

# Consequences of Passive Smoking

by Md Anowarul Islam Khan

**T**HE tragedy of smoking does not only sweep the smokers, rather it equally affects those who do not smoke. A comparison of the chemical composition of the smoke inhaled by active smokers with that inhaled by involuntary or passive smokers shows that the toxic and carcinogenic effects are qualitatively similar.

Individual mainstream smoke constituents have usually been found in sidestream smoke as well. It is found that undiluted sidestream smoke contains at least five times the tar and nicotine, four times the benzopyrene and 48 times the ammonia as well as higher concentration of many other harmful substances.

Sidestream smoke also contains a greater concentration of nicotine, carbon dioxide, nitrogen oxides, hydrogen cyanide, aromatic amines and volatile amines according to the findings published in the WHO fact sheet.

Furthermore, the particle size of side stream smoke is smaller than of mainstream smoke and hence the particles are inhaled to a greater depth in the lungs of non-smokers.

## Health Hazards of Passive Smoking

In the United States, passive smoking has been estimated to be the third leading preventable cause of death where 53000 deaths occur every year due to passive smoking alone. The health hazards associated with exposure to environmental tobacco smoke

are acute respiratory illness in early childhood, reduced level of lung function and reduced development of lungs of children, lung cancer, coronary heart disease and so on. The children of smoker-parents usually born with low birth weight and less height. The frequency of respiratory infections is higher among children living with smokers than among those living with non-smoking families. Bronchitis and other respiratory diseases are significantly more common in the first year of life if a child has one smoking parent and even more common if both father and mother smoke.

In developing countries acute respiratory infections are a leading cause of childhood death accounting for nearly one-third of all deaths under five years of age. In addition to poor nutrition and over crowding air pollution has been shown to be a risk factor for acute respiratory infection.

It appears that passive smoking increases the risk of death from coronary heart disease by about 30 per cent. In Australia over one death in five is directly related to drug abuse of which 71 per cent can be accounted to tobacco related diseases.

In the state of Victoria with about four million population, it has been estimated that in 1987 smoking was responsible for 4735 adult deaths, 41 pre-natal deaths, 21191 lost years of adult life and more than 24500 were admitted into hospitals.

In places where cigarette smoking has been practised for several decades, about 80-90 per cent of lung cancer, 80-85 per cent of chronic bronchitis and emphysema and 20-25 per cent of death from heart disease and stroke are attributable to tobacco. The percentage risks would be lower in regions with less exposure to smoking.

## Smoking Pattern

Over the last decades numerous hazards of smoking and its consequences could have threatened human civilization all over the world. Smoking has become an epidemic which claims thousands of life every year in every country.

The smoking pattern shows that in the industrialized countries 20-40 per cent female do smoke while male smokers vary from 30-40 per cent. In the developing countries, typically from 2-10 per cent females are smokers and in these countries 40-70 per cent males do have the practice of smoking that exceed the figure of developed countries.

Globally about three million people die every year due to smoking, of which two million in the developed countries and one million in the developing countries. It is important that both active and passive smoking has now been recognized as a significant causative agent of several acute diseases of mankind.

What is eventually needed is to prevent smoking to protect environment from harmful particles and gases that effect human health considerably. The smokers not only suffer themselves from smoking-related diseases but they are also responsible for similar diseases and deaths for the non-smokers.

Considering the depth of the problems arising out of smoking, anti-smoking measures are being intensified all over the world to reduce health problems and environmental pollution. More than half of the countries in the world now provide protection from smoking in public place encompassing a variety of public sights and public health laws.

## Anti-smoking Law and social awareness

Policies that regulated smoking in public places and public transport stem from a collective consensus at the local, municipal, regional and national level. While it is the role of government to pass and enact legislation, the role played by individuals as part of society is also important and the responsibility still remains with the individuals to pursue the introduction and application for further regulations to attain a tobacco-free society.

A strong anti-smoking awareness and practices be developed among the people through intensive educational campaign. The existing laws

and regulation discouraging smoking behavior have to be implemented effectively in collaboration with all concerned authorities and organizations. Political commitment for the protection and promotion of public health would facilitate the achievement of anti-smoking goals in the country. We still have to go a long way for attaining smoking free society where about 70 per cent of the male population practice smoking.

It is a responsibility of the government to safeguard public health for the greater interest and welfare of the people. In fact, health is not a commodity available in the market for public consumption but it can only be shared by each and every individual member of the community with logical understanding and self determination. People have the right to know more about the health hazards of smoking and its socio-economic consequences to abstain themselves from such habit of smoking. An intensive health education programme containing scientific knowledge and information on smoking should have to be developed by the Health Department, law enforcing agencies, educational institutes, media network, social organizations and other government and non-government agencies for establishing a smoking-free environment and healthy life style in society.

