

# Tea Helps to Fight Disease

by A special correspondent

**T**HE "case for tea" is quite strong. There is growing evidence that tea can reduce blood cholesterol, which helps against high blood pressure and heart disease.

It helps combat cancer and fights virus and bacteria, as well as help prevent tooth decay.

Tea without milk and sugar hardly contains any calories and may be used where a low calorie intake is desired. Tea with lemon is rich in Vitamin C. Tea is low in sodium but rich in potassium.

It is obviously much more than a simple refreshing drink," according to a Food and Agriculture Organisation (FAO) report on tea consumption and human health.

For centuries, tea has been considered to possess curative powers for a variety of illness, especially in China and India. In developing countries, tea has long been regarded as a comparatively safe drink because the water is boiled when the tea is brewed.

The addition of milk and sugar to tea also provides a certain amount of nutrition, especially in countries where many people fail to consume the minimum amount of calories required for good health.

However, the close scientific scrutiny of tea's therapeutic value and its impact on human health has been done only in the past few decades, and findings have not always been conclusive. The FAO report highlights research on the positive aspects of tea consumption on human health.

What is clear — and the most universally accepted value of tea consumption — is its beneficial role in maintaining the proper fluid balance required by the human body.

The amount of fluid lost daily by a human being varies, depending largely of individual intake and the amount of water vapour lost through exhalation and perspiration. However, the minimum water loss by an adult is 1.1 litres (2 pints). It is imperative that the body recovers at the very least this minimum amount of liquid ev-

aporated. About two-thirds of total body weight is water. A fluid loss of just over 1 per cent of body weight can result in dehydration.

Tea is a good source to maintain this fluid balance, which is vital to such basic functions as regulation of body temperature, transports of nutrients and hormones to the cells, transport of waste products from the cells and the lubrication and catalysis of many biochemical reactions.

Tea is also low in carbohydrates — only 4 to 5 per cent in a cup. Tea can thus be used extensively in low-calorie diets.

The fluorine content of tea varies between 3 and 260 parts per million, or even higher, in a normally brewed cup of tea. There is lack of

consensus among scientists whether this is beneficial or not. The implication of tea-drinking in areas with high fluoride content in water has not been thoroughly studied. But in areas where the water is fluoride deficient, fluoride in limited quantities helps combat tooth decay.

controversy surrounds the intake of caffeine in tea, despite growing evidence that a normal intake of caffeine, when consumed in tea brew, is not harmful to human health.

The presence of caffeine in tea is 2.5 to 5 per cent on a dry weight basis. Out of this, about 80 per cent is extracted when tea is brewed with hot water in a normal manner. A daily consumption of 5 to 6 cups of tea means a caffeine intake of less than half a gram (0.3 grams) which is well below tolerable limits prescribed by the British Pharmaceutical Code for the medical administration of pure caffeine.

Tea does not appear to have any adverse impact on the car-

diovascular system. On the whole, when consumed in the form of brewed tea, caffeine does not appear to have any harmful effects.

In general, it has been conclusively indicated that there is no connection between tea consumption and atherosclerosis, or the hardening of the arteries brought about by high cholesterol levels. Indeed, studies in Israel and Finland have shown that blood cholesterol levels decrease with tea consumption.

In certain tests carried out on rats, mice and rabbits by Chinese and Japanese scientists, it has been reported that certain extracts from green tea, when administered, resulted in a lowering of blood cholesterol.

"In the final analysis," says the FAO report, "it can be argued there is reasonable evidence from experiments conducted to date that tea or some of its derivatives have either no influence on, or help in lowering, blood serum cholesterol."

The chemicals so far found in tea also do not indicate that tea may cause cancer. In March 1991, the International Agency for Research on Cancer placed tea in category 3 (carcinogenicity is classified on a scale of 1 to 4 in descending order). This means that there is no or inadequate evidence that tea is cancer-causing.

Still, over the past two or three decades, cancer of bowels, breasts, ovaries, bladder, pancreas, bones and kidneys had been linked to caffeine through coffee and tea. But it seems the studies have been faulty.

For instance, in parts of China, eastern Iran and southern Soviet Union, an above average incidence of cancer of the esophagus has been observed. Although the precise

cause is not known, the cancer has been linked to a tea-drinking habit. However, a study of this phenomenon did not take into account the dietary habits (salted, pickled food) and malnutrition coupled with drinking tea at extraordinarily hot climates.

