

## Immunodeficiency and its Treatment

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### DESCRIPTION

Immunodeficiency, is a condition in which the immune system's ability to fight infections and cancer is weakened or missing. It is also known as Immunocompromisation. Extrinsic factors that impact the patient's immune system cause the majority of cases to be acquired. Immunodeficiency diseases make it difficult for your body to fight infections and diseases. Immunodeficiency disorders can be acquired or congenital. A congenital disorder is one that you were born with. Disorders that get later in life, often known as acquired or secondary disorders. But congenital disorders are less common than acquired disorders.

Organs such as spleen, tonsils, bone marrow, lymph nodes make and release lymphocytes. These are white blood cells that are divided into two types: B cells and T cells. Antigens are invaders that B and T lymphocytes combat. B cells produce antibodies that are unique to the sickness detected by your body. T cells are immune cells that attack alien or diseased cells. When the immune system isn't functioning properly, an immune deficiency disorder develops. Primary immunodeficiency disease occurs when you are born with a deficiency or when there is a hereditary reason. There are around 100 different types of primary immunodeficiency diseases. Spleen removal may be required due to illnesses such as liver cirrhosis, sickle cell anaemia, or spleen damage.

Your immune system is also weakened as you age. Some of the organs that make white blood cells shrink and create fewer of them as you become older. Proteins are necessary for your immune system to function properly. When you sleep, your body creates proteins that aid in the battle against infection. As a result, not getting enough sleep weakens your immune system. Cancer and chemotherapy medicines can both weaken your immune system. Any element of the immune system might be affected by immunodeficiency diseases. Most of the time, these

diseases arise when T or B lymphocytes, which are unique white blood cells, do not function properly or when your body does not make enough antibodies.

Candida (yeast) infections can be caused by inherited immunodeficiency disorders that impact T lymphocytes. T cells and B cells are both affected by inherited combination immunodeficiency. If not treated early, it can be fatal within the first year of life. When people have an immunodeficiency condition caused by drugs that weaken the immune system, they are referred to be immunosuppressed.

Chemotherapy-induced immunosuppression is a typical side effect of cancer treatment. Immunodeficiency can be caused by a variety of malignancies. People who have had their spleen removed have developed an acquired immunodeficiency and are more susceptible to infection by microorganisms that the spleen would typically combat. Diabetes patients are also more susceptible to some infections. The immune system becomes less effective as you get older. The number and activity of white blood cells decreases as immune system tissues diminish.

The immune system is weakened by primary immunodeficiency condition, making infections and other health problems more likely. This disorder is also called as primary immune disorders.

Many persons with primary immunodeficiency are born without elements of the body's immunological defences or with a malfunctioning immune system, making them more susceptible to infection-causing bacteria. Primary immunodeficiency can be so mild that it goes unnoticed for years. Other types are so severe that they're found quickly after a baby is born with them. Many types of primary immunodeficiency illnesses can benefit from treatments that enhance the immune system. People with the illness will benefit from new therapies and a higher quality of life as a result of on-going research.

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