(Md Anowarul Islam Khan is Asstt Chief, Bureau of Health Education)

# Breastfeeding Prevents Diarrhoea

Clare Blenkinsop

**D**IARRHOEA and its fatal consequences are again making headlines in our daily newspapers. Certainly great improvements have been made in our understanding of how to treat diarrhoea quickly and effectively; over 90% of households know about ORT (Oral Rehydration Therapy) and its use is widespread. But unfortunately in another equally important area of understanding, we appear to be regressing rather than advancing; breastfeeding and particularly exclusive breastfeeding is declining.

Can breastfeeding make a significant difference in the incidence of diarrhoea? Most certainly — in fact 'significant' is the wrong word to use — 'fantastic' or 'dramatic' would be more appropriate. A recent study in Brazil found that infants who received both breastmilk and other milk were 4 times more likely to die from diarrhoea than those who were exclusively breastfed, while those who received no breastmilk were 14 times more likely to die.

of infants in Bangladesh is a problem confined to urban areas or to a small elite section of the population. To state that 98% of mothers breastfeed their children is irrelevant. What is important to understand is that so-called 'combined feeding' is the norm and exclusive breastfeeding rare. Studies in this country have shown that almost 100% of babies receive something other than breastmilk for their first feed and this is the beginning of a pattern of partial breastfeeding combined with giving the baby foods and drinks other than breastmilk.

Another common misconception is that malnourished women are unable to breastfeed their babies adequately and therefore must supplement their breastmilk with other powdered milks. In fact, it has been shown scientifically that malnourished women can produce both the quantity and quality of breastmilk needed for the proper growth of a baby up to 5 months of age. And

to bottlefeed their babies. Exclusive breastfeeding means giving the baby nothing else but breastmilk — no honey, mustard oil or sugar water soon after birth or cows milk, powdered milk or other fluids afterwards. Breastmilk really does contain everything a baby needs for the first five months — even enough water for a hot climate like ours. Diarrhoea, which is always caused by taking contaminated food or fluids, can be almost totally avoided for the first 5 months of a child's life by exclusive breastfeeding.

At 5 months breastmilk should be complemented with a variety of freshly prepared family foods. The food should be mashed up and fed either by a clean spoon or hand but never by a bottle. Small children need small quantities of food often — their stomachs are not large enough to contain large quantities.

Why does bottlefeeding so quickly lead to diarrhoea? Because it is very difficult to ensure that all the fluids in the bottle are sterile, or completely clean, or that the bottle and the teat are free from bacteria. To be safe, bottles and teats must be boiled for 10 minutes, each time they are used. The water used to mix the feed also needs to be boiled for at least 10 minutes. To achieve these conditions, money, time, equipment and information are required and even then the product is inferior to breastmilk.

In addition to its nutritional value, and its immunological properties there are many other advantages to breastfeeding — babies that are breastfed are less likely to suffer from allergies such as asthma and eczema. Children who are exclusively breastfed are half as likely to develop cancer before the age of 15 than children not breastfed.

For mothers too the advantages are great — the process of breastfeeding helps a woman's body return to its pre-pregnancy condition and it offers good contraceptive protection (if practiced exclusively) for the first 5 months after delivery. The risk of breast cancer and ovarian cancer in later life progressively decreases with increased breastfeeding duration.

The goal we should be striving to achieve for the optimal health and nutrition of mothers and children is that all women should be enabled to breastfeed exclusively for the first 5 months of a baby's life. This child feeding ideal can only be achieved by creating an appropriate environment of awareness and support so that women can breastfeed in this manner. Attainment of this goal means that obstacles to breastfeeding both in the community and the workplace must be eliminated.



The reasons why breastfeeding offers protection against diarrhoea are:

- o The immunological and antimicrobial properties of breastmilk
- o The gut bacteria of exclusively breastfed infants tend to inhibit the growth of diarrhoea-causing bacteria
- o bottlefed infants are at greater risk of bacterial contamination
- o breastfed infants have a better nutritional status, and thus less risk of death from diarrhoea.

