

## Foster Handbook for Dealing with Ringworm

*Most shelters across the country euthanize animals at the first sign of ringworm but Austin Animal Center is committed to curing this condition by placing animals in foster care. In foster care they are treated with a 3 pronged approach – lime dips, oral antifungal medications and treatment of the environment to reduce the spread of ringworm. Without foster homes to step up to take on the treatment of this condition, the infected animals face certain euthanasia. Animals with signs of ringworm should leave the shelter ASAP as this is a very contagious condition.*

**\*\*\*Ringworm is a treatable, curable condition\*\*\***

### What is Ringworm ?

Contrary to its name Ringworm is not a worm at all but a fungus. In the past, because of the circular lesions made by the fungi they were thought to be caused by worms, hence the name ringworm. It does not however always grow in this pattern. There are 3 types of ringworm, one type is the same fungus typically referred to as “athlete’s foot”. When this fungus grows anywhere other than the bottom of a person’s foot, it is called ringworm. The fungi live on the surface of the skin and in the skin follicles feeding on dead skin tissue and hair.



### What does Ringworm look like?

The usual symptom is a round hairless lesion. The characteristic "ring" that we see on humans doesn't always appear as a ring on animals. This lesion will grow in size and often become irregular in shape.

The fungi cause the hair shafts to break off and this results in patches of hair loss. Ringworm is commonly found on the face, ears, tail and paws. The lesions are scaly and may or may not be itchy and often the skin is reddened and inflamed.

## How is ringworm transmitted?

Transmission can happen by direct contact with another infected animal or person. It can be passed from cats to dogs and visa versa and from pets to humans and from humans to pets. The fungal spores can live in the environment for a long time and can be found in carpets, bedding, grooming equipment, etc and can infect an animal when it comes into contact with them. The incubation period is 10-12 days. This means that following exposure to the fungus, about 10-12 days will pass before any lesions occur. In many cases ringworm can be spread by contact with infected soil. The fungus can live for months in soil if the nutrients are right.

## Can Humans catch Ringworm from Animals?

Humans can contract ringworm by touching an animal with ringworm. Ringworm can spread while petting or grooming cats or dogs with ringworm. You can also get ringworm from cows, goats, pigs and horses.



## Are all cats or dogs susceptible to ringworm?

Healthy adult cats or dogs usually have a resistance to ringworm. Young cats and kittens and puppies are more susceptible because their immune system hasn't fully developed. Many cats and dogs are carriers of ringworm but show no symptoms. They can, however, infect other animals or humans.

## Diagnosis of Ringworm

To diagnose Ringworm the vet will need to do one of the following tests. It is not possible by just looking at the skin to make the diagnosis. Typically, if ringworm is suspected, treatment is begun immediately as diagnosis is difficult and time consuming.

### *Wood's Lamp*

An ultra violet lamp also known as a black light. The vet may use this as 50% of *microsporum canis* will glow under the lamp.

### *Microscopic diagnosis*

The vet may look at part of the hair or skin from the lesion under a microscope.

### *Culture*

The vet may decide to take a scraping from the lesion and grow it in a medium to see what the culture grows.

## Is there a cure for Ringworm?

If no treatment is carried out, ringworm will run it's course in two to four months and the symptoms will resolve themselves. However, treatment is recommended to save the pet from suffering any longer than necessary and to cut down the period of time they are contagious.

## **Ringworm Treatment**

### **Oral Antifungal Medication**

The vet may prescribe an anti fungal drug that is used for pets with that inhibits fungal reproduction. It is given once a day for 14-28 days and the dosing must be adjusted as the pet grows as the dose is calculated based on the animal's weight.

### **Shampoos and Dips:**

Lime sulfur dips are also usually prescribed by the vet.

Dips should be given twice a week and can be given at home. Please be aware that Lime Sulfur will stain clothing and jewelry and will cause temporary yellowing of the cat or dog's hair. It also smells very strongly of rotten eggs. Follow the instructions for mixing the dip listed on the bottle.

### **Decontaminate the environment**

Use bleach mixed at 1:10 on any surface that you can at least every other day. It will kill 80% of the spores. Vacuum on a daily basis a dispose of vacuum bags which will contain the spores. Steam cleaning of carpets and furnishings will also kill a large number of the spores – this is best done after the pets have left the home.

Don't forget your foster's bedding. Wash all bedding in very hot water with detergent that contains color safe bleach. Confine the fosters to one room of the house or in a crate to avoid spreading spores all over the house.

