

The World Health Report 1997

**Conquering suffering
Enriching humanity**



**World Health Organization
Geneva**

**Executive
Summary**

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Executive summary

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Conquering suffering, enriching humanity

Chronic diseases are responsible for more than 24 million deaths a year, or almost half of the global total.

The state of world health

Life expectancy, health expectancy

Dramatic increases in life expectancy, combined with profound changes in lifestyles, will lead to global epidemics of cancer and other chronic diseases in the next two decades. The main result will be a huge increase in human suffering and disability. There is an urgent need to find ways to reduce that coming burden.

Half a century ago, most people died before the age of 50. Now, the great majority live well beyond that age. Global average life expectancy at birth reached 65 years in 1996.

However, while extending our life span is a desirable goal in itself, it is much more so if it can be accompanied by freedom from additional years of suffering poverty, pain or disability. Unfortunately, for many millions of people, there is as yet no such freedom. The quality of human life is at least as important as its quantity. Individuals are entitled to be concerned not so much about their *life expectancy* as their *health expectancy*.

Health expectancy can be defined as life expectancy in good health, and amounts to the average number of years an individual can expect to live in such a favourable state. It is vital to realize that increased longevity does not come free. Every year many millions die prematurely or are disabled by diseases and conditions that are to a large extent preventable. Longer life can be a penalty as well as a prize. A large part of the price to be paid is in the currency of chronic disease, the main subject of this report.

The health transition

As shown in *The world health report 1996 – fighting disease, fostering development*, infectious diseases kill about 17 million people a year and afflict hundreds of millions of others, particularly in the developing world.

In the industrialized world, infectious diseases are well under control. It is noninfectious diseases – particularly cancer, circulatory diseases, mental disorders including dementia, chronic respiratory conditions and musculoskeletal diseases – that now pose the greatest threat to health in developed countries. These are essentially the diseases that strike later in life and which, as life expectancy increases, will become more prevalent.

Chronic diseases are responsible for more than 24 million deaths a year, or almost half of the global total. The leading causes are circulatory diseases, including heart disease and stroke, cancer and chronic obstructive pulmonary disease.

As life expectancy in developing countries also increases, so does the certainty that people will become more and more prone to diseases that are more common among older age groups. Already, the outlook for most individuals in the developing world is that if they do manage to survive the killer infections of infancy, childhood and maturity, they will become exposed in later life to noncommunicable diseases.

This situation is known as the “epidemiological transition” – the changing pattern of health in which poor countries inherit the problems of the rich, including not merely illness but also the

harmful effects of tobacco, alcohol and drug use, and of accidents, suicide and violence. It is also referred to as the "double burden", because of the continuing weight of endemic infectious diseases.

For richer, for poorer?

Increasingly, health is influenced by social and economic circumstances over which the individual has little control, and over which the conventional health sector also has little sway. As a result, many countries are now experiencing a widening gap in health terms between rich and poor.

The world health report 1995 – bridging the gaps showed that infectious diseases are more prevalent among poorer and rural people, while middle- and upper-income urban dwellers – whose life expectancy is higher – are more exposed to noncommunicable diseases and conditions. Furthermore, as the gaps in life expectancy clearly demonstrate, the poor die young, while the rich die old.

In terms of setting global health priorities, therefore, the poor stand to benefit much more than the rich from a continued emphasis on infectious diseases. Shifting priorities significantly away from infectious diseases towards noncommunicable diseases would benefit the rich at the expense of the poor. This would be in direct conflict with the goals of equity in health.

Any further improvements in health thus demand integrated, comprehensive action against all the determinants of ill-health. Countries, particularly in the developing world, can no longer afford to deal with the double challenge of these diseases one after another, as in the past: they must combat them simultaneously, with the help of the international community. These will be challenges reaching far into the future, but they must be confronted today.

Curing and caring

One crucial and controversial difference between infectious and chronic diseases needs to be recognized. The history of medicine and public health shows that

infectious diseases can be cured – eliminate or destroy the infectious agent, and the disease is defeated.

The eradication of smallpox is the supreme example, but many other infectious diseases are steadily being conquered. This could not be achieved without strong community participation – immunization campaigns, for example, cannot succeed without active community support.

Chronic diseases, with a few exceptions, have not so far lent themselves so easily to cure. They are less open to community action. They do not spread from person to person. Every case of chronic disease represents a burden borne by one individual who, depending on circumstances, may or may not have access to treatment or support.

This stark fact demands a realistic response: if the majority of chronic diseases cannot as yet be cured, the emphasis must be on preventing their premature onset, delaying their development in later life, reducing the suffering that they cause, and providing the supportive social environment to care for those disabled by them.

Today there are an estimated 380 million people aged 65 years or more, some 220 million of them in developing countries. By 2020, projections indicate that there will be more than 690 million and 460 million respectively.

Hazards of living

The development of chronic diseases is seldom, if ever, due to one single cause. In addition to inherited vulnerability, many lifestyle factors are known to increase the risks – factors such as smoking, heavy alcohol consumption, inappropriate diet, and inadequate physical activity.

These factors are at least to some extent within the control of the well-informed individual. But there are others over which the individual alone has little control, such as the effects of poverty; poor reproductive and maternal health; genetic predisposition; occupational hazards; and unhealthy living and stressful working conditions.

If the majority of chronic diseases cannot as yet be cured, the emphasis must be on preventing onset, delaying development, reducing suffering, and providing the supportive environment to care for those disabled by them.

Many people are suffering and dying prematurely from chronic diseases. This trend is strongly linked to lifestyles which have undergone radical changes in recent years – from physical, outdoor labour to sedentary work, from rural life to urban existence, from traditional diet to unhealthy foods, from negligible consumption of alcohol and/or tobacco to daily or heavy consumption of one or both.

