

# Allergies in Pets



Presqu'île Animal Hospital

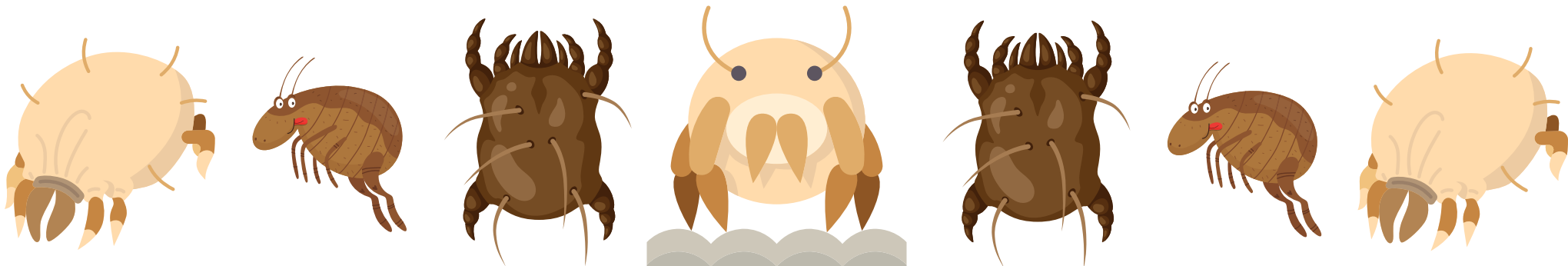


# What Causes the Itch?

The most common cause of itching, skin infections, and ear infections in both dogs and cats are fleas, allergies to fleas, and environmental allergies – dust mites, pollen, grasses. Both flea allergies and environmental allergies are MUCH more common in pets than food allergies but flea, environmental, and food allergies can all have similar symptoms. - <https://vetnutrition.tufts.edu/2017/01/food-allergies/>

## Step 1 = Parasite Prevention

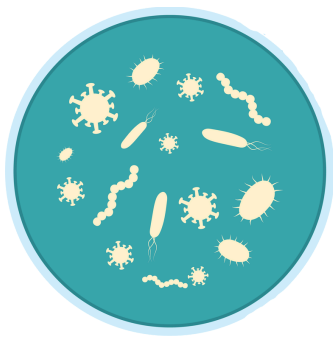
With fleas and other parasites such as demodectic or sarcoptic mites being one of the main causes of itching, it is always our first step to ensure our patients are on monthly parasite prevention year-round. We use the Nexgard family of products as it has been proven to control and treat all of the parasites that we are most concerned about.





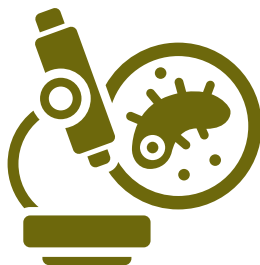
# Allergy Diagnostics and Monitoring

## Culture and Sensitivity



A sample is collected from the skin or ears with a sterile swab, applied to a culture plate and the bacteria is grown at the lab. The bacteria is then identified and tested with a variety of antibiotics to determine which medication must be used to kill that particular strain.

## Skin or Ear Cytology



A sample is collected from the skin or ears with a swab or tape, applied to a microscope slide and stained in a 3 step process. It is examined under the microscope to identify if bacteria and/or yeast are present.

## Skin Scraping



A sample is collected from the skin by scraping a scalpel across the surface, which can pick up the mites which burrow into the skin. These samples are applied to a slide and examined under the microscope to identify which type(s) of mites are present

## Medication Monitoring for Allergy Medications

Some allergy medications, such as steroids, have more negative side effects associated with them, than others.

For all patients on chronic, long-term medications, we will perform bloodwork at least once every 12 months to ensure we are monitoring organ function and cell counts. If a pet is not doing well or not tolerating the medication well, this may be done more frequently or the medication may be changed. It is always important to inform us of any concerns or questions you have about your pet's health.



