

## PREFACE

God has gifted human beings with a strong and irresistible desire for a long life. When Dr. Albert Schweitzer realized this feeling in himself, he observed that this feeling exists in all living creatures. Dr. Albert Schweitzer then dedicated his life caring for whole creation of God. To live a long healthy life, scientists and doctors have been doing researches on various aspects of health. There are some preventive measures, which when adopted can save human beings from various diseases and if the persons suffer from some diseases they can adopt some methods to control the diseases and can be saved from complications of the diseases.

In this book entitled 'IN SEARCH OF HEALTH' *Part-I* Pingalwara Institution has taken some article from various Newspapers of famous and well qualified doctors and dieticians and got imprinted in the form of book so that we can help people to live healthy life.

Symptoms of various diseases have been written in this book and if one is conscious, one can go to doctor as early as possible and help the doctor in early diagnosis of the disease and thus being saved and can prevent complications of the diseases.

There are two categories of people. One category is too much conscious of their bodies. Some people spend a lot of money for baldness and wrinkles which is useless. Some take anti-cholesterol drugs in abundance but according to Dr. N.N. Wig if 10,000 patients take anti-cholesterol drugs, 9,755 patients would have no benefit. Second category of people do not bother for their disease and consult doctor very late and then enhance the disease and sometimes the disease proves to be fatal e.g. if there is growth in the body specially in the breast of ladies,

hesitatingly ladies do not consult the doctor in early stage. When it grows in size it turns out to be Cancer which spreads on other parts of the body and becomes incurable and ultimately fatal but if diagnosed early the patient can be cured fully.

Dr. N. N. Wig also draws the attention of commercialization of health. Specialists and super specialists have been replaced by general practitioners ever for minor ailments and there is race among the ignorant people for costly investigations even when those are not needed. Doctors are pressurized to use particular brand of medicines or surgical instruments. The solution is to stick to your family doctor for routine medical problems. A family doctor knows about your previous illness family history, your life style, and can advise you better. Some changes in the body are natural like aging menopause among women etc. Medical profession does not have complete solution to these problems, so we should not spend time unnecessarily on such problems. As the well-known 'SERENITY PRAYER' says: "GOD GIVE ME OPPORTUNITY TO ACCEPT THINGS I CAN NOT CHANGE, GIVE ME COURAGE TO CHANGE THINGS I CAN AND GIVE ME WISDOM TO KNOW THE DIFFERENCE."

In my opinion this book is very useful for understanding the right perspective of health care. I request all God fearing people to help me with donations so that Pingalwara should continue printing awareness literature for the people. There are some Articles in which data is not upto date. These articles are printed to create awareness among the readers about the health issues.

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**PART-1**  
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## **Dizziness or Vertigo: Go in for Exercise**

**Dr. Ravinder Chadha**

Dizziness and vertigo are among the common complaints encountered by physicians in their day-to-day practice. Dizziness or giddiness is the feeling of light-headedness, confusion and fainting associated with the loss of balance.

Vertigo is also a kind of dizziness where there is a feeling of whirling/spinning on motion. This is usually associated with the fear of falling. At times this could be alarming as it induces fear and the loss of confidence.

Dizziness occurs due to decreased blood flow to the brain, causing light-headedness. The poor circulation could be blamed as narrowing of arteries occurring in individuals suffering from high blood pressure, diabetes or high blood cholesterol levels.

Vertigo occurs due to a problem in the vestibular system in the ear. This leads to headache with nausea, vomiting and anxiety of falling with the movement of the head or the eyes. This can affect the sense of balance, thereby restricting day-to-day activities. Vertigo/dizziness could thus turn out to be one of the leading causes of injuries, especially hip fracture, among people over 65 years of age.

Conditions affecting the vestibular system and causing vertigo: *Meniere's disease*: There is usually swelling in the inner ear leading to an attack of spinning/whirling on motion and losing of balance. The vertigo could last from 20 minutes to around two hours or longer. There may be associated temporary hearing loss, feelings of fullness and ringing in the affected ear.

*Benign positional vertigo*: There is sudden feeling of spinning while the head is rotated/moved in bed.

Pressure builds up in the inner ear due to the blockage to the flow of liquid. The culprit could be a small stone of calcium carbonate crystals in the semi-circular canal of the inner ear. In this particular condition, the person experiences spinning with or without nausea on moving the head. Positional vertigo usually does not last more than a minute. This situation bothers the individual but is in no way dangerous.

Vertigo/dizziness is encountered where the head is pushed back to look up—such as when women get their hair shampooed at a beauty parlour.

Diagnosis is of critical importance as treatment is undertaken on individual basis.

Treatment is usually conservative.

*Repositioning maneuver* provides immediate relief, but this can only be performed by an expert as it entails movement of the head in different positions in order to effectively treat the patients suffering from positional vertigo instantly.

*Home Remedy*. Sit straight up in bed, then moving into the side lying position with the head angled upward. Return to a sitting position. Repeat it on the other side. This should be performed three times per day for two to three weeks.

The aim of the home exercise programme is to relax the muscles of the neck and shoulders, to improve the balance and train the eye-movements and ultimately to restore and enhance self-confidence. This comprises balance and coordination exercise and gait training.

Exercises should always be initiated slowly while sitting. As dizziness decreases, exercises should be done in a standing position. All exercises should be done three times a day.

### *Sitting Position*

- (i) Eye exercises—at first slow, then quickly.
- (ii) Up and down      (iii) Side to side
- (iv) Focus on finger at arm's length.

Head exercise—head movements in the forward/backward, sideways direction at first slowly, then quickly.

1. Shrugging of shoulders with rotation.
2. Rotate the head and shoulders slowly, then quickly.
3. Rotate the head, shoulders and trunk with eyes opened, then closed.

### *Walking*

- \* Walk seven steps, stop, abruptly, wait for 10 seconds, and repeat for a distance of 20 feet.
- \* Walk seven steps, then pivot and walk back.
- \* Walk and turn head from right to left for about 25 feet. To avoid dizziness, the following precautions may be taken in the daily activities.
- \* Avoid sleeping on the affected side.
- \* In the morning, sit on the edge of the bed for a minute and then get up slowly.
- \* Avoid extending the head, especially at the beauty parlour, dentist clinic, etc.

Treatment in all the cases of vertigo/dizziness, irrespective of the cause, should be initiated at the earliest. If not done so an individual can develop a fear psychosis as he/she is unable to pursue daily chores, loses self-confidence and may also suffer from depression. Exercises are simple and can be performed at home but under proper guidance to ensure quick recovery.

(The Tribune, 24 May, 2006)

## **The Medical Benefits of Togetherness**

Loneliness in people over 50 greatly increases their risk of high blood pressure, researchers say, in the latest study to underscore the health advantages of friends and family.

The loneliest people studied had blood pressure readings as much as 30 points higher than those who were not lonely, suggesting that loneliness can be as bad for the heart as being over-weight or inactive, the researchers said.

“The magnitude of this association is quite stunning,” said University of Chicago scientist Louise Hawkley, the study’s lead author.

With earlier research suggesting that more than nine million people over 50 in the United States alone often feel isolated or left out, the study could have substantial public health implications if it can be shown that reducing loneliness can lower people’s blood pressure, said Richard Suzman, director of a behavioural research programme at the National Institute on Aging, which helped fund the study.

Ms. Hawkley said the findings hint that one strategy for treating high blood pressure might be to get more involved, “make yourself useful.”

The study of 229 Chicago-area men and women ages 50 to 68 appears in the March issue of the journal *Psychology and Aging*. The results build on earlier research by co-author John Cacioppo, who found that in younger adults loneliness was linked with blood vessel problems that could lead to high blood pressure. Last year, Harvard research linked loneliness in men with increased

blood levels of inflammatory markers associated with heart disease. And a study at Duke University found an increased risk of death in socially isolated patients with heart disease.

The research “says something about the importance of social connection in our everyday lives,” said Prof. Cacioppo, a Professor of Psychology who works with Ms Hawkley at the university’s cognitive and social neuroscience centre. “Part of living a healthy life is paying attention to friends and family.”

#### *Replenishment needed*

As people grow old, friends and family move away, retire, fall ill and die, “so there has to be a replenishment of social relationships,” Mr. Suman said.

Study participants were asked on a 20-item questionnaire to rate the degree to which they lacked companionship. Slightly over half the study participants were considered at least moderately lonely and had higher blood pressure than those who felt less lonely. The strongest link was in the 15 per cent of participants who were highly lonely.

Their systolic blood pressure—the upper number in a blood pressure reading—was 10 to 30 points higher than in non-lonely people.

Loneliness was strongly linked to high blood pressure even when conventional risk factors such as weight, smoking and alcohol consumption were also considered.

(The Hindu, 29 March, 2006)

## **Turn Your Sickness into an Asset**

**Dr. Louis Bisch**

Only yesterday you were marching in health and vigour; sickness was a far-off shadow. Then suddenly illness unhinged your knees, brought you limply to bed. And now you are a horizontal citizen of the sickroom, an unwilling initiate in the fellowship of pain.

Your reaction is to rail fretfully against fate, to resent bitterly such untimely interference with life’s routine. Yet your illness can confer substantial benefits—and not just in the realm of job-like piety, either. An enforced holiday in bed blamelessly releases us from a too-busy world, sharpens our mental and spiritual perceptions, and permits a clearer perspective on our lives. Any serious illness should be regarded as an opportunity to gather dividends and generate energies that mere health cannot possibly bestow.

The first-time sufferer rarely learns to make the most of illness, regarding it only as a visitation of bad luck. Yet thousands actually have found themselves for the first time during sickness. The “beloved physician,” Dr. Edward Livingstone Trudeau, was sent, as a young doctor, to the mountains where he expected to die of tuberculosis. But he did not die. As he laid in bed he had a vision of a great hospital where he could rebuild other sufferers. Flat on his back, he examined patients not as ill as himself. He raised money and laboured until his dream became the great sanatorium at Saranac, in New York State, that has helped thousands of tuberculosis patients. Trudeau’s affliction turned an unknown doctor in to a physician of worldwide fame.

Playwright Eugene O’ Neill was an utter drifter

with no plan of life until he was 25. A serious breakdown gave him the requisite leisure, he says, ‘to evaluate the impressions of many years in which experiences had crowded one upon the other, with never a second’s reflection.’ It was in hospital that he first began to write his plays.

Like any major experience, illness actually changes us. How? Well, for one thing, we are temporarily relieved from the terrible pressure of meeting the world head-on.

Responsibility melts away like the snow; we no longer have to catch trains, tend babies, or wind the clock. We enter a realm of introspection and self-analysis. We think soberly, perhaps for the first time, about our past and future. Former values are seen to be fallacious; habitual courses of action appear weak, foolish or stubborn. Illness, it seems, gives us that rarest thing in the world—a second chance, not only at health but at life itself!

Illness knocks a lot of nonsense out of us; it induces humility, cuts us down to our own size. It enables us to throw a searchlight upon our inner selves and to discover how often we have rationalized our failures and weaknesses, dodged vital issues and run skillfully away.

Mistakes made in our jobs, marriage and social contacts stand out clearly. Especially when we are a bit scared is the salutary effect of sickness particularly marked; pneumonia and typhoid have reformed drunkards, thieves, liars and wife beaters. If a stiff bout of illness brings us near to death’s door—perhaps so much the better. For only when the gate straitens and the way grows narrow, do some people discover their soul, their God, or their life work.

Florence Nightingale too ill to move from her bed,

reorganized the hospitals of England. Semi-paralyzed, and under the constant menace of apoplexy, Pasteur was tireless in his attack on disease. Innumerable illustrations might be cited. And the testimony from humbler sources is just as striking. A young man in hospital for a fortnight discovered that he had always wanted to be a research worker in chemistry. Till then he had been “too busy” as a drug salesman. He became splendidly successful at his new job.

While recuperating from scarlet fever, a woman in her 40’s the vanquished terrors she had felt about approaching middle age. “I am not going to return to my former state of feeling superfluous,” she resolved. “My children are married and can take care of themselves. I’m going to start a millinery shop and make them like it.” She did, and needless to say, they do!

In talking to patients, I have found that many who have sojourned in “the pleasant land of counterpane” say that for the first time they learned the true meaning of friendship, often undecipherable in the complex pattern of this modern world’ They say also that they discovered secret depths of their own life-stream.

“After a few days in bed,” wrote one of them, “time becomes an unimagined luxury. Time to think, time to enjoy, time to create, time at last to express the best and deepest part of human nature. Illness is one of the great privileges of life; it whispers that man’s destiny is bound up with transcendental powers. Illness pares and lops off the outer parts of life and leaves one with the essence of it.”

Even pain confers spiritual insight, a beauty of outlook, a philosophy of life, an understanding and

forgiveness of humanity—in short, a quality of peace and serenity. Suffering is a cleansing fire that chars away much of the meanness triviality and restlessness of so-called “health”. Milton declared, “Who best can suffer, best can do.” The proof is his ‘Paradise Lost’, written after he was stricken blind.

*In illness you discover that your imagination is more active than it ever has been; unshackled by petty details of existence, you day-dream, build castles in the air, make plans.*

As your physical strength returns, your fantasies are not dulled; rather they become more practical, and you definitely decide upon the things you will put into action when you recover. Your concentration improves tremendously. You are astonished to find how easily you can think a difficult problem through to its solution. Why? Because your instincts of self-preservation are speeded up, and all non-essentials are eliminated.

It is interesting too that your reactions to what you see and hear are more acute. A robin at the window, a fleeting expression on a friend’s face are delicately savoured as memorable experiences.

Reproduced from the journal Reader’s Digest,  
January 1963.

## **Don’t Blow Your Top!**

**A. S. Negi**

Anger is a destructive emotion. It affects us both physically and mentally. Yet most of us keep our rage bottled up inside us, instead of discharging it in a healthy manner.

Holding in your anger can have terrible effects on your body. And some poor souls don’t know they are doing it. Anger can affect us adversely, both physically and mentally. If we think of it as a form of energy which if repressed must come out somewhere, we must recognize that it can harm almost any part of our body or influence our emotions and eventually our minds, if a sufficient amount is accumulated.

The energy for anger comes from one of two nervous systems which regulate the functioning of the human body. The parasympathetic nervous system maintains everyday activities such as digestion. The sympathetic nervous system is the emergency system which mobilizes body forces needed to meet a particular crisis.

Scientists say that the sympathetic system governs the ‘fight or flight’ response to the body which enables us to either stand up to the stress and fight it out, or to retreat. Thus, if we become angry, a number of changes take place inside us. More blood is circulated by increasing the blood pressure and making the heart beat faster. More adrenalin is secreted to dilate the pupils of the eye and make us see better and to help mobilize other such needed activities.

If there is no discharge of this build-up, as is usually the case, we remain in a chronic state of preparedness:



with the heart beating rapidly, blood pressure high and chemical changes in the blood. Eventually, this condition can harm us physically.

People who never let off any steam when their blood boils may be prone to psychosomatic illnesses. They are not imaginary maladies like the diseases of the hypochondriac, but real medical problems that usually have an emotional origin instead of a physical one. Take, for instance, migraine. Its causes are not completely understood but emotional factors are apparently involved. Feelings of anxiety, nervous tension, anger or repressed rage are associated with migraine attacks in many people.

Often these feelings may be so well concealed that the patients themselves are not aware of them. Doctors treating migraine patients have observed that an attack may be aborted (i.e. suddenly halted) when the individual gives vent to underlying hostility.

Repressed anger is said to be capable of causing gastrointestinal, respiratory, circulatory and skin disorders. Some scientists even believe that the emotion may be linked to the development and repression of cancer.

In the 1950s, two researchers looked at the life history patterns of about 400 cancer patients in USA. They found that the patients had some very interesting similarities. Many of them seemed unable to express anger or hostility in defence of themselves. Yet they could get angry in the defence of others or in the defence of a cause. But when it came to self-defence, they did not follow through.

Suppressed hostility was another significant factor appearing in other patients. They seemed to lack the discharge mechanism need to allow anger to surface. They

kept their anger bottled up inside.

It is just not enough to express anger. There has to be a genuine resolution of conflict or else tension continues to operate. Some people may have a history of discharging their anger, put inappropriately. They may suppress angry feelings for a long time, then suddenly explode over something, whether it warrants the rage or not.

A low-grade depression may occur in people who do not face up to their anger, and turn it inward instead. This happens more often in the case of women than men. Some women may feel powerless at times, but instead of getting mad, they get depressed. As a result, they may constantly feel tired or have a chronic “headache”. Therefore, people must retain themselves to accept anger as a normal emotion and deal with it accordingly.

Anger is a normal emotion that is a result of our genetics, upbringing and cultural patterns. The biggest problem we face is learning how to discharge it in a manner that is both acceptable in society and healthy for the self. Take the case of children. The parents must have an open attitude towards their children’s anger. They are emotional beings and we must allow them to express feelings of all kinds. If you crush their anger, you also crush their imagination and creativity. Of course, children also must have limits set on their behaviour. If their anger gets out of control, interrupt in a firm and direct way, but don’t crush it completely.

As children grow to adulthood, they can learn to direct their anger or frustration through appropriate channels. Activities involving physical motion are good for discharging angry feelings.

Verbal aggression is one of five safety valves

available to us for the release of anger. People may laugh hysterically, cry, physically work off their anger, resort to physical aggression or use verbal aggression. Crying is probably the best safety valve and the one most socially acceptable in most cultures. People who choose words to drain anger are more civilized than those who resort to knives, bullets or fists.

To conclude, there exists a rare breed of people who really do not need to release their anger. Their mental or spiritual conditions allow them to shrug their shoulders instead of blowing their tops. We should try to be like them, but it is difficult.

It fact, we all should occasionally step back and take a look at ourselves. We are supposed to get mad at some things in life. That is perfectly normal. But some people explode into uncontrollable anger which can be devastating. If you become angry too often, it is time to evaluate yourself and ask why. Someone who is too frequently angry may be insecure as an individual. If his security is threatened, hostility emerges. It may be time for that individual to re-evaluate his whole life and situation, even if it means requiring professional help.

Perhaps society has placed too much emphasis on getting angry and not enough on how to recover from it. We have to learn to forgive, reconcile, make up and have compassion.

(The Indian Express, 10 April, 1991)

## Osteoporosis VS Spondylitis

Dr. B.S. Aggarwal

The most common diseases Osteoporosis & Spondylitis bothering almost all human beings mainly because they are based on diet patterns. They oppose each other in character and present symptoms in relation to the intake of proteins and calcium. One is atrophic in nature and other is hypertrophic. *If proteins and calcium are taken in large quantities it leads to spondylitis and the deficiency of these two substances leads to osteoporosis. They can co-exist later due to senile osteoporosis.*

*“Osteo” is a reference to the bone and “porosis” means when it becomes porous and weak. It means osteoporosis is a condition where calcium loss from the bone mass leaves the bones porous, weak and prone to injury or fracture. One feels tired and exhausted after some work. It is a metabolic bone disease. It affects the spine and hip more than the other bones of the body.*

*Spondylitis points to the spinal joints, and arthritis is for the joints of upper and lower limbs. In these conditions the joint cartilage shows degeneration due to any other disease, injury, overweight or bad posture and also there is extra bone deposition around the joints and along the ligaments due to protein and calcium-rich diet. The bony projections are known as osteophytes.*

It has been reported in medical journals that osteoporosis is noticed after 35 years of age and commonly seen in women after menopause. The urinary loss of calcium is more marked. Disturbance in the hormonal pattern is one of the reasons given, but bad digestion and diet remains the possible cause to produce this silent debilitating disease. Calcium absorption from the intestines is affected due to bad digestion or by the effect of steroids and other hormones on intestinal function.

On the other hand, parathyroid glands, which are lying along with the thyroid gland, are the regulators of

calcium metabolism in our body and deficiency of this hormone can cause severe drop in the calcium level to produce “tetany” which is a manifestation of neuromuscular excitability. Aging also contributes to the loss of calcium in the bones called senile osteoporosis. Whenever the body circulation needs calcium the bones are the resource and if this process of bone resorption continues the bones become osteoporotic.

A high calorific diet rich in proteins and calcium without regular exercise can lead to the Arthritis of joint and Spondylitis of the spine. It starts with pain and stiffness in the body and swelling around the affected joints. The manifestation begins after 35 years of age while overweight remains a contributory factor.

So, osteoporosis is the result of a low calcium and low protein diet while spondylitis of the spine or osteoarthritis of the knees and other joints happens due to a diet high on calories and rich in calcium and proteins. The people who like to take a lot of meat and milk products every day and live a lavish style of eating do suffer from arthritis or spondylitis after 40 years of age. On the other hand, people with poor digestion and low intake of milk products who live mostly on vegetarian can suffer from osteoporosis.

Men equally suffer from osteoporosis. At a recent osteoporosis detection camp males showed an equal number of osteoporosis as compared to females. Osteoporosis was detected among people between 32 and 68 years of age. The possible reason can be irregular eating habits, bad digestion and poor intake of calcium and protein products. Healthy-looking overweight persons, fond of eating junk foods with no liking for nutritional food, are also found to suffer from osteoporosis. A bad digestive system has also been observed in patients suffering from Rheumatoid arthritis (atrophic) in which osteoporosis co-exist.

The treatment for osteoporosis consists of improving the digestive system along with food rich in

calcium and proteins. Some patients also require anabolic steroids like “Nandrolone Decanoate” to counter the catabolic effects of Glucocorticoids or Cortico-steroids. The anabolic steroids stimulate the digestive process, facilitate the absorption of calcium and proteins from the intestines and help in building the bone mass. Allendronates (osteophos) are found to be useful in giving quick relief to symptoms of osteoporosis and help in restoring the bone mass.

To make up for the calcium loss, select calcium containing natural foods and vegetables. Milk and dairy products, fish and eggs, green leafy vegetables like spinach and cabbage, beans, peas, all types of nuts, dates and figs are suitable. Half ripe papaya, chikoo and mango containing phosphorous can help retain calcium in the body.

