

## Brief note on autoimmune disease.

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### Autoimmune Disease

An autoimmune disease is a condition in which your protected system inappropriately attacks your body. Immune systems often protect against causes such as bacteria and infection. Normally, the protected system can express the difference between foreign cells and the own cells. In an autoimmune disease, the weak system treats parts of your body, such as joints or skin, as foreign. Most autoimmune diseases cause inflammation that can affect many parts of the body. The parts of the body affected depend on a person's autoimmune disease. Common signs and symptoms include fatigue, fever, muscle aches, swelling and joint pain, skin problems, abdominal pain, digestive problems, and swollen glands. Symptoms originate and go often and can be mild or severe. They are more common in women and can run in families also referred to as an autoimmune disease. There are many types of autoimmune diseases in which some are discussed below

#### *Type 1 diabetes*

The pancreas produces the hormone insulin, which helps regulate blood sugar levels. In type 1 diabetes, the immune system attacks and destroys the insulin-producing cells in the pancreas. High blood sugar can damage blood vessels as well as organs like the heart, kidneys, eyes, and nerves.

#### *Rheumatoid arthritis*

In Rheumatoid Arthritis (RA), the immune system attacks the joints. This attack causes redness, heat, pain, and stiffness. Unlike osteoarthritis, which usually affects people as they get older, RA can start in their 30s or earlier.

#### *Multiple sclerosis*

Multiple Sclerosis (MS) damages the myelin sheath, the protective coating that surrounds nerve cells in your central nervous system. Damage to the myelin sheath slows the rate at which messages are transmitted from your brain and spinal cord to and from the rest of your body.

#### *Psoriasis/psoriatic arthritis*

Skin cells grow normally and then disappear when they are no longer needed. Psoriasis causes skin cells to multiply too quickly. Excess cells accumulate and form red, inflamed patches, often with silvery-white patches on the skin.

#### *Addison's disease*

Addison's disease affects the adrenal glands, which produce the hormones cortisol and aldosterone as well as the androgen hormones. Having too little cortisol can affect how the body uses and stores carbohydrates and sugar (glucose). A lack of aldosterone leads to sodium loss and excess potassium in the blood.

#### *Graves' disease*

Graves' disease attacks the thyroid gland in the neck, causing it to produce too much hormone on its own. Thyroid hormones control the body's energy expenditure, known as metabolism. Having too much of this hormone accelerates the body's activities, causing symptoms such as anxiety, heart palpitations, heat intolerance, and weight loss.

#### *Hashimoto's thyroiditis*

In Hashimoto's thyroiditis, thyroid hormone production is slowed down and in deficit. Symptoms include weight gain, sensitivity to cold, fatigue, hair loss, and swelling of the thyroid gland (goiter).

#### *Myasthenia gravis*

Myasthenia gravis affects the nerve impulses that help control the muscles in the brain. When nerve-to-muscle communication is impaired, the signals cannot direct the muscles to contract.

#### *Pernicious anemia*

This condition causes a deficiency in a protein made by cells in the stomach lining, called intrinsic factor, which is needed by the small intestine to absorb vitamin B12 from food.

### Autoimmune Disease Symptoms

The early symptoms of many autoimmune diseases are very similar, such as:

- Fatigue
- Achy muscles
- Swelling and redness
- Low-grade fever
- Trouble concentrating
- Numbness and tingling in the hands and feet
- Hair loss
- Skin rashes

Individual diseases can also have distinct symptoms. For example, type 1 diabetes causes extreme thirst, weight loss, and fatigue. IBD causes abdominal pain, bloating, and diarrhea. With autoimmune diseases like psoriasis or RA, symptoms can come and go. A period of symptoms is called a "flare-up." The time that symptoms go away is called the period of remission.

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