

# Healthy Animal Medications

**Objective:** Students will safely handle animal medications and injecting needles.

**Concept:** Animals require medication when they are ill. Vaccinations are administered to prevent disease. Medication can be administered orally in the form of pills and feed supplements; topically by spraying, pouring or rubbing on the skin; or by injecting into the animal's tissue. Whatever the administration method, care should be taken to follow procedures and recommendations in order to protect animals and humans.

- ▶ **Intravenous:** to inject or administer directly into the vein or blood stream. This method requires a veterinarian and brings the fastest results.
- ▶ **Subcutaneous:** to inject under loose skin. It causes the least amount of damage to the meat so it is the preferred method of injection.
- ▶ **Intermuscular:** to inject directly into the muscle of the animal. This type of injection may cause tissue damage or lesions.

**Targeted Age:** Middle to high school (youth who are new to administering medication and injections need close supervision by adults)

**Materials:**

Middle School

- ▶ Syringes without needles
- ▶ Oranges

High School

- ▶ Syringes with needles of various sizes
- ▶ Stuffed animals with loose fitting fur

## ACTIVITY 1

Show students the proper way to give a subcutaneous injection by lifting the skin (tenting) with one hand and inserting a needleless syringe into the base of the tented area with the other hand. This technique is referred to as a subcutaneous injection- see the following page for visuals. Have each student demonstrate the procedure with a stuffed animal. With older, more responsible students, you may want to try syringes with needles and oranges. This gives students practice in handling a syringe and needle and feeling what it is like to inject body tissues. Use special caution that students are not horse-playing with the needles.

## ACTIVITY 2

Make copies of the activity on page 69 and hand out to students. Have students indicate where you would give intramuscular injections (IM) with a triangle. Indicate the subcutaneous injection (SQ) sites with a circle.

Answer key is provided on page 70.

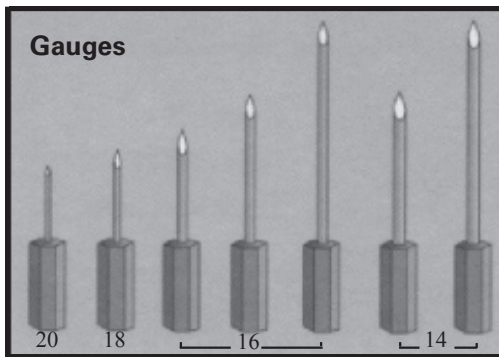
(this activity is contuned on the next page)



# Healthy Animal Medications (resource)

## MEDICATION GUIDELINES

Type of Injection	Placement	Placement Tips
Subcutaneous (SQ)	Under the skin	Inject only into dry, clean areas. Slide needle under the skin away from the site of skin puncture before injecting treatment.
Intramuscular (IM)	Into the muscle	Use proper needle size to ensure medication is placed into the muscle. Avoid IM injections to the shoulder or hip area as it can cause damage to muscle tissue. Injections into the neck area are best.