#### *Steps to remember*

- \* Keeping a good digestive system is essential to prevent osteoporosis.
- \* The long-term strategy should be to have a regular diet of natural foods rich in calcium and proteins rather than putting much dependence on medicinal resources like calcium tablets.
- \* Calcium is best absorbed in the body in the form of milk.
- \* Regular exercise like morning walk provides more oxygen to muscles, which will also improve the digestive system and prevent the formation of arthritis and spondylitis.
- \* Three-hourly eating schedules give the stomach enough time to empty for the next meal.
- \* Small meals with boiled foods are better than overloading the stomach with fat-rich curries, dosai, noodles, fried chickens, cheesy pizzas and ice-creams.

(The Tribune, 23 November, 2005)

## Is Anxiety Making Your Bones Weak?

Nona Walia

Many of us are chronic worriers, fretting over small things. This constant anxiety can weaken our bones and get vitamin D levels down, according to a new study. It has been established earlier that anxiety, fatigue and loneliness—all synonymous with modern living—can lower bone mineral density. But for the first time a study has discovered that highly anxious women are at higher risk of low bone density, breaks and fractures. A team of Italian researchers has found out that women with anxiety have three per cent greater risk of hip fractures and a four per cent higher risk of other fractures than men. Highly anxious women are at higher risk of low bone density, breaks and fractures.

Says Dr. Sagar Mandada, psychiatrist, *“Excess worry is perceived as distress by our body. Increased long-term stress causes unbalanced release of cortisol and has been associated with many changes in the body, especially bone and joint related problems. Stress impacts Vitamin D levels as well. One should increase the intake of Omega 3 fatty acids as it improves brain function and anxiety.”*

### *Deal With It*

Another Dr. Antonio Catalano, who led the study, believes that anxious women are more likely to engage in poor health behaviour. The negative effects of stress hormone on bone status increase the fracture risk. The study recommends taking in vitamin D and eating oily fish, egg yolks and fortified cereals. Adds Dr. Sagar, “The best way to let go of anxiety is accept the certainty of uncertainty. There will be things and outcome beyond your control. Don’t worry and think the worst case scenario.”

(The Times of India, 03 June, 2018)

## Storm In A Cup

Toufiq Rashid

Out of limits, tea and coffee are more dangerous than refreshing. Do you walk about in a fog till that first shot of caffeine? Are there days when you’d kill for a cuppa? If the urge to hold a cup of something strikes more than twice a day then you could be addicted.

### *Define addiction*

Addiction is a subconscious craving for something. *“The craving is so strong that it overpowers the feeling that it may harm you,”* says dietician Dr. Shikha Sharma.

The addictive substance secretes endorphins—pleasure giving substances. *“It is the secretion of hormones and their effect on the nervous system that causes addiction,”* says Dr. Sharma.

### *What type of person is prone to addiction?*

Creative and ambitious people are more prone to addiction. According to Ayurveda, it also depends on the metabolism, whether it’s Vatt or Pitta.

*Vatt:* They are restless, prone to sleeplessness, and have sensitive digestive systems. These people are irritable and marked by dry skin and hair.

*Pitta:* Highly organized, very ambitious, short-tempered and prone to stress. Their digestive system is good but they're prone to acne. “They experience many highs and lows. It leads to addictive cycles,” says Dr. Sharma.

### *Coffee addiction*

Coffee stimulates the central nervous system, thus making a person feel unnaturally alert. The induced state

of alertness tends to subdue your body's natural instincts and prevents it from relaxing. This causes undue stress and leads to various physical and mental ailments. The combination of sugar and coffee is also dangerous for blood sugar levels.

#### *Side effects*

Irritability, fatigue, insomnia and acidity.

#### *Tea*

Considered an antioxidant when taken without milk and sugar, brewed tea is as much a villain as coffee. It contains caffeine and xanthine—both responsible for addiction, and a related chemical called theobromine, which has similar (slightly milder) effects on the body. The amount of caffeine in a cup of tea varies depending on the variety of tea and brewing time. In large doses it can cause anxiety and insomnia. As with any stimulant, the period of enhanced alertness and heightened mood is generally followed by a period of depression and dip in ability.

Addiction to tea is less common than addiction to coffee because tea has less caffeine than the latter. But it is addictive. “*The most reliable sign of tea addiction is a recurring headache that goes away by drinking tea,*” said Dr. Sharma.

#### *Side effects*

Mood swings, bloating, gas, acidity and disrupted sleep.

#### *The limits*

Three cups of tea and two cups of coffee is the permissible limit. Be careful if you cross five cups. You cross the line with eight cups a day.

#### *Weaning of the habit*

First halve intake. Avoid the other half by replacing it with a cup of organic green tea or herbal tea. “If you're used to four cups of coffee a day, start drinking two cups of coffee/tea and two cups of mild green tea.” Says Dr. Sharma. Gradually replace the mild tea with soup or plain hot water mixed with honey and lime. Replace the remaining two cups of coffee with mild tea and follow the same pattern.

#### *The alternatives*

- \* 60 varieties of herbal tea
- \* Malt drinks
- \* Flavoured milk
- \* Honey and lime in water
- \* Soups

#### *Addict 101*

#### *You're one if you*

- \* Have more than two daily cups of coffee/tea
- \* Feel fatigued during the day
- \* Have mood swings
- \* Suffer frequent headaches
- \* Suffer from constipation
- \* Depend on coffee/tea to clear your bowels
- \* Suffer acidity/heartburn
- \* Have a general pain in the neck, shoulders or back region and discomfort in the legs, hands and stomach
- \* Have a burning sensation, fatigue and heaviness in the eyes.

(The Indian Express, 11 September, 2005)

## Poison in That Cup of Coffee

Alfred B. Ossen M. D. & M. Eusworth Olsen, M.A

If you could extract a single drop of tasteless, colourless liquid contained in that cup of steaming beverage at your elbow and inject it into the family cat, the poor creature would be dead within five minutes. Caffeine, the essential ingredient of coffee (and tea) is a deadly poison. Injected into your muscles, it would paralyse them.

*“An infinitesimal amount applied directly to your brain would send you into violent convulsions from which you would most probably die”*

“Of course, when you swallow the caffeine in coffee none of these disasters happens—mainly because most of it goes straight to the kidneys which render it (almost) harmless”.

Even so, research at Massachusetts Institute of Technology shows that some startling things happen inside after even a couple of cups of coffee.

Within ten minutes, the temperature of your stomach jumps about ten to fifteen degrees fahrenheit and there is an increase of up to 400 per cent in its secretion of hydrochloric acid.

Your salivary glands double their output, your heart beats fifteen percent faster, and your lungs work eleven per cent harder.

Blood vessels get narrower in your brain and wider in and around your heart Your metabolism’s rate goes up twenty-four per cent, and your kidneys begin to work thirty per cent harder. Scientists at a New York hospital working with Dr. Phillip Hawk, arranged for 250 non-coffee drinkers to drink from two to six cups a day for six

months. Just under half, complained of painful ‘burnings in the stomach’. As soon as they stopped coffee drinking, the pains disappeared.

—The Watford Evening Echo, England.

From the Monthly Journal Herald of Health, published from Poona.

In composition coffee strongly resembles tea, containing a trifle more than one per cent of caffeine, eight to nine per cent of caffein acids, four to six per cent alcoholic extracts, and some other unimportant ingredients. Its effect on the digestion seems to be less decisive than that of tea, there being no tannic acid; but the nervous system is affected by strong coffee in much the same way as by tea.

### *Sugar in Tea*

Those who drink tea should see to it that they keep their habit within reasonable limits they should remember that it is not only the caffeine content of tea that is harmful for human health, even the sugar content of it becomes harmful if it is taken in excess of two table spoonfuls in 24 hours, a limit prescribed by medical men for human consumption.

—From the book the *School of Health*

## Watch What You Eat

M. A. Eliakottil

Pulses are full of proteins. So is the dhatura variety which is grown abundantly in the semi-arid regions of Madhya Pradesh and consumed as staple diet by its poor inhabitants. But despite all its protein, dhatura turned out to be poison when most of the population was struck with paralysis after using it continuously over a considerable period.

Unfortunately it is not an isolated example. Curiously, most human edibles contain dangerously high toxic levels. Worse still, there is almost nothing legal or otherwise to prevent their sale and consumption. Laboratory tests have proved that many edibles of daily usage contain poison in one form or the other.

For example, a good number of fruits and vegetables like apples, lemons, cucumbers, berries etc. have their counterparts growing in the wild. When brought into the market, these are difficult to distinguish from the consumable variety by an inexperienced customer. While they are incredibly cheap as costs are confined only to picking and transportation, the slow poison contained in them shows up only after prolonged use or consumption. The users of such varieties are usually bulk consumers like hotels, restaurants, and catering contractors who have their eyes on profits only.

Sale of illicit liquor and adulteration of food stuffs are taken care of by relevant statutory acts and standards prescribed by the Indian Standards Institution (ISI). But there is nothing to warn against or prevent the sale and consumption of poisonous natural products. For example, some mushrooms, shrimps and eels prove positively fatal unless properly processed before consumption.

Similarly, piped water available in many urban

centres is not potable as it contains toxic chemicals like chlorine, mercury and lead. These contaminate the water through the industrial effluents discharged into the river, purifiers added for coagulation and by metallic corrosion while passing through pipes. More alarming is the sewage water absorbed into fresh water due to pipe leakage.

The World Health Organization, (WHO), has classified the particularly injurious varieties of various cereals, pulses and fruits and vegetables found around the world. But it is hunger more than ignorance that compels people to eat such foods and to become victims of dreaded diseases. In many parts of Asia and Africa, including India, millions of tribals and nomads subsist on inedible roots, leaves and tree barks.

Even in the case of processed food products, ISI standards have not been comprehensive enough to take care of all the aspects. Thus while there are regulations regarding additives, preservatives and colouring agents added to jams, pickles and marmalades, there are no rules to prevent their sales after a period of time when these agents disintegrate into harmful compounds and generate toxic substances. This is because food product manufacturers, unlike drug firms, are not obliged to inscribe an expiry date on the food stuff.

With the passage of time, canned foods become susceptible to fungal and viral action. It has been found that cola products and other beverages sold in the market lose not only their original flavor, but turn repugnant after a lapse of time. Food drinks and supplementary diets which normally consist of milk, malt, cocoa and sugar are durable only for a certain period of time, tending to turn stale with a loss of natural nutrients later.

Due to several constraints, legal action against unscrupulous manufactures is not possible. In many cases standards governing production, storage and marketing

are yet to be evolved. In some other cases manufacturers circumvent the provisions of law by labelling the products with names not listed in the concerned acts. For example recently the Delhi Administration had to go to the Delhi High Court to establish that ice-cream is food, to book a recalcitrant company. In another incident, the Kerala High Court had to declare that pepper is a spice and not a condiment before the State Government could prosecute a firm for unfair trade practices banned under the official act.

It is reported that in States like Bihar and Andhra Pradesh, ayurvedic preparations with 70 per cent, or more, alcohol are sold under the guise of health tonics. Authorities have no power to ban such unabashed sales of alcohol under such guises.

Besides food, there are consumer products that injure man in more ways than one. Scientists have often warned that prolonged use of toothpastes containing fluoride compounds is harmful to the brain. So are the innumerable sulpha drugs which are released on the market after inadequate investigation about their harmful effects on patients.

However, there is another school of thought that tends to discount such fears and ignore the warnings and maintains that such apprehensions are ill-founded. It is pointed out that scientists have come out with conclusive findings which prove that even garlic, cardamom and lemon contain some chemicals that are not altogether healthy for man. The supari (Areca) is alternatively claimed to cause and cure cancer among paan chewers. Such findings are theoretical and should not interfere much with our daily consumption patterns.

And if anybody decide to scrupulously observe findings of all such investigations, very soon he will discover that there is nothing to eat, drink or wear that is absolutely harmless, express point out.

## **Eat Right For A Strong Back**

**Luke Coutinho**

Back problems like pains, stiffness, lumbar disc problems, slipped discs can be very debilitating and age has nothing got to do with it. With our modern lifestyles, compromised guts and nutritional deficiencies, one can see the onset of back issues even in children, teens and young adults. Save your back and tank up on the following:

*Calcium & Vitamin D:-*Calcium is one of the most prominent bone minerals, and maintaining its levels is critical for a healthy back. However, calcium doesn't work alone. It works in synergy with many minerals and vitamins. One such is Vitamin D3.

*Calcium-rich foods include nuts, seeds (sesame seeds being the best), leafy greens, whole grains like millets, broccoli, oranges, kale bok choy, many legumes and some types of fish such as salmon.*

*As for Vitamin D, sunlight is the most abundant source of Vitamin D.* Unfortunately, there aren't many dietary sources, but traces of it can be found in organic egg yolk, salmon, fish oil and mushrooms. However, one may need Vitamin D supplementation if they are truly deficient.

It's also important to keep our body alkaline in order to maintain a strong back. How? Excess acidity can trigger leaching of calcium from bones to maintain blood calcium levels, which could lead to weak bones overtime. Lemon water, fennel seed tea, barley grass powder, raw potato juice, fresh kokum juice, peppermint tea works well to combat acidity.

*Vitamin K2:-* Vitamin K, an ignored vitamin, is needed for the bones to absorb calcium and for healthy bone metabolism. The combination of vitamin K2 and calcium works to help bones in the spine and throughout the body



stay strong and healthy. The actual form of Vitamin K that we get from dietary sources is K1, which is then converted to K2 (absorbable form) via gut bacteria. So, in a way, probiotics also play a huge role in maintaining a strong back. *Vitamin K is found in dairy products and green leafy vegetables such as spinach, kale, and broccoli.*

In addition to that, Vitamin B12 is necessary for healthy bone marrow, and for the body and spine to grow strong and healthy.

*Magnesium:* - Magnesium is a key mineral in the structure of bones and is required for more than 300 biochemical reactions in the body. If blood magnesium levels drop, magnesium will be pulled from the bones. Magnesium helps in maintaining bone density, assisting calcium absorption and preventing back problems. This nutrient also helps in relaxing and contracting muscles, making it necessary for strengthening the muscles that support the spine. Dietary sources of magnesium include: nuts, seeds, cacao, green leafy vegetables, dates, bananas and avocados.

*Sulphur Rich:-* Sulphur helps to strengthen and support strong connective tissue in the body including tendons, ligaments, cartilage and collagen. Top sources of sulphur include cruciferous veggies like broccoli, cabbage cauliflower and garlic, onions.

Having said that, nutrition alone doesn't work. An approach towards building a strong back must be coupled with adequate exercise, rest and recovery and a positive attitude.

*Pineapple/Bromelain:-* Pineapple, or its extract bromelain, is a great anti-inflammatory for back pains related to arthritis. It is also rich in Vitamin C, which is not only a powerful antioxidant but also necessary for collagen formation, the substance found in bones, muscles, skin and tendons.

(Times of India, 2 December, 2018)

## **Foods Considered Hot But Are Not**

**Supriya Sharma**

*Spices:* Spices need not always mean hot and fiery! Changing weather calls for a liberal use of fennel, cumin, coriander seeds, cardamom and turmeric in food. Fennel seeds (saunf) is known for stimulating intestinal juices, promoting proper digestion, and reducing acid reflux. Coriander seeds are traditionally soaked overnight in cold/room temperature water and the water is taken to treat excess Pitta (heat) in the body.

*Mangoes:* Mangoes grow and ripen during the summer because the antioxidants and various other micro-nutrients in it help the body to cope with the heat the season brings along. Hence, they cannot be heat-producing by themselves. Just soak them in water for a minimum of half-an-hour before consumption or mix with milk and consume. *Similarly, raw mango, if combined with fennel or coriander, is less heat-producing for the body.*

*Chyawanprash:* It is generally considered heat-producing, but the base of Chyawanprash is amla, which is a cooling agent. Chyawanprash also has herbs like sandalwood, agarwood which lend it cooling properties. Additionally, it is combined with cold or warm desi cow's milk to make most of its beneficial properties.

*Lychee and Jackfruit:* Fruits and veggies of a particular season help one to cope with the changes that the season brings along. *To make sure you stay hydrated in the hot summer, include summer fruits like lychee and power veggies like jackfruits in your diet.* Contrary to popular opinion, they are both cooling for the body and packed with nutrients.

*Fermented Foods:* There is a common perception that fermented foods such as yogurts, pickles, breads, fermented cheese and soy-products are best avoided in summer as sour foods increase heat in the body and can lead to indigestion and heartburn. Experts, however, beg to differ. Certain communities in the eastern part of our country (Bengal, Assam and Orissa) have traditionally been cooling cooked rice in water and leaving it overnight. This fermented rice (called pakhala bhat), consumed the next morning is known to prevent heat strokes and stomach ulcers. *Fermented foods are excellent for summer because they restore the proper balance of gut micro-biota, ease digestion, and boost immunity.*

*Ghee:* In an attempt to avoid greasy and ‘rich’ food, especially in the hot summer months, many of us start avoiding ghee. *On the contrary, ghee is cooling in nature, anti-inflammatory and prevents heart burn and acidity.*

*Dates:* As winter gets over we stop eating dates thinking they are hot for the body. But date can be had all through the year. *Fresh dates are cooling, sweet and demulcent.*

(The Times of India, 06 May, 2018)

## Healthy Haldi

Pooja Makhija

Possibly the most beneficial health supplement in existence, haldi or turmeric, is packed with a host of goodness. *Haldi can boost immunity and brain power.* But what gives it its magic power?

Curcumin. It is the magic active ingredient that is the fount of all its goodness, whether ingested or used topically. In addition, *turmeric is a good source of iron, manganese, vitamin B6, dietary fibre, potassium and copper.* For ease of recall, I’ve divided the benefits into anti and pro:

*Antioxidant and Anti-Inflammatory:* It is the curcumin in turmeric that gives it its antioxidant properties. Oxidative damage (the chemical reactions that oxygen performs inside our bodies) leads to the development and proliferation of free radicals, which are highly reactive molecules. Free radicals have the potential to damage organs and also create a crazy, disease-prone, inflamed environment inside our body. Antioxidants help flush out free radicals and also work as a brilliant anti-inflammatory.

*Anti-Septic:* If you cut or even burn yourself, not only will the topical usage of haldi help with pain and inflammation, but as a natural anti-bacterial, it will ensure that bacteria is prevented from entering the body via the wound.

*Anti-Ageing:* The antioxidant properties in turmeric prevent organs from being damaged. Keep in mind that the skin is and organ too.

*Anti-Anxiety:* More and more studies are making linkages between haldi and its positive effect on anxiety. Curcumin seems to boost serotonin-the happy hormone, while

lowering cortisol-the stress hormone.

*Pro-Heart:* Curcumin helps block the conditions that lead to cardiovascular damage, which helps manage blood pressure and reduces the formation of clots.

*Pro-Digestion:* Turmeric's ability to relax abnormal muscle contractions and lower inflammation makes it great for digestive issues.

*Pro-Brain Power:* Researchers are now discovering that haldi helps the brain repair itself as well as prevent the onset of Alzheimer's.

*Pro-Immunity:* Curcumin's anti-inflammatory properties make it an effective immunity booster, mitigating incidences of infection, disease.

*Pro-Sleep:* While a warm glass of milk before bedtime is in itself a wonderful inducer of sleep. A warm glass of haldi doodh seems to reduce the transition time from A to Zzzzz.

Ingest, apply or gargle when needed and take advantage of its availability and affordability in our country. That the world is already making tablets and capsules of turmeric and curcumin highlights something we've known for centuries-this gold dust is worth more than its weight in gold.

(The Tribune, 15 April, 2018)

## **Eat What You Want, But Know What You Eat**

**Seema Burman**

Food is whatever the five senses absorb. Sights and smell, sound, food and touch that go in through the ears, eyes, nose, mouth and skin affect body and mind. *Food is important because it is visible and vibrant energy that influences us physically, emotionally and spiritually.*

Ironically, even the wealthiest person cannot ensure purity of food. Bhishma Pitamah lamented on his deathbed that eating evil-minded king Duryodhana's food had made him mentally weak and he could not stand up for Draupadi when she was being disrobed in court. After lying on a deathbed of thorns, the effect of Duryodhana's food was nullified, making him feel ashamed of his weakness. *Pure food is that in which purity of body and mind is used by all those involved in the whole process of producing, buying, cooking and eating.* Food is to be eaten with respect for the cook, the vegetables, buyer, seller, so that gratitude is part of the system.

*Food is an important part of paying tribute to God. A prayer of thanks to God before eating is an important ritual in Christian homes. Arya Samajis, proponents of formless Power, offer food to fire as respect and gratitude.* Offering food to fire, cow, crow, dog or a poor person is recommended in scriptures as *Bhuta Yajna*. Sharing develops cosmic love and a feeling of oneness. Anything offered to God becomes prasada and acquires the ability to purify body, mind and spirit.

*Entire existence and all actions come under three categories of purity, passion and ignorance- Satvic, Rajasic, Tamasic.* Eating food is like performing yajna or sacrifice. Dry wood is right quantity, camphor, ghee and other havan materials are collected, flame is lit and

mantras are chanted for a successful yajna. Similarly cooking and eating is a highly revered process. Kitchen and utensils have to be clean, ingredients are collected with care, the digestive agni of fire is to be ignited meaning that hunger should exist. Cooking and eating is to be held in a saatvic place with saatvic music and sounds. Consuming junk, cold, stale, heavy food, meat and frozen, canned, processed food is like using rotten wood in yajna. Pesticides, chemical fertilizers, sprays, hormones, irradiation, artificial refrigeration, preservatives and artificial colours, rob natural food of all prana, making it lifeless.

Naturopathy and Ayurveda recommend food to be seasonal grown in the right place, at the right time, as only then it can contain living intelligence of nature and energy. Nature offers water-rich fruits and vegetables in summer and dry ones in winter. When we eat out of-season food we not only disrespect nature but also our inner nature and immune system.

*Rajasic food stimulates unnecessary activity of body and mind. Oily, heavy food with artificial preservatives is too bitter, sour, salty, hot, pungent and dry resulting in hyperactivity, restlessness, anger, irritability and sleeplessness. Tamasic food is decomposed and decayed, consists of leftovers and brings dullness of mind, inertia and confusion. Non-vegetarian diet, stale food, excessive intake of fats, oil and sugary food is tamasic.*

Satvic foods have prana, life force. Modern food processing takes the life out of foods. By choosing a saatvic way of living and eating we discipline ourselves, raise our minds from the tamasic to rajasic to saatvic level. Food prepared by someone who is thinking of how to rob or murder, or on anger or tears will have negative vibes. Not only will the food be difficult to digest, it will also lead to heaviness and inertia, anger and violence in mind.

