



ARIZONA HUMANE SOCIETY

PARASITES: MANAGING TICKS, FLEAS AND OTHER INTERNAL & EXTERNAL PARASITES

Parasites come in many shapes and sizes, and all of them feed off your dog or cat. Even though some of them are microscopic they still can cause problems. It is important to check your pets frequently for external parasites like fleas and ticks, and at least once a year for internal parasites like heartworm and intestinal worms. All of them can be managed or eliminated with persistence, awareness and the help of your pet's health care professionals.

EXTERNAL PARASITES

Ticks

The tick is a blood-sucking parasite that prefers dogs but has been known to opt for cats, and sometimes people if dogs are not around, but this is unusual. Ticks are somewhat seasonal, hatching during late spring through summer and dying off in the winter months. However, if the winter season is warm they may not ever completely stop. If ticks are allowed to infest your household, they can cause a variety of problems for your dog: dermatitis, allergies, itching, skin infections, loss of heartiness, anemia and Ehrlichia (tick fever).

Life Cycle

In order to eradicate ticks it is important to understand their life cycle. There are four stages: egg, larva (seed tick), nymph and adult.

- ① **Eggs:** The eggs hatch into tiny, hungry and active 6-legged larvae in 20 –30 days.
- ① **Larvae:** At the first opportunity they attach themselves to the dog and consume your dog's blood. They engorge themselves until they are approximately 1/16 of an inch in diameter; this can take 3 - 6 days. Once they are engorged, they drop off and hide in cracks or any dark, warm spot, where they molt to become 8-legged nymphs in 6 –23 days.
- ① **Nymphs:** The nymphs attach themselves to your dog and once again consume blood for the next 4 – 9 days. At this time they are approximately 1/8 of an inch in diameter and gray. They drop from their host and once again hide and molt into an adult in 12 – 29 days.
- ① **Adults:** These adults reattach to your dog become engorged within 6 – 50 days. They then mate, drop off to lay more eggs and start the whole cycle all over again. Females deposit over 4,000 eggs in large batches in thick clumps of grass; cracks in buildings, or under bark trees and shrubs, and in wood fences. They are able to climb most surfaces.

Under ideal conditions, the life cycle may be complete in two months; however, under normal household conditions, 3 – 4 generations per year is average.

Note: Larvae and nymphs can live up to 8 months, the adults up to 1½ years without food. Therefore infestations can persist without a host.

What You Can Do

You can eliminate ticks with diligence; a good pest control regime and daily inspections of your dog during your quiet time with your pet. There have been great advances in the control of ticks on your dog as well as indoors and outdoors.

On Your Dog:

-  **Topicals:** Are applied to the back of the dog's neck; the amount used depends upon the weight of the dog. There are many brands on the market. They range in effectiveness but all usually last for up to 4 weeks or longer. It may become less effective if your pet gets wet after the application and/or wet on a regular basis.
-  **Dips:** Are also effective for at least 30 days. The dog must be totally saturated including the head area. To keep the dip out of their eyes you can put a drop of mineral oil or ophthalmic ointment in each eye, before dipping. You can also sponge the dip solution on your dog. Dip works best on clean dogs, so bathe your dog prior to applying dip.
-  **Tick Collars:** Collars have been around for quite some time; their effectiveness is often debated. They need to be replaced monthly. They are useless if they are wet, so if your dog is a swimmer, a collar will not be useful.
-  **Shampoos:** Tick shampoo works only on the ticks that are on your dog at the time of the bath. It has limited ability to kill ticks completely.
-  **Powders:** Powders work but are difficult to apply evenly and effectively. They are also very dusty.
-  **Natural Remedies:** There are some natural products that claim to work effectively. Many of them are not 100% proven but, if used within the specified instructions, could prove to be useful in the fight against ticks. Diatomaceous earth (DE) has proven effective for tick control outdoors. Dust your entire yard once every two weeks. It is important to get the food or organic grade DE (Do not purchase swimming pool DE).
-  **Daily Checks:** This is critical; you must check your dog for ticks daily. Make it part of your daily petting and interaction routine. Ticks prefer ear flaps, the neck, shoulders, underarms, toes, head and rear areas of your dog. If you do find ticks remove them with tweezers or a tick removal tool. Use care not to leave any part of the tick still attached.

