

Resource

## Smoking

Many are aware of the negative effect smoking has on overall health but may not know how it impacts on RA. It can make people more susceptible to developing RA, can worsen RA symptoms and make the medication less effective.

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Smoking is widely accepted to have an adverse effect on health and is known to cause heart attacks, strokes, cancer, chronic obstructive pulmonary disease (COPD) and more. However, many people are not aware of the negative effect smoking has on rheumatoid arthritis (RA). So, how does smoking affect RA? This can be answered in three parts:

## 1. Smoking makes people more susceptible to developing RA

The exact cause of RA is not clear, but it is thought to be due to a number of reasons, including genetic and environmental factors. One of these environmental factors is smoking, and many studies have shown that smoking is a risk factor for developing RA. This risk relates to both the number of cigarettes smoked per day and to the number of years someone has smoked. Importantly, even light intensity smoking (for example, smoking 1 to 7 cigarettes a day) significantly increases the risk of developing RA. The risk of RA decreases over time from smoking cessation; however, this risk remains higher compared to non-smokers, even among those who stopped smoking over 15 years previously. Cigarette smoking is associated with the production of rheumatoid factor and anti-CCP antibodies; these are both specific and sensitive antibodies that increase the risk of developing RA. The risk of RA persists even after 20 years of smoking cessation in those who have anti-CCP antibodies.?

## 2. Smoking makes symptoms of RA worse

Smoking is associated with more severe RA, for example, more active disease, more joint damage (leading to joint deformities and loss of function), and more RA disease outside the joints, such as nodules, inflammation of the blood vessels (known as vasculitis), or rheumatoid lung disease. This may be because smoking is associated with the production of anti-CCP antibodies which in turn predicts more aggressive RA.

Additionally, patients with RA are at an increased risk of heart disease and strokes. Smoking only compounds this risk, putting people with RA at an even greater risk of cardiovascular disease and death.?

## 3. Smoking makes RA medication less effective

Evidence shows that those who smoke are less likely to respond to both first and second-line treatment used in RA (methotrexate and TNF inhibitors respectively). This suggests that smoking weakens the potency of anti-rheumatic drugs and/or drives more active disease. Additionally, it is possible that those with RA who smoke are less likely to go into remission compared to non-smokers.

What about passive smoking and vaping?

Exposure to passive smoke does not seem to increase the risk of developing RA. However, there is a suggestion that exposure to passive smoke in childhood may increase the risk of RA in future light smokers and even non-smokers.

The use of e-cigarettes and vaping are not completely risk-free, but there is no strong evidence demonstrating a relationship between vaping/e-cigarettes and the risk of RA.

So you want to stop smoking?

Clearly, with all the evidence provided above, stopping smoking is one of the best things you can do to improve your health. The hardest part is deciding you want and feel ready to stop smoking, but there is a lot of advice and support available to help you when you do.

For support you can contact:

- Your GP or practise nurse, or discuss it at a well person check-up
- Your rheumatology consultant and nurse specialist
- Your local smoking cessation service
  
- Your local pharmacist?

Useful websites for information:

[NHS Smoke-Free](#)

[Patient.co.uk information on smoking cessation](#)

[NHS Choices information on quitting smoking](#)

References available on request

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## Read more

### [Study shows smoking and being overweight affect RA](#)

A study in Canada has shown that being a current smoker or being overweight or obese negatively affects RA symptoms over time.

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