(The Times of India May 28, 2016)

## Get the Maximum Out of Your Diet

Mridula Wattas

Our body needs vitamins to function efficiently. They play important roles in metabolism, immunity and digestion. The vitamins, our bodies need, can be broken down into two groups: fat-soluble vitamins and water-soluble vitamins.

Fat-soluble vitamins like A, D, E and K rely on fats to be digested. A lack of healthy fats in the diet can lead to deficiencies of fat-soluble vitamins. But if taken in excess these can be harmful to the body as these cannot be excreted easily. Water-soluble vitamins include vitamin B complex and the vitamin C. Excess intake is excreted in the urine. Because our bodies can't store these vitamins, we need to take them regularly.

The important minerals required by our body during different stages of life are calcium, iron, zinc, magnesium. A healthy balanced diet normally provides all these minerals in sufficient amount.

The recommended dietary allowance (RDA) of various vitamins and minerals are far more than the actual requirements of our body. Because while calculating the RDAs, it is assumed that only a small percentage is actually absorbed from the food we eat. So we should make sure that our vitamin and mineral needs are met by making conditions favourable for maximum absorption of these vitamins and minerals by our digestive system. This way we can meet our daily needs by having lesser amount of these nutrients. The absorption can be maximized in the following way:

### *Deworming*

Parasitic infestations in the gastro-intestinal tract hinders the absorption of these nutrients. Even adults can have these infestations if they tend to eat out a lot because the food handlers or cooks could be the carriers. Hence, regular deworming is the must.

### *Avoid wrong food combinations*

Avoid eating palak and paneer together as the oxalate from palak combines with the calcium from paneer inhibiting calcium absorption from the gut.

Do not drink tea or coffee with meals as the tannin present in both the tea and the coffee inhibit the absorption of iron from the food.

Do not eat fruits along with the meals. The best time to eat fruits is on an empty stomach in morning, or as a snack between breakfast and lunch. This will ensure that all vitamins and minerals present in the food are fully absorbed.

Do not drink water with meals as it dilutes the enzymes in the mouth and digestive tracks leading to incomplete digestion and absorption of food.

### *Eating the right combinations*

Lemon juice is a good source of vitamin C and should be taken with iron-rich foods such as spinach, quinoa, chia seeds, lentils, oatmeal and soybeans. Sulphur-rich foods like garlic and onion should always be added while cooking mutton, chicken because sulphur helps in the absorption of zinc and iron present in these foods.

### *Soaking and sprouting*

Soaking and sprouting of cereals and pulses

increases their vitamin C and B complex content and bioavailability.

### *Eat probiotic and prebiotic foods*

To keep your gut healthy you need to maintain a healthy micro flora in your gut. Add the following foods in your diet which help to increase the healthy bacteria in your gut. *These are prebiotic foods like banana, pineapple, garlic, onion, and cucumber and flax seed. Probiotic foods like curd and yoghurt should also be added.*

Health and wellness is something which we all desire. Most people look for an easy way to attain it. The internet is flooded with information regarding the extraordinary role of some vitamins and minerals in achieving health and wellness. While the information may be true but it may not cater to individual needs.

Since vitamins and mineral supplements are available over the counter and are considered relatively harmless without any side effects, more and more people fall prey to self-medication with these supplements. However, these should always be taken under medical guidance and according to the specific needs of a particular person.

The bottom line is that these supplements may be good for you but they do not substitute a balanced diet. Never start any such supplementation without consulting your doctor and in any case eating a healthy balanced diet is of utmost important.

### *Who requires Vitamin and Mineral Supplementations?*

*Stressed individuals:* Vitamin B complex supplements helps if you are under stress.

*Pregnant women:* They need additional calcium, iron,

folate and DHA supplements.

*Women on the pill:* The good bacteria get altered when you are on any hormonal medicine. It is a good idea to take probiotic supplements along with the pill.

*Post-menopausal women:* They need calcium and vitamin D supplements.

*After 60:* Supporting health with good quality supplements such as digestive enzymes and vitamins and minerals can be very beneficial for the elderly.

*Those suffering from a prolonged illness:* For such persons, vitamin and mineral supplementation are required according to the type of illness and medication they are taking.

#### *The right balance*

Here is a list of certain foods if taken daily would provide the vitamins and minerals to our body in accordance with their recommended dietary allowances (vitamin A, E, K, B complex and vitamin C and minerals like calcium, magnesium, zinc and iron). For vitamin D half an hour exposure to sun is recommended.

Low fat milk	1 glass
Curd/yoghurt	1 cup
Wheat flour	75gm
Brown rice	50gm
Spinach	100gm
Fresh coriander, curry Leaves and mint leaves	25gm each
Tomato	50gm
Almonds	30gm

Pumpkin & Watermelon seeds	30gm each
Bengal gram whole/soyabean	100gm
Pumpkin	100gm
Amla	one
Lemon	one
Raisins	30gm
Rice flakes	30gm
Jiggery	30gm
Olive oil	30gm
Egg	one

Add condiments and spices like red chillies, green chillies, cumin seeds, mustard seeds, turmeric and cardamom for additional minerals. You can also use millets like jowar, bajra and ragi in your daily diet.

(The Tribune, 19 August, 2017)

## Mediterranean Diet Is Good For Gut

Apart from being good for your heart, Mediterranean-style diet can have a positive effect on your gut health. Diet rich in vegetables and fermented milk products such as yoghurt, along with coffee, tea and chocolate, boosts beneficial bacteria, found scientists at Wake Forest Baptist Medical Centre. They found that eating a plant-based diet enhanced the good bacteria living in the gut by upto 7 percent as compared to only 0.5 per cent from eating a more meat-centric, western diet. Using an animal model, the research team designed the study to mimic human Western and Mediterranean-type diets that could be controlled and analysed over a sustained period of time. According to the study's lead author Hariom Yadav, in the pre-clinical study, non-human primates were randomized to either western or Mediterranean diet groups and studied for 30 months. The western diet consisted of lard, beef tallow, butter, eggs, cholesterol, high-fructose corn syrup and sucrose, while the Mediterranean diet consisted of fish oil, olive oil, fish meal, butter, eggs, black and garbanzo bean flour, wheat flour, vegetable juice, fruit puree and sucrose. The diet had the same number of calories. At the end of the 30 months, Yadav's team analysed the gut microbiome-the good and bad bacteria that live in the gastrointestinal tract-in both diet groups through faecal samples. They found the gut bacteria diversity in the Mediterranean diet group was significantly higher than in the group that ate the Western diet. There are about 2 billion good and bad bacteria living in our gut. The study showed that the good bacteria, most of which are probiotic, significantly increased in the Mediterranean diet group. The study is published in the journal *Frontiers in Nutrition*.

(The Tribune, 28 April, 2018)

## Time To Go Nutty

Naini Setalvad

Winter is upon us. We are afflicted with sniffles, flu, sore throats, dry skin, hair problems, lethargy, joint pains and a host of other problems.

One easy way to tackle this is by following our ancient Indian scriptures that said there are cooling foods and warming foods, and in winter you need foods to warm your body internally and keep the metabolism high. Fats keep you warm, and also give you more energy.

However, try to eat healthy fats such as ghee, coconut flesh, nuts and seeds. For thousands of years, nuts, seeds, dry fruits and coconut have been an important food for humans, and for good reason. These are cholesterol-free and contain healthy, unsaturated fats which can help lower the risk of heart diseases and other problems. Nuts also provide magnesium, which helps maintain bone structure and chromium, which helps maintain bone structure and chromium, which helps to ensure proper insulin function. These contain zinc, needed for growth and wound healing, and manganese, which protects against free radicals. All nuts are a good source of vitamin E, an important antioxidant. Like all plant foods, these are high in fibre and phytochemicals, both of which help to protect against cancer and other chronic diseases. These make your skin glow and are an excellent source of protein.

*Pistachios*:-A handful of 30 pistachios have only 100 calories. Pistachios are salty but do not affect the blood pressure levels.

\* If you add a handful of ground pistachios to your gravies then you do not need to add any oil to your

food, and you get good quality fat.

- \* The reason you feel full after eating a handful of pistachios is because these take longer to digest.

*Almonds*:-Almonds contain good quality fat. One type is known as the American the other slightly bitter one is known as mamro.

- \* The mamro has high cancer-fighting properties.
- \* The almond of the apricot has the most healing properties.
- \* Almonds have vitamin E and small amount of calcium.

*Walnuts*:- A handful of walnuts is a must daily add to soups, salads or have as a snack. A huge volume of scientific evidence shows that incorporating walnuts in a healthy diet reduces the risk of all major disease like cardiovascular diseases, high blood pressure, diabetes, cancer, asthma and arthritis. Eating a handful of walnuts every day is one of the easiest way to improve your food and health, and add a glow to your skin, lustre to your hair and prevent aging and memory loss.

- \* Whiter the walnut the more it is bleached so always go for the darker variety.
- \* Sprouted walnuts have higher health benefits.
- \* Soaked walnuts are less acidic.
- \* Squeezing lemon on walnuts and tossing it with leafy greens makes a healthy snack.
- \* Californian walnuts are of superior quality.
- \* Walnut oil helps relieve joint pains and improves skin quality.
- \* *Walnuts is the only nut rich in polyunsaturated fatty*

*acids like oleic acid and an excellent source of all important Omega-3 fatty acids like alpha-linolenic acid.*

- \* These have maximum Omega-3 fatty acids than any other nut. Therefore these known to reduce bad (LDL) cholesterol and improve HDL (good) cholesterol making them a very powerful anti-oxidant which fights free radical damage.
- \* Walnuts are one of the best plant sources of protein.
- \* Walnuts need to be stored in the fridge so that they remain fresh.
- \* The anti-inflammatory benefits and Omega-3 fatty acids in walnuts help fight asthma, rheumatoid arthritis, and inflammatory skin diseases such as eczema and psoriasis.

#### *Cashew Nuts*

- \* Cashews nuts are a good source of natural fats.
- \* Their creamy texture makes wonderful gravies.
- \* Cashews nuts contain a good amount of zinc and is important for men's health.
- \* These are low in glycemic index hence gives you energy for a longer time.
- \* Spotless white cashew nuts are healthier.

#### *Peanuts*

- \* Known as *singdana*, the peanuts are so much integral part of Indian diet. It's added to many of our dishes from chutneys to dals for gravies as well as a part of auspicious occasions as a part of Prasad.
- \* Peanuts should be consumed with its skin where as maximum antioxidants are present.



- \* Boiling the peanuts with a little salt multiplies the isoflavone (an antioxidant) by almost four times as compared to raw or roasted ones.
- \* Peanuts are beneficial in regulating the temperature of the body as these can generate heat. Peanuts can prevent the colon cancer. The fat in peanuts is a healthy fat.
- \* Peanuts are low in the glycemic index therefore these keeps you fuller for a longer time, preventing hunger pangs.

#### *Sesame seeds*

- \* Sesame contains essential fats required by the body in the winter.
- \* The health benefits of sesame increase if lemon and turmeric power are added to them.
- \* Roasted sesame tastes better and remains fresh longer.
- \* White sesame contains more calcium which protects the bones and joints in the cold.
- \* Black sesame contains more iron.

So, for good health and better immunity remember that nature has its reasons, so eat according to the seasons. These are the foods you should be looking forward to eat this winter.

## **Nut Butters Exploring Alternatives to Butter**

**Pooja Makhija**

If you feel you cannot bet on good oil' butter, don't be bitter because there are better butters. Peanut butter almond butter, coconut butter and hazelnut butter have swept through the supermarket aisles and left a nut butter food revolution in their wake...

These butters are everywhere: from cakes to toasts, to salads to even mains, and are nourishing alternatives to butter because they don't contain harmful fats like Trans fats. There are many organic versions of these butters available too. However, there can be too much of a good thing and nut butters are no exception. Before we get into quantity, let's understand the qualities of the ones available in India.

*Peanut Butter* : Loaded with the antioxidant vitamin E, bone-strengthening magnesium, potassium (good for muscles) and vitamin B6 (boosts immunity), peanut butter has lots of fibre and is a great source of monounsaturated fats. The best thing about fibre is that it keeps you feeling full for longer periods of time. In small amounts, it's good for weight loss.

*Almond Butter* : High in fiber and low in fat, almond butter is useful for cardiovascular health, and weight loss. This is healthier than peanut butter as it's full of vitamin E and magnesium. Apart from being a great source of monounsaturated fats, almond butter also has calcium and copper, great for brain and bone health, respectively.

*Coconut Butter*: Coconut butter builds immunity, contains fibre, iron and healthy monosaturated fats. If you want

to go coconuts, then choose the extra virgin for virgin options; these are the least refined.

But how much is too much? This is where I urge you to re-look at the part where I said that it is an alternative to butter. Be as you would with regular butter because they are all approximately the same in calorie content. If you are in a weight loss mode, have no more 1-2 teaspoons, but this could mean that you need to have oil-less food for the rest of the day. It all depends on what your priorities are.

Kids, of course, have it easier because their bodies need and burn more calories. They could have at least 2-3 teaspoons a day, depending on their age and activity level. But again, the oil content of other foods will need to be kept at a minimum. Lastly, don't entertain any products with added sugar, saturated fat, sodium and other unhealthy ingredients because it really does defeat the grand nutritional purpose of these exciting foods.

(The Times of India, 3 June, 2018)

## The Six Enemies of Food

K. Bhatia

Food or agriculture has six enemies even as man has six foes; viz., lust, anger, greed, attachment, passion and envy.

Among them some are *Satvic*, some are *Rajasic* and some are *Tamasic*.

Adversaries of the *Rajas* and *Tamas* variety are well-known as injurious and harmful, but the *Satvic* ones can sometimes be equally dangerous—they raise up obstacles in paramartha (doing good), create attachment and hold up all progress.

Likewise, food has six enemies, two of each type.

Beginning with the *Tamas*, they are tobacco and tea. The best soil of our country is consumed by these two crops.

Once when I was going round in Andhra, I saw a tobacco field, very neat and luxurious. Humorously, I said to its owner, "You seem to take care of this field and love it like a child."

He replied, "no, I love it more than my child."

"Why," asked I.

Without any pause he remarked, "so far as the child is concerned I have to feed him, but this field feeds me instead. Every plant yields eight annas and supports me as nothing else can."

You will thus realize that if we want to grow sufficient food in the village, we have to give up tobacco-growing.

The *Rajas* enemies are jute and cotton. We do

require cotton for our cloth. But we must spare only that much area for cotton as is genuinely needed for cloth.

I find that cloth is mercilessly beaten or crushed. They use bleaching power and all sorts of things to give it a shining look.

I have often raised my voice against this passion for dazzling appearance. If a piece of cloth which can last for twelve months is so awfully treated as to last for only nine months, you will require twelve acres of land for cotton cloth for which nine acres would have sufficed. This is bad.

Thus we do require land for cotton but the minimum amount must be taken up for the same and the rest allotted to food.

Lastly, the *Satvic* one-groundnut and sugar.

It is simply horrible to produce sugar for export and then import food, even bad food at times.

Wisdom demands that we should grow only as much cane as is required for our consumption of sugar and gur.

In other words, the area under cane should be decreased. Otherwise, I am afraid; you will have cane-grain riots in this country as you have the Hindu-Muslim or the Harijan-non Harijan riots.

Like cane, only the barest minimum amount of land should go to ground-nut. We must grow food on as much land as possible.

Thus food has six enemies.

*Saving Food-grains*

If urgent steps in the following directions are

taken, we can save sufficient food-grains consumption in the country.

Vast quantities of food-grains in the shape of jowar and rice are used by mills manufacturing cloth, preparing paste from food-grains for polishing cloth. This polish gives a shine and stiffness to the cloth and all this is lost in the first wash. The Government should put an immediate ban on the use of paste from food-grains for polishing cloth manufactured in mills, if not for cloth to be exported but surely or cloth used in the country.

Washing soap is made by mixing maida and oil, etc. People should be requested to use washing soda for washing their clothes and this will save lakhs of tons maida etc.

For preparing 'lai' (adhesive used for pasting papers) maida is used. People may be asked to use gum and other adhesives. There will be a lot of saving of maida.

Maida paste is prepared for giving stiffness to turbans.

All these things can easily be stopped and the nation saved from starvation.

What a pity that khoya is available in plenty in the market for the preparation of sweets but the children are not able to get milk. Because of khoya preparation, milk is very costly. Instead, if butter is prepared and given to the common man cheaply, a man ordinarily taking 10 chapatis will hardly be able to eat more than six chapatis. In other words, more milk and ghee to the common man will help in saving food-grains.

(The Indian Express, 2-3-1967)

## **Junk Food's Siren Appeal**

**Chetan Bhagat**

Enough has been written about the Maggi controversy, where government labs found more than permissible lead and MSG. The resultant PR disaster, confusion and a nationwide recall of one of the most popular products in the country is likely to become a case study in business schools.

However, there is something else as important as the controversy about harmful substances. It is that Maggi noodles, or for that matter any instant noodles, are not healthy for you in any case, with or without lead and MSG. It is time we have a new, simplified classification system and scale for junk versus healthy food.

Eating refined starch that is processed, dried and kept for months with the help of chemical preservatives is unlikely to be good for you. The ads may be extremely moving emotionally, the brand ambassador could be highly credible, and the soupy noodles might taste really good. It is still not good for you.

Hence, even with no MSG or lead, Maggi's tagline of "Taste Bhi, Health Bhi", was only half correct. Any nutritional expert will tell you eating instant noodles for health is about as funny and implausible as using a cheap deodorant to attract dozens of women.

Of course, the noodles won't kill you. Our diet today has plenty of other unhealthy things as well. For instance, almost all Indian mithais are unhealthy. As are many of our gravy 'delicacies'. We give up health benefits of food in favour of cost, convenience of taste.

Such compromises are acceptable to an extent. However, if done in excess they can lead to major health problems such as obesity, heart disease and diabetes.

How does one limit unhealthy food then? The problem comes when junk is marketed as healthy. Our advertising standards for food are extraordinarily lax. Junk food manufacturers not only hide the nature of their food, but also position them as health filled alternatives. Armed with ads of beaming mothers feeding sparkly kids, we have junk marketed as emotional nectar every day.

In other sectors such nonsensical advertising would never be allowed. In financial services there have to be a ton of disclaimers reminding investors of the market risk they take. In cigarettes, we have pictures of blackened lungs on the packs. But packets of potato chips don't bear the picture of an obese heart patient, right?

Food-be it for nourishment or pleasure-has positive associations for us. Any food is good and the kind of food doesn't seem to matter. Perhaps this comes from a time when India was poorer and food was scarce. When we worked 12 hours a day in the fields and could eat and burn as many calories as we wanted. This was also when processed food from big corporations didn't exist.

However, times have changed. Physical labour is reducing and we don't burn off calories as easily. Hence, we need to monitor our food intake carefully. If a big part of our diet has to come from packaged food, we need to understand and label it accordingly.

Of course, nutritional values are provided for most packaged food products today. However, to the average person it is a jumble of tiny font text and numbers. Even if you were to read the data, what would you make of it? Is it healthy food or junk food? Or is it healthy but only in moderation?

Hence, we need a simple label for our, food, comprehensible at a quick glance. This should be akin to the green and red dot for vegetarian and non-vegetarian

food which has worked well.

We need a new junk-healthy scale classification for all foods. One example, purely for illustration, is to use four tiny dots, in red or green based on the junk-healthy scale.

A red colour for all four dots would mean it is completely junk food. Chips, aerated drinks and fried snacks would belong here. Three red dots and one green would mean it is mostly junk, but perhaps not as high in fat, such as instant noodles or juices made from concentrate with added sugar.

Foods that are healthy in small amounts, such as high calorie nuts, would have two red and two green dots each. Mostly healthy but still processed foods, such as skim milk packs and low sugar juices would earn one red and three green dots. Four green dots would be reserved only for fresh, healthy and unprocessed foods such as fresh vegetables, low calorie fruits and low fat meats.

Only foods with three green dots or more can advertise themselves as healthy. While this labelling will obviously not answer every nutritional question, it will at least tell consumers what kind of food they are eating.

The above four-dot template is just an example. However, junk versus healthy labeling is essential and implementable. This will increase awareness about what we are eating, and over time incentivize us as well as manufacturers to move towards healthier foods.

A healthy society leads to lower healthcare costs, improved productivity at work and a better quality of life for citizens. Food is an important part of public health. About time we knew what we are putting in our mouths.

(The Times of India, 13 June, 2015)

## Harmful Ingredients Cola Drink

During a market research conducted by Britain's consumers' association, 142 school children who were cola addicts indicated that they could easily identify any of the 50 odd drinks available in that country. Considering the undesirable effects of uncontrollable intake of caffeine (which is a drug) will have on growing children, it has been suggested that all cola drinks should mark the caffeine content on the labels. This is already being done in European countries and there is no reason why that should not be universally practised.

*Phosphoric acid is used in soft drinks in spite of the fact that it is harmful.*

These facts make a strong case for the Indian authorities to take a serious view of the use of caffeine and phosphoric acid in soft drinks and compel the manufacturers to declare the ingredients that go their drinks. It is only fair that the consumer is told what he is paying for, even if it were the *loss of appetite or increased heart-beats (which are the natural side-effects of cola drinking.)*

### *Cola Addicts*

It is hard to believe but nevertheless true that people, especially the very young ones, can become soft-drink addicts. All cola drinks have a stimulating effect due to their caffeine content. A child of 10 who has three drinks a day may not get enough caffeine to harm him, but (as a recent British survey discloses) they will have an effect on him sufficient to form a habit. Cola is the general name used for a nut which is the basis of several thirst-quenching soft drinks; it is caffeine in it that refreshes.

## **Fruit You're Eating May be Unripe**

**Dr. Charanjit Parmar**

Fruits of Safeda mango from South India are already being sold at fruit shops though the harvesting season for this variety begins after mid-May. It is only then when Safeda Mangoes attain the right stage of maturity to be fit for eating. Fruits picked earlier can be made to ripen with the help of a chemical; Calcium Carbide. But such fruits will never attain the “real” taste of Safeda fruits harvested at the right stage of maturity.

