

Sinusitis

What is it?

Sinusitis or sinus infections are an inflammation of the mucosal lining of one or more of the sinuses. The sinuses are air cavities in the bones of the skull and face, which connect with the nose through small openings. There are four pairs of sinuses: the frontal sinuses sit above the eyes in the forehead, the maxillary sinuses lie behind the cheekbones, the sphenoid pair rests behind the nose, and the ethmoid sinuses are located between the eyes and the bridge of the nose.

What causes it?

Sinusitis can be caused by viral, bacterial or fungal infection, or allergy. Inflammation produces swelling of the mucosal lining; this blocks the small openings preventing normal drainage of the sinuses. Accumulation of mucus and secretions within the cavities turns them into an ideal breeding ground for further infection. Sinusitis frequently occurs with or after a cold.

What are its common symptoms?

Pain over the infected sinuses, thick opaque yellow-green nasal discharge, fever, fatigue, and headache that lasts all day. Depending on the sinus involved there may be swelling around the eyes, increased pain with bending, coughing and throat irritation due to a post-nasal drip, or dizziness. The throat pain may be severe with some swelling of the lymph nodes in the neck. Pain can also occur behind the eyes or around the teeth. Occasionally you may have tenderness along the nose, a decrease in the sense of smell or a change in taste, and have bad breath.

Is it contagious?

Sinusitis itself is not contagious, but other conditions that have caused the infection can be.

Is it serious?

Only if left untreated. Most sinus infections are viral and require only symptom treatment. If your symptoms last beyond seven days, most likely the source of infection is not viral and you should be seen by a provider. When the sinuses stay congested for long periods, small growths called polyps may develop on the membranes inside the nose. Nasal polyps may need to be removed.

How long will it last?

There are four different classifications of sinusitis. The majority of this handout discusses the acute sinusitis classification.

- Acute cases, which last for four weeks or less
- Sub acute cases, which last four to twelve weeks
- Chronic cases, which last more than twelve weeks and can continue for months or even years
- Recurrent cases, which involve several acute attacks within a year

The time needed for the inflammation to clear up depends on what caused it. With proper treatment, the condition will usually begin to improve in 2-4 days. An allergic sinusitis or viral sinusitis may take longer. If you are told this is a viral infection and the symptoms do not improve after seven days of symptomatic treatment, you should be re-evaluated by a provider.

What can you do?

- Reduce normal activities until fever, pain, and other acute symptoms have subsided.
- Drink lots of fluids, especially water, to help loosen secretions. Drink six to eight extra glasses of water a day.
- Use a humidifier in your bedroom or fill a basin/sink with hot water, place a towel over your head and lean over the basin/sink to breathe in the moist air. Another steam method is to run a hot shower and sit in a closed bathroom.
- Blow your nose gently, rather than forcefully. By blowing forcefully the thick mucous may be pushed further back into the sinus cavity away from the opening.
- Warm, moist packs applied over the painful areas will give some relief. Some people have found they get better relief with cold compresses, so experiment.

- If your provider prescribes nose drops or spray, it is important for nose medication to reach the back of the nose. Clear the nose first by blowing the nose. If using a nasal spray do not tilt your head back. You can lean your head slightly forward. Direct the medication to the outer side of the nasal passages, as this is where the sinuses open into the nose.
- Elevating your head when lying down will give relief from the stuffy feeling.
- Use a commercially prepared nasal irrigation system to flush the sinus cavities once or twice a day. The irrigation solution can be prepared at home without having to purchase additional sodium chloride packets.

Salt water solution (saline solution) recipe

1. 1 clean quart jar. Fill with distilled water.
2. Add 1 to 1 ½ heaping teaspoons of pickling/canning salt (not table salt).
3. Add 1 teaspoon of baking soda (pure bicarbonate).
4. Mix and store at room temperature.

What can your health care provider do?

Sinusitis is usually treated with medicines to relieve the symptoms. One or more of the following may be recommended:

- **Antibiotics** - Antibiotics are often not prescribed unless non-allergy symptoms have been present for at least two weeks. They help to fight bacterial infection. It is most important that you take all of the medicine, even if you are feeling better in three or four days. If you stop the medication before the full treatment is completed, your symptoms may return. If you are taking the antibiotic as directed and you are not improving after 3-4 days you should be re-evaluated by a provider.
- **Decongestants/Expectorants** - These medicines may promote healing by reducing swelling of the nasal passages and draining the sinuses. Nasal spray decongestants should not be used for more than three days.
- **Analgesics** - Acetaminophen or Ibuprofen are helpful for the pain associated with sinusitis. They may also be used for fever.
- **Saline nose drops and/or sprays** - These medicines help loosen the mucus and clear the nasal passage. Do not share drops/sprays with others; discard them after each course of treatment because they will be contaminated.
- **Saline nasal irrigations** - Irrigation of the nose and sinuses with a mild salt water solution can remove the thick secretions and alleviate some of the pain. See the salt water solution recipe above.

Follow-up

Follow up with your health care provider, as recommended. Some sinus infections may need more than one course of treatment - your provider may discuss this with you.

Remember

Notify your health care provider if you have any of the following symptoms:

- Any fever that persists
- Blurred vision
- Severe headache
- Stiff neck
- Vomiting
- Continued pain that disrupts sleep
- Red, tender, swollen areas of skin on the face
- Inability to swallow or uncontrollable drooling
- Development of a rash
- If given antibiotics and not improving after 2 days

References

- Institute for Clinical Systems Improvement (ICSI). (2004). *Acute sinusitis in adults*. Bloomington, MN. Institute for Clinical Systems Improvement. Retrieved on April 2, 2005
- Kantz, B.R., & Varon-Thomas, L. (2003) *Sinus infection*. eMedicine
- National Institute of Allergy and Infectious Diseases. (NIH). *Sinus infection*. Retrieved on July 23, 2008

If you are a registered University of Illinois student and you have questions or concerns, or need to make an appointment, please call: **Dial-A-Nurse at 333-2700**

If you are concerned about any difference in your treatment plan and the information in this handout, you are advised to contact your health care provider.

Visit the McKinley Health Center Web site at: <http://www.mckinley.uiuc.edu>