



Autoimmune Diseases in Women

June 2026

How Are Females Affected?

Autoimmune diseases occur when the immune system mistakenly attacks the body's own healthy cells, tissues, or organs. Autoimmune diseases can affect anyone, but many autoimmune conditions are more common in women than in men (Angum et al., 2020).

Research has consistently found a female predominance in many autoimmune diseases. This sex difference is not the same across every autoimmune condition. Some conditions, such as systemic lupus erythematosus, Sjögren's disease, Graves' disease, and Hashimoto's thyroiditis, are much more common in women. Other autoimmune diseases, such as type 1 diabetes, Crohn's disease, and ankylosing spondylitis, may have a more equal sex distribution or may be more common in men depending on the condition and population studied (Angum et al., 2020; Ngo et al., 2014).

Because sex differences vary by disease, it is more accurate to say that many autoimmune diseases disproportionately affect women rather than saying all autoimmune diseases affect women more often.

The Science Behind the Sex Bias in Autoimmune Diseases

Researchers believe that sex differences in autoimmune disease risk are influenced by several interacting biological and environmental factors. These include sex hormones, immune regulation, X-chromosome biology, genetics, epigenetics, pregnancy-related immune changes, infections, the microbiome, and environmental exposures (Angum et al., 2020; Ngo et al., 2014).

Sex Hormones and Immune Balance

Sex hormones can influence immune activity. Estrogen is generally associated with stronger immune activation, while testosterone is often associated with immune-suppressing effects. A stronger immune response may help protect against some infections, but it may also

increase the risk of immune overactivation and autoimmunity in some people (Angum et al., 2020; Ngo et al., 2014).

Genetic and Epigenetic Factors

X-chromosome biology may also contribute to the higher burden of some autoimmune diseases in women. Many immune-related genes are located on the X chromosome. In females, one X chromosome is usually inactivated, but some genes can escape this inactivation, which may increase expression of immune-related genes. Epigenetic changes may also influence immune system regulation and autoimmune risk (Angum et al., 2020; Ngo et al., 2014).

Environmental and Microbial Influences

Autoimmune disease risk is also shaped by environmental factors, including infections, smoking, stress, diet, microbiome changes, medications, and toxin exposures. These factors may interact with genetic and hormonal differences to influence immune activity. However, the exact causes of autoimmune diseases are complex and are still being studied (Angum et al., 2020; Ngo et al., 2014).

A Closer Look at Common Autoimmune Diseases in Women

Graves' Disease and Hyperthyroidism

Graves' disease is an autoimmune disorder that affects the thyroid gland. The thyroid produces hormones that help control many body functions, including metabolism. Graves' disease causes the thyroid gland to produce too much thyroid hormone, a condition called hyperthyroidism (HealthLink BC, 2022a).

Symptoms of Graves' disease can include rapid heartbeat, irregular heartbeat, nervousness, mood changes, weakness, fatigue, diarrhea, heat intolerance, and weight loss. Graves' disease is the most common cause of hyperthyroidism, tends to run in families, affects women more often than men, and most commonly affects people between the ages of 30 and 50 (HealthLink BC, 2022a).

Hyperthyroidism means the thyroid gland makes too much thyroid hormone. Thyroid hormone controls how the body uses energy, also called metabolism. When there is too much thyroid hormone, metabolism speeds up. A person may lose weight quickly, feel nervous or moody, feel weak or tired, have shaking hands, feel hot and sweaty, or have a fast heartbeat. Some people may have no symptoms at all (HealthLink BC, 2023a).

Too much thyroid hormone can also affect the heart, muscles, bones, and cholesterol. Untreated hyperthyroidism can lead to serious heart problems, bone problems, and a dangerous condition called thyroid storm, so medical assessment and treatment are important (HealthLink BC, 2023a).

Hashimoto's Disease and Hypothyroidism

Hypothyroidism means the thyroid gland does not make enough thyroid hormone. Thyroid hormone controls how the body uses energy, so low thyroid hormone levels can affect the whole body. Hypothyroidism can cause tiredness, weakness, dry skin, brittle nails, cold intolerance, constipation, memory problems, depression, and heavy or irregular menstrual periods (HealthLink BC, 2023b).

People of any age can develop hypothyroidism, but older adults are more likely to get it. Women age 60 and older have the highest risk. A family history of thyroid disease also increases risk (HealthLink BC, 2023b).

In Canada, the most common cause of hypothyroidism is Hashimoto's thyroiditis. Hashimoto's thyroiditis is an autoimmune condition in which the immune system attacks thyroid tissue. As a result, the thyroid gland cannot make enough thyroid hormone. Worldwide, iodine deficiency is the most common cause of hypothyroidism (HealthLink BC, 2023b).

Hashimoto's disease usually progresses slowly over years. Symptoms may not be noticeable at first, but over time the decline in thyroid hormone production can lead to symptoms such as fatigue, increased sensitivity to cold, constipation, dry skin, muscle weakness, joint pain or stiffness, depression, memory or concentration problems, irregular or heavy menstrual bleeding, hair loss, brittle nails, and swelling of the thyroid, also called a goiter (Mayo Clinic, 2024).

