

## Recommendations for New Puppy Owners: Veterinary Care

### When should my puppy visit the veterinarian?

Most puppies will visit the veterinarian at six to eight weeks of age for a health exam and to begin vaccinations and parasite treatment/preventives. This is also a great time for you to discuss your puppy's vaccination schedule as well as behavior and training with your veterinarian. It is important to follow your veterinarian's recommended exam schedule to ensure that your puppy receives proper protection and that you receive timely and appropriate advice.



### When should my puppy be vaccinated?

Fortunately, your veterinarian can help to prevent several diseases by vaccinating your puppy. To be effective, vaccines must be given as a series of timely injections. Ideally, they are given at about 6 to 8, 12, and 16 weeks of age, but the recommended vaccines and schedule of injections may vary depending on your puppy's individual needs.

The core vaccination schedule will protect your puppy from common diseases, including distemper, hepatitis, parvovirus, and rabies. The first three are generally included in one injection that is given at 6 to 8, 12, and 16 weeks. Some puppies will receive an additional booster vaccination at 20 weeks of age. The rabies vaccine is given at 12 to 16 weeks of age.

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Other optional vaccinations are appropriate in certain situations. These may include Bordetella, Lyme, and leptospirosis vaccines if there are risks of those diseases based on your geographic location and lifestyle. Your veterinarian will help you determine which vaccines are recommended based on risk factors for contracting these diseases.

### Why does my puppy need more than one vaccination?

When a puppy nurses his mother, he receives a temporary form of immunity through the colostrum; the milk that is produced in the first days after puppies are born. Colostrum contains high levels of maternal antibodies that can provide passive protection against diseases that the mother has been exposed to, either naturally or by vaccination. This passive immunity is of benefit during the first few weeks of your puppy's life, but at some point, those levels decline, and your puppy must develop his own active long-lasting immunity. Vaccinations are used to provide this long-lasting protection.

As long as the mother's antibodies are present, vaccinations are unable to stimulate the puppy's immune system because the mother's antibodies neutralize the vaccine.

Many factors determine when a puppy will be able to respond to vaccinations. These include the level of immunity in the mother at the time of birth, how many antibodies the nursing puppy absorbed, and the general health of the puppy. Since it is unknown when an individual puppy will lose its short-term maternal immunity, a series of vaccinations are given. The goal is for at least two of these to fall into the time frame when the puppy has lost immunity from its mother and has not yet been exposed to disease. A single vaccination, even if effective, is not likely to stimulate long-term immunity, which is critically important.

The rabies vaccine is an exception to this; one injection given at the right time is enough to produce long-term immunity due to the lack of maternal antibody interference.

## How can I provide permanent identification for my dog?

The most widely recommended pet identification device is the microchip. This tiny device is implanted with a needle, much like administering an injection. The microchip will contain important information about your dog and how to contact you. A special scanner can detect these chips; veterinary hospitals, humane societies, and animal shelters have these scanners. A national registry assists in the identification and return of microchipped pets throughout the United States and Canada. The microchip can be quickly implanted during any regular veterinary appointment.

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## Do all puppies have worms?

Intestinal parasites are common in puppies. Puppies can become infected with some types of intestinal worms before they are born or later through their mother's milk. Microscopic examination of a stool sample often reveals the presence of most intestinal parasites. This exam is recommended for all puppies, especially during their first few veterinary visits.

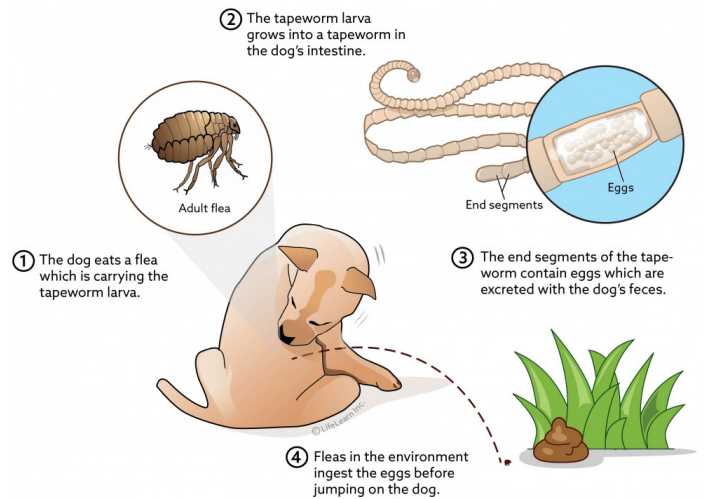
Even if a stool sample is not obtained, the routine use of a deworming medication that is safe and effective against the common worms that affect dogs is recommended. This protocol is followed because deworming medication has little, if any, side effects and because your puppy does not pass worm eggs every day; therefore, the stool sample may not detect worms that are present but not shedding eggs. Additionally, some of these intestinal parasites can be transmitted to humans.

