

by Gail Kocian

**A Texas Longhorn breeder in Texas writes:**

***I've noticed that after we vaccinate our cattle, there is a large lump in the area where they were vaccinated sometimes for several months. But the lumps aren't on all the cattle, just a few of them. What am I doing wrong to cause these lumps to form and how can I get rid of them? Could I be using the wrong size needle for the vaccinations?***

**What could be causing these large lumps to appear on this breeder's cattle after vaccinating them?**

Sometimes an animal can have an allergic reaction at the injection site and a lump forms. The tissue gets irritated and a swelling develops and can remain there for months. The lumps can vary in size, anywhere from a small walnut to a golf ball size, depending on the type of vaccine administered and the volume of the injection. There's no need to worry if this happens to your cattle. It's common for at least a few of the animals to develop lumps while others don't.

**When these lumps form does it mean the vaccine is just sitting under the surface of the skin and has not been absorbed into the animal's system? Should the animal be vaccinated again just as a precautionary measure?**

No, there is no need to vaccinate the animal again. The drug was absorbed into the animal's system when you vaccinated it and the lump has not affected how the vaccine works. Most vaccines for blackleg and other clostridial diseases contain aluminum hydroxide, an adjuvant used in the manufacturing of many vaccines. Aluminum hydroxide is known to irritate skin and cause adverse reactions in some animals and also in humans.

**Would it be a good idea to use a different brand of vaccine next time to prevent the lumps from forming?**

That probably wouldn't make any difference since some cattle develop the lumps and some don't. You would be running into the same situation each time no matter what vaccine you used. Generally only the SQ injection sites will develop a lump, not the IM injection sites. Since so many vaccines contain the same basic ingredients to combat or prevent diseases, it would be hard to find the perfect vaccine to use on all your cattle with

the intentions of preventing allergic reactions and lump formations.

**Could my vaccination technique be the cause of the allergic reaction?**

It's highly unlikely since the animal's skin is reacting badly to an ingredient in the vaccine, not to how it is administered. Your technique is probably correct, but you want to make sure that you inject the vaccine into the proper location on the animal. Read the vaccine labels carefully and make sure you administer the proper dose in the suggested location on the animal. Changing routes of injection can cause the drug to be ineffective and/or harmful to the animal.

Certain drugs are meant to be absorbed into the animal's system slowly so a subcutaneous (under the skin) injection is recommended by the vaccine manufacturer. Subcutaneous injections are usually given in front of the shoulder although some drugs like wormers can be administered behind the shoulder. That's why the lumps formed due to the allergic reactions will appear in the neck and/or shoulder areas more frequently.

Intramuscular injections are given in the muscle and the suggested location is also in the neck. Some breeders prefer to inject IM vaccines into the hip muscle, but it isn't recommended especially for beef producers. Drugs injected into the muscle are absorbed into the animal's system quicker.

**To reduce the size of the lump, should I try to lance it and drain out the fluid?**

Cutting into those lumps to drain any pus that might be present would be inviting infection and is not necessary. If left alone, the lump will disappear in time. Yes it doesn't look good to have a lump on your animal's neck or shoulder, but since an animal could have an allergic reason at the injection site every time it's vaccinated,

you would have to put that same animal back in the chute each time and repeat the process to remove a lump. Most veterinarians suggest that these lumps be left alone.

**What about the needle size...could the wrong kind of needle contribute to the lump formations?**

No matter what size needle you use to administer a vaccine, if the animal is allergic to the vaccine drugs, inflammation and lumps will develop. Clean, sharp needles are always recommended to use because dull, contaminated needles can cause bruising and irritate the injection site and even cause infection.

While we're on the subject of needles, let me just say that it is important that the right needles be used because some vaccines are thicker than others and require a heavier needle to administer the vaccine quicker and easier. The most commonly used needle size for intramuscular injections is a 16-gauge, 1-inch needle and subcutaneous injections can be given with either that size or a 1 ½ inch, 16-gauge needle. Larger size needles (14-gauge and up) can traumatize the skin and cause lesions.

Never inject more than 10 ml into any one site and spread your injections out at least three to four-inches apart from each other if more than one kind of vaccine/drug is being injected into the same site area. This helps on the proper absorption of all the vaccines and prevents cross reactions with the different drugs.

To get your questions submitted, simply type your question and send it to *Trails* Editor Brenda Cantrell at [Brenda@tlbaa.org](mailto:Brenda@tlbaa.org) or fax (817) 625-1388 or mail to: 2315 N. Main Street, Suite 402, Fort Worth, TX 76164. Your questions will be sent to Gail and she will be in hot pursuit to get you the answer.