

# WELLINGTON VETERINARY CLINIC, Inc.

45015 State Route 18

Wellington, Ohio 44090

Office 440-647-4100 Fax 440-647-2558

## SUGGESTED VACCINATION AND INJECTABLE VITAMIN SUPPLEMENTATION FOR ALPACAS AND LLAMAS

**Disclaimer:** No single vaccination/supplementation program is appropriate for every farm. Factors that must be considered include animal numbers, stocking density, possible exposures, travel and disease histories, etc. The information included below is intended to provide information that can help us decide on a program that is appropriate for your situation.

### VACCINATIONS

#### CD&T

This vaccine provides protection against diseases caused by Clostridium perfringens type C and type D, and Clostridium Tetani. The first two are bacteria commonly found in the normal intestinal tract in low numbers which, when conditions such as carbohydrate overload or third compartment stasis occur, can replicate quickly and release a toxin that can cause rapid death. (In fact, old-time sheep producers noticed that the healthiest, most aggressive bottle-fed lambs were often the most susceptible to these bacteria, and so named the problem “overeating disease”). The third is the source of tetanus (“lockjaw”), and grows in wounds or exposed tissues such as umbilical stumps, shearing wounds, etc. producing a toxin that causes spasmodic muscle contraction and paralysis.

I recommended that every animal on every farm be vaccinated for CD&T, and discourage the use of vaccines containing additional Clostridium species, such as Covexin 8. The additional vaccines protect against bacteria which do not cause disease in our region, dilute the immune response to the important species, and themselves can cause more vaccination site abscesses than vaccines containing just CD&T. All clostridial vaccines are made from the modified toxins of the given bacteria, so it stands to reason that giving more of these toxins increases the risk of adverse reactions to a vaccination in the form of allergic/anaphylactic reactions, fever and/or illness, and possibly abortion in pregnant animals.

CD&T vaccine should be given subcutaneously, 2cc per animal. Animals over one year of age can all be vaccinated annually as a group without regard to pregnancy status, etc. New animals with unknown vaccination histories should get two doses three weeks apart, then annually with the rest of the herd.

Vaccinate pregnant dams with C, D, & T vaccine 3-5 weeks before they are due. This will maximize the colostral antibodies to be transferred to the cria. This will eliminate the need to vaccinate crias for C, D, & T until 5-6 months of age, when they should be given two 2cc doses three weeks apart, and can then be vaccinated annually with the rest of the herd.

## LEPTOSPIROSIS

Leptospirosis is a disease that can cause a number of symptoms including fever, anorexia, and abortion. Like clostridial diseases, each sub-type of *Leptospira* requires its own vaccine component, and there is no cross-protection between types afforded by a single vaccine. Most Leptospirosis vaccines contain five or seven sub-types. I feel that the risk of this disease in the herds I visit is overstated, and recommend routine vaccination only in those herds with proven disease or natural waterways in pastures (which can carry the organisms shed by wild animals).

If the decision is made to vaccinate for leptospirosis, use **only** a leptospirosis vaccine, not a cattle vaccine such as a “nine-way” that also contains vaccines against cattle diseases not found in alpacas. The vaccinations should be given subcutaneously at 6 months and again three weeks later, then annually. Pregnant animals can be vaccinated per label directions, but vaccinating pre-breeding is preferable.

## RABIES

Extremely rare in our region in any domesticated species, and rarer still in alpacas. Give per label instructions annually.

\*In summary, which animals/herds do I routinely recommend receive the above vaccines?

*CD&T* = All      *Leptospirosis* = Very Few      *Rabies* = None

## VITAMIN AND MINERAL SUPPLEMENTATION

In general, most vitamins and trace minerals should be provided in the feed. The makers of alpaca grain mixes/concentrates are careful to include sufficient concentrations of these to compensate for the deficiencies in Ohio’s forages. For instance, Ohio soils are selenium-poor, but blood selenium tests on local animals fed pasture/hay and commercial alpaca grain mixes have come back in the normal to high-normal ranges.

## SELENIUM AND VITAMIN E

I will give newborn crias selenium and vitamin E on day 2 simply because these are especially important in the first weeks of life for normal skeletal and muscle formation, and for normal immune function. The dosage is 0.5cc Bo-Se (*not* Mu-Se, which is five times stronger) subcutaneously. Supplementation in other age animals is typically unnecessary.

## VITAMIN A AND VITAMIN D3

These two are very important to bone development and maintenance, especially vitamin D3. Because sunlight is the natural source of vitamin D3 and because Ohio winters are infamously sunless and gray, it is now recommended to supplement newborns on day 2, then all animals once in late fall (mid-November) and again in the winter (early February). Whether using an A and D injection (preferred) or an A, D & E injection, base the dosage on the vitamin D3 requirement of 1000 I.U./kg body weight given subcutaneously. The following subcutaneous dosages assume a D3 concentration of 75,000 I.U. per mL (always wise to check the label, but the only exception to this I'm aware of is "Vital E, A & D" which has only 10,000 I.U. per mL):

Weight in pounds:	<b>NEWBORN TO 30LBS.</b>	<b>60</b>	<b>90</b>	<b>120</b>	<b>150</b>	<b>180</b>	<b>210</b>
Dosage in cc:	<b>.2</b>	<b>.4</b>	<b>.6</b>	<b>.8</b>	<b>1.0</b>	<b>1.2</b>	<b>1.4</b>

I hope you find this helpful in determining vaccination and injection protocols for your animals based on solid medical rationales. Please let me know on my next visit if you have any questions on vaccinations and injections – I've already coached plenty of owners on syringe handling and one-person injection techniques and have answered many good questions regarding vaccine timing, vitamin requirements, etc.

*Steven Kranz, DVM*