

Feature Health

Unitedly Combating a Curse called AIDS

The human civilization is exposed to the threat of HIV/AIDS pandemic all over the world. Since a single case of AIDS had been detected in the United States of America in 1981, the disease had begun to be transmitted elsewhere in the world. The scientists have named the deadly disease as Acquired Immune Deficiency Syndrome (AIDS) which causes due to entry of Human Immune Deficiency Virus (HIV) into the human system. The virus is so fatal that it destroys total immunity of the body leading the infected person towards unavoidable death in a certain period of time.

The human system has received into it a natural immunity mechanism to fight against diseases. But the opportunistic HIV/AIDS virus is very much potential to completely damage the protective cells of the body and as a result the infected person becomes vulnerable to any kind of illness which could not be cured. The most important and serious characteristics of this disease is that AIDS becomes apparent after 8-10 years after having been infected with HIV. It is quite fearsome that during this long incubation period the infected person may seem to be healthy and can lead normal productive and social life without showing any clinical symptoms and complaints.

This silent manifestation of the disease is very much likely to transmit itself into others without leaving any scope for protection or prevention. Once some specific clinical symptoms like constant diarrhoea, prolonged cold and fever, night sweats, severe weight loss and cancer in different parts of the body begins to be appear, the patient can hardly survive for two or three years.

It is surprising and frustrating that neither a vaccine nor any medical treatment for AIDS related health problems could have been developed. Worldwide continuous efforts are being made by the scientists but very little so far have been achieved in this field. This inability of the scientific and medical failure to develop a cure has made an opportunity for the virus (HIV) to spread all over the world.

The global HIV/AIDS situation has become a matter of great concern for the survival of human kind as a whole. It has been estimated that about 14 million people around the world have been infected with HIV. It

is painful to note that about 50 lacs of women and 10 lacs of children throughout the globe, by this time, have been infected with this malady. The tragedy is that by the year 2000 AD, 50-100 lacs of children will be infected with HIV. In the sub-Saharan region the most tragic victims of HIV/AIDS are the women and children. As a result of immature death of parents who had suffered from AIDS about 50-100 lacs orphan children have created a sense of great concern in every sphere of life. At the time when about 100 lacs people will again die of AIDS by 2000 AD many more children will again become orphan. It may be speculated that the death rate will exceed the present population growth rate if it continues to increase in such an alarming way.

It has been well understood and recognised that a comprehensive AIDS prevention and control programme has to be carried out in the country. In the absence of any cure or antidote, education is the only weapon to fight against AIDS. The people at large, therefore, have to be very well informed about AIDS so that they can involve themselves in the AIDS prevention and control programme.

The deadly AIDS virus follows some specific mode of transmission which are closely associated with human behaviour. The environment has very little scope to help the virus to be transmitted unlike other communicable diseases. Human kind is known as the only carrier of AIDS virus. The virus is mostly transmitted through sexual contacts with HIV infected persons and also through homosexual relations with any infected male partners.

It is statistically proved that up till now 80 per cent of HIV/AIDS infections have occurred as a result of sexual promiscuity. The virus can also be transmitted through HIV infected blood transfusion and use of infected needles and syringe. The other mode of transmission is from HIV infected mother to her unborn child during pregnancy, during delivery and even after delivery, through breast feeding. There is no other known way for the virus to be transmitted into human body.

Bangladesh is no more free this ghastly disease from 21 HIV/AIDS positive cases were recorded during the last few

years. There might be more HIV positive cases still unnoticed and therefore, untreated, which could not be detected due to lack of extensive surveillance and sufficient blood screening mechanism in the country. In the neighbouring India, Burma and Thailand HIV/AIDS epidemic has posed to be very alarming where millions have already been infected with the fatal disease. This situation has become a potential threat to us because of our close social, political and economic relationships with those countries. We must learn from these countries and start preparing to fight the menacing disease without any further delay.

