Addison’s disease is an uncommon autoimmune disease, characterized by chronic and insufficient functioning of the outer layer of the adrenal gland. The adrenal glands are located atop each kidney and produce vital glucocorticoid hormones. Because of this chronic under-functioning of the adrenal glands, persons with Addison’s disease have a deficiency in the production of glucocorticoid hormones. Glucocorticoid hormones are involved in how the body utilizes and stores carbohydrates, protein, fat and blood sugar.

The adrenal gland also plays a role in the immune response. A deficiency in glucocorticoid hormones causes an increase in the release of sodium and a decreased release of potassium in the urine, sweat, saliva, stomach and intestines. These changes can cause low blood pressure and increased water excretion that can in some cases lead to severe dehydration.

Although there are many underlying factors in the development of adrenal insufficiencies, including destruction of the adrenal cortex due to diseases such as tuberculosis, the growth of tumors, non-autoimmune diseases amyloidosis and adrenoleukodystrophy, and atrophy of the gland due to prolonged use of cortical steroids used in the treatment of other conditions and illnesses, most cases of Addison’s disease are thought to be autoimmune in nature.

Agammaglobulinemia is an immune disorder related to antibody deficiency (hypogammaglobulinemia) and is manifested in a variety of immune deficiency disorders in which the immune system is compromised. This group of immune deficiencies may be the consequence of an inherited condition, an impaired immune system from known or unknown cause, a relation to autoimmune diseases, or a malignancy.

Immunoglobulin deficiencies may be referred to by many different names, as there are several variables within the separate but related immune disorders; and there are also many subgroups. Antibody deficiency, immunoglobulin deficiency, and gamma globulin deficiency are all synonyms for hypogammaglobulinemia.
Alopecia areata is an autoimmune disorder which is characterized by hair loss. Alopecia areata is found equally in both men and women. The disease can occur at any age, including childhood.

The hair loss may result in round bald patches on the scalp (alopecia areata) or involve the loss of all facial and scalp hair (alopecia totalis). The loss of all body hair is called alopecia universalis. Alopecia postpartum is characterized by loss of significant hair following pregnancy and is usually temporary. When a patient is diagnosed with alopecia, the first question is usually about whether or not the hair will regrow. The answer is usually vague as each case is different. Regrowth of hair may occur in some patients; and in other, the hair loss is permanent.

Amyloidosis is a disorder in which abnormal proteins build up in tissues and organs. The cause of primary amyloidosis is unknown. The condition is related to abnormal and excess production of antibodies by a type of immune cell called plasma cells. Clumps of abnormal proteins build up in certain organs. This reduces their ability to work correctly. Symptoms depend on the organs affected. This disease can affect the tongue, intestines, skeletal and smooth muscles, nerves, skin, ligaments, heart, liver, spleen, and kidneys. Symptoms include: abnormal heart rhythm, fatigue, numbness of hands or feet, shortness of breath, hoarseness or changing voice, and joint pain.

Ankylosing spondylitis is an autoimmune disease and is a type of arthritis of the spine. It causes swelling between your vertebrae, which are the disks that make up your spine, and in the joints between your spine and pelvis. The disease is more common and more severe in men. It often runs in families. Early symptoms include back pain and stiffness. These problems often start in late adolescence or early adulthood. Over time, ankylosing spondylitis can fuse your vertebrae together, limiting movement. Symptoms can worsen or improve or stop altogether. The disease has no cure, but medicines can relieve the pain, swelling and other symptoms. Exercise can also help.

Anti-GBM/Anti-TBM nephritis: Anti–glomerular basement membrane (anti-GBM) antibody disease is a rare autoimmune disorder caused by autoantibodies that attack the walls of small blood vessels (capillaries) in the kidney. Anti-GBM disease that only affects the kidneys is called anti-GBM glomerulonephritis. This is a form of inflammation (-itis), which is injury to tissue caused by white blood cells (leukocytes). Glomerulonephritis due to Anti-GBM antibody disease is rare. It occurs in less than 1 case per million persons. It affects mostly young, white men aged 15-35. After age 50, women are more likely to be affected. The sexes overall are affected approximately at a male-female ratio of 3:2. It is seen very rarely in children. Some evidence suggests that genetics may play an important role in this disease. 60-70% of patients have both lung and kidney involvement. This is called Goodpasture’s Syndrome. 20-40% have only kidney involvement, which is called “renal limited” anti-GBM disease. Symptoms may include: chills and fever, nausea and vomiting, weight loss, chest pain, bleeding may cause anemia, respiratory failure, and kidney failure. Treatment of anti-GBM disease is focused on removing the anti-GBM antibody from the blood.
Antiphospholipid syndrome (APS) is an autoimmune syndrome caused by antiphospholipid antibodies. These antibodies are often referred to by different terms, including anticardiolipin antibody, lupus anticoagulant, and antiphospholipid antibody. APS can be primary or secondary, and also can be referred to by the name Hughes syndrome or “sticky blood”.

Various manifestations of antiphospholipid antibody syndrome include: recurrent fetal loss; thrombocytopenia; large vessel occlusive syndromes (deep venous thromboses and pulmonary embolism); cardiac disease, skin manifestations (livedo reticularis, digital ischemia, cutaneous necrosis); ocular disease (visual disturbances, episcleritis (inflammation of the sclera) and keratitis (inflammation of the cornea); central nervous system syndromes as cerebral ischemia, stroke, transient ischemic attack (TIA) or venous thrombosis) and other CNS presentations including dementia, migraine and seizure; Disorders of mentation (forgetfulness and confusion). A patient with these varied neurologic symptoms may be misdiagnosed with multiple sclerosis.

There is a strong familial association which has been demonstrated. APS is of utmost importance to the clinician interested in women’s health issues. The disease occurs more frequently in women, plays a major role in fetal loss, and is associated with numerous serious and predominantly female disease states.

Autoimmune hepatitis is a chronic inflammatory autoimmune disease of the liver. It usually occurs by itself, but it can coexist with other autoimmune diseases. The male/female ratio is 8:1, and it most often occurs in persons of Northern European extraction. It is usually classified as Type I or Type II. Type I is the most common and occurs at any age, most commonly in women. Type II is less common, affecting mostly girls between the ages of two to fourteen, although adults can have it too.

Fatigue is the most common symptom and other symptoms include an enlarged liver, jaundice, itching skin rashes, joint pain, and abdominal pain. These symptoms range from mild to severe and can lead to cirrhosis (scarring and hardening) of the liver and may eventually lead to liver failure. Many people with autoimmune hepatitis experience remission within two years of starting treatment. Sometimes the disease will return so periodic treatment may be necessary.

Autoimmune inner ear disease (AIED) is an unusual form of progressive non-age-related sensorineural hearing loss and sometimes vertigo. It occurs in both ears with cochlear and vestibular symptoms that progress over a period of weeks to months and affects hearing, and often balance function, in both ears. The classic presentation is with bilateral fluctuating but progressive sensorineural hearing loss leading on to severe deafness. Tinnitus (ringing, tinkling, buzzing, or other sounds in the ear) and intra-aural pressure may occur, as well as dizziness or vertigo.

Axonal & neuronal neuropathy (AMAN) is a variant of Guillain-Barré syndrome, an autoimmune disease. It is characterized by acute paralysis and loss of reflexes without
sensory loss. The syndrome typically presents as a progressive symmetric paralysis (loss of muscle function) with areflexia (absence of neurologic reflexes such as the knee jerk reaction), often causing respiratory failure. Antibodies attack the coating of the motor neurons without causing inflammation. It does not affect sensory neurons, so sensation remains intact despite loss of movement.

**Baló’s concentric sclerosis (BCS)** is a rare disorder usually considered a variant of multiple sclerosis (MS). However, its correlation with MS remains unclear and controversial. Baló’s disease is a demyelinating (damage to the nerve sheath) disorder of the central nervous system in which the myelin (the fatty substance covering nerve fibers) is damaged. It is characterized by a severe, rapidly evolving clinical course, and by unusual nervous system changes. Often large tumor-like plaques (lesions) that are found to destroy the sheath of the nerve are present. Studies indicate that autoimmune factors may play a role in its development. Autoimmune disorders are caused when the body’s natural defenses against “foreign” or invading organisms begin to attack healthy tissue for unknown reasons resulting in inflammation (swelling). Baló’s disease appears to be most common in Asians and in people from the Philippines; it affects males and females with similar frequency. Baló’s disease usually appears in adulthood but childhood cases have been reported.

**Behcet’s disease** is a chronic, multisystem autoimmune disease involving inflammation of blood vessels, called vasculitis, throughout the body. It is a rare disease, most commonly found in the Eastern Mediterranean countries and in eastern Asia. It affects more young men than women in those countries, but in the US it affects more women, most often in their 20s and 30s. The central nervous system, heart, and intestinal tract may be involved. Because this disease is so rare and its symptoms overlap those of other diseases, it may be very difficult to diagnose. Spontaneous remission may occur, which can add to the difficulty in diagnosis.

**Bullous pemphigoid** is an autoimmune disorder. If you have it, your immune system attacks healthy cells in your skin and mouth, causing blisters and sores. No one knows the cause. Bullous pemphigoid does not spread from person to person. It does not appear to be inherited. But some people’s genes put them more at risk for bullous pemphigoid. Bullous pemphigoid is most common in older adults and may be fatal for older, sick patients. Bullous pemphigoid usually occurs in elderly persons and is rare in young people.

Symptoms come and go. In most patients, the condition goes away within 5 years. Some people have no symptoms. Others may have mild redness, itching and irritation. In severe cases, they are multiple blisters, called bullae. Blisters are usually located on the arms, legs, or middle of the body. About one-third of persons with bullous pemphigoid also develop blisters in the mouth. The blisters may break open and form ulcers or open sores. Bullous pemphigoid usually responds well to treatment. Most patients stop taking medicine after several years. The disease sometimes returns after treatment is stopped.
Castleman disease (CD) is a rare disease of lymph nodes and related tissues. It is also called giant lymph node hyperplasia, and angiofollicular lymph node hyperplasia (AFH). Castleman disease can occur in a localized (unicentric) or widespread (multicentric) form. It was first described by Dr. Benjamin Castleman in the 1950s. CD is not cancer. Instead, it is called a lymphoproliferative disorder. This means there is an abnormal overgrowth of cells of the lymph system that is similar in many ways to lymphomas (cancers of lymph nodes). Treatment and outlook vary, depending on the type of Castleman disease you have. The localized type can usually be successfully treated with surgery. Sometimes associated with HIV infection, multicentric Castleman disease can be life-threatening. Multicentric Castleman disease is also associated with other cell-proliferation disorders, including Kaposi’s sarcoma and POEMS syndrome.

Celiac disease is an autoimmune disease in which people can’t eat gluten because it will damage their small intestine. If you have celiac disease and eat foods with gluten, your immune system responds by damaging the small intestine. Gluten is a protein found in wheat, rye, and barley. It is found mainly in foods but may also be in other products like medicines, vitamins and supplements, lip balm, and even the glue on stamps and envelopes. Celiac disease affects each person differently. Symptoms may occur in the digestive system, or in other parts of the body. One person might have diarrhea and abdominal pain, while another person may be irritable or depressed. Irritability is one of the most common symptoms in children. Some people have no symptoms. (see also Dermatitis Herpetiformis).

Chagas disease is caused by a parasite called Trypanosoma cruzi, sometimes called a kissing bug and related to the African trypanosome that causes sleeping sickness. It is one of the major health problems in South America. Due to immigration, the disease also affects people in the United States. The infected blood-sucking bugs spread it. When the bug bites you, usually on your face, it leaves behind infected waste. You can get the infection if you rub it in your eyes or nose, the bite wound or a cut. The disease can also spread through contaminated food, a blood transfusion, a donated organ or from mother to baby during pregnancy. If you notice symptoms, they might include: fever, flu-like symptoms, a rash, or a swollen eyelid. These early symptoms usually go away. However, if you don’t treat the infection, it stays in your body. Later, it can cause serious intestinal and heart problems. A physical exam and blood tests can diagnose it. You may also need tests to see whether the disease has affected your intestines and heart. Medicines can kill the parasite, especially early on. You can also treat related problems.

Chronic inflammatory demyelinating polyneuropathy (CIDP) is a rare autoimmune disorder in which there is swelling of nerve roots and destruction of the covering (myelin sheath) over the nerves. This causes weakness, paralysis, and/or impairment in motor function, especially of the arms and legs. Sensory loss may also be present, causing numbness, tingling, and burning sensations. The motor and sensory impairments are usually found on both sides of the body. The severity of CIDP can vary from mild to severe. CIDP can affect any age group, and the onset may begin anytime throughout life.
The course of CIDP may also vary. Some patients may follow a slow steady pattern of symptoms, while other patients have symptoms that flare and remit. The most severe symptoms usually occur after many months of symptoms that come and go. One characteristic that differentiates this disorder from other similar demyelinating diseases is that there is typically no preceding viral infection at least three to four months prior to onset, such as in the case of Guillain-Barré syndrome.

