

# HEALTH PRINCIPLES OF HOUSING



WORLD HEALTH ORGANIZATION  
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The World Health Organization is a specialized agency of the United Nations with primary responsibility for international health matters and public health. Through this organization, which was created in 1948, the health professions of some 165 countries exchange their knowledge and experience with the aim of making possible the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life.

By means of direct technical cooperation with its Member States, and by stimulating such cooperation among them, WHO promotes the development of comprehensive health services, the prevention and control of diseases, the improvement of environmental conditions, the development of health manpower, the coordination and development of biomedical and health services research, and the planning and implementation of health programmes.

These broad fields of endeavour encompass a wide variety of activities, such as developing systems of primary health care that reach the whole population of Member countries; promoting the health of mothers and children; combating malnutrition; controlling malaria and other communicable diseases including tuberculosis and leprosy; having achieved the eradication of smallpox, promoting mass immunization against a number of other preventable diseases; improving mental health; providing safe water supplies, and training health personnel of all categories.

Progress towards better health throughout the world also demands international cooperation in such matters as establishing international standards for biological substances, pesticides and pharmaceuticals; formulating environmental health criteria; recommending international nonproprietary names for drugs; administering the International Health Regulations; revising the International Classification of Diseases, Injuries, and Causes of Death; and collecting and disseminating health statistical information.

Further information on many aspects of WHO's work is presented in the Organization's publications.

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# Preface

Over and above their basic purpose of providing shelter against the elements and a focus for family life, human dwellings should afford protection against the hazards to health arising from the physical and social environments.

At its best, appropriate housing promotes physical and mental health. It provides people with psychological security, physical ties with their community and culture, and a means of expressing their individuality.

Unfortunately, the dwellings in which most of the world's people live do not enable them to enjoy these benefits to the full. Indeed, for great and increasing numbers, the available housing not only fails to protect them against health risks, but increases their exposure to environmental hazards, many of them preventable. Particularly at risk are those who are caught up in rapid urban change, accompanied by limited resources and inappropriate public policies.<sup>a</sup>

The underlying forces that condemn people to marginal or submarginal housing are poverty, inadequate socioeconomic development, population growth, migration and failure to ensure equitable access to land and housing. These forces are insurmountable for many people, particularly in developing countries, where housing conditions in many areas are declining.

This publication outlines the health needs to be met in human dwellings and the steps that governments, communities and families might take to meet them, with particular attention to developing countries. The World Health Organization has strengthened its support to Member States in this connection,

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<sup>a</sup> See: *Urbanization and its implications for child health: potential for action*. Geneva, World Health Organization, 1988.

taking into account the trend towards accelerating urbanization and the worsening housing situation in many developing countries. In particular, as part of WHO's contribution to the International Year of Shelter for the Homeless,<sup>a</sup> a Consultation on Housing—the Implications for Health, was held in June 1987.<sup>b</sup> The experts and representatives of international bodies participating in the Consultation reviewed, revised and approved the principles set forth in this publication. They also proposed six lines of action for immediate attention by governments and the international agencies and nongovernmental organizations concerned.<sup>c</sup>

The principles published here represent a distillation of the policies pertinent to housing developed over many years by national health authorities; health information from epidemiological and other research studies, and technical reviews; the deliberations of WHO Expert Committees and technical meetings; and studies of other international bodies concerned. The principles represent the work of many individuals and groups. However, special acknowledgement must be given to Professor Morris Schaefer, formerly with the School of Public Health, University of North Carolina, NC, USA, for his diligent efforts in preparing a working draft of the principles and helping to edit them during the Consultation. Dr A. E. Martin, formerly Principal Medical Officer (Environmental Health) Department of Health and Social Security, London, England, is also deserving of thanks for his research efforts and contributions to the working draft. The participants in the WHO Consultation, responsible for the revision and approval of the principles, are listed in Annex 1.

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<sup>a</sup> *Shelter and health*. Unpublished WHO document, WHO/EHE/RUD/87.1, 1987.

<sup>b</sup> *Housing—the implications for health. Report of a WHO Consultation*. Unpublished WHO document, WHO/EHE/RUD/87.2, 1987.

<sup>c</sup> *Housing and health: an agenda for action*. Unpublished WHO document.

# Introduction

This publication has been prepared for the use of leaders, officials and scientists involved in health, housing and socioeconomic development. Part I gives guidance on basic issues and concepts connected with the health aspects of housing and summarizes the information available on the underlying relationships between health and housing conditions. Part II describes public health approaches to meeting housing-related health needs.

