

Decongestants and your nose

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ENT North

Rhinitis medicamentosa is a condition of your nasal passages caused by long-term use of nasal decongestant sprays. There are a large number of these on the market, under various brands (e.g. Sinex, Logicin, Afrin, Otrivin, Sudafed nasal sprays, and many more).

Essentially, what happens when you use these sprays is they cause sudden and dramatic changes in blood flow to the lining of your nose. This causes the lining of your nose to shrink back, opening the nasal passages and making it suddenly easier to breathe through the nose. This can be fantastic in the short term if you have a cold, severe allergies, or another reason that the lining of your nose is swollen.

However, once you use them for more than ten days, they cause unhelpful changes in the lining of your nose. Although they still cause the lining to shrink back when first used, this effect lasts for shorter and shorter periods of time. In addition, when they wear off, the lining becomes more and more swollen. This is thought to be due to a combination of more blood coming back into the nose ('rebound hypervascularity') and swelling of the tissues between the blood vessels ('tissue oedema'). The combination of these effects is what is known as 'rebound nasal congestion', or 'rhinitis medicamentosa'.

The end result is a nose that is more and more blocked, that often starts to feel painful/irritated, and you might start having small volume nose bleeds. The only thing that fixes the blockage is the spray causing the problem in the first place. **Effectively, think about it as your nose being addicted to the spray, despite the harm it is causing.**

What causes this 'rebound congestion'?

There are two important parts of your decongestant sprays that can cause rhinitis medicamentosa:

- **The active ingredient** (e.g. phenylephrine, oxymetazoline, xylometazoline): these stimulate naturally occurring hormonal receptors in your nose to cause blood vessels to constrict. This shrinks back the lining of the nose and makes it easier to breathe. With repeated use, there is a decrease in the number of these receptors, and a change in the structure of the lining of the nose, which make the sprays less effective and the nose more congested.
- **Benzalkonium chloride** is a commonly used preservative in nasal sprays, and is present in many nasal decongestants. It's there because it stops the bacteria in your nose breeding in your spray bottle after you've used it. It's been shown that in combination with the above agents that rhinitis medicamentosa will occur after a much shorter period of exposure, and the benzalkonium itself can lead to damage to the nasal lining if used for a prolonged period of time.

Solving the problem

The only solution to the problem is to **completely cease** the nasal decongestant sprays. You need to go through your house, car and workplace, gym bag, wherever you keep a bottle 'just in case' and throw them out.

It's important to know that your nose **will** become more congested for about one-two weeks, then return to its normal baseline.

This period can be made less uncomfortable by using medications during this time that decrease inflammation and swelling in the nose. These can include:

- Saline rinsing, either with 'isotonic saline' ([see our recipe sheet online](#)) or 'hypertonic saline'. The latter may be slightly more effective in decreasing the swelling in the nasal passages than isotonic saline, but only slightly so. To make this, triple the amount of salt you add to each litre of water from that outlined in the recipe, and increase the bicarbonate of soda enough to minimize any stinging that results.
- Topical steroids (Nasonex, Rhinocort, Pulmicort etc). Use at the maximum dose advised for about two-three weeks when you stop your decongestant sprays.
- Oral steroids (cortisone, prednisolone), prescribed by your doctor. These are highly effective in reducing the period of increased nasal congestion, but have significant side effects your doctor will need to discuss with you.

Managing ongoing nasal symptoms after you've stopped the sprays

There is usually an underlying reason that people start the spray in the first place. This might be allergies in the nose ('hay fever'), a prolonged cold, sinus disease, or hormonal changes affecting the nasal passage (such as pregnancy). If these are present, there are effective treatments available which do not have these side effects. Unfortunately, your GP or ENT surgeon will not be able to treat your underlying condition effectively until you are no longer using the decongestant sprays.

Many people who have been using decongestant sprays long term will actually find that their nose is perfectly healthy once they have recovered from this period of rebound congestion, and no further treatment is needed. For the remainder, the underlying cause can then be identified and effectively treated.

Surgery and nasal decongestant sprays

It's important to know that people who have surgery while using nasal decongestants bleed **a lot** during their operation. Best-case scenario, your surgeon will still be able to complete your surgery, however often they will need to stop your surgery early, and there is considerably more risk of complications to you, including life-threatening bleeding. Even if your surgery is successful from a technical perspective, your nasal symptoms will continue if you continue to use your sprays.

It is important that you are honest with your doctor about your use of these sprays if surgery is planned, so these risks can be managed, and your nasal symptoms can actually be effectively treated.

Using decongestants again in the future

It's also important to know that if your nose has become addicted to decongestants in the past, and you've successfully withdrawn from them, that if you use them again in the future that your nose will become addicted much more quickly – changes are seen as early as a few days later rather than the usual ten or more.