**Chronic recurrent multifocal osteomyelitis (CRMO)** – Although its definition is still evolving, many doctors and articles describe CRMO as an autoimmune related disease. The origin of this disease however, is unclear. It is “multifocal” because it can erupt in different sites, primarily in bones. It is a rare condition (1:1,000,000). It comprises periodic bone pain, fever, and the appearance of multiple bone lesions that can occur in any skeletal site. Genetics appears to play a role, but the diagnosis can be difficult. Although adults can be affected, CRMO most often affects children, more commonly girls than boys. The peak age of incidence is around 10 years, with the range being 4 to 55 years. Children show symptoms ranging from pain, deep aching pain, limping, to fever. The metaphyseal area of long bones, the clavicle, and the shoulder girdle are common locations where CRMO is found. Other sites such as the spine, ankle, and foot have been reported. Dermatological (skin) manifestations may occur and include psoriasis, acne, and pustules on the palms of the hands and soles of the feet.

**Churg-Strauss** syndrome, also known as allergic granulomatosis, is an autoimmune disorder characterized by accumulated antibodies, inflammation of blood vessels, and abnormal clustering of white blood cells. An allergic reaction or asthma may precede the syndrome’s development by several years. Although Churg-Strauss syndrome patients may have a prior history of pulmonary disease, the syndrome tends to impair kidneys or other organs or to cause nerve damage in affected areas. Diagnosis is difficult because early symptoms mimic common flu. Lung tissue infiltrations (short-term or persistent), fever, and weight loss are often initial signs. Prompt diagnosis and treatment (with corticosteroids) increase a patient’s chances of resuming a normal life. Onset typically occurs from 15-70 years of age, and the disease affects both males and females.

**Cicatricial pemphigoid/benign mucosal pemphigoid** (also known as mucous membrane pemphigoid, or benign mucous membrane pemphigoid) is a rare chronic autoimmune blistering disease characterized by erosive skin lesions of the mucous membranes and skin that results in scarring of at least some sites of involvement. The autoimmune reaction most commonly affects the mouth, causing lesions in the gums, but it can also affect areas of mucous membrane elsewhere in the body, such as the sinuses, genitals and anus. When the cornea of the eye is affected, repeated scarring may result in blindness. The management depends upon the severity of the condition. Simple measures that can be taken include avoidance of hard, sharp or rough foods, and taking care when eating. Good oral hygiene is also usually advised, and professional oral hygiene measures such as periodontal scaling.
Cogan’s syndrome is defined as nonsyphilitic interstitial keratitis (an inflammation of the eye) and bilateral audiovestibular deficits (hearing problems and dizziness). It is more common in Caucasians than in other races. Onset of the disease is generally a brief episode of inflammatory eye disease, most commonly interstitial keratitis. This eye condition causes pain, lacrimation (tearing of the eye) and photophobia (eye pain with exposure to light). Shortly following these ocular (eye) symptoms, patients develop bilateral audiovestibular (ear) symptoms, including hearing loss, vertigo (dizziness) and tinnitus (ringing in the ears). Approximately half of patients ultimately develop complete hearing loss, but only a minority experience permanent visual loss. Other symptoms that may occur include headache, fever, arthralgia (joint pain), and systemic vasculitis (inflammation of the blood vessels). The symptoms typically deteriorate progressively within days. It is currently thought that Cogan’s syndrome is an autoimmune disease. The inflammation in the eye and ear are due to the patient’s own immune system producing antibodies that attack the inner ear and eye tissue.

Cold agglutinin disease is a form of autoimmune hemolytic anemia caused by cold-reacting autoantibodies (a type of protein produced by the immune system). Primary cold agglutinin disease is usually associated with monoclonal (produced from a single ancestral cell by repeated cellular replication) cold-reacting autoantibodies. Primary cold agglutinin disease is chronic and occurs after the fifth decade of life, with a peak incidence in the seventh and eighth decades. Secondary cold agglutinin disease is predominantly caused by infection and lymphoproliferative disorders in which lymphocytes (white blood cells) are produced in excessive quantities. It is essential with chronic cold agglutinin disease to keep all body parts warm at all times and avoid cooling of body parts. Appropriate clothing is necessary in cold environments, and avoidance of cold foods and working in cold storage areas is also important.

Congenital heart block is a rare complication of pregnancy associated with Sjögren Syndrome (an autoimmune syndrome) that may result in the death of the fetus or infant, or the need for pacing in the newborn or at a later stage. Doctors might detect congenital heart block before or after a baby is born. Certain diseases that may occur during pregnancy can cause heart block in a baby. Heart block is a problem that occurs with the heart’s electrical system. This system controls the rate and rhythm of heartbeats. (“Rate” refers to the number of times your heart beats per minute. “Rhythm” refers to the pattern of regular or irregular pulses produced as the heart beats.) With each heartbeat, an electrical signal spreads across the heart from the upper to the lower chambers. As it travels, the signal causes the heart to contract and pump blood. Heart block occurs if the electrical signal is slowed or disrupted as it moves through the heart.

Coxsackie myocarditis is inflammation and weakness of the heart muscle caused by a viral infection (Coxsackie virus) that reaches the heart. Myocarditis can damage the heart muscle causing it to become thick and swollen. The heart muscle may be directly damaged by the virus or the bacteria that infect it. The body’s immune response can also damage the heart muscle (called the myocardium) in the process of fighting the
infection. This can lead to symptoms of heart failure. Symptoms may include: anxiousness, failure to thrive or poor weight gain, feeding difficulties, fever and other symptoms of infection, listlessness, low urine output (a sign of decreasing kidney function), pale, cool hands and feet (a sign of poor circulation), rapid breathing, and rapid heart rate. Myocarditis may also occur during or after other viral or bacterial infections such as the influenza (flu) virus, adenovirus, polio, rubella, Lyme disease, and others. Myocarditis is rare in young children. It is slightly more common in older children and adults. It is often worse in newborns and young infants than in children over age 2. There is no cure for myocarditis. The heart muscle inflammation will often go away on its own.

**CREST syndrome** is an acronym for calcinosis, Raynaud’s phenomenon, esophageal dysfunction, sclerodactylly, and telangiectasia. It is a variant of the two groups of scleroderma, localized and systemic. CREST is a relatively stable and slow-moving form of scleroderma and has a much more favorable prognosis than other forms. There is no evidence that the basic process differs from the usual scleroderma, but the tempo of CREST seems to be different in that organ involvement comes slower and later in the course of the disease.

**Crohn’s disease** is an inflammatory autoimmune bowel disease characterized by severe and persistent inflammation of the lining or wall of the gastrointestinal tract. Crohn’s is sometimes referred to as chronic ileitis, regional enteritis, or granulomatous colitis. The part of the gastrointestinal tract most commonly affected is the segment between the ileum and the rectum. Although Crohn’s disease can be difficult to manage and live with, it is usually not life threatening.

Crohn’s can affect anyone, although persons of Jewish descent are afflicted three to six times more frequently than others. The disease usually involves young adults between the ages of 15-35, but it can be seen in children and the elderly. Males and females are equally affected. There is a genetic predisposition to develop the disease, and up to 25% of persons with the disease are likely to have a close relative with either Crohn’s or ulcerative colitis. While an auto-reactive antibody hasn’t yet been found in Crohn’s, it is generally accepted that autoimmunity is the underlying cause. Demyelinating neuropathies

**Dermatitis herpetiformis** is an extremely itchy rash consisting of bumps and blisters. The rash is chronic, which means it continues over a long period. Dermatitis herpetiformis usually begins in people age 20 and older. Children can sometimes be affected. It is seen in both men and women. The cause is unknown. It is thought to be an autoimmune disorder. Dermatitis herpetiformis is also linked to gluten sensitivity (celiac sprue disease) in the small bowel. Symptoms of dermatitis herpetiformis tend to come and go. Symptoms include: extremely itchy bumps or blisters, most often on the elbows, knees, back, and buttocks. The rash is usually the same size and shape on both sides. The rash can look like eczema. Some patients may have scratch marks instead of blisters. A strict gluten-free diet will be recommended to help control the disease. Sticking to this diet may eliminate the need for medications and prevent later
complications. The disease may be well-controlled with treatment. Without treatment, there may be a significant risk of intestinal cancer.

Dermatomyositis is an autoimmune muscle disease that involves inflammation and a skin rash. It is a type of inflammatory myopathy. The cause of dermatomyositis is unknown. Experts think it may be due to a viral infection of the muscles or a problem with the body’s immune system. It may also occur in patients who have cancer in the abdomen, lung, or other parts of the body. Anyone can develop dermatomyositis. It most commonly occurs in children age 5 – 15 and adults age 40 – 60. Women develop this condition more often than men. Symptoms may include: problems swallowing, muscle weakness, stiffness, or soreness, purple color to the upper eyelids, purple-red skin rash, and shortness of breath. The muscle weakness may come on suddenly or develop slowly over weeks or months. You may have trouble raising your arms over your head, getting up from a sitting position, and climbing stairs. The rash may appear on your face, knuckles, neck, shoulders, upper chest, and back. Symptoms may go away completely in some people, such as children. The condition may be fatal in adults due to severe muscle weakness, malnutrition, pneumonia, or lung failure. The major causes of death with this condition are cancer and lung disease.

Devic’s disease (neuromyelitis optica) is an autoimmune condition that affects the spinal cord and optic nerves (the nerves that carry information regarding sight from the eye). In Devic disease, the body’s immune system attacks and destroys myelin, a fatty substance that surrounds nerves and helps nerve signals move from cell to cell. Signs and symptoms worsen with time and include optic neuritis; transverse myelitis; pain in spine and limbs; and bladder and bowel dysfunction. The exact cause of Devic’s disease is unknown. Most affected people do not have other family members with the condition. Currently there is no cure for Devic’s disease, but there are therapies to treat an attack while it is happening, to reduce symptoms, and to prevent relapses.

Discoid lupus – see entry for Lupus

Dressler’s syndrome is a type of pericarditis, inflammation of the sac surrounding the heart (pericardium). Inflammation associated with Dressler’s syndrome is believed to be an immune system response following damage to heart tissue or the pericardium, such as a heart attack, surgery or traumatic injury. Dressler’s syndrome symptoms include chest pain, much like that experienced during a heart attack, and fever. With recent improvements in heart attack treatment, Dressler’s syndrome is less common than it used to be. However, once you’ve had this condition, it may happen again. Dressler’s syndrome may also be called postpericardiotomy, post-myocardial infarction syndrome, and post-cardiac injury syndrome. Symptoms are likely to appear weeks to months after a heart attack, surgery or other heart injury.

Endometriosis is a problem affecting a woman’s uterus. Endometriosis occurs when the kind of tissue that normally lines the uterus grows somewhere else. It can grow on the ovaries, behind the uterus or on the bowels or bladder. Rarely, it grows in other parts of the body. This “misplaced” tissue can cause pain, infertility, and very heavy
periods. The pain is usually in the abdomen, lower back or pelvic areas. Some women have no symptoms at all. Having trouble getting pregnant may be the first sign.

**Eosinophilic esophagitis (EoE)** is a newly recognized chronic disease that can be associated with food allergies. It is increasingly being diagnosed in children and adults. EoE is characterized by inflammation and accumulation of a specific type of immune cell, called an eosinophil, in the esophagus. Eosinophils are a type of white blood cell. They help fight off infections and play a role in your body’s immune response. They can also build up and cause inflammation. Normally your blood doesn’t have a large number of eosinophils. Your body may produce more of them in response to, allergic disorders, skin conditions, parasitic and fungal infection, autoimmune diseases, some cancers, and bone marrow disorders. In some conditions, the eosinophils can move outside the bloodstream and build up in organs and tissues. Symptoms of EoE include nausea, vomiting, and abdominal pain after eating. A person may also have symptoms that resemble acid reflux from the stomach. In older children and adults, it can cause more severe symptoms, such as difficulty swallowing solid food or solid food sticking in the esophagus for more than a few minutes. In infants, this disease may be associated with failure to thrive. In some situations, avoiding certain food allergens will be an effective treatment for EoE.

**Eosinophilic fasciitis** is a very rare syndrome in which muscle tissue under the skin, called fascia, becomes swollen and thick. The hands, arms, legs, and feet can swell quickly. The disease may look similar to scleroderma but is not related. The cause of eosinophilic fasciitis is unknown. In people with this condition, white blood cells called eosinophils, build up in the muscles and tissues. Eosinophils are linked to allergic reactions. The syndrome is more common in people ages 30 to 60. Symptoms can include: bone pain or tenderness, carpal tunnel syndrome, muscle weakness, tenderness and swelling of the arms, legs and sometimes the joints, and thickened skin that looks puckered. In most cases, the condition goes away within 3 to 5 years. However, symptoms may last longer or come back.

**Erythema nodosum** is an inflammatory disorder that involves tender, red bumps (nodules) under the skin. In about half of cases, the exact cause of erythema nodosum is unknown. Some cases may occur with infections. Some of the more common infections are: streptococcus (most common), cat scratch disease, chlamydia, coccidioidomycosis, hepatitis B, histoplasmosis, leptospirosis, mononucleosis (EBV), mycobacteria, mycoplasma, psittacosis, syphilis, tuberculosis, tularemia, and yersinia. Erythema nodosum may occur with sensitivity to certain medications, including: antibiotics including amoxicillin and other penicillins, sulfonamides, sulfones, birth control pills, and progestin. Erythema nodosum is most common on the shins. It may also occur on other areas of the body such as buttocks, calves, ankles, thighs, and arms.

The lesions begin as flat, firm, hot, red, painful lumps that are about an inch across. Within a few days, they may become purplish in color. Over several weeks, the lumps fade to a brownish, flat patch.
Sometimes, erythema nodosum may occur during pregnancy. Other disorders linked to this condition include leukemia, lymphoma, sarcoidosis, rheumatic fever, Bechet's disease, and ulcerative colitis. The condition is more common in women than it is in men.

