

## The Immune Defence Study

### Plain English Summary

**The study found that advice to use commonly available nasal sprays (at the first sign of a cold, cough or flu) reduced days of illness. The two sprays used were Vicks First Defence and a salt water spray. Our study showed that both the sprays and a website designed to help people get more active and manage stress led to less severe illness and less antibiotic use.**

### What was the Immune Defence study about?

Most people in the UK will get a cough, cold, sore throat or flu each year. People who already have a health problem can become very unwell if they catch these illnesses. The aim of this study was see the impact of common nasal sprays, or helping people to get more active and reduce stress.

### Who took part?

People could take part if they normally had lots of infections each year. They could also take part if they were at higher risk if they did get an infection: this included heart disease, asthma, diabetes, stroke, obesity, or aged over 65 years. People were invited to take part by their GP practice between December 2020 and April 2023.

A total of 13,799 people agreed to take part and were put equally into 1 of 4 groups:

- **Usual care group:** people were given brief standard NHS advice about managing infections
- **Website group:** to help people get more active and lower stress
- **Vicks First Defence (“Gel-based nasal spray”)**  
OR
- **Saline (salt water) (“Liquid-based nasal spray”):**  
People were asked to use the spray up to 6 times per day at the first signs of infection. They were also asked to use it when around lots of people who might have an infection, or when in close contact with someone who was unwell.

## What did we find?

**Days with illness:** People in the nasal spray groups had fewer days of illness over 6 months. People in the usual care group who had an infection were unwell for 15 days, but this was reduced to 14 days for the website and 12 days for the nasal spray groups.

**Number of infections:** We found that 5% fewer people in the website group had an infection during those 6 months than the usual care group.

**Other important findings:** People in both sprays and website groups also had fewer days with severe symptoms. This means that they were able to get back to work or their normal activities more quickly, and they used fewer antibiotics.

**Adverse events:** We found that almost twice as many people in the Vicks First Defence group reported a headache than in the other groups (8% compared with between 4 and 5%).

## Why is this important?

In summary, a website to help people get more active and manage stress resulted in fewer infections. Using nasal sprays reduced days of illness, and both the sprays and the website reduced more severe illness and antibiotic use.

The finding of less antibiotic use is very important, because antibiotic resistance - where over-use results in some infections not responding to antibiotics - is a growing worldwide problem.

If these simple interventions were more widely used, patients would benefit, winter pressures in the NHS could potentially be reduced, and we would have a useful weapon in the battle against antibiotic resistance.

## Where can I get the nasal sprays and access to the website?

Vicks First Defence and saline nasal sprays can be purchased over the counter in pharmacies and supermarkets. You do not need a prescription.

You can find the website to help you get more active and manage stress here:

<https://immunedefence.lifeguide.site/>

## Where can I find out more?

You can read more details about these results here:

[https://doi.org/10.1016/S2213-2600\(24\)00140-1](https://doi.org/10.1016/S2213-2600(24)00140-1)