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the absence of any cure or antidote, education is the only weapon to fight against AIDS. The people at large, therefore, have to be very well informed about AIDS so that they can involve themselves in the AIDS prevention and control programme. We need to be very careful and committed in carrying out AIDS prevention activities without disturbing psychosocial sentiment of our society. Discrimination and complacency should not be there if we really want to save our people from this terminal disease. At this point collective and coordinated efforts both within and outside health sectors are to be stimulated in creating a mass awareness about this disease. Health professionals at all levels must be prepared with adequate knowledge and information on AIDS as well as with appropriate programmatic concepts to address the target group timely, adequately and effectively. This should be treated as one of the top priority health problem. The existing health care network system has to be rightly identified and entrusted with the responsibility of AIDS education and information, and

The Big Task that Faces New Man at FAO

A United Nations study has asked: Will there be enough food for the people of the world to eat in the year 2010? Its simple answer: Yes.

However, answers to questions about the future of the world are never so simple. Yes, there will be enough food to eat but, no, it will not be distributed adequately around the world. The reasons include poverty, population growth, exploitation of natural resources and war.

Nikos Alexandratos, head of the team from the UN Food and Agriculture Organization (FAO), which edited the study, says "There are many who think that the world is on a path to destruction."

They see the world population in poverty without enough access to food and fear that as the population grows more will become chronically undernourished. But the world is not coming to an end — not on the food front.

The study, Agriculture: Toward 2010, looks at the problem of feeding people and focuses on developing countries. World per capita food supplies are 18 per cent above what they were 30 years ago. Progress has been slow and uneven.

While most developing countries have been part of this progress, sub-Saharan Africa is worse off nutritionally than it was three decades ago. Even though the percentage of chronically undernourished people has decreased, the overall number has remained constant because of world population growth.

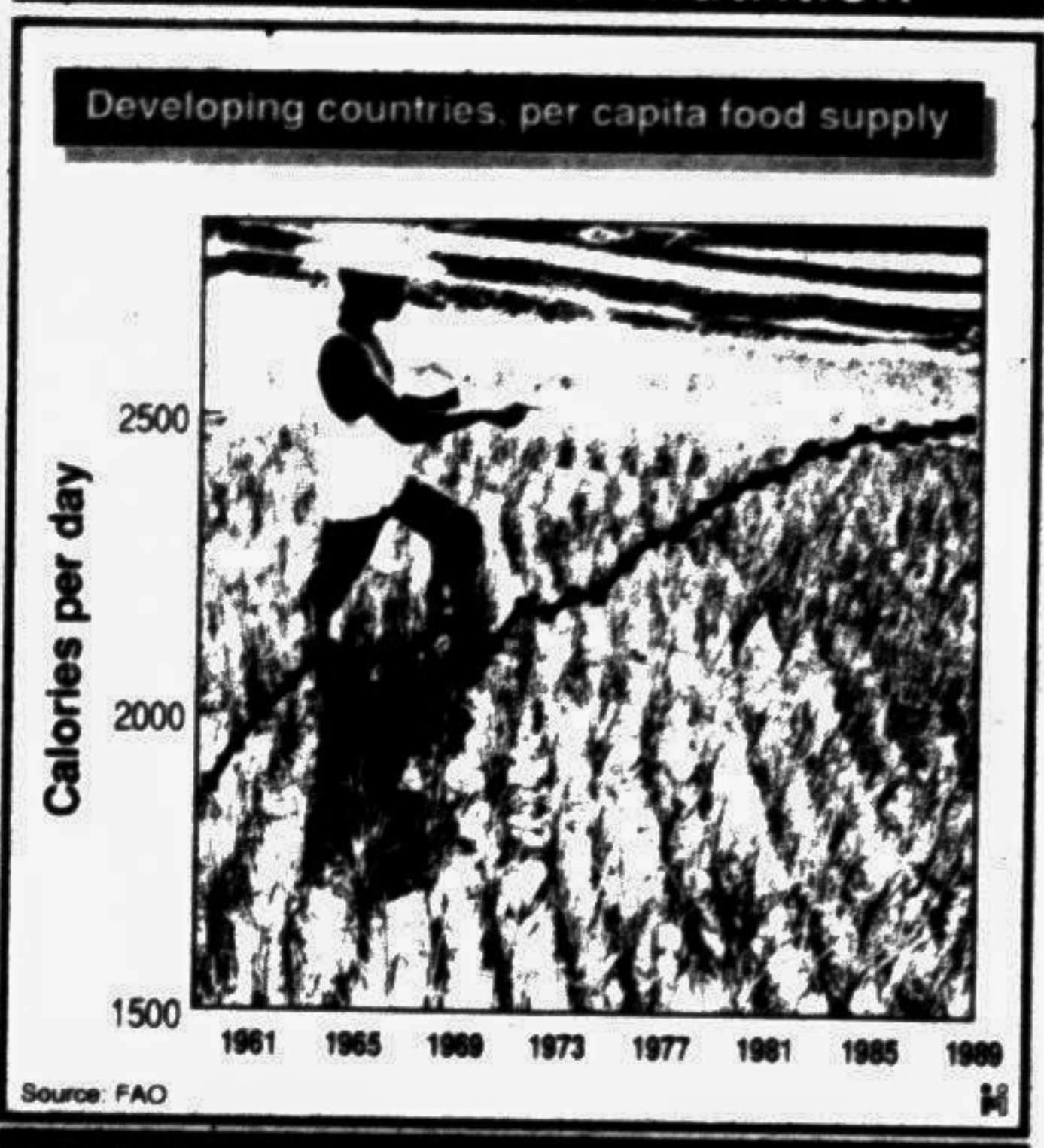
So, in absolute numbers, there are today 800 million hungry people on earth and in the year 2010 that number will still total 650 million.

