**Topical Steroids**

Steroids are substances that our body naturally produces. As medicines they have anti-inflammatory properties which are used in the treatment of rhinosinusitis. They can be given in both a topical (nasal spray) and systemic (pill) form. Steroids help prevent and decrease swelling of the lining of the nose and sinuses. They also help to decrease the size of polyps and may prevent them from recurring once they have been removed. Because steroids can also decrease the immune response, there are certain risks associated with their use.

**Topical nasal steroid sprays**

*Introduction:* Nasal steroid sprays (Flonase®, Nasocort®, Rhinocort AQ, Nasonex®, etc) deliver the medicine directly to the lining of the nose. Because this dose affects the lining of the nose directly but in small quantities, the adverse effects on your body are minimized. For this reason, topical nasal steroids are generally safe and effective medications to reduce nasal swelling/congestion and polyps in patients with and without allergies. Studies from Europe indicate that steroid sprays are very safe even after many years of continued use. However, they should not be abused by taking more than the recommended dose. At the first signs of a cold or flu stop the nasal steroid spray for until the acute phase subsides.

*Dosing:* Topical nasal steroids do not produce the immediate relief of nasal congestion achieved through topical nasal decongestants. Occasionally they require weeks of regular use before any therapeutic effect is noticeable. These sprays will not work well if they are used sporadically. Because of this, you should develop a routine that ensures that you will use the sprays as prescribed by your physician (i.e., placing the spray next to your alarm clock or toothbrush so that it becomes part of your daily routine).

*Proper Administration:* The spray bottle tip should be placed into your nose just past the hairs of your nostril. The nozzle should not scuff the lining of the nose if at all possible. Once the spray is pumped into the nostril, a gentle sniff in assures it does not come back out of your nose. Do not sniff in forcefully or you will inhale the medicine into your throat where it will not be effective. It is important to leave your nose feeling stuffy or wet from the medication for about 3-5 minutes. At which point you can sniff in forcibly to clear your nose or you may gently blow the residuum.

*Adverse reactions:* Nasal steroids may have some local effects on the lining of the nose such as nasal drying, crusting, and bleeding. More extensive local effects such as nasal septal perforations are rare but may occur if the preparations are used more frequently than recommended or improperly by scuffing the nose with the spray tip. Nasal steroids may also produce irritation of the throat. Although steroid nasal sprays usually do not carry the same risks that systemic (oral) steroids do, some of the same serious side effects can occur if they are used in significantly higher-than-recommended doses (see Systemic Steroids). We recommend an annual ophthalmologic.
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examination if you are on nasal steroids for prolonged periods, as there is a theoretical risk of cataract formation or unmasking your tendency towards glaucoma.

Topical steroid drops

**Introduction and Dosing:** Steroid drops (Dexamtethasone Ophthalmic® 0.1%) prepared to be used ophthalmically (in the eyes) can be used in the nose if higher concentrations of steroid would be beneficial more superiorly in your nose. These drops are generally used twice a day, instilling three drops into each nostril. They should be instilled using the head upside down position.

To do this you should be lying on your stomach leaning forward over the edge of your bed with the top of your head touching the floor. This can be very hard for some to do but the more upside down your head is the more effective this treatment can be (see attached diagram). An alternate position is kneeling with your forehead on the floor. This tends not to be as effective. Once your head is upside down, instill the drops as prescribed. It is helpful to have another person place the drops in your nose, but it is not necessary. You may purchase an eye dropper and mark the dropper on the glass for the amount of medicine you must deliver. After the drops are instilled, remain in this position for 2-5 minutes. Afterward, be sure to lie flat for one minute, and then sit upright gradually to avoid becoming dizzy or lightheaded.

**Adverse reactions:** Although ophthalmic steroid drops are prepared to be instilled in the eye, there are no known additional risks with intranasal use. When they are used as eye drops they drain into your nose through your tear duct anyway. However, this use of the medicine is not approved by the Federal Drug Administration (FDA) for use in the nose. Adverse effects are the same as with nasal steroid sprays, except there may be less risk of septal perforation (see above). **At the first signs of a cold or flu stop the nasal steroid spray for until the acute phase subsides.**