# Itch/Scratch Threshold

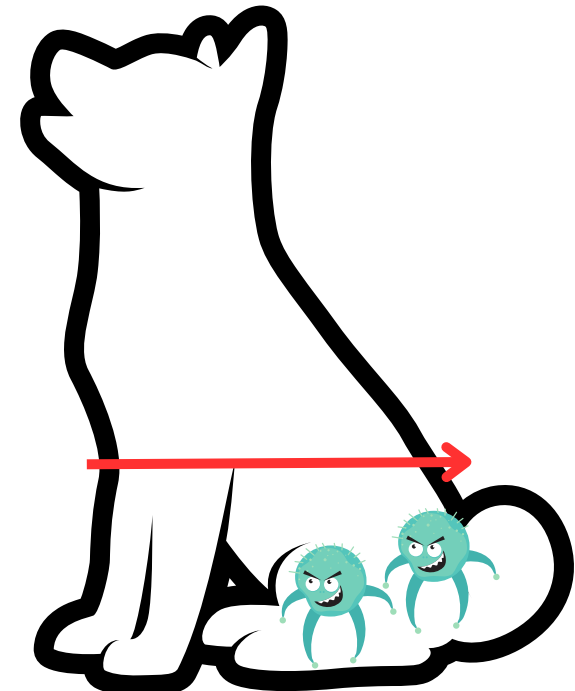
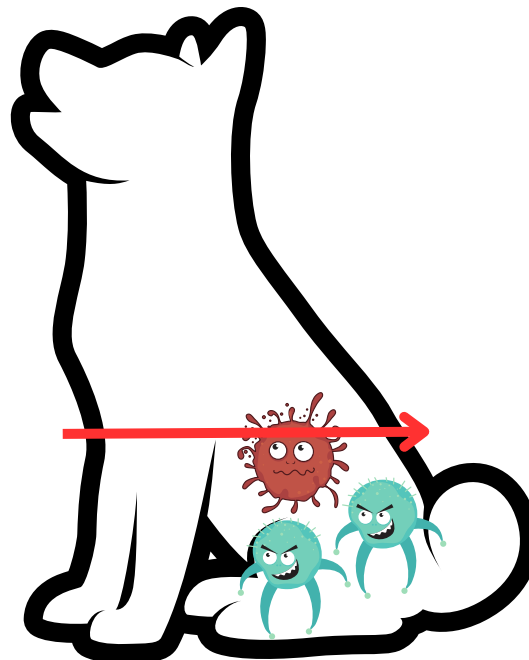
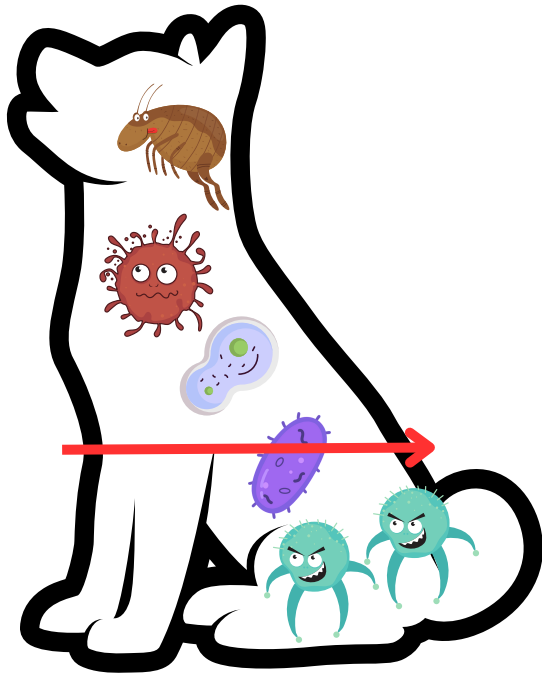


The Itch Threshold is individual for every pet. Each pet can tolerate a certain amount of allergen exposure before they become itchy. The below diagram shows a single dog's itch threshold, and the factors that contribute to his/her itchiness. As we treat the skin and restrict allergens, we work towards stopping the itch.

The patient presents with severe itching, redness of the skin and an ear infection. We need to consider parasites, food allergy, yeast infection, skin infection and environmental allergens.

We have treated for any potential parasites, skin infection, yeast infection and have started a diet trial to eliminate food allergies. Our patient is still itchy, but the skin is overall improved.

