

**AL MUSTAQBAL UNIVERSITY**

**College of Pharmacy / Fourth Stage**



# **Public Health**

## **(L 1) DEFINITIONS & KEY TERMS**

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# What is Health?

Health is not just the **absence of disease**, but a state of **complete physical, mental, and social well-being**.

It is important because it allows us to live our lives to the fullest and achieve our goals. When we are healthy, we have more energy, better concentration, and can enjoy our relationships with others.

**Maintaining** good health **requires** a balanced diet, regular exercise, adequate sleep, and managing stress. By taking care of our bodies and minds, we can prevent many diseases and live longer, happier lives.

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The most widely accepted definition of **health** was the one published by the **World Health Organization** in 1947. That definition states that “health is a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity.”



**Public Health** is defined as:

the science and art of preventing disease, prolonging life, and promoting physical health and efficiency, through organized community efforts, for the sanitation of the environment, the control of community infection and the education of the individual in the principles of personal hygiene .

# Public Health Defined

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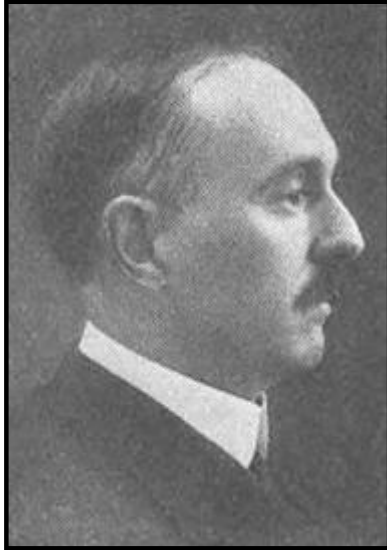


Photo: IF Fisher and EL Fisk

“The science and art of preventing disease, prolonging life, and promoting health through the organized efforts and informed choices of society, organizations, public and private communities, and individuals.”

—CEA Winslow

# The History of Public Health

## Sanitation and Environmental Health

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500 BCE



Greeks and Romans practice community sanitation measures

1840s



The Public Health Act of 1848 was established in the United Kingdom

1970



The Environmental Protection Agency was founded

# The Difference Between Health and Public Health

While health refers to an individual's physical, mental, and social well-being, public health is concerned with the health of entire populations.

Public health focuses on preventing disease, promoting healthy behaviors, and improving the overall health of communities.

For example, a doctor may focus on treating a patient's illness or injury, while a public health professional may work to prevent the spread of that same illness throughout a community. Public health interventions can include things like vaccination campaigns, health education programs, and policy changes to promote healthier environments.

For example, vaccination campaigns have eradicated diseases like **smallpox** and drastically reduced the incidence of others like **polio**. Additionally, public health programs that promote healthy lifestyles, such as **smoking cessation** programs and **safe sex education**, can prevent chronic diseases and improve overall health outcomes.

# Comparison of Clinical Medicine and Public Health Practice

<b>Clinical Medicine</b>	<b>Public Health- Population Medicine</b>
Take a history of the current illness Ask directed questions	Problem identification; anecdotes, focus groups, basic population health indicators,
Review of symptoms	Surveillance statistics, Disease registries
Physical examination of the patient	Behavioral risk studies, NHANES, observational studies; cross sectional studies, case control
Develop a single or differential diagnosis	Develop a hypothesis
Conduct tests to confirm the diagnosis or reduce the number in the differential	Case control studies, prospective cohort studies,
Evaluates possible modes of treatment- Clinical studies	Evaluates modes of treatment- Outcome evaluation Cost-benefit analysis
Treat the problem	Select, modify and implement programs
Monitor results	Monitor outcome indicators
Adjust treatment plan as necessary	Revise programs as necessary

## KEY PUBLIC HEALTH TERMS

What is **clinical care**?

The prevention, treatment and management of illness and the preservation of mental and physical well-being through the services offered by medical and allied health professions; also known as **health care**.

What is **epidemiology**?

Epidemiology is the method used to find the causes of health outcomes and diseases in populations. In epidemiology, the patient is the community and individuals are viewed collectively. By definition, epidemiology is the study (scientific, systematic, and data-driven) of the distribution (frequency, pattern) and determinants (causes, risk factors) of health-related states and events (not just diseases) in specified populations (neighborhood, school, city, state, country, global). It is also the application of this study to the control of health problems. So it encompasses studying disease **frequency**, its **distribution** and **determinants**.



## KEY PUBLIC HEALTH TERMS

What is an **outbreak**?

