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# Good life-styles for good health

Chronic noncommunicable diseases, long responsible for death and disability on a large scale in developed countries, are now becoming highly significant in the developing world. Much can be done towards their prevention by encouraging people to adopt healthier life-styles. Ways of going about this are considered below.

In many developed countries, infectious diseases have been overtaken as the major cause of mortality by accidents and noncommunicable diseases, particularly circulatory disorders, stroke, malignancies, and chronic bronchitis. Other chronic disorders, including musculoskeletal diseases, psychosocial conditions, congenital abnormalities, diabetes, and dental caries contribute to the burden of morbidity and disability.

As developing nations overcome the ravages of endemic infectious diseases and become more industrialized and affluent, they too can expect an upsurge in noncommunicable diseases. This is indeed already occurring in some rapidly expanding urban and industrial centres *(1)*. The control of noncommunicable diseases should therefore be considered as a global problem, not one restricted to the developed nations.

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## Community-based prevention

Despite enormous advances in medical knowledge and technology, clinical developments have reduced the incidence of chronic diseases to only a modest degree. As a consequence there has been growing interest in and support for preventive measures. This trend has been encouraged by evidence from some countries of a decline in cardiovascular disease mortality *(2)*, not apparently reflecting advances in medical technology but possibly resulting from changed attitudes in society towards diet, smoking and physical fitness.

Health care costs, especially those for acute care, have continued to escalate, and this has attracted political interest in prevention. Whether preventive measures can reduce expenditure is, however, a matter for debate, since they are not necessarily cheaper than conventional treatment. Furthermore, a longer productive life and an improvement in its quality must be seen in the context of the requirements of an increasing population of old people for welfare services.

There are already good grounds for implementing a wide range of preventive

measures, even though much research is still needed in this field. The prospect of preventing chronic diseases has attracted considerable attention, but individual programmes have not proved as successful as was hoped. Antismoking campaigns, for example, have given disappointing results. This highlights the urgent need to intensify and coordinate efforts to devise practical, acceptable and effective measures of prevention.

Sanitary reforms introduced in the 19th century were broad-based public health measures that raised the overall level of health and controlled a number of infectious diseases. Specialization in clinical medicine has led to a tendency for the prevention of each noncommunicable disease to be considered in isolation. Measures against individual risk factors have been introduced piecemeal into health care systems. The potential for implementing an integrated, community-based approach to the prevention of noncommunicable diseases is suggested by epidemiological, logistical and organizational considerations *(3)*. This type of prevention involves a range of activities directed against indigenous chronic diseases. It makes optimum use of available communication channels and is coordinated by the primary health care team in cooperation with the community.

## *Risk factors*

Many chronic diseases are multifactorial in origin, and various risk factors are shared by several diseases: cigarette smoking is the most often reported, other important ones being poor diet, excess weight, alcohol and drug abuse, and psychosocial stress. Health-promoting life-styles reduce not only the incidence of heart disease but also overall mortality *(4, 5)*. One risk factor may influence another, e.g., the risk of developing lung cancer in asbestos workers who smoke is greater than the sum of the risks of the independent exposures. Furthermore, a substance may be beneficial in one particular disease yet risk-producing at the same time, e.g., clofibrate prevents coronary heart disease but increases the incidence of hepatic disorders *(6)*. Risk factors and related conditions should not be considered in isolation. The integrated approach aims to avoid overlap, repetition and contradiction, and to ensure that one risk factor is not changed at the expense of increasing others.

## *Life-styles*

The prevention of chronic diseases evidently requires, to a greater or lesser extent, a change in life-styles. The promotion of health and the reduction of overall population risk are common objectives.

Preventive actions have been characterized as: governmental and legislative; societal; and individual. Some focus on changing the overall risk to the population, others on identifying and treating high-risk individuals. However, such compartmentalization is artificial, as all of these measures interact *(7)*. A community-based programme marshals activities at all these levels in order to change public opinion and life-styles and to screen and treat people at high risk. This

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appears the most promising vehicle for health promotion and long-term change in population risk. The North Karelia programme in Finland is an example of community-based action aimed at reducing the major risk factors for coronary heart disease *(8)*. The results have proved encouraging in this highly motivated community. Logistically it makes sense to encompass other chronic diseases in such programmes, including chronic bronchitis, various cancers, diabetes, high blood pressure, and dental caries. In this way the maximum benefit is gained from the expertise, communication channels, and community commitments that have been built up.

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It is highly desirable to have an organizational structure with a comprehensive system for data collection and evaluation so that the impact of a preventive programme can be monitored. Such a system allows new developments in chronic disease prevention to be introduced more quickly and makes it possible to avoid repeating mistakes.