The food allergy trial has been completed, and the food allergy is eliminated as a contributing factor. We still have environmental allergies, but they are not causing our patient to be in distress.







# The Skin Barrier

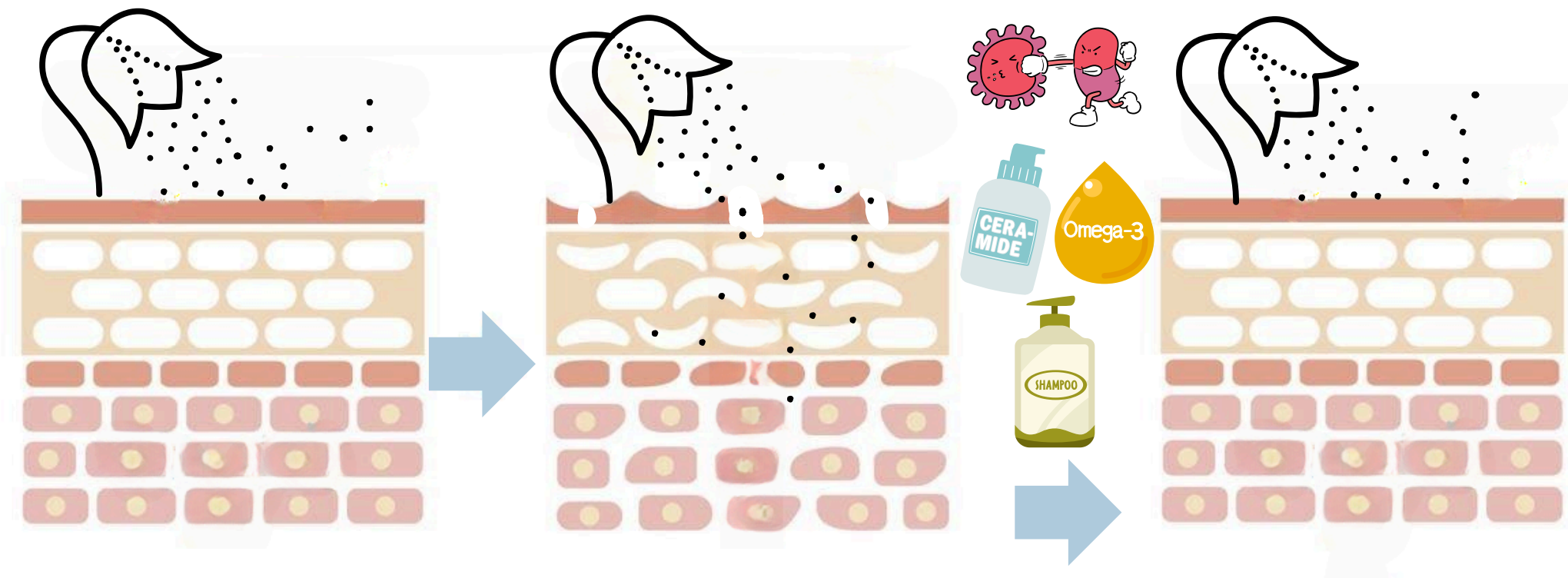
The skin barrier is one of the most important parts of allergy management for a few reasons.

- 1) As pollens/allergens are released into the air, the skin should be healthy and strong enough to prevent them from penetrating into the deeper skin layers. In patients with allergic disorders, their skin is often not healthy.
- 2) Patients with damaged skin barriers are at higher risk for skin infections due to bacterial and yeast overgrowths.
- 3) Patients with damaged skin will lose water through their skin barrier and will have continually dry and unhealthy skin.

## Healthy Skin Barrier

## Damaged Skin Barrier

## Healthy Skin Barrier



To improve the skin barrier, we add ceramides topically to the skin, Omega 3 fatty acids orally, use shampoos and sprays and add in medications for infections as needed.



# How to Stop the Itch

## The Newest Generation of Itch Blockers

Apoquel is an oral tablet that is given twice daily initially, and then once daily. It is an immune-modulating drug, which means that it works by altering part of the immune system – in this case, it blocks the itch receptors in the body, which prevents dogs from feeling itchy. It does not “treat” the allergy itself; it simply removes the itchy feeling. Dogs may still experience skin damage, infections etc, which is why frequent progress examinations are recommended.