That is the reality Jacques Diouf will inherit on January 1 when he becomes the new director-general of the GAO in place of Edouard Saouma, who held the post for 18 years. Diouf has been Senegalese ambassador to the UN since 1991 and has a PhD in agricultural economics from the Sorbonne in Paris. He is the first African elected to head the organisation.

In his acceptance speech at

Nancy Hart writes from Rome
A United Nations study says there will be enough food to feed the world two decades from now. Distribution is the big problem. On January 1 a new man, Jacques Diouf of Senegal, takes over as head of the UN Food and Agriculture Organization. Gemini News Service reports on the task he will face of making sure more of the food supply gets into the hands and bellies of the people who desperately need it.

Slow road to better nutrition



the 27th FAO Biennial Conference, Diouf said that although he was supported in his campaign by African member nations, he has a "firm and unwavering intention" to serve the entire international community and bring all 169 FAO member nations together "to meet the biggest challenge facing mankind, which is the challenge of hunger."

In the last 10 years many countries have been economically stagnant. All developing regions had falls in per capita incomes — except for Asia — which has translated into reduced food and medicine and increased death rates.

Alexandratos said: "In developing countries, failure to grow means failure to have hospitals or schools or basic services. In Europe or North America, failure to grow means they don't sell as many automobiles."

The FAO report predicts that the growth rate of world agricultural production will be lower in the next 20 years — down from 2.3 per cent to 1.8 per cent. Part of the drop can be explained by countries that already have all the food they need, which means the agricultural market in those countries is unlikely to grow. Also, the pace of increase in the world's population has slowed.

Poverty plays a big role in reduced agricultural production.

tion. People who would consume more food do not have enough money to buy it, so farmers do not increase production because the increased demand comes from the poor who cannot afford to buy.

"It is not a food problem, it is a poverty problem," Alexandratos said.

In terms of nutrition, the FAO study predicts that by the year 2010, the Middle East and North African region as well as East Asia — including China — and the Latin America-Caribbean region will be above the 3,000-calorie-a-day per person mark. That is significant progress. The 1993 World Development Report from the World Bank said 2,200 calories per day is an energy intake adequate for only light physical activity.

The FAO study said South Asia may also make significant progress by 2010, but not enough. Sub-Saharan Africa, where 32 per cent of the population is undernourished, will continue to have a chronic problem.

Many other factors have to be considered when looking at the ability of the world to feed itself. World population may be growing more slowly, but it is still increasing — from 3.7 billion in 1970 to 5.3 billion in 1990 and a predicted 7.2 billion by 2010. Some 94 per cent of that growth is in developing countries.

The process of enabling people to have more food also has impacts. People work in industry, consume more energy, putting pressure on the environment. In future, particularly in developing countries, the environment will pay a price for increasingly intensive agriculture.

