

Vaccination:

How does it work, and why does my pet need so many?

Vaccinations are also known as inoculations (or “inertings” in Afrikaans).

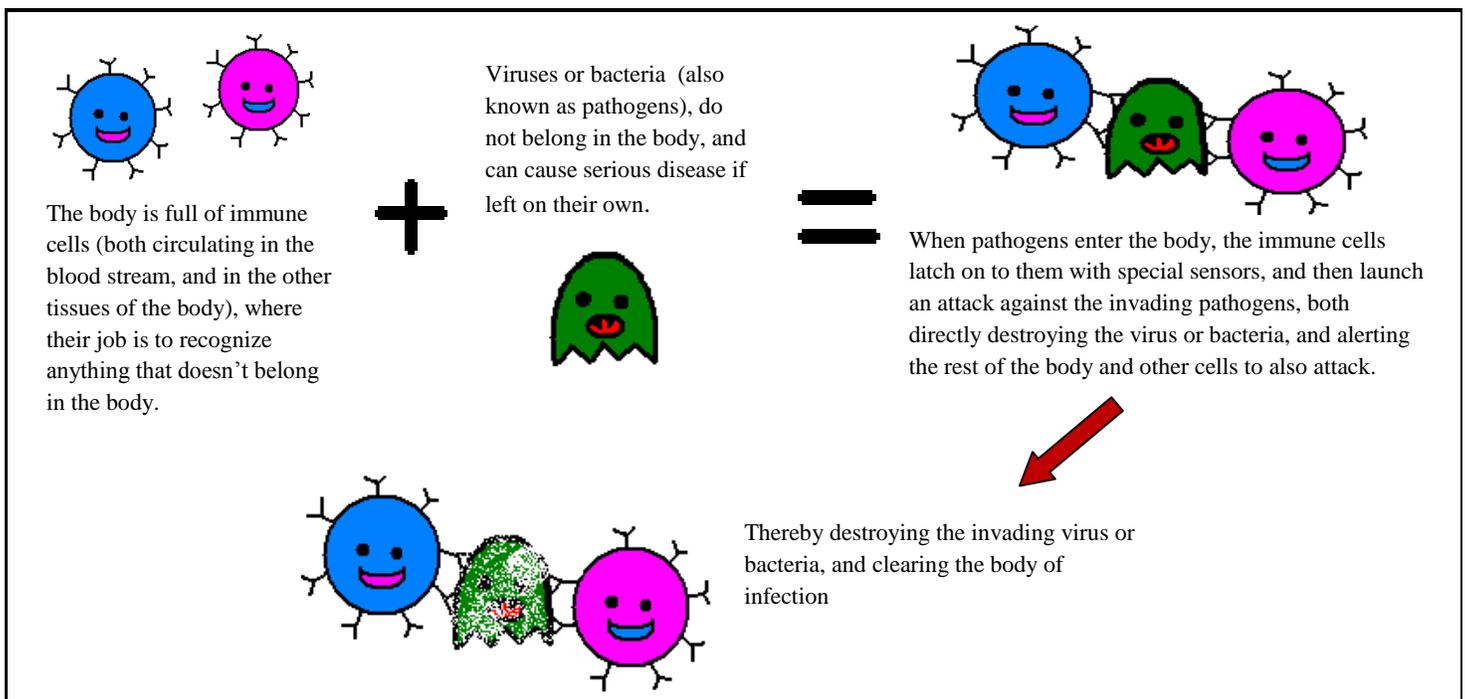
They are injections which give your pets immunity against certain serious diseases (either preventing the disease, or in some cases reducing the severity of the disease).

What is immunity?

Basically immunity is when the body’s immune system is ready to instantly recognize and start fighting a disease (virus or bacteria) as soon as the animal is exposed to that disease, thereby preventing them from getting sick.

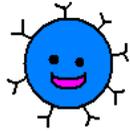
How do vaccinations work?

To fully understand how vaccinations work, one must first understand how the immune system works and how it fights infections.

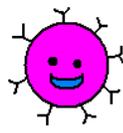


However, this process can be very slow, so your pet may get very sick, or even die before the infection is completely cleared up. This is where vaccination comes in, to speed up the process, so the infection is destroyed before the animal even becomes sick.