Later in life, hundreds of millions of adults suffer from mental illnesses ranging from chronic depression to dementia, and huge numbers are disabled for many years by musculoskeletal disorders such as rheumatoid arthritis and osteoporosis.

Making a difference

This report examines chronic diseases, and the factors influencing them, throughout the entire human life span. At every stage, opportunities exist for prevention or treatment, for cure or for care. Major efforts have also been made, and continue to be made in these fields, in promoting healthy behaviour in individuals, in attacking risk factors, in promoting health as a component of social policies, and in protecting the environment through pollution control.

A key approach to the preparation of the report has been the recognition that the impact of disease on the individual is fundamental to improving health for the community.

The report considers aspects of noncommunicable diseases which are major causes of death or avoidable ill-health and disability – areas amenable to measures that have a direct and tangible effect on individual health, that make a difference, and make it sooner rather than later.

Chapter 1 of the report begins with a 1996 update of the global health situation. It then gives a brief description of leading noncommunicable diseases; estimates the global numbers affected by them; identifies risk factors that contribute to them; and explains the methods of prevention, detection, diagnosis and treatment. Together, these form a basis for reducing and conquering suffering

and its social and economic burden on families and society, and thereby enriching humanity.

The global situation – 1996 update

The world population increased by more than 80 million during the year, reaching a total of 5800 million in mid-1996. The child and adolescent population grew by about 0.7%, the adult population by 1.8%, and that of the elderly by 2.4%.

Between 1990 and 1995, fertility declined more rapidly than expected, to 3.0 children per woman instead of 3.1 as predicted.

The number of people aged 65 years and above increased to 380 million, reflecting a 14% global increase in that age group between 1990 and 1995. Between 1996 and 2020, it is projected that the over-65 population will have increased by 82% globally, about 110% in the least developed and developing countries, and about 40% in developed countries.

In 1996, life expectancy at birth reached 65 years. It has increased globally by about 4.6 years between 1980 and 1995 (4.4 years for males and 4.9 years for females).

Of more than 52 million deaths in 1996 worldwide, over 17 million were ascribable to infectious and parasitic diseases; more than 15 million to circulatory diseases; over six million to cancers; and about three million to non-specific respiratory diseases. About 40 million deaths occurred in the developing world.

Cancer: the growing burden

More than 10 million people developed cancer in 1996 and over 6 million others already having the disease died of it. The gradual elimination of some other fatal diseases, combined with rising life expectancy, means that the risks of developing cancer are steadily growing.

As most cancers appear in adults at an advanced age, the burden of cancer is much more important than other diseases in populations with a long life expectancy.

Major efforts continue to be made in promoting healthy behaviour, in attacking risk factors, in promoting health as a component of social policies, and in protecting the environment.

In 1996 there were an estimated 17.9 million persons with cancer surviving up to five years after diagnosis. Of these, 10.5 million were women.

The eight leading cancer killers worldwide are also the eight most common in terms of incidence. Together, they account for about 60% of all cancer cases and deaths. They are cancers of the lung, stomach, breast, colon-rectum, mouth, liver, cervix and oesophagus. Although they do not share the same risk factors, a few major factors dominate this group, namely diet, tobacco, infections, alcohol and hormones.

The most ominous trends are in lung cancer and breast cancer. Lung cancer is not only the biggest killer and the most common of cancers – almost a million deaths a year and over 1.3 million cases – it is also preventable. Globally, 85% of cases in men and 46% in women are due to smoking. Rates for men are increasing in most countries, and rates for women are rising rapidly in countries where female smoking is long established. As tobacco consumption is increasing in many developing countries, the lung cancer epidemic seems certain to continue and grow.

Lung cancer is the most common cancer in men in developed countries, followed by prostate cancer.

In 1996 there were an estimated 17.9 million persons with cancer surviving up to five years after diagnosis. Of these, 10.5 million were women, 5.3 million of whom had cancer of the breast, cervix or colon-rectum. Among men, prostate, colorectal and lung cancer were the most prevalent.

Breast cancer kills 376 000 women a year worldwide and there are about 900 000 new cases annually. Incidence is increasing in most parts of the world. In developing countries, breast cancer is now almost as common as cervical cancer, the leading female cancer in the developing world. Unlike cervical cancer, however, breast cancer has no infectious agent to explain its rising incidence.

Stomach cancer is the second most common cancer worldwide and almost two-thirds of all cases are in developing countries. Colorectal cancer is more common in richer countries but its incidence is rising in some developing

nations. The majority of cancers of the liver, mouth, oesophagus and cervix occur in developing countries. The risk of developing those cancers that are typical of higher socioeconomic groups – cancers of the breast, colon and rectum – can be expected to increase with economic development.

Circulatory diseases

Diseases of the heart and circulation – cardiovascular and cerebrovascular – such as heart attacks and stroke, kill more people than any others, accounting for over 15 million deaths, or about 30% of the global total, every year. Many more millions of people are disabled by them. Many who die are under the age of 65, and given today's increased life span, these deaths are premature. A large proportion of them are also preventable or avoidable – occurring prematurely despite a wealth of knowledge on how to reduce the risks of contracting them. They cause grief in families and are a loss of valuable talent that many countries need for economic development.

Regarded largely as lifestyle diseases because smoking, obesity, unhealthy diet and heavy alcohol consumption increase the risk of developing them, circulatory diseases were once thought of as affecting exclusively industrialized nations.