Now, as Agriculture: Toward 2010 points out, the crucial issue is whether the world can make the transition to slow growth on a global scale and at the same time eliminate the poverty and undernutrition that remains chronic in the developing world.

— Gemini News
NANCY HART is an American journalist based in Italy. She has 25 years experience working for newspapers and television stations in the US.

Dipyrrone: A Drug No One Needs

IN the early 1980s, 94 people died in Germany after taking a pain killer that contained dipyrrone. As a result, the German drug registration authority (BGA) restricted the indications for the drug to severe pain after surgery or accident, as a result of cancer, or because of intestinal colic. Combination products containing dipyrrone were withdrawn from the market. In 1990, the BGA re-emphasised that it considered dipyrrone a drug of last resort, primarily for cancer pain.

The world's leading manufacturer of dipyrrone is the German company, Hoechst. The restrictions on dipyrrone in its home country have not stopped Hoechst from promoting its dipyrrone products widely in other countries, says Health Action International's (HAI) latest publication, *Problem Drugs*. In 1992, Hoechst was advertising dipyrrone's "ample safety margin" in Latin America and recommending the product for all types of fever and pain.

Promotion such as this ensured high sales. Globally, dipyrrone contributes more than 2 per cent to the company's overall pharmaceutical sales. In countries such as Pakistan, or the Philippines, dipyrrone brings in anywhere from one-quarter to one-third of the company's national turnover.

Besides Hoechst, many local companies manufacture dipyrrone-containing products. At least one out of every seven pain killers in markets in Pakistan, the Middle East, Africa and the Caribbean during 1990 contained dipyrrone.

In 1977, the American Medical Association described dipyrrone as "obsolete" and the US Food and Drug Administration withdrew approval of the drug because of the availability of safer alternatives. Ten years later, the German Medical Association said that even a small risk of a life-threatening condition was "an unacceptable price to pay for pain relief, especially since it cannot be maintained that alternatives are not available."

Dipyrrone can cause two life-threatening conditions: agranulocytosis (severe loss of white blood cells due to bone marrow damage), and anaphylactic shock (a severe allergic reaction). In both cases, it is impossible to predict who is likely to be at risk from these conditions.

In the mid-1980s Hoechst helped to pay for an international study which the company hoped would show that dipyrrone was not a significant factor in causing agranulocytosis. Instead, the study found that one out of every four cases of drug-induced agranulocytosis in the participating countries occurred as a result of taking dipyrrone.

— Health Action International

...Fiebre. ...Dolor?

Novalgina

- Maxima eficacia
- Amplio margen de seguridad
- Rapidez de accion
- Facilidad de administracion

Hoechst

Hoechst advertises dipyrrone's "ample safety margin" in *Comahue Medico* in 1992 in Latin America. Fever and pain are listed as indications. Dipyrrone has caused deaths from agranulocytosis (severe loss of white blood cells due to bone marrow damage) and anaphylactic shock (a severe allergic reaction) and has been banned or severely restricted in many countries.

Exercise-induced Asthma

by Mohd. Ali Belal

EXERCISE-INDUCED asthma may be defined as the asthma of persons in whom exercise is the predominant and the only identified precipitating factor of stimulus to airflow obstruction. Usually in all patients of asthma in response to exercise or due to any provocative stimulus the airflow obstruction deteriorates. Most people in whom exercise is the main factor which precipitates asthmatic symptoms, will be found to have other additional sensitivities that either can be found in the clinical history or will evolve overtime. The principle of treatment of asthma in athletes is that all of the strategies normally effective in reducing the activity of asthma are also effective methods for limiting bronchospasm caused by exercise.

Patho-physiology of Exercise-induced Asthma
The exact mechanism of exercise-induced asthma is not completely known, but the important elements of the process can be recognised and can be manipulated for its prevention. The main aspects of the precipitating stimulus are the level of ventilation during exercise and the temperatures/water content of the inspired air. The higher the rate of ventilation during exercise and the colder and drier the inspired air, the greater the stimulus for bronchospasm. For all asthmatics, regular exercise that improves cardiovascular fitness can help reduce exercise-induced asthma by lowering the level of ventilation needed during any given exercise task. Cardiovascular fitness is achieved by increased oxygen extraction from the blood by exercising muscles. An athlete can choose the venue for performing exercise; avoidance of cold/dry environment is preferable.