Note: It is important that you do not apply any of these products on puppies younger than six weeks of age (read the label for any age, species or health limits). Be careful not to "over-kill" all of these products contain toxins; that if used inappropriately or in addition to another tick product could cause considerable harm to your dog.

Indoors

Indoor treatments work well if you follow the directions outlined by the manufacture and you know which cycle the ticks are in. Knowing the cycle is helpful because you will know when to repeat the treatment.

-  **Fog:** Fogging is very effective. A successful fogging can greatly reduce the existing ticks. It also is able to penetrate the areas where ticks hide. Fog also has a long residual effect. Follow the directions to the letter; foggers are toxic to fish, birds and other small house pets. Fogging requires planning time and initial set-up, and you and your pets must be out of the house for a few hours.
-  **Spray:** Spraying should be done in addition to fogging. Use it where the fogger can't reach and where there is heavy pet traffic. Spraying inside your house on a regular basis even through the winter months is preventive maintenance. You can do this yourself; with a product that is effective for ticks or you can hire a service. Many give discounts for frequent customers.
-  **Powders and Granules:** Work well around perimeters indoors and out. They should be used in conjunction with preventative spraying. Keep out of reach or accessibility of children and other house pets.

Outdoors

Killing ticks outdoors is equally important. It is imperative that you eliminate all sources of infestation. Try to determine which cycle the ticks are in; the ticks indoors may be in a different cycle than the ticks outdoors.

-  **Yard Work:** It is essential that you keep your yard well mowed and maintained, and free of unnecessary debris.

-  **Sprays:** Thorough spraying and saturation of the entire yard is essential. Don't forget to spray the perimeter walls and fences well. Sprays should also be done on a routine basis, not just during tick season.
-  **Powders and Granules:** Are effective in garden areas and around the perimeters and thresholds. Avoid areas where your pets and children could track through these products.

You can do all of these yourself; the most important thing to remember is to follow all of the instructions as written by the manufacturer. Be diligent and you will be able to control the ticks.

Note: Often times your neighbors will be battling the same problem. If you can, try to get them to treat at the same time, otherwise you may just be swapping ticks from yard to yard and dog to dog.

Fleas

Fleas do not climb like ticks rather they hop or jump onto their hosts. They spend most of their life off of their hosts, only adult fleas need a warm body to live. Fleas will also bite humans more readily than ticks. Fleas transmit tapeworms, roundworms to your pets and have been known to carry diseases such as plague, murine typhus and tularemia.

Life Cycle

The average lifespan of an adult flea is approximately 6 weeks. Like the tick it is important to understand the life cycle of fleas before trying to eradicate them. Their cycle is egg, larva, pupa and adult.

-  **Eggs:** The eggs are laid on the host and fall off onto the ground in the yard, carpet, drapes, furniture and bedding.
-  **Larvae:** After 3 - 5 days the eggs hatch into maggot-like larvae. They feed on organic debris for approximately a week, and then make a cocoon.
-  **Pupae:** The pupae then live out their life in the carpets, furniture, bedding, drapes or yard for the next 3 – 6 weeks, until hatching into adults.
-  **Adults:** When the adults emerge they immediately seek a host and mate. The fertilized eggs are laid and the cycle begins again.

Note: Ideal conditions are 65°F - 80°F with 70% humidity. With these ideal conditions one female can lay dozens of eggs per day. She is still able to lay eggs under less ideal conditions, just fewer. It is thought that a female flea can lay an average of 20 - 30 eggs per day, or 620 - 930 eggs per month.