This is not only about Safeda Mango. The fruits of Santa Rosa plum should be removed from the tree only after they attain their characteristic deep purple colour and the white blush. This stage is reached in Himachal mid-hills around June 15. But orchard contractors start picking immature fruits which are still green to get higher prices prevailing in the market in the beginning of the season. These plums are also made to ripen with calcium carbide and passed on to buyers as normally ripened fruits. These fruits, though apparently ripe, are completely devoid of the natural taste and flavor of Santa Rosa plum.

This practice is going on with all the fruits that can be ripened with chemicals. Artificially-ripened Dasherri Mangoes will start reaching the market next month though these should not be picked before July. It is now a common practice to spray unripe *Apples on tree with a chemical, Ethephon, to reach the market early by 15 days.*

The fruits removed from the tree much earlier are not able to attain proper maturity. Though in some cases fruits might have attained their full size, but still these are physiologically immature. Therefore, when the fruits at this stage of development are induced to ripen with chemicals, they do develop the colour, become soft and look to be ripe, but very much lack the taste, flavour and to some extent, the food value too of fruits picked at the right stage.

A fruit of Dasherri Mango or Santa Rosa plum removed from the tree 15 days before the normal harvesting date will never taste at par with the one picked at “full maturity”. The practice of putting such fruits on sale is nothing short of “adulteration” and requires to be curbed.

This practice is becoming popular and the use of chemicals like Calcium Carbide and Ethephon is increasing every year. In fact, the practice has assumed such a proportion that at times the entire crop of popular varieties is picked before reaching maturity. So, the consumer is not even able to enjoy the real taste of a Dasherri Mango as it is not able to reach him.

*Who is to blame?*

Though the orchard contractors appear to be culprits at first glance, the initial fault lies with growers. Every orchardist wants to plant only the best variety and therefore, most orchards comprise a single variety. This is not a healthy situation as the whole crop in the region ripens simultaneously. Consequently, there is glut in the market and the prices crash. The growers, therefore, must plant a combination of early, mid-season and late maturing varieties so that the season gets extended and there is no glut. It is possible to do it. There exists a choice of several varieties in all the fruits.

*Legal regulation required*

It is true that selling chemically-ripened fruits is not an offence in India. But, it is also not fair to give the buyers fruits lacking in natural taste, flavour and nutrients for earning additional profit. The practice has become the rule of the day and right-quality fruits have virtually disappeared from the market. It is, therefore, high time for some legal measures to ensure that the buyers get fruits with their original taste and natural nutritive quality.

(The Hindustan Times, 19, 2006)

## **The Scourge of Malnutrition**

**Dr. Y.P. Gupta**

At present, except for the USA, Canada and Western Europe, the world is still trapped in the vicious circle of ignorance, poverty, malnutrition, disease and early death. A UN survey reveals that the world's hungry are increasing fast.

India is one of the few countries of the world where malaria, cholera diseases continue to break out in epidemic form. The outbreak of cholera and gastro-enteritis in Delhi in 1988 due to contaminated water is a distressing reminder of the failure to combat such diseases.

Much more than 40,000 young children die every day of malnutrition and infection in the developing world. And nearly seven million children below the age of five die every year from diarrhoeal dehydration. According to WHO estimates, about 500 million children in Africa, South East Asia, West Asia and Latin America do not get enough food. In India, the number of children suffering from the ill-effects of malnutrition has been placed at more than 37 million.

The rate of infant mortality reflects on the general health and economic conditions of a country. It represents the number of babies who die before the age of one out of every 1,000 live births. In the Third World, the overall infant mortality rate is 120 per cent 1,000, whereas it is 84 in the world as a whole. It is 14 in North America and Europe. In China and Pakistan, it is 45 and 124, respectively. It is the lowest in Sweden as 6.7. It is also low in Japan (7.4), Australia (9.9), New Zealand (12.4) and UK (18). In poor countries like Haiti, Afghanistan, Cambodia, Laos and Uganda, it is nearly 250.

In India, it is as high as 105 per 1,000. Kerala has

the lowest rate of 22, whereas UP has the highest rate of 147 followed by Madhya Pradesh and Orissa having 134 and 132 respectively. India's high rate is attributed to malnutrition among women in the reproductive age group. Some countries like Singapore and Cuba have succeeded in lowering their rate by improving health services and proper education.

It is estimated that 40 million are totally blind and about 2.5 lakh children lose their sight every year mostly due to malnutrition and poverty in the developing countries. In India, over seven million children suffer from vitamin A deficiency every year, of which 42,000 become totally blind and 78,000 suffer from poor vision. Ignorance is one of the contributing factors. To prevent the incidence of vitamin A deficiency, UNICEF, WHO and FAO agencies are actively involved in the education of rural and urban poor against this blinding scourge. Massive doses of vitamin A to young children once in six months yielded encouraging results in Kerala and Karnataka. The inclusion of green leafy vegetables and fruits like Mango and papaya in the daily diet has also been recommended.

About 30 per cent pregnant women among the poorer sections in India are reported to suffer from Anaemia. Also, nearly 63 per cent children below three years of age and about 45 per cent children between three and five years suffer from Anaemia. A national programme on Anaemia prevention advises expectant mothers to take a combination of iron and folic acid tablets during the last 100 days of pregnancy and to include green leafy vegetables and legumes in their daily diet.

Clean drinking water is an unheard of luxury for about 75 per cent of the world's rural population as well as for about 150 million in urban dwellers. More than 250 million children in the third world do not get clean

drinking water. As a result 25,000 people die every day for want of clean and safe drinking water.

It is estimated that 250 million people in India, consume less than three-fourths of the needed calories while another 55 million takes in less than half of their daily calorie requirement. A study by the Washington-based international food policy research institute shows that an average Indian hardly gets 1,900 calories a day, with millions still not in a position to afford even that much when the daily minimum should be at least 2,200 calories. The average daily intake per capita in advanced nations like the USA and Western Europe is over 3,000 calories.

The average Indian diet is not only insufficient in calories. It is also unbalanced in composition. As a result, a large section of the people, particularly growing children, suffer from protein-calorie malnutrition. Infants and young children, pregnant and nursing women are most vulnerable to such malnutrition.

Availability of adequate food, improvement in health services and control of infectious diseases must be given high priority in any development programme if the goal of "Health for All" is to be achieved by 2000. A National Nutrition Policy must ensure that even the poorest segments of the society are able to obtain the least expensive balanced diets that provide them the minimum nutrients needed for growth, development and Normal functioning.

(Indian Express, 28 February 1990)

## **Planning for Proteins The Problem of Malnutrition**

**Ashok Thapar**

The new strategy for the production of cereals is now safely across the hump. Its momentum is unlikely to falter.

Cereals alone do not make a balanced diet. There is a crippling deficiency in this country in the average per capita intake of proteins, iron and Vitamin A. This is cause for serious concern. Its victims include a majority of the children in the pre-school age or about 20 per cent, of the total population.

There is a relationship between malnutrition and mental retardation. The implications are clear. An undernourished child is forever debarred from growing up to be bright and productive, despite normal educational and environmental opportunities. The F. A. O. reports that countries with the lowest per capita daily protein consumption are also those with the lowest productivity.

### *Sluggishness*

Sluggishness which has in the past frequently been attributed to laziness, indolence, or other so-called "ethnic traits" is more often than not a result of simple malnutrition in the early years. The deficiency of Vitamin A is, if anything, more pronounced. This is primarily because the staples contain very little of it, and the richer sources, such as vegetables, eggs and fruit are limited in supply, quite in addition to being expensive and beyond the reach of the lower expenditure group.

In areas where wheat is the staple the under-consumption of proteins is altogether smaller cause for concern than that of the other two items, iron and Vitamin



A. The daily average requirement of protein is estimated at a little over 59 gm. The intake is at present limited to 52.5 gm. But there is hope yet, even if nothing is done to increase the per capita availability to milk. Genetic improvements have invested the new high yielding varieties of wheat with a higher lysine content thus adding to the protein value of an item that is principally a source of carbohydrates.

In the rice-growing areas the problem is a great deal more complex. The crop does not offer itself to genetic improvements of the kind applicable to wheat. To make matters worse it is precisely these areas where the per capita availability of milk is substantially lower than the ridiculously low national average of 5 oz, per day. There is however, a way out. Milling technology has made rapid strides in recent years. The whole grain can be treated with amino acids such as lysine and then coated with gelatin. The method has been tried with considerable success in the Philippines.

#### *A Mistake*

But it would be a mistake to expect it to achieve spectacular result in this country. It takes for granted the existence of an efficient and well-controlled milling industry, which is not the case in India.

Several attempts have been made in the past to propagate the optimum storage, handling, polishing and cooking practices recommended by the Central Food Technological Research Institute. But their impact has been negligible. Had these attempts been successful there would never have been a rice shortage. In the circumstance, any plan for increased proteins based on improved milling techniques must be looked at skeptically.

Levels of consumption being what they are, it is

estimated that it will cost roughly. There is no simple cut and dried answer to the problem. It has to be attacked on a variety of fronts—vastly increased supplies of pulses Balahar, fish, fresh milk, groundnut flour, toned milk, fresh protein concentrate, lysine and ferrous sulphate. This in turn necessarily means the creation of an entirely new set of central and subsidiary agencies to establish and manage concentrate plants, to distribute iron and folic acid to pregnant mothers, shark liver oil or Vitamin A concentrate to infants and biscuits reinforced with groundnut flour or Bengal gram to all school-children.

The desirability of such a programme can hardly be denied. But it would be unrealistic to overlook the obstacles. Even if it is taken for granted that the funds required to finance it can be found, it might still take several years before it can reach every single child in the “target group”. Family Planning has been a national programme since 1935. But its impact in areas where its need is most urgent has yet to make itself felt. This being the case, consider the amount of effort and extension activity that will be required to make an effective job of applied nutrition, even on so limited a scale.

In the circumstances, the only sure and reliable answer to the problem is a crash programme for the increased production not of subsidised reinforcements but of those very protein-rich items which are already part of the conventional consumption pattern, namely green leafy vegetables for Vitamin A and iron, and milk and pulses for protein. In other words, the time has come for a re-formulation of the country’s agricultural strategy. Its emphasis must now be shifted from dealing exclusively with the shortage of cereals of the more complex attack on malnutrition.

### *Vegetables*

A sustained and widespread search for new high-yielding pulses is already underway. Several hundred separate strains have been collected and distributed to the agricultural universities and research institutions all over the country. It should not be long before the right crosses are hit upon. If these lead to varieties that provide the cultivator with input-output ratios similar to those now held out by the new wheat strains a significant step towards increased production will have been taken.

A comparable development with regard to vegetables, however, is still nowhere in sight. The problem here is more complex. It is not just the input-output ratios that have to be improved to make vegetable farming more attractive. Much requires to be done to eliminate the very high risk element involved. Since the commodity is perishable, producers have to be provided with vastly improved co-operative storage, transportation and marketing facilities. This is a task which calls for immediate attention.

(The Times of India, 9 February, 1968)

### **Protein-Rich Diet May Reduce Alzheimer's Risk**

A diet high in protein-rich foods may reduce the risk of developing Alzheimer's disease, a study claims. Researchers examined the diets of 541 participants and measured the levels of amyloid beta (AAY) in their brain, a precursor to Alzheimer's disease. They found that participants with higher levels of protein in their diet were less likely to have high levels of AAY in their brain, reducing their risk of developing Alzheimer's disease. The participants were divided into three groups based on their protein intake. The team found that those with the highest consumption, around 118 gm per day, were 12 times less likely to have high levels of AAY than those in the lowest consumption group, who ate only 54 gm per day. The study was published in the *Journal of Alzheimer's Disease*. *One possibility is that a high protein diet is associated with lower blood pressure, an expert said. High blood pressure is a risk factor for both Alzheimer's disease and cardiovascular disease. Developing cardiovascular disease also increases the risk of developing Alzheimer's disease.*

## Time to End Neglect of Children

The time has come for the international community to say it is intolerable for its young children to die every day and for millions more to be malnourished, blinded, brain damaged and disabled in the silent emergency of infection and malnutrition' says UNICEF's report.

Report of Executive Director, focusses attention on ways to arouse the world's conscience to combat what it calls 'the silent emergency,' of children dying slowly of malnutrition and infection. It says that a global ethic already exists which no longer allows millions of its children to die in sudden emergencies, like drought or famine. This is because the mass media and advances in communication ensure that governments act to prevent mass deaths. The worldwide public and political response to the African emergency was ample proof of this, the report says.

In the last two years more children have died in India and Pakistan than in all 46 nations of Africa put together. Yet, it is still 'normal' to accept many children dying every year of malnutrition , 'despite the fact that recent technical and social advances have rendered hollow the inevitability on which that acceptance is based.

The greatest need today therefore was for a change in global morality—a change which will make the silent emergency as equally unacceptable as the other much publicized disasters of famine and drought. It makes no moral difference that these millions of children did not die in any one particular place at any particular time. The world must be shamed into action,' the report says just as it did against previously accepted evils like slavery, colonialism, racism and apartheid are no longer acceptable.

In the last 40 years, tremendous progress had been

made in the condition of children. These included the rising of child death rates in the developing world.

However, though 'probably more real progress for children, there is one serious and disturbing trend caused by the effects of a long-running world recession. 'Stagnating trade, falling commodity prices, declining aid, mounting debt repayments, and a steep drop in private lending have stalled economic development in many countries during this decade. Average incomes fell by nine percent in Latin America and by 15 per cent in Africa. Only the more dynamic economies of South East Asia, and the larger, more insulated nations such as India and China have managed to sustain significant economic progress.'

*IMF to blame?* This has forced as many as 70 developing nations since the Eighties to tighten their belts and follow what are known as 'adjustment policies' in order to receive International Monetary Fund support to tide over their difficulties. The heaviest burden of recession in these countries have inevitably fallen on those least able to bear it—the children of the poor.

A UNICEF study yet to released has concluded that 'health and education services are declining in many countries and that deteriorating health and nutrition is widespread' among the young children of Africa and Latin America. The result, the report says quoting the study, is that in many countries there are schools without books and paper and clinics without adequate staff or essential supplies.

Arguing for 'adjustment with a human face,' the UNICEF report says there are alternative policies which do not sacrifice 'children at the altar of recession.' It says that a shift in spending to support the mass promotion of low cost measures such as oral rehydration and immunization,

improved weaning and birth spacing, could bring about a significant advance in child protection despite present economic difficulties. The use of today's knowledge—and today's unprecedented capacity to put that knowledge at the disposal of the majority—could therefore be a vital part of the “adjustment with a human face.”

Looking ahead, the UNICEF report says in the next few years the focus would have to be in the systematic exploitation of existing capacities, especially in communications and infrastructure.

*Affordable price:* According to the report the lives of many million children have been saved in the last five years by today's low-cost methods of protecting child health. And if existing methods like ORT, immunization, birth spacing, breast feeding and improved weaning were implemented, many million children could be saved and millions more ensured normal growth—at a price all nations and families could afford.

The report states that within a decade the following tasks were within reach of every nation:-

- \* More than half the world's children could be fully immunized and death by dehydration and frequent diarrhoeal disease could be prevented.
- \* Virtually all parents could be informed and supported about today's basic knowledge about birth spacing and prenatal care, and about the normal physical and mental growth of their children.
- \* In few years Government and economic institution would have found ways of not transferring the burden of recession on to the helpless backs of children.

(The Daily Hindu Madras, 11 December, 1986)

## **Kids Who Skip Breakfast May Be Malnourished**

A study found that children who skip breakfast regularly may not be consuming the daily amounts of recommended key nutrients for growth. Children who ate breakfast daily had better nutritional intake compared to those who didn't. These children had higher daily intake of key nutrients such as folate, calcium, iron and iodine than kids who didn't. Researchers used food diaries from a programme between 2008 and 2012 from a group of 802 children aged 4-10 years and 884 children aged 11-18 years. Breakfast was considered as consumption of over 100 calories between 6 and 9am. As many as 31.5 per cent of those who skipped breakfast did not meet even the lower recommended nutrient intake (LRNI) of iron compared to only 4.4 per cent of breakfast consuming children. Nineteen per cent did not meet LRNI for calcium, compared to 2.9 per cent of breakfast consuming children, while 21.5 per cent did not meet lower levels for iodine, compared to 3.3 per cent of breakfast consuming children. No children who consumed breakfast daily had a folate intake below their LRNI compared to 7.3 per cent of those who skipped breakfast. The study compared breakfast habits and nutrients within individual participants and showed that in younger children (4-10 years old), on days when breakfast was consumed, children had higher intakes of folate, calcium, vitamin C and iodine compared to their breakfast-skipping days. The study also showed that only 6.5 per cent of 4-10 years olds missed breakfast every day, compared with nearly 27 per cent of 11-18 year olds. Girls were more likely to miss breakfast than boys and household income was found to be higher in the families of children eating breakfast every day. The study is published in the *British Journal of Nutrition*.

(The Tribune, 19 August, 2017)

## Children Are Watching Parents' Health

Susan Reimer

Being a parent is hard work, and you need to stay healthy for the long haul. From the time you are eating for two, through the sleepless nights of infancy and into the combat zone of adolescence, being a parent is as much about physical endurance as it is about enduring love.

But there is another reason for you to live as though you are in training for a road race—your kids are watching.

Researcher Nicholas Zill, president of Child Trends, a Washington think tank, says in his most recent report that the behavior of parents represents an unexpected but very real threat to their children's health.

If we smoke, drink heavily or lead a sedentary lifestyle, we are giving tacit permission to our children to do the same. We can't blame a toxic popular culture or the bad kids in the neighborhood when our children are learning this stuff at home.

"The health of parents is important for a number of reasons, not the least of which is that these are the women and men who are raising the next generation of citizens and workers," writes Zill in his report, "Setting an Example: The Health, Medical Care and Health-Related Behavior of American Parents."

"How good a job individual parent do depends in part on how physically fit and mentally healthy they are."

The report concludes that low-income parents are more likely to be in poor health than higher-income parents; more educated parents are less likely to engage in risky health behaviors.

If you are reading this column, you probably believe you are among those higher-educated, higher-income parents who do not have poor health habits. But my guess is, you would admit to a fair amount of stress in your life, and Zill's research demonstrates that stress can be as big a predictor of poor health as income and education.

"It was a very striking finding in the study," Zill said in an interview. "Higher levels of stress are associated with poorer health and a greater incidence of risky health behaviours."

"The link is that parents and others who find themselves under stress often self-medicate, and they use it as a way to ease the stress, be it smoking, drinking heavily or vegging out in front of the television."

These are the familiar responses to stress. "But stress also has a way of impairing judgment and causing bad decision-making. That causes accidents, and it might cause you to get involved with people you shouldn't."

"And parents whose life situations are more stressful are more likely to neglect care."

What qualifies as stress? Zill says it is a self-defining term. You know it when you have it. But certainly those parents who are widowed, divorced, separated or living together in anger qualify, and Zill reports that they are twice as likely to be in poor health as married parents and they are more likely to engage in high-risk health behaviors.

And their children are watching. Not only do these parents have fewer physical and emotional resources to devote to the task of raising children; not only are they

modeling poor health habits in front of their children, but they are also demonstrating for their children—who will face plenty of stresses in their own lifetimes—that there is no healthy or positive way to get through the tough times.

“It is the counsel of despair,” said Zill. Modern parents are very often walking the knife’s edge of a tightly programmed life. One misstep and things fall into chaos. A health crisis, even a minor or temporary one, is the kind of bump in the road that can knock the wheels off the wagon. Stressed-out parents may believe they don’t have time for routine health maintenance and regular checkups. Stressed-out parents who abuse their physical well-being may believe they have found short-term release.

But your health isn’t anything you can ignore until later because your kids need you now.

“Parenting at certain stages requires a lot of work and supervision and attention,” said Zill. “We should remember that staying healthy is one of the things we can do to stay more effective as parents.”

(The Times of India, 11 May, 1999)

## Starve Or Crawl...

M. Mohan Ram

It is rare indeed for a community to be crippled by its own staple food. Poor agricultural labourers in certain pockets of northern and central India are forced into eating kesari dal, which like poison, cripples them for the rest of their lives. Nearly 32,000 paralysed victims in Rewa and Satara districts alone in Madhya Pradesh, have been reported.

The *crippling disease, Lathyrism*, characterized by paralysis of the lower limbs, has been known in India for nearly two centuries. It is caused by excessive consumption of the pulse, *Lathyrus Sativus*, commonly known as kesari dal which forms the staple food for the lower socio-economic groups, particularly in the districts of Rewa, Satara, Bhopal, Sanpar and Allahabad. Recently, it has also been observed in the border areas of Maharashtra and West Bengal.

*Lathyrus Sativus* is a hardy crop, giving good yields even under severe drought conditions. It is extensively cultivated in Madhya Pradesh and Bihar and to a limited extent in Uttar Pradesh, West Bengal, Maharashtra, Gujarat, Karnataka and Andhra Pradesh. It is cheap and has a high protein content (28%). In our country, on an average, a person eats two to three ounces of dal daily. But these poor people consume eight to 16 ounces of kesari dal flour as “chapatis.”

Both humans and livestock are victims of lathyrism. Human lathyrism affects the nervous system especially of young men in their twenties and thirties. Surveys have shown that in endemic areas, the incidence is four per cent of the total population. In the endemic areas, several

families have all the males affected. Though not fatal, this condition is incurable and cripples the victims for life. There is no known treatment.

The disease manifests itself only if the pulse is eaten in large quantities exceeding one-third of the total daily diet for prolonged periods from a few months to one year. It can be arrested only in its latent form by not eating the dal. Otherwise, it progresses irreversibly into four stages of disability.

The first stage is characterized by an awkward manner of walking with short jerky steps and crossed gait. Very soon the disease may advance to the second stage. Muscular stiffness makes it necessary to use a stick to maintain balance. Then, due to excessive bending of knees and crossed legs, the patient needs two crutches for support. Finally, the erect posture becomes impossible as the knee-joints cannot support the weight of the body. The patient is reduced to crawling by throwing his weight on his hands.

