JOHNS HOPKINS MEDICAL INSTITUTIONS

Autoimmune Disease Research Center

Frequently Asked Questions

Q: What is autoimmunity?
A: Autoimmunity is an immune response directed to a substance (referred to as "antigen") present in the body of the host.

Q: What is autoimmune disease?
A: It is a disorder caused entirely or in part by an autoimmune response.

Q: How many autoimmune diseases are there?
A: The National Institutes of Health has estimated that at least 80 human diseases are caused by primarily or secondarily by an autoimmune response. New diseases are being added to the list frequently.

Q: How prevalent are autoimmune diseases?
A: The National Institutes of Health estimates that five to eight percent of Americans have an autoimmune disorder.

Q: Why are autoimmune diseases so different?
A: The presentation of an autoimmune disease (that is, the signs and symptoms) depend upon the location of the autoimmune attack on the body. Autoimmune diseases have been found in virtually every organ system in the body.

Q: Who takes care of patients with autoimmune diseases?
A: Since autoimmune diseases vary greatly in presentation, many different physician specialists care for patients with these disorders. The specialist is usually skilled in treating diseases of a particular system. For example: rheumatologists tend to treat diseases affecting the joints and connective tissue; neurologists, autoimmune diseases of the central and/or peripheral nervous system; dermatologists; diseases of the skin; gastroenterologists, diseases of the intestinal tract; and endocrinologists, diseases of endocrine organs. It can be truly said that physicians of any specialty may encounter patients with autoimmune disease.

Q: Why are autoimmune diseases so expensive?
A: Generally, autoimmune diseases continue for the lifetime of the patient. They require continual or intermittent care. At this time definitive cures for the autoimmune diseases are not available. Often the drugs used for treating these diseases are quite expensive and have unfortunate side effects. Autoimmune diseases in one member of the family may have economic impact on other family members.

Q: Who is usually afflicted with autoimmune diseases?
A: Individuals of any age and either sex may be affected by an autoimmune disease. Some autoimmune diseases such as Type 1 diabetes and rheumatic fever are more common in younger individuals. A few others such as rheumatoid arthritis and autoimmune diseases of the thyroid gland are most commonly seen in older individuals. However, many of the autoimmune diseases such as lupus and multiple sclerosis are most common in women during the ages of twenty to forty.

Q: Why are autoimmune diseases more common in women than men?
A: The answer to this question is not yet fully available. It is likely that hormones play an important role, but a number of other factors have been implicated. It should be noted that while most autoimmune diseases are more prevalent in women, a few such as Type

1 diabetes, ankylosing spondylitis and autoimmune myocarditis are actually more common in men. It seems likely, therefore, that there will be multiple reasons for the sex related bias in autoimmune disease.

Q: Are autoimmune diseases inherited?

A: Clinical and epidemiologic evidence as well as data from experimental animals demonstrate that a tendency to develop autoimmune disease is inherited. This tendency may be large or small depending on the disease but, in general, close relatives are more likely to develop the same or a related autoimmune disease. A number or genes have been implicated in causing autoimmune disease, primarily genes related to the human major histocompatibility complex called HLA.

Q: If autoimmune diseases are not primarily inherited, what causes them?

A: It seems likely that environmental factors acting with the genetic predisposition of the patient are responsible for triggering autoimmune disease. A few such triggers have been identified, including a number of drugs that are associated with some forms of lupus, thrombocytopenia, hemolytic anemia and other autoimmune disorders. Infections can be followed by an autoimmune disease in a few instances such as rheumatic fever followed by a streptococcal infection and Guillain-Barre` syndrome caused by chlamydia. A great deal of circumstantial evidence suggests that viruses may play a role in initiating some autoimmune diseases. A number of nutrients have been studied including iodine which contribute to the onset of autoimmune thyroid disease. In most cases, however, we do not have clear evidence of a particular environmental trigger of autoimmune disease.
