Companion animals today have the opportunity to live longer, healthier lives than ever before, in part due to the availability of vaccines that can protect pets from deadly infectious diseases. Over the past several decades, the widespread use of vaccines against diseases like rabies has saved the lives of millions of pets and driven some diseases into relative obscurity. Unfortunately, infectious diseases still pose a significant threat to dogs and cats that are unvaccinated; therefore, although vaccine programs have been highly successful, pet owners and veterinarians cannot afford to be complacent about the importance of keeping pets up-to-date on their vaccinations.

How Do Vaccines Work?
Although there are many types of vaccines, they tend to work through a similar principle. Most vaccines contain a very small portion of the virus or bacterium that is the infectious agent. Some vaccines contain small quantities of the entire virus or bacterium, whereas others contain particles that are part of the infectious organism. When this material is introduced into the body in a vaccine, the body’s immune system responds through a series of steps that include making antibodies and modifying other cells that will recognize the target organism later. When the vaccinated individual encounters the “real” organism later, the body recognizes the organism and reacts to protect the vaccinated individual from becoming sick by activating the immune system.

Why Does My Pet Need Vaccines?

Vaccines protect your pet.
Vaccines are one of our most important weapons against infectious diseases. Some diseases, such as “kennel cough” in dogs and rhinotracheitis in cats, can be transmitted directly from pet to pet. If your pet is ever around other animals, such as at a kennel, dog park, grooming salon, or daycare facility, exposure to infectious disease is possible. Even pets that look healthy on the outside may be sick, so keeping your pet’s vaccines up-to-date is a good way to help prevent illness.

Even primarily indoor pets can be exposed to diseases.
Even if your pet doesn’t have direct contact with other animals, some diseases can be transmitted indirectly. For example,
parvovirus infection, which is potentially fatal, is spread through contact with feces from an infected dog. Even if your dog never has contact with a dog infected with parvovirus, exposure to the virus can occur through contact with feces from an infected dog, such as in a park or on a beach. Lyme disease—a dangerous infection that is carried by ticks—is another disease that your dog can be exposed to without coming into contact with other dogs.

In cats, panleukopenia infection is potentially fatal and spread through contact with body fluids (mostly urine and feces) from an infected cat. Once a cat is infected with panleukopenia, it may shed virus in body fluids for a few days or up to 6 weeks. Panleukopenia can live in the environment (such as on contaminated bedding, food bowls, litter boxes, and other items) for a very long time, so contact with contaminated objects can spread the infection to other cats. Additionally, if a pet owner is handling an infected cat, failure to change clothes and wash hands thoroughly with the correct disinfectant can expose other cats to the disease.

So, even pets that spend most of their lives indoors or have very limited contact with other animals are not completely safe from exposure to infectious diseases.

Vaccines protect your family and community.
Some infectious diseases, such as leptospirosis in dogs and rabies in dogs and cats, are zoonotic diseases. That means humans also can become infected. In the case of rabies and leptospirosis, both diseases can cause serious illness and death in infected individuals—including humans. Protecting your pets against these diseases also protects the rest of your family members, as well as other pets and people in your community.

Are Vaccines Safe?
All of the available vaccines for dogs and cats have been thoroughly tested and found to be safe when administered as directed. Most pets tolerate vaccines very well, although reactions can occur in some cases. Some pets can seem a little “tired” after receiving vaccines. Notify your veterinarian if your pet develops breathing problems, facial swelling, vomiting, hives, redness on the skin, or other unusual changes after receiving a vaccine. You also should tell your veterinarian if your pet has ever had a problem in the past after receiving a vaccine.

Which Vaccines Does My Pet Need?
Many vaccines are available for dogs and cats, but every pet does not need to receive every available vaccine. So how do you know which vaccines your pet should have? The American Animal Hospital Association (AAHA) and the American Association of Feline Practitioners (AAFP) have summarized vaccine recommendations to help veterinarians clarify how to best protect dogs and cats through the use of vaccine programs.
AAHA and AAFP evaluated the available vaccines and categorized them to provide guidelines on how commonly they should be used. Vaccines are categorized as core, non-core, or not recommended. A core vaccine is one that all pets should receive. The core vaccines for dogs are rabies, distemper, adenovirus-2, and parvovirus; and the core vaccines for cats are rabies, rhinotracheitis (feline herpesvirus-1), panleukopenia (feline distemper), and calicivirus. Non-core vaccines are optional ones that pets can benefit from based on their risk for exposure to the disease. Examples include the vaccines against Lyme disease and leptospirosis in dogs, and the vaccines against feline leukemia virus and feline immunodeficiency virus (or feline AIDS) in cats. Categorization of a vaccine as “not recommended” does not mean that the vaccine is bad or dangerous. This designation simply means that widespread use of the vaccine is not currently recommended.

Because core vaccines are recommended for all pets, your veterinarian will recommend keeping these vaccines up-to-date at all times. The decision regarding non-core vaccines should be made after you and your veterinarian have discussed the vaccines in question and whether your pet might benefit from receiving them. Factors to consider include your pet’s lifestyle (how much time your pet spends outside), where you live, where you travel with your pet, and how often your pet has contact with other animals. Bear in mind that vaccine recommendations and your pet’s lifestyle can change. Your veterinarian may want to discuss modifying the vaccine recommendations to ensure that your pet is well protected.

What Is the Recommended Schedule for Vaccines?
Puppies and kittens generally receive their first vaccines when they are around 6 to 8 weeks of age (depending on the vaccine and manufacturer’s recommendations). Booster vaccines are generally given during your puppy or kitten checkup visits; your veterinarian can discuss the recommended schedule with you. Vaccines are generally repeated a year later.

Although puppies and kittens are considered especially vulnerable to some diseases, it is also very important for adult pets to be up-to-date on vaccines. Traditionally, many vaccines were repeated yearly, during regular checkup examinations. However, research has shown that some vaccines can protect pets for longer than 1 year. In light of these findings, the AAHA and AAFP guidelines note that some vaccines don’t need to be repeated more frequently than every 3 years. The decision regarding how often your pet needs vaccine boosters depends on several factors, including your pet’s overall health status and risk for exposure to the diseases in question. Your veterinarian may recommend annual boosters after considering your pet’s lifestyle and disease exposure risk. The decision regarding how often to administer any vaccine (annually, every 3 years, or not at all) should be an individualized choice that you and your veterinarian make together.

Vaccination remains one of the most important services your veterinarian offers, and although vaccination is a routine procedure, it should not be taken for granted. It also allows a regular opportunity for your veterinarian to perform a physical examination, which is very important for keeping your pet healthy. Protecting patients is your veterinarian’s primary goal, and developing an appropriate vaccine protocol for your pet is as important as any other area of medicine.