The immune system is a complex and highly developed system, yet its mission is simple: to seek and kill invaders. If a person is born with a severely defective immune system, death from infection by a virus, bacterium, fungus or parasite will occur. In severe combined immunodeficiency, lack of an enzyme means that toxic waste builds up inside immune system cells, killing them and thus devastating the immune system. A lack of immune system cells is also the basis for DiGeorge syndrome: improper development of the thymus gland means that T cell production is diminished.

Most other immune disorders result from either an excessive immune response or an 'autoimmune attack'. Asthma, familial Mediterranean fever and Crohn’s disease (inflammatory bowel disease) all result from an over-reaction of the immune system, while autoimmune polyglandular syndrome and some facets of diabetes are due to the immune system attacking 'self' cells and molecules. A key part of the immune system’s role is to differentiate between invaders and the body's own cells - when it fails to make this distinction, a reaction against 'self' cells and molecules causes autoimmune disease.
Diseases

Asthma
Ataxia telangiectasia
Autoimmune polyglandular syndrome
Burkitt lymphoma
Diabetes, type 1
DiGeorge syndrome
Familial Mediterranean fever
Immunodeficiency with hyper-IgM
Leukemia, chronic myeloid
Severe combined immunodeficiency

Did you know ...?

A child that received the measles vaccination will be protected from measles for life? That’s because our immune cells have "memory"...