Swimming is the preferred exercise for persons with asthma in the old age. Inhaled irritants, air pollutants and cigarette smoke can also trigger asthma, especially during exercise when larger than normal volumes of these irritants are delivered to the airways. During short period of exercise (few minutes) airways actually dilates. Airway narrowing develops within two to three minutes after cessation of exercise. Muscle constriction is thought to be the cause of airway narrowing. It usually reverses spontaneously over 30-90 minutes or within a few minutes of administration of a bronchodilator inhaler. A late asthmatic reaction may arise several hours after a single exercise event. A second event for a short period within two hours of the first event induces less post-exercise bronchospasm despite identical exercise conditions, a phenomenon on referred to as the "refractory period". Many asthmatic athletes report that a warm-up period of submaximal exercise helps to minimize exercise-induced symptoms.

Assessment
The presence or absence of bronchospasm before and after exercise can be assessed by Spirometry. In the laboratory this can be assessed by having the patient exercise with a stationary bicycle or treadmill to the level of ventilation and with inspired air temperature and humidity that duplicate the actual exercising conditions. Formal pulmonary evaluation before and after exercise can also be used effectively to evaluate the impact of preventive therapies.

Treatment and Prevention
The main object of optimal asthma management is, enabling persons with asthma to achieve a normal exercise capacity. The goal translates into the ability to walk short distances and to work regularly without limitation due to dyspnoea. The challenges of the physician to achieve this goal are 1) to maximize lung function of asthmatics prior to exercise and 2) to protect against bronchoconstriction during exercise.

Exercise-induced asthma is generally rapidly eliminated by administration of inhaled bronchodilators (betaadrenoceptor agonists). The greater challenge is preventing development of significant air flow obstruction during and following exercise so as to minimize the impact of asthma on athletic participation and performance. Optimizing asthma in general but not with exercise is the first step towards prevention. The less the underlying bronchial hyper-responsiveness and the higher the pre-exercise level of expiratory air flow, the less likely it is that a particular exercise task will provoke asymptomatic airflow obstruction. In some asthmatics, regular use of corticosteroid inhalers will be needed to achieve this goal. Corticosteroid inhalers are currently approved by the international sporting community for this purpose. Asymptomatic otherwise, these patients, betaadrenergic agonists are the drug of choice against bronchospasm for prophylaxis. Because betaadrenergic agonists do not enhance exercise performance in any way other than prevention of airflow obstruction, they are almost approved for use in world class competitions.

Fenoterol, taken in standard doses (1-2 inhalation) 10-20 minutes prior to exercise affords excellent protection for up to two hours. The newer long acting bronchodilators, salmeterol and formoterol offer effective prevention of exercise-induced symptoms for as long as eight hours following a single pre-exercise dose. Cromolyn sodium may be used as inhaler intolerant to the above drugs as it is devoid of side effects. When used as an anti-inflammatory medication for chronic asthma it must be taken four times a day.

HOWEVER, THESE DRUGS SHOULD NOT BE USED WITHOUT PRIOR CONSULTATION WITH A QUALIFIED PHYSICIAN
The writer is the Civil Surgeon and CMO, Secretariat Clinic, Dhaka.

Dioxin Does Cause Cancer in Humans

by Peter Montague

A n explosion at a Hoffman-LaRoche chemical plant in Seveso, Italy, in 1976 sent a cloud of the herbicide 2,4,5-T over the surrounding countryside, contaminating several thousand people. Dioxin is created as an unwanted by-product during the manufacture of 2,4,5-T, so the Seveso population was exposed to dioxin. For years, optimists have been pointing to Seveso saying, "Dioxin doesn't cause cancer in humans — look at

A study reveals that people in Seveso, Italy who were exposed to dioxin during an explosion at a chemical plant there, have begun to exhibit excessive numbers of cancers. This should effectively silence those who for years have been denying the link between dioxin and cancer in humans.

Seveso. Now a new study in the journal *EPIDEMIOLOGY* reveals that people exposed to dioxin during the Seveso explosion have begun to exhibit excessive numbers of cancers.