In the individual countries, the principles and approaches in question can serve as a check-list of the health problems to be tackled by health authorities and others involved in social development. To meet specific national problems, the information should be used selectively and adapted as a basis for a logical sequence of activities aimed at improving the situation.

## The principles

For the purposes of this publication, “principles” may be defined as rules for guiding thought and action, based on experimental, clinical or epidemiological findings. As such, they have been deliberately left general. The evidence on which they are based varies in quality (1). Many of them require situation-specific adaptations, to bring them in line with circumstances (climate, culture), preferences (choices of locations and housing materials), and the availability of resources to provide and improve housing.

The general nature of these principles distinguishes them from housing standards (2) and codes, which are usually drawn up by governments on the basis of selected principles, to provide norms that are applicable to particular communities at specific times. Standards and codes are thus the adaptation of principles to concrete situations. Further, because of the local and continuing nature of much activity connected with housing, the scope and

applicability of housing standards will always be more limited than that of the principles discussed in the following pages.

## **Background**

Along with food and clothing, shelter has long been regarded as a basic need for human life. At a minimum, shelter has to provide protection against the stresses of the physical environment, as well as satisfying people's psychological requirements for a "place" or territory of their own and a focus for the primary social group, the family.

The ways in which human beings meet this basic need are myriad; a vast range of materials is used in buildings (wood, brick, earth, concrete, stone, foliage, animal skins, ice) and there is a great diversity of patterns in which structures are spaced, clustered or even moved about. Ownership and tenure of housing and land also vary widely, and legal provisions are often at the root of the exclusion of low-income groups from adequate housing. The provision of housing is closely related to occupation and economic activity, which are themselves dependent on geographical, technological and climatic factors. Transport is also an important determinant of where and how people live, as are political conditions: the levels of stability, security, prosperity and peace. The quality and distribution of its housing clearly reflects a country's economic status, social values and political character.

Housing is intimately related to health. The structure, location, facilities, environment and uses of human shelter have a strong impact on the state of physical, mental and social well-being. Poor housing conditions and uses may provide weak defences against death, disease, and injury or even increase vulnerability to them. Adequate and appropriate housing conditions, on the other hand, not only protect people against health hazards but also help to promote robust physical health, economic productivity, psychological well-being and social vigour.

This document discusses in some detail the relationships between housing and health. However, the possibilities of applying that knowledge to improve health and the human condition are limited in many countries by a number of conditions and constraints that must be recognized, understood and dealt with.



## Conditions and constraints

The prospect for “healthy housing for all” is most fundamentally affected by the fact that most existing human dwellings are inadequate to foster optimum health or even to protect people against avoidable health hazards. The distribution of deficiencies varies sharply between countries and between economic groups within countries. Improving the housing situation largely depends on progressive socioeconomic development, which in many countries is hindered by:

- inadequate measures to reduce *poverty*, which limits the material and social means for improvement;
- the *growth of populations* at rates that outrun the pace of economic development, and the inequitable distribution of the benefits of development;
- restrictions on *access to land* for housing and farming, which affects prospects for economic self-sufficiency, as well as for adequate housing;
- rapid *urbanization*, usually the result of economic changes, which produces problems that local governments are ill equipped to meet;
- inappropriate *policies* that may, *inter alia*, perpetuate unrealistic and obsolete standards that limit access to housing for the poor;
- *limited powers of intervention* by local governments, in view of the fact that most dwellings are built by those who live in them (3);
- inadequate *popular knowledge* about the health aspects of housing and its uses, all the more important because housing decisions and actions are so highly decentralized;
- *inadequate attention to social development*, as it interacts with economic development or stagnation; and
- *unstable political and military conditions* that restrict the possibilities of adequate housing.

Despite their negative or limiting effects, these constraints suggest some criteria on which to base the design of effective policies and programmes to improve the situation. For example, recognizing the extent to which the provision of housing depends on individual action suggests that improvement efforts

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## PART I

# Principles related to health needs

The relationships between housing conditions and human health are set forth in six major principles, some of which include a number of subdivisions. The subjects of the major principles are:

1. Protection against communicable diseases.
2. Protection against injuries, poisonings and chronic diseases.
3. Reducing psychological and social stresses to a minimum.
4. Improving the housing environment.
5. Making informed use of housing.
6. Protecting populations at special risk.

