

The Immune System

Antigen: Anything the body can not recognize.

eg) a splinter or a virus

Pathogen: An organism or substance that causes disease.

Four Ways to Receive Infectious Diseases

Direct contact: Shaking hands

Indirect contact: Being near someone when
they cough

Water and food

Animal bites

1st line of defence:

Skin, mucus, tears, ear wax, nose hair, etc.
prevent pathogens from entering your body.
The gastric juices in the stomach destroy
pathogens which you swallow.

Innate Immune Response:

Inflammation: Fluid, cells and dissolved substances flow to the site of infection causing redness, swelling, and fever.

Increased numbers of phagocytes, white blood cells that swallow invading cells.

Acquired Immune Response:

B cells: Recognize antigens in the body and produce specific antibodies to fight them. The antibodies attach to the antigens and stop them from getting into body cells or flag them for destruction by phagocytes.

T cells: Attach themselves to infected cells and destroy them.

B and T cells work against specific pathogens, when you get a disease for the first time it can be difficult for the body to make the right B and T cells to fight it. After the body has fought off the disease some of these B and T cells remain in the body and if you are ever infected with the same disease again they make copies of themselves to easily fight off the pathogen. This is called active immunity.