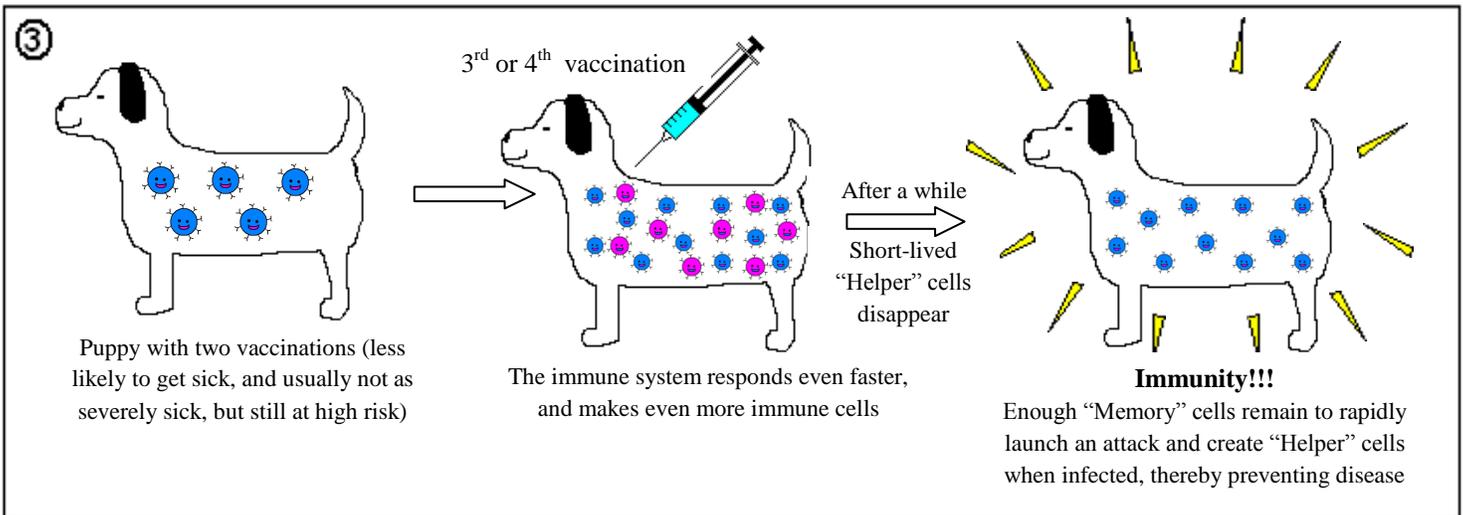
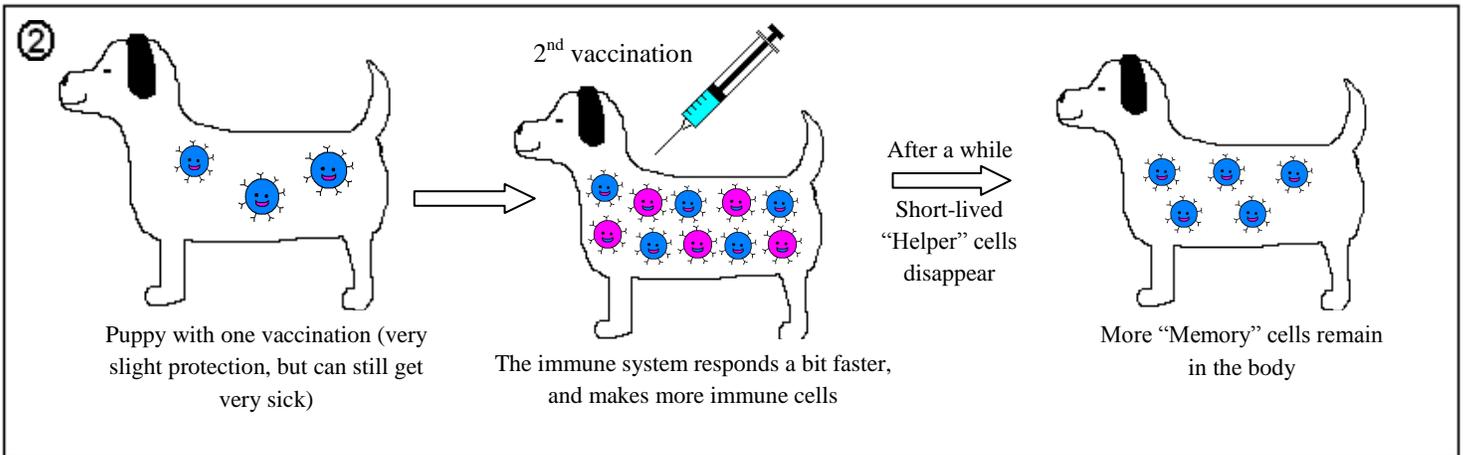
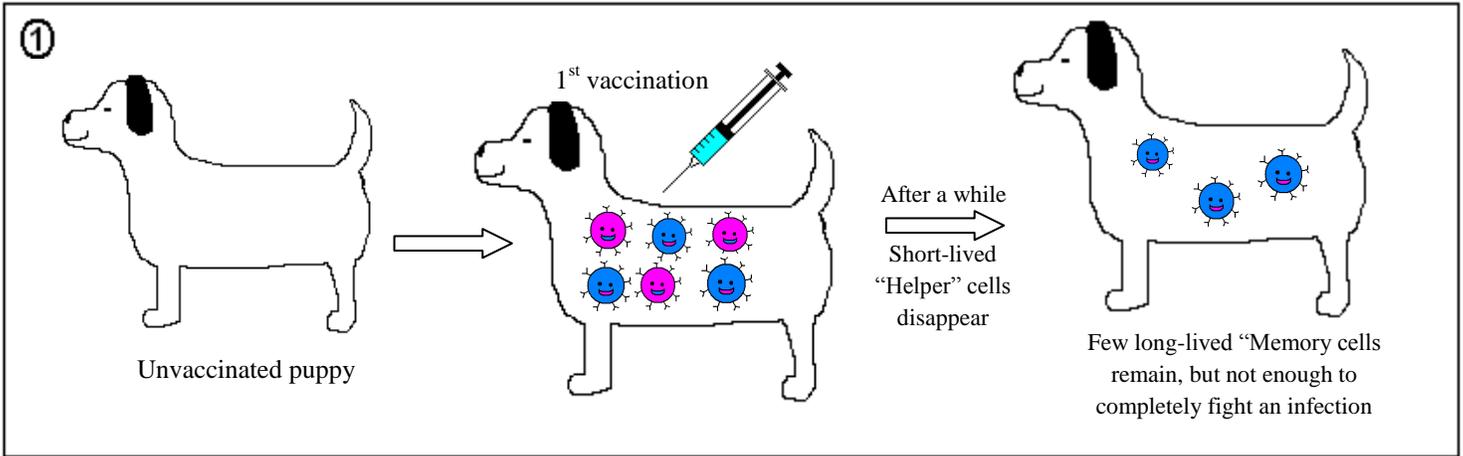
To further understand vaccination, one needs to understand that there are different types and groups of immune cells. Some have a long lifespan (long-lived or “memory” cells), whereas others have a short lifespan (“helper” cells), but are better able to fight infection. The long-lived memory cells are capable of rapidly producing many short-lived helper cells needed to clear an infection, and it is these memory cells that we aim to build up through vaccination.



