

## CHRONIC NASAL DISCHARGE

When a cat has a discharge from its nose that lasts more than two months, it is considered chronic. The discharge may be thin and clear like water (serous), thick and yellow or green like pus (purulent), bloody (sanguineous or hemorrhagic), or a combination.

### *What are the causes?*

Chronic nasal discharge is not a diagnosis; rather, it is a term that describes the signs of disease in the nose and frontal sinuses. Almost all disease conditions that occur in the nose will cause irritation and inflammation to the lacy bones in the nose, called turbinates. The presence of disease in the nose is called rhinitis. The turbinate bones are easily distorted and destroyed. When that happens, bacteria that normally live in the nose grow rapidly, causing a secondary bacterial infection.

The frontal sinuses are hollow cavities in the skull and are located just above the eyes. They are connected to the nasal cavity by a small canal. Most diseases that occur in the nasal cavity have the ability to move through these canals into the frontal sinuses. When the sinuses become involved and develop inflammation, this is called sinusitis.

Chronic nasal discharge may result from several disorders involving the sinuses and nasal cavity. These include:

- Chronic viral infection
- Chronic bacterial infection
- Chronic fungal infection
- Nasal tumor, usually malignant
- Inflammatory polyp
- Nasal foreign body
- Food allergy

### *How is the cause diagnosed?*

There are several diagnostic tests that should be done for a cat with a chronic nasal discharge. A blood profile will often detect underlying diseases that can contribute to a nasal disease. Testing for the feline leukemia virus and the feline immunodeficiency virus ("Feline AIDS Virus") is important because these viruses have the ability to suppress the cat's immune system, making recovery from normally mild infections difficult (or even impossible).

It is very important to make radiographs (x-rays) of the skull. Special positions are necessary to view the nasal cavity and frontal sinuses. These require sedation or a short-acting anesthetic. Nasal flush and biopsy are diagnostic procedures used to collect material from deep within the nasal cavity. This material can be studied under the microscope (cytology) and can also be cultured. Although these procedures are not particularly traumatic to the cat, anesthesia is required, so they are usually done in conjunction with radiographs. This allows more than one procedure to be done while the cat is under anesthesia.

Foreign objects within the nasal passage can sometimes be detected with radiographs. If a foreign body is suspected but not visualized, endoscopy may be helpful, depending on where the foreign body is located. For some cases, exploratory surgery of the nasal cavity is needed.



Allergic conditions (such as food allergy) are not detected by any of the above tests. This cause of chronic nasal discharge is diagnosed with a food trial. A food trial consists of feeding a special, hypoallergenic diet for 4-8 weeks and evaluating the cat's response.

As you can see, it may require several days or weeks of testing to determine the cause of a chronic nasal discharge. When the diagnosis remains elusive, more sophisticated tests may be required

### ***How are the various conditions treated?***

**Chronic viral infections:** Two viruses which can infect the nose may persist and lead to long term viral rhinitis/sinusitis. No drugs are available to kill them so this type of infection is often incurable. However, some cats respond very well to interferon, a drug that stimulates the immune system and reduces viral replication.

**Chronic bacterial infections:** Administration of antibiotics alone is usually unsuccessful in curing bacterial infections of the nose and sinuses because the bacteria have become entrapped within the turbinates. Although many cats improve while taking antibiotics, cortisone, or antihistamines, they will relapse when these drugs are discontinued. The combination of interferon and antibiotics has been successful in many cats.

**Chronic fungal infections:** The most common fungal infection in the nose is caused by *Cryptococcus neoformans*. Because some of the drugs used to treat this organism are quite expensive and will occasionally cause adverse effects, they are not used unless a firm diagnosis is made. Fortunately, the newer antifungal drugs have fewer significant side-effects and many cats with fungal diseases can be successfully treated. If the cat is infected with the feline leukemia virus or feline immunodeficiency virus, the outcome will usually be less favorable.

**Tumors:** Most nasal tumors are malignant. Complete surgical removal is very unlikely, so chemotherapy or radiation therapy must be considered. Unfortunately, many nasal tumors do not respond to either treatment, so the prognosis is poor. However, when surgery is performed to collect tissue for biopsy, most surgeons remove as much of the tumor as possible. Following this procedure, the cat may be greatly relieved of the nasal discharge and remain improved for several months. However, in almost all cases, the tumor can be expected to recur.

**Inflammatory polyps:** Inflammatory polyps are non-cancerous masses of tissue that are composed of inflammatory cells. Extensive surgery is often successful in removing much of the polyp, but regrowth is assured if not all of it can be removed. Since these often begin in the internal ear and grow down the Eustachian tube into the back of the nose, their removal can require extensive surgery that may not be completely successful. The prognosis for an inflammatory polyp is guarded because the entire polyp cannot be removed in most cases.

**Foreign bodies:** When a piece of grass or other foreign material lodges in the nasal cavity, the membrane which lines the nose produces large amounts of mucus in response to the irritation. In addition, affected cats will sneeze violently in an attempt to expel the foreign body.

If the foreign body cannot be sneezed out, the veterinarian must take steps to remove it. When a nasal foreign body is suspected but cannot be seen on radiographs or with an endoscope, exploratory surgery may be needed. If it is found and removed, the prognosis is good.

**Food allergy:** It is necessary to perform a food trial to make a diagnosis of food allergy. If the nasal discharge responds to a hypoallergenic diet, that diet is usually continued to the exclusion of other foods. In some cases, other foods are tried to see if there may be several foods acceptable. If an acceptable diet is found, the prognosis is good.