**Essential mixed cryoglobulinemia** is often found in people who have a chronic (long-lasting) inflammatory condition, such as an autoimmune disease or hepatitis C. Most people with mixed cryoglobulinemia have a chronic hepatitis C infection. Cryoglobulins are antibodies. It is not yet known why they become solid or gel-like at low temperatures. When this occurs, these antibodies can block blood vessels. This may lead to problems ranging from skin rashes to kidney failure. Cryoglobulinemia is the presence of these abnormal proteins in the blood. Although the underlying mechanisms have not been fully elucidated, cryoglobulin formation is clearly linked to the attempt of the host to clear the significant quantities of virions generated daily by the chronic infection.

Other conditions that may be related to cryoglobulinemia include: leukemia, multiple myeloma, mycoplasma pneumonia, primary macroglobulinemia, rheumatoid arthritis, and systemic lupus erythematosus. Symptoms will vary depending on the type of disorder you have and the organs that are involved. Symptoms may include: breathing problems, fatigue, glomerulonephritis, joint pain, muscle pain, purpura, Raynaud’s phenomenon, skin death, and skin ulcers.

**Evans syndrome** is a very rare autoimmune disorder in which the immune system destroys the body’s red blood cells, white blood cells and/or platelets. Affected people often experience thrombocytopenia (too few platelets) and Coombs’ positive hemolytic anemia (premature destruction of red blood cells). Signs and symptoms may include purpura, paleness, fatigue, and light-headedness. The exact cause of this condition is unknown. The best treatment options for Evans syndrome depend on many factors, including the severity of the condition, the signs and symptoms present, and each person’s response to certain therapies.

**Fibromyalgia** is a chronic disorder which is characterized by widespread pain, tenderness and fatigue. Persons with fibromyalgia may also experience sleep disturbances, morning stiffness, anxiety, and irritable bowel syndrome. Often it is also accompanied by depression. It is difficult to diagnose because most of the symptoms mimic those of other disorders. Fibromyalgia is NOT an autoimmune disease, however it does accompany other autoimmune rheumatic and endocrine diseases.

**Fibrosing alveolitis**, also known as Idiopathic pulmonary fibrosis (IPF), involves scarring or thickening of the lungs. Doctors do not know what causes idiopathic pulmonary fibrosis (IPF) or why some people get it. Idiopathic means the cause is not known. The condition may be due to the lungs and autoimmune system responding to
an unknown substance or injury. Genes may play a role in developing IPF. The disease occurs most often in people between 50 and 70 years old.

When you have IPF, your lungs become scarred and stiffened. This makes it hard for you to breathe. In some people, IPF gets worse quickly over months or a few years. In others, IPF worsens over a much longer time. Symptoms can include chest pain (occasionally), cough (usually dry), decreased tolerance for activity, and shortness of breath during activity (this symptom lasts for months or years, and over time may also occur when at rest). There is no known cure for IPF. Treatment is aimed at relieving symptoms.

**Giant cell arteritis (temporal arteritis)** is a disorder that causes inflammation of arteries of the scalp, neck, and arms. It narrows the arteries, which keeps blood from flowing well. Giant cell arteritis often occurs with another autoimmune disorder called polymyalgia rheumatica. Both are more common in women than in men and almost always affect people over the age of 50. Early symptoms of giant cell arteritis resemble the flu: fatigue, loss of appetite, and fever. Other symptoms include headaches, pain and tenderness over the temples, double vision or visual loss, dizziness, problems with coordination and balance, as well as pain in your jaw and tongue.

**Giant cell myocarditis** is a disease of relatively young, predominantly healthy adults. The patients usually die of heart failure and ventricular arrhythmia unless a cardiac transplantation is performed. The term myocarditis refers to an autoimmune inflammatory response within the myocardium that is not secondary to ischemic events or cardiac rejection in the setting of transplantation. The incidence of giant cell myocarditis is low and it varies with the population which is being studied and the method of diagnosis which is used. In a Japanese autopsy registry, the incidence of giant cell myocarditis was 0.007%. There is no proven cure because of the unknown nature of the disorder.

**Glomerulonephritis** is a type of kidney disease in which the part of your kidneys that helps filter waste and fluids from the blood is damaged. Glomerulonephritis may be caused by problems with the body’s immune system. Often, the exact cause of glomerulonephritis is unknown. Damage to the glomeruli causes blood and protein to be lost in the urine. The condition may develop quickly, and kidney function is lost within weeks or months (called rapidly progressive glomerulonephritis). A quarter of people with chronic glomerulonephritis have no history of kidney disease.

The following may increase your risk of this condition: blood or lymphatic system disorders, exposure to hydrocarbon solvents, history of cancer, infections such as strep, viruses, heart infections, abscesses, amyloidosis, anti-glomerular basement membrane antibody disease, goodpasture syndrome, heavy use of pain relievers, especially NSAIDs, henoch-schonlein purpura, IgA nephropathy, lupus nephritis, and membranoproliferative GN. Common symptoms of glomerulonephritis include: blood in the urine (dark, rust-colored, or brown urine), foamy urine (due to excess protein in the urine), and swelling (edema) of the face, eyes, ankles, feet, legs, or abdomen.
**Goodpasture’s syndrome** is a pulmonary-renal syndrome, which is a group of acute illnesses involving the kidneys and lungs. Goodpasture syndrome includes all of the following conditions:

Glomerulonephritis – inflammation of the glomeruli, which are tiny clusters of looping blood vessels in the kidneys that help filter wastes and extra water from the blood.

The presence of anti-glomerular basement membrane (GBM) antibodies; the GBM is part of the glomeruli and is composed of collagen and other proteins.

Bleeding in the lungs

In Goodpasture syndrome, immune cells produce antibodies against a specific region of collagen. The antibodies attack the collagen in the lungs and kidneys. Goodpasture syndrome is fatal unless quickly diagnosed and treated. The symptoms of Goodpasture syndrome may initially include fatigue, nausea, vomiting, and weakness. The lungs are usually affected before or at the same time as the kidneys, and symptoms can include shortness of breath and coughing, sometimes with blood.

**Granulomatosis with Polyangiitis (GPA) (formerly called Wegener’s Granulomatosis)** is a rare autoimmune disease in which blood vessels and other tissues become inflamed. This inflammation limits blood flow to important organs in the body, potentially leading to long-term damage. Disease onset and severity varies between patients, and earlier diagnosis and treatment can prevent life-threatening organ failure. Although the disease can involve any organ system, GPA mainly affects the respiratory tract (sinuses, nose, trachea [windpipe], and lungs) and kidneys. This disorder can affect people at any age and strikes men and women equally. Compared to other racial groups, Caucasians are more commonly affected. The most common sign of GPA is upper respiratory tract distress such as sinus pain, discolored or bloody fluid from the nose, and nasal ulcers. A common sign of the disease is almost constant rhinorrhea (“runny nose”) or other cold symptoms that do not respond to usual treatment or become increasingly worse.

**Graves’ disease** is an autoimmune thyroid disease which causes the thyroid gland to produce excessive hormones. Symptoms may include nervousness, weight loss, heart palpitations and intolerance to heat. Women are affected seven times more often than men and are predominantly diagnosed between 20-40 years of age. A distinguishing characteristic of Graves’ is an eye condition causing inflamed eye muscles with accompanying bulging of the eyes (exophthalmos). Approximately 30-50% of Graves’ patients develop this condition in its mild form and about 5% develop the severe form. Although rare, “thyroid storm” can occur. Symptoms of this thyroid crisis include fever, vomiting, elevated heart rate, confusion and profuse sweating and requires immediate emergency attention.

**Guillain-Barre syndrome** is a rare autoimmune disorder that causes your immune system to attack your peripheral nervous system (PNS). The PNS nerves connect your brain and spinal cord with the rest of your body. Damage to these nerves makes it hard
for them to transmit signals. As a result, your muscles have trouble responding to your brain. No one knows what causes the syndrome. Sometimes it is triggered by an infection, surgery, or a vaccination. The first symptom is usually weakness or a tingling feeling in your legs. The feeling can spread to your upper body. In severe cases, you become almost paralyzed. This is life-threatening. You might need a respirator to breathe. Symptoms usually worsen over a period of weeks and then stabilize. Recovery can take a few weeks to a few years.

**Hashimoto’s thyroiditis** is a chronic inflammatory autoimmune thyroid disease in which the immune system attacks and destroys the thyroid gland. The thyroid then produces too little hormone and metabolism is slowed. It is the most common of all the thyroid conditions in the US and women are affected 10 times more often than men. Most diagnoses occur between the ages of 30-50 and prevalence increases with age in both women and men. Symptoms, which often develop gradually, may include weight gain, cold sensitivity, tingling in the hands and feet, fatigue, hair loss, dry hair, fertility problems, and difficulty concentrating. Thyroid hormone should be monitored in women who plan pregnancy. Low thyroid function can affect the development of the baby. Post-partum thyroiditis can develop in the 12 months following childbirth. Women who are having trouble conceiving should also have their thyroid levels checked as thyroid hormone levels can affect ovulation.

**Hemolytic anemia** – autoimmune hemolytic anemia is an autoimmune disorder which causes the premature destruction of red blood cells. A normal red blood cell has a lifespan of approximately 120 days before the spleen removes it from circulation. Red blood cells are made in the bone marrow and released into circulation. In persons with autoimmune hemolytic anemia, the red blood cells are destroyed prematurely; and bone marrow production of new cells cannot make up for their loss. The severity of this disorder is determined by the length of time the red blood cell survives and by the capability of the bone marrow to continue red blood cell production. Autoimmune hemolytic anemia usually occurs in conjunction with some other medical condition, very often another autoimmune disease. It may sometimes occur alone and without a triggering factor. It affects twice as many women as men, specifically women in the childbearing years. Cold antibody hemolytic anemia most commonly affects the elderly and warm antibody hemolytic anemia can affect anyone at any age.

**Henoch-Schonlein purpura (HSP)** is a fairly common autoimmune childhood disorder that may affect adults as well, although less frequently. Children with this condition are often initially seen with acute abdominal pain and are referred for surgical evaluation. HSP is characterized by purpura, or allergy-related bleeding into the skin and other tissues. The characteristic palpable purpuric rash is found in the majority of cases and is considered the hallmark of the disease. This rash is most often located on the buttocks and upper thighs in children and on the feet and ankles in adults. Symptoms also occurring with HSP are joint pain, gastrointestinal disorders and kidney involvement. Less common manifestations include peripheral neuropathy and testicular torsion.
Herpes gestationis or pemphigoid gestationis (PG) is a bullous (characterized by blistering, such as a second-degree burn) disease developing in association with pregnancy. It is believed to be an autoimmune disorder. It occurs during pregnancy, typically in the second or third trimester, and/or immediately following pregnancy. It was originally called herpes gestationis because of the blistering appearance, although it is not associated with the herpes virus. Diagnosis of PG becomes clear when skin lesions progress to tense blisters during the second or third trimester. PG typically starts as a blistering rash in the navel area and then spreads over the entire body. It is sometimes accompanied by raised, hot, painful welts called plaques. After one to two weeks, large, tense blisters typically develop on the red plaques, containing clear or blood-stained fluid. PG creates a histamine (compound involved in local immune responses) response that causes extreme relentless itching (pruritus). PG is characterized by flaring and remission during the gestational and sometimes post partum period. Usually after delivery, lesions will heal within months, but may reoccur during menstruation.

Hypogammaglobulinemia is a type of primary immune deficiency disease. The common clinical feature of hypogammaglobulinemia relates to a predisposition toward infections that normally are defended against by antibody responses (including Streptococcus pneumoniae and Haemophilus influenzae infections). Most patients with hypogammaglobulinemia present with a history of recurrent infections.

Immune thrombocytopenic purpura (ITP) is an autoimmune bleeding disorder. Persons with the disease have too few platelets in the blood. ITP is sometimes called immune thrombocytopenic purpura or simply, immune thrombocytopenia. ITP occurs when certain immune system cells produce antibodies against platelets. Platelets help your blood clot by clumping together to plug small holes in damaged blood vessels. The antibodies attach to the platelets. The spleen destroys the platelets that carry the antibodies. In children, the disease sometimes follows a viral infection. In adults, it is more often a chronic (long-term) disease and can occur after a viral infection, with use of certain drugs, during pregnancy, or as part of an immune disorder. ITP affects women more often than men, and is more common in children than adults. The disease affects boys and girls equally. Symptoms can include any of the following: abnormally heavy menstruation, bleeding into the skin, often around the shins, causing a skin rash that looks like pinpoint red spots (petechial rash), easy bruising, nosebleed or bleeding in the mouth.

IgA nephropathy is an autoimmune related kidney disorder that occurs when IgA (a protein that helps the body fight infections) settles in the kidneys. After many years, the IgA deposits may cause the kidneys to leak blood and sometimes protein in the urine. This leakage does not necessarily mean they will have long-term problems. If too much protein leaks into the urine, the hands and feet can swell. After 10 to 20 years with IgA nephropathy, the kidneys may show signs of damage. About 25 percent of adults with IgA nephropathy develop total kidney failure. Only 5 to 10 percent of children develop total kidney failure. Symptoms of kidney failure include swelling in the hands and feet, nausea, fatigue, headaches, and sleep problems. By the time these symptoms occur, total kidney failure is near. Total kidney failure means the kidney
damage is permanent. People with kidney failure need dialysis or a kidney transplant. IgA nephropathy can occur at any age, even in childhood. More men are affected than women. Although found all over the world, IgA nephropathy is more common among Caucasians and Asians. It is one of the most common diseases of the kidney, other than those caused by diabetes or high blood pressure.

