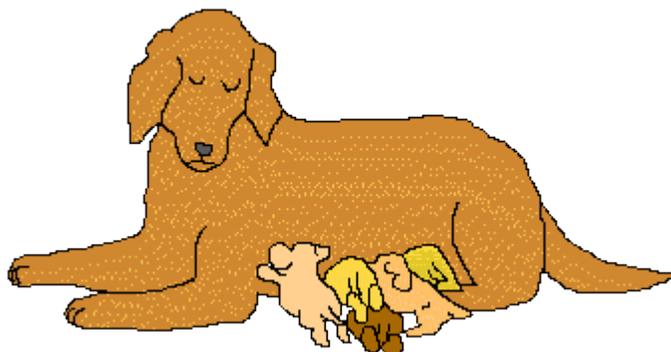


Why do puppies and kittens need a series of shots and how many do they need?

When a baby kitten or puppy is born, its immune system is not yet mature; the baby is wide open for infection. Fortunately, nature has a system of protection. The mother produces specific milk in the first few days after giving birth. This milk is called colostrum and is rich in all the antibodies that the



mother has to offer (some protection is also derived from the bloodstream). As the babies drink this milk, they will be taking in their mother's immunity. After the first couple of days, regular milk is produced and the baby's intestines undergo what is called closure, which means they are no longer able to take antibodies into their systems. These first two days are critical to determining what kind of immunity the baby will receive until its own system can take over.

How long this maternal antibody lasts in a given puppy is totally individual. It can depend on the birth order of the babies, how well they nursed, and a number of other factors. Maternal antibodies against different diseases wear off at different times. We do know that by 16 to 20 weeks of age, maternal antibodies are gone and the baby must be able to continue on its own immune system.

While maternal immunity is in the puppy's system, any vaccines given will be inactivated. Vaccines will not be able to "take" until maternal antibody has sufficiently dropped. Puppies and kittens receive a series of vaccines ending at a time when we know the baby's own immune system should be able to respond. We could simply wait until the baby is old enough to definitely respond as we do with the rabies vaccination but this could leave a large window of vulnerability if the maternal antibody wanes early. To give babies the best chance of responding to vaccination, we vaccinate intermittently (usually every 3 to 4 weeks) during this period, in hope of gaining some early protection.

When a vaccine against a specific disease is started for the first time, even in adult animal, it is best to give at least two vaccinations. This is because the second vaccination will produce a much greater (logarithmically greater) response if it is following a vaccine given 2 to 4 weeks prior.