

# Medical Update Memo

August 19, 2010

## Modifiable factors influencing relapses and disability in multiple sclerosis.

### Summary

Using a literature review, researchers from Belgium and the Netherlands have summarized the information about factors associated with reducing relapse rate and disability in multiple sclerosis. D'hooghe MB, Nagels G, Bissay V, De Keyser J., *Mult Scler.* 2010 Jul;16(7):773-85. Epub 2010 May 18.

### Details

A growing body of literature indicates that the natural course of multiple sclerosis can be influenced by a number of factors. Strong evidence suggests that relapses can be triggered by infections, the postpartum period and stressful life events. Vaccinations against influenza, hepatitis B and tetanus appear to be safe. Surgery, general and epidural anaesthesia, and physical trauma are not associated with an increased risk of relapses. Factors that have been associated with a reduced relapse rate are pregnancy, exclusive breastfeeding, sunlight exposure and higher vitamin D levels. A number of medications, including hormonal fertility treatment, seem to be able to trigger relapses. Factors that may worsen progression of disability include stressful life events, radiotherapy to the head, low levels of physical activity and low vitamin D levels. Strong evidence suggests that smoking promotes disease progression, both clinically and on brain magnetic resonance imaging. There is no evidence for an increased progression of disability following childbirth in women with multiple sclerosis. Moderate alcohol intake and exercise might have a neuroprotective effect, but this needs to be confirmed.

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