

BASIC IMMUNOLOGY



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Dr. Ghousia Fatima

Department of Periodontics
S. D. M. College of Dental Sciences and Hospital,
DHARWAD.

The science of immunology, once a small branch of microbiology; has grown into one of the principal sciences concerned with human diseases.²⁴

Our environment contains a great variety of infectious microbes like viruses, bacteria, fungi, protozoa and multicellular parasites, which can cause disease and if left untreated will eventually kill their host. Most infections in the normal individuals are short lived and leave little permanent damage. This is due to the immune system, which combats infection.¹

The human immune system is a sophisticated network of cells, tissues and soluble factors capable of recognizing and responding to a vast array of potentially harmful agents, rendering them harmless.¹

The term immunity is derived from the Latin word (*Immunitae*, which referred to the protection from the legal prosecution offered to Roman Senators during their tenure in office).

Historically immunity refers protection for disease. Thus immunity refers to the resistance exhibited by the host towards injury caused by microorganisms and their products. Protection against infectious disease is only one of the consequences of the immune response.²⁵

The function of the immune system is to distinguish self from non-self and eliminate potentially destructive foreign substances from the body.

The physiologic function of the immune system is defense against infectious microbes. However, even non infectious foreign substances, including microbes as well as macromolecule, such as proteins and polysaccharides regardless of the physiologic or pathologic consequence of such a reaction. Concepts of disease are rapidly changing because of knowledge gained in immunologic research.²⁴