**This “trifecta” of treatment has proven very successful in treating ringworm but all three components must be diligently carried out as it considered a “chain” of treatment – if one chain is weakened, the chain will collapse the ringworm will not be cured.**

## Ringworm Protocol

*Pet should be checked daily for additional lesions.*

Day	Lime Dips	Oral Medication	Environment
1	Date of Dip 1	Oral Medication should be given as directed, for 14-28 days. Young animals should be weighed every two weeks and their dosage re-calculated.	All ringworm animals should be kept strictly quarantined in a room that is easily cleaned, preferably without carpeting or upholstery. After handling and interacting with ringworm animals, hands should be thoroughly washed and clothing should be discarded or immediately washed in color safe bleach with the hottest water possible. Disposable smocks may be used. All non-porous surfaces should be cleaned with bleach diluted 1 part bleach to 32 parts water. This includes floors, walls, counter tops, windowsills, carriers, etc. Rugs, carpeting, drapes and upholstery should be vacuumed at least once a day. Vacuum bags should be regularly discarded. Bedding should be changed daily, and soiled bedding discarded or washed in a washing machine on the hottest water setting with color safe bleach detergent. Scratching posts should not be used since they can harbor ringworm spores and are not easily cleaned. Toys should be soaked at least 15 minutes a day in a bleach solution diluted 1 part bleach to 32 parts water. Toys not easily soaked in bleach should not be used.
2	_____		
3			
4			
5	Date of Dip 2		
6	_____		
7			
8			
9			
10	Date of Dip 3		
11	_____		
12			
13			
14			
15	Date of Dip 4		
16	_____		
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19			
20	Date of Dip 5		
21	_____		
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23			
24			
25	Date of Dip 6		
26	_____		
27			
28			

After the last dip, the shelter will culture all affected animals. If the animal still has active lesions, continue all treatments and cleaning protocols during this waiting period. If the animal does NOT have lesions, dips, cream and anti fungal oral medication can be discontinued but diligent cleaning protocols should still be followed. Changing heating and air conditioning vents regularly during the entire treatment protocol is recommended as well as changing of vacuum bags or cleaning vacuum canister with bleach solution. Vacuum filters should also be replaced, with special consideration to their disposal as ringworm spores can live in this environment indefinitely.

## How to Lime Dip To Cure Ringworm

- ❖ Lime-sulfur should be used at 4 ounces to the gallon. Do not pre-wet the cat.
- ❖ When mixing the dip it is important to put 4 ounces of the lime sulfur in the mixing container FIRST and then add the warm water. This will give you the correct dilution.
- ❖ The lime-sulfur treatment is very important to reduce ongoing environmental contamination. Lime-sulfur can be applied with a garden hose sprayer with nice warm water. We use a half-gallon sprayer.
- ❖ It is recommended to wear heavy duty dishwashing gloves during the dip. Remove jewelry and wear old cloths.
- ❖ Keep the nozzle of the sprayer very close to the cat's skin so the spray just flows over them like a shower. Let the solution 'coat' the hairs. You must soak the cat to the skin. Use rags to gently sponge on dip around the face and inside their ears, on their little noses, etc. These areas are most important and tend to be the most difficult to resolve.
- ❖ Dipping the cats directly into a bucket containing the solution is most effective. Use rags to gently sponge on dip around the face and inside their ears, on their little noses, etc. These areas are most important and tend to be the most difficult to resolve.
- ❖ Do NOT use the sink or tub for dips – use an old tub or bucket as the lime dip WILL STAIN anything it comes in contact with.
- ❖ Do not rinse off the solution
- ❖ Do not towel dry off the animal, let it “drip dry” in a crate that is in a warm area, free of drafts. Continue to protect them from becoming cold until they are completely dry.
- ❖ When using the “bucket” method, you can use the same solution for multiple dips (on the same day). Start with the least symptomatic animal (few or no lesions) and work up to the one with the most lesions last.
- ❖ When disposing of the lime dip after the baths, it is safe to rinse down the drain, just be sure to rinse it with lots of water to prevent staining.
- ❖ Good Lime Dipping Videos

<http://www.youtube.com/watch?v=35zau-JS5TE&feature=fvvr>

<http://www.youtube.com/watch?v=Xjxm01mlCqw&feature=related>

[http://www.youtube.com/watch?v=-wr-lGdh\\_E0](http://www.youtube.com/watch?v=-wr-lGdh_E0)

## **CLEANING UP RINGWORM**

- ❖ While ringworm animals are in your home, it is VERY important to thoroughly clean the environment to prevent re-infection of the animals and infection of healthy animals and people in the home.
- ❖ All non-porous surfaces should be cleaned with bleach diluted 1 part bleach to 32 parts water. This includes floors, walls, counter tops, windowsills, carriers, etc.
- ❖ Rugs, carpeting, drapes and upholstery should be vacuumed at least once a day for one week Vacuum bags should be regularly discarded.
- ❖ Bedding should be washed in a washing machine on the hottest water setting with color safe bleach detergent.
- ❖ Scratching posts should not be used since they can harbor ringworm spores and are not easily cleaned.
- ❖ Toys should be soaked at least 15 minutes in a bleach solution diluted 1 part bleach to 32 parts water every other day. Toys not easily soaked in bleach should not be discarded.
- ❖ Carriers should be cleaned with bleach diluted 1 part bleach to 32 parts water.
- ❖ Changing heating and air conditioning vents is recommended.
- ❖ Changing of vacuum bags or cleaning vacuum canister with bleach solution. Vacuum filters should also be replaced, with special consideration to their disposal as ringworm spores can live in this environment indefinitely.