

How To Give Injections

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Introduction

Modern health practices in swine production require numerous injections which provide pigs with antibiotics, vaccines, bacterins, hormones, drugs, vitamins, and iron compounds, and other products. To minimize the pig's pain and avoid illegal residues of the products, proper injection techniques should be followed.

Steps to Give Injections

1. Determine the Routes of Administration

Following the specific and approved routes of administration can provide maximum results with minimum problems. Recommended routes are specified on the label. Read the label carefully about the route of administration, amounts to be used, or other precautions. There are four major routes of administration: intramuscular (IM), into the muscle; subcutaneous (SQ), below or beneath the skin; intraperitoneal (IP), within the abdominal cavity; and intravenous (IV), in the vein.

2. Select Syringe

Selecting the proper syringe will ensure a proper injection technique and minimize injection problems. Disposable syringe with a tip located off center is intended primarily for intravenous injections. The two main types of tips are Leur lock (Figure 1) and Leur slip (Figure 2). Except for use in piglets, the Leur lock type syringe hub is preferred because it has the strongest attachment, whereas the slip tip is easily bent and broken if animal movement occurs during the injection. However, slip type of syringe tip is always used when producers are required to place the needle into the animal and then attach the syringe themselves. Non-disposable syringe, which is also called automatic syringe (Figure 3), has a dose adjusting



Figure 1 - Leur Lock Syringe



Figure 2 - Leur Slip Syringe

mechanism that may be set for a 1- to 5-cc delivery with every squeeze of the trigger. This offers the advantages of quick dose delivery and a pre-set volume adjustment when injecting large numbers of similar age pigs.



Figure 3 - Automatic Syringe

3. Select Needle

Broken needles are a major concern in the swine industry. To prevent this, select the appropriate gauge and length of needle for the job. Needle size selection will vary depending on the route of administration (IM or SQ) and size and age of the animal. The National Pork Producers Council recommends the following:

Intramuscular Injection			Subcutaneous Injection	
	Gauge	Length		Length
Baby Pigs	18 or 20	5/8 in. or 1/2 in.		
Nursery	16 or 18	3/4 in. or 5/8 in.	Nursery	1/2 in.
Finisher	16	1 in.	Finisher	3/4 in.
Breeding	14 or 16	1 in. or 1 1/2 in.	Sows	1 in.

4. Restrain the Animal

Have all the supplies ready before restraining the pig. Small pigs are easily restrained and adequate restraint makes injections easier to perform. When holding small pigs, it is best to restrain just as you would hold a dog. Use proper restraint device (e.g., humane hand-held pig catcher) on larger pigs (greater than 50 pounds) and adult sows and boars.

5. Place the Injection

Intramuscular (IM):

- Use a spot behind the ear on the side of the neck (Figure 4).
- Pull the skin forward slightly before inserting the needle. After the needle is inserted, release the skin, give the injection, and remove the needle.
- Avoid injections into the fat.

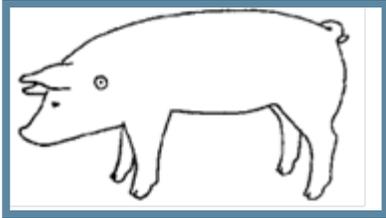


Figure 4 - Location of preferred site for IM injections.

Subcutaneous (SQ):

- Use the loose flaps of skin in the flank and elbow for small pigs (Figure 5).
- Use loose skin behind the ears for sows.
- Slide the needle under the skin away from the site of skin puncture before depositing the product.

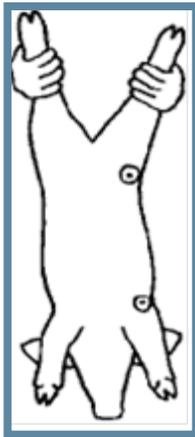


Figure 5 - Location of preferred sites for SQ injection.

Intraperitoneal (IP):

- Use only with veterinary guidance and instruction because serious injury to abdominal organs can occur.

Intravenous (IV):

- Commonly used for anesthetic agent administration.
- Ear vein is the preferred site (Figure 6).
- Sedation can be used to ensure good access.
- Use with veterinary guidance and instruction.

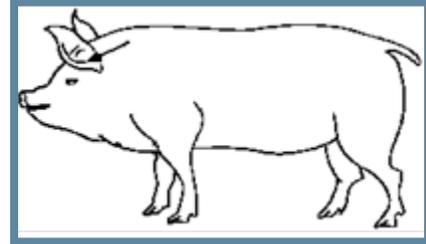


Figure 6- Location of preferred site for IV injections.

6. Cautions for Giving Injections

- Restrain the animal properly.
- Select correct dosage on the syringe.
- Select the injection site (clean and dry), and disinfect with alcohol, iodine, or other suitable disinfectant.
- Make sure no air bubbles are present in the syringe.
- Firmly and quickly insert needle to the animal.
- Quickly deliver the compound.
- Read the product label, be aware of the potential drug reaction, and be prepared to deal with them.
- Use proper stainless steel needles and good restraint can avoid problems caused by broken needle shafts. If needle breakage does occur and the needle fragment cannot be removed from the pig, mark the pig and document the occurrence, ensuring this information is provided when the animal is sold.
- Always keep record of injection.

References

- Vaccinations for the Swine Herd. ANR-902.
- Swindle MM: Surgery, Anesthesia and Experimental Techniques in Swine, Ames, IA: Iowa State University Press, 1998.