“Memory” cells



“Helper” cells



So it is clearly very important to make sure that your pet gets all their initial puppy/kitten vaccinations (always check your vaccination booklet to see when the next one is due), and to return for the yearly vaccinations thereafter to make sure that an adequate level of immunity is maintained.

How does an injection create immunity though and can it make my pet sick?

Vaccines fall into different categories, namely live and dead vaccines.

- With “live” vaccines, the virus or bacteria that would usually cause disease, has been altered in such a way that it is unable to cause disease, but will still be recognized by the body. The immune system then launches an immune response against the altered virus or bacteria, as it would with a normal one, creating immunity, but with no risk of your animal becoming sick.
- With “dead” vaccines, the virus or bacteria is either killed, or only a small part of the virus or bacteria is used. The immune system will however still launch a full attack on the particle, and will then be able to recognize the real thing later on, and fight the infection rapidly.

Though the vaccines cannot cause your pet to become sick (get one of the diseases vaccinated against), they may feel a bit tired or have a decreased appetite for about 24 hours (esp with the live vaccines). This is simply due to the immune system going into action, which can make your pet feel a bit under the weather, but they will be back to normal in no time.

Why can't my sick pet be vaccinated?

Once your pet is sick, it is too late to vaccinate them. Firstly, the full effect of the vaccination is only achieved after about 2-3 days, by which time it will be too late to help your pet. And secondly, by vaccinating a sick pet, one would overload and distract the immune system. Instead of just fighting the current illness, the immune system would now simultaneously have to start an immune response against the vaccination, dividing its attention and making it less effective.

Why do we only start vaccinating at 6 weeks?

Puppies and kittens are born with a level of immunity from their mother (the immunity is strongest if the mother's vaccinations are up to date). This immunity lasts for approximately 6 weeks. If vaccinated before six weeks, then the immunity that they have from their mother neutralises the vaccination, without them developing any immunity of their own, so in effect the vaccination would be useless and a waste of money.

Key Point: Keep up to date with your pet's vaccinations to keep them safe from dangerous diseases!