Among all studies undertaken for tea and urinary bladder cancer, only one showed significant relationship. "At best, it can be said there is very little likelihood that tea-drinking could lead to cancer of the bladder," the FAO report says.

It also quotes the National Academy of Sciences, United States, which says "there is no convincing evidence relation tea consumption to any type of cancer" and "tea drinking has not been associated with an increased risk of any chronic disease in humans."

A number of studies have been conducted by Japanese and Chinese scientists on the effect of crude extracts of black and green tea which inhibits cancer growth.

It was observed that cancer-related deaths both in males and females were much lower in the Shizuoka province of Japan. Researchers have found that habitual green tea drinkers showed considerably lower incidence of cancer compared with those who drank green tea less frequently.

Polypheols are present in most plant tissues where they may form part of the defence system against predators. Soluble polypheols constitute about 15 per cent of black tea. For many years, certain tea polypheols have been shown to strengthen cell walls of blood vessels and regulating their permeability.

"It is strongly suggested that polypheols affect adrenal levels which, in turn, leads to strengthening of capillary activity, anti-inflammatory action, normalisation of thyroid hyperfunction, etc. These actions appear to be more pronounced when green tea polypheols are used rather than black tea," the FAO report says.

Deaths due to heart attacks, it is believed, can be significantly cut if people are made aware of the risk factors and are motivated to change their lifestyles.

Until recently the truth of this theory had never been studied, mainly because research workers could not find a non-mobile, homogeneous population which could be continuously monitored over a period of time.

Such a population is necessary so that gradual changes in lifestyle can be observed and compared with the occurrence of heart attacks and deaths due to heart disease.

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And it not only confirms what the medical research workers have been preaching all along, but also lends weight to the advice of individual doctors to their patients to cut smoking, change food habits and keep taking blood pressure pills if they do not want to suffer a heart attack.

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More than half the population lives in the capital city, Reykjavik, which made the survey's 13,000 randomly selected subjects readily accessible.

Moreover, since Iceland is totally self-sufficient in meat and dairy products and prohibits their import, it was relatively easy to fine out how much of these foods was consumed by the population.

The research project studied the changes in the three risk factors over a 20-year period from 1968 to 1988 as well as changes in the consumption of meat and dairy products during this time.

Researchers found that Icelanders now smoke much less than they used to. Whereas 54 per cent of men and 42 per cent of women were smokers in 1968, only 25 per cent of men and 29 per cent of women were found to smoke in 1988.

In fact, all three risk factors have been gradually reduced over the last 20 years. The average level of serum cholesterol in the population fell by six per cent in men and 11 per cent in women — while av-

# Child Health Care Facing Crisis

by Dr MA Bari

**I**NFANT Mortality Rate (IMR), which means the number of infant (0-12 months) age group) death in the first year per 1000 live births, is 109 in our country. This figure is only 05 in Japan and Sweden. It is only 26 in Sri Lanka, a developing country with almost equal socio-economic condition except a high literacy rate.

About 250,000 children die each year only from six preventable killer diseases — tetanus, measles, whooping cough, diphtheria, poliomyelitis and tuberculosis. All of these can be avoided through proper vaccination.

The single diarrhoeal disease snatches away about 4,00,000 lives per year. Most of the victims are children. The disease can be eradicated by building community awareness about sanitation, personal hygiene and assuring safe drinking water. You will never find a child who has not suffered, at least once a year from diarrhoea. By assuring safe drinking water some other water-borne catastrophic diseases like Jaundice, typhoid etc. also can be prevented.

About 40,000 children go blind every year and become morbid and burden for himself, for the family, community and at large for the nation. This happens only due to vitamin A deficiency. High potency vitamin A capsules are being supplied absolutely free from UNICEF through National Nutrition Council. Still the figure has changed from 30,000 to 40,000 within a couple of years. There is one and only one Upazila in the whole country from where the problem has been completely eradicated. It is Mirzagonj in Patuakhali district, 300 kms away from Dhaka.

If malnutrition taken into consideration (except vitamin A deficiency), the incidence is 100 per cent. Very few have appropriate weight according to their age which doesn't come in percentage. Not only that their height is also affected, most of them are stunted due to chronic malnutrition.