Cytopoint is an immunotherapy injection that is given every 4-8 weeks. This injection also works by blocking itch-receptors, but may be of lower risk than Apoquel long-term.

### Steroids

Prednisone and Vanectyl P are considered steroid drugs and have been used for a long time when managing the symptoms of allergies. They help to reduce the inflammation and itching associated with many allergic conditions, but also have several negative side effects associated that may be detrimental to patient health.



**While using these medications, we must always monitor the skin, be diligent with shampoo and medication schedules and perform routine monitoring. We do not have a 1-step quick fix for allergy management.**

## Atopica

Atopica/Cyclosporin is an oral liquid or capsule that is used for long-term maintenance of allergic skin disease and is in a similar class of drug to Apoquel. It works to modulate immune response to allergens and is effective in approximately 80% of allergic patients. Atopica has long term safety data to document that it is typically well tolerated with chronic use.

## Antihistamines

Antihistamines such as Benadryl or Reactine are commonly used with minimal success. It is an option to try and works best when used very consistently. They should be started **prior** to exposure to known environmental allergens, not after pets are already itchy for a better chance of success. Reactine is the more preferred option and it is given twice daily.



# Allergy Testing and Hyposensitization

Hyposensitization, more commonly known as allergy shots, is by far the treatment of choice for atopic dermatitis.

All the other medications simply relieve itch; only hyposensitization actually treats the allergy.

Many dogs are eventually able to go off all treatment and are no longer itchy after they have been on hyposensitization long enough.

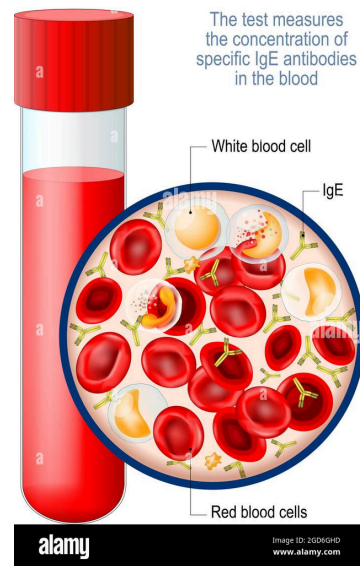
The younger a pet is when they start this treatment, the better the outcome will be.

There is NO allergy test available for food allergies - this is only for environmental allergies.



## Testing Option 1 - Skin Testing

This type of allergy testing is completed by a board-certified veterinary dermatologist. They will test for all allergens located within your region and determine the level of allergic response.



## Testing Option 2 - Serum Testing

This type of allergy testing is completed by a specialty lab. A blood sample is collected in our office and is then transported to the lab for assessment.

Once the results are in, we can start treatment.

Our options are:

### Treatment Option 1 - Injections

Injections are given at home by owners or in the hospital. They start out being given every day or two and are weaned down to once monthly after 1-2 months.



### Treatment Option 2 - Sublingual

The allergy serum is given orally every day for the rest of the pet's life.







## Food Allergy - What is it and What are my Options?

Food allergies occur when an animal's immune system misidentifies a protein from a food as an invader rather than a food item and mounts an immune response. The end result of this response can be itchy skin or ear and skin infections in some pets, while it may cause vomiting or diarrhea in others.

The most commonly reported food allergies in dogs and cats are chicken, beef, dairy, and egg (and fish for cats). There is nothing particularly special about these ingredients other than they have been the most common ingredients in pet foods for the past few decades, so both cats and dogs often have been exposed to them a lot. What surprises many pet owners is that grains are actually uncommon causes of food allergies – most pets are allergic to animal proteins - <https://vetnutrition.tufts.edu/2017/01/food-allergies/>

Nutrition for allergic pets has had quite the shift over the past 15 years or so. The plan in the past was to use a “novel protein” food, which meant feeding a protein that a pet had never been exposed to in the past with the expectation they would not be allergic to it. Unfortunately, with the introduction of so many commercial foods using a combination of proteins (for example: salmon+duck, bison + chicken + lamb), novel proteins are no longer easy to find. This lead to diets being made with extremely novel protein sources such as the sheaths of chicken feathers (Anallergenic) or soy-based foods. Although these foods have excellent success, the ingredients are very specialized and therefore expensive. We now most commonly use “hydrolyzed” diets – these are diets that are basically pre-digested. The protein sources have been broken down in advance to their amino acids – allowing the pet to absorb the nutrients needed, without a protein marker to react to.