IgG4-related sclerosing disease, also known as IgG4–related systemic disease (IgG4-RSD), hyper-IgG4 disease and IgG4-related disease is an autoimmune disease in which inflammatory cells cause fibrosis, the deposition of connective tissue, in one or more organs. The disease is so named because the antibody subtype IgG4 can be detected on tissue samples and often at elevated levels in the bloodstream. The association with IgG4 is a relatively recent finding, and the condition has been described under numerous other names in the past.

Immunoregulatory lipoproteins

Inclusion body myositis (IBM) is one of a group of autoimmune related muscle diseases known as the inflammatory myopathies, which are characterized by chronic, progressive muscle inflammation accompanied by muscle weakness. The onset of muscle weakness in IBM is generally gradual (over months or years) and affects both proximal (close to the trunk of the body) and distal (further away from the trunk) muscles. Muscle weakness may affect only one side of the body. Falling and tripping are usually the first noticeable symptoms of IBM. For some individuals, the disorder begins with weakness in the wrists and fingers that causes difficulty with pinching, buttoning, and gripping objects. There may be weakness of the wrist and finger muscles and atrophy (thinning or loss of muscle bulk) of the forearm muscles and quadriceps muscles in the legs. Difficulty swallowing occurs in approximately half of IBM cases. Symptoms of the disease usually begin after the age of 50, although the disease can occur earlier. IBM occurs more frequently in men than in women. There is no cure for IBM.

Interstitial cystitis (IC) is an autoimmune related condition that causes discomfort or pain in the bladder and a need to urinate frequently and urgently. It is far more common in women than in men. The symptoms vary from person to person. Some people may have pain without urgency or frequency. Others have urgency and frequency without pain. Women’s symptoms often get worse during their periods. They may also have pain with sexual intercourse. The cause of IC isn’t known. There is no one test to tell if you have it. Doctors often run tests to rule out other possible causes of symptoms. There is no cure for IC, but treatments can help most people feel better.

Juvenile arthritis is a type of arthritis that happens in children age 16 or younger. It causes joint swelling, pain, stiffness, and loss of motion. It can affect any joint, and in some cases it can affect internal organs as well. One early sign of JA may be limping in the morning. Symptoms can come and go. Some children have just one or two flare-ups. Others have symptoms that never go away. JA causes growth problems in some children. No one knows exactly what causes JA. Scientists do know it is an autoimmune disorder, which means your immune system, which normally helps your
body fight infection, attacks your body’s own tissues. JA can be hard to diagnose. Your health care provider may do a physical exam, lab tests, and x-rays. Medicines and physical therapy can help maintain movement and reduce swelling and pain.

**Juvenile diabetes (Type 1 diabetes)** can occur at any age. It is most often diagnosed in children, adolescents, or young adults. Insulin is a hormone produced in the pancreas by special cells called beta cells. The pancreas is below and behind the stomach. Insulin is needed to move blood sugar (glucose) into cells. Inside the cells, glucose is stored and later used for energy. With type 1 diabetes, beta cells produce little or no insulin. Without enough insulin, glucose builds up in the bloodstream instead of going into the cells. This buildup of glucose in the blood is called hyperglycemia. The body is unable to use the glucose for energy. This leads to the symptoms of type 1 diabetes. The exact cause of type 1 diabetes is unknown. Most likely it is an autoimmune disorder. This is a condition that occurs when the immune system mistakenly attacks and destroys healthy body tissue. With type 1 diabetes, an infection or another trigger causes the body to mistakenly attack the cells in the pancreas that make insulin. The tendency to develop autoimmune diseases, including type 1 diabetes, can be passed down through families.

**Juvenile myositis (JM)**, including Juvenile Dermatomyositis (JDM) and Juvenile Polymyositis (JPM), is a group of rare and life-threatening autoimmune diseases, in which the body’s immune system attacks its own cells and tissues. Myositis means inflammation of the muscles that you use to move your body. It typically affects children ages 2 to 15 years, with symptoms that include weakness of the muscles close to the trunk of the body, inflammation, edema, muscle pain, fatigue, skin rashes, abdominal pain, fever, and contractures. Children with juvenile dermatomyositis may have difficulty swallowing and breathing, and the heart may also be affected. About 20 to 30 percent of children with juvenile dermatomyositis develop calcium deposits in the soft tissue. Muscle weakness without a rash is the primary symptom of Juvenile Polymyositis. Although medications can help alleviate the symptoms of JM, the disease has no known cure.

**Kawasaki disease** is a rare form of vasculitis. Children, usually under the age of 5, have a high fever and red eyes, lips, mouth, a rash and swollen lymph nodes. The disease also affects the heart and the wall of blood vessels. Kawasaki is the leading cause of acquired heart disease in children. Immediate treatment is necessary to avoid permanent damage to the heart and to the coronary arteries and a full recovery may be expected.

**Lambert-Eaton syndrome** is an autoimmune disorder in which faulty communication between nerves and muscles leads to muscle weakness. In this syndrome, substances produced by the immune system attack nerve cells. This makes nerves cells unable to release enough of a chemical called acetylcholine. This chemical transmits impulses between nerves and muscles. The result is muscle weakness. Lambert-Eaton syndrome may occur with cancers such as small cell lung cancer or autoimmune disorders such as vitiligo, which leads to a loss of skin pigment. Symptoms may
include: weakness or loss of movement that can be more or less severe, difficulty chewing, difficulty climbing stairs, difficulty lifting objects, difficulty talking, drooping head, need to use hands to get up from sitting or lying positions, swallowing difficulty, gagging, or choking. Vision changes can occur such as: blurry vision, double vision, and problems keeping a steady gaze. The symptoms of Lambert-Eaton syndrome may improve by treating the underlying disease, suppressing the immune system, or removing the antibodies. However, not everyone responds well to treatment.

**Leukocytoclastic vasculitis**, also called hypersensitivity vasculitis, describes inflammation of small blood vessels. The term leukocytoclastic refers to the debris of neutrophils (immune cells) within the blood vessel walls. The disease can be confined to the skin (cutaneous) or it can affect many different organs of the body such as the kidneys, central nervous system, heart, gastrointestinal tract, and lungs. An allergic reaction to drugs, food, or food additives supports the theory of the immune system playing the dominant role. Infections, inflammatory bowel disease, rheumatoid arthritis, lupus erythematosus, Sjögren syndrome, and less often malignancy are some of the various conditions associated with the vasculitis. In the skin, damaged blood vessels become leaky and small areas of hemorrhage appear as purple-red, raised lesions known as palpable purpura. Multiple discrete or grouped lesions are commonly found on the legs or other dependent areas of the body. These lesions are usually asymptomatic but can be itchy or painful. Signs of systemic involvement include fever, muscle aches, joint pain, blood in the urine or stool, abdominal pain, vomiting, cough, numbness, and weakness.

**Lichen planus** is a condition that forms an itchy rash on the skin or in the mouth. The exact cause of lichen planus is unknown. It may be related to an allergic or immune reaction. Risks for the condition include: exposure to medicines, dyes, and other chemicals (including gold, antibiotics, arsenic, iodides, chloroquine, quinacrine, quinide, phenothiazines, and diuretics), and diseases such as hepatitis C. Lichen planus mostly affects middle-aged adults. It is less common in children. Symptoms you may see include mouth sores that will sometimes form painful ulcers, skin sores that are itchy and have even sides (symmetrical) and sharp borders, dry mouth, hair loss, metallic taste in the mouth, and ridges in the nails (nail abnormalities). A skin lesion biopsy or biopsy of a mouth lesion can confirm the diagnosis. Blood tests may be done to rule out hepatitis. Lichen planus is usually not harmful. It usually gets better with treatment. The condition often clears up within 18 months but may come and go for years. If lichen planus is caused by a medicine you are taking, the rash should go away once you stop the medicine.

**Lichen sclerosus** is a skin disorder that can affect men, women, or children, but is most common in women. It usually occurs on the vulva (the outer genitalia or sex organ) in women, but sometimes develops on the head of the penis in men. Occasionally, lichen sclerosus is seen on other parts of the body, especially the upper body, breasts, and upper arms. Other names for lichen sclerosus include kraurosis vulvae and hypoplastic dystrophy. Doctors think a too active immune system and hormone problems may play a role in the cause of lichen sclerosus. It is also thought
that people inherit the likelihood of getting the disease. Sometimes, lichen sclerosus appears on skin that has been damaged or scarred from some other previous injury. Early in the disease, small white spots appear on the skin. The spots are usually shiny and smooth. Later, the spots grow into bigger patches. The skin on the patches becomes thin and crinkled. Then the skin tears easily, and bright red or purple bruises are common. Sometimes, the skin becomes scarred. If the disease is a mild case, there may be no symptoms.

**Ligneous conjunctivitis** is a rare disorder characterized by the buildup of a protein called fibrin which causes inflammation of the conjunctiva (conjunctivitis) and leads to thick, woody (ligneous), inflamed growths that are yellow, white, or red. Ligneous conjunctivitis most often occurs on the inside of the eyelids, but may also affect the sclera, cornea and pupil, leading to vision loss. A systemic form of the condition may occur, affecting the mucous membranes of the larynx, vocal chords, nose, trachea, bronchi, vagina, cervix, and gingiva. The cause of ligneous conjunctivitis is unknown. Autosomal recessive inheritance has been suggested in some cases. Ligneous conjunctivitis is sometimes associated with a condition known as congenital plasminogen deficiency.

**Linear IgA disease (LAD)** is an autoimmune subepidermal (lying beneath or constituting the innermost part of the epidermis) disease that may be idiopathic or drug-induced. Children and adults are affected, with disease of the former historically referred to as chronic bullous dermatosis of childhood. The clinical presentation appears similar to other blistering diseases, such as bullous pemphigoid and dermatitis herpetiformis.

**Lupus** is a chronic inflammatory autoimmune disease. There are three common types of lupus.

- **Systemic Lupus Erythematosus (SLE)** is the most serious. SLE can affect almost any organ or system in the body including blood vessels, muscles, joints, the digestive tract, lungs, kidneys, heart and central nervous system.
- **Discoïd lupus** causes a raised, scaly, red rash, usually on the face, scalp and neck and may cause scarring.
- **Drug-induced lupus** is a type of lupus which is caused by prescription medications. Symptoms are similar to those of SLE; and once the medication is stopped, the symptoms usually cease.
- **Neonatal lupus** is a rare disease that can affect some newborn babies of women with SLE or certain other immune system disorders. These babies may have a heart defect, skin rash, low blood count, and/or liver problems. However, most infants of mothers with SLE are born healthy.

**Lyme disease, chronic** is a late stage of an inflammatory disease caused by Borrelia burgdorferi bacteria and believed to be autoimmune related. It is also called Stage 3, or tertiary, Lyme disease. Lyme disease is transmitted by the bite of a deer tick.
Some people may not be treated for Lyme disease because they do not have any symptoms or their symptoms are mild. Chronic persistent Lyme disease may develop months or even years after the Lyme disease infection. Even people who were treated may develop chronic persistent Lyme disease. Chronic persistent Lyme disease can affect the skin, brain, and nervous system, and muscles, bones, and cartilage. Symptoms include: chronic arthritis, fatigue, headaches, joint inflammation in the knees and other large joints, memory loss, mood changes, sleep disorders, abnormal sensitivity to light, numbness and tingling. A blood test can be done to check for antibodies to the bacteria that cause Lyme disease. Antibiotics are given to fight the infection. Chronic persistent Lyme disease is treated for up to 28 days with antibiotics. If arthritis symptoms do not go away, a second 2 – 4 week course of antibiotics may sometimes be used. Treating patients for longer periods of time is generally not thought to be helpful, even if symptoms do not go away.

**Meniere’s disease** is a disorder of the inner ear. It can cause severe dizziness, a roaring sound in your ears called tinnitus, hearing loss that comes and goes and the feeling of ear pressure or pain. It usually affects just one ear. It is a common cause of hearing loss.

Attacks of dizziness may come on suddenly or after a short period of tinnitus or muffled hearing. Some people have single attacks of dizziness once in a while. Others may have many attacks close together over several days. Some people with Meniere’s disease have “drop attacks” during which the dizziness is so bad they lose their balance and fall.

Scientists don’t yet know the cause. They think that it has to do with the fluid levels or the mixing of fluids in the canals of your inner ear. Doctors diagnose it based on a physical exam and your symptoms. A hearing test can check to see how it has affected your hearing. There is no cure. Treatments include medicines to control dizziness, limiting salt in your diet, and taking water pills. A device that fits into the outer ear and delivers air pulses to the middle ear can help. Severe cases may require surgery.

**Microscopic polyangiitis (MPA)** is an autoimmune related disorder that causes blood vessel inflammation (vasculitis), which can lead to organ damage. The kidneys, lungs, nerves, skin, and joints are the most commonly affected areas of the body. MPA is diagnosed in people of all ages, all ethnicities, and both genders. The cause of this disorder is unknown.

