

Immunity I

B.SC. PART-II (SUB/GEN)

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Introduction

- ▶ Immunity is the ability of the body to protect against all types of microorganism or foreign bodies like bacteria, viruses, toxic substances extra, which enters the body. In other words we can say that immunity is the ability of the body to defend itself against disease causing organisms. On a regular basis, the body encounters several pathogens, but only a few result in diseases. The reason is that our body has the ability to release antibodies against these pathogens and protect the body against diseases. This defense mechanism is called immunity

Types of Immunity

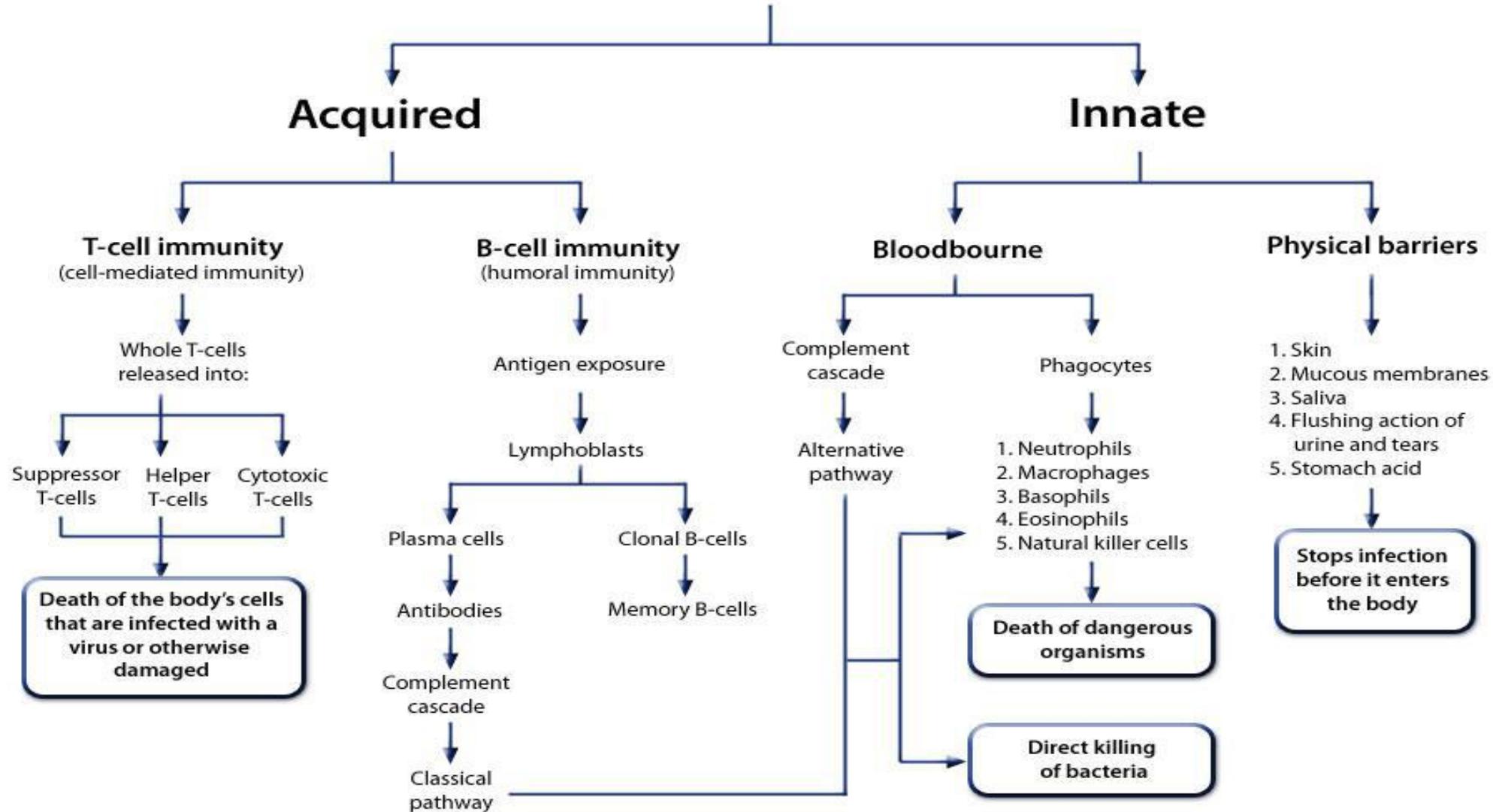
- ▶ There are two types of immunity:
- ▶ 1. Innate Immunity
- ▶ 2. Acquired Immunity

Two types of immunity

The body is protected against microorganism in basically two ways.

The first is my innate immunity which is also referred to as non-specific. These nonspecific mechanisms against a wide range of potential infectious agents in a non-discriminating way. secondly immunity may be acquired also called specific or adaptive immunity in this form of immunity the body learn how to combat a particular species of microorganism

Immune system



Innate Immunity

- ▶ Immunity with which an individual is born is called innate or natural immunity
- ▶ Innate immunity is provided by various components such as skin, mucous membrane, natural phagocytic cells etc.
- ▶ Innate immunity act as a first line of defense to particular microorganism
- ▶ It is non- specific
- ▶ Works against wide variety of microorganism

Mechanism of Innate immunity

- ▶ Normal anatomical and physiological barrier
- ▶ Inflammatory barrier or inflammation
- ▶ Phagocytotic barrier or phagocytosis
- ▶ Complement system
- ▶ Interferon
- ▶ Natural killer lymphocyte

Acquired Immunity

- ▶ The immunity that an individual acquires after the birth is called acquired immunity
- ▶ It is also called specific or adaptive immunity
- ▶ It is mediated by antibodies or lymphocyte or both
- ▶ It is specific to a specific infective agent
- ▶ It has immunological memory
- ▶ It shows diversity or diversified reaction against different infective agents.
- ▶ Two types of acquired immunity is present
- ▶ A-Active Immunity
- ▶ B-Passive immunity