Now, as developing countries modernize, they are gradually controlling communicable diseases, and the life expectancy of their populations is increasing. Unfortunately, the risks of circulatory diseases are also increasing, partly because of the adoption of lifestyles similar to those common in industrialized countries. These diseases are emerging rapidly as a major public health concern in most developing countries, where they now account for about 25% of all deaths – 10 out of 40 million. In developed countries, almost half of all deaths – more than 5 out of 12 million – are attributable to them.

The most important circulatory diseases are hypertension, coronary heart disease, cerebrovascular disease, and cardiomyopathies. Worldwide, there are

more deaths from coronary heart disease (7.2 million) than stroke (4.6 million), but more than twice as many deaths from stroke occur in developing countries as in developed countries.

In addition, the developing world still suffers from other heart conditions such as rheumatic heart disease, which is linked to poverty, and from cardiac damage related to Chagas disease, a parasitic illness afflicting about 17 million people in Latin America. About 30% of those who develop chronic Chagas disease become incapacitated because of heart damage that may also lead to sudden death. Rheumatic fever is the most common worldwide cause of heart disease in young people, accounting for about one-third of all deaths from cardiovascular diseases.

The *coronary heart disease* epidemic began in North America, Europe and Australasia in the early decades of this century. In many industrialized countries, death rates peaked in the 1960s and early 1970s and have since declined dramatically – by over 50% in some countries. The world's highest rates are now found in eastern and central Europe.

Decades of research have shown conclusively that a number of determinants – most of them associated with lifestyle – operating from childhood onwards, are responsible for coronary heart disease. The term "risk factor" was first used for this disease. The major risk factors are high blood pressure, cigarette-smoking, certain dietary habits (particularly excessive intake of saturated fat), elevated blood cholesterol levels, lack of physical activity, obesity and diabetes. The primary prevention of high blood pressure is crucially important in the prevention of deaths from coronary heart disease.

High blood cholesterol levels contribute to deaths more commonly among women than men. The causes can be genetic but are more usually related to a diet rich in animal fats. Lack of physical activity is the most prevalent modifiable risk factor in many industrialized countries.

Rheumatic fever/rheumatic heart disease is the most common cardiovascular disease in children and young adults, currently affecting at least 12 million people, and causing 400 000 deaths a year. More than 2 million require repeated hospital admissions and 1 million will need heart surgery in the next 5-20 years.

Stroke and other *cerebrovascular diseases* are the second most common worldwide cause of death, accounting for more than 4.6 million deaths worldwide, of which two-thirds are in developing countries. Mortality and morbidity occur mainly in the over-65 age group. High blood pressure is the most common risk factor; others are those mentioned for coronary heart disease. About one-third of stroke patients die within six months of the event; most of these deaths occur in the first month. Survivors may be severely disabled.

Hypertension is the most common cardiovascular disorder, affecting about 20% of the adult population. It is considered both as a disease category and as one of the major risk factors for heart disease, stroke and kidney disease. It is particularly common in elderly men and women. The major risk factors are overweight, poor dietary habits, particularly excessive intake of salt and alcohol and inadequate physical activity. Several genetic factors may also play a role.

Chronic nonspecific lung diseases

Chronic bronchitis and emphysema, usually considered together as chronic obstructive pulmonary disease (COPD), and asthma are among the chronic nonspecific lung diseases which kill almost 3 million people a year. COPD is especially prevalent among older age groups, and deaths from it are expected to increase significantly with the rise in smoking and environmental pollution.

Respiratory diseases rank among the three principal causes of workdays lost, and COPD is responsible for the majority of these. It shares with asthma characteristics such as obstruction of the respiratory passages. Asthma is more prevalent in children, causes high mor-

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idity and can be fatal even in young people; it can also evolve into COPD. The prevalence of asthma has been increasing in recent years in both children and young adults, for reasons that are not clearly understood.

Diabetes mellitus

This disease is one of the most daunting challenges posed by chronic diseases. The number of sufferers is currently estimated to be about 135 million; this number is expected to rise to almost 300 million by the year 2025. The main reasons are population ageing, unhealthy diets, obesity and a sedentary lifestyle. While the rise in cases will exceed 40% in developed countries, it will be in the order of 170% in developing countries.

Diabetes mellitus is a hereditary disease with two major forms: insulin-dependent (IDDM) and non-insulin-dependent (NIDDM). These terms are currently under review. In IDDM, the pancreas fails to produce the insulin which is essential for survival. This form develops most frequently in children and adolescents but is being increasingly recognized later in life; sufferers are dependent on daily injections of insulin. Much more common, NIDDM accounts for about 90% of all cases and occurs principally in adults; in this form, the body is unable to respond properly to the action of insulin produced by the pancreas.

Diabetes is closely linked with heart disease, kidney failure and blindness; it adversely affects the outcome of pregnancy; and it can give rise to foot lesions which may progress to gangrene and limb amputations. Recent research provides clear evidence of the potential for adequate treatment to delay or even prevent these long-term complications of the disease.

Nutrition-related disorders

Besides being disease entities, nutrition-related disorders are underlying factors in chronic diseases. An appropriate diet is essential in the avoidance of diseases such as cardiovascular diseases, diabetes mellitus, certain forms of cancer and

liver disease, and dental caries. An inadequate diet produces two main types of metabolic nutritional disorder: protein-energy malnutrition and micronutrient disorders (mainly deficiencies). Chronic undernutrition occurs when long-term food consumption is insufficient to cover the requirements for daily energy expenditure; acute malnutrition (wasting) occurs when food consumption is suddenly severely reduced. Malnutrition has been found to underlie more than half of deaths among children in developing countries.

Human genetics, hereditary diseases and birth defects

In typical developed societies, congenital and genetic disorders are second only to perinatal factors as the most common cause of infant and childhood death. Some of these disorders are hereditary, including thalassaemia and sickle cell disorder. Almost 70% of cases of the latter occur in sub-Saharan Africa.

