



Five-in-one (clostridial) vaccination protocol

Alpaca CheQA

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5-in-1 vaccine protects against 5 different but related bacteria known collectively as clostridial diseases. These bacteria can cause sudden death in your alpacas. The bacteria are often concentrated around stock yards and in and around dung piles, and their spores can survive in soil for many years.

How to use the vaccine?

Read the instructions that come with the 5-in-1 vaccine and look after the vaccine so it maintains its efficacy. Take an esky and cold brick with you when you buy the vaccine so you can keep it cool and out of direct sunlight after purchase *en route* to placing it in the fridge when you get home. On the day/s of use, carry the vaccine in an esky containing a cold brick to the yards and place the vaccine back in the esky during breaks such as lunch to maximise life and efficacy of the vaccine. At the end of the day, remember to put the vaccine back in the fridge and not leave the vaccine pack/s hooked on a nail in the woolshed or rattling around in the back of your vehicle. Write the date you opened the vaccine on the plastic container. Vaccine should ideally be discarded 30 days after opening. Vaccine that was opened last season should not be used this season!

Shake vaccine container well before use. If you are only injecting a few livestock, you can use a needle and syringe to draw up the vaccine. Only ever use a new needle to draw up medication. Swab the rubber bung with alcohol before inserting the needle. Remove air bubbles from the syringe/ful so each animal gets the correct dose. Ideally, use a new needle to inject each animal. Otherwise, use a clean vaccinator gun with a new needle at the start of each day. Replace the needle when it gets blunt. Avoid getting air bubbles in the line/syringe so all livestock get the appropriate dose. The appropriate volume of vaccine to administer varies according to manufacturer so read the label carefully. Alpacas should be given a sheep dose if not specified on the label. Alpaca owners need to be aware that few vaccines are registered for use in alpacas. Consult your local veterinarian for advice on vaccine use in alpacas on your farm.

Vaccine should be injected *under the skin* (subcutaneously), NOT into the muscle (intramuscularly). To facilitate this, use short ($\frac{1}{4}$ " or 6 mm) needles. Insert the needle at a shallow angle at the base of the neck in front of the shoulder blade where there is loose skin on the side of the neck. Do not inject too close to the dorsal mid-line to avoid the large ligament that supports the neck. Do not inject too close to the ventral midline to avoid the trachea and major nerves and blood vessels in that area. Do not pick up the skin with your other hand to avoid self-injection!

An alternative site for subcutaneous injection is in the hairless area on the lateral thorax, behind the elbow. This site is easier to access when fleece is short.

Avoid accidental mixing of different treatments, if administering other medications at the same time, by ensuring you use different sides of the neck. Injecting on the same side could lead to inactivation of the different products rendering thus rendering them ineffective (and wasting the dollars you have just invested).

When to vaccinate?



1. Crias should be vaccinated at 8 weeks of age to provide a priming dose, when the protection from mother's milk is starting to decline.
2. Crias should be vaccinated again 4-6 weeks later to provide a booster dose thus ensuring maximal effect of vaccine.
3. Pregnant females should be vaccinated 4-6 weeks pre-parturition to ensure high concentrations of clostridial antibodies in the colostrum.
4. Twice yearly vaccination of all stock (because antibodies for *C. perfringens* wane after 9 months). For example, in spring at shearing and prior to autumn birthing season.
5. ANY new stock onto the property: Vaccinate twice, 4-6 weeks apart to ensure been boosted properly, then as per home-grown livestock.

Only use other vaccines in consultation with your local veterinarian

6-in-1 vaccine is designed for use in sheep and goats and protects against the 5 clostridial diseases discussed above, and another bacterial disease known as cheesy gland/CLA/caseous lymphadenitis (*Corynebacterium ovis*). The organism is picked up by animals that have not been vaccinated, through shearing cuts/infected combs and cutters/dipping after shearing/close yarding. Infection leads to abscess formation in lymph nodes around the body and carcass condemnation at the meat works. Consider vaccinating alpacas if your herd has a high prevalence of subcutaneous abscess formation under the direction of your veterinarian, and according to the manufacturer's directions. If you have lice in your alpaca herd and are going to dip them off-shears, avoid dipping until shearing wounds have healed to reduce risk of spreading cheesy gland.

7-in-1 vaccine protects against the 5 clostridial diseases discussed above, and 2 types of leptospirosis. The latter 2 organisms can affect cattle, sheep, goats and alpacas and is spread by urine from infected animals contaminating pastures, water and feed. Humans can also be infected. Clinical signs of leptospirosis include abortions, reduced milk output, red urine, ill-thrift and may cause death. Speak to your veterinarian about using 7-in-1 vaccine in your alpaca herd.