A SIMPLE SOLUTION TO THE COMMON COLD

IT'S BEEN RIGHT UNDER OUR NOSES

- Boosts the nose's natural antiviral defence
- Speeds recovery by up to 3 days
- 30% fewer antibiotics
- Saves the NHS over £50 per patient
- Eases winter pressures on the NHS

Nasal Saline Sprays: An Evidence-Based, Low Cost Method of Reducing Winter Health Pressures

Summary

Saline nasal sprays can provide a safe, evidence-based, and cost-effective method of reducing the severity and impact of respiratory infections. Their widespread adoption has the potential to reduce the burden of winter viral illnesses, decrease unnecessary antibiotic use, relieve pressures on the NHS, and support the delivery of national prevention and anti-microbial resistance priorities.

The NHS Challenges

Each winter, seasonal respiratory tract infections such as influenza, respiratory syncytial virus (RSV), and rhinoviruses create huge pressure on NHS services. These viral infections primarily originate in the nasal mucosa, where viruses begin to replicate and then spread throughout the respiratory system. Antibiotics are commonly prescribed, even though they are ineffective against viral infections, and their unnecessary use contributes to the growing challenge of antimicrobial resistance (AMR), which poses a substantial threat to public health.

Given these challenges, there is a clear and urgent need for interventions that are effective, affordable, and accessible. Such interventions should aim to lessen the severity and duration of RTIs, reduce the inappropriate use of antibiotics, and help alleviate the demand on both NHS and social care services during the winter months.

The Mechanism: Why Saline?

Saline (sodium chloride solution) provides a targeted approach at the site of infection, the nasal passages. The mode of action is based on enhancing the body's natural antiviral defences. Laboratory investigations have demonstrated that chloride ions present in saline allow nasal cells to produce hypochlorous acid, a substance that directly inhibits the replication of viruses.[1]

The Evidence from Clinical Trials

The effectiveness of saline nasal sprays has been evaluated in robust clinical research, most notably the Immune Defence Trial published in Lancet Respiratory Medicine in 2024 [2]. This large scale study included 13,799 adults who either experienced three or more RTIs per year or were identified as being at higher risk from respiratory infection. Participants were randomly assigned to one of four groups: usual care, isotonic saline spray, antiviral spray, or a wellbeing programme. Saline and antiviral sprays were used up to six times per day, either at the first sign of infection or following exposure.

The key findings from this six-month trial period were that saline spray resulted in:

- **Shortened duration of illness (12 days compared to 15 days in the control group)**
- **Less severe illness and less impact on normal activities or work**
- **A 30% reduction in antibiotic use**
- **Cost savings to the NHS of over £50 per patient**

This robust evidence for saline is further supported by a feasibility trial of homemade hypertonic nasal saline irrigation and gargling in 68 adults and of saline nose drops in 407 children [3, 4]. Both of these trials showed saline solutions resulted in shorter illness duration (2 days less) and less transmission of illness to household contacts and also demonstrated that saline solutions can be safely made up at home.

Public Health Impact

Widespread use of saline nasal sprays has several major potential public health benefits:

- **Reduction in the duration and severity of viral respiratory tract infections**
- **Lower antibiotic prescribing rates, supporting efforts to combat anti-microbial resistance**
- **Alleviation of pressures on primary care services and hospitals**
- **Enhanced resilience within the healthcare workforce**
- **A way for people in the community to take control of common viral infections and reduce the impact on their lives**

Policy and Practice Implications

To maximise the benefits of saline nasal sprays, several practical and policy-oriented steps are recommended:

- **Incorporate saline sprays into NHS winter preparedness strategies and acute respiratory infection pathways**
- **Encourage their use through community pharmacies and targeted public health campaigns**
- **Ensure alignment with DHSC acute respiratory infection priorities, the national antimicrobial resistance strategy, and broader prevention objectives**

References:

1. Ramalingam, S., et al., Antiviral innate immune response in non-myeloid cells is augmented by chloride ions via an increase in intracellular hypochlorous acid levels. Sci Rep, 2018. 8(1): p. 13630.
2. Little, P., et al., Nasal sprays and behavioural interventions compared with usual care for acute respiratory illness in primary care: a randomised, controlled, open-label, parallel-group trial. Lancet Respir Med, 2024. 12(8): p. 619-632.
3. Ramalingam, S., et al., A pilot, open labelled, randomised controlled trial of hypertonic saline nasal irrigation and gargling for the common cold. Sci Rep, 2019. 9(1): p. 1015.
4. Cunningham, S., et al., Abstract no: OA1985 "A randomised controlled trial of hypertonic saline nose drops as a treatment in children with the common cold (ELVIS-Kids trial)"; Presented in session "Advancements in paediatric infectious respiratory health" at 15:45–17:00 CEST on Sunday 8 September 2024. 2024: 2024 ERS Congress.

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Transforming Lung Health. Together.

Sometimes the most powerful solutions are the simplest.

Safe. Affordable. Proven. Saline nasal sprays can shorten symptoms by up to three days, reduce the impact of illness and cut antibiotic use by 30%. Used early, they will ease winter pressure on the NHS and save over £50 per patient.

How does saline spray work?

The salt supports your nose's natural defences; its cells use chloride from the saline to make hypochlorous acid, a natural antiviral that boosts your immune system and stops viruses multiplying.

Make saline your first step this winter.

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