It is important that deworming is repeated because it only kills adult worms. Within three to four weeks, the larval stages of the intestinal parasites will become adults and need to be removed. Dogs remain susceptible to re-infection with hookworms, whipworms, and roundworms throughout their lives. Periodic deworming throughout a dog's life is generally recommended for these common intestinal parasites.

Tapeworms are another common intestinal parasite. Tapeworms require an intermediate host, meaning that they are not passed from dog to dog. Depending on the type of tapeworm, puppies become infected with them when they swallow fleas or when they eat contaminated raw meat, infected mice, birds, or rabbits.

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Dogs infected with tapeworms will intermittently pass small segments of the worms in their stool. The segments are white and look like grains of rice or cucumber seeds. They are about an eighth of an inch (3 mm) long and may be seen crawling on the surface of the stool. They may also stick to the hair under the tail. If that occurs, they will dry out, shrink to about half their size, and become golden or light brown in color. If you observe tapeworm segments on your dog's stool, your veterinarian may want to assess it so that the appropriate medication for treatment and prevention can be prescribed.



## What should I do if my puppy has fleas?

Contrary to popular belief, most of the flea life cycle is spent away from the dog, as only adult fleas live on an animal. The egg, larva, and pupa feed and develop in the environment. Therefore, flea control may also include treatment of the environment, as well as the pet. **Many of the flea control products that are safe on adult dogs are not safe for puppies less than two to three months of age.** Be sure that any flea product you use is labeled as safe for puppies. Consult with your veterinarian to determine which flea medication is appropriate for your puppy.

## What are heartworms?

Heartworms are important parasites, especially in climates where mosquitoes are prevalent. They live in the dog's bloodstream and cause major damage to the heart and lungs that can result in death. Heartworms are transmitted by the bite of an infected mosquito. Heartworm preventives are dosed according to your dog's weight. As your dog's weight increases, the dosage should also increase. They are very safe and effective when used as directed. Many of these products also protect your dog against certain intestinal parasites and/or external parasites, such as fleas and ticks.

## What are ear mites?

Ear mites are tiny parasites that live in the ear canal of dogs and cats. The most common sign of an ear mite infection is excessive and persistent scratching of the ears that can result in injury if not addressed promptly. Sometimes the ears will appear dirty because of a black material in the ear canal. The tiny mites can be seen with magnification, either directly in the ear with an otoscope or by examining a sample of the ear discharge under a microscope. Ear mites spend the majority of their lives within the protection of the ear canal, and transmission requires direct contact with an infected animal. Ear mites are more common in cats than in dogs.

In dogs, ear infections are the most common cause of a dark discharge in the ear canals. It is important that your puppy is examined to differentiate between an ear infection and ear mites. It is inappropriate for a veterinarian to dispense medication without an accurate diagnosis.

## Why should I have my dog spayed/neutered?

Spaying is the surgical removal of the uterus and the ovaries and eliminates the dog's estrus (heat) cycles. In an intact dog, these heat periods result in about two to three weeks of vaginal bleeding and discharge approximately every six months. During this time, male dogs are attracted, even from a distance. Male dogs will go over, around, and through doors or fences to reach a female in heat.

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Apart from the risk of unplanned pregnancies, it is well documented that intact female dogs have a significant risk of developing breast cancer and/or uterine infections. Spaying your dog before she experiences her first estrus cycle has three benefits:

- It eliminates the risk of unplanned pregnancy and helps control the problem of dog overpopulation
- It eliminates any possibility of uterine disease
- It virtually eliminates any chance of developing breast cancer.

Neutering or castration is the surgical removal of the dog's testicles. Intact male dogs tend to be more territorial towards other male dogs and are prone to developing prostatic disease and testosterone-induced tumors. Neutering will prevent or lower the risk for these problems. Additionally, it is an effective method for controlling the overpopulation problem. Neutering can be performed any time after your dog is six months old.

Your veterinarian will discuss the best time to spay or neuter your dog with you.

## If I choose to breed my female dog, how old should she be?

If you plan to breed your dog, she should have at least one or two heat cycles first, when she will be more physically mature, allowing her to be a better mother. Consult your veterinarian regarding what tests should be done to ensure she will not pass a heritable disease to her puppies, such as hip dysplasia or genetic mutations.

Breeding for the first time after she is five years of age is not recommended. Having her first litter so late increases the risk of complications during the pregnancy or delivery. For more information, see the "Breeding for Dog Owners" series of handouts.

As always, if you have any concerns or questions about your new puppy, your veterinarian is there to help!