Celiac Disease and Associated Autoimmune Diseases: The Connection

People who have celiac disease or dermatitis herpetiformis (celiac disease that manifests as a skin rash) are at greater risk than the general population for developing one or more of the associated autoimmune diseases listed below. These disorders share common genetic and immunological linkages with celiac disease. The prevalence of autoimmune conditions in people with celiac disease is approximately 14%, compared with a prevalence of 2.8% in a healthy population. The autoimmune conditions most associated with celiac disease are type 1 diabetes and autoimmune thyroid disease.

The tendency to develop autoimmune diseases is believed to be genetically influenced. For reasons that are not completely understood, approximately 75% of individuals with autoimmune diseases are women. In an autoimmune disorder, the cells of the immune system produce antibodies and other cellular products that begin to react against normal, healthy tissue, causing inflammation and damage.

This is not a complete listing of autoimmune diseases associated with celiac disease. Anyone who has unexplained, persistent or recurring symptoms should consult a qualified physician for an evaluation.

Insulin Dependent Diabetes Mellitus (Type 1 Diabetes)
A disease of the pancreas. The coincidence of type 1 diabetes and celiac disease is 8 - 10 %. Often the second disease to develop is silent (having few symptoms). Symptoms can include excessive thirst, hunger, weakness, frequent urination, blurred vision, trembling, confusion, weight loss, and coma (if left untreated).

Thyroid Disease
There are two common forms of autoimmune thyroid disease commonly associated with celiac disease - Grave’s disease and Hashimoto’s disease.

**Grave’s Disease:** An overactive thyroid. Symptoms may include weight loss, rapid pulse, protruding eyes, feeling too warm, restlessness, insomnia, diarrhea, irritability, palpitations.

**Hashimoto’s Disease:** An underactive thyroid. Symptoms may include weight gain, slow pulse, red puffy eyes, feeling too cold, mental slowness, drowsiness, confusion, constipation, enlarged thyroid gland in the neck, thick and coarse hair.

Addison’s Disease
A rare disease involving the adrenal gland. The prevalence of celiac disease in people with Addison’s disease is significant. Symptoms of Addison’s may include weight loss, increasing fatigue, lack of appetite, anemia, darkening of the skin, increased sun sensitivity, low blood sugar, low blood pressure, nausea, vomiting, diarrhea or constipation, and dehydration.

Autoimmune Chronic Active Hepatitis
A disease of the liver that may be mistaken for alcoholic liver disease. 70% of patients are female. Symptoms can include fatigue, abdominal discomfort, itching, nausea, vomiting, bloating, yellowing of the skin and whites of the eyes (jaundice), enlarged
liver, tumors on the skin, aching, fever, mental confusion, and cirrhosis.

**Myasthenia Gravis**
A disease involving muscle function in which nerve impulses to the muscles are impaired. 62% of patients are female. Symptoms can include rapid fatigue and muscle weakness, especially as the day progresses, high-pitched voice, difficulty swallowing, droopy eyelids, unsteady or waddling gait, double vision, enlarged thymus gland.

**Pernicious Anemia**
Also known as vitamin B-12 deficiency. In pernicious anemia the lining of the stomach is damaged, causing a deficiency of intrinsic factor. Intrinsic factor is required to absorb vitamin B-12. Symptoms can include fatigue, sore tongue, yellow skin, tingling hands and feet, depression, memory loss, difficulty with balance, shortness of breath, and occasionally heart palpitations.

**Raynaud’s Phenomenon**
Often seen in combination with other autoimmune diseases, such as lupus, rheumatoid arthritis, or Sjogren’s. It affects the blood vessels. Symptoms may include abnormal sensitivity to the cold, hands or feet change colors from white, purple, or blue to red; and painful spasms with exposure to cold.

**Scleroderma**
Scleroderma can affect the skin, GI tract, muscles, lungs, or kidneys. It causes scar tissue (fibrosis) to form in skin and organs. 80% of patients are female. Symptoms may include tight, leathery skin, red and swollen fingers, severe indigestion, heartburn, constipation, diarrhea, muscle pain, weakness and shortness of breath.

**Sjogren’s Syndrome**
A disease involving the mucus-secreting glands that causes a reduction of excretions. This can cause dryness of the eyes, mouth, vagina, skin, lungs, brain, sinuses, blood cells, blood vessels, digestive tract, bladder, kidneys, and joints. 90% of patients are female. Symptoms may include painful dry eyes, dry mouth, sores in the mouth, on the tongue or throat, gum inflammation, tooth decay, tooth loss, dry skin, rashes, vaginal dryness, yeast infections, shortness of breath, pleuritis, pericarditis, diarrhea, constipation, abdominal pain, chronic sinusitis, confusion, numbness or tingling in the hands or feet, seizures, stroke, kidney disease, fatigue, joint and/or muscle pain, vasculitis or blood clots.

**Systemic Lupus Erythematosus**
Lupus can affect many organs and body systems: the skin, joints and muscles, kidneys, heart, brain, lungs, blood and blood vessels, intestines, hearing and balance. 90% of patients are female. Symptoms vary depending on the organs involved, but may include fatigue, fever, anemia, rashes in sun-exposed areas, aching muscles, painful and stiff joints, confusion, seizures, inflammation around the heart or lungs, sores in the mouth, vasculitis, blood clots, and changes in the urine.