These foods work for the vast majority of dogs and cats with food allergies.



The other food option that is commonly recommended would be geared more towards the support of the skin, while also being made with a less common protein source. These diets may be made with egg, pea protein, fish or other sources to provide more novel nutrition. They include added supplements, such as therapeutic levels of Omega FAs to help the skin barrier heal and stay strong.



# Diagnosing a Food Allergy

The “gold standard” or best method that we currently have, for diagnosing food allergies is the dietary elimination trial. This means feeding your pet a diet purchased through a veterinarian or carefully made at home that contains only a few ingredients (typically one protein and one carbohydrate plus necessary fats, vitamins, and minerals) that your pet has never been fed before or that are hydrolyzed (where the proteins are broken down into very small pieces that can hide from the immune system) or purified to remove the parts that are likely to cause allergies.

This diet is then fed as **THE ONLY FOOD OR FLAVORED THING TO GO INTO YOUR PET’S MOUTH** for at least a month but potentially several, depending on your pet’s history and type of issues. - <https://vetnutrition.tufts.edu/2017/01/food-allergies/>

The concern with using a food other than one we recommend is that there is a risk of contamination from manufacturing practices. Similarly to a peanut allergy in humans, there is a risk of exposure to allergens when feeding food that is not specifically built for elimination trials.

Replacing bowls, measuring scoops, food storage containers etc is an important part of the trial.

Once they have been on the diet for 12 weeks, if we feel like they are well managed but would like to explore food options, we can challenge them with one different food item at a time to find their best long-term solution. It is important to track skin and itch scales carefully for up to 2 weeks after each exposure to a new food item.

## Common Sources of Contamination to a Food Trial

Family members sneaking some treats



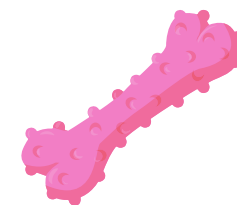
Using the same bowls and measuring scoops/cups



