

Can the Environment Cause Lupus?

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Genes and the Environment

“Why have I got lupus?” This common question remains difficult to answer but research over the last 10 years has provided some major clues. For many years we have known that lupus can run in families. Genetic studies have refined our views on this and researchers are now looking at a number of genes that may increase the likelihood of developing lupus. However, genes are not the only influences on the development of lupus. It appears that a combination of genes and environmental factors are needed. When a number of these factors are present lupus develops.

What Environmental Factors are Important?

A number of factors present in the environment have been implicated in the development of lupus. These broadly include exposure to certain infections, chemicals and toxins, smoking and sunlight.

Infections

Some infections have been associated with the development of lupus. Many are common infections that are largely unavoidable. The strongest association seems to be with the Epstein-Barr Virus (EBV). This is the virus responsible for the illness infectious mononucleosis or “glandular fever”. Most people are exposed to this virus during childhood or early adulthood. However, it appears that the immune system whilst trying to fight the EBV virus may become confused and start to damage the body leading to lupus. There is also some work suggesting that individuals exposed to more infections in early life may develop an immune system more likely to have some of the abnormalities associated with lupus.

Chemicals and Toxins

Studies on exposure to chemicals and toxins include work suggesting that silica (not to be confused with silicone) may increase the likelihood of developing lupus. Silica is a constituent of some rocks and dust. This may be why there have been reports of increased levels of lupus in miners from a number of countries.

Smoking

More recently smoking has been implicated in the development of lupus. Smoking also increases the development of other autoimmune diseases like rheumatoid arthritis and multiple sclerosis. An analysis of the best studies of smoking and lupus has shown that being a current smoker explains most of the risk; so stopping smoking may reduce the likelihood of developing lupus along with the other better understood health benefits.

Sunlight

Exposure to ultraviolet light present in sunlight has been shown to worsen lupus. It can do this in two major ways. The first is by producing lupus rashes in skin exposed to sunlight. The second is by causing a general flare of lupus in other parts of the body. Avoiding sunlight and using sun-block is not always easy but can produce major benefits particularly for lupus related skin problems.

Diet

Many patients have experience of exposure to different foodstuffs affecting their lupus symptoms. However, these tend to be very particular to the individuals and are difficult to generalize. However a good healthy diet rich in fruit and vegetables is a good idea for anyone with a chronic inflammatory illness.

The Environment and Lupus - Summing up:

The exact cause of lupus remains an area of intense debate and a focus for research. The main risk factors seem to be a number of different genes and exposure to environmental factors including infections, chemicals, sunlight and smoking. There is also the suggestion that many years before the development of lupus the environment may be altering the way our immune systems develop. Research in this area will allow advice to be given to individuals with lupus and those at risk of developing it.

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