What You Can Do

You can eliminate fleas with the same persistence of a good pest control regime and daily inspections of your dog or cat during your daily quiet time with your pet. The advances in flea control are even more effective than with ticks. There are many ways to control them both indoors and out.

CAUTION: You cannot treat cats or kittens with the same kind of remedies that you would treat a dog. Use products that are specified safe for cats and kittens!

On Your Dog or Cat

-  **Topical:** Are applied on the back of the neck for both cats and dogs. The amount used is also determined by age and weight.
-  **Dip:** Also work well, following the same procedure you would for ticks. NEVER dip a cat! If your cat needs to be dipped for any parasite, let your veterinarian do it.
-  **Flea Collars:** Collars should be changed every month and should be closely monitored on cats especially if they are indoor/outdoor cats.
-  **Shampoos:** Flea shampoos kill only on the fleas that are on the host. Use CAUTION when bathing a cat. Be careful not to get it in your pet's eyes.
-  **Powders:** Powders work but are difficult to apply evenly and effectively. They are also very dusty.

Natural Remedies

There are some natural products that claim to work effectively. Many of them are not 100 percent proven but if used within the specified instructions could prove to be useful in the fight against fleas.

- 🔊 **Ultrasonic Devices:** These devices emit ultrasonic sounds that are supposed to deter and repel fleas and a variety of insects. The jury is still out on how effective these really are. However, if you have small house pets such as ferrets, hamsters or gerbils, and sometimes cats these are not recommended.
- 🐾 **Daily Checks:** This is critical; you must check your pets' daily. Make it part of your daily petting and interaction routine. Fleas prefer the neck, shoulders, underarms, stomach, head and rear areas of your pet. If you do find fleas, immediately start procedures to eradicate them from your cat or dog and then continue with total treatment of indoors and outdoors.

Important Reminder: It is important that you do not apply any of these on puppies or kittens younger than six weeks of age (read the label for any age, species or health limits). Be careful not to "over-kill". All of these products contain toxins that, if used inappropriately or in addition to another tick or flea product could cause harm or death to your dog or cat.

Indoors

It is essential that you commit to all-out warfare on fleas. They breed so rapidly that your household and pets can become quickly infested. The steps are similar to those for ticks except with a few changes.

- 🧹 **Vacuum:** Treat your carpets with powders specially designed for flea control.
- 🧹 **Fog:** Be sure to purchase foggers that contain IGR's (Insect Growth Regulator), they interrupt the development stages of the larvae and pupae, so you can kill them in all the stages of development. Follow the directions to the letter; foggers are toxic to fish, birds and other small house pets.
- 🧹 **Spray:** Spraying should still be done in addition to fogging. Use it where the fogger can't reach and where there is heavy pet traffic. Spraying inside on a regular basis even through the winter months is good preventive maintenance.
- 🧹 **Powders and Granules:** Powders and granules work well around perimeters inside and out. They should be used in conjunction with preventative spraying. Keep out of reach and or accessibility of children and other house pets.

Outdoors

These steps are the same as with ticks.

- 🧹 **Yard Clean-up**
- 🧹 **Sprays**
- 🧹 **Powders and Granules**

Mange Mites

Mites can only be detected under a microscope. If you have ruled out either fleas and ticks and your dog or cat is still suffering from hair loss or itching, you should take your pet to the veterinarian to be 'scraped' for mites. This is particularly important because some mites are transmittable to humans.

Types of Mange

- 🧹 **Sarcoptic:** Can be communicable between both dogs and cats. Humans can also get this type of mange.
 - ⚡ **Treatment:** Eliminate mange mites by dipping your pet in flea and tick dip. **NEVER** dip a cat yourself – must be done by a veterinarian.
- 🧹 **Demodectic:** Both dogs and cats are susceptible, but these mites do not cross species and humans cannot get this kind of mange.
 - ⚡ **Treatment:** There are two acceptable treatments, both of which must be administered by your veterinarian:
 - ❖ Specific dip that requires many applications a few weeks apart.
 - ❖ Injections or an oral application; these may also require several applications.