Treats



Flavored toys



Medications and Supplements

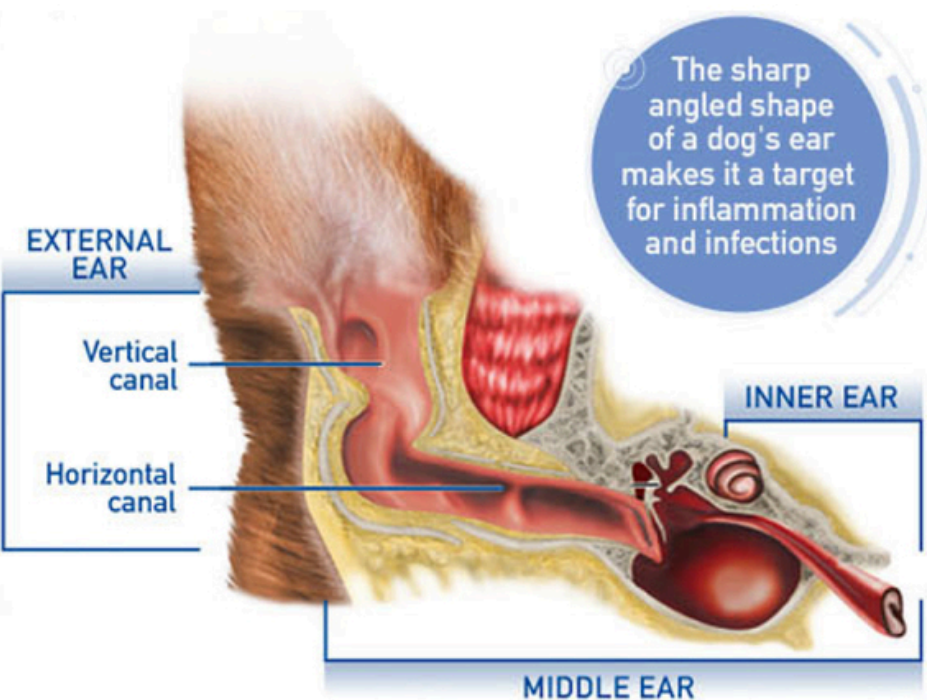




# Chronic Ear Infections



As you can see from the image below, our canine patients have a horizontal canal which can make cleaning and treatment difficult. When cleaning ears, it is very important to use a significant amount of ear cleaning solution to fill the ear canal - this softens the debris in the lower part of the canal and allows it to come up to the surface more readily.

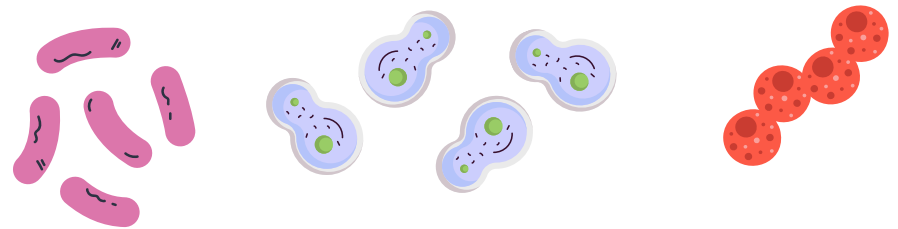


Ear infections must be treated fully; otherwise, antibiotic resistance and permanent damage can occur to the tissues of the ear. For some patients, we need to use medications year-round and life-long to control the pH and moisture in the ears.

Increased heat, moisture and an abnormal pH in the ear canal, creates a perfect breeding ground for bacteria and yeast.

Ear infections are also a common symptom of allergies in pets. When we see recurrent ear infections of the same type, we first assess compliance - to ensure the medications are being administered properly and as directed. Then we consider other factors - with allergies being the most common.

Ear infections can be caused by bacteria, yeast or a combination of both. Some pets will also have inflammation of the ear canal without infection present.



Ear cleaning solutions contain a mixture of a drying agent, an agent to break down wax/debris and often has some moisturizing components. Using a fresh bottle of ear cleaner after any infection is important as contamination is always possible.

Do not use alcohol, water, peroxide, coconut oil, or any other oils in the ears.



# Over-The-Counter Solutions

## Allerderm - Ceramides

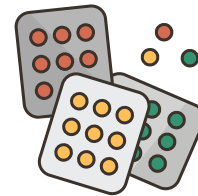
Allerderm is a topical ceramide solution which is applied to the skin and helps to rebuild the skin barrier. It is applied first to the affected areas and then down the spine.

It is applied once weekly for 4 weeks and then once monthly. It should be used year-round in allergic patients.



## Medicated Shampoos

Shampoos are very valuable tools for managing topical skin infections and overgrowths. There are many ways that it can be used to help your pet. You can use shampoo to remove allergens from the skin and coat after a long hike or a camping trip, you can make a foot soak for pets who lick their paws or you can use it routinely to control infection. Remember that medical shampoos can be overused and cause damage to the skin, so it is important to discuss how it is best used for your pet's case with a veterinarian.



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## Omega 3&6 Fatty Acids

Omega 3 and 6 fatty acids are vital for healthy skin and coat. Pets receive this from their food or supplements. Some pets need supplementation above what their food includes. We recommend Omega-Pro Fatty Acid supplements.



## Topical Sprays and Wipes

Topical sprays, mousse and wipes are available for pets who experience skin disease - for some, this is an easy way to control skin infections and bacterial overgrowths.







# Presqu'ile Animal Hospital

Compassionate Care for Pets and Family

Any questions? Please contact us to discuss further!

Phone/Text: 613-475-5510

Email: [PresquileAH@outlook.com](mailto:PresquileAH@outlook.com)

## Resources:

<https://vetnutrition.tufts.edu/2022/04/think-your-pet-has-a-food-allergy-eliminating-mistakes-in-elimination-diet-trials/>

<https://veterinarypartner.vin.com/default.aspx?pid=19239&sterm=allergies>

<https://nextmune.com/us/home-pet-parent/>