Appreciating the acuteness of the problem the Indian Council of Medical Research (ICMR) and the National Institute of Nutrition (NIN) have carried out extensive investigations during the last two decades on different facets of this preventable disease.

Lathyrus Sativus has become a subsistence crop due to drought conditions and lack of proper irrigation facilities in the region. As it gives the maximum yield even under adverse climatic conditions, it is considered a life saving crop. Consumption increases during drought years when other crops fail. The dal is doled out to agricultural labourers in lieu of wages, so it has become a staple food for the low-income groups.

The disease occurs more frequently in men than in women. Young men between 11 and 35 years and women between 6 and 15 years of over 45 years are particularly susceptible.

This preventable condition has not received adequate attention in the past. Scientists at the NIN have now demonstrated for the first time that the disease can be experimentally produced in animals. They have also identified the toxic factor in the pulse, which is an unusual amino-acid, providing a major breakthrough.

The most effective way of controlling the disease would be to ban cultivation of the pulse. This, however, is impracticable since it would perpetuate malnutrition for lack of other food crops at a comparable cost for the poor agricultural labourer. An alternative would be to implement an intensive educational programme to make the people living in the affected areas aware of the cause of the disease and the harmful effects of consuming large amounts of the pulse.

Based on the research work carried out at the NIN, a few simple and feasible solutions have been suggested to render kesari dal safe for human consumption. It is not difficult to remove the toxin. A household method is to steep the dehusked seeds in about four volumes of boiling water for an hour and to drain off the steep water. Nearly 95% of the toxin present in the seed is effectively leached out by this method. The seeds are then dried in sun, and the dal or its flour used. This is simple, but needs to be effectively tested under field conditions to determine whether it can be successfully implemented.

The parboiling technique removes 80 to 90% of the toxin. The advantage in this method is the plants now

available in our country for parboiling paddy could be used for this purpose. The seeds are soaked in water for short periods, steamed for 20 to 30 minutes and then dried in the sun. This method is suitable for processing the pulse on a large scale.

A genetic solution of the problem has also been investigated. Extensive screening of samples from several districts of Madhya Pradesh have revealed that toxin levels in different varieties of seeds ranged from 0.1 to 2.5 per cent. A collaborative effort between the NIN and the Indian Council of Agricultural Research has shown that a selective breeding of varieties of seeds with lowest content of toxins can be achieved. Propagation and cultivation of low toxin strains may be one of the effective methods to eradicate lathyrism without any drastic change in the food habits of the population.

(The Hindustan Times, 13 July, 1979)

## **Heat and Eat**

**Thankamma Jacob**

The ultimate dream! Food that is already cooked pulao, curry, dessert—packed and sealed. When needed all you have to do is take the packet out of the deep freeze, thaw the contents, reheat and serve. Very convenient, no doubt, but are these foods altogether safe? Do we need to keep certain precautions in mind?

### *Precautions*

- \* Buy only from reputed retailers.
- \* Check when you buy that the packets are clean, frozen hard and intact.
- \* Deep freeze the packets until use.
- \* Store minimally.
- \* Use immediately in case of power failure.
- \* Thaw the contents completely but gradually so that the interior of the packet also is thawed and not just the surface.
- \* Reheat thoroughly.
- \* Serve immediately.
- \* Reheat leftovers, cool and store in sealed dishes in the freezer. It is preferable, however, not to use leftovers.

Pre-cooked frozen foods when properly processed, packaged and stored are generally safe and acceptable. However this means observing several safeguards both at the factory and consumer level.

Let's talk about the factory level first. Raw foods have to be received in good condition. They should undergo microbiological examination at this stage and later to make sure that the bacterial and mould load is



within reasonable limits. Checks also have to be performed for tapeworm cysts in meat and meat products. However, very few food product manufacturers have extensive facilities for such testing. This becomes particularly important in the case of foods of animal origin which are well-known vehicles of food poisoning. Meat and meat products, poultry and milk (usually unpasteurised) are frequent culprits. Hence particular care has to be taken to prevent the entry of contaminated food into the factory. Once contaminated food enters the factory it will contaminate equipment and premises greatly enhancing the danger.

Once the raw materials are received, they will go through various pre-preparation procedures and then they will be cooked in the manner desired. After cooking, the products have to be cooled and then packed. All utensils and equipment used during cooking have to be kept scrupulously clean.

Packaging material also has to be free from disease-causing organisms. Once packed and sealed, the cooked product has to be stored in deep freezes at very low temperatures prior to sending or distributing it to retailers. Till the packets are sold to the consumer, the retailer also has to store them in the deep freeze. If cooking have been thorough and cooling and packing have been conducted in clean premises by adequately trained food handlers themselves free of disease using clean equipment, this is all the precaution required.

Most disease-causing bacteria and moulds are killed at very low temperatures. Some are however, only inactivated and not killed. There are few which actually thrive at low temperatures. To prevent disease, keeping up the 'cold chain' is of utmost importance during storage

at the factory, transport to retailers, storage by the retailer prior to purchase and storage by the consumer prior to consumption. Power failures at any point can completely disturb the balance. Since temperatures are not maintained at the desired level, bacteria (including pathogenic ones) are allowed to grow and multiply. If such food is then not thoroughly reheated it can still carry disease-causing organisms when consumed.

How do we as consumers know when the cold chain has failed? We can probably find out only at the retail level. The packets should be frozen hard and should not feel moist and should not be mushy or dripping. This is, of course, no guarantee that the product was stored at the appropriate temperature prior to being brought to the retailer. We can also ensure that we buy foods only from shops which are clean and well maintained.

In the case of food poisoning outbreaks reported from all over the world, manufacturers tend to 'blame the victim'. The victim or in other words the consumer is accused of improperly storing and using the product. And the manufacturer frequently gets away with it unless large numbers of consumers have been afflicted.

Notwithstanding this, we should take all precautions to protect ourselves. These precautions are, in fact, our 'final time of defence'. We cannot control what happens before the packet reaches us but we certainly can control what happens once it enters our kitchens. Another major precaution we need to take is proper care of the deep freeze. All foods should be stored in separate polythene packs. No food should be allowed to get spoilt. This will encourage cross-contamination i.e. bacteria will move or migrate from the spoilt food to other foods thus encouraging their spoilage as well. The deep freeze has to

be kept scrupulously clean at all times.

In other words, adequate cooking, proper temperature control and measures to avoid cross-contamination are the main, effective safeguards against food Poisoning.

We must remember to be particularly careful about meat or meat-based dishes. It is no secret that our slaughter houses are run under the most insanitary conditions. Infections can easily spread from one carcass to another. There is no testing worth the name to check on diseased animals and no facilities for sterilizing equipment or instruments used on a diseased animal.

In addition to meat products, milk products or products containing them (e.g. tarts, custard-filled bakery goods, pies, pastries and sweets), fish, fruit juices and preserves are all well-known hosts of harmful bacteria which cause nausea, vomiting, diarrhoea and sometimes liver damage and even death.

This kind of highly contaminated environment (which may well prevail in food factories too) brings the 'final line of defence' too close to our homes and kitchens for comfort. The problem is often that the 'final line of defence' becomes the 'only line of defence'.

Frozen cooked foods may contain several additives. These include nitrate and nitrite in the case of meat products, polyphosphates in the case of fish and poultry and antioxidants to preserve the added fat. There also might be extensive use of added flavours to make up for losses in storage. Nitrites can combine in the stomach with another set of compounds present in food called amines to form nitrosamines. The latter are carcinogenic. Nitrites can also convert the vital oxygen-carrying component of blood called haemoglobin into methaemoglobin. This

can even cause death particularly in infants and young children.

Polyphosphates are added to improve texture, keeping quality and reduce drip during thawing and cooking. Polyphosphates help to retain water inside the food. You then have the paradoxical situation of the consumer paying for more water than food.

It is evident that the occasional use of precooked frozen foods may present no dangers. They would, however, rarely match the wonderful aroma and flavour of fresh cooked food. It may be preferable not to give such foods too frequently to children in particular.

(The Hindustan Times, 7 July, 1990)

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### **Anti-depressants raise risk of intestinal bleeding**

Those who are on anti-depressant pills to treat anxiety, obsessive-compulsive disorders and post-traumatic stress disorder, could be at a risk of intestinal bleeding, ranging from mild to severe, which can be fatal. Gastrointestinal bleeding or haemorrhage is all forms of bleeding in the gastrointestinal tract from the mouth to the rectum. Patients taking antidepressant drugs classified as selective serotonin reuptake inhibitors (SSRIs) are 40 per cent more likely to develop severe gastrointestinal bleeding, according to a study in the *Journal of the American Osteopathic Association*. The SSRIs are most frequently prescribed as they are relatively low-cost, effective and safe, but they carry risks for gastrointestinal and intracranial bleeding—particularly when patients also use common over-the-counter pain relievers. The most common and concerning interactions occur with non-steroidal anti-inflammatory drugs (NSAIDs), including ibuprofen and naproxen, anti-coagulants like warfarin or antiplatelet drugs such as aspirin and clopidogrel, the study said. An expert recommended doctors to ask about all medications their patients take, including over-the-counter NSAIDs. The expert recommended doctors to monitor patients closely for symptoms of gastrointestinal bleeding during the first 30 days of SSRI therapy, especially if patients are taking concurrent medications that may increase bleeding risk.

## **Taking Too Many Medicines is Risky**

**Dr. N. N. Wig**

Paradoxically, people's health has never been so good as it is today. The scourge of smallpox has been eradicated. Polio is on its way out. Most common communicable diseases are far better controlled than before. People are living much longer. Life expectancy at birth has nearly doubled.

However, people are more worried about their health today. They don't consider fully fit. Over two-third people above 50 years in the UK take medicines. In India's big cities, the number is even larger. Swallowing pills and getting repeated medical tests done has become a way of life. The cost of health service is rapidly increasing.

About 100 years ago, the more we invested in health technology, the greater was the improvement in health. Now? We get poor returns for greater investment. Despite heavy financial investment greater improvement in health is less likely.

There is the problem of rising expectations on health. If the rich consume more medicines, pay more visits to hospitals and get more investigations for every minor ailment, the weaker sections too follow suit. They seek bigger share of doctor and investigative medical services even though there is very little evidence to suggest that overzealous investigations and medications have greatly benefited societal health.

The longer life span and greater improvement in health are perhaps related to general public health measures like better housing, sanitation, improved nutrition, clean drinking water and vaccination of children against common infectious diseases.

In this book *Medical Nemesis* (1974), Ivan Illich's opening sentence "The medical establishment has become a major threat to health" sent shock waves across the medical world, which are still reverberating. In some ways, the impact was like Gandhiji's comment in *Hind Swaraj* (1908) that modern science and technology was becoming a threat rather than a solution to our problems.

Illich used the medical term *Latrogenic* to refer illness produced by doctors and hospitals. Citing data from journals, he said nearly 10 per cent people are worse off when they come out of hospitals, having picked more infections, complications of treatment received and side effects of medicines. He described how doctors encourage people to seek more and more medical services for all kinds of minor ailments. His strongest criticism was at the cultural level—old age, pain and death have always been part of human existence and all civilizations have devised various cultural and spiritual ways to cope with this reality. Now by over-medicalising these problems. We are taking away from society these cultural coping mechanisms.

Medical intervention can be lifesaving in and emergency. The doctors provide relief from suffering to countless people every day. But the problem is that things are getting out of their control. The health sector is rapidly becoming an industry controlled by large commercial interests and multinational companies. Health is now treated as a commodity to be bought in the market.

Specialists have replaced general practitioners. And single specialists are being replaced by large multi-specialty clinics and hospitals, now run by large business houses. These are supported by powerful industrial groups making medicines, machines for investigations, surgical instruments and so on. The main emphasis is on how to

sell and make profit. Relieving suffering seems to be a by-product now; it is not the main concern of these techno-medicine industrial groups.

Doctors are pressurized to use particular brands of medicines or surgical instruments or use of investigation technology. Evidently, even research papers in noted medical journals are influenced by powerful pharmaceutical companies to promote their products. These companies have worked out two new approaches. One, broadening the definition of disease. The reasoning is that if more problems of daily living are seen as signs of diseases, then more and more people will use medical products. Hence, intense propaganda is done to present every discomfort as a symptom, every symptom as a sign of disease, every disease as a serious and dangerous condition threatening life.

And two, it is much more profitable to treat the healthy than to treat the sick because the number of healthy people in society is much larger than the sick people. This is a big breakthrough in the sales strategy of drug firms. In the name of promotion of health, everyone is encouraged to get medical examinations and laboratory tests done and take medicines to avoid some future illness. Millions of people are swallowing a large number of pills everyday with the hope that they would perhaps never get ill (or perhaps never die!).

True, a small number, especially those with serious symptoms, benefit but everybody taking pills will only fill the coffers of big pharma companies. Rarely doctors take patients into confidence and discuss with them the cost-benefit analysis of the drugs they are asked to take or tests they are asked to undergo.

Defining disease is not easy. It is a very slippery

proposition. For malaria, tuberculosis, cancer or a fractured leg, there may be a broad agreement but what about a headache, backache, leg pain or gas in abdomen? Should all of them be called diseases? What about baldness or wrinkles of the facial skin or dark shadows below the eyes? Are they diseases? Amazingly, people spend millions of rupees today seeking relief for these symptoms !

Doctors encourage people to think more and more in terms of diseases and medical solutions of daily problems of living. Hundred years ago, menopause was an important event in a women's life. But now it is presented as a disease. Every woman after 45 years is encouraged to consider herself as not being well and advised to take hormones and other medicines?

A powerful change in modern medicine is that risk factors to future health like obesity or raised cholesterols or higher than average readings of blood pressure are all being presented as diseases. It is sad to see patients clutching files containing all the latest laboratory tests and having boxes full of medicine of all sorts for conditions which are as yet not diseases but only indications for some possible illness in the future. Admittedly, a small number may be benefited but for a large majority it is not of much use because so many other variables like your genetic constitution, levels of mental stress, previous health status etc. are also relevant.

On the other hand, constant worry and anxiety about further ill health may damage your health much more than the benefit you will get from medicines. In a recent editorial in the *British Medical Journal*, it was reported that if 10,000 patients are treated with a Stain (anti-cholesterol medicine) for five years, 9,755 would receive no benefit.

It is a great dilemma for the poor common man. What should he do when he is not sure about the reliability of the medical advice he is getting. Health is now too important a subject to be left only to doctors and drug firms. Each one of us must take charge of our own health and take important decisions ourselves. The following general points seem important for guidance.

- \* Openly discuss with your doctor, the pros and cons of any line of treatment or investigations advised. How much urgent or necessary it is? What will be the benefit, the risks and the total cost-immediate and long-term ?
- \* It is better to stick your family doctor for routine medical problems rather than consult too many specialists. A family doctor knows about your previous illnesses, your family history, your lifestyle and can advise you better.
- \* Aging, illness, pain and death are all part of human existence. Medical professionals do not have a complete solution to these problems. All doctors also die. Apart from medical approaches, all civilizations have evolved different social, cultural or spiritual ways to cope with the problems of living.

*As the well-known 'Serenity prayer' says, "God, give me serenity to accept things I cannot change; give me courage to change the things I can and give me wisdom to know the difference!"*

(The Tribune, 8 January, 2006)

## **The Vitamin Hoax**

**Lalita Eswaran**

Unnecessary consumption of vitamin pills is not only a waste of money but also imposes an extra burden on the system.

Marketed in myriads of ways, health food and drinks, tonics, honey, glucose powders, vitamins and minerals promise everything from instant energy to good health, sturdy growth to great vitality and healthier blood to increased appetite. To the average educated Indian, these health foods and vitamin pills are a necessary investment, whether he needs them are not.

Indians thus spend Rs. 2,000,000,000 annually on these pills, potions and tonics. Much of this is money ill-spent, according to doctors and nutritionists who are unanimously of the view that a good deal of this intake is superfluous and at times can even be harmful to the system. Ironically, it is often those who can least afford tonics, health drinks and pills (these are invariably expensive) who are the biggest buyers.

Swallowing vitamin pills every day in the belief that they are capable of performing health miracles far beyond warding off the well-known vitamin deficiency diseases is, therefore, a sheer waste of money. Dr. Subhash C. Arya, a well-known paediatrician and honorary consultant to the Ganga Ram and Holy Family hospitals in New Delhi points out: "While most substances are harmless at a low level of intake, all substances—even elements that are essential to life—can become dangerous if you overdo them."

Any excess intake of water-soluble vitamins such as Vitamin C and vitamins of the B complex group "simply pass from the mouth to the intestines, to the blood, to the

kidneys and then out through the other end of the body dissolved in urine.” But even this imposes an extra burden on the system, with no gain at all.

According to a US Food and Drug Administration report, Vitamin C, which some people consume in doses of anywhere between 1000 and 4000 milligrams daily, to prevent or lessen the symptoms of the common cold “does indeed have a mild Antihistaminic effect, helps stop runny noses, sneezing and slightly reduces the severity of the cold. But an ordinary Antihistamine from the Chemist might be a better choice because Vitamin C also acts as a reducing agent: it increases the breakdown of foods and nutrients and the elimination of them.

The much Vitamin C, the report adds, has been known to partially destroy the Vitamin B12 in foods, cause the formation of kidney stones in predisposed individuals, menstrual bleeding in pregnant women and have adverse effects on growing bones.

“Large amounts of Vitamin E taken by some people in search of protection against heart disease and in the pursuit of youthful strength and sexual vigour,” the report continues, “have resulted in headache, nausea, giddiness, fatigue and blurred vision.” Excessive intake of Vitamin E may also cause a relative deficiency of Vitamin K, which is necessary for normal blood clotting. And perhaps the unkindest, finding of all is that prolonged daily intake of 4 to 12 grams of Vitamin E, once touted as an aphrodisiac, may actually reduce gonadal function. (The gonads are the tests and the ovaries, which control the production of sperm and egg cells.)

Vitamin B complex is yet another superfluous vitamin supplement promoted by multinationals through high-powered advertisement campaigns. These campaigns

have been so successful that almost every second Indian considers himself deficient in the vitamin and gobbles pills with or without a doctor’s prescription. Research has shown that excessive Vitamin B complex—that is, a pill a day over a long period—can cause skin changes, jaundice, gastro-intestinal ulcers, abnormal liver function, increased levels of uric acid in the blood and lowered glucose tolerance. Though evidence is accumulating that extra doses of Vitamin B and C do hurt in the ways mentioned, it has traditionally been believed that these water-soluble vitamins are washed away in the urine and sweat.

The fat soluble Vitamins A, D, E, K generally consumed along with fat containing foods, however, are stored in the body and have lasting toxic effects. The Recommended Dietary Allowances (RDA) for Vitamin A is 5,000 IU (international units) and for Vitamin D 400 IU. Since these vitamins can be built up in the body, prolonged intake of Vitamin D at only five times the RDA can cause physical and mental retardation, calcium deposits in soft tissues in children and adults results, in kidney damage. At 15 to 20 times the RDA, Vitamin A produces headaches, nausea and diarrhoea. Both these vitamin supplements are totally unnecessary in Indian conditions.

Calcium is another important mineral aggressively marketed. What the educated Indian seems to be unaware of is that two glasses of milk and some green leafy vegetables consumed daily provide sufficient calcium, and at less cost, for a normal person. When too much is consumed in the form of pills, it has been shown to depress nerve function, cause drowsiness and extreme lethargy. Excess calcium has also resulted in calcium deposits in tissues, where it does not belong, and false X-ray signs of cancer.

Glucose powder is yet another commercial product which enjoys wide popularity, says Mrs. Thankamma Jacob, a well-known nutritionist and adviser to the Quality Testing Laboratory of Lady Irwin College, "Glucose is essential, but if consumed by normal healthy people every time they have a run-down feeling, it can have harmful effects. True, they will get abundant energy within minutes. But it will be followed by a dullness, a lethargy that permeates the whole being because of a sudden fall in blood sugar."

Commercial honey, too, is not as nutritious as it is made out to be. Comprising mainly of glucose, fructose and some potassium, an adult would have to consume 90 table-spoons a day for any significant benefit of potassium to accrue, says Mrs. Jacob. At the same time, such large amounts of sugar would only hasten tooth decay and obesity.

For some unknown reason, tonics have acquired a respectability all their own with all sections of society. Says Dr. Subhash C. Arya, "My patients force me every day to prescribe some tonic that will fatten the child, increase his appetite, make him taller or build up his resistance against illness. That tonics can do any such thing is absolutely incorrect. There are many preparations in the market for stimulating appetites, including hormones, amino acids and antihistamines but their safety and effectiveness have to be carefully considered before taking them, because growth is largely influenced by genetic, hormonal and nutritional factors which none of these tonics can influence."

(The Illustrated Weekly of India, 8 May, 1983)

## **Side-Effects of Medicines: Myth & Reality**

**Dr. R.P. Bansal**

The physician has to be very careful in dispensing drugs. He should take full care and prescribe only well-established drugs with which he is fully conversant. If at all a new drug has to be used, be sure it is really indicated and, before prescribe, go through the literature of the drug thoroughly. Never prescribe just because the drug has been strongly recommended by the medical representative.

Try to use the minimum number of drugs at a time. Similarly, avoid using multicomination preparations.

When the patient presents in acute stage of an illness (e.g. fever, cough, pains etc.), do not prescribe vitamins or tonics routinely along with the proper medicine. They increase the bulk of drugs ingested by a nauseated patient without any added benefit. These can, however be well prescribed in the convalescent phase of the disease.

Drugs used for symptoms (e.g pain-killers, antipyretics, antiemetic's) should be prescribed only in an Emergency and not on regular basis (e.g Three times a day, etc.) this may lead to continued ingestion of the drug even when the symptom has subsided. Also, it masks the natural course of the disease, thus confusing the diagnosis.

Do inform the patient about any special precautions to be taken while using a particular drug for example, ask him to take painkillers like Brufen or Aspirin only after taking full meals. Special attention should be paid to the dosage of the drug prescribed. It is not a good practice to prescribe one capsule three times a day for all

adults. Dosage of the medicines should be individualised depending on the age, weight, underlying disease and general condition of the patient.