Occurrence in a community or region of cases of an illness, specific health-related behavior, or other health-related event clearly in excess of normal expectancy. Both terms are used interchangeably; however, **epidemic** usually refers to a larger geographic distribution of illness or health-related events.

**cluster:** group of cases in a specific time and place that might be more than expected.

**endemic:** disease or condition present among a population at all times.

**pandemic:** a disease or condition that spreads across regions.

# Pandemics

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Influenza



500 million infected worldwide in 1918

Polio



Vaccine introduced in 1955; eradication initiative launched in 1988

HIV



34 million living with HIV worldwide; 20% decline in new infections since 2001

# KEY PUBLIC HEALTH TERMS

What is a **health outcome**?

The result of a medical condition that directly affects the length or quality of a person's life.

What is public health **surveillance**?

Public health surveillance is the ongoing, systematic collection, analysis and interpretation of health-related data essential to planning, implementation and evaluation of public health practice.

What are **health disparities**?

Health disparities are preventable differences in the burden of disease, injury, violence or in opportunities to achieve optimal health experienced by socially disadvantaged racial, ethnic and other population groups and communities. Achieving health equity, eliminating disparities and improving the health of all population groups are all goals of public health.



# Knowledge Check

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Match each term with the correct example.

A. endemic

B. pandemic

C. epidemic

A. endemic

1. Malaria is present in Africa at all times because of the presence of infected mosquitoes. Malaria is \_\_\_\_\_ in Africa.

C. epidemic

2. The Ebola virus in parts of Africa is in excess of what is expected for this region. This virus is a/an \_\_\_\_\_.

B. pandemic

3. HIV/AIDS is one of the worst global diseases in history. It is a/an \_\_\_\_\_.

# Risk Factor

Risk factors are characteristics or behaviors that increase the likelihood of developing a particular health condition.

They can be **genetic, environmental, or behavioral** in nature. For example, smoking is a risk factor for lung cancer, while genetics can increase the risk of certain diseases such as diabetes or heart disease.

Understanding risk factors is important because it allows individuals to take steps to reduce their risk of developing certain health conditions.

For example, maintaining a healthy diet and exercising regularly can help reduce the risk of developing obesity, which in turn can lower the risk of developing related health conditions such as diabetes or heart disease.”

## Types of Risk Factors

There are **three** main types of risk factors that can impact an individual's health: behavioral, environmental, and genetic.

**Behavioral** risk factors include things like smoking, poor diet, and lack of exercise. These behaviors can lead to chronic diseases such as heart disease, diabetes, and cancer.

**Environmental** risk factors include exposure to pollutants, toxins, and other harmful substances in the air, water, and food we consume.

**Genetic** risk factors are inherited traits that can increase the likelihood of developing certain diseases, such as breast cancer or Alzheimer's.

## Risk Groups

A risk group is a demographic or population subset that is more likely to experience negative health outcomes due to shared **characteristics** or **circumstances**.

For example, **elderly individuals** and people with **pre-existing medical conditions** are considered high-risk groups for severe illness from COVID-19.

Understanding risk groups is important because it allows us to identify and address health disparities in our communities.

By recognizing which groups are at higher risk for certain health issues, we can take steps to mitigate those risks through targeted interventions such as education, outreach, and access to healthcare. For instance, public health officials may prioritize vaccination efforts for high-risk groups during a pandemic.