**Mixed connective tissue disease (MCTD)** is a rare autoimmune disorder that is characterized by features commonly seen in three different connective tissue disorders: systemic lupus erythematosus, scleroderma, and polymyositis. Some affected people may also have symptoms of rheumatoid arthritis. Although MCTD can affect people of all ages, it appears to be most common in women under age 30. Signs and symptoms vary but may include Raynaud’s phenomenon; arthritis; heart, lung and skin abnormalities; kidney disease; muscle weakness, and dysfunction of the esophagus.
The cause of MCTD is currently unknown. There is no cure but certain medications may help manage the symptoms.

**Mooren’s ulcer** is a rare disease that studies suggest is an autoimmune disorder. Some cases run a chronic severe course and fail to respond to local and systemic therapy. Mooren’s ulcer is an idiopathic (unknown origin) noninfectious ulceration (The process or fact of being eroded away, as by an ulcer) of the peripheral cornea that has been classified into 2 clinical types. One is a milder, unilateral, less progressive form of the disease generally seen in elderly patients that responds well to therapy. The second type is a much more aggressive, frequently bilateral, relentless disease usually seen in younger patients that is poorly responsive to any therapy and often leads to corneal destruction.

**Mucha-Habermann disease** may also be called PLEVA (pityriasis lichenoides et varioliformis acuta). It is a skin disease characterized by a recurrent red rash that is itchy and burning. There are red elevated areas on the skin, with small pus, lymph, or serous-filled blister-like elevations. There also may be headache, chills, malaise, and sometime pain in one or more joints. It affects females and males equally.

**Multiple sclerosis (MS)** is a nervous system disease that affects your brain and spinal cord. It damages the myelin sheath, the material that surrounds and protects your nerve cells. This damage slows down or blocks messages between your brain and your body, leading to the symptoms of MS. They can include visual disturbances, muscle weakness, trouble with coordination and balance, sensations such as numbness, prickling, or “pins and needles”, and thinking and memory problems. No one knows what causes MS. It may be an autoimmune disease, which happens when your immune system attacks healthy cells in your body by mistake. Multiple sclerosis affects women more than men. It often begins between the ages of 20 and 40. Usually, the disease is mild, but some people lose the ability to write, speak, or walk. There is no single test for MS. Doctors use a medical history, physical exam, neurological exam, MRI, and other tests to diagnose it. There is no cure for MS, but medicines may slow it down and help control symptoms. Physical and occupational therapy may also help.

**Myasthenia gravis** is disease that causes weakness in the muscles under your control. It happens because of a problem in communication between your nerves and muscles. Myasthenia gravis is an autoimmune disease. Your body’s own immune system makes antibodies that block or change some of the nerve signals to your muscles. This makes your muscles weaker. Common symptoms are trouble with eye and eyelid movement, facial expression and swallowing. But it can also affect other muscles. The weakness gets worse with activity, and better with rest. There are medicines to help improve nerve-to-muscle messages and make muscles stronger. With treatment, the muscle weakness often gets much better. Other drugs keep your body from making so many abnormal antibodies. There are also treatments which filter abnormal antibodies from the blood or add healthy antibodies from donated blood. Sometimes surgery to take out the thymus gland helps. For some people, myasthenia gravis can go into remission and they do not need medicines. The remission can be
temporary or permanent. If you have myasthenia gravis, it is important to follow your treatment plan. If you do, you can expect your life to be normal or close to it.

Myositis means inflammation of the muscles that you use to move your body. An injury, infection, or autoimmune disease can cause it. Two specific kinds are polymyositis and dermatomyositis. Polymyositis causes muscle weakness, usually in the muscles closest to the trunk of your body. Dermatomyositis causes muscle weakness, plus a skin rash. Other symptoms of myositis may include: fatigue after walking or standing, tripping or falling, trouble swallowing or breathing. Doctors may use a physical exam, lab tests, imaging tests and a muscle biopsy to diagnose myositis. There is no cure for these diseases, but you can treat the symptoms.

Narcolepsy is a chronic brain disorder that involves poor control of sleep-wake cycles. People with narcolepsy experience periods of extreme daytime sleepiness and sudden, irresistible bouts of sleep that can strike at any time. These “sleep attacks” usually last a few seconds to several minutes. Contrary to common beliefs, people with narcolepsy do not spend a substantially greater proportion of their time asleep during a 24-hour period than do normal sleepers. In addition to daytime drowsiness and uncontrollable sleep episodes, most individuals also experience poor sleep quality that can involve frequent waking during nighttime sleep, and other sleep disorders. Narcolepsy can greatly affect daily activities. People may unwillingly fall asleep while at work or at school, when having a conversation, playing a game, eating a meal, or, most dangerously, when driving or operating other types of machinery. Narcolepsy affects both males and female equally and appears throughout the world. Symptoms often start in childhood or adolescence, but can occur later in life. The condition is life-long. Narcolepsy cannot yet be cured, but some of the symptoms can be treated with medicines and lifestyle changes.

Neuromyelitis optica – see Devic’s disease
Neutropenia is an abnormally low number of white blood cells. These cells, which are called neutrophils, help the body fight infection. White blood cells are produced in the bone marrow. They are released into the bloodstream, and travel wherever they are needed. Low levels of neutrophils occur when the bone marrow cannot replace them as fast as needed. A very severe infection may cause neutrophils to be used up quickly, and may also prevent the bone marrow from producing more neutrophils. In rare cases, mothers may have antibodies against their baby's neutrophils. These antibodies cross the placenta before birth and cause the baby's cells to break down (autoimmune neutropenia). In other rare cases, a problem with the baby's bone marrow may lead to decreased white blood cell production. In many cases, neutropenia goes away on its own as the bone marrow recovers and begins to produce enough white blood cells.

Ocular cicatricial pemphigoid is a rare, chronic, blistering and scarring disease that affects the oral and ocular mucosa. Other mucosal sites that might be affected include the nasopharynx, larynx, genitalia, rectum, and esophagus. The condition usually begins in late adulthood (e.g. 50’s or 60’s), affects more women than men, and has a variable prognosis. Scarring of the affected mucosa of the eye may lead to blindness.
and tends to be the most feared complication. A combination of environmental and genetic factors appear to play a role in the susceptibility of developing cicatricial pemphigoid. Although the specific causes of this condition have not been identified, it is considered an autoimmune disease that is characterized by the production of autoantibodies.

**Optic neuritis** is inflammation of the optic nerve. It may cause sudden, reduced vision in the affected eye. The exact cause of optic neuritis is unknown. The optic nerve carries visual information from your eye to the brain. Sudden inflammation of this nerve can cause the optic nerve to swell. This can result in injury to the nerve fibers and some or permanent loss of vision. Conditions that have been linked with optic neuritis include: autoimmune diseases, including lupus, sarcoidosis, Behcet’s disease, and more. Symptoms include loss of vision in one eye over an hour or a few hours, changes in the way the pupil reacts to bright light, loss of color vision, and pain when you move the eye. Vision often returns to normal within 2 to 3 weeks with no treatment. People who have optic neuritis without a disease such as multiple sclerosis have a good chance of recovery.

**Palindromic rheumatism (PR)** is an autoimmune related disease characterized by sudden, multiple, and recurring attacks of joint pain and swelling, typically in the hands and feet. Each episode may last from several hours to several days. The frequency of attacks also varies, from one episode a day to several during the course of a year. Between attacks, the symptoms disappear and the affected joints appear normal on x-ray exams. The cause of palindromic rheumatism is unknown, although a possible allergic origin has been suggested. There may also be a clinical association between antiphospholipid syndrome and palindromic rheumatism. Some individuals with palindromic rheumatism develop chronic joint inflammation and go on to develop rheumatoid arthritis.

**PANDAS (Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcus)** This term is used to describe a subset of children who have Obsessive Compulsive Disorder (OCD) and/or tic disorders such as Tourette Syndrome, and in whom symptoms worsen following strep infections such as “Strep throat” and Scarlet Fever. The children usually have dramatic, “overnight” onset of symptoms, including motor or vocal tics, obsessions, and/or compulsions. In addition to these symptoms, children may also become moody, irritable or show concerns about separating from parents or loved ones. This abrupt onset is generally preceded by a Strep throat infection. Researchers at the NIMH are pursuing a theory that the mechanism or cause is similar to that of Rheumatic Fever, an autoimmune disorder triggered by strep throat infections.

**Paraneoplastic cerebellar degeneration (PCD)** is a rare neurological disorder characterized by a widespread loss of Purkinje cells associated with a progressive pancerebellar dysfunction. Paraneoplastic syndromes are a group of rare disorders that are triggered by an abnormal immune system response to an underlying (usually undetected) malignant tumor. Patients with paraneoplastic neurological syndrome
(PNS) most often present with neurologic symptoms before an underlying tumor is detected.
Paraneoplastic neurologic syndromes include many neurologic disorders including paraneoplastic cerebellar degeneration (PCD) caused by an immune-mediated mechanism other than a metastatic complication in patients with an underlying malignancy. Any part of the nervous system can be involved depending on the type of primary malignancy.

**Paroxysmal nocturnal hemoglobinuria (PNH)** is a rare disease in which red blood cells break down earlier than normal. Persons with this disease have blood cells that are missing a gene called PIG-A. This gene allows a substance called glycosyl-phosphatidylinositol (GPI) to help certain proteins stick to cells. Without PIG-A, important proteins cannot connect to the cell surface and protect the cell from substances in the blood called complement. As a result, red blood cells break down too early. The red cells leak hemoglobin into the blood, which can pass into the urine. This can happen at any time, but is more likely to occur during the night or early morning. The disease can affect people of any age. It may be associated with aplastic anemia, myelodysplastic syndrome, or acute myelogenous leukemia. Risk factors, except for prior aplastic anemia, are not known. The outcome varies. Most people survive for more than 10 years after their diagnosis. Death can result from complications such as blood clot formation (thrombosis) or bleeding. In rare cases, the abnormal cells may decrease over time.

**Parry Romberg syndrome** is a rare disorder characterized by slowly progressive deterioration (atrophy) of the skin and soft tissues of half of the face (hemifacial atrophy), usually the left side. An autoimmune mechanism is suspected, and the syndrome may be a variant of localized scleroderma. It is more common in females than in males. Initial facial changes usually involve the tissues above the upper jaw (maxilla) or between the nose and the upper corner of the lip (nasolabial fold) and subsequently progress to the angle of the mouth, areas around the eye, the brow, the ear, and the neck. The deterioration may also affect the tongue, the soft and fleshy part of the roof of the mouth, and the gums. The eye and cheek of the affected side may become sunken and facial hair may turn white and fall out (alopecia). In addition, the skin overlying affected areas may become darkly pigmented (hyperpigmentation) with, in some cases, areas of hyperpigmentation and patches of unpigmented skin (vitiligo). Parry-Romberg syndrome is also accompanied by neurological abnormalities including seizures and episodes of severe facial pain (trigeminal neuralgia). The onset of the disease usually begins between the ages of 5 and 15 years. The progression of the atrophy often lasts from 2 to 10 years, and then the process seems to enter a stable phase. Muscles in the face may atrophy and there may be bone loss in the facial bones. Problems with the retina and optic nerve may occur when the disease surrounds the eye. There is no cure and there are no treatments that can stop the progression of Parry-Romberg syndrome. In mild cases, the disorder usually causes no disability other than cosmetic effects.
Parsonnage-Turner syndrome, also called brachial neuritis, is characterized by the sudden onset of shoulder and upper arm pain followed by marked upper arm weakness or atrophy. Individuals may present with the condition several weeks after an injury, infection or immunization, or in the absence of an obvious inciting event. Treatment is symptomatic and may include pain relievers and physical therapy. Although affected individuals may experience paralysis of the affected areas that lasts for months or even years, prognosis is generally favorable with most individuals experiencing complete recovery within 2 years.

Pars planitis (peripheral uveitis) is a disease of the eye in which there is inflammation of the pars plana, a small area of tissue next to the iris that is responsible for making aqueous humor (the fluid in the eye that nourishes the lens and cornea). Pars planitis is often referred to as intermediate uveitis because the pars plana is a part of the uvea. This condition most often affects young men and is generally not associated with any other disease or symptoms (idiopathic). However, there have been a few case reports of an association with autoimmune disease such as Crohn’s disease. Some experts also suggest a possible association with multiple sclerosis, sarcoidosis, cat scratch or Lyme disease.

Pemphigus is a group of chronic autoimmune skin diseases characterized by blister formations in the outer layer of the skin and the mucous membranes. Pemphigus vulgaris begins with blister formations (bullae) occurring in the mouth and on the scalp. The blisters are soft and are easily broken. The blistering can also affect the esophagus, rectum, nose or the lining of the eyelids. These bullae heal without scarring. Pemphigus vulgaris most often occurs in middle-aged patients of Jewish or Mediterranean descent. It has been associated with other autoimmune diseases such as myasthenia gravis and lupus. Diagnosis of an autoimmune bullous disease should be suspect when there is no clear history of exposure to a drug or a contact allergen or when other studies for infectious origins, such as herpes or impetigo, are negative. To differentiate these diseases, a careful history and physical examination are important. A skin biopsy is often helpful.