Since almost all the medicines have to dissolve in the stomach or gut, metabolised in the liver and excreted in the urine, so unnecessary medication puts unwanted burden on these organs. Therefore, avoid giving a drug unless it is really needed.

#### *Dos and Don'ts for the patient*

1. Follow carefully the instructions of your doctor about the dosage and timing of the doses.
2. Don't ever take any drug on empty stomach unless specially advised. In general it is better to take the medicines ½ to 1 hour after ingesting the meals.
3. Don't take any drug with tea, coffee or alcoholic beverage. In general, all medicines should be ingested with water.

Although some drugs like Aspirin, Chloroquine etc. may be taken with milk with some benefit, but unless so advised do not take any drug with milk as well. Some antibiotics may prove harmful if taken with milk. Efficiency of many tonics and iron preparations decreased if taken with milk.

4. In an infant, it may not be advisable to give the medicine after the feed because the baby is likely to vomit. It is preferable to give the medicine before feeding or about an hour after the feed.
5. Dosage of liquid preparation should be measured in mls and not in spoons. Sizes of spoons vary greatly! A tea spoon may contain 2ml to 6 ml of the syrup in

different households. Use of tea spoons usually leads to under medication.

6. Although some general home remedies may be tried for common ailments like cold, loose motions etc do not ever indulge in self-medication. It sometimes seems to be a short cut route but may prove disastrous one.

It can be concluded that a drug is innocuous. Only people using them can make it useful or harmful. A fire can cook food or burn the cook depending upon the way it has been handled. Similarly, badly used drugs can lead to disease, instead of curing it.

But maximal benefit and minimal harm can be safely expected if a drug is properly selected by a competent physician and used in the optimum dosage with adequate precautions for the required duration.

(The Indian Express, 31 October, 1995)



## **Deadly Miracle Drugs**

**Dr. Pankaj Mandale**

A slight nick from a razor could leave you struggling for life. The most basic of operations could become impossible to perform. Your survival will depend more on luck than the doctor treating you. We are staring at a future without antibiotics, and the situation is nothing short of a catastrophe.

Antibiotics, usually obtained from micro-organisms or semi-synthetic modifications of natural compounds, are medicines that can destroy bacteria or inhibit their growth to cure deadly infections, but the irrational use of these drugs had led to a bacterial backlash with the microbes developing resistance against them. Called “superbugs”, these dangerous bacterial strains are causing infections for which no cure is in sight. Even most powerful antibiotics have been rendered ineffective against them. The WHO has warned that “many common infections will no longer have a cure and, once again, could kill unabated.”

British microbiologist Alexander Fleming, who had discovered penicillin, the first antibiotic known to mankind, had warned in 1945 about the threat in his lecture after winning Nobel Prize. “It is not difficult to make microbes resistant to penicillin in the laboratory by exposing them to concentrations not sufficient to kill them, and the same thing has occasionally happened in the body. The time may come when penicillin can be bought by anyone. Then there is the danger that the ignorant man may easily under-dose himself and, by exposing his microbes to non lethal quantities of the drug, make them resistant.”

## *Belligerent Bacteria*

Termed antimicrobial resistance (AMR), this is essentially a natural phenomenon caused by mutations in genes. But the wrong and excessive use of antibiotics accelerates the growth of antibiotic-resistant bacteria. When exposed to antibiotics, vulnerable bacteria are killed, but the resistant ones continue to multiply, causing prolonged illness or even life-threatening conditions. Infections caused by resistant bacteria may require stronger and more expensive antibiotics, which may have more severe side effects. The problem is compounded by the fact that a bacterium can swap its genetic code with other bacteria, even the ones from different species. These bacteria may spread and cause infections in other people who have not taken antibiotics.

The emergence of new bacterial strains resistant to several antibiotics at the same time has made the situation more worrisome. Such bacteria may become resistant to all existing antibiotics in due course, making even simple surgeries, for which antibiotics are administered beforehand to prevent the possibility of an infection, impossible to perform.

## *Causative factors*

The miracle drugs are losing their magic due to repeated misuse. If you are in the habit of popping them even when you do not need these, these might just not work when you need these the most. Doctors are under pressure from patients to overprescribe antibiotics. Many patients insist on antibiotics for viral infections like common cold, against which these medicines do not work. The “smarter” ones do not even feel the need for a prescription to buy these drugs. Unfortunately, most chemists are more than willing to oblige them.

Even when the drug has been rightly prescribed, some patients do not bother to finish the course, which again leads to infection and, in the bargain, stronger bacteria emerge that require a higher dose later on. This vicious circle unleashes increasingly resistant strains of bacteria with lethal potential.

It is distressing that hospitals, the last hope of critically ill patients, have themselves turned into breeding grounds for deadly infections. Studies conducted by the US-based Centre for Disease Control and Prevention (CDC) reveal that 2 million people in America contract hospital acquired infections annually, resulting in 20,000 deaths. There is no reliable data available for India. While some experts claim that hospital-acquired infections accounted for 50 per cent of all infections five years ago, others maintain that the average incidence ranges from 10-30 per cent.

The bacteria responsible for hospital-acquired infections are much more resistant than the ones found in community setting. A 10-year study conducted by Sir Ganga Ram Hospital on 77,618 patients has shown an alarming rise in AMR. The study found that the bacterium *Klebsiella pneumoniae*, which damages human lungs, had stopped reacting to carbapenem, the strongest antibiotic available, and the resistance to this last-resort drug had grown from 2.4 per cent to 52 per cent in a matter of just one decade.

In some cases patients admitted to hospital with a breathing problem acquired pneumonia from the ventilator. The hospital staff kept on administering antibiotics but without hope. Patients in hospitals have low immunity, making the treatment more complicated. On account of high levels of exposure to antibiotics and their prolonged

misuse, bacteria in hospitals develop more resistance as a natural survival strategy.

Antibiotics have also entered the human food chain due to misuse of antibiotics in animal husbandry. While Europe has banned the use of antibiotics to boost livestock growth, this practice is widely prevalent in other parts of the world. The release of pharmaceutical waste into water bodies is also a matter of deep concern.

#### *Disturbing Findings*

AMR, which claims thousands of lives every year, is a global concern, but the problem is more acute in India. According to a 2010 WHO report, multidrug-resistant tuberculosis causes 1.5 lakh deaths worldwide every year. Almost half of these cases are estimated to have occurred in China and India. The prevalence rate of extended-spectrum beta-lactamase (ESBL), an enzyme that deactivates antibiotics, in *e coli* is 3-5 per cent in France, but around 80 per cent in India. Studies reveal that 30 per cent infants die in India every year from germs that do not respond to antibiotics. In the last 10 years, there has been a 95 per cent rise in pneumonia and blood and wound infections in India, which cannot be cured by last-resort drugs. The findings are alarming and call for urgent action.

#### *Tread with Caution*

- \* Avoid self-medication. Take antibiotics only when prescribed by a registered medical practitioner.
- \* If the doctor has prescribed antibiotics, complete the course even after you get well. Not completing the full course encourages the emergence of drug-resistant bacteria.
- \* Do not take antibiotics for viral diseases like flu.

These medicines work only for bacterial infections.

- \* Basic hygiene like washing hands and maintaining cleanliness while preparing food can stop the spread of bacteria, including resistant strains.

#### *Long way to go*

Resistant bacteria are developing at a faster pace than the solutions to tackle them. Research on antibiotics is not a profitable proposition owing to their short duration of use, longer research span and high R&D costs.

The onus is on doctors, pharmaceutical companies, government agencies, NGOs and chemists to promote the judicious use of antibiotics. However, India lacks a national policy on antibiotics to check their indiscriminate use and over-the-counter sale. Poor hospital hygiene practices, absence of infection-control protocols and lack of awareness among the nursing staff and patients are the major problem areas. Some organizations are generating awareness about the proper use of antibiotics, but these initiatives will not be enough without government support. For instance, the Emerging Antimicrobial Resistance Society (EARS), an NGO, is doing its bit to collect data on resistance. The government should complement these efforts by initiating a national survey on the prevalence of AMR.

(The Tribune, 6 November 2013)

### **Sub-Standard Drugs Useless Painkillers**

While the debate goes on what kind of pharmaceutical and health care policy this country needs and even as the government seems all set to announce its promised new drug policy, disturbing reports continue to pour in of the prevalence of sub-standard medicines on the Indian market. The latest such report is based on the government of Maharashtra's own figures. Its food and drugs administration discovered no fewer than 688 sub-standard drugs in chemists' shops in the state in 1984-85. Unsurprisingly, these medicines were found to belong to all categories, including that of life-saving formulations to be given to patients in acute distress.

Staggering as it is for a single year, the number of spurious drugs actually discovered in checks is only the proverbial tip of the iceberg. The Union government has itself admitted that up to 20 per cent of all formulations produced in the country may be spurious or sub-standard, and there are over 60,000 formulations produced by 8,000 companies on the Indian market. It is also known that, contrary to the belief held by many doctors and middle-class Indians, the drug multinationals are basically as unreliable as their indigenous counterparts when it comes to quality. 1980—no consolidated figures are available for later years—23 MNC subsidiaries accounted for 135 samples of sub-standard drugs from a total of 218. And yet action has rarely been taken by the government against the guilty firms, although it can cancel their licences under the law. This is true even of Maharashtra which has a relatively efficient drugs administration and employs nearly one-fifth of the country's drug inspectors, themselves adding up to a miserable total of 500 or so.

### **Whither Drug Policy?**

This is the story of drugs that are sub-standard. That of drugs that are therapeutically useless and/or dangerous is even more frightening. These account for about two-thirds of all formulations on the Indian market. Their list includes, besides relatively lesser known drugs, such common ones as the antidiarrhoeal chloramphenicol-streptomycin combination and halogenated hydroxy quinolones, the pain killer analgin and its combinations and a host of cough medicines and tonics. In reality this country, like most others, needs no more than a few hundred drugs: World Health Organization recommends only 200 and Bangladesh's highly regarded drug policy use only 150. Logically a rational drug policy ought to concentrate on eliminating such drugs and promoting essential ones. That exercise, although long overdue, has never even been attempted in this country. It remains to be seen if the promised new drugs policy will like its predecessors continue to be a mere drug industry policy on prices and production, or one which takes up the real issues involved.

### **Watch Your Back!**

**Jaya Chandran**

Are you one of those who can't sit 'in peace' anywhere—be it in office, in your car or even on your favourite couch in front of the television? Well, you too might be a victim of one of the most common problems faced by adults in urban India: Backache. According to medical experts, more than 80 per cent of people all over the world experience a backache at least once. The common symptoms are weakness in your legs and feet, tingling or burning sensation and/or sharp pain or dull ache. Pain in the lower back may originate from the spine, muscles or nerves in that region. It may also be felt in your mid or upper back. "The most commonly affected area is the lower back as it supports most of your weight," says Dr. Yash Gulati, orthopedic surgeon at Delhi's Indraprastha Apollo Hospital.

#### *Mark Your Moves Carefully*

The problem develops gradually, say experts. You may have been sitting, standing or even lifting things in the wrong manner for a long time. And then one day, it hits you suddenly—while reaching for something in the shower or getting up from the chair.

"It might appear sudden, but your back must have been losing strength along? our disc is like a shock absorber. One it give away, the small joints also start degenerating," says Dr. Gulati. At times, the disc ruptures and puts pressure on the nerves. However, backaches should not always be linked with wrong postures, warns the doctor. There can be various other reasons also. They include small fractures in the spine because of osteoporosis, muscle spasm, ruptured or herniated disk, degeneration of

the discs, poor alignment of disk, poor alignment of the vertebrae, spinal stenosis (narrowing of the spinal canal), strain or tears in the muscles or ligaments supporting the back; spine curvatures and infections. Women may have backaches in case of gynaecological problems. Ailments related to kidneys and pancreas also cause back pain.

#### *The Risk Index*

You have every reason to worry if your work involves lifting heavy objects, bending or twisting. Vibration of the body for long hours as in the case of truck drivers or people using sandblasters is also harmful. Avoid sitting for long hours in the wrong posture, quit smoking and check if you are overweight and remember, not exercising means inviting trouble. Pregnant women and people above the age of 30 are also vulnerable to back problems. Those who have arthritis or osteoporosis should take care.

#### *Knock The Doctor's Door*

Seeking medical help should not be delayed. In fact, rush to a doctor if the pain doesn't subside in two weeks even after trying out home remedies. Never delay a visit to the doctor if the problem spreads to the buttocks, arms or legs.

#### *Back To A Good Back*

- \* Exercise improves your posture and flexibility, strengthens the back and controls weight. A complete exercise regimen includes aerobic activity (like walking, swimming, or riding a stationary bicycle), as well as stretching and strength-training.
- \* Proper furniture is very important.
- \* Avoid lifting heavy object and standing at a stretch. If

you need to keep standing, use a stool.

- \* High heels are not recommended and use cushioned soles when walking.
- \* When sitting, especially in front of a computer, make sure that your chair has a straight back.
- \* Rest your feet on a stool while sitting so that your knees are higher than your hips.
- \* Place a small pillow or rolled towel behind you lower back while sitting or driving.
- \* If you drive long distances for work, bring you seat as forward as possible to avoid bending.

#### *Backaches And Babies*

Backaches during pregnancy can be particularly annoying. They can be because of poor posture, lack of exercise, the weight of the baby, or even the stretching of ligaments. Pregnant women should get massage done, sleep with pillows supporting their legs and back, swim and stretch.

(Indian Express, 28 May, 2006)

## **Pain in the Hard Disk!**

**Vandana Majumdar**

It is now several months since the InfoTech industry virtually swept the country off its fragile feet. Every one worth their salt has computerized and even many who cannot afford chips, let alone microchips, have chosen to tread the PC path. Tens of thousands of people sit bunched up over their trusty new computer, their eyes all screwed up and watering, and bang away furiously at protesting keyboards: each of them is doing the work of 10, and the country is getting more work done in less time than ever before. At least, so they say.

But there is also a flip side to the coin: just as the computer is helping the people to handle much greater work-loads, so are they causing burnout among the talented and hardworking computer professionals and many others who work on computers. Instances abound, of people breaking down after logging long hours on their machines.

- \* Nirmal Vaid (30), who runs a features agency, had backaches, severe pain in his hands and wrists every time he worked on the computer for long. He ignored it till it became so acute that he couldn't even move his wrist. He consulted an orthopaedic and was diagnosed as suffering from repetitive strain injury (RSI).
- \* Arun (30), a computer operator suffers from stiffness and cramps all the time.
- \* Sushant (9) is a computer games addict and suffers from uncontrollable blinking.

Do the above cases sound familiar to you? Is at least one member of your family or a colleague suffering

from any of the above symptoms? Welcome to the vast global family of 'computer-patients'.

The world over, people working in computerized offices have been, for several years now, suing their employers for diseases and physical breakdowns sustained by prolonged proximity to computers. Much research has been done; that computers are hazardous to health, is now more or less an accepted fact.

Amazingly, however, little or no research computer-related health hazards has been conducted in India, the most happening place as far as the infotech industry is concerned! The number of computer users in the country is growing by leaps and bounds but the awareness among the tech-dependents is abysmally low.

Sources at the All India Institute for Medical Sciences, the premier research institution in the country, curtly say that there are "more pertinent areas that require urgent attention."

But Dr. NS Laud, has seen a 10-fold increase in neck, shoulder and back problems in Mumbai in the last five years. Of these cases, at least 80 per cent, are reported by those who do more than five hours of computer work a day.

Perhaps of the most concern is the age factor: according to Nasscom, the 18-24 age group spent maximum time at the computers (49%), followed by the age group of 25-39 (28%). "Cervical spondylosis comes of wear and tear of some muscles, bones and ligaments and stress. Most of these patients were more than 40-45 years old. Today, I have 23-year-olds with similar complaints," Laud points out.

The Repetitive Strain Injury that Nirmal Vaid suffers from is by far the most common yet little-known ailment. This happens as the soft tissue in tendons and the skin does not get time to recover from the pounding it receives during typing. Typical symptoms are sore tendons, burning sensation, numb joints, and muscle spasms in the hand, shoulder, back or neck.

According to Dr. D.K. Gupta, orthopaedic surgeon high-speed typing and repeated keystrokes, and long periods of clicking and dragging the mouse, slowly 'accumulate' damage to the body-known as Cumulative Trauma Disorder (CTD).

"There will be a rapid increase in breakdowns if the work ethic related to computer usage is not regulated." says Laud. "Apart from diffused, shifting and unrelated pain in the neck, shoulder, back regions, this technology is also throwing up problems related to vision and psychology."

Other "force related" ailments are carpal tunnel syndrome, tendonitis, and bursitis among a host of others, if neglected they even lead to disability. There is also the question of radiation, which has never been satisfactorily answered. Dr. S. Hukoo chief of Radiation Oncology at Dethi's Rajiv Gandhi Cancer Institute, claims that "ELF radiation can promote the disease after cancer has been triggered by another agent, and can contribute to the growth of cancerous tumours." But computer companies are not buying any of this.

Koushik Chatterjee, chief, technical support (north) of Hindustan Computers Ltd, says emissions of computers are well below safe levels set out in international recommendations.

Peer pressure to be computer savvy exerts a lot

of stress on those who are not into technology. But the desire to master it without adequate training leads to many problems. "Training procedures tell you little about how to sit, key in, and relax. The challenge is to figure out how best to absorb the technology without hurting the body," says Laud. Meanwile, watch out for symptoms, and be sure to take frequent breaks while working on computers.

#### *How to avoid injury*

##### *Ergonomics*

- \* Maintain a neutral posture, free from awkward angles or positions.
- \* Keep the wrist and hand in a neutral position, never bend.
- \* Use as little force as possible when clicking or dragging mouse.
- \* Avoid pounding the keys or holding the mouse in a death grip.
- \* Don't tuck the phone between shoulder and arm while working on the computer.
- \* Adjust your cold muscles and tendons are at a much greater risk of overuse injuries.
- \* Frequent short breaks are essential.

##### *Radiation*

- \* Keep your computer more than 4 feet from the back and sides of other computers.
- \* Do not stand or lean against the back, top or sides of the monitor, as these are the areas of greatest radiation concentration.
- \* Move copiers and laser printers away from work areas.

##### *Screen Controls*

- \* Top of the display screen should be at, or slightly below

eye-level and at about 18-24 inches away from the face.

- \* Characters on the screen should be easily visible. In setting up software, choose options giving text that is large enough to read easily on your screen.
- \* Select colours that are easy on the eye.
- \* The Screen should be cleaned of dust frequently to ensure the image is sharp.

#### *Proper visibility*

- \* Adjust brightness and contrast controls to suit lighting conditions in the room.
- \* Eliminate reflected light from other sources.
- \* Keep bright lights out of your field of vision.
- \* Get your vision checked frequently.
- \* If you wear connective lenses, ask about lenses that have a focal distance designed for working at a computer.  
Contact lens wearers should blink frequently and use eye moisturising drops to avoid “dry eye” syndrome.

## **80 Going on 18**

### **Vivita Relan**

Foods that fight age may not quite reverse the clock but they can substantially slow down the ageing process, making you look and feel younger.

Life would be infinitely happier if we could have been born at the age of 80 and gradually approach 18, said Mark Twain. That was not to be, but delaying those wrinkles and a host of degenerative diseases may be possible by adding some anti-ageing foods to your daily diet, say Mumbai-based Nutritionist Shama Adalja and Delhi-based Dietician Dr. Shikha Sharma. Among the most effective age-defying miracle foods are:

*Sprouts: Highly nutritious, sprouts are a good source of protein and Vitamin C. Sprouts can grow from seeds of vegetables, grains, legumes, buckwheat and beans. As we age, our body’s ability to produce enzymes declines. Sprouts, which are a concentrated source of the living enzymes and life force that is lost when food is cooked or not picked fresh, reduce the damage. Also, due to their high enzyme content, sprouts are much easier to digest than the seed or bean from which they come.*

*Garlic: Garlic contains flavonoids that stimulate the production of glutathione (the tripeptide that is the liver’s most potent antioxidant). Glutathione enhances the elimination of toxins and carcinogens. Ideally, garlic should be eaten raw as cooking destroys some of its potency. Garlic lowers total cholesterol, but raises good cholesterol, reduces risk of atherosclerosis (hardening of the arteries), blood clots, and certain cancers.*

*Onion: Onion contains two powerful antioxidants:*



sulphur and quercetin. Both help to neutralize the free radicals in the body and protect the cell membranes from damage. *Onion also inhibits the growth of cancerous cells, increases good cholesterol (especially when eaten raw), reduces total cholesterol level, the risk of diabetes and certain cancers, increases blood-clot, dissolving activity, helps prevent a clot, stimulates the immune system, has antibacterial and anti-fungal properties and helps deal with gastrointestinal disorders.*

*Beans and Lentils:* Beans are low in fat (except soyabeans), calories and sodium, and high in complex carbohydrates and dietary fibre. They are a rich source of protein and have modest amounts of essential fatty acids—mostly Omega-6 (only soyabean which has significant amounts of Omega-3 fatty acids). Beans rank low on the glycaemic scale, which means they do not cause hunger-inducing spike in blood sugar levels associated with refined grains and baked goods. They also offer ample fibre (one cup of cooked beans can provide 15 grams of dietary fibre, more than half the recommended ‘daily value’ of 25 grams) and are released into the bloodstream slowly, providing energy and satiation for a sustained period.

*Yoghurt:* Yoghurt lowers chances of food allergies and inflammatory, allergic conditions like asthma and eczema, urinary tract and bladder infections, inflammatory intestinal disorders, including inflammatory bowel disease, intestinal cancers, duration of gastroenteritis and rotavirus-induced diarrhoea in infants. It also helps prevent tooth decay.

*Hot Peppers:* Pepper—sweet bell or hot chilli—is a member of the plant genus ‘capsicum’. All pepper contains a compound called capsai-cinoids. This is especially true

of chilli pepper, which derives its spicy heat as well as extraordinary anti-inflammatory, analgesic, anti-cancer and healthy heart effects from high levels of capsaicinoids. In addition to capsaicin chillies are high in antioxidant carotenes and flavonoids, and contain about twice the amount of Vitamin C found in citrus fruits.

