

The Dangers of Lupus

Systemic lupus erythematosus (Lupus) is an autoimmune disease that causes inflammation to various parts of the body, including the kidneys, heart, lungs, blood, and brain. The course of the disease varies from person to person, and can progress to serious – and sometimes life-threatening – complications. Here are some facts on two of the most common dangers of lupus:

Heart Disease

- Narrowing of the coronary arteries, called atherosclerosis, occurs prematurely and more commonly in people with lupus. This can lead to chest pain and heart attack. In fact, premature heart disease is the third most common cause of death in women with lupus, following complications of kidney disease and infection.
- Recent studies have reported a five- to 10-fold greater risk of developing cardiovascular disease in women with lupus compared to women in the general population.
- One study reported in the *New England Journal of Medicine* found that lupus itself is a risk factor for atherosclerosis independent of other risk factors such as diabetes, smoking or excess weight.
- Researchers are beginning to discover some of the immune abnormalities that lead to lupus-related heart disease. The Lupus Research Institute supports a range of studies in this field, including those aimed at increasing understanding of biomarkers (predictors) of atherosclerosis, at uncovering underlying mechanisms of heart disease in lupus, and at determining whether noninvasive diagnostic techniques are useful for early detection.
- Lupus also can directly impact the heart by causing myocarditis (inflammation of the myocardium or heart muscle) and endocarditis (inflammation of the inner heart lining). This can lead to heart failure.

Kidney Disease

- Lupus nephritis, or lupus related kidney disease, is a significant clinical problem in approximately one-half of all patients with lupus.
- Autoantibodies (antibodies directed against the self) can deposit in certain areas of the kidney, and are part of the mechanisms of kidney damage. There are varying degrees of severity, but the resulting inflammation can lead to complete kidney failure, which then would require either dialysis or kidney transplant.
- Lupus nephritis is commonly treated with corticosteroids and cytotoxic or immunosuppressive drugs to control inflammation and to decrease immune activity in the kidney. A goal of present research is to find treatments that result in less toxicity. New treatment approaches are undergoing clinical trials.
- Through several LRI grants, researchers are investigating various mechanisms of kidney disease in lupus, with the goal of better predicting and detecting kidney involvement, so it can be appropriately treated before significant damage occurs.