Pernicious anemia (PA) is a decrease in red blood cells that occurs when the intestines cannot properly absorb vitamin B12. Red blood cells provide oxygen to body tissues. There are many types of anemia. Pernicious anemia is a type of vitamin B12 anemia. The body needs vitamin B12 to make red blood cells. You get this vitamin from eating foods such as meat, poultry, shellfish, eggs, and dairy products. A special protein, called intrinsic factor (IF), helps your intestines absorb vitamin B12. This protein is released by cells in the stomach. When the stomach does not make enough intrinsic factor, the intestine cannot properly absorb vitamin B12. Common causes of pernicious anemia include: weakened stomach lining (atrophic gastritis), an autoimmune condition in which the body’s immune system attacks the actual intrinsic factor protein or the cells in the lining of your stomach that make it. Very rarely, pernicious anemia is passed down through families. This is called congenital pernicious anemia. Babies with this type of anemia do not make enough intrinsic factor. Or they cannot properly absorb vitamin B12 in the small intestine. In adults, symptoms of
Pernicious anemia are usually not seen until after age 30. The average age of diagnosis is age 60. Patients usually do well with treatment. It is important to start treatment early. Nerve damage can be permanent if treatment does not start within 6 months of symptoms.

**Peripheral neuropathy** – More than 100 types of peripheral neuropathy have been identified, each with its own symptoms and prognosis. In general, peripheral neuropathies are classified according to the type of damage to the nerves. Some forms of neuropathy involve damage to only one nerve and are called mononeuropathies. More frequently however, multiple nerves are affected, called polyneuropathy. An estimated 20 million people in the United States have some form of peripheral neuropathy, a condition that develops as a result of damage to the peripheral nervous system — the vast communications network that transmits information between the central nervous system (the brain and spinal cord) and every other part of the body. (Neuropathy means nerve disease or damage.) Autoimmune diseases, in which the immune system attacks the body’s own tissues, can lead to nerve damage. Sjogren’s syndrome, lupus, and rheumatoid arthritis are among the autoimmune diseases that can be associated with peripheral neuropathy. Symptoms can range from numbness or tingling, to pricking sensations (paresthesia), or muscle weakness. Areas of the body may become abnormally sensitive leading to an exaggeratedly intense or distorted experience of touch (allodynia). In such cases, pain may occur in response to a stimulus that does not normally provoke pain. Severe symptoms may include burning pain (especially at night), muscle wasting, paralysis, or organ or gland dysfunction. Most people recover from this autoimmune syndrome although severe cases can be life threatening. In the most extreme cases, breathing may become difficult, or organ failure may occur.

**Perivenous encephalomyelitis** – Perivenous demyelination is the pathological hallmark of acute disseminated encephalomyelitis. Acute disseminated encephalomyelitis (ADEM) is characterized by a brief but widespread attack of inflammation in the brain and spinal cord that damages myelin – the protective covering of nerve fibers. ADEM is thought to be an autoimmune disorder and often follows viral or bacterial infections, or less often, vaccination for measles, mumps, or rubella. The symptoms of ADEM appear rapidly, beginning with encephalitis-like symptoms such as fever, fatigue, headache, nausea and vomiting, and in the most severe cases, seizures and coma. ADEM typically damages white matter (brain tissue that takes its name from the white color of myelin), leading to neurological symptoms such as visual loss (due to inflammation of the optic nerve) in one or both eyes, weakness even to the point of paralysis, and difficulty coordinating voluntary muscle movements (such as those used in walking). ADEM is sometimes misdiagnosed as a severe first attack of multiple sclerosis (MS), since the symptoms and the appearance of the white matter injury on brain imaging may be similar. However, ADEM has several features which differentiate it from MS. Children are more likely than adults to have ADEM, whereas MS is a rare diagnosis in children. In addition, ADEM usually consists of a single episode or attack of widespread myelin damage, while MS features many attacks over the course of time. The long-term prognosis for individuals with ADEM is generally favorable. For most individuals, recovery begins within days, and within six months the majority of ADEM
patients will have total or near total recoveries. Others may have mild to moderate lifelong impairment ranging from cognitive difficulties, weakness, loss of vision, or numbness. Severe cases of ADEM can be fatal but this is a very rare occurrence.

**POEMS syndrome (polyneuropathy, organomegaly, endocrinopathy, monoclonal gammopathy, skin changes)** – POEMS syndrome is a rare autoimmune related blood disorder that damages your nerves and affects many other parts of the body. POEMS syndrome can be misdiagnosed because the signs and symptoms mimic those of other disorders. POEMS syndrome progresses rapidly and may become life-threatening, so early diagnosis is important. POEMS stands for these signs and symptoms:

- **Polyneuropathy.** Numbness, tingling and weakness in your legs — and over time, maybe in your hands — and difficulty breathing.
- **Organomegaly.** Enlarged spleen, liver or lymph nodes.
- **Endocrinopathy.** Abnormal hormone levels that can result in underactive thyroid (hypothyroidism), diabetes, sexual problems, fatigue, swelling in your limbs, and problems with metabolism and other essential functions.
- **Monoclonal plasma-proliferative disorder.** Abnormal bone marrow cells (plasma cells) that produce a protein (monoclonal protein) that can be found in the bloodstream.
- **Skin changes.** More color than normal on your skin, possibly thicker skin and increased facial or leg hair.

**Polyarteritis nodosa** is a serious autoimmune related blood vessel disease. The small and medium-sized arteries become swollen and damaged. Arteries are the blood vessels that carry oxygen-rich blood to organs and tissues. The cause of polyarteritis nodosa is unknown. The condition occurs when certain immune cells attack the affected arteries. More adults than children get this disease. The tissues that are fed by the affected arteries do not get the oxygen and nourishment they need. Damage occurs as a result. People with active hepatitis B or hepatitis C may develop this disease. Symptoms are caused by damage to affected organs. The skin, joints, muscle, gastrointestinal tract, heart, kidneys, and nervous system are often affected. Symptoms include: abdominal pain, decreased appetite, fatigue, fever, joint aches, muscle aches, unintentional weight loss, and weakness. If nerves are affected, you may have numbness, pain, burning, and weakness. Damage to the nervous system may cause strokes or seizures. Current treatments with steroids and other drugs that suppress the immune system can improve symptoms and the chance of long-term survival. The most serious complications usually involve the kidneys and gastrointestinal tract. Type I, II, & III autoimmune polyglandular syndromes

**Polymyalgia rheumatica** is characterized by muscle pain and stiffness in the neck, shoulder, and hip area. This stiffness, lasting about 30 minutes, is more severe upon waking or after a period of inactivity. Persons also may have “flu-like” symptoms. The symptoms may come on suddenly or gradually and usually strikes people over 50 years of age with age 70 the most common age of onset. There may be remission in one to
several years. Up to 15% of persons develop giant cell arteritis (also called temporal arteritis), during or after polymyalgia symptoms appear.

**Polymyositis** is a rare inflammatory disease that leads to muscle weakness, swelling tenderness, and tissue damage. It is part of a larger group of diseases called myositis. Polymyositis affects the skeletal muscles. It is also known as idiopathic inflammatory myopathy. The exact cause is unknown, but it may be related to an autoimmune reaction or infection. Polymyositis can affect people at any age. It most common in adults between ages 50 and 70, and in children ages 5 to 15. It affects women twice as often as men. It is more common in African Americans than Caucasians. Polymyositis is a systemic disease, which means it affects the whole body. Muscle weakness and tenderness can be signs of polymyositis. Response to treatment varies based on the complications. The 5-year mortality rate can be as high as 1 in 5 patients. Many people, especially children, have a period when no symptoms are present and recover. For most other people, immunosuppressant drugs can control the disease.

**Postmyocardial infarction syndrome** – see Dressler’s Syndrome

**Postpericardiotomy syndrome** – a frequent complication of open-heart surgery, is characterized by fever, chest pain, and pericardial and pleural effusions. These signs may develop 1 to 12 weeks after intracardiac surgery in approximately 30 percent of patients. Although the etiology of the syndrome is unknown, evidence points to a viral and/or autoimmune cause. Postpericardiotomy syndrome is diagnosed after excluding other conditions such as endocarditis and pneumonia. In many cases, the syndrome is self-limiting and occurs only once, but in other cases the symptoms have recurred as many as eight times. Early recognition of the syndrome is the key to limiting the discomfort and possible complications associated with this condition.

**Progesterone dermatitis** is a rare condition characterized by a cyclic skin rash which develops premenstrually in women. The condition usually occurs in adulthood after the start of periods (menarche), and rarely during pregnancy or postmenopause. Signs and symptoms vary among affected individuals; skin findings that have been reported include hives, erythema multiforme, papulovesicles (an eczema-like rash), annular erythema, angiodema, mouth erosions and pruritus (itching). The rash typically begins a few days before menses and subsides around the time menstruation begins, recurring at the next cycle. The exact cause is unknown, but is thought to involve a hypersensitivity or autoimmune reaction to a woman’s own progesterone. Depending on the severity, treatment may include topical medications, systemic corticosteroids, hormone therapy to inhibit the production of progesterone, or surgical removal of the ovaries.

**Primary biliary cirrhosis** is irritation and swelling (inflammation) of the bile ducts of the liver. This blocks the flow of bile, which damages the liver cells and leads to scarring called cirrhosis. The cause of inflamed bile ducts in the liver is not known. However, primary biliary cirrhosis is an autoimmune disorder. That means your body’s immune system mistakenly attacks healthy tissue. The disease more commonly affects middle-aged women. Long-term bile obstruction is believed to lead to liver cirrhosis. The
disease may be linked to autoimmune disorders such as: celiac disease, Raynaud’s phenomenon, sicca syndrome (dry eyes or mouth), and thyroid disease. More than half of patients have no symptoms at the time of diagnosis. Symptoms most often come on slowly and may include: abdominal pain, enlarged liver, fatigue, fatty deposits under the skin, fatty stools, itching, jaundice, and soft yellow spots on the eyelid. The outcome can vary. If the condition is not treated, most patients will die without a liver transplant. About a quarter of patients who have had the disease for 10 years will have liver failure. Doctors can now use a statistical model to predict the best time to do the transplant. Other diseases such as hypothyroidism and anemia can also develop.

**Primary sclerosing cholangitis** refers to swelling (inflammation), scarring, and destruction of the bile ducts inside and outside of the liver. The cause of this condition is usually unknown. The disease may be seen in patients who have: autoimmune disorders, chronic pancreatitis, inflammatory bowel disease (Crohn’s disease and ulcerative colitis), and sarcoidosis. Genetic factors may also be responsible. Sclerosing cholangitis occurs more often in men than women. This disorder is rare in children. The first symptoms are usually: fatigue, itching, and yellowing of the skin and eyes (jaundice). However, some people may have no symptoms. How well patients do varies. The disease tends to get worse over time.

**Psoriasis** is a skin disease that causes itchy or sore patches of thick, red skin with silvery scales. You usually get the patches on your elbows, knees, scalp, back, face, palms and feet, but they can show up on other parts of your body. Some people who have psoriasis also get a form of arthritis called psoriatic arthritis. A problem with your immune system causes psoriasis. In a process called cell turnover, skin cells that grow deep in your skin rise to the surface. Normally, this takes a month. In psoriasis, it happens in just days because your cells rise too fast. Psoriasis can be hard to diagnose because it can look like other skin diseases. Your doctor might need to look at a small skin sample under a microscope. Psoriasis can last a long time, even a lifetime. Symptoms come and go. Things that make them worse include: infections, stress, dry skin, and certain medicines. Psoriasis usually occurs in adults. It sometimes runs in families. Treatments include creams, medicines, and light therapy.

**Psoriatic arthritis** – Some people with psoriasis have psoriatic arthritis. It causes pain, stiffness, and swelling of the joints. It is often mild, but can sometimes be serious and affect many joints. The joint and skin problems don’t always happen at the same time. Your doctor will do a physical exam and imaging tests to diagnose psoriatic arthritis. There is no cure, but medicines can help control inflammation and pain. In rare cases, you might need surgery to repair or replace damaged joints.

**Idiopathic pulmonary fibrosis** is an autoimmune related condition in which the tissue deep in your lungs becomes scarred over time. This tissue gets thick and stiff. That makes it hard for you to catch your breath, and your blood may not get enough oxygen. Causes of pulmonary fibrosis include environmental pollutants, some medicines, some connective tissue diseases, and interstitial lung disease. Interstitial lung disease is the name for a large group of diseases that inflame or scar the lungs. In most cases, the cause cannot be found. This is called idiopathic pulmonary fibrosis. Symptoms include,
shortness of breath, a dry, hacking cough that doesn’t get better, fatigue, weight loss for no known reason, aching muscles and joints, and clubbing, which is the widening and rounding of the tips of the fingers or toes. Your doctor may use your medical history, imaging tests, a biopsy, and lung function tests to diagnose pulmonary fibrosis. There is no cure. Treatments can help with symptoms and improve your quality of life. They include medicines, oxygen therapy, pulmonary rehabilitation, or a lung transplant.

**Pyoderma gangrenosum** is an uncommon, ulcerative cutaneous condition of uncertain etiology (cause). It is associated with systemic autoimmune related diseases in at least 50% of patients who are affected. The diagnosis is made by excluding other causes of similar-appearing cutaneous ulcerations, including infection, malignancy, vasculitis, collagen vascular diseases, diabetes, and trauma. In a process termed pathergy, new ulcerations may occur after trauma or injury to the skin in 30% of patients who already have pyoderma gangrenosum. The prognosis of pyoderma gangrenosum is generally good; however, the disease may recur, and residual scarring is common. Pain is a common complaint of patients and may require narcotics.

