the function.

Jeevaniya : A Retrospective View

The first issue of Jeevaniya was Greeshma 89. Till now we have published 24 issues. We often receive letter from our readers asking now many issues of Jeevaniya have been published so far and what were their contents? So we are giving a retrospective view of Jeevaniya. This may satisfy our readers. The retrospective view of Jeevaniya published in Varsha Sharad 92 issue contains the names of articles and outness upto Greeshma 92 only and the current issue contains the details from Varsha-Sharad 92 to Hemant 95.

From Sharad 92 to Sharad Hemant 95

S.No.	Title	Author	Issue	S.No.	Title	Author	Issue
A Health and Disease							
1.	Panchakarm in Rainy Season	-	Var-Sha92	8.	AIDS - Dying for Life	Ms. Veena Tandon	*
2.	Importance of Fasting	-		9.	AIDS- An Ayurvedic Way	Vd. K. R. Thirumalpad	*
3.	Skin diseases in Rainy Season	Vd. R.M. Nanal	*	10.	Abdomen : Organs & their Functions	Vd. P.C. Jain & Vd.Pramod Malviya	*
4.	Nature Cure for Fever	Vd.T.K. Abdul Razack	*	11.	Vital Role of Umbilicus	Mr. R.K. Singh	*
5.	Dietary Control of Asthma	Vd. R.M. nanal	*	12.	Breast Milk and Diarrhoea	Vd. R.M. Nanal	*
6.	prevention and Cure of Jaundice	Vd. Nidhi Gupta	*	13.	Diarrhoea : Pathya & Apathya	Vd. R.M. Nanal	*
7.	Youth Consdence	Vd. Murlidhar Prabhudesai	*	14.	Simple Cures for Indigestion	Vd. R.M. Nanal	*



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16.	Digestive Disorders and Diet	Dr. T.K. Abdul Razack		46.	Management of Coryza	Vd. Balmupund Shukla	Sha93
17.	Mandagni : Ayurvedic Perspective	Vd. R.M. Nanal		47.	Prophylaxis of Diabetes	Dr. P. Yadayya	
18.	Udershoola (Stomachache)	Prof. Jagaram Yadav		48.	Herbal Cure for Minor Ailments	Vd. Mayaram Uniyal	
19.	Home Remedies for Constipation	Vd. N.S. Bhatt & Vd. T.K. Nan		49.	Structure & Significance of Bones	Vd. P.C. Jain	
20.	Abdominal Diseases & Homeopathy	Dr. P. Ali		50.	Asthivaha Srotas	Vd. V.M. Nanal	
21.	Abdominal Diseases	Vd. Ramakant Mani		51.	Diseases of Bones and Their Management	Vd. A.P. Achal	
22.	Prevention & Cure of Intestinal worms	Vd. S.N. Pande		52.	Diagnosis & Prevention of Bone Diseases	Vd. R.M. Namal	
23.	Healthful Eating	Vd. S.R. Dakhore	VarSha92	53.	Bone Diseases in Dults	Vd. V.B. Mhaiskar	
24.	Himalayan Herbal Environment	Dr. Vinod Upadhyaya		54.	Asthi Bhanjan Jvara	Vd. Braj Bihari Mishra	
25.	Effects of Juglens regia on Dental Plague	Dr. C.S. Sambhi et.al.		55.	Rickets	Dr. A.P. Achal	
26.	Tradition and Practices in Yoga	Dr. Srikrishna		56.	Osteomyelitis - Trifal Euperiene	Vd. S.R. Dakhore	
27.	Diet and Health	Vd. P.C. Jain	Gree. Var93	57.	Bone Diseases and Naturopathy	Dr. T.K. Abdul Razack	
28.	Diet in Skin Diseases	Vd. Ramesh Nanal		58.	Backache	Dr. D.P. Singh	
29.	Traditional Indian Treatments	Dr. K.S. Pillai		59.	Arthritis - Homeopathic Management	Dr. P. Ali	
30.	Causes, prevention and therapy of AIDS	Dr. C.S. Awasthi & Dr. S.S. Tripathi		60.	Arthritis	Dr. Ravindra Prakash	
31.	AIDS - Homeopathic Treatment	Dr. P. Ali		61.	Inflammation of Joints	Vd. Balmukund Shukla	
32.	Indian Plants in AIDS care	Dr. P. Ali		62.	Fluorosis	Dr. K.S. Pillai	
33.	Ayurvedic Claims on AIDS	Dr. P. Ali		63.	Simple Devices to Heal Fractures	Vd. R.M. Nanal	
34.	The Concept of Ojas	Vd. R.M. Nanal		64.	Osteoarthritis	Vd. R.M. Nanal	
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37.	Adoloscence and Celibacy	Vd. B.M. Shukla		67.	Health and Beauty	Dr. Umesh Pandey	
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39.	Acne - The Cheeky Pimples	Dr. P. Mishra		69.	Herbal Medicines for Beauty	Vd. V.P. Upadhyaya	
40.	Sexual Desire and its Control	Vd. R.M. Nanal		70.	Diet and Health of Women	Vd. P.C. Jain	
41.	Aphrodisiac Therapy in Unani	Dr. Shamshul Afaque		71.	Simple Beautifying Exercises	Vd. Umesh Pande	
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43.	Suicidal Tendencies in Adoloscents	Dr. A.P. Achal		73.	Reproductive System	Vd. P.C. Jain	
44.	Butter milk in Abdominal Diseases	Vd. R.M. Nanal		74.	Ultrasound in Pregnancy	Vd. P.C. Jain	
				75.	Menstruation or Menses	Dr. Savita Chovdhari	
				76.	Menstrual Cycle	Dr. Pramod Malviya	
				77.	Breastfeed to Enhance Beauty	Dr. A. Prakash	
				78.	General Diseases of Breast	Vd. Umesh pande	
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88.	Women's Declaration on Population Policies	-	*	123.	Vicharchika (Eczema)	Vd.S.k.Sathy	*
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191.	Disorders of Blood	Dr. V.N. Pande & Dr. K.D. Sharma					

226. Dietary Control of Asthma	Vd. R.M. Nanal	Sh.Hem95
227. Asthma and its Treatment	Dr. A.K. Acharya	
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229. The Crazy Coryza	Vd. A.P. Achal	
230. Nature Cure of Coryza	Vd. A.P. Achal	
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33. Pushakarmool	-	
34. The Asthma Plant	-	
35. Agustya	-	
36. Abhrak Bhasma	Vd. K.K. Pandey	
37. Some Uses of Gular Fig	Vd. R.K. Mani	
38. Medicinal uses of Crotalaria	Dr.R.C. Arya	

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10. Tomato	-	
11. Nutritious Banana	Dr. Sad Usmani	
12. Nutritious Bathua	Vd. S.A. Khan	H.Sha.Vas92
13. Tasty Orange	-	
14. Vitamin Rich Guava	-	
15. Protein Rich Soyabean	-	
16. Dietary Fibre	Dr. S.C.Verma	Gr.Var.Sha94
17. Spinach	Dr. Madan Lal	
18. White Pumpkin	-	
19. Healbug Caulifloner	Vd. S.A.Khan	Hem94
20. Cabbage	Dr.(Mrs) Sunanda Ranade	
21. Wholesome Gingelly	Pt. U.D. Dubey	
22. Sugercane Juice	Dr. P.K. Alok	Sh.Vas95
23. Haemogenic Spinach	Vd. S.D. Jain	Gr.Var.95
24. Jamboo	-	
25. Sweet Melon	-	
26. Multipurpase Coconut	-	Sh.Hem95
27. Banana	-	

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