Almost cent per cent people suffer from parasitism. So stool examination for parasite is no longer of any significant importance except to know exactly about the particular type of the parasite.

Scabies is so common that it can be called a national disease. In village and urban slum, the rate of incidence is about 100 per cent. As this ugly disease does not threaten the life instantly, it usually never draws attention. As a result it goes untreated, which subsequently may be so dangerous that it might contribute to life threatening kidney diseases.

Pneumonia along with other respiratory diseases take some more lives which can be saved by early detection and simple treatment with oral penicillin. It should be noted that except the late (pneumonia and other respiratory disorders), none of the above mentioned problems exist at all in Japan or Sweden or any other developed countries.

Then why our children are facing such crisis? There are a good number of contributing factors, some are being discussed here.

1. Very low literacy rate — both institutional and functional and poor sanitation and poor knowledge about hygiene (Health education).
2. Very few skilled health personnel who realises the problem and can find out strategies to sort out the problems.
3. Lack of political and social commitment.

While 55 million children in the country have been facing the above mentioned simple problems, it is funny enough to know that we have only 140 Paediatricians (both physicians and surgeons) including those who have been serving abroad. Out of these 140 about 30 are

without knowing anything about child health one can come out successfully to be a medical graduate. After that he has 30 days training in paediatrics.

This might be a good joke. Within 30 days he really cannot learn anything. As a matter



That is how the children make it in Bangladesh

engaged in Shishu Hospital, one single institution. 47 are free lancer practising at their own initiative mainly in the greater Dhaka city. Another 20 have been serving in P G Hospital, Dhaka Medical College (Hospital and Sir Salimullah Medical College. Of them two or three are holding teaching posts in each peripheral medical colleges and the rest have been serving in sporadic manners in different government hospitals and in private chambers. Of the trained personnel, Dr. Syed Zahid Hossain, a fellow paediatrician is holding a post of adult physician in Patuakhali Sadar Hospital. He has spent more than a decade to train him up to deal with child health problems, but he is not allowed to serve the nation with his talent and skill; rather has been pushed to do some odd jobs. Another fellow Dr Rahman had been first posted as M O Department of Anatomy (job of a junior MBBS doctor), Shere-e-Bangla Medical College, then got the posting of medical officer, surgical outpatient department of the same medical college and now after three years as medical officer, Sadar Hospital, Barisal. Some child specialists had been posted in blood bank.

The 18,000 graduate doctors did not study paediatrics as a major subject in their under-graduation course. It is just a negligible part attached to adult medicine. The examiners are adult physicians and

of fact, while the 50 per cent of our total population are children, for each adult doctor there should have been two of them paediatrics-oriented; because there is a good deal of difference between an adult and a child. For example, a) The children faces a group of problems relating to their birth (before, during and after), b) There is a major part of caring and physical growth and mental development monitoring etc. c) Almost all the problems the adult faces may happen to the children as well. So, out of three phased job mentioned in case of children, the adult don't face the first two and overall the child neither can express nor wait and while he is sick the whole family is disturbed. The mortality and morbidity rate of the children of any nation is inversely proportional to its economic growth and social wellbeing.

It is easier to highlight any problem but difficult to find out any need-based appropriate solution. Here some outlines have been drawn.

1. Child Health (Paediatrics) should be a separate major subject and need-based texts should be prepared to be taught in under-graduation courses, so that all graduate doctors have enough knowledge to deal with day-to-day problems of our children population and it should be followed by at least 6-month training during internship for all.

50 per cent of our total hospital beds should be kept reserved for children population, this will allow the medical students to grow interest in the subject and facilities to develop skill and to build up a nation-wide awareness about children's right including health.

3. Immediate steps should be taken to start DCH (Diploma in Child Health) Courses in all medical colleges to produce more

specialists and to pay equal respect and importance to the teachers serving in peripheral medical colleges which are lacking at the moment.

4. BPMPA (Bangladesh Private Medical Practitioners Association) with collaboration with members of BPA Bangladesh Paediatric Association should arrange short courses for at least six months on child health consisting of need-based curriculum to orient young general practitioners and subsequently may develop post-graduation course for them. If audio-video method is applied middle aged and senior general practitioners who are very busy and practising in remote areas and can't offer lengthy period of six months may purchase or hire cassettes to upgrade themselves.

