

## Sinusitis and allergy

Sinusitis is an inflammation of the nasal sinuses. It may be a short-term, acute inflammation caused by bacterial infection following an infection such as the common cold. However, sinusitis can sometimes be a long term, chronic condition, complicated by allergies and/or structural problems in the nose, which can greatly affect quality of life.

### What are sinuses?

The sinuses are hollow cavities within the skull, situated in the forehead, cheeks and between and behind the eyes. They are connected to the nose through small tunnels that are little wider than a pinhead. Nasal sinuses are located within the cheeks, around and behind the nose. It is believed that their main function is to warm, moisten and filter the air in the nasal cavity. They also play a role in our ability to vocalise certain sounds.

Blocked sinuses can be due to untreated allergy, colds or polyps (growths on the sinus linings) and often cause pain in the face. Blocked sinuses also create an environment that favours the overgrowth of bacteria, in a similar way that algae grows in stagnant water.

### Colds and allergies are the main risk factors for developing sinusitis

Sinusitis is an inflammation of the nasal sinuses, commonly caused by bacterial infection following a viral infection such as the common cold. Other risk factors for developing sinusitis include untreated allergies, crooked nasal anatomy, smoking, nasal polyps and overuse of decongestant nasal sprays.

### Sinusitis can be acute or chronic

There are two types of sinusitis:

- **Acute sinusitis** - an infection lasting for up to 3 weeks, caused by bacterial infection in most cases, and usually occurring as a late (secondary) complication of a viral respiratory infection such as the common cold, or as a result of untreated allergies.
- **Chronic sinusitis** - an infection lasting more than 3 weeks may also be caused by bacterial infection, but more often is a chronic inflammatory disorder similar to bronchial asthma. Chronic sinusitis can last for months or years if inadequately treated. Allergies, structural problems or immunological problems may lead to chronic sinus infections.

### There are many symptoms and signs of sinusitis

The signs and symptoms of sinusitis vary depending on the level of severity of the inflammation and which sinuses are involved. Only a few or all of the following symptoms and signs may be present:

- Thick, green or yellow coloured mucus from the nose or down the back of the throat
- Loss of sense of smell or taste
- Bad breath/bad taste in the mouth
- Sore throat/cough
- Tiredness
- Temperature or shivers (fever)
- Facial congestion (a feeling of fullness) and pain
- Headache/toothache

- Sensation of pressure that is worse with leaning forward
- Obstructive sleep apnoea
- Post nasal drip

It is important to consult your doctor promptly if these signs or symptoms develop.

### How is allergy a risk factor for developing sinusitis?

Allergy can cause chronic inflammation of the sinus and mucus linings. This inflammation prevents the usual clearance of bacteria from the sinus cavity, increasing the chances of developing secondary bacterial sinusitis. If you test positive for allergies, your doctor can advise on appropriate measures and/or prescribe medications to control them, thereby reducing the risk of developing a sinus infection.

### Environmental irritants may increase symptoms

People with sinus problems and allergies should avoid environmental irritants such as tobacco, smoke and odours, which may increase symptoms.

### Effective treatment depends on correct diagnosis

Even if there are symptoms, infection is not always present. To confirm diagnosis, your doctor will usually take a medical history, conduct a physical examination and if necessary, order appropriate tests. These tests may include allergy tests (skin prick tests or blood allergen specific IgE tests) and X-rays of the sinuses.

### Sinusitis versus rhinitis

Although many symptoms are similar, it is important that sinusitis is not mistaken for rhinitis. Rhinitis is an inflammation of the mucus membrane of the nose, not the paranasal sinuses. It is often caused by allergies (allergic rhinitis, commonly referred to as hay fever), increased sensitivity to irritants such as smoke, temperature changes or the overuse of decongestant nasal sprays. Poorly controlled rhinitis can, however, lead to sinusitis.

### Early treatment can reduce the need for medications

Around half of all sinus infections will resolve without antibiotics. In people with frequent infections it is important to treat the underlying problems, such as allergy. It is also important to treat symptoms promptly, as soon as they are noticed, which will often prevent the need for antibiotics.

Examples of treatments include:

- **Steam inhalations** - use a bowl of hot water with a towel over your head. This will help to thin the mucus and make it easier to drain
- **Salt water irrigation of the nose** - use a commercial preparation (spray or douche), or a syringe or empty nasal spray container filled with saline (bought commercially or made with 1 litre of hot water, 2 teaspoons of salt and 1 teaspoon baking soda/sodium bicarbonate - allow to cool before using). Whichever preparation is used, it is important to tilt your head to the right for 10 seconds and then to the left for 10 seconds, and then pinch the nose and lean forward for 10 seconds. This will assist in nasal drainage
- **Antibiotics** - if symptoms persist, appropriate antibiotics should be prescribed for an adequate duration (generally 10-14 days for acute sinusitis and 3-4 weeks for chronic sinusitis)
- **Surgery** - in patients with persistent disease, despite adequate medical treatment, surgical removal of disease tissue, polyps and/or drainage of sinuses may be required

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