Cystic fibrosis occurs worldwide. Life expectancy in developed countries for children with the disease has improved however, thanks to medical advances; but up to 95% of cases in Latin America, for example, are never diagnosed.

Some 420 000 people in the world are estimated to have haemophilia. Until recently, the foremost cause of death was haemorrhage; in the past decade, this has been overtaken by infections as the side-effects of treatment, including HIV/AIDS and liver disease secondary to hepatitis.

About 3 million fetuses and infants a year are born with major congenital malformations; the causes of about 70% remain unknown.

Musculoskeletal diseases

Often referred to as chronic rheumatic diseases, musculoskeletal diseases include about 200 conditions affecting joints, bones, soft tissues and muscles. Together they amount to a huge burden in pain and often crippling disability, and consequently, huge costs in terms of health care and lost productivity. Among the most prevalent are rheuma-

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toid arthritis and osteoarthritis. Particularly serious is osteoporosis, which with its associated bone fractures is a major cause of death, illness and disability.

Mental and neurological disorders

The impact of mental and neurological disorders on society is likely to become more and more profound in future years. Already, many hundreds of millions of people are affected by some form of mental disorder, from the relatively minor to the incurable and life-threatening; many individuals suffer from several simultaneously.

Epilepsy, the most common neurological condition, afflicts 40 million people. An estimated 45 million have schizophrenia; an increase in its prevalence is expected due to a rise in the proportion of the population moving into the age group at risk. Given its chronic nature in the majority of cases, schizophrenia imposes a burden not only on the sufferers but also on their families. In many developing countries, the supply of essential drugs to treat this condition cannot always be maintained.

Some 29 million suffer from dementia, of which Alzheimer disease is the most common form. Global population ageing will inevitably result in huge increases in the number of cases of dementia. The risk of developing the condition rises steeply with age in people over 60; the possibilities for prevention and treatment are limited. Projections suggest that Africa, Asia and Latin America together could have more than 80 million people with dementia by the year 2025.

Mood disorders (including depression) are estimated to affect some 340 million people at any given time. In the United States of America alone, the yearly cost of depression is estimated at US\$44 000 million, equal to the total cost of all cardiovascular diseases.

Tobacco is estimated to cause three million deaths a year primarily from lung cancer and circulatory diseases. The use of alcohol, illicit drugs and other psycho-active substances causes at least 123 000 deaths annually. Alcohol is also im-

plicated in crime, violence, marital breakdown and major losses in industrial productivity. Amfetamines and other psychostimulant drugs are increasingly being used worldwide; in many countries drug injection is becoming more common.

Violence

In all its forms, violence has increased dramatically worldwide in recent decades. During 1993, at least 4 million deaths resulted from unintentional or intentional injury, including 300 000 murders. Of the violent deaths, some 3 million were in the developing world. In many countries, homicide and suicide account for 20%-40% of deaths in males aged 15-34. In half the countries of Latin America and the Caribbean, homicide is the second leading cause of death in people aged 15-24. It is more frequent among men and increases in direct relationship with age, and is closely associated with depression, personality disorders, substance abuse and schizophrenia.

Occupational and other risks

The figures seem like the casualties of a major war: at least 200 000 killed, more than 120 million injured. However, these losses occur not on a battlefield but in the workplace. They are only part of the much wider impact of health hazards at work. The links between alcohol and work injury are of rising concern. There may be up to 160 million cases a year of occupational diseases stemming from exposure to chemical, biological and physical agents, and other environmental hazards. Surveys show increasing exposure to psychological stress at work.

There are of course also hazards at home: among unintentional injuries falls kill more people than anything except traffic accidents, and most falls occur at home, as do most deaths from burning. Most injuries at home are sustained by children under five and elderly women. Those at highest risk from road accidents are motorcycle riders; head injury is a major cause of death and

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permanent disability, the risk of which can be markedly reduced through the use of crash helmets.

Other issues

Blindness. An estimated 180 million people worldwide have visual impairments, of whom nearly 45 million are blind, four out of five of them living in developing countries. About 80% of blindness is avoidable (treatable or potentially preventable). However, a large proportion of those affected remain blind for want of access to affordable eye care. Blindness leads not only to reduced economic and social status but may also result in premature death. The major causes of blindness, and their estimated prevalence, are cataract (19 million), glaucoma (6.4 million), trachoma (5.6 million), onchocerciasis (0.29 million).

Some 121 million people are estimated to have a disabling **hearing impairment**. There is an urgent need for more, accurate population-based data on the prevalence and causes of hearing impairment, so that countries may set priorities and determine needs. As more countries conduct surveys, WHO collates the information so that an accurate global picture is progressively revealed.

Oral health. Dental diseases are chronic and adversely affect quality of life, especially in the elderly where they may have serious adverse effects on nutrition. Although great progress has been made over the last 20 years in combatting them, dental caries and periodontal disease remain the most prevalent. Caries, or tooth decay, is the more prevalent of the two.

WHO's contributions to world health

Chronic conditions

Since chronic conditions have a number of common risk factors, WHO adopts an integrated approach to their prevention through the INTERHEALTH project. Genetic factors, for example,

play an important role in determining individual susceptibility to various types of cancer and to diabetes mellitus, cardiovascular diseases and hereditary disorders. WHO has set up such integrated programmes in all regions of the world. In Europe, the countrywide integrated noncommunicable diseases intervention (CINDI) programme now covers 24 countries; based on the experience in the CINDI network, a special action plan has been developed with the aim of building capacity for preventing chronic diseases in eastern Europe. In the Americas, there is a similar project known as CARMEN, which focuses mainly on cardiovascular diseases but is also concerned with diabetes, cervical cancer and injury prevention.