Dr Linda Birnbaum, director of environmental toxicology for the US EPA (Environmental Protection Agency), said that the new study is "one more nail in the coffin" for dioxin. Birnbaum, who is coordinating EPA's multi-year "scientific reassessment" of dioxin, said, "This, together with other studies, clearly supports that dioxin has the potential to cause cancer in people, just as it does in every animal it's been tested in. The weight of the evidence is becoming overwhelming."

The area around Seveso has been divided into three zones, called A, B and R. The small A zone was most heavily contaminated, but its 724 residents

increased cancer deaths among exposed workers. However, the Monsanto studies have been criticised by a report from the National Research Council, which says Monsanto's studies were "plagued with errors in classification of exposed and unexposed groups, according to some reports, and hence have been biased toward a finding of no effect". A 1990 analysis of Monsanto workers, conducted by the National Institute for Occupational Safety and Health, reported a statistically-significant increase in soft tissue sarcomas.

As part of its multi-year scientific reassessment of dioxin, EPA recently published a draft review of all scientific data linking dioxin to cancer and other health effects in humans. The EPA's draft document concludes that four separate studies of workers exposed to dioxin have revealed an "overall increased mortality from all malignancies combined". EPA speculates that dioxin's ability to mimic hormones gives dioxin the capacity to cause cancer in many different organs and bodily systems in humans.

There seems to be little room left for doubt: As EPA's scientific reassessment team told then-chief of EPA, William Reilly, on 27 January 1992: "Dioxin does cause cancer in humans."

It therefore seems that EPA now has little choice but to declare dioxin a class a carcinogen, that is, one known to cause cancer in humans. This would have far-reaching implications for public health policy.

An editorial in the September issue of *EPIDEMIOLOGY* points out some of the public policy implications of the conclusion that dioxin causes cancer in humans. The author of the editorial, Swedish dioxin researcher Olay Axelsson, says that the "biological effects of TCDD (dioxin) are a first order public health concern".

Dioxin is produced by every municipal solidwaste incinerator ever tested: it is produced by all hazardous waste incinerators, cement kilns and BIFs (boilers and industrial furnaces) that burn chlorinated wastes. It is produced by the manufacture of many pesticides (85% of which involve chlorine). It is produced by metal smelters and paper mills, and probably by other common industrial processes. Although there is now little doubt that dioxin causes cancer in humans, translating that into public policies that genuinely protect public health will create a political firestorm.

— Third World Network Features

Dying for a smoke

Death Cigarettes
Founded in US, Feb. 1991
Launched in Britain, Oct. 1992
Also available Japan and Canada (March 1993)
Slogan: "If you don't smoke, don't start. If you smoke, quit."

Facts on smoking

- Health risks: lung cancer, oesophageal cancer, heart disease, respiratory disease
- Annual deaths from smoking worldwide 3 million
- World's top-selling brand: Marlboro, produced by Philip Morris US (1991 tobacco sales \$23 billion)
- 10% of British children aged 11-15 smoke, despite ban on sales

were evacuated. [Heavy contamination means that each square yard of land contained 13 to 494 micro-grams of dioxin; a microgram is a millionth of a gram and there are 28 grams in an ounce.]

The B zone was less heavily contaminated but its 4,824 residents were not evacuated; zone B contained 43 micrograms of dioxin per square yard of soil, or less. The R zone was even less contaminated (average contamination being 4.3 micrograms per square yard), so its 31,647 residents were probably exposed to low levels. Another 181,579 people living beyond zone R serve as a control group living in non-contaminated areas.

The greatest cancer increase has occurred in zone B. In zone A the numbers are small and no

ident. Since most cancers take longer than 10 years to develop, the cancers reported in this study may represent only the earliest signs of more trouble to come.

This Seveso study is not the first to indicate the dioxin causes cancer in humans. Swedish researchers in the late 1970s began reporting that exposure to phenoxy herbicides (2,4-D and 2,4,5-T) caused a threefold to sixfold increase in the risk of soft tissue sarcomas and lymphomas. Phenoxy herbicides are contaminated with dioxin during manufacture.

Monsanto Corporation, a major manufacturer of phenoxy herbicides, in the late 1970s and early 1980s sponsored studies of workers that the company had exposed to dioxin, and these studies showed no