Ear Mites

Cats and dogs can get ear mites. However they do not affect humans. The treatment is the same for cats and dogs.

- 🦋 **Cleaning:** The ears must be thoroughly cleaned. If you have never been shown how to do this properly, do not attempt it. You could damage your pet's ears and hearing.
- 🦋 **Ear Mite Drops:** These drops must be applied to both ears even if one ear is not affected. Do not put drops in before the ears are cleaned.

If left untreated dogs and cats will continue to scratch and shake their ears causing sores, hematomas and even cause hearing loss.

INTERNAL PARASITES

Worms

Internal parasites (worms) are a common problem among dogs and sometimes cats. Almost all puppies are born with worms or become infected via nursing from their mother shortly after birth. Although many of these parasites can pose enormous health risks, they are preventable. At some point in your pet's life they will be exposed to worms, through mosquito bites, fleas, or even a romp in the local dog park or field.

- 🦋 **Roundworms:** Many puppies are born with round worms or acquire them through their mother's milk. Though they usually expel them by the age of 6 months, many dogs will continue to have light infestations. Adult worms lay up to 80,000 eggs a day.
 - ☆ **Transmission:** The most common transmission is by nursing puppies from an infected mother before birth. It can also be transmitted through feces or contaminated soil. Dogs that eat an infected rodent are also susceptible.
 - ☆ **Symptoms:** Your pet may exhibit lethargy, vomiting and diarrhea and also have a bloated look. Roundworms look like spaghetti.
 - ☆ **Diagnosis:** Your veterinarian may find larvae or eggs in the stool, through a routine fecal exam.
 - ☆ **Potential health problems:** Severe infestation may result in intestinal blockage and hemorrhage.
 - ☆ **Treatment:** Is fairly inexpensive and easy. Deworm with a product that is specific for this worm, or that is suggested by your veterinarian. In the case of severe infestation more than one worming may be necessary.
 - ☆ **Prevention:** Proper hygiene and yard maintenance is required.
 - ☆ **Pets At Risk:** Dogs and cats.
 - ☆ **Human Risk:** Humans can get roundworms through the contact of contaminated soil. A clean yard and maintenance of children's play areas are important.

- 🦋 **Tapeworms:** Are probably the most common and the worm itself can be seen in the stool without a microscope, but larvae are too minute.
 - ☆ **Transmission:** Are transmitted by fleas. Your pet becomes infected when they groom and swallow an infected flea. The tapeworm grows to maturity in the gut of your pet.
 - ☆ **Symptoms:** Increased or ravenous appetite, or in severe infestations a loss of appetite may occur; also vomiting, diarrhea and a poor coat.
 - ☆ **Diagnosis:** At the egg stage you would not know that your pet has them. Once they become adults the segments are passed in the stool and can sometimes be seen crawling outside your pet's rectum. Live tapeworms look like segments of rice; dead worms resemble dried sesame seeds stuck to the rear of your pet.
 - ☆ **Treatment:** Deworming with the wormer that is specific for tapeworms.
 - ☆ **Prevention:** Effective environmental (indoor and outdoor) control of fleas to prevent re-infestation.
 - ☆ **Pets At Risk:** Dogs and cats.
 - ☆ **Human Risk:** Tapeworm can also be transmitted to humans if proper hygiene is not practiced.
 - ☆ **Whipworms:** Are common in dogs but rare in cats. Whipworms live in the large intestine, and are transmitted when a dog or cat ingests food or water contaminated with whipworm eggs. The eggs mature into adults and

attach themselves to the intestinal wall and feed on blood. Their eggs are passed through the stool and stay in the soil for about 1 month where they mature and repeat the process all over again.