### *Populations and individuals*

Prevention may consist of reducing population risk or identifying and treating high-risk cases. The reduction of risk and the promotion of health in an entire population are more difficult to achieve than the identification and treatment of high-risk individuals. However, only a small proportion of a population is at high risk, and deaths from chronic disease are not confined to this category. The ultimate objective should be primary prevention through the reduction of population risk, but the finding of high-risk cases, and secondary and tertiary prevention, will all have their roles for the foreseeable future. Indeed, greater compliance with advice and treatment regimens may be achieved among high-risk individuals where the whole community accepts the need to aim for a healthier life-style. In this situation, high-risk individuals will not be singled out as different.

### *Health promotion*

All potential outlets to the community, including schools, workplaces, shops, public buildings, clinics, hospitals, the mass media, and voluntary and community organizations, should be utilized to provide information, generate debate and increase awareness about the scope that ordinary people have for eliminating or reducing health risks. Illustrative material should be made available and there is a need for commitment and participation by influential members of communities.

Emphasis should be placed on the duty of families and the community to create an environment in which children can acquire health-giving habits. In large measure, children follow examples set by their relations, friends and teachers, and by popular figures such as pop stars and sports personalities.

Finally, the use of health services should be encouraged, e.g., screening or case-finding services, antenatal care, and well-baby clinics.

### *Primary health care*

Primary health care should form the nucleus for locally organized programmes of disease prevention. No matter how primary health care is organized, it provides the first contact between the person and the health services and provides continuity of care.

Advice should be available to individuals on how to reduce risk factors for chronic diseases and there should be universally accessible screening and case-finding facilities. Specific services should include the following.

1. *Antenatal care.* The objective should be to provide antenatal care as early as possible during the first trimester of pregnancy. This contact should be used to promote a healthy life-style; for example, the danger of smoking, not only to the mother but also to her children, should be indicated, and advice should be given on parentcraft. Comprehensive screening should be offered for conditions harmful to the mother and her unborn child *(9)*, with the aims of ensuring that children are born healthy and reducing disability.

2. *Well-baby clinics and home visits.* Screening for congenital defects of vision, speech, hearing and development at key stages after birth is an important first step towards reducing later handicap and helping children to reach their full potential. How services are arranged to do this will vary between communities but there is likely to be a co-ordinated range of activities performed at home, in clinics and at school.

3. *Screening/case-finding for high-risk cases.* People usually visit a doctor at least once every five years. This occasion could be used to obtain information, through simple tests or questions, on blood pressure, obesity, cigarette smoking, serum cholesterol, alcohol intake, blood sugar, and, in women, cancer of the cervix and breast. With appropriate age/sex registers and record linkage, repeat screening at suitable intervals could be organized.

### *Community settings*

A community-based programme requires the reorganization of primary health care to take on broader responsibility for prevention and to forge closer links with community leaders and the public in general. The development of an integrated programme for the prevention of noncommunicable diseases should be part of a process of modelling primary health care to meet the needs of the community, in cooperation with it. Reorganization should not be confined to the area of primary health care: more specialized hospital-based care should be modified so as to complement primary health care and community-based programmes for disease prevention.

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The value of a community-based programme is that it gives health professionals flexibility for identifying the best opportunities for health promotion activities. In general, however, the following sorts of setting and activity may be considered.

1. Schools should provide health education as part of the normal curriculum. There are many examples of this having been done on an experimental basis *(10)*. Further work is needed to identify the best methods, given

that different age groups will be responsive to different types of health message. Teachers should be persuaded to set a good example, and parents and popular, respected figures should be encouraged to involve themselves in health promotion in the school environment.

Schools also offer a setting for screening and the identification of high-risk children through regular health checks, and also for counselling on stress, drug abuse, sex, psychological problems, and other matters.

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2. Workplaces should be utilized for publicizing health issues. Managers, in cooperation with workers, should ensure that workplaces are pleasant and safe. If meals are provided on the premises they should be consistent with the attainment of a healthy, balanced diet. If sports facilities are available they should be publicized as part of a campaign to encourage the taking of exercise on a regular basis. If occupational health services are available they should contribute to health promotion and the giving of advice on the control of risk factors. Careful planning and organization are needed here to ensure that preventive services are not suspected of being used as a means of deciding on future employment.

3. By forging links with local traders and supermarket chains and gaining the cooperation of food manufacturers in the labelling of products and the provision of, for example, unsalted as well as salted tinned foods, it should be possible to reach a large part of the population. Information on diet and other health matters might be distributed through local stores.