*Nuts and Seeds:* A handful of raw, unsalted nuts can dramatically decrease risk of cancer, heart disease and diabetes, help to control weight and reduce visible signs of ageing such as wrinkles and sagging skin. The appetite-suppressing and health benefits of nuts and seeds are lost when they are salted, oiled, roasted, stale or rancid. All nuts and seeds are healthful in moderation. The key is to eat a variety, though some stand out for their exceptionally healthy fatty acid composition, in either omega-3 or omega-9 (monounsaturated) fatty acids. Both fatty acids are heart-healthy; omega-3s are powerful anti-inflammatory agents. They make a good midmeal snack but should not be taken in excess (over 30 gm a day) by people watching their weight.

(The Hindustan Times, 24 July, 2006)

## How to Age Well

Neeta Lal

Conventional wisdom tells us that creaky joints, lack of appetite and a closet full of medicines are an inevitable part of ageing. But an increasing number of health professionals across the globe are endorsing the view that a prudent diet and exercise programme can help the elderly sail through their golden years. In other words, many of the degenerative changes that plague old age cardiac ailments, diabetes, osteoporosis, blood pressure can be easily reversed or prevented by following an 'age well' plan.

Dr. Smriti Vyas, Consultant General Physician of Max Hospital explains the concept: "An age well plan is a long-term, holistic look at an elderly person's diet and exercise to help minimize her/his chances of falling ill, while simultaneously maximizing physical and mental productivity." Since a person's body composition changes with age, adds Vyas, muscle mass decreases due to a decelerated metabolism. Hence, nutritional and exercise requirements for the elderly are totally different from that of a teenager or a 40-year-old. They need to consume extra doses of certain nutrients and totally avoid the others.

So what are the foods that one needs to focus on? "Calcium and Vitamin D are crucial for the elderly," advises Dr. Ravinder K Tuli, Senior Consultant, "Calcium is imperative for the prevention of osteoporosis (porosity of bones leading to brittleness) and maintenance of healthy bones, while Vitamin D helps absorb calcium into the system. Vitamin B12 is needed to build red blood cells and maintain healthy nerves. Similarly, zinc helps shore up one's immunity while potassium maintains blood pressure."

In addition, doctors advocate that folic acid and B vitamins help lower levels of homocysteine, a compound found in the blood that causes cardiac disorders. "Bowel disorders are also quite common in old age." Elaborates Dr. Ishi Khosla, a nutritionist, "so one should increase one's intake of fibre to prevent constipation." Ergo, five servings of fruits and vegetables per day, like carrots (provides beta-carotene for better vision), peppers, melons, cabbages, tomatoes (contains lycopene that inhibits cancers), berries and at least a cupful each of wholegrain flour and cereals must be consumed. Also, Omega-3 fatty acids found in certain types of fish, flax seeds and canola oils are important.

"Remember to replenish your system with at least 12 glasses of water. This not only prevents dehydration but also keeps your kidneys in great working order, detoxifies your system and lubricates the joints to improve mobility." The nutritionist also advises opting for foods of varied and contrasting colours, textures and flavours. "Remember," she says, "to stick to original foods and not supplements. Cut down on refined sugars (jaggery is better). Spice up your food with herbs and healthy flavourings rather than oil or ghee, salt and red chillies, which may provide taste but are harmful for the body."

Apart from the right intake of nutrients, a well-balanced health plan also factors in the right kind of exercise. Although cardiovascular and aerobic exercises work best for all age groups, it is best that the elderly do not overdo the exercise bit, cautions septuagenarian fitness trainer Rama Bans, who trains Miss India beauty contestants. "You are not aiming to be a marathon runner at this age," says Bans. "The idea should be to keep moving—a walk in the nearby park, a climb up and down the stairs

four-five times in a day, gardening, vacuuming the house, walking your dog, playing with your grandchildren are all wonderful and potent ways to stay active.”

Also doctors believe that improving the strength of core muscles (abdomen, trunk, pelvis and buttocks) goes a long way in improving bodily balance, motility (spontaneous movement) and posture. “As people age,” elaborates gym instructor Ashwini Kolhapure, “the nerves in their cerebellum—the command centre for movement begin to lose their waxy myelin coatings and wither. By activating these neural centres through a series of movements, people can keep these nerves activated longer.”

Yoga, tai chi (all different exercise regimens), says Kolhapure, help enormously in building ‘core strength’. Not surprisingly, when clients visit Phyllis Douglas, owner of Equilibrium Fitness in La Verne, California, a gym that specializes in elderly rehabilitation, her thrust is always on building the person’s core strength first.

Says Douglas Vetter, Assistant Professor of Neuroscience at Tufts University School of Medicine, US, in Newsweek magazine, “Although core strength exercises are not a magic bullet, it is not a stretch to say that we may be able to put off some of the degeneration this way.”

The right mental attitude—building a close circle of friends, cultivating hobbies and generally keeping busy is another way to promote well-being in old age, say psychologists. Japanese wellness guru, Dr. Shigenki Hinohara, 94, author of *How To Live Well*, for instance, eats frugally and sleeps little but feels the right mental attitude is the key to his longevity.

The million-plus sales of his book have consolidated

his position as Japan’s guru to healthy ageing. “If you keep learning something new, keep working even after 75, you’ll never get old. When I get to 95, I’ll take up golf because then I’ll finally have time for it,” he says.

Dr. Andrew Weil, the celebrated Professor of Medicine at the University of Arizona stresses minimal alcohol/tobacco/drugs consumption over and above meditation, touch, massage, walking, yoga, good food, productivity and adequate rest. Desi new-age spiritual guru Deepak Chopra too considers creative pursuits as the best “anti-ageing pill”. “Maintain old friendships, build new ones and, apart from physical and mental well-being, try to develop your spiritual side too. This can act as the wonder drug for many of your age-related problems,” is his advice.

(The Tribune, 16 April, 2006)

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### **Aerobics can Delay age-related cognitive decline**

While most studies on exercise and cognition have focused on the elderly, a new study suggests that aerobics can even prevent or slow the appearance of at least some age-related cognitive changes in young and middle-aged adults. It also found that aerobics training increases executive function—cognitive processes important for reasoning, planning and problem-solving—in adults as young as 20, although the effect was stronger with increasing age. Aerobic exercise is any type of cardiovascular conditioning which can include activities like brisk walking, swimming, running or cycling. “Executive function usually peaks around age 30 and aerobic exercise is good at rescuing lost function, as opposed to increasing performance in those without a decline,” said an expert. For the study, researchers tested 132 adults aged between 20 and 67 for executive function, processing speed, language, attention and episodic memory prior to being assigned to groups and at 12 and 24 weeks. The findings, published in the journal *Neurology*, showed that after 24 weeks, there was a significant improvement in executive function in the aerobics group for participants of all ages and the greater the participant’s age, the greater the improvement in executive function.

## **Glaucoma: Be Cautious About Water Intake**

**Dr. Mahipal S. Sachdev**

In this era of fitness everyone is concerned about what he/she is eating. Everyone is calorie conscious and prefers drinking a lot of water/fluids. It is generally good for everybody, but not for a glaucoma patient.

Glaucoma or “Kala Motia” is a disease where eye pressure increases to a level that is not safe for the optic nerve. The balance between the fluid produced inside the eye and drained out from the eye is disturbed, resulting in increased pressure and damage to the optic nerve.

Glaucoma presents in different forms like open angle glaucoma, angle closure glaucoma and secondary glaucoma. Also there are various factors which affect the progression of glaucoma. In angle closure glaucoma the fluid drainage is affected.

Water therapy and different *shuddhi-kriyas* as per yoga are commonly practiced in our country. There is a belief that taking a large quantity of water in early morning helps in bowel movement and flushes the body clean. In this water therapy the person drinks almost four-six glasses of water at a time in the morning empty stomach. This may do well for his/her digestive system, but create problems for the eye of the glaucoma patient. Many people are not aware of this.

Anything which overloads our body fluid will increase the load on the drainage system. When one drinks a large amount of water like this, it gets absorbed in the fluid spaces of the body. So, fluid in the eye is produced in excess quantity. This increases the load on the drainage of the eye.

In angle closure glaucoma the drainage system is affected and so will lead to a rise in the eye pressure. Such intake of a large quantity of fluids in a short span will give rise to short spikes of increase in the eye pressure that may be missed on an examination by the eye specialist. So, this type of glaucoma may get presented or aggravated if one drinks a lot of water in a short span.

Every patient of glaucoma or having a family history of glaucoma should be cautious about the water therapy. In the case of such patients, if they continue the water therapy habit, glaucoma may progress in spite of the best treatment. This should not be practiced in families with glaucoma. Glaucoma is a multifactorial disease and one need to control this factor as far as possible.

The water drinking test, commonly used to detect such cases of glaucoma, is based on similar observations. During this test we check the eye pressure after drinking one litre of water in a short time.

The eye pressures are checked every half an hours. Persons with a positive water drinking test should avoid large quantities of fluid intake empty stomach in the morning,

*Be careful and watch for your glass of water!*

## **Glaucoma: A Check-up In Time Saves Sight**

**R. Prasad**

- \* *Glaucoma can be treated but loss of sight cannot be reversed.*
- \* *Comprehensive eye examination is essential for diagnosing glaucoma*

It is a silent thief; a thief who silently robs one's sight. And the villain is glaucoma.

While loss of sight due to cataract can be reversed by a now routine procedure, glaucoma, unless detected at an early stage, can lead to permanent and irreversible loss of vision. The degree of loss depends on the stage when the disease is detected.

That people who have glaucoma do not know about it. It was brought out in a recent epidemiological study undertaken by the Chennai based Sankara Nethralaya.

“About 4 per cent from rural and 5.4 per cent from urban areas had Glaucoma,” noted Dr. L. Vijaya, Director of Glaucoma Services at Sankara Nethralaya.

“About 3,900 people from rural and 3,850 from urban areas were enrolled for the study.”

Incidentally, 98 per cent of those who had glaucoma were simply unaware of their condition.

And worse, nearly 3 per cent of glaucoma patients studied were already but still unaware of the conditions that caused the blindness.

*Why people are unaware ?*

The main reason for people not being aware of their disease status is that loss of vision is peripheral to begin with and slowly progresses to affect the central field of vision.

This is because the increased intra-ocular pressure first affects the nerve fibres that are responsible

for peripheral field of vision. If untreated, the disease progressively affects nerve fibres responsible for the central field of vision.

It is worth remembering that nerve fibre damage and hence loss of vision cannot be reversed. Glaucoma sets in when the aqueous fluid flowing continuously through a drainage canal around the lens, iris and responsible for providing nourishment to the lens is affected.

While the inlet of the drainage canal is normal, obstruction occurs further down the canal in the case of primary open angle glaucoma leading to gradual increase in intra-ocular pressure.

In the case of primary angle closure glaucoma, the obstruction occurs more at the drainage canal inlet. It could either be an acute or a chronic closure.

The chronic primary angle closure glaucoma much like the primary open angle glaucoma, is a slow process leaving the patients unaware of their condition.

*Sudden build-up*

Acute primary angle closure, as the name indicates, leads to a sudden build-up of intra-ocular pressure and is symptomatic—headache, eye pain, nausea, rainbows around lights at night, and very blurred vision are some of the symptoms.

The primary open angle glaucoma can be treated with medication and if this fails to control the intra-ocular pressure then glaucoma filtration surgery (GFS) is performed.

In the case of closed angle glaucoma, laser and medication are the first line of treatment; GFS surgery is performed if this fails.

“Medicines or surgery can only control the intra-ocular pressure and can't eliminate the disease,” Dr. Vijay underlined. “And life time checking is mandatory.”

The study brought out several other facets of the disease—even people who had normal intra-ocular

pressure had the disease. “We found nearly 70 per cent of such cases in our study,” said Dr. Ronnie J. Georage, Associate Consultant, Glaucoma Service. Comprehensive eye examination and not just measuring the eye pressure is essential for diagnosing glaucoma.”

“Intra-ocular pressure varies through the day. Measuring it a dozen times is needed to ascertain increased intra-ocular pressure.” Dr. Vijaya added.

It was founded that those who had undergone cataract surgery were four times more prone to developing glaucoma and about one-third of all those who had glaucoma had undergone cataract surgery.

“It was more prevalent in those who had undergone cataract surgery years ago,” Dr. George noted. “This was when older techniques of cataract surgery were used and probably due to operation related complications.”

Cataract surgeries have become commonplace—75 per cent of blindness in India is caused by cataract. The need to perform them under ideal conditions cannot be overlooked, lest patients suffer from other complications including glaucoma.

The study also brought out the role of genetics. “We found few genetic causes in the case of primary open angle glaucoma,” said Dr. G. Kumaramanickavel, Head of the Department of Genetic & Mylecular Biology at Sankara Nethralaya.

No genetic causes have been identified in the case of primary angle closure glaucoma.

#### *Siblings at higher risk*

Dr. Kumaramanickavel also added that siblings of glaucoma patients had 3.7 per cent higher risk of developing the disease and the prevalence of the disease in first degree relatives of those suffering from primary open angle glaucoma is as high as eight times that in the general population.

(The Hindu, 26 April, 2006)

## **Do Our Eyes Also Age ?**

**Dr. Mahipal S. Sachdev**

A middle-aged woman walks to the clinic. She is disturbed as she finds difficulty in threading the needle.

A 75-year-old man is concerned as his vision is getting blurred day by day.

*What is happening ?*

yes, their eyes are showing the effects of aging. Like my other parts of body—graying hair and cracking knees—our eyes also age.

Aging affects the eyes in various ways. The common complains may be:

1. Difficulty in near work—yes, the focusing power of the eyes goes down with age called presbyopia. At around 40 years one needs the reading glasses to see clearly.
2. Black spots in front of the eye—these are called floaters. These are tiny specks that float across the field of vision. Some may describe them as cobwebs of black dots or flies. They are more prominent on white background or in bright light. They are normal and one has to ignore them. Only if they increase in number suddenly or are associated with flashes of light, one should get the retina examined.
3. Blurred vision—it is a common complaint after 40-50 years. It can be because of different reasons like cataract, age-related macular degeneration and glaucoma.
  - a. As age advances, age-related cataract is the commonest thing to appear. The natural lens which is transparent becomes cloudy with age. This may cause blurred vision for near or distance and one needs to undergo cataract surgery to see clearly.
  - b. Age-related mascular degeneration (ARMD) is another common reason for blurred and distorted vision. This is presenting more nowadays as life expectancy is

increasing. ARMD occurs when the area of the retina, which produces sharp vision i.e. macula, gets affected.

- c. Other causes can be glaucoma and diabetic retinopathy.
- 4. Watering of eyes and drooping lids related to lid laxity is common in old age.

There are so many changes which are occurring because of aging, but do we have to succumb to it or accept it? No. We can at least slow down these age-related changes.

Simple good diet rich in antioxidants like Vitamins A, C, E helps in slowing down the age-related changes. Research has shown that they prevent these changes in about 25 per cent cases.

*Antioxidant-rich foods include:*

- \* Vitamin A: Carrot, pumpkin, leafy green vegetable, spinach, sweet potatoes.
- \* Vitamin C: All citrus fruits, tomatoes, strawberries, sweet potatoes, cauliflower, asparagus.
- \* Vitamin E: Almonds, whole grains, vegetable oil, wheat germ, sweet potatoes.
- \* Zinc: Fish, meat, poultry, whole grains, dairy products, etc.

Aging eyes may benefit from changes in the environment and the lifestyle of the individual. Increased lighting and colour contrast, coupled with reduced glare, may aid residual vision, increase effectiveness in the performance of tasks, and enhance safety. Adaptive aids may improve or enhance the remaining vision, aid in the performance of skills and independence.

To catch these changes occurring earliest, one should get biannual eye examination down from the age of 40 years. This is how we can treat or prevent them in a better way.

## Understanding Dry Eye Syndrome

**Dr. Mahipal S. Sachdev**

The dry eye syndrome is a chronic insufficiency of moisture in the eye. Its consequences range from subtle but constant irritation to severe disturbance in day-to-day activity.

*Its symptoms may include the following:*

- \* A stinging, burning or scratchy sensation in your eyes.
- \* A sense of a sand grain in your eyes.
- \* Strings of mucus in or around your eyes.
- \* Eye fatigue after short periods of reading.
- \* Feel better with eyes closed.

The dry eye syndrome has several causes. For some people the cause is an imbalance in the composition of their tears. In others its insufficient tears to keep the eyes comfortably lubricated. Medications and environmental factors can also lead to dry eyes. The common causes include:-

1. Living in a dry, dusty or windy climate.
2. As a part of the natural aging process, especially during menopause.
3. As a side-effect of many medications such as antihistamines, antidepressants, certain blood pressure medicines and birth control pills.
4. Insufficient blinking such as when you're staring at a computer screen all day.
5. Dry eyes are also a symptom of systemic diseases such as lupus, rheumatoid arthritis rosacea or Sjogren's syndrome.
6. Long-term contact lens wear is another cause.
7. Certain conditions may cause eyes to feel dry and scratchy, like in blepharitis, an inflammation along the edge of the eyelids.

## Treatment

For most people who have dry eyes, it's a chronic condition. The goal of treatment is to make the symptoms as less as possible.

Effective treatment begins with a careful examination to determine which factors may be causing your symptoms. The goal of treatment is to keep your eyes moist. This can be done in a couple of days.

*Artificial tears:* These are lubricating eye drops that may reduce the dry, scratching feeling.

*Preserving tears:* This can be done by partially completely closing the tear ducts, which normally serve to drain tears away. The closure conserves both your own tears and artificial tears you may have added.

*Medications:* Dry eyes caused by problems with the meibomian glands and blepharitis generally respond to specific treatment from the same.

### *Self-care*

Simple care at home can make these patients feel better. So,

- \* Avoid direct air currents. Don't direct hair dryers' car heaters, air-conditioners or fans toward your eyes.
- \* Wear protective glasses while going out.
- \* Use home humidifiers. In winter, a humidifier can add moisture to dry indoor air. Some people use specially designed glasses that form a moisture chamber around the eye, creating additional humidity.
- \* Remember to blink. While working on computers, consciously blink. It helps spread your down tears more evenly.
- \* Avoid rubbing your eyes.
- \* Cold compresses give soothing feeling to the patient with dry eyes.

## First Aid For Eye Emergencies

**Dr. Mahipal S. Sachdev**

When most people enjoy fire-crackers during the festive season, go out to mow the lawn or perform other ordinary house hold activities, the last thing they think about is their eyes. But millions of eye injuries occur each year.

Knowing what to do for an eye emergency can save valuable time and possibly prevent vision loss. Here are some instructions for basic eye injuries.

### **Be Prepared**

- \* Wear eye protection for all hazardous activities and sports at school, home and on the job.
- \* Stock a first aid kit with a rigid eye shield and commercial eyewash before an eye injury happens.
- \* Do not assume that any eye injury is harmless. When in doubt see a doctor immediately.
- \* Wear safety goggles while using household chemical like cleansing fluids, detergents and ammonia, as they are extremely hazardous and can damage your eyes. Wash your hands thoroughly when you have finished the use of chemical.
- \* Avoid toys with sharp or rigid points, spikes, rods and dangerous edges.
- \* Pad or cushion sharp corners and edges of furnishing and home fixtures.
- \* Put on safety goggles, before using a lawn mower, power trimmer or edger. Stones and twigs can become dangerous projectiles if they shoot from blades.



### **Chemicals burns**

In all cases of eye contact with chemicals one should do the following:

Immediately flush the eye with water. Hold the eye under a basin or shower, or pour water into the eye using a clean container. Keep the eye open and as wide as possible while flushing. Continue flushing for at least 15 minutes.

- \* Do not use an eye-cup.
- \* If a contact lens is in the eye, begin flushing over the lens immediately. This may wash away the lens.
- \* Do not bandage the eye.
- \* Seek immediate medical treatment after flushing.
- \* Specks/foreign body
- \* Do not rub the eye.
- \* Try to let tears wash the speck out or use an eyewash.
- \* If the speck does not wash out, keep the eye closed, bandage it lightly, and see a doctor.
- \* Blows to the eye

Apply a cold compress without putting pressure on the eye. Crushed ice in a plastic bag can be taped to the forehead to rest gently on the injured eye. Don't apply any pressure on the eye.

In cases of pain, reduced vision, or discoloration (black eye), seek emergency medical care. Any of these symptoms could mean internal eye damage.

### **Cuts and punctures**

- \* Do not wash out of the eye with water or any other liquid.

- \* Do not try to remove an object that is stuck in the eye.
- \* Do not rub the eye.
- \* Cover the eye with a rigid shield without applying pressure. The bottom half of a paper cup can be used.
- \* See a doctor at once.

A serious eye injury is not always immediately obvious. Delaying medical attention can cause the damaged areas to worsen and could result in permanent vision loss or blindness.

So, if you sustain an eye-injury, rush to an eye-specialist or visit the nearest hospital even if the injury seems minor at first sight.

*The writer is Chairman and Medical Director,  
Centre for Sight, New Delhi.  
E-mail: msachdev@bol.net.in*

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### **Blood Cancer Accelerates Ageing**

Blood cancer can accelerate ageing in healthy bone marrow cells, says a study. It is well known that ageing promotes cancer development. However, this is the first time that the reverse has been shown to be true. The study, published in the journal *Blood*, shows that healthy bone marrow cells were prematurely aged by cancer cells around them. The aged bone marrow cells accelerated the growth and development of the leukaemia, creating a vicious cycle that fuels the disease. The study identified the mechanism by which this process of premature ageing occurs in the bone marrow of leukaemia patients. It provided evidence that cancer causes ageing and the cancer cell itself drives the ageing process in the neighbouring non-cancer cells. The research revealed that leukaemia used this biological phenomenon to its advantage to accelerate the disease.

## That They Might See...

Saroj Jha

There are many million blind people in the world, of whom majority are Indians.

Blindness costs our country about more than Rs. 10,000 crores directly and indirectly, including loss of production. A further drain on the economy takes place due to the social dependence of the blind on the community. And for every totally blind person in India, there are at least four suffering from mild to moderate degrees of visual impairment.