Too often it is claimed, inaccurately, that bottlefeeding

practically the only option a malnourished woman has to feed her baby safely and adequately is to breastfeed exclusively. Someone who cannot give herself sufficient food cannot possibly afford the expensive and dangerous option of buying tinne formula milk. Breastfeeding is not just the best way of feeding a baby — but easily the cheapest; to feed a baby of 3 months on tinne formula milk powder costs perhaps Tk 30 a day whereas a woman who is breastfeeding requires only Tk 2-5 of extra food. We should find ways of feeding mothers themselves more, rather than urging them

# Practising Psychiatry Without Medicines

by Alvaro Pan

**D**R Cristina Etchechurry is a young psychiatrist specialised in the treatment of people addicted to various types of drugs. She has adopted a holistic medicine which combines traditional acupuncture with 'moxa' and Bach's floral medicines.

Moreover, it stresses the importance of a strict control and constant checking of these people, who in most cases need to be listened to, to be paid attention to.

Acupuncture is an ancient therapeutical method which constitutes one of the mainstays of Chinese medicine. It is a healing practice based on the stimulation of certain points on the skin with needles or other objects.

In acupuncture 'complete recovery' means the eradication of the agent that causes the illness, so that a natural balance is re-established in the individual and his or her defences are strengthened to fight disease. In general, the treatment is carried out using steel needles.

The treatment with acupuncture combined with moxa (a Portuguese word meaning 'wick') is done using dried Artemisia leaves. In some case small cones are made and in others the leaves

are rolled in to the shape of a thick cigar. In the first case the cones are lit and then applied directly on the skin.

The second method involves bringing the Artemisia cigar close to the chosen point; when the heat reaches the highest bearable temperature, the point is pressed lightly, and the operation is repeated.

A team of Uruguayan psychiatrists are treating their patients with acupuncture and Bach's floral medicines, replacing conventional medicines almost completely.

In Uruguay acupuncture has been known for some time now. On the other hand, Bach's floral treatments have only started to be used recently, and according to Dr Etchechurry herself, it was only 'by chance' that she came across them.

Bach's floral medicines are concentrated extracts from wild flowers, whose healing properties were discovered by Dr Edward Bach, a medical doctor born in Mosely, a small town in the outskirts of Birmingham, England.

Bach started his research based on the conviction that illness is the result of an emotional imbalance in the energy field of a living creature. For

him, the conventional material treatment merely provides temporary relief but does not attack the real causes of illness.

'Illness is not material in its origin. What we call illness is the final reflection on the body, the end product of a process in which deep and long-lasting

clear spring from the surroundings. Then they are left in the sun for some hours in the same place where they have been collected. Thus, the water becomes impregnated with the flower's energy.

There are 38 of these medicines, which appear among the medical systems credited and recommended by the World Health Organisation (WHO). Thirty-five of them come from wild flowers that grow in England: rock rose, mimulus, cherry plum, aspen, red chestnut, scleranthus, gentian, gorse, hornbeam, wild oat, clematis, honeysuckle, wild rose, olive, white chestnut, mustard, chestnut bud, water violet, impatiens, heather, agrimony, centaury, walnut, holly, larch, pine, elm, sweet chestnut, star-of-Bethlehem, willow, oak, crab apple, chicory, vervain, beech.

Ligneous flowers are boiled with some drops of cognac, because it is a natural alcohol which comes from life and helps to keep the flower's energy. Afterwards, concentrates

forces take part. Bach explained. Therefore, taking measures to correct the emotional imbalance will improve physical ailments. Treating the patient's personality rather than the illness, is at the root of the new medical system,' Bach stressed.

Based on this conviction he started observing natural phenomena such as dew, light, shade, and plants. He then selected some plants and natural elements until he arrived at a method consisting of cutting buds of the chosen flower, selecting those with the most perfect blossoming.

These blossoms are then placed in a thin glass container full of water collected from a

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compared with 90 per cent awareness of the better-known but less prevalent multiple sclerosis and muscular dystrophy, says the British MND Association, which will initially provide the International Alliance's secretariat.

In Britain alone, MND kills three people each day and affects 6,000 others, mainly

adults. The number of patients in contact with the national health service is 900 annually. Their life expectancy is between three and five years.

'As yet there is no specific treatment that will arrest or slow down the progress of the disease,' the association says. 'The speed of deterioration causes tremendous practical and financial problems for those with MND and those who care for them... however, much can be done to improve the quality of life through the correct care and provision of special equipment.'

Such equipment includes reclining/elevating chairs which make daily life more manageable and comfortable, and 'lightwriters' that give sufferers the power of speech by displaying and mechanically speaking words touch-stroked on to a keyboard.

Research into the cause and cure of MND is being carried out on a growing international scale. Many theories have been suggested — vital infection, environmental poisons, metabolic disturbance and genetic defects.

Some medical scientists are trying to trace the geographical and social spread of MND to see if these give any useful clues.

