

Smoking and MS

Exposure to cigarette smoke increases your MS risk. Smoking increases your risk of developing MS – both as a smoker and through passive smoking. Life-time MS risk is increased by exposure to smoking during childhood.

Smokers are more likely to progress from relapsing-remitting to progressive MS than non-smokers and have higher levels of long-term disability. Smoking with clinically isolated syndrome (CIS) are more likely to be diagnosed with MS in the future than non-smokers. Smoking may also reduce how well your disease-modifying medications work. It's not too late. Stopping smoking can lower your relapse rate, reduce symptoms and their severity, and delay the onset of progressive MS.

Key Data

Two billion people on the planet smoke cigarettes. That means that more than one in four people smoke. Eight million people die of smoking each year. The proportion of people with MS who smoke is higher than the proportion of the general population who smoke. People who smoke have up to 50 % higher risk of developing MS than those who do not.

Tobacco smoking

N.B Smoking in this article refers to cigarette tobacco smoking, unless otherwise stated.

There are three forms of exposure to smoking: (1) primary smoking, when you yourself smoke; (2) second-hand smoke exposure, when you inhale the smoke of people close by; and (3) pre-natal exposure to smoking, where the fetus is exposed to the effects of smoking by the mother.

Smoking kills more than eight million people every year. Smoking drastically increases the risk of heart disease, lung cancer, and stroke. Smoking tobacco releases diverse types of toxic molecules into the human body which cause lung irritation and reduce the body's ability to repair damage. It also generates an inflammatory response in lung cells. In other words, smoking creates an inflammatory environment in the body. For persons with MS, additional inflammation is exactly the opposite of what one would want. Further, smoking leads to lung disease, cardiovascular disease including heart attack and stroke, and reduces exercise tolerance. All of these co-morbid health concerns reduce the health and function of persons living with MS, as well as lowering life expectancy.

Smoking and MS

Exposure to smoking increases the risk of developing MS compared to the general population. People who smoke have a 50 % higher risk of developing MS than those who do

not. The risk of developing MS in smokers may be proportional to the number of cigarettes smoked. Scientists refer to this as a 'dose-dependent effect'. Similarly, studies suggest that the longer you are exposed to passive smoke, the more the risk of developing MS may go up. Tobacco smoke exposure during childhood is associated with MS risk, with children growing up in homes with smokers having an increased risk of MS onset in childhood or in adulthood.

Please note: most of the studies examining risk of MS have been carried out using Swedish registries. This means that it is difficult to extrapolate these findings to populations that are not of Northern European descent.

Effect of smoking on disease activity and progression

Smoking has adverse effects on MS disease activity and progression.

Studies show that people who have relapsing-remitting MS and smoke are at higher risk of developing secondary progressive MS (SPMS) – up to eight years earlier than those who do not smoke.

Compared to non-smokers, smokers may have more severe MS symptoms. Some of the symptoms that can be intensified by smoking include fatigue, pain, cognition (such as memory and thinking), control of muscles or muscle weakness, worsened hand or arm movement, balance and visual loss.

Using brain scanning technology such as MRI (magnetic resonance imaging), studies have found that people with MS who smoke have a higher rate of brain atrophy than non-smokers, and may also have more enhancing lesions, which are a sign of active disease.

The effects of smoking on MS treatment

A limited number of studies exist describing the impact of smoking on the effectiveness of disease-modifying therapies. Smoking has been associated with the development of neutralizing antibodies to interferon-beta and natalizumab, which in turn reduce the effectiveness of those therapies.

Smoking and pregnancy

Women who are trying to get pregnant or are pregnant should stop smoking and should avoid being in rooms with smokers. There is overwhelming evidence that both active smoking and second-hand smoke exposure damages the fetus. Exposure to smoke increases the risk of stillbirth and premature birth. Some studies also suggest that maternal smoking is associated with birth defects.

It is not known whether women with MS who smoke have a greater risk for poor pregnancy outcomes compared to women who smoke but do not have MS.

Vaping

The use of electronic cigarettes or e-cigarettes, also known as vaping, is becoming increasingly popular. It is often branded as 'a healthier option' but there is lack of both research and regulatory guidelines on it. Some studies have found that vaping could irritate

the lungs or damage cells in your body. Both of these might have a negative effect on MS. An alternative to help quit smoking may be nicotine replacement products such as chewing gum and nicotine patches.

Cannabis smoking

There is very limited evidence on the effects of cannabis smoking and MS. Although some governments permit the use of certain cannabis-derived medicinal products to relieve some MS symptoms, for instance spasticity, this is not the same as smoking cannabis.

There is an increasing amount of evidence of the damaging effects of cannabis smoking on lung function, and people should be warned of these risks – especially those who mix cannabis with tobacco.

Benefits of stopping smoking

1. Stopping smoking reduces the impact of MS
2. Stopping smoking reduces risk of progressive disability,
3. Stopping smoking reduces health care needs, hospital visits and enhances overall health
4. Stopping smoking reduces the risk of cardiovascular disease, pulmonary infections, or cancer – all of which add to the impact of MS
5. Smoking is expensive and reduces available funds for other healthier activities or for therapies

What our members say about smoking

These pages from our members include additional information about smoking and MS, along with local support groups to help quit smoking.

[UK MS Society](#)

[Italian MS Society \(AISM\)](#)

[National MS Society \(USA\)](#)

[MS Australia](#)

[Spanish MS Society \(EME\)](#)

[MS Society Canada](#)