According to an internationally accepted definition, a person is considered blind if he has less than 1/20 of normal vision or if he cannot count his fingers at a distance of one and a half metres. If these standards are followed, the number of the blind in this country may far exceed the official figure of 9 million.

Recent surveys have in fact shown that blindness may be prevalent in as high as 2.5 percent to our population. What is truly tragic is the fact that most of these people need never have lost their sight, for blindness is almost completely preventable.

Unlike certain recently evolved expensive methods to control the prevention of blindness has long been known to be cheap, practical and effective. Yet our blind increase in numbers every year and threaten to more than double themselves by the end of this century, if something is not done now.

Until recently, our concern for the blind had been restricted to merely providing rehabilitative services for the afflicted, largely carried out by dedicated social workers through various agencies like the National Association of the blind. But the more important measures for prevention

and control have at best been sporadic only.

An occasional cataract camp or a single nutritional campaign in an isolated district are mere drops in the ocean. As a whole, the medical profession has failed in its slow and half-hearted efforts to reduce the incidence of blindness. But we hope that this apathy and indifference will soon be a thing of the past, now that the World Health Organization (WHO) has focused attention on this very poignant problem. April 7 is observed each year as *World Health Day*.

Every year, children turn blind due to a diet deficient in Vitamin A quite unnecessarily, since this vitamin is neither scarce nor expensive. Apart from its abundant presence in comparatively rich expensive foods like milk, ghee, butter, eggs and liver. Vitamin A is also readily available in cheaper vegetables and fruits like the carrot, yellow pumpkin, drumstick, papaya and in all varieties of green leafy vegetables that can be grown easily.

Vitamin A is absolutely essential for good vision. If taken regularly in the required quantity of 3,000 to 4,000 international units daily, blindness can quite easily be averted. Fortunately, several warning signals are given if the body is not receiving adequate amounts of this vitamin, long before the irreversible state of blindness sets in.

An early symptom is night blindness i.e. a person is unable to see in dim light. If uncorrected at this stage, dryness of the conjunctiva (the thin transparent sheath that covers the front of the eye) follows, giving it a muddy and wrinkled look. If still uncorrected keratomalacia sets in. The eye now softens, ulcers appear on its surface, cerosis sets in and then complete destruction of the eyeball and permanent blindness.

Since Vitamin A is abundantly present in common foods, consumption of such foods is obviously the best

preventive against xerophthalmia. A daily intake of 100 gram of green leafy vegetables like spinach may be all that is required. Carrots of the same quantity contain similar amounts of this vitamin, so also eggs, butter and ghee. A much more concentrated source is fish liver oil, one teaspoonful of which provides to the body as many as 60,000 international units of Vitamin A.

For the vast majority of people, ignorant and living in rural areas on substandard diets, nutrition education alone is insufficient to ward off xerophthalmia.

The biggest single cause of blindness in India is however cataract. Many people suffer from this condition in which the normally transparent lens of the eye turns opaque, losing all its capacity for sight. Cataract is not entirely a disease of old age. It can appear even in the young due to various causes like nutritional deficiencies and eye injuries. Cataract may not be easily prevented but it certainly lends itself to cure through a simple surgical operation. But the many millions afflicted by cataract in this country, remain sightless for life due to ignorance, poverty and lack of surgical facilities.

Quacks still dominate in the field of eye cures luring unsuspecting patients and causing irreparable harm. Operation theatre facilities are meager in rural areas. Only available in sparsely scattered medical centres, people find it difficult to travel long distances to seek modern methods of treatment. Even less available in rural areas are qualified eye surgeons.

Trachoma and other eye infections account for 23 per cent of all cases of blindness. In parts of Punjab, Rajasthan and Uttar Pradesh 70 to 80 per cent of the population suffer from this disease. Highly infectious, the trachoma virus spreads quickly from person to person affecting vast numbers, especially those with low standards of personal hygiene.

Even simple conjunctivitis, if neglected, can lead to permanent blindness. Irritation of the eyes, watering of eyes, redness, swelling of the eyelids and purulent discharges all need prompt attention. Personal hygiene and cleanliness help a great deal in warding off such eye infections and its dangerous consequences.

Other less common causes of blindness in India are glaucoma, squints, eye injuries and congenital abnormalities Smallpox once occupied a rather prominent position in the list of important causes of blindness, accounting as it did for 4.5 per cent of the total number. Thanks to the WHO it is now no longer such a dire threat.

Glaucoma still accounts for 0.5 per cent, of all causes of blindness. In glaucoma, eye pressure is raised due to various causes of which Argemone toxicity is worth mentioning. Argemone, a not infrequent adulterant found in edible oils, has a very deleterious effect, on the eyes. Dimness of vision, pain in both eyes and a raised intraocular tension may eventually lead to permanent blindness. Glaucoma is a disease difficult to prevent, but if detected early and treated promptly need never blind its victim.

Corneal grafting a technique to restore sight to those who have become blind due to opacity in the cornea caused by smallpox or eye injuries, has gained tremendous popularity. Normal corneas stored at eye banks after the death of the donor are used for transplants. A fair degree of success has been achieved by such operation.

Let us hope that in future with more determined efforts at prevention of blindness, the problem of rehabilitation will never assume the magnitude that it has reached today.

(The Times of India, 4 April, 1976)

## Losing Battle Against Venereal Disease

Educational Campaigns, Free Government Clinics and legal, medically supervised Prostitution – These are the stratagems that have failed to curb the swelling ranks of the infected throughout the world.

An overwhelming majority of cases can be cured if caught early. But in this permissive age social diseases spread like invisible bushfires. A World Health Organization report issued five years ago estimated that 200 million people a year were contracting syphilis or gonorrhoea. A more recent report says these two major social diseases will never be eliminated in the Pacific.

Penicillin and sulpham drugs have long been the major medical weapons against both gonorrhoea and syphilis. But gonorrhoea has shown a disturbing ability to develop penicillin-resistant strains.

### *Vietnam Rose*

An especially hardy breed of gonorrhoea called “Vietnam Rose” has been falsely labeled incurable. There are drugs which can knock it out but it is immune to penicillin and most common VD-fighting drugs.

Many people are wondering why VD has suddenly flared into a major, world-wide health problem. There seems to be a number of factors, most of them social rather than medical.

Mainly infection is the price of sexual freedom. Most scientists agree that more people are catching venereal diseases because more people are having sexual relations with more than one person.

Many blame birth control pills. They complain the pill has encouraged promiscuity among women who would not have dreamed of having extra marital or premarital

affairs before.

The mobility of today’s generation causes further disease control headaches. Within a week some fly-by-night playboy (or girl) can prove in a dozen places that love is not the only thing that is catching when people get generous with their affections. War always spawns serious outbreaks of VD. Vietnam has proved no exception.

### *First Signs*

There are four social diseases, transmitted sexually, which account for all but a very few cases of VD. The two serious ones are syphilis and gonorrhoea.

The other two common ones—non-specific urethritis in men and trichomoniasis in women – have no serious medical repercussions. They are mainly nuisance infections.

Syphilis is spread by intercourse or sometimes by kissing. Some medical authorities have recently revived the discredited theory that it can also be caught from lavatory seats. Children can also inherit it if the mother had the disease during pregnancy.

The first signs of the disease, appearing from one to 12 weeks after infection is a hard and usually painless sore near the sex organs or the lips. It may look like a pimple, a blister or an open sore. During the first visible stage of infection the disease is most contagious. The sore disappears after three to six weeks. Shortly after the lump goes, a second stage begins marked by sore throat, rash, enlargement of glands and headaches.

Soon these symptoms also disappear and the grim third stage occurs. The disease attacks the individual’s weakest and most vulnerable organ system—possibly bones, skin, heart, liver and nervous system.

Syphilis of the nervous system leads to paralysis and insanity. The disease is often fatal if not detected and treated until the third stage.

In men gonorrhoea usually announces its presence by a thick yellow discharge from the penis after the disease bacteria have incubated for two to 10 days from the time of infection. The discharge causes a painful burning sensation during urination. Further effects of the disease if not treated include arthritis of the knee, ankle, wrist or elbow, blood poisoning with inflammation of the heart valves or abscesses in part of the body.

Similar symptoms occur in some women, but many experience no early signs of infection or else to such a mild degree that they ignore the symptoms. Often the only way of discovering an infected female is for special workers to trace her through an infected male sex partner who came to the clinic or hospital for treatment. This is why women are often the hidden reservoirs of infection. In women the infection may spread to the uterus, the fallopian tubes and ovaries.

#### *Eye Problems*

The probable effect will be sterility, frequent miscarriages or premature births. Less frequently gonorrhoea in women can lead to a fatal attack of peritonitis—leakage of digestive germs from the stomach or intestines in to the surrounding abdominal area.

Children who are born of infected mothers are likely to have eye problems leading to blindness. The infection is not serious but all abnormal discharges are reason enough to heed for your doctor or clinic. Trichomoniasis is an infection caused by an over-population of protozoans which normally inhabit the female vagina. Intercourse often spreads the infection to

men causing a discharge which can be confused with the symptoms of gonorrhoea.

There is no vaccination that will ward off the evils or gonorrhoea or syphilis. So there is no true preventive measure authorities can enact.

#### *Potent Cures*

Education programmes aimed at teenagers in school are a good method of informing a younger segment of the public about the dangers of VD, but parents often complain about class discussion of such subjects.

A new finger- tip blood test for gonorrhoea may help close the widening gap of infection. The test, for women, is quicker, easier and less embarrassing.

Commonsense, a sophisticated awareness of the facts of life and high ethical standards are the only surefire protection against misery and perhaps disaster. What you do not know might deny you a family. It might even kill you.

(From the Sunday Standard October 1- 1972)

# PINGALWARA DIARY

(UPTO November, 2018)

Services rendered by Pingalwara Institution for the service of the suffering humanity are:-

## 1. Homes for the Homeless

There are 1807 patients in different branches of Pingalwara now a days:-

- |  |              |
|--|--------------|
| (a) Head Office, Mata Mehtab Kaur Ward,<br>Bhai Piara Singh Ward | 343 Patients |
| (b) Manawala Complex   | 881 Patients |
| (c) Pandori Warraich Branch, Amritsar                            | 109 Patients |
| (d) Jalandhar Branch   | 41 Patients  |
| (e) Sangrur Branch   | 217 Patients |
| (f) Chandigarh (Palsora ) Branch                                 | 119 Patients |
| (g) Goindwal Branch  | 97 Patients  |

**Total 1807 Patients**

The number of patients suffering from various diseases are as follows:

Disease	Number	Disease	Number
1. Mental Patients	365	9. Aids Patients	19
2. Paralysis, Polio	159	10. Epilepsy Cases	198
3. Mentally Retarded	454	11. Cancer Patients	01
4. Deaf and Dumb	168	12. Diabetes	85
5. Old Aged	143	13. School going Children	88
6. Injured	30	14. Abandoned Children	03
7. T. B. Patients	20	15. Recovered	31
8. Blind	43	<u><b>Total 1807</b></u>	

## 2. Treatment facilities

- (a) **Dispensary & Laboratory:-** Pingalwara has a dispensary and a laboratory for the treatment of patients. It has an annual expenditure of about

90 lakhs. Medicines are also distributed free of cost to the poor and needy people.

- (b) **Medical Care Staff:-** Experienced medical staff like Nurses, Pharmacists and Laboratory Technicians are available for the care of the Pingalwara residents.
- (c) **Blood-Donation Camps:-** A Blood Donation Camp is organized on Bhagat Ji's Death Anniversary every year. The blood is used for Pingalwara residents and road accident victims.
- (d) **Ambulances:-** Ambulances with basic Medical aid are available for victims of road accidents on G.T. Road, round the clock and provide facilities for taking Pingalwara patients to the hospital.
- (e) **Artificial Limb Centre:-** There is an Artificial Limb Centre at Manawala Complex, dedicated to the memory of Bhagat Ji which provides free of cost Artificial Limbs to amputee cases and calipers to paraplegic, hemiplegic or polio affected people. 12411 needy people have benefitted till November 2018.
- (f) **Physiotherapy Centre:-** A Physiotherapy Centre equipped with State-of-the-art equipment is functioning in the Manawala Complex since June 2005. On an average 80 patients are treated everyday.
- (g) **Operation Theatres:-** There is a well equipped Operation Theatre in Bhai Piara Singh Ward Amritsar for general surgery and A Micro Surgery Operation Theatre in Manawala Complex where Cochlear Implants and major operations are carried out.

- (h) **Dental, Eye, Ear & Ultrasound Centres:-** These Centres have been set up to provide these services to Pingalwara residents, sewadars and their families.

3. **Education:**

Pingalwara Society is running Educational Institutions for the poor and needy children.

- (a) **Bhagat Puran Singh Adarsh School, Manawala Complex, Amritsar:-** This school provides free education to 768 students from the poor and deprived sections of the society. They are provided with free books and uniforms. Children being brought up by Pingalwara Society are also studying in this school.
- (b) **Bhagat Puran Singh School for Special Education, Manawala Complex, Amritsar :-** This school is providing Special Education to 169 Special children.
- (c) **Bhagat Puran Singh School for the Deaf, Manawala Complex, Amritsar:-** Bhagat Puran Singh School for Deaf Children is functional at the Manawala Complex since May 2005. The school is equipped with state-of-the-art training aid and has 180 children on its rolls.
- (d) **Bhagat Puran Singh School for Special Needs Manawala Complex Amritsar:** Under RCI two Diploma courses are running.
- (i) Diploma Special Education (Hearing Impairment)  
25 Seats.
- (ii) Diploma Special Education (Mental Retardation)  
25 Seats.
- (e) **Bhagat Puran Singh School for the Deaf, Attari, Amritsar:-** 13 Students are taking education under the guidance of well qualified staff.

- (f) **Bhagat Puran Singh Adarsh School, Buttar Kalan (Qadian), Distt. Gurdaspur:-** This school is dedicated to the sweet memory of Bhagatji. 461 students are getting free education under the able guidance of well qualified teachers. The school also provides financial help to students who have finished their school studies and are aspiring for higher studies.
- (g) **Bhagat Puran Singh Deaf School, Buttar Kalan (Qadian), Distt. Gurdaspur:-** 11 Students are taking education under the guidance of well qualified staff.
- (h) **Bhagat Puran Singh Deaf School, Katora, Firozpur:-**This School is running since 2016 in which 17 Students are studying.
- (i) **Bhagat Puran Singh Deaf School, Sarhali, Tarn Taran:** 11 Students are taking education in this school.
- (j) **Bhagat Puran Singh Deaf School, Village Kakkon, Hoshiarpur:-** 9 Students are studying in this school.
- (k) **Bhagat Puran Singh School for Special Education, Chandigarh (Palsora):-**This school caters to the needs of Special adults of the branch.
- (l) **Vocational Centre:-** This Centre is providing free training in embroidery, stitching, craft work, making washing powder, candle making and painting, etc. Young girls from the villages of surroundings areas are the main beneficiaries.
- (m) **Computer Training:-** Computers are available in all the schools for academic and vocational training.
- (n) **Hostel facilities:-** There are separate hostels for boys and girls in Manawala Complex. Many girls are pursuing higher studies in different colleges.

4. **Rehabilitation:**

**Marriages:-** After being educated, boys and girls at Pingalwara are married to suitable partners. 41 girls and 4 boys have been married off till date.

5. **Environment Related Activities:**

(a) **Tree Plantation:-** Bhagat Puran Singh Ji was deeply concerned about the degradation of the environment. A vigorous campaign of tree plantation is started every year on Bhagat Ji's Death Anniversary. Each year trees are planted in various schools, colleges, hospitals, cremation grounds and other public places. These include Amaltas, Kachnar, Behra, Champa, Arjun, Sukhchain, Chandni, Zetropa, and Kari-patta, etc. These are distributed to different institutions.

(b) **Nursery:-** Pingalwara has its own Nursery where saplings of various plants and trees are prepared. Every year, the aim of nursery is to grow more than 54 different kinds of saplings.

6. **Social Improvement Related Activities:**

(a) **Awareness:-** Pingalwara has played an important role in spreading awareness about the evils in the society. This has been done by printing literature on religious, social and environmental issues at the Puran Printing Press, Amritsar and is being distributed free of cost. Annual expenditure of printing and publicity is about 1 crores 50 lakhs rupees.

(b) **Puran Printing Press:-** The Printing Press has been updated with an Offset Press.

(c) **Museum and Documentaries:-** A Museum, and a

number of documentaries have been prepared on Pingalwara activities as well as on zero budget natural farming. The C.D.s are freely available from Pingalwara.

A feature film produced by Pingalwara Society, Amritsar on 30 January, 2015 EH JANAM TUMHARE LEKHE (Punjabi) on Rev. Bhagat Puran Singh Ji, founder Pingalwara and his struggle not only for selfless services of wounded humanity but for Environment Crisis also, will prove a beacon for the generations yet to come after us.

7. **Help to the victims of Natural Calamities:**

Pingalwara makes an effort to provide succour to the victims of natural calamities like floods, earthquakes and famines. Aid was sent for the earth-quake victims in Iran, Tsunami disaster victims, Leh landslide and flood affected areas.

8. **Cremation of unclaimed dead-bodies:**

Pingalwara cremates unclaimed dead bodies with full honour.

9. **Dairy Farm:**

180 cows and buffalos at Manawala Complex provide fresh milk to the Pingalwara residents.

10. **Old Age Homes:**

Old age homes at Sangrur and Manawala Complex of Pingalwara caters to the needs of elderly people.

11. **Expenditure:** The daily expenditure of Pingalwara is more than 6.5 lakhs.



**Other Details:**

- a) All India Pingalwara Charitable Society is a Registered Society, registered by Registrar of Companies vide letter No. 130 of 1956-1957 as amended vide No. A-28/4540 dated 07-07-1998.
- b) All donations to Pingalwara are exempted under Section 80 G of Income Tax-II Amritsar letter No. CIT-II/ASR/ITO (Tech.)/2011-12/4730 dated 11/12 January, 2012.
- c) PAN Number of the All India Pingalwara Charitable Society is AAATA 2237R
- d) FCRA (Foreign Contribution Regulation Act) 1976 Registration No. of Pingalwara is 115210002

Wahe Guru Ji Ka Khalsa

Wahe Guru Ji Ki Fateh

**Dr. Inderjit Kaur,**  
**President,**

All India Pingalwara Charitable Society (Regd.),  
Tehsilpura, G.T. Road, Amritsar. (Punjab).

<b>Details of Banks for sending Donation through Online/ Cheque/Draft may be sent in favour of: All India Pingalwara Charitable Society (Regd.), Amritsar' (PAN No.: AAATA 2237R)</b> (The donations made to Pingalwara are exempt from Income Tax under Section 80G of I.T. Act. 1961)			
S.No.	Name of Account	Name of the Bank	Swift/IFS Code
<b>(FOR FOREIGN CONTRIBUTORS)</b>			
	All India Pingalwara Charitable Society (Regd.), Amritsar.	Oriental Bank of Commerce, Sharifpura, Amritsar.	ORBCINBBASR
<b>(FOR INLAND CONTRIBUTORS)</b>			
1.	All India Pingalwara Charitable Society (Regd.), Amritsar.	Oriental Bank of Commerce, Sharifpura, Amritsar.	ORBC 0100156
2.	All India Pingalwara Charitable Society (Regd.), Amritsar.	State Bank of India, Town Hall, Amritsar.	SBIN000609
3.	All India Pingalwara Charitable Society (Regd.), Amritsar.	Bank of India, City Centre, Amritsar.	BKID0006305
4.	All India Pingalwara Charitable Society (Regd.), Amritsar.	Axis Bank Ltd., City Centre Amritsar.	UTIB0000685
5.	All India Pingalwara Charitable Society (Regd.), Amritsar.	Punjab National Bank, Hall Bazar, Amritsar.	PUNB0001800
6.	All India Pingalwara Charitable Society (Regd.), Amritsar.	ICICI Bank Ltd., Lawrence Road, Amritsar.	ICIC0000066
7.	All India Pingalwara Charitable Society (Regd.), Amritsar.	HDFC Bank Ltd., Mall Road, Amritsar.	HDFC0000115
8.	All India Pingalwara Charitable Society (Regd.), Amritsar.	HDFC Bank Ltd., Ghanta Ghar, Golden Temple, Amritsar.	HDFC0001313

9.	All India Pingalwara Charitable Society (Regd.), Amritsar.	Punjab & Sind Bank, Hall Bazar, Amritsar.	00011000096048	PSIB000A001
10.	All India Pingalwara Charitable Society (Regd.), Amritsar.	Bank of Baroda, Town Hall, Amritsar.	01010100015572	BARBOAMRITS
11.	All India Pingalwara Charitable Society (Regd.), Amritsar.	Oriental Bank of Commerce, Sec-47 C, Chandigarh.	12332011000560	ORBC0101233
12.	All India Pingalwara Charitable Society (Regd.), Amritsar.	Punjab & Sind Bank, Sangrur.	00671000012150	PSIB0000067
13.	All India Pingalwara Charitable Society (Regd.), Amritsar.	State Bank of India, Patiala Gate, Sangrur.	33530846863	SBIN0001759
14.	All India Pingalwara Charitable Society (Regd.), Amritsar.	Punjab & Sind Bank, Gole Market, New Delhi.	07621000007388	PSIB0000762
<b>(IN UK)</b> <b>S. GURBAKHS SINGH</b> 63 Peacock street, Gravesend, Kent, (U.K.) <b>DA12 IEG, Ph. 1474568574</b>		<b>(IN CANADA)</b> <b>BIBI ABNASH KAUR KANG</b> (Pingalwara Society of Ontario (Regd.) 124 Blackmere Cir, Brampton, ONT., L6W 4C1, Canada <b>Ph: 905-450-9664, 416-674-3341</b> <b>Email-abnash6@yahoo.com</b>	<b>(IN USA)</b> <b>JASWANT SAWHNEY CHARITABLE TRUST</b> In Association with All India Pingawara Charitable Society (Regd.) 7713 Toburk CT, HANOVER, MD 21076-1643 U.S.A. <b>BIBI JATINDER KAUR DUSAJ</b> <b>Ph. 410-551-8010</b> <b>E-mail-kaurg 2004@yahoo.com</b>	