

Smoking and IBD

Introduction

If you have Inflammatory Bowel Disease (IBD), which includes Crohn's Disease and Ulcerative Colitis (UC), the effects of smoking are quite different in the two conditions. People with Crohn's are more likely to be smokers. In contrast, people with UC tend to be non-smokers or people who have given up smoking. This information sheet looks at the evidence for the opposite effects of smoking on these two conditions and what it means for people with IBD. It also looks at ways to help if you wish to give up smoking.

Smoking and Crohn's Disease

There have been numerous studies in many countries on the relationship between smokers and Crohn's Disease. In almost all of them, half or more of adults with Crohn's smoke. Compared with a non-smoker, the smoker has at least double the chance of getting Crohn's. Women appear more at risk: one study found a 5-fold increased risk for women smokers; the risk is increased for men but not as much.

However, researchers have not found a link with smoking amongst Jewish people, who have a strong genetic tendency to develop the condition. It has been suggested that this may be because the genetic tendency is so strong that the trigger of smoking is not necessary.

A recent study funded by NACC showed that disease location was a significant factor. Smokers tended to

have Crohn's disease more frequently in the small intestine (small bowel) rather than the colon (large bowel). Fundamental differences in the functions of the small and large bowel may explain why smoking has a different effect on different parts of the bowel. We need further investigations to understand what is involved.

How does smoking make you susceptible/prone to Crohn's?

We do not know, although there are lots of theories. It may be that nicotine alters the way blood flows through the gut; alters the make-up of fluid given off by the bowel; directly inflames the lining layers of the bowel; or affects the function of the immune system.

What about the risk of passive smoking?

A recent study in the USA found that people with Crohn's Disease were more likely to have had mothers who smoked during pregnancy and to have been exposed to smoking at home during childhood. An earlier, smaller Scottish study in 2005 of children who developed IBD had similar findings regarding pregnancy, though did not find any risk during childhood. Researchers in this study believed that it was the early exposure that was significant. They found that fathers as well as mothers of these children more commonly smoked during pregnancy and around the time of birth. These studies suggest that there may be a risk of developing IBD when children and unborn babies are exposed to passive smoking.

Is Crohn's more severe in smokers?

The research shows that smoking makes Crohn's worse if you have small bowel disease. Smokers have more severe symptoms, more likely requiring stronger immunosuppressant drugs, and a poorer quality of life. In one American study, the number of days that people felt symptoms was much less in non-smokers - 5 days per month rather than 15. Smokers have a greater chance of needing surgery than non-smokers. Also, if people have had surgery for Crohn's, the chances of needing another operation over the following few years is nearly twice as high in smokers.

Smoking also reduces the effectiveness of some treatments for Crohn's Disease, including the biological drug, infliximab.

The picture is different if you have Crohn's in the colon. In this case smoking may have the same effects as in Ulcerative Colitis (see below). Studies have shown that people with Crohn's Disease of the colon were less likely to develop any complications or to need surgery. Further research into the genetics of IBD may help to explain these differences.

If I am a smoker now, does giving up improve my outlook?

The answer seems to be yes. In the non-smoker, Crohn's disease seems milder. In a French study, amongst those who gave up smoking the chances of needing surgery were less than in those who continued. There was less need for some of the stronger forms of medical treatment such as immunosuppressant drugs. After giving up smoking, the chance of a relapse is probably as low as for a non-smoker.

Smoking and Ulcerative Colitis

Surprisingly, the situation is quite different for Ulcerative Colitis (UC). Most people with UC do not smoke;

only about 12% of adults with UC smoke. Research studies have found that some people develop UC when they have been smokers and then give up. This suggests that smoking has a protective effect in UC. A recent study of 499 UC patients found that a large proportion of them, especially ex-smokers, were not diagnosed until after the age of 50. The ex-smokers smoked more heavily and for a longer period before stopping than current smokers. Current smokers were also lighter smokers at diagnosis. This indicates a possible threshold of protection of smoking: the more heavily you smoke the more protection you may have. This may explain why women who smoked were diagnosed at a younger age as they may smoke less than men. On the other hand, researchers suggest that smoking may be less protective in women than men because of some hormonal influence.

It may be tempting to continue or to take up smoking to help your UC. It is important to remember that by smoking you would be at increased risk of chronic bronchitis, lung cancer, other cancers and heart diseases. Health professionals consider the risks of smoking to people's health far outweigh any benefits seen in UC and strongly discourage smoking in all people whether they have IBD or not. There are many treatments much safer than smoking which could be explored. See NACC's booklet: *Drugs used in IBD*.

Can nicotine treatment help UC?

There have been a good number of studies on the effects of nicotine patches or chewing gum in treating Ulcerative Colitis. The results have been fairly consistent. For mildly or moderately active UC, nicotine patches or gum do help. In a UK study, compared with a dummy preparation, over half of the people who were given nicotine improved markedly over six

weeks, compared with less than a quarter on the dummy. Similar findings were seen in a study published in the USA. However, not everybody could tolerate nicotine. Nearly 10% could not put up with side effects – nausea, light headedness, headache or shakiness. Also, although nicotine seemed to help in active disease, it did not seem to help when it was given as maintenance therapy: taking it continuously to prevent flare-ups.

So while nicotine may help to treat UC, it may not be as effective as drug treatment. For example, one study has shown it is not as effective as prednisolone for treating active disease. Nicotine is just one of over 4,700 compounds in cigarette smoke and many of these compounds may also have an effect on the immune system. You could discuss nicotine treatment for your UC with your specialist doctor or nurse.

How can I give up smoking?

It is a good idea to talk to your doctor first. The NHS has set up a programme to help people stop smoking. Nicotine Replacement Therapy (NRT) which includes patches, gum, lozenges and inhalers, as well as medicines (bupropion or varenicline), are used to manage the withdrawal symptoms you get when you stop smoking. The NHS also offers local support groups and trained advisers. Research has found that a combination of NRT, medication and counselling is more effective than a single approach.

Further help

If you have any further queries please call the **NACC Information line** on **0845 130 2233** or email: nacc@nacc.org.uk.

NACC-in-Contact

☎ **0845 130 3344**

**weekday afternoons 1-3.30pm
and evenings 6.30-9pm.**

A supportive listening service run by trained volunteers who have IBD or a relative with IBD.

NHS Free Smoking helplines:

England & Wales: 0800 169 0 169

Northern Ireland: 0800 85 85 85

Scotland: 0800 84 84 84

Website: www.givingupsmoking.co.uk

QUIT

211 Old Street, London EC1V 9NR

Website: www.quit.org.uk

Quitline: 0800 00 22 00

A charity to help people stop smoking.

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We hope that you have found the information helpful and relevant. We welcome any comments from readers, or suggestions for improvements. Please send your comments to Helen Terry at NACC, 4 Beaumont House, St Albans, Herts AL1 5HH – or email h.terry@nacc.org.uk

The National Association for Colitis and Crohn's Disease (NACC) is a voluntary Association, established in 1979, which has 30,000 members and 70 Groups throughout the United Kingdom.

Membership of the Association costs £12 for the first year and £10 subsequently. Additional donations to help the work of the Association are always welcome.