Treatment usually involves thyroid hormone replacement medication, such as levothyroxine. With proper treatment and follow-up, many people with hypothyroidism can manage their symptoms effectively (HealthLink BC, 2023b; Mayo Clinic, 2024).

Lupus

Lupus is a chronic disease with a variety of symptoms caused by inflammation in one or more parts of the body. Lupus Canada estimates that lupus affects more than 1 in every 1,000 Canadians (Lupus Canada, n.d.).

Anyone can get lupus, including women, men, and children. However, between the ages of 15 and 45, lupus affects women much more often than men. Lupus Canada states that in this age group, eight times more women than men get lupus. In people under 15 and over 45, both sexes are affected more equally (Lupus Canada, n.d.).

Lupus is not contagious and is not related to AIDS or cancer. It is part of a family of autoimmune diseases that includes rheumatoid arthritis, multiple sclerosis, juvenile diabetes, and scleroderma (Lupus Canada, n.d.).

There are several types of lupus. When people refer to lupus, they are usually talking about systemic lupus erythematosus, or SLE. Other types include discoid lupus erythematosus and subacute cutaneous lupus, neonatal lupus, drug-induced lupus, and lupus nephritis (Lupus Canada, n.d.).

Systemic lupus erythematosus is a treatable, chronic, autoimmune, inflammatory disease that can affect many organs in the body. Lupus can involve the skin, joints, blood vessels, lungs, heart, kidneys, brain, and other tissues. Symptoms and severity vary widely from person to person (Lupus Canada, n.d.).

There is currently no cure for lupus, but it is treatable. With proper medical care, many people with lupus can bring the disease under control and experience periods of remission, when symptoms are reduced or quiet (Lupus Canada, n.d.).

Sjögren's Disease

Sjögren's disease, also called Sjögren's syndrome, is a chronic, systemic, inflammatory autoimmune disease. It usually attacks and damages the salivary, tear, and mucous-secreting glands, causing dry mouth and dry eyes. However, Sjögren's can affect more than dryness and may also involve internal organs, arthritis, muscle pain or weakness, neuropathy, and debilitating fatigue (Sjögren's Society of Canada, n.d.-a).

The Sjögren's Society of Canada states that nine out of ten Sjögren's patients are women and that Sjögren's affects approximately 1% of the population. It is often undiagnosed, misdiagnosed, or undertreated (Sjögren's Society of Canada, n.d.-a).

Sjögren's is a systemic disease, meaning it is not limited to the eyes and mouth. It can affect every organ and system in the body. Symptoms and complications vary from person to person; some people experience mild discomfort, while others experience debilitating symptoms (Sjögren's Society of Canada, n.d.-a).

There is currently no cure for Sjögren's. Management may include lifestyle changes, over-the-counter products, and prescription medications for symptoms such as dry eyes, dry mouth, neuropathy, and other complications. Patients may also need monitoring for organ involvement, including the liver, kidneys, lungs, and nervous system. Sjögren's can also co-exist with other autoimmune diseases such as rheumatoid arthritis or lupus (Sjögren's Society of Canada, n.d.-b).

Resources

Support and education are available through patient organizations and healthcare resources, including:

- Lupus Canada Resource Hub
- Sjögren's Society of Canada support groups
- HealthLink BC thyroid disease resources
- Healthcare providers, rheumatologists, endocrinologists, and other specialists as appropriate

References

Angum, F., Khan, T., Kaler, J., Siddiqui, L., & Hussain, A. (2020). The prevalence of autoimmune disorders in women: A narrative review. *Cureus*, 12(5), e8094.

<https://doi.org/10.7759/cureus.8094>

HealthLink BC. (2022a). *Graves' disease*. Retrieved June 18, 2026, from

<https://www.healthlinkbc.ca/healthwise/graves-disease>

HealthLink BC. (2023a). *Hyperthyroidism*. Retrieved June 18, 2026, from

<https://www.healthlinkbc.ca/healthwise/hyperthyroidism>

HealthLink BC. (2023b). *Hypothyroidism*. Retrieved June 18, 2026, from

<https://www.healthlinkbc.ca/healthwise/hypothyroidism>

Lupus Canada. (n.d.). *What is lupus?* Retrieved June 18, 2026, from

<https://www.lupuscanada.org/what-is-lupus/>

Mayo Clinic. (2024). *Hashimoto's disease: Symptoms and causes*. Retrieved June 18, 2026,

from <https://www.mayoclinic.org/diseases-conditions/hashimotos-disease/symptoms-causes/syc-20351855>

Ngo, S. T., Steyn, F. J., & McCombe, P. A. (2014). Gender differences in autoimmune disease.

Frontiers in Neuroendocrinology, 35(3), 347–369. <https://doi.org/10.1016/j.yfrne.2014.04.004>

Sjögren's Society of Canada. (n.d.-a). *What is Sjögren's?* Retrieved June 18, 2026, from

<https://sjogrenscanada.org/what-is-sjgrens/>

Sjögren's Society of Canada. (n.d.-b). *Management & treatment*. Retrieved June 18, 2026,

from <https://sjogrenscanada.org/what-is-sjgrens/management-treatment.html>