The International Agency for Research on Cancer (IARC) coordinates and conducts epidemiological and laboratory research and risk evaluations that form the basis of scientific strategies for preventing cancer. In 1996 the Agency published monographs on the carcinogenic risks posed by printing inks and printing processes; by some pharmaceutical drugs, including tamoxifen; and by retroviruses, including HIV. Other publications dealt with cancer chemoprevention, cancer incidence and mortality, and fibre carcinogenesis.

The 10-year-old, 26-country MONICA project continues to monitor trends and determinants of **circulatory diseases** and measures the effectiveness of interventions. During 1996, WHO disseminated the first five-year trend data on risk factors and incidence of heart attacks and strokes, and made available protocols and a training manual for monitoring cardiovascular risk factors in developing countries, as well as guidelines for promoting physical activity as part of a prevention strategy. The Organization also published a regional plan for control of cardiovascular diseases and specific guidelines for countries in the Eastern Mediterranean.

During 1996, WHO conducted a study to determine the worldwide prevalence of **diabetes mellitus**. It concluded that approximately 120 million people

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are currently affected, and that this figure will more than double in the next 25 years. The theme of World Diabetes Day, "Insulin for life", highlighted the continuing unavailability and unaffordability of this essential medication in many of the world's poorest countries. WHO set up a computerized information system (DIABCARE), and issued (with the International Diabetes Federation) guidelines for the management of non-insulin-dependent diabetes mellitus in Africa, and developed a plan for diabetes control in the Eastern Mediterranean.

The Organization continued to support studies of primary prevention approaches for a variety of **hereditary disorders** including familial hypercholesterolaemia, haemophilia and cystic fibrosis. A landmark technical report, *Control of hereditary diseases*, was published in 1996.

WHO's work in 1996 on the epidemiology of **mental and neurological disorders** included a study of the prevalence, severity and cost of neurological disorders such as dementia, stroke, epilepsy and headache. An internationally accepted nomenclature has been translated into 25 languages. A WHO collaborative project in 14 countries showed that one in four adults visiting a general doctor had a current and diagnosable mental disorder, and only 1% of people with such disorders receive specialized care. The Organization has prepared simple, user-friendly versions of diagnostic and treatment guidelines for the common mental disorders. WHO and the International League against Epilepsy announced a worldwide campaign against epilepsy in 1996.

The Organization studied global patterns of **substance dependence** and analysed its health and social consequences. Action to fight smoking is a central priority for the CINDI programme in Europe, which organized a smoking cessation campaign in 1996 in which 24 countries participated and some 70 000 smokers registered. A conference on alcohol dependence with participants

from 46 countries adopted a European Charter setting out basic ethical principles and action strategies. WHO has a global epidemiological surveillance system to assess and describe patterns and trends of psychoactive substance abuse together with the health consequences and national policy responses.

WHO promotes community-based **rehabilitation** as a component of primary health care, and in 1996 the Organization continued its close cooperation in this area with ILO, UNESCO, organizations for the disabled and other international nongovernmental organizations. Over 80 countries have programmes, which are now tending to broaden their focus to cover "persons with social disadvantages" or "persons more in need" and to include vulnerable and special population groups such as displaced persons and war victims. WHO trained senior personnel from 26 countries in managing community-based rehabilitation, issued training materials, and continued with a major revision of the International Classification of Impairments, Disabilities and Handicaps.

Health of adults and the elderly

WHO emphasizes the concept of **healthy ageing** and stresses the need to avoid compartmentalizing older persons in "the elderly" category. In 1996 it issued guidelines on healthy ageing, with emphasis on active ageing. The Organization also developed a conceptual framework for establishing the priority areas for research on ageing and health worldwide. WHO collaborated in the international conference in 1996 which culminated in the Brasilia Declaration on Ageing.

In Africa, WHO cosponsored the first forum on teaching **reproductive health** in medical schools and other basic training institutions in 16 countries, and launched a training curriculum on this subject. The Organization also made recommendations on the medical criteria for prescribing various contraceptives, and supported research on contraception for men.

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500 million immunization contacts with children were made during the year. The Organization enables the provision of sufficient quantities of high-quality affordable vaccines to be sustained.

Health of women

WHO cooperates with countries in implementing national plans for *safe motherhood* and has data banks on related subjects which are a source of up-to-date information and contribute to the development and maintenance of standards and normative guidelines. In 1996 WHO's midwifery education modules for health workers were field-tested and were already in use in a number of countries. The Organization gave technical support to research projects aimed at reducing the morbidity and mortality associated with child-birth.

In 1996 WHO held a consultation on *violence* against women and carried out a multicountry study on the prevalence, health consequences and risk factors of such violence, especially in the family.

Health of adolescents and school-age children

WHO developed its life skills *education* project, which assists education authorities to introduce problem-solving, communication and interaction skills into school curricula. In 1996, teachers' unions in 18 Latin American countries benefited from programmes for the training of trainers based on the WHO/UNESCO resource package *School health education to prevent AIDS and STDs*.

In 1996 WHO signed a memorandum of understanding with UNESCO and the International Society and Federation of Cardiology to establish a joint prevention and health promotion project on the subject of *rheumatic fever and rheumatic heart disease*. WHO and AGFUND supported an intensified programme on the prevention and control of these conditions in China, the Philippines, Tonga and Viet Nam.

A school feeding manual on health and *nutrition* was completed, providing guidance on the design and implementation of school feeding programmes; it sets out nutritional principles for establishing food requirements in schools and for undertaking other school-based health-related activities.