## PRINCIPLE No.1

# Protection against communicable diseases

**Adequate housing provides protection against exposure to agents and vectors of communicable diseases, through**

- **safe water supply,**
- **sanitary excreta disposal,**
- **disposal of solid wastes,**
- **drainage of surface water,**
- **personal and domestic hygiene,**
- **safe food preparation, and**
- **structural safeguards against disease transmission.**

In most developing countries, in which the bulk of the world's population lives, communicable diseases continue to cause an excessive number of illnesses and deaths. Infants and young children are the main victims of these conditions. Immunization provides an important countermeasure, but it is limited to certain diseases and may be further constrained by inadequate financial and technical resources and by problems of distribution. The domestic environment is therefore a crucial battleground for reducing exposure to disease pathogens; where the battle is not well fought, the dwelling becomes a killing ground of the youngest and weakest.

Because so many aspects of the home and the neighbourhood may be implicated in the transmission of communicable diseases, Principle No. 1 has seven subdivisions.

## Principle No. 1.1

### **Safe and adequate water supply**

**An adequate supply of safe and potable water assists in preventing the spread of gastrointestinal diseases, supports domestic**

## **and personal hygiene and provides an improved standard of living.**

Because water is essential to life itself, people must be protected against biologically contaminated water, which may carry such harmful microorganisms as shigellae, salmonellae, enteropathogenic *Escherichia coli*, probably certain enteroviruses, and various protozoal and helminthic parasites. Water-borne diarrhoeal diseases affect young children particularly and, in some developing countries, may account for as many as a third of all deaths of children under five years of age. The severity of these diseases increases markedly when exposure is combined with the effects of malnutrition. Water in a reasonable quantity is required for adequate personal and domestic hygiene (4), and if provided in a convenient way will serve to promote such uses, as well as increasing family productivity and the safety of food preparation.

Large numbers of people are without access to safe and adequate water supplies. An estimate by WHO at the end of 1985 indicated that 23% of urban and 64% of rural dwellers lack such access, and it is estimated that 1200 million people will still be without it in 1990 (5).

While a protected water supply piped into the dwelling is the best means of providing adequate quantities of safe water, this will be impossible to achieve in the near future for most rural dwellers and many urban dwellers in developing countries. Having to carry water from a distance almost always means that there will be inadequate quantities in the home and an added risk of contamination.

Water may be supplied from a variety of sources: springs, streams, ponds and lakes, surface wells or deep boreholes. Sources should be protected against contamination; protection may involve both structural barriers and the reduction of contamination from insanitary human and animal behaviour. Even so, the degree of contamination will vary, and treatment—commonly by filtration or chlorination—will often be needed to ensure that the water is safe. To ascertain what needs to be done requires the regular examination of water samples to detect contamination by microorganisms. In both town and country, operation and maintenance work is required to ensure the continuing safety and availability of water.



Hygienic user behaviour, based on correct information, is essential to protect water from contamination during its transport to, and storage in, the home. The use of clean, closable containers to carry and store water and clean vessels to drink it from could improve the protection of perhaps a thousand million people in the world against water-borne diseases.

## Principle No. 1.2

### **Sanitary disposal of excreta**

**Sanitary disposal of excreta reduces the faecal-oral transmission of disease and the breeding of insect vectors.**

A prime source of the biological contamination of water, food and soil is human faeces. Contamination may occur near houses, as when people defecate on the ground or in areas where food is grown, or when latrines are improperly located in relation to wells, set in soil lacking satisfactory drainage, or inadequately maintained. Overflow from latrines results in insanitary muddy conditions that expose people directly to helminthic and protozoal parasites and other pathogenic organisms, as well as encouraging flies. Exposure may also be less direct, as when untreated excreta are introduced into water sources and then into the food chain, transmitting pathogenic organisms to people at some distance from the original site of contamination (6).

These hazards are worse in conditions of overcrowding, whether in slums, periurban settlements or temporary camps, where facilities for excreta disposal are absent, insufficient or badly maintained.

The global picture remains threatening. In 1985, WHO estimated that 40% of urban and 84% of rural dwellers were without adequate sanitary facilities and that the anticipated improvement by 1990 would still leave 1800 million people in that category. The situation in regard to sanitation is therefore even worse than in regard to water supply (5).

The main problem is not a technical one. Technological alternatives of various degrees of sophistication are available for the sanitary disposal of excreta, some relying on householders and others on community services or facilities. There is increasing interest in processes that can convert human wastes into useful agricultural soil conditioners and energy products;