Chronic Nasal Discharge in Cats

When a cat has a discharge from its nose that lasts more than 2 months, it is considered chronic.

Nasal discharge is classified based on the appearance of the draining fluid. The classification is as follows:

1. The discharge may be thin and clear like water - serous
2. The discharge may be thick and yellow or green in colour, similar to pus - purulent
3. The discharge may be bloody - sanguineous or haemorrhagic
4. The discharge may be a combination of any of the above

Development of a chronic nasal discharge is not diagnostic for any particular disease; rather, it is a term that indicates the presence of an abnormality in the nose and frontal sinuses. Disease in the nose is called rhinitis, while disease in the sinuses is called sinusitis.

Almost all disease conditions that occur in the nose will cause inflammation of the delicate, lacy bones of the nasal passage; these fragile bones are called turbinates. With chronic inflammation, the turbinate bones are easily distorted and destroyed. When this occurs, it provides the ideal environment for growth of bacteria and, regardless of the underlying cause, a secondary bacterial infection ensues.

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 migrate up through these canals and involve the sinuses. Most diseases in the frontal sinuses begin in the nasal cavity.

Clinical Signs
As noted above, a variety of nasal discharges may occur. Drainage may involve one or both nostrils. Regardless of the cause, the nasal discharge is usually accompanied by “stuffiness” or congestion and sneezing. In some cases, there may be swelling over the bridge of the nose or a growth protruding from the nostril.

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

- Viral infection, either acute or chronic
- Chronic bacterial infection
- Chronic fungal infection
- Food allergy
- Nasal foreign body (grass, fly larvae, etc)
- Nasal tumour, usually malignant
- Inflammatory polyp
- Dental disease, especially with presence of a fistula (communication between the oral and nasal passages)

Diagnosis
A complete medical exam, to include a physical examination, bloodwork, and certain viral tests, should be done on cats with a chronic nasal discharge. The blood tests are not diagnostic for the cause of a nasal discharge, but offer information about the general health of the cat and may identify contributing factors for the nasal discharge. Testing for the feline immunodeficiency virus (“Feline AIDS Virus”) is important because this virus has the ability to weaken the cat's immune system, making recovery from normally mild infections more difficult.

Tests more specific for evaluation of the nasal discharge may include the following:
1. X-rays. Radiographs of the nasal passages and sinuses are helpful in identifying areas of bone destruction and dental disease. Because certain positions are necessary to view the nasal cavity and frontal sinuses, general anaesthesia or sedation are required.
2. Nasal flush. A nasal flush is a diagnostic procedure used to collect material from deep within the nasal cavity. This material can be examined under the microscope (cytology) and can also be cultured. This procedure is done under anaesthesia and is usually completed after the initial radiographs have been taken.

3. Rhinoscopy. Some veterinarians have a specialized instrument called an endoscope that allows examination of the nasal passage, the back of the throat, and the area around the soft palate. In order to pass this small flexible tube into the area of interest, anaesthesia is required. Although foreign objects within the nasal passage can sometimes be detected with radiographs, rhinoscopy can be helpful for those cases where a foreign body is suspected but not seen on the x-rays. It is also helpful in removal of some foreign bodies.

4. Biopsy. There are some diseases that can only be diagnosed with a biopsy of material deep within the nasal cavity. A biopsy requires recovery of an actual piece of tissue, so surgery is often required for this procedure. If the veterinarian has a very small endoscope, the biopsy can occasionally be obtained without surgery.

5. Allergy testing. 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.

6. Exploratory surgery. When the initial diagnostics are unsuccessful in identifying the cause, surgery is sometimes indicated so the nasal cavity or frontal sinuses can be explored.

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. Veterinarians unable to perform these tests often refer the cat to a specialist.

Viruses that 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, except for treating the secondary bacterial infections they are consequently predisposed to.

**Therapy**

Administration of antibiotics alone is usually unsuccessful in curing bacterial infections of the nose and sinuses because the bacteria have become entrapped within the diseased turbinates. As mentioned above, bacterial infection of the nose and sinuses is usually secondary to another underlying problem. Although many cats improve while taking antibiotics, cortisone, or antihistamines, they frequently relapse when these drugs are discontinued.

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 treated with a successful outcome.

It is necessary to perform a food trial to make a diagnosis of food allergy. If the chronic 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.

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 it causes. 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.

Most nasal tumours are malignant. Because complete surgical removal is unlikely, chemotherapy or radiation therapy must be considered. Unfortunately, many nasal tumours do not respond to either treatment, so the prognosis is poor. However, when surgery is performed to get tissue for biopsy, most surgeons remove as much of the tumour 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 tumour can be expected to recur.

Inflammatory polyps are non-cancerous growths that are composed of inflammatory cells. Extensive surgery is often successful in removing much of the polyp, but recurrence will result if not all of the polyp 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.