Child health

In order to help monitor and prevent protein-energy *malnutrition*, WHO published an expert committee report, *Physical status: the use and interpretation of anthropometry*. This and the Organization's global data base on child growth and malnutrition (now also accessible on the Internet) have become standard reference works for those active in this field. *Trace elements in human nutrition and health*, also published in 1996, describes the global status and assessment of deficiency and excess of 19 trace elements.

To combat *iodine deficiency*, WHO, in collaboration with other interested agencies and organizations, has promoted salt iodization, for which programmes now exist in 110 countries.

The WHO/UNICEF *Integrated management of childhood illness* strategy provides a systematic process for diagnosing and treating diarrhoea, acute respiratory infections, malnutrition (including breast-feeding problems), measles and malaria, which together are responsible for approximately 70% of all child deaths. In 1996, six African countries were already implementing the programme.

As a result of WHO's activities, 500 million *immunization* contacts with children were made during the year. One of the Organization's goals is to enable the provision of sufficient quantities of high-quality affordable vaccines to be sustained; to this end, a network was established in 1996 to train staff of national control authorities.

Infectious diseases

The Joint United Nations Programme on *HIV/AIDS* (UNAIDS) became operational on 1 January 1996. WHO, one of its six cosponsors, provides epidemiological and technical support through epidemiological surveillance. Publications in 1996 dealt with HIV/AIDS counselling, action for children affected by AIDS, and combined infection with HIV and tuberculosis.

In the fight against *tuberculosis*, WHO continued to promote the directly observed treatment, short course (DOTS). By the end of 1996, over 80 Member States had adopted or were beginning to use the DOTS strategy, with an increase in cure rates to 90% in some countries.

WHO works with ministries and donors in developing countries to ensure continued financial support to countries where *malaria* is endemic. With this support the Organization in 1996 provided training in epidemic control, trained entomologists in selective vector control, gave technical assistance for malaria prevention and control, and issued guidelines for malaria control among refugees and displaced persons.

WHO, by collecting information at the global level, assists countries in defining high-priority zones for *leprosy* control and in mobilizing adequate resources for this purpose. During the year, the leprosy elimination campaign, with different target dates for elimination in different regions and countries, continued to be implemented by national staff with technical cooperation from WHO and other agencies and with the involvement of community volunteers and general health workers.

Promotion and protection of health

WHO encourages the adoption of *healthy lifestyles*. For this purpose a *Five-year action plan, leading health promotion into the 21st century* was launched in 1996. It focuses on advocacy for health, empowerment of communities and design of media strategies for health.

Safe food and good nutrition are cornerstones of socioeconomic development. In 1996 outbreaks of infection with the foodborne pathogen enterohaemorrhagic *Escherichia coli* occurred in Japan and the United Kingdom. WHO kept the international public health community informed by issuing articles and fact sheets on this and other emerging foodborne diseases.

Human health continues to be adversely affected by many *environmen-*

tal factors, ranging from climate change to water supply. In 1996, the Intergovernmental Panel on Climate Change, in which WHO participates, was instrumental in securing new international commitments to deal with the root causes of global climate change.

The WHO Healthy Cities programme continued to expand during the year. A dialogue on health and human settlements was convened, which stressed the participatory approach and the important role of local authorities in addressing health and environment issues in urban areas. World Health Day 1996, on the theme "Healthy cities for better life", involved over 1000 participating cities around the world.

WHO is the executing agency of the International Programme on Chemical Safety (IPCS), operated jointly with ILO and UNEP. In the field of assessment of risks to human health and the environment from exposure to chemicals, validated information was produced in the form of international chemical safety cards, data sheets on pesticides and the classification of pesticides by hazard. Over 30 poison information monographs and 14 treatment guides were reviewed and finalized. All IPCS publications are now available on CD-ROM. A training project for decision-makers and risk managers was launched in 15 developing countries in Africa, Asia and Latin America.

Health services and health policy

WHO provided support to Member States on *health systems* issues such as development of medical cooperatives, integration of health activities in agricultural projects, and basic health services.

A major goal for WHO is ensuring access to and availability of *essential drugs and vaccines* at low cost, their rational use, and their quality and safety. In 1996 the *Model list of essential drugs* was updated having regard to the increasing problem of resistance to antimicrobials. WHO provided support to over 50 countries, covering all ele-

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ments of national drug policies. More than 110 countries now have an essential drugs list, and some 60 have formulated, and are implementing, a national drug policy.

In the area of *blood safety*, the Organization perfected its simple reusable haemoglobin colour scale, developed a device that salvages patients' blood lost in trauma, devised a blood cold chain to ensure the safety of blood and blood products from donor to recipient, and organized three regional workshops using WHO's distance learning materials on safe blood and blood products.

In the area of *health personnel*, WHO developed a nursing management system in the context of national human resources information systems. A comprehensive system for the management of the Organization's fellowships programme was completed in 1996. Several global, regional and national initiatives were taken during the year to promote coordinated changes in health care and health professionals' practice and education, such as setting up educational development centres, establishing an international working party involving training schools, and issuing guidelines to develop an interface between health care, medical practice and medical education.

During 1996, WHO continued to promote and strengthen *partnerships for health*, that is, strategic alliances with the international scientific community, intergovernmental organizations within and outside the United Nations system, and nongovernmental organizations and other bodies. The Organization's Advisory Committee on Health Research, which provides a privileged link with partners in the scientific community, established a task force on organ transplantation in 1996, to identify and clarify medical, social, economic, ethical and related issues. Cooperation with the United Nations during the year concerned in particular

a major interagency programme, "Nations for mental health", aimed at reducing discrimination against people affected by mental disorders, and the United Nations systemwide Special Initiative on Africa, which includes a strategy for health sector reform. Other partnerships for health that were of major importance during the year included those with UNCTAD, FAO, the World Bank, the major development banks, ASEAN, OAU and the European Union. In January 1996 the number of nongovernmental organizations in official relations with WHO was increased to 184 by the admission of four organizations.