Work being done in Sydney, suggests families may have different forms of the diseases caused by a multiplicity of defective genes (protein substances forming part of the body's chromosomes).

Researchers in New England, US, have identified a defective gene with a chromosome — 'Chromosome 21.'

A Chromosome is the rod-like portion of each cell's nucleus; it plays an important part in transmitting hereditary characteristics from one generation to the next.

The relevant fields of ap-

## WHO's Prognosis: World Remains a Dangerous Place

by Ian Steele

**T**HE world is a dangerous place, as the World Health Organisation (WHO) reminds us in its annual snapshot of pestilence and major causes of death.

WHO reports that:

- \*\*About 500,000 women died during pregnancy and childbirth last year.
- \*\*Malaria, sleeping sickness, and Chagas disease are on the increase, as are leishmaniasis and schistosomiasis.
- \*\*Heart disease is approaching epidemic proportions among the better fed populations of Asia and Latin America; and
- \*\*Population growth is outstripping the capacity of developing nations to provide their people with safe drinking water and sanitary waste disposal services — the most basic investments a nation can make in the health and development of its children.

Maternity health care coverage remains as low as 2 per cent in parts of Africa. An average 10 per cent of all pregnancies in the developing world last year led to life-threatening complications. The highest proportion of births assisted by a trained health care worker in the developing world was in East Asia, but some of the lowest were in South Asia.

Malaria poses a threat to 40 per cent of the world's population, or 2 billion people, living in more than 100 countries. And in the worst-affected countries, the situation has deteriorated over the past decade.

The resistance of mosquitoes to insecticides; the resistance of parasites to pharmaceuticals; and the failure of health services to reinforce epidemics on countries such as Ethiopia, Madagascar and northern Sudan. Resistant strains of malaria are currently threatening the repatriation of refugees from

Every dollar, deutschmark, yen or pound has to be fought for — and it is being done so through relentless effort by brave patients and healthy, supportive members of the public.

Their fund-raising activities have recently included a trans-European cycle ride, a 100-hole golf marathon, a royalty-sponsored polo weekend in Switzerland, fashion shows and concerts.

In their commitment to beating the killer disease, the MND associations are determined, a spokesman says, that 'our reach will exceed our grasp.'

— Gemini News

## Global Body will Fight Killer Nerve Disease

by Nicola Cole

**R**EPRESENTATIVES from up to 40 nations are to meet soon to launch formally an aid organisation with one pyramid aim — improved action against motor neurone disease (MND), which ranks among the world's deadliest, cruellest afflictions.

Also known as amyotrophic lateral sclerosis (ALS), it is a wasting illness which destroys nerve cells controlling muscles. This causes gradual weakening of the limbs and ultimately paralysis of the entire body while leaving the intellect unaffected.

Death occurs when the muscles that power the breathing system collapse, or eating and drinking become impossible. No cure exists.

The best-known living victim is Professor Stephen Hawking, author of a Brief History of Time, a best-seller which Hollywood director Stephen Spielberg has now turned into a feature film.

The proposed International Alliance of MND/ALS Associations is due to be formed in November. Component objectives will be:

- \* to help promote awareness of MND/ALS worldwide
- \* to exchange and spread information about research into the disease as well as stimulating and supporting research
- \* to coordinate research programmes so that 'unnecessary duplication of effort' is avoided
- \* to share data about patient care and disease management

National associations from South Africa, Romania, Japan, Australia, the United States and the Philippines have already formed a steering group and discussed common problems. These notably include inadequate health system, limited

professional knowledge of the disease, and cases where some patients are 'ignored.'

Tragically, the effects of MND, such as slurred speech and poor co-ordination, sometimes cause sufferers mistakenly to be treated as if drunk or mentally retarded.

Awareness of MND is 'generally' about 50 per cent,

compared with 90 per cent awareness of the better-known but less prevalent multiple sclerosis and muscular dystrophy, says the British MND Association, which will initially provide the International Alliance's secretariat.

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**A BRIEF HISTORY OF TIME**

FROM THE BIG BANG TO BLACK HOLES

**STEPHEN W. HAWKING**

INTRODUCTION BY CARL SAGAN

Cambridge Professor Stephen Hawking: the author of this world bestseller is the most famous victim of motor neurone disease.

A dramatic reduction in cases of guinea worm disease (dracunculiasis) in India and Pakistan — the only countries of Asia where the disease is prevalent.

The success of a 15-year campaign against the black fly which causes river blindness (onchocerciasis) in seven West African countries in particular. —Depthnews Asia