**Pure red cell aplasia (PRCA)** is an uncommon disorder in which maturation (growth) arrest occurs in the formation of erythrocytes (red blood cells). Secondary PRCA occurs in patients with conditions such as autoimmune disorders, thymomas, systemic lupus erythematosus, hematologic malignancies, and solid tumors. The life expectancy of patients with idiopathic PRCA is about 1-2 decades. The survival of patients with congenital PRCA is limited. The lifespan of patients with secondary PRCA depends on the course of the underlying disorder.

**Raynaud’s phenomenon** is a condition in which cold temperatures or strong emotions cause blood vessel spasms. This blocks blood flow to the fingers, toes, ears, and nose. Raynaud’s phenomenon can be linked to other conditions. This is called secondary Raynaud’s phenomenon. Most people with the condition are over age 30. Common causes are: diseases of the arteries (such as atherosclerosis and Buerger’s disease), drugs that cause narrowing of arteries (such as amphetamines, certain types of beta-blockers, some cancer drugs, certain drugs used for migraine headaches), arthritis and autoimmune conditions (such as scleroderma, Sjogren’s syndrome, rheumatoid arthritis, and systemic lupus erythematosus), repeated injury or usage (such as from typing, playing the piano, or heavy use of hand tools), smoking, frostbite, and thoracic outlet syndrome. Raynaud’s phenomenon can also occur without another cause. This is called primary Raynaud’s phenomenon. It most often begins in people younger than age 30.

**Reactive Arthritis** is a type of infectious arthritis caused by an infection in the joint. The infection comes from a bacterial, viral, or fungal infection that spreads from another part of the body. Symptoms of infectious arthritis include: intense pain in the joint, joint redness and swelling, chills and fever, and inability to move the area with the infected joint. The joint is usually the knee, ankle, or toe. Sometimes, reactive arthritis is set off by an infection in the bladder, or in the urethra, which carries urine out of the body. In women, an infection in the vagina can cause the reaction. For both men and women, it
can start with bacteria passed on during sex. Another form of reactive arthritis starts with eating food or handling something that has bacteria on it.

**Reflex sympathetic dystrophy** also called Complex regional pain syndrome (CRPS) is a chronic pain condition. The key symptom of CRPS is continuous, intense pain out of proportion to the severity of the injury, which gets worse rather than better over time. CRPS most often affects one of the arms, legs, hands, or feet. Often the pain spreads to include the entire arm or leg. Typical features include dramatic changes in the color and temperature of the skin over the affected limb or body part, accompanied by intense burning pain, skin sensitivity, sweating, and swelling. Doctors aren’t sure what causes CRPS. In some cases the sympathetic nervous system plays an important role in sustaining the pain. Another theory is that CRPS is caused by a triggering of the immune response, which leads to the characteristic inflammatory symptoms of redness, warmth, and swelling in the affected area. Because there is no cure for CRPS, treatment is aimed at relieving painful symptoms. The prognosis for CRPS varies from person to person. Spontaneous remission from symptoms occurs in certain individuals. Others can have unremitting pain and crippling, irreversible changes in spite of treatment.

**Reiter’s syndrome** is a disease which classically consists of inflammation of the joints (arthritis), urethra (urethritis), and eye. Reiter’s syndrome frequently includes skin manifestations and is thought to be triggered in some people by an infection and immune response. This is a fairly typical rash on the feet associated with Reiter’s syndrome. This type of rash may also appear on the hands.

**Relapsing polychondritis** is a rare disease in which cartilage in many areas of the body becomes inflamed. The disease most commonly affects the ears, nose and the airways of the lungs. The cause is not known, and it occurs most often in people in their 50s or 60s. One theory is that polychondritis might be an autoimmune disease, in which the immune system attacks the body rather than foreign invaders such as viruses. In polychondritis, it’s possible that a triggering event, perhaps an infection, sets off a reaction by the immune system, which unleashes an attack on the body’s cartilage. Some people may have a genetic makeup that makes them more prone to this. The disease does not seem to run in families. It sometimes appears in people who have other disease, such as rheumatoid arthritis, vasculitis (inflammation of blood vessels) and systemic lupus erythematosus (SLE or lupus). Polychondritis is a chronic (long-lasting) disease, although medications frequently can reduce the severity of symptoms. Sometimes, the disease goes into remission, meaning it goes away temporarily, whether or not the person is treated.

**Restless legs syndrome (RLS)** causes a powerful urge to move your legs. Your legs become uncomfortable when you are lying down or sitting. Some people describe it as a creeping, crawling, tingling, or burning sensation. Moving makes your legs feel better, but not for long. RLS can make it hard to fall asleep and stay asleep. In most cases, there is no known cause for RLS. In other cases, RLS is caused by a disease or condition, such as anemia or pregnancy. Some medicines can also cause temporary
RLS. Caffeine, tobacco, and alcohol may make symptoms worse. Lifestyle changes, such as regular sleep habits, relaxation techniques, and moderate exercise during the day can help. If those don’t work, medicines may reduce the symptoms of RLS.

**Retroperitoneal fibrosis** is a rare autoimmune related disorder that blocks the tubes (ureters) that carry urine from the kidneys to the bladder. Retroperitoneal fibrosis occurs when extra fibrous tissue forms in the area behind the stomach and intestines. The tissue forms a mass (or masses) that can block the tubes that carry urine from the kidney to the bladder. The cause of this problem is not known. It is most common in people aged 40 – 60. Men are twice as likely to develop the condition as women. Early symptoms include: dull pain in the abdomen that increases with time, pain and change of color in the legs (due to decreased blood flow), and swelling of one leg. Later symptoms include: decreased urine output, no urine output (anuria), nausea, vomiting, changes in thinking caused by kidney failure and build-up of toxic chemicals in the blood, and severe abdominal pain with hemorrhaging (due to death of intestinal tissue). The outlook will depend on the extent of the problem and the amount of damage to the kidneys. The kidney damage may be temporary or permanent.

**Rheumatic fever** is an inflammatory autoimmune disease that may develop after an infection with group A Streptococcus bacteria (such as strep throat or scarlet fever). The disease can affect the heart, joints, skin, and brain. Rheumatic fever is common worldwide and is responsible for many cases of damaged heart valves. It is not common in the United States, and usually occurs in isolated outbreaks. The latest outbreak was in the 1980s. Rheumatic fever mainly affects children ages 5 -15, and occurs approximately 14-28 days after strep throat or scarlet fever. Symptoms include: abdominal pain, fever, heart (cardiac) problems, which may not have symptoms, or may result in shortness of breath and chest pain, joint pain, arthritis (mainly in the knees, elbows, ankles, and wrists), joint swelling; redness or warmth, nosebleeds (epistaxis), skin nodules, skin rash, skin eruption on the trunk and upper part of the arms or legs, eruptions that look ring-shaped or snake-like, and sydenham chorea (emotional instability, muscle weakness and quick, uncoordinated jerky movements that mainly affect the face, feet, and hands). If you are diagnosed with acute rheumatic fever you will be treated with antibiotics. Anti-inflammatory medications such as aspirin or corticosteroids reduce inflammation to help manage acute rheumatic fever. If rheumatic fever returns, your doctor may recommend you take low-dose antibiotics continually, especially during the first 3 -5 years after the first episode of the disease. Heart complications may be severe, particularly if the heart valves are involved.

**Rheumatoid arthritis (RA)** is a form of arthritis that causes pain, swelling, stiffness and loss of function in your joints. It can affect any joint but is common in the wrist and fingers. More women than men get rheumatoid arthritis. It often starts in middle age and is most common in older people. But children and young adults can also get it. You might have the disease for only a short time, or symptoms might come and go. The severe form can last a lifetime. Rheumatoid arthritis is different from osteoarthritis, the common arthritis that often comes with older age. RA can affect body parts besides joints, such as your eyes, mouth and lungs. RA is an autoimmune disease, which
means the arthritis results from your immune system attacking your body’s own tissues. No one knows what causes rheumatoid arthritis. Genes, environment and hormones might contribute. Treatments include medicine, lifestyle changes and surgery. These can slow or stop joint damage and reduce pain and swelling.

**Sarcoidosis** is an autoimmune disease that leads to inflammation, usually in your lungs, skin, or lymph nodes. It starts as tiny, grain-like lumps, called granulomas. Sarcoidosis can affect any organ in your body. No one is sure what causes sarcoidosis. It affects men and women of all ages and races. It occurs mostly in people ages 20 to 50, African Americans, especially women, and people of Northern European origin. Many people have no symptoms. If you have symptoms, they may include: cough, shortness of breath, weight loss, night sweats, and fatigue. Tests to diagnose sarcoidosis include chest x-rays, lung function tests, and a biopsy. Not everyone who has the disease needs treatment. If you do, prednisone, a type of steroid, is the main treatment.

**Schmidt syndrome** also known as Polyglandular autoimmune syndrome type 2 is a rare autoimmune syndrome that commonly has the constellation of three diseases: diabetes mellitus type 1, hypothyroidism and adrenal insufficiency. Owing to the diabetes mellitus type 1, patients require life-long insulin therapy and blood glucose levels need to be monitored. They are at risk for chronic complications of diabetes such as neuropathy, nephropathy and retinopathy. More acutely, due to fluctuations in blood glucose levels, they are at risk for hypoglycemia with neuroglycopenic symptoms and ketoacidosis. Hypothyroidism is diagnosed by measuring the thyroid hormone levels and if inappropriately low is treated with replacement therapy. Patients with adrenal insufficiency experience symptoms due to low glucocorticoid and mineralocorticoid levels in the body, due to decreased or absent production.

**Scleritis** is an inflammation of the sclera (the white outer wall of the eye). Inflammation of the sclera is often linked to autoimmune diseases such as rheumatoid arthritis and systemic lupus erythematosus. Sometimes the cause is unknown. Scleritis occurs most often in people between the ages of 30 and 60. It is rare in children. Symptoms of scleritis include: blurred vision, eye pain and tenderness, red patches on the normally white part of the eye, sensitivity to light, and tearing of the eye. A rare form of this disease causes no eye pain or redness. In most cases, the condition goes away with treatment. But it may come back. The disorder causing scleritis may be serious. However, it may not be discovered the first time you have the problem. The outcome will depend on the specific disorder.

**Scleroderma** means hard skin. It is an autoimmune related disease that causes abnormal growth of connective tissue. Connective tissue is the material inside your body that gives your tissues their shape and helps keep them strong. In scleroderma, the tissue gets hard or thick. It can cause swelling or pain in your muscles and joints. Symptoms of scleroderma include: calcium deposits in connective tissues, Raynaud’s phenomenon, a narrowing of blood vessels in the hands or feet, swelling of the esophagus, thick, tight skin on your fingers, and red spots on your hands and face. No
one knows what causes scleroderma. It is more common in women. It can be mild or severe. Doctors diagnose scleroderma using your medical history, a physical exam, lab tests, and a skin biopsy. There is no cure, but various treatments can control symptoms and complications.

**Sjogren’s syndrome** is a disease that causes dryness in your mouth and eyes. It can also lead to dryness in other places that need moisture, such as your nose, throat and skin. Most people who get Sjogren’s syndrome are older than 40, nine of 10 are women. Sjogren’s syndrome is sometimes linked to rheumatic problems such as rheumatoid arthritis. Sjogren’s syndrome is an autoimmune disease. If you have an autoimmune disease, your immune system, which is supposed to fight disease, mistakenly attacks parts of your own body. In Sjogren’s syndrome, your immune system attacks the glands that make tears and saliva. It may also affect your joints, lungs, kidneys, blood vessels, digestive organs, and nerves. The main symptoms are dry eyes, and dry mouth. Treatment focuses on relieving symptoms.

**Sperm & testicular autoimmunity** – The human immune system is trained during the early postnatal period. In men, at puberty when the sperm first appear in the testis and epididymis, the human immune system will have the chance to contact sperm antigens. Similarly, when women become sexually active, their immune system will inevitably contact sperm antigens. Therefore, once sperm, as an autoantigen, activates the human immune system, an autoimmune response against human sperm will occur. The blood-testis barrier and the epididymal blood-epithelium barrier in humans are important structures in preventing sperm antigens from contacting immunocompetent cells, due to the tight junctions of Sertoli and epithelial cells. This creates favorable conditions for spermatogenesis and sperm survival in the testicular fluid, and sperm maturation in the epididymal fluid. It also prevents the occurrence of autoimmunity after puberty. Therefore, alteration of the blood-testis barrier and the blood-epithelium barrier allows the production of ASAs and, hence, may lead to infertility. There are three types of sperm autoimmunity: that associated with genital tract obstruction, that accompanied by tesricular inflammation, and a spontaneously occurring type that does not present with either of the preceding associated features.

**Stiff person syndrome (SPS)** is a rare disease of the nervous system. Progressively severe muscle stiffness typically develops in the spine and lower extremities; often beginning very subtly during a period of emotional stress. Most patients experience painful episodic muscle spasms that are triggered by sudden stimuli. An autoimmune component is typical and patients often have other autoimmune disorders. Symptoms usually begin in the mid forties. Although it is not possible to determine the exact prevalence, it may occur in fewer that 1 per million. The disease is more common in women (the ratio is 2 women for every man affected). There is no predilection for any race or ethnic group. There is an association with diabetes and perhaps over half of patients with SPS have or will develop diabetes. Other autoimmune diseases have been found in association with SPS, for example: thyroid disease and vitiligo. There is an increased incidence of epilepsy. An important but especially rare variant of SPS is associated with breast or lung cancer. Although SPS is a serious potentially life-
threatening disease, and some of the treatments have serious potential side effects; the course of SPS is variable. There are patients who, with proper treatment, are able to return to activities they enjoy.