5. Government concerned offices should take immediate steps to correct odd posting of the paediatricians, to create more posts so that such a small number of highly skilled manpower is not wasted.

6. Government Health administrators (Service delivery system) should be made more functional and accountable about the preventable diseases to combat the crisis. The civil surgeons are the basic unit for the purpose.

# Changed Lifestyle Cuts Down Heart Attack in Iceland

by Dr. Sanjiva Wijesinha

**H**EART attacks and coronary diseases are major killers that can strike people in the prime of life. They account for millions of unnecessary deaths each year. It is hardly surprising, then, that much research has been done into the causes of heart

attacks and coronary heart disease.

Medical science has now identified the risk factors that contribute to the development of these conditions, and doctors have accepted that pre-

vention is the most effective weapon against coronary heart disease.

Smoking, high blood pressure and increased blood cholesterol — the prime causes of heart problems — can all be

reduced by taking appropriate measures.

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erage blood pressure fell by 16 per cent in men and 19 per cent in women.

The proportion of the population diagnosed as having high blood pressure and taking medication to keep their pressure under control had more than doubled during the period under review.

The pattern of food consumption was found to have changed considerably, resulting in a marked decrease in the consumption of animal fats.

The average daily intake of whole milk was nearly halved, from 787 grams daily per person to 410, while the daily intake of butter and margarine fell from 59 to 46 grams.

Icelanders are the largest consumers of fish in Europe, each swallowing 120 kilograms of fish each year.

In 1982, low fat milk became available in Iceland, and subsequently low fat butter and margarine, which also accounted for a reduction in dairy fat intake. Overall, the composition of the average Icelandic diet has changed to include more carbohydrates and less saturated fats.

Although the amount of meat eaten has not changed, there has been a trend towards eating healthier meats such as chicken and lean beef instead of the higher fat lamb and mutton.

— Gemini News

# HIV Carriers Infected with TB

**A**FTER declining worldwide for some 32 years, tuberculosis (TB) is on the rise again. In its latest incarnation, the killer plague has surfaced as one of the opportunistic diseases attacking AIDS (acquired immune deficiency syndrome) sufferers.

US medical experts say they are hamstrung in the fight against the TB resurgence by the near impossibility of detecting the disease in patients with AIDS. When people are infected with the human immunodeficiency virus (HIV) which causes AIDS, tuberculosis is more likely to set in due to the weakened immune system, the World Health Organisation (WHO) says.

The WHO estimates that about three million people worldwide who are HIV carriers are also infected with TB.

TB has been spreading rapidly in US prisons, homes for beggars and homeless people and drug rehabilitation centres where about 40 per cent of the patients are afflicted with HIV.

Existing tests to detect tuberculosis, like chest x-rays or tuberculin skin tests either give doubtful results or do not produce reactions in HIV-positive patients.

As a result, doctors often overlook the presence of TB in a symptomatic people, thus depriving patients of early treatment to prevent more infection or eventual death.

The rod-shaped bacilli that attack the lungs and cause TB are spread by coughing, sneezing and spitting. Contrary to common belief, handling a patient's personal belongings does not cause infection. Close contact does.

"There is nothing we can do to detect TB early," said Michael Iseman of the Jewish National Centre for Immunology and Respiratory Medicine.

The difficulty in diagnosing TB has caused a 900 per cent increase in TB cases in prisons in New York and Texas in the past 10 years, Iseman said.

He said he was sure the upsurge contributed to the rise in HIV contaminations. Official records show that there were about one million new HIV-positive cases in the United States this year.

Since the disease was first

discovered, in 1980, the number of people in the United States with AIDS has risen to almost 200,000, according to the Centre for Disease Control in Atlanta.

Some doctors have started to develop new tests for people with a weak immune system. But experts say the methods will be more expensive and will not be immediately available to all patients.

WHO records show that there are about eight million new cases of TB per year and nearly three million people die yearly from the disease. About 1.7 billion people, one-third of the world population, are carriers of the TB bacteria.

Most of TB deaths occur in developing countries. Last year, about 1.8 million people in Asia died of TB, mostly adults aged 15 to 60.

Over 650,000 people died in Africa, 220,000 in Latin America and 163,000 in the Middle East countries with the largest number of TB cases are Bangladesh, Brazil, China, India, Indonesia, Nigeria, Pakistan, the Philippines and Vietnam.

— IPS

