

**MEDICAL UPDATE MEMO
NOVEMBER 21, 2003**

**STUDY REPORTS SMOKING
AS RISK FACTOR FOR MS**

SUMMARY

Researchers in Norway have found that the risk of developing MS is higher among smokers than in people who never smoked. The investigators administered questionnaires that covered current and previous smoking habits, including the age at which smoking started, as well as if an individual had MS and if so, when MS symptoms first started. The risk of developing MS was nearly twice as high in people who were current or former smokers compared to people who had never smoked. The average duration from start of smoking to MS symptom onset was 15.2 years. This is the second large, population-based study to find an association between smoking and risk of developing MS. A smaller, Montreal-based study also found smoking was a risk factor for MS. Further study is necessary to confirm this association and to explain the underlying mechanisms for a possible link between smoking and developing MS.

DETAILS

Researchers in Norway have reported that in a study of more than 20,000 Norwegians, the risk of developing MS was higher among smokers than people who never smoked. The study by Trond Riise, PhD (University of Bergen, Norway) and colleagues from Bergen University College and Harvard University was reported in the October 28, 2003 issue of [*Neurology*](#).

MS is believed to occur in persons who have a genetically determined predisposition for the disease. But evidence suggests that even those who are genetically susceptible may need to encounter some other factor or factors in their environment – infectious, environmental or dietary, for example – in order for MS to develop. One environmental factor that has been investigated is smoking.

Smokers have higher rates of lung cancer, heart disease, emphysema and other respiratory problems, and infants born to smoking mothers tend to have lower birth weight than infants born to nonsmokers.

Several studies have examined the association between smoking and the risk of developing MS, with mixed results. Some smaller, hospital-based studies were negative, but a recent large US population-based study of nurses found a statistically significant association between smoking and risk of developing MS. In Montreal, a small study

examined a number of factors that might be involved in the development of MS. People with MS were 1.6 times more likely to have smoked prior to their diagnosis than non-MS controls. The risk seemed to rise with an increase in the amount smoked.

In Norway, the investigators administered questionnaires and a clinical examination to 22,312 people living in Hordaland, Norway. Questions covered current and previous smoking habits, including the age at which smoking started, as well as if an individual had MS and if so, when MS symptoms first started. The development of other diseases with which smoking has also been connected (heart attack, angina, asthma) was also ascertained.

A total of 87 people reported having MS. The risk of developing MS was nearly twice as high in people who were current or former smokers compared to people who had never smoked. The average duration from start of smoking to reported onset of symptoms was 15.2 years. Separate from MS, the risk among smokers for heart attack, angina, and asthma was also increased – which, the authors say, supports the validity of the association with MS.

This is the second large, population-based study to find an association between smoking and risk of developing MS. Further study is necessary to confirm this association and to explain the underlying mechanisms for a possible link between smoking and development of MS. However, there is increasing evidence for a link between smoking and MS. Although there is no evidence from this study that past or current smoking can make MS worse in a person who has the disease, smoking is known to produce shortness of breath, susceptibility to lung infections, and heartbeat irregularities in many people. These might transform a mild or moderate neurologic limitation into a severe disability.

[Adapted from Research/Clinical Update, National Multiple Sclerosis Society (USA)]

ASK MS Information System Code: 2.3.9.d

National Research Department
National Communications & Social Action Department