**Subacute bacterial endocarditis (SBE)** (also called endocarditis lenta) is a type of endocarditis (more specifically, infective endocarditis). It is usually caused by a form of streptococci viridans bacteria that normally live in the mouth and throat (Streptococcus mutans, mitis, sanguis or milleri). Other strains of streptococci (bovis and equines) can also cause subacute endocarditis, usually in patients who have a form of gastrointestinal cancer. Additional causes are Enterococci (urinary tract infections) and coagulase negative staphylococci such as Staphylococcus epidermidis (skin).

Underlying structural valve disease is usually present in patients before developing subacute endocarditis. It is less likely to lead to septic emboli than is acute endocarditis, but subacute endocarditis has a relatively slow process of infection and, if left untreated, can worsen for up to one year before it is fatal.

**Susac’s syndrome** is a very rare autoimmune related disease, of still unknown etiology, and many persons who experience it do not display the bizarre symptoms named here. Often sufferers experience a personality change and develop bizarre and paranoid behavior. Their speech can be affected, such as the case of a female of late teens who suffered speech issues and hearing problems, and many experience unrelenting and intense headaches and migraines, some form of hearing loss, and impaired vision. The problem usually corrects itself, but this can take up to five years. In some cases, subjects can become confused. The syndrome usually affects women around the age of 18 years old, with female to male ratio of cases of 2:1.

**Sympathetic ophthalmia (SO)** is a bilateral diffuse granulomatous uveitis (a kind of inflammation) of both eyes following trauma to one eye. It can leave the patient completely blind. Symptoms may develop from days to several years after a penetrating eye injury. Sympathetic ophthalmia is rare, affecting 0.2% to 0.5% of non-surgical eye wounds, and less than 0.01% of surgical penetrating eye wounds. There are no gender or racial differences in incidence of SO. Eye floaters and loss of accommodation are among the earliest symptoms. Once SO is developed, Immunosuppressive therapy is the mainstay of treatment. When initiated promptly following injury, it is effective in controlling the inflammation and improving the prognosis. Mild cases may be treated with local application of corticosteroids and pupillary dilators.

**Takayasu’s arteritis** is a chronic inflammatory autoimmune condition that affects the largest blood vessel in the body (the aorta) and its branches. Thus, the complications of Takayasu’s arise directly or indirectly from damage to these blood vessels. The vasculitides are classified according to the size of blood vessel involved. Takayasu’s is the classic “large vessel” vasculitis. Takayasu’s arteritis is occasionally called “pulseless disease”, because of the difficulty in detecting peripheral pulses that sometimes occurs as a result of the vascular narrowings. The “typical” patient with Takayasu’s arteritis is a woman under the age of 40. There is a 9:1 female predominance in this disease. Although the disease has a worldwide distribution, it appears to occur more often in
Asian women. Takayasu’s arteritis is a rare disease. The best estimates of the disease frequency suggest that 2 or 3 cases occur each year per million people in a population. Because TAK can cause heart problems, high blood pressure and stroke, patients with TAK should talk to their doctor about ways to lower the risk of these serious problems.

**Temporal arteritis/Giant cell arteritis** is inflammation and damage to the blood vessels that supply blood to the head. If the inflammation affects the arteries in your neck, upper body and arms, it is called giant cell arteritis. Temporal, giant cell, and cranial arteritis occur when one or more arteries become inflamed, swollen, and tender. Temporal arteritis commonly occurs in the arteries around the temples (temporal arteries). These vessels branch off from the carotid artery in the neck. However, the condition can occur in medium-to-large arteries in other places in the body. The cause of the condition is unknown. It is believed to be due in part to a faulty immune response. The disorder has been linked to severe infections and the use of high doses of antibiotics. The problem may develop with or following another inflammatory disorder known as polymyalgia rheumatica. Giant cell arteritis almost always occurs in people over age 50. It is rare in people of African descent. The condition may run in families. Some common symptoms of this problem are throbbing headache on one side of the head or the back of the head and tenderness when touching the scalp. Most people make a full recovery, but treatment may be needed for 1 to 2 years or longer. The condition may return at a later date. Damage to other blood vessels in the body such as aneurysms (ballooning of the blood vessels) may occur. This damage can lead to a stroke in the future.

**Thrombocytopenic purpura (TTP)** is an autoimmune related bleeding disorder in which the immune system destroys platelets, which are necessary for normal blood clotting. Persons with the disease have too few platelets in the blood. TTP is sometimes called immune thrombocytopenic purpura or simply, immune thrombocytopenia. TTP occurs when certain immune system cells produce antibodies against platelets. The antibodies attach to the platelets. The spleen destroys the platelets that carry the antibodies. In children, the disease sometimes follows a viral infection. In adults, it is more often a chronic (long-term) disease and can occur after a viral infection, with use of certain drugs, during pregnancy, or as part of an immune disorder. TTP affects women more often than men, and is more common in children than adults. The disease affects boys and girls equally. TTP symptoms can include any of the following: abnormally heavy menstruation, bleeding into the skin, often around the shins, causing a skin rash that looks like pinpoint red spots (petechial rash), easy bruising, and nosebleed or bleeding in the mouth. With treatment, the chance of remission (a symptom-free period) is good. In rare cases, TTP may become a long-term condition and reappear, even after a symptom-free period.

**Tolosa-Hunt syndrome (THS)** is a rare autoimmune related disorder characterized by severe and unilateral headaches with extraocular palsies, usually involving the third, fourth, fifth, and sixth cranial nerves, and pain around the sides and back of the eye, along with weakness and paralysis (ophthalmoplegia) of certain eye muscles. The exact cause of THS is not known, but the disorder is thought to be, and often assumed
to be, associated with inflammation of the areas behind the eyes. Symptoms are usually limited to one side of the head, and in most cases the individual affected will experience intense, sharp pain and paralysis of muscles around the eye. Symptoms may subside without medical intervention, yet recur without a noticeable pattern. The prognosis of THS is usually considered good. Patients usually respond to corticosteroids, and spontaneous remission can occur, although movement of ocular muscles may remain damaged. Roughly 30–40% of patients who are treated for THS experience a relapse.

Transverse myelitis is a neurological disorder caused by inflammation across both sides of one level, or segment, of the spinal cord. The term myelitis refers to inflammation of the spinal cord; transverse simply describes the position of the inflammation, that is, across the width of the spinal cord. Attacks of inflammation can damage or destroy myelin, the fatty insulating substance that covers nerve cell fibers. This damage causes nervous system scars that interrupt communications between the nerves in the spinal cord and the rest of the body. Symptoms of transverse myelitis include a loss of spinal cord function over several hours to several weeks. What usually begins as a sudden onset of lower back pain, muscle weakness, or abnormal sensations in the toes and feet can rapidly progress to more severe symptoms, including paralysis, urinary retention, and loss of bowel control. Transverse myelitis often develops following viral infections and is considered to be autoimmune related. Although some patients recover from transverse myelitis with minor or no residual problems, others suffer permanent impairments that affect their ability to perform ordinary tasks of daily living. Most patients will have only one episode of transverse myelitis; a small percentage may have a recurrence. Transverse myelitis occurs in adults and children, in both genders, and in all races. No familial predisposition is apparent. A peak in incidence rates (the number of new cases per year) appears to occur between 10 and 19 years and 30 and 39 years. Although only a few studies have examined incidence rates, it is estimated that about 1,400 new cases of transverse myelitis are diagnosed each year in the United States, and approximately 33,000 Americans have some type of disability resulting from the disorder.

Type 1 diabetes – Diabetes means your blood glucose, or blood sugar, levels are too high. With type 1 diabetes, your pancreas does not make insulin. Insulin is a hormone that helps glucose get into your cells to give them energy. Without insulin, too much glucose stays in your blood. Over time, high blood glucose can lead to serious problems with your heart, eyes, kidneys, nerves, and gums and teeth. Type 1 diabetes happens most often in children and young adults but can appear at any age. Symptoms may include, being very thirsty, urinating often, feeling very hungry or tired, losing weight without trying, having sores that heal slowly, having dry, itchy skin, losing the feeling in your feet or having tingling in your feet, and having blurry eyesight. A blood test can show if you have diabetes. If you do, you will need to take insulin for the rest of your life.

Ulcerative colitis (UC) is an autoimmune related disease that causes inflammation and sores, called ulcers, in the lining of the rectum and colon. It is one of a group of
diseases called inflammatory bowel disease. UC can happen at any age, but it usually starts between the ages of 15 and 30. It tends to run in families. The most common symptoms are pain in the abdomen and blood or pus in diarrhea. Other symptoms may include, anemia, severe tiredness, weight loss, loss of appetite, bleeding from the rectum, sores on the skin, joint pain, and growth failure in children. About half of people with UC have mild symptoms. Doctors use blood tests, stool tests, colonoscopy or sigmoidoscopy, and imaging tests to diagnose UC. Several types of drugs can help control it. Some people have long periods of remission, when they are free of symptoms. In severe cases, doctors must remove the colon.

**Undifferentiated connective tissue disease (UCTD)** is a systemic autoimmune disease. This means the body’s natural immune system does not behave normally. Instead of serving to fight infections such as bacteria and viruses, the body’s own immune system attacks itself. In UCTD, autoimmunity may cause the immune system to attack specific parts of the body resulting in a variety of problems. The phrase “connective tissue disease” is used to describe the diseases of the immune system that are treated primarily by rheumatologists. These represent systemic autoimmune diseases that often involve the joints, cartilage, muscles, and skin. They can also involve any other organ system such as the eyes, heart, lungs, kidneys, gastrointestinal tract, bone marrow, nervous system, and blood vessels. Examples of connective tissue diseases include lupus, scleroderma, rheumatoid arthritis, Sjögren’s syndrome, myositis, and vasculitis. There are many people who have features of connective tissue disease; however, they do not fulfill the diagnostic criteria established for any one disease. In such circumstances, they are often considered to have “undifferentiated” connective tissue disease. Over time, people with UCTD may evolve into one of the more specific connective tissue diseases, such as lupus, Sjögren’s or scleroderma.

**Uveitis** is swelling and irritation of the uvea, the middle layer of the eye. The uvea provides most of the blood supply to the retina. Uveitis can be caused by autoimmune disorders, including rheumatoid arthritis or ankylosing spondylitis. It can also be caused by infection or exposure to toxins. In many cases, the cause is unknown. The most common form of uveitis is anterior uveitis. This involves inflammation in the front part of the eye. It is often called iritis because it usually only affects the iris, the colored part of the eye. The disorder may affect only one eye. The inflammation may be linked with autoimmune diseases, but most cases occur in healthy people. It is most common in young and middle-aged people. Symptoms may develop rapidly and can include: blurred vision, dark, floating spots in the vision, eye pain, redness of the eye, and sensitivity to light. With proper treatment, most attacks of anterior uveitis go away in a few days to weeks. However, the problem often returns. Inflammation related to posterior uveitis may last from months to years. It may cause permanent vision damage, even with treatment.

**Vasculitis** is an autoimmune related inflammation of the blood vessels. It happens when the body’s immune system attacks the blood vessel by mistake. It can happen because of an infection, a medicine, or another disease. The cause is often unknown. Vasculitis can affect arteries, veins and capillaries. Arteries are vessels that carry blood
from the heart to the body's organs. Veins are the vessels that carry blood back to the heart. Capillaries are tiny blood vessels that connect the small arteries and veins. When a blood vessel becomes inflamed, it can narrow, making it more difficult for blood to get through, close off completely so that blood can’t get through, or stretch and weaken so much that it bulges. The bulge is called an aneurysm. If it bursts, it can cause dangerous bleeding inside the body. Symptoms of vasculitis can vary, but usually include fever, swelling and a general sense of feeling ill. The main goal of treatment is to stop the inflammation. Steroids and other medicines to stop inflammation are often helpful.

**Vesiculobullous dermatosis**

**Vitiligo** causes white patches on your skin. It can also affect your eyes, mouth, and nose. It occurs when the cells that give your skin its color are destroyed. No one knows what destroys them. It is more common in people with autoimmune diseases, and it might run in families. It usually starts before age 40. The white patches are more common where your skin is exposed to the sun. In some cases, the patches spread. Vitiligo can cause your hair to gray early. If you have dark skin, you may lose color inside your mouth. Using sunscreen will help protect your skin, and cosmetics can cover up the patches. Treatments for vitiligo include medicines, light therapy, and surgery. Not every treatment is right for everyone. Many have side effects. Some take a long time. Some do not always work.

**Wegener’s granulomatosis** (now termed Granulomatosis with Polyangiitis (GPA)) is a rare autoimmune related disease. It is a type of vasculitis, or inflammation of the blood vessels. The inflammation limits the flow of blood to important organs, causing damage. It can affect any organ, but it mainly affects the sinuses, nose, trachea (windpipe), lungs, and kidneys. The cause of GPA is unknown. It can affect people at any age. Men and women are equally affected. It is more common in Caucasians. Symptoms may include joint pain, weakness, tiredness, and cold symptoms such as a runny nose that doesn’t get better. Doctors use blood tests, chest X-rays, and biopsies to diagnose GPA and rule out other causes of the symptoms. Early treatment is important. Most people improve with medicines to slow or stop the inflammation.