- ☆ **Transmission:** Are transmitted by fleas. Your pet becomes infected when they groom and swallow an infected flea.
- ☆ **Symptoms:** The symptoms may vary depending on the number of worms in the small intestine. Small numbers cause little or no signs. Look for a swollen abdomen, diarrhea, weight loss, poor coat and anemia.
- ☆ **Diagnosis:** Your veterinarian may find larvae and eggs in the stool, through a routine fecal exam.
- ☆ **Potential Health Problems:** In severe infestations look for excessive licking around your pet's right flank area because the worms may have penetrated the intestinal wall. They may also cause an inability to maintain weight and severe anemia.
- ☆ **Treatment:** There are a variety of products that will kill whipworms; however it is best to use the recommended dose given by your veterinarian.
- ☆ **Prevention:** Proper hygiene and yard maintenance is required.
- ☆ **Pets at Risk:** Dogs only.
- ☆ **Human Risk:** Some cases have been reported however with, proper hygiene and yard maintenance it is uncommon.

☞ **Hookworms:** Attach to the dog's intestinal lining with hook-like teeth and feed on the blood of your pet. Hookworms have a voracious appetite and are capable of reproducing at the rate of 50,000 eggs a day. Five hundred worms could cause a 5 lb. puppy to lose half of its total blood volume in a day.

- ☆ **Transmission:** The eggs pass through the feces of infected dogs and hatch into larvae. The larvae can be swallowed by a healthy dog or penetrate through the dog's skin or footpad. Nursing mothers can give hookworms to their puppies also.
- ☆ **Symptoms:** Look for a swollen abdomen (pot-belly), diarrhea, anemia, lethargy, weight loss and poor coat.
- ☆ **Diagnosis:** Your veterinarian may find larvae and eggs in the stool, through a routine fecal exam.
- ☆ **Potential Health Problems:** They may also cause an inability to maintain weight and severe anemia or even death.
- ☆ **Treatment:** There are a variety of products that will kill hookworms; however, it is best to use the recommended dose given by your veterinarian.
- ☆ **Prevention:** Proper hygiene and yard maintenance is required.
- ☆ **Pets at Risk:** Dogs only.
- ☆ **Human Risk:** Some cases have been reported; with proper hygiene and yard maintenance it is uncommon.

☞ **Heartworms:** Are the most life threatening of all canine worms. Heartworms live and thrive in your dog's heart as long as five years. They can range in size from 6 – 12 inches.

- ☆ **Transmission:** Mosquitoes are responsible for the transmission of this awful disease. An infected dog carries with them thousands of microscopic larvae in its blood stream; when mosquitoes bite, they suck the blood, swallow the tiny worms and pass them along to the next dog. The strain of mosquitoes can vary from area to area and the rate of transmission is directly related to the number of mosquitoes in your area.
- ☆ **Symptoms:** Look for coughing, although many dogs will never show signs of infestation until it is too late.
- ☆ **Diagnosis:** Your veterinarian must test your dog's blood.
- ☆ **Potential Health Problems:** They cause organ failure, heart disease and death. They usually live in the right ventricle of the heart and pulmonary arteries. They cause the blood vessels to thicken and expand and eventually give your dog high blood pressure. If they are allowed to multiply your dog may experience both congestive heart failure and kidney or liver failure as well.
- ☆ **Treatment:** Once it is determined that your pet has heartworm, it is given two injections one month apart.
- ☆ **Prevention:** Your pet must be given a monthly pill for the rest of his life. The pills are fairly inexpensive but must be supplied by your veterinarian.
- ☆ **Pets at Risk:** Dogs and cats. However it is still uncommon in cats.
- ☆ **Human Risk:** There is no risk to humans.

Note: Even though worms can put your dog or cat at great risk, they are also easily eliminated. It is important that before you purchase a “wormer” from your local pet store that you know what kind of worm you are trying to kill. Not all wormers are effective for all worms, and too much, not enough or the wrong kind can be extremely harmful to your pet.

For more information, please visit

www.azhumane.org

*Adapted from material originally developed by applied animal behaviorists at the Dumb Friends League, Denver, Colorado
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