To make partnerships effective and mutually supportive through *information exchange*, WHO continued to collect, analyse and publish scientific information and the practical health experiences of countries at all levels of development. Taking full advantage of the economics of time and money offered by advances in information technology, the Organization used the services available via the Internet, thus reaching a vast audience with statistical, technical and practical information. WHO maintains global electronic networks which monitor the spread of antibiotic resistance, levels of air and water pollution, toxic reactions to chemicals, and adverse reactions to pharmaceuticals.

In the field of *emergency relief and humanitarian assistance*, during 1996 WHO supported 58 Member States in activities such as control of communicable diseases and epidemiological surveillance and investigations. Most of the Organization's response programmes focused on coordination and provision of technical support to national and international implementing partners, as well as provision of emergency vaccines, laboratory supplies and equipment for control of epidemics, and training of health workers.

WHO promotes strategic alliances with the international scientific community, organizations within and outside the United Nations system, and nongovernmental organizations.

Charting the future

Health prognosis

Health conditions are likely to continue to change in the future with the rapid ageing of the global population and modifications in work habits and leisure activities. It is estimated that the elderly population (aged 65 and above) will increase globally by more than 80% during the next 25 years. In at least 10 countries, one person in five will be elderly by the year 2020. Most deaths among the elderly will be due to cancers, and lung and heart diseases.

Increased life expectancy, resulting primarily from declines in child mortality and in fertility, and the prevention of deaths from infectious diseases, is increasing the risks of developing certain chronic and debilitating diseases such as heart disease, cancer, diabetes and mental disorders.

The rapid mechanization of everyday life brings hazards. These include changing behaviour (sedentary living; excessive or ill-balanced diets rich in calories, cholesterol and salt; smoking) and a deteriorating environment (air pollution; exposure to chemicals and biological agents; contamination of soil and water; risks to food safety). They result in increases in heart and lung disease, and cancer.

The profound changes in work habits and lifestyles associated with modernization mean that conditions such as diabetes and premature disability associated with ergonomic factors are increasing among young adults and in the working population. In addition, more people are likely to suffer from psychiatric and neurological conditions.

Greater longevity and economic progress have been accompanied by an increasing burden of chronic disease and social and behavioural health problems. For more people, the price of living to a later age is pain, suffering, loss of physical capacity, and social impairment.

Their quality of life is diminished, and part of the price to society is the substantial monetary costs associated with mental illness and behavioural problems.

While later death is in itself a benefit, the question of quality of life during the additional years needs to be considered.

Current demographic changes are also creating an unprecedented imbalance between the young and the old. While the elderly population is growing rapidly, by the year 2020 the working population of 20-64 years will grow much more slowly (46%) and newborns by only 3%.

Among the socioeconomic implications for countries will be the imbalance between the elderly and the working populations. Fewer people of productive age will increasingly have to provide for an expanding number of elderly dependants.

Priorities for action

Expanding life expectancy provides the potential for better health expectancy. However, steps towards fulfilling that potential can only be taken if the pathways are clearly marked. In terms of controlling noncommunicable diseases, this means defining realistic priorities for international action.

It is clear from the analysis in this report that many of these diseases share a relatively small number of crucial risk factors. An integrated, coordinated approach to their prevention is therefore necessary. Until now, most interventions have been medical, conducted through traditional disease-specific vertical programmes. The time has now come to build on the best of these and develop integrated packages of disease-specific interventions that incorporate primary and secondary prevention, diagnosis, treatment and rehabilitation for the most prevalent diseases.

There is an urgent need to develop and incorporate activities that raise awareness of, and motivation for, healthy lifestyles and the environments to support them.

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 for action intended to
 improve the ability to
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There is an urgent need to develop and incorporate activities that raise awareness of, and motivation for, healthy lifestyles and the environments to support them.

This demands a new relationship in which specialists, experts and leaders in various fields look beyond their own professional boundaries. They need to recognize that many diseases have common risk factors and to share their skills and experience so as to tackle them together. This risk factor recognition must be communicated clearly to the public at large.

The relationship between core physical health and mental health services has been complex, and sometimes counterproductive. The separation of the two fields has also often produced fragmentation in the delivery of health services, to the detriment of the clients. A new alliance between the exponents of physical and mental health is required.

In many areas of noncommunicable disease control, an abundance of cost-effective technologies and intervention strategies already exists. Others are being developed. Listed according to their priority for action, they can be grouped as follows: *prevention* (which includes behaviour change and immunization); *medical* (which includes screening and early detection, treatment and palliative care); *policies* (including legislation and regulation); and *research*. At the same time, ethical issues are becoming more and more important.

Priority areas for international action in health should be:

