MS Increasingly a Woman’s Disease

Steady Rise in Rates of Multiple Sclerosis Seen in Women

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April 26, 2007 -- Women with multiple sclerosis (MS) now appear to outnumber men with the disease by a ratio of four to one in the U.S., new research shows.

The review of data from a voluntary MS registry suggests a steady increase in MS rates among women over time, while rates among men appear to have remained stable.

In 1940, twice as many women as men in the U.S. had multiple sclerosis. By 2000, four out of five cases were occurring among women, University of Alabama professor of biostatistics Gary Cutter, PhD, tells WebMD.
That represents an increase in the ratio of women to men of nearly 50% per decade, and it mirrors recent findings from other countries with more comprehensive MS registries, including Canada, Norway, and Denmark.

It is not clear why MS rates seem to be increasing only among women, but the observation could help researchers searching for the cause or causes of the disease, Cutter says. Some believe that environmental or viral influences early in life trigger the disease in people who are genetically predisposed toward getting it. Though there are many theories about what these triggers are, there is no proof that any of them cause MS.

MS is a disease that affects the brain and spinal cord. Experts believe that it is due to an abnormal response of the immune system attacking the myelin sheath that surrounds nerve fibers. Myelin is needed for sending nerve signals such as those that control movement. The National Multiple Sclerosis Society estimates that 400,000 Americans have MS.

**Searching for Clues**

"We have to ask ourselves, "What has been going on over the last 50 years or so that would affect women more than men?"" Cutter says.

During that time, obesity and smoking rates have increased among women, the oral contraceptive was introduced, and there has been a trend toward earlier menstruation and later childbirth. These factors influence levels of the sex hormones, and there is some evidence that sex hormones play a role in MS by suppressing the immune system.

Most women with MS have fewer symptoms of the disease during pregnancy. After delivery, symptoms often return.

The sex hormone connection is just one avenue that needs to be explored, Cutter says. He is scheduled to present findings from the study at next week's 59th Annual Meeting of the American Academy of Neurology in Boston.

**Probably No Single Cause**

"We also need to ask the general questions about what women do differently than men, such as use of hair dye and use of cosmetics that may block vitamin D absorption," he says in a news release. "At this point we are just speculating on avenues of research that could be pursued."

MS rates are highest among people living farthest from the equator, leading to speculation that vitamin D deficiency due to low sun exposure contributes to the disease. MS researcher and clinician Gary Birnbaum, MD, tells WebMD that there probably isn't any single "smoking gun" that can explain all cases of MS.

Birnbaum directs the Multiple Sclerosis Treatment and Research Center at the Minneapolis Clinic of Neurology in Golden Valley, Minn. He is also a clinical professor of
"If it were that simple we probably would have been able to figure it out by now," he says. "MS may not be a single disease. It may be a syndrome. The pathway may actually be very different for different people."


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