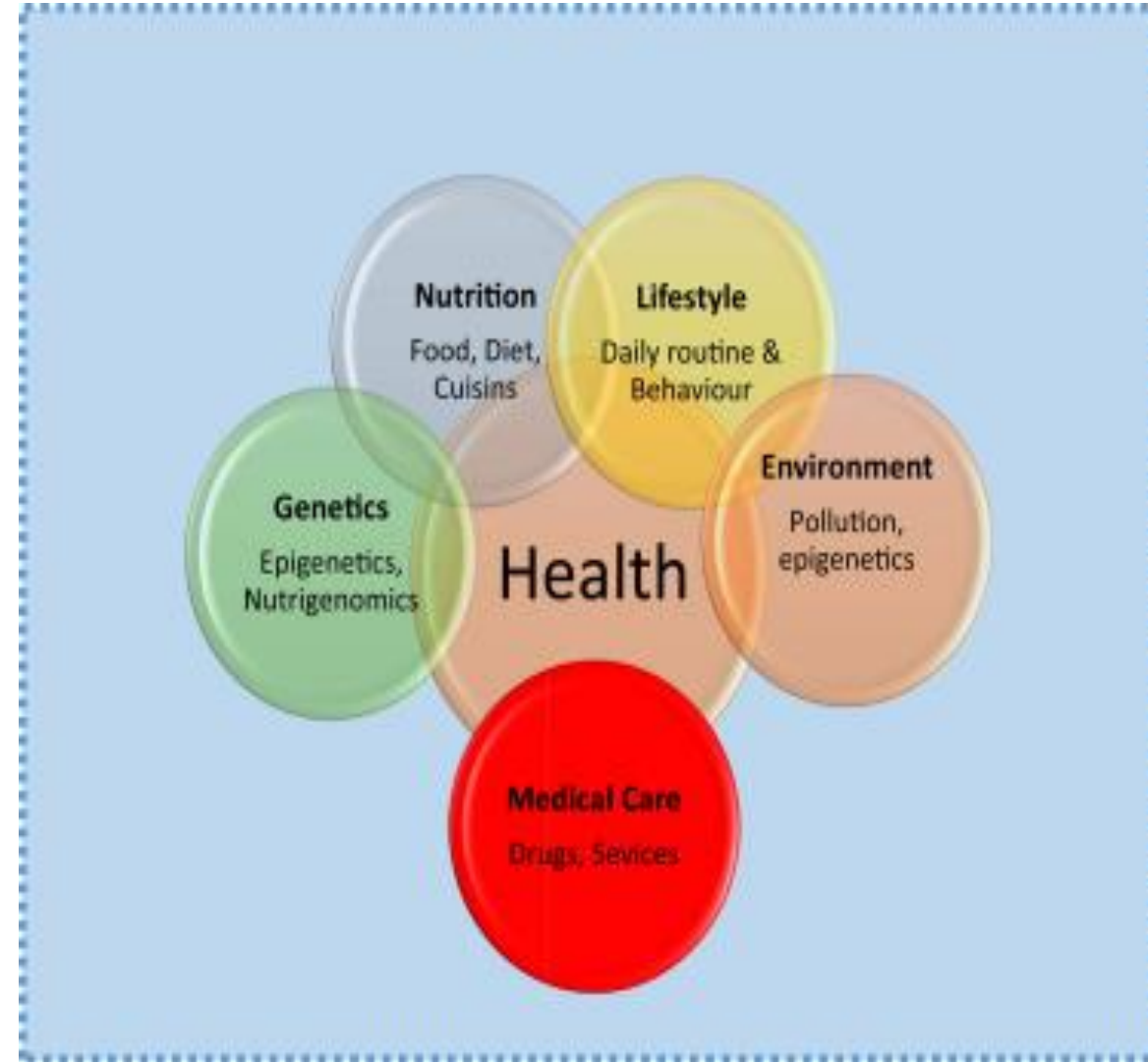
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# What Are Determinants of Health?

refers to those factors that have a significant influence, whether positive or negative, on health. The term should not imply a cause–effect relationship between a risk factor and a health status.

Health is the result of multiple factors including those genetic, biological, and lifestyle factors relating to the individual and those factors relating to the structure of society and its policies.

Understanding these determinants is important because they can have a significant impact on a person's health outcomes.





## Social Determinants of Health

These determinants include factors such as income, education, and housing, which can have a significant impact on health outcomes.

For example, individuals with low incomes may have limited access to healthy food options, safe housing, and healthcare services, which can lead to higher rates of chronic diseases such as diabetes and heart disease.

Similarly, individuals with lower levels of education may be less likely to understand how to maintain good health or to have access to information about healthy behaviors.

## Social Determinants of Health



## **Behavioral Determinants of Health**

These include diet, exercise, and substance use.

Poor dietary habits, lack of physical activity, and excessive alcohol consumption have been linked to a range of health problems, including obesity, heart disease, and cancer. On the other hand, healthy behaviors such as regular exercise and a balanced diet can help prevent these conditions and promote overall wellness.

## **Environmental Determinants of Health**

refer to the physical conditions of our surroundings that can have an impact on our well-being. One such factor is pollution, which has been linked to a range of health problems including respiratory issues, heart disease, and cancer. Exposure to pollutants can vary depending on where you live, work, or spend time outdoors.

Access to green spaces is another important environmental determinant of health..

**Healthcare Determinants of Health:** Access to healthcare is a crucial determinant of health. Individuals who lack access to healthcare services are at higher risk for developing chronic conditions and experiencing negative health outcomes.

# THANK YOU!