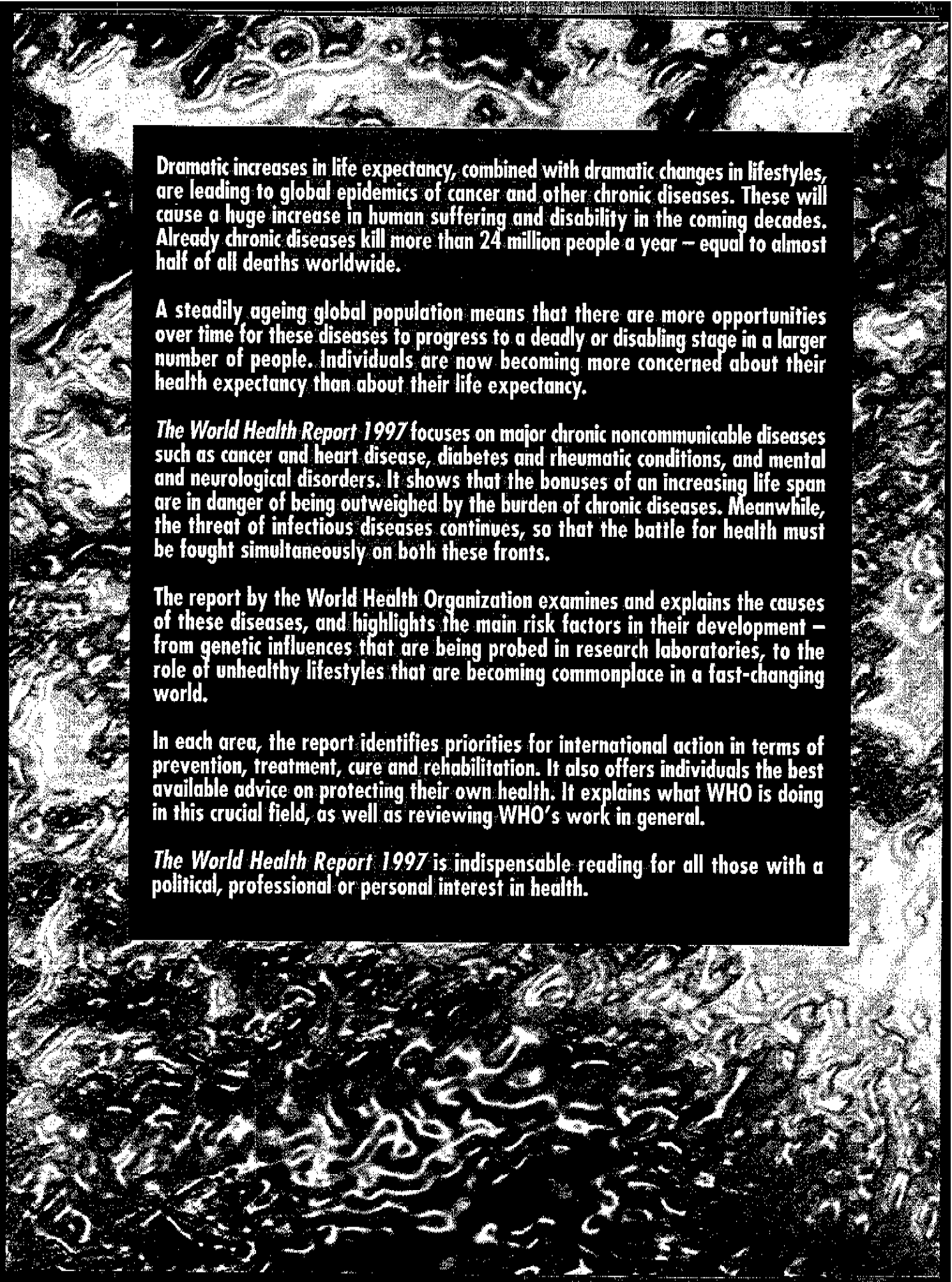
1. Integration of disease-specific interventions in both physical and mental health into a comprehensive

chronic disease control package that incorporates prevention, diagnosis, treatment and rehabilitation and improved training of health professionals.

2. Wider application of existing cost-effective methods of disease detection and management, including improved screening, taking into account the genetic diversity of individuals.
3. A major intensified but sustained global campaign to encourage healthy lifestyles, with an emphasis on the healthy development of children and adolescents in relation to risk factors such as diet, exercise and smoking.
4. Healthy public policies, including sustainable financing, and legislation on pricing and taxation, in support of disease prevention programmes.
5. Acceleration of research into new drugs and vaccines, and into the genetic determinants of chronic diseases.
6. Alleviation of pain, reduction of suffering and provision of palliative care for those who cannot be cured.

The world health report 1997 indicates priorities for action that are intended to improve humanity's ability to prevent, treat, rehabilitate and where possible, cure major noncommunicable diseases, and to reduce the enormous suffering and disability that they cause.

Inevitably, each human life reaches its end. Ensuring that life ends so in the most dignified, caring and least painful way that can be achieved is equally a priority. It is a priority not merely for the medical profession, the health sector or the social services, but also for each society, community, family and individual.



Dramatic increases in life expectancy, combined with dramatic changes in lifestyles, are leading to global epidemics of cancer and other chronic diseases. These will cause a huge increase in human suffering and disability in the coming decades. Already chronic diseases kill more than 24 million people a year – equal to almost half of all deaths worldwide.

A steadily ageing global population means that there are more opportunities over time for these diseases to progress to a deadly or disabling stage in a larger number of people. Individuals are now becoming more concerned about their health expectancy than about their life expectancy.

The World Health Report 1997 focuses on major chronic noncommunicable diseases such as cancer and heart disease, diabetes and rheumatic conditions, and mental and neurological disorders. It shows that the bonuses of an increasing life span are in danger of being outweighed by the burden of chronic diseases. Meanwhile, the threat of infectious diseases continues, so that the battle for health must be fought simultaneously on both these fronts.

The report by the World Health Organization examines and explains the causes of these diseases, and highlights the main risk factors in their development – from genetic influences that are being probed in research laboratories, to the role of unhealthy lifestyles that are becoming commonplace in a fast-changing world.

In each area, the report identifies priorities for international action in terms of prevention, treatment, cure and rehabilitation. It also offers individuals the best available advice on protecting their own health. It explains what WHO is doing in this crucial field, as well as reviewing WHO's work in general.

The World Health Report 1997 is indispensable reading for all those with a political, professional or personal interest in health.