4. Posters and leaflets should be placed in public buildings, including health care facilities, and on public transport. Public canteens should be encouraged to provide a varied, nutritionally sound menu. Smoking should be discouraged on public transport and in public buildings. Sports installations should provide a range of facilities to cater for different needs, including organized classes.

5. The mass media strongly influence people's ideas, opinions and life-styles. Contact should be made with newspapers, television and other media to encourage the discussion of health issues and to heighten the public's awareness and understanding of them. Advertising space should be used to present facts about preventable diseases and health promotion.

6. Community involvement should be reinforced by distributing leaflets to houses and organizing public meetings and events, e.g., fun runs. Sports clubs, youth clubs, women's institutes, and other bodies should be encouraged to take part.

### *Governmental and legislative measures*

Governments should ensure that the necessary facilities are available. It is useless to advise regular exercise if sports facilities, organized classes, and so on are not available or accessible. Government support is also needed if food manufacturers are to be brought into campaigns aimed at modifying and diversifying what people eat. Finally, national and local governments are responsible for seat-belt legislation, road safety, pollution control, and other preventive measures. Dialogue between

government and community should be encouraged so as to improve cooperation and the awareness of responsibilities.

## National strategy on prevention

While decentralization is a major component of the population-based approach to prevention, central government has an important role. In addition to providing political, logistical and financial support, establishing a national strategy is important. This provides a framework for the interchange of experiences so that the maximum benefit can be obtained from developments and experience. Such initiatives have been taken in recent years in Canada *(11)*, the United Kingdom *(12)*, and the USA *(13)*. On the international level, targets for the year 2000 have been set by the World Health Organization *(14-16)*. Governments should have objectives for the prevention of chronic disorders within the context of a strategy that can be adapted to different communities.

## Evaluation and research

Evaluation is essential to justify a programme's continuation or provide for its modification and development; it is also necessary if the experiences in one area are to be applied elsewhere. It requires the collection of a minimum set of data. Some may be obtained routinely on a national basis, such as demographic and mortality data. Other information, e.g., that relating to risk factor levels, behaviour, and beliefs, has to be collected through *ad hoc* surveys. At the planning stage the types of data needed must be defined, and procedures for collecting the information must be included in the design of the programme. Where possible, national and local trends should be compared. However, it may also be desirable to compare local changes with trends in similar communities. To gain any indication of what is happening within a community, baseline data must be collected before initiating the programme.

Evaluation is an important research tool. There is strong etiological evidence to support the introduction of action to prevent noncommunicable diseases. However, there is still much to learn about how to change the incidence of diseases, reduce risk factor levels in communities, and promote healthy life-styles. Although the harmful effects of cigarette smoking are acknowledged, young people still take up the habit. Those women most at risk of cervical cancer and birth problems, i.e., the economically worst off, are still the least likely to take advantage of screening services.

We need to discover how to package preventive measures and health promotion in ways attractive to target populations. We need to determine how best to marshal all the settings and communication networks in communities and how to avoid conflict between the prevention of noncommunicable disease on the one hand and economic and social concerns on the other.

For many important noncommunicable diseases, however, there is a need for further basic research. In some cases, screening or preventive measures have not been devised, in others there is still insufficient knowledge of causative factors. This is true of various forms of cancer, certain congenital anomalies, neurological diseases, multiple sclerosis, and psychiatric disorders such as schizophrenia.

## Training and manpower

The implementation of a community-based programme for the prevention of

noncommunicable diseases requires that new skills and knowledge be acquired by primary care workers, other health professionals, and community representatives.

Primary care workers should be trained to understand the health problems of their communities and the approaches to the early detection, prevention and treatment of disease. They should also acquire interpersonal and organizational skills so that they can motivate, encourage and respond to the communities. Moreover, primary health care workers should train community representatives, including elected leaders, teachers, and trade unionists, so that they can help to contact and motivate people.

The training of more specialized health professionals is important, since primary health care workers rely on them for guidance and training. Far from undermining the role of workers in acute care and hospital services, a community-based programme for the control of chronic disease gives them broader responsibilities.

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The prevention of noncommunicable diseases is an international issue since they are of growing concern throughout the world. Much can be learnt by the exchange of ideas and experiences between countries and communities. The World Health Organization, particularly by supporting an integrated programme for the prevention and control of noncommunicable diseases, is making a major contribution to the development of strategies, the evaluation of their feasibility, and the promotion of the principle of prevention worldwide. However, it must be stressed that success will rest on political as well as societal commitment. □

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