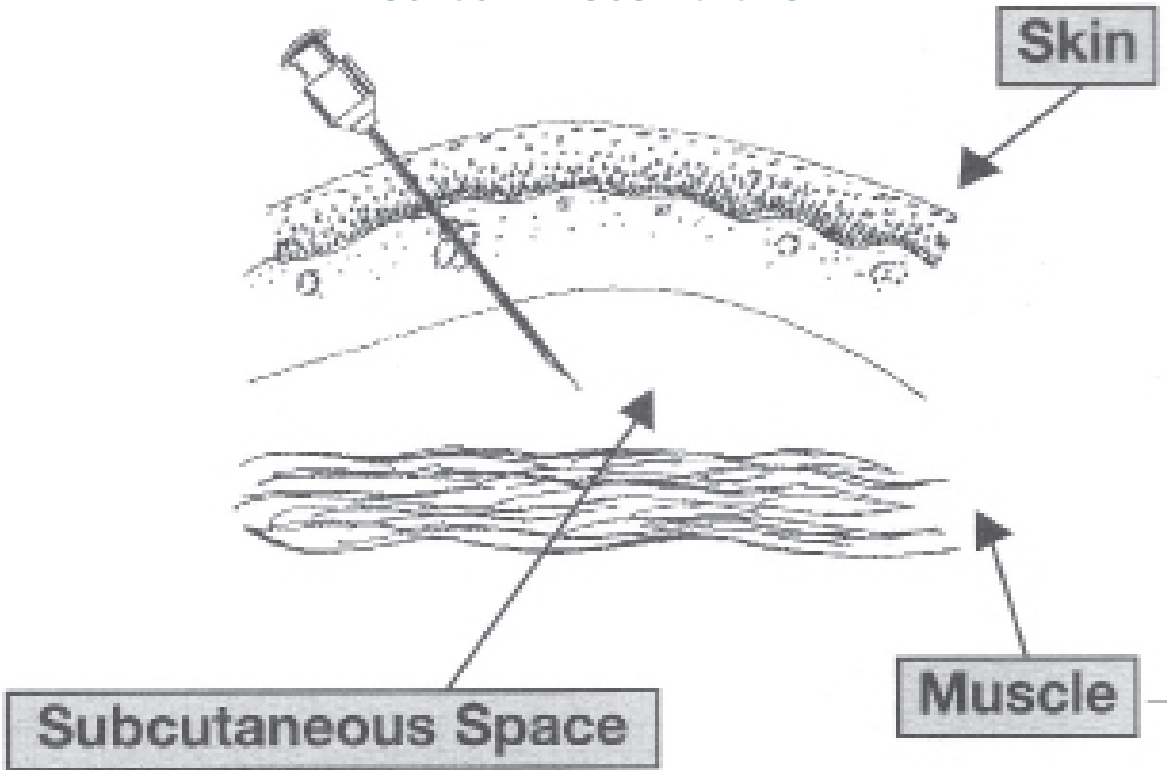
## SUGGESTED NEEDLE SIZES

Swine - IM	Gauge	Length
Baby pigs	18 or 20	5/8" or 1/2"
Nursery pigs	16 or 18	5/8" or 3/4"
Finisher	16	1"
Sows or Boars	14 or 16	1 1/2" or 1"
Swine - SQ		
Nursery	16 or 18	1/2"
Finisher	16	3/4"
Sows or Boars	14 or 16	1"
Cattle - IM		
Calves (under 300 lbs)	18	1" to 1 1/2"
Calves (300- 700 lbs)	16 to 18	1" to 1 1/2"
Cattle (over 700 lbs)	16	1" to 1 1/2"
Cattle - SQ		
Calves (under 300 lbs)	18 to 20	1/2" to 3/4"
Calves (300- 700 lbs)	16 to 18	1/2" to 3/4"
Cattle (over 700 lbs)	16 to 18	1/2" to 3/4"
Sheep - SQ		
All Sheep	18	1/2" to 5/8"
Horses - IM		
All Horses	18 to 20	1" to 1 1/2"

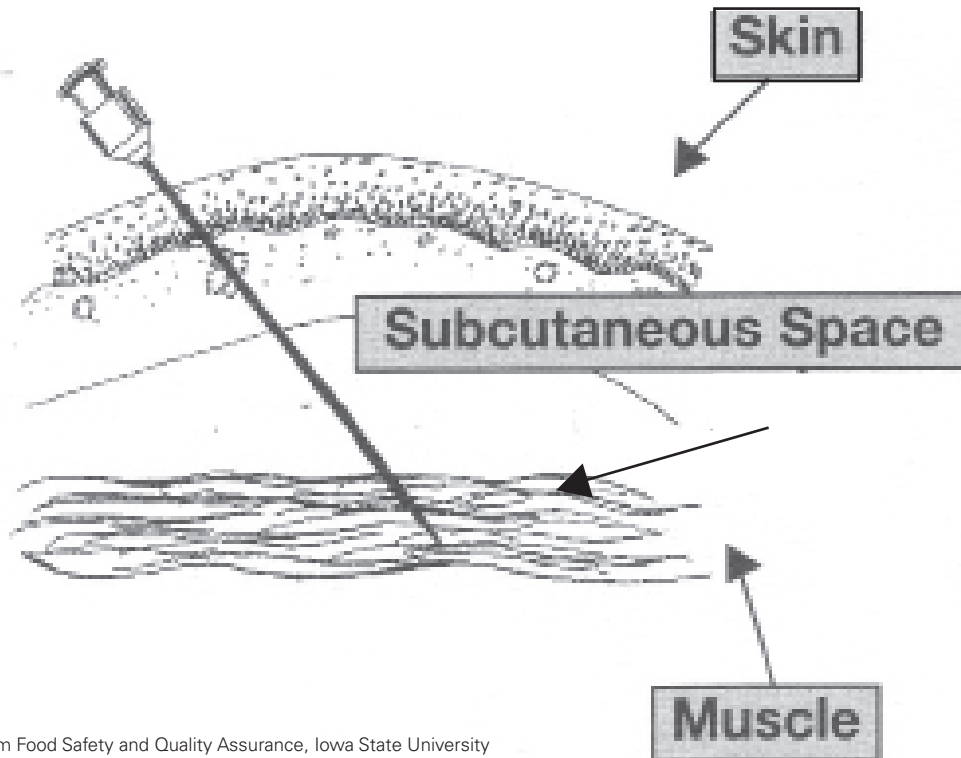


# Healthy Animal Medications (resource)

## SUBCUTANEOUS INJECTION



## INTRAMUSCULAR INJECTION

