



What Causes Lupus

Genes

No gene or group of genes has been proven to cause lupus. Lupus does, however, appear in certain families, and when one of two identical twins has lupus, there is an increased chance that the other twin will also develop the disease. These findings, as well as others, strongly suggest that genes are involved in the development of lupus. Although lupus can develop in people with no family history of lupus, there are likely to be other autoimmune diseases in some family members. Certain ethnic groups (people of African, Asian, Hispanic/Latino, Native American, Native Hawaiian, or Pacific Island descent) have a greater risk of developing lupus, which may be related to genes they have in common.

Environment

While a person's genes may increase the chance that he or she will develop lupus, it takes some kind of environmental trigger to set off the illness or to bring on a flare. Examples include:

- ultraviolet rays from the sun
- ultraviolet rays from fluorescent light bulbs
- sulfa drugs, which make a person more sensitive to the sun, such as: Bactrim® and Septra® (trimethoprim-sulfamethoxazole); sulfisoxazole (Gantrisin®); tolbutamide (Orinase®); sulfasalazine (Azulfidine®); diuretics
- sun-sensitizing tetracycline drugs such as minocycline (Minocin®)
- penicillin or other antibiotic drugs such as: amoxicillin (Amoxil®); ampicillin (Ampicillin Sodium ADD-Vantage®); cloxacillin (Cloxapen®)
- an infection
- a cold or a viral illness
- exhaustion
- an injury
- emotional stress, such as a divorce, illness, death in the family, or other life complications
- anything that causes stress to the body, such as surgery, physical harm, pregnancy, or giving birth

Although many seemingly unrelated factors can trigger the onset of lupus in a susceptible person, scientists have noted some common features among many people who have lupus, including:

- exposure to the sun
- an infection
- being pregnant
- giving birth
- a drug taken to treat an illness

However, many people cannot remember or identify any specific factor that occurred before they were diagnosed with lupus.

Hormones

Hormones are the body's messengers and they regulate many of the body's functions. In particular, the sex hormone estrogen plays a role in lupus. Men and women both produce estrogen, but estrogen production is much greater in females. Many women have more lupus symptoms before menstrual periods and/or during pregnancy, when estrogen production is high. This may indicate that estrogen somehow regulates the severity of lupus. However, it does not mean that estrogen, or any other hormone for that matter, causes lupus.

Related Information

[Environmental Factors in Lupus](#)

January 2007 webchat transcript with Dr. Mark Gourley

Frequently Asked Questions

Is lupus stress related?

We do not know for certain. There are many anecdotal reports (personal accounts) of lupus flaring during or after a stressful time, but this question requires further scientific study.

Does lupus occur more often in certain geographical areas?

No. There are on-going studies of several suspected "clusters" of lupus case but no evidence has emerged that suggests lupus is more prevalent in specific areas.

Is lupus related to pollution or toxic chemicals?

We do not know. The cause of lupus, and many other autoimmune diseases, remains unknown. The respective roles of genetic and environmental factors in triggering lupus remain to be determined. The National Institutes of Health (NIH), the principal biomedical research agency of the United States Government established the National Institute of Environmental Health Sciences (NIEHS) to study issues related to environmental health. A meeting in September 1998 at Research Triangle Institute (RTI) in Durham, NC organized by NIEHS, looked at autoimmunity and the environment and specifically lupus. A review of the discussion was published in the medical journal, *Arthritis and Rheumatism* (1998 Oct; 41(10): 1714-24) in an article titled: "Hormonal, Environmental, and Infectious Risk Factors for Developing Systemic Lupus Erythematosus" by Cooper GS, Dooley MA, Treadwell EL, St Clair EW, Parks CG, Gilkeson GS.

Can something in your diet cause lupus?

We do not believe so.

Is there any truth to the claims being circulated on the Internet that lupus is caused by the artificial sweetener, aspartame?

We are aware there is an email message circulating on the Internet warning individuals with lupus about dangers associated with using the artificial sweetener aspartame. The Lupus Foundation of America consulted with the chair of the LFA Medical Council, Evelyn Hess, MD, MACP, MACR. Dr. Hess is one of the nation's leading researchers in the field of lupus specializing in environmental influences. According to Dr. Hess, there is, as of now, no specific proof of an association with aspartame as a cause or worsening of SLE. People with lupus should always consult with their physician before making any changes in their medical treatment, diet, exercise or other routine based on information received via the Internet or other sources lacking known credentials.

Lupus Foundation of America, Inc.

<http://www.lupus.org/>