

MEDICAL UPDATE MEMO
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**STUDY EXAMINES EXPOSURE TO SUNLIGHT
AND RISK OF DEVELOPING MULTIPLE SCLEROSIS**

Research conducted in Australia's most southerly state of Tasmania suggests that higher exposure to ultraviolet light delivered through sunshine may reduce the risk of developing MS. The benefit appears to be linked to increased sun exposure in children and young adolescents. The result of the study, which involved 136 people with MS and 272 non-MS controls living in Tasmania, was published in the August 9, 2003 issue of the *British Medical Journal*.

Background

- Multiple sclerosis has a well-known and varied distribution throughout the world. It is more common in countries that are farther away from the equator. It also has a striking north-south gradient, i.e., MS is more common in the northern United States than in the south, and conversely, is more common in southern Australia than in the north.
- A number of environmental and genetic factors have been investigated to try to understand this variation including migration patterns and exposure to common viruses. More recently, researchers have turned their attention to the possible role of sunlight in preventing the development of MS.
- Researchers at the University of Tasmania studied sunlight exposure of 136 people with MS compared to that of 272 non-MS matched controls. They used questionnaires to ascertain the amount of time individuals had spent in the sun during the early part of their lives. Tests for sun damage to the skin were conducted to provide objective backup for possible faulty memories.
- The researchers found that people who had spent more time in the sun when they were between the ages of six and 15 were less likely to develop MS than those who had less exposure to sunlight. Having higher sun exposure during the winter months seemed particularly important.

- Sunlight delivers ultraviolet radiation, which upon coming in contact with the skin, stimulates the body to produce Vitamin D. Several studies have shown that ultraviolet radiation and Vitamin D suppress the activity of immune T cells. Several other studies involving an animal model of MS found the animal disease could be prevented or delayed by giving ultraviolet radiation or the active form of Vitamin D. MS appears to be the result of certain T cells mistakenly attacking the body's own tissues, including myelin, the vital protective cover of the central nervous system.
- While the study of sunlight exposure and MS risk in Tasmania is promising, larger studies must be conducted to determine if higher levels of sunlight or Vitamin D supplements can actually prevent the development of MS, cautioned Dr. William J. McIlroy, national medical advisor.
- It should also be noted that unprotected exposure to sunlight is linked to the development of skin cancer and premature skin aging. Not enough is known about Vitamin D supplementation in people to determine if it or heightened exposure to sunlight during childhood and early adolescence can prevent multiple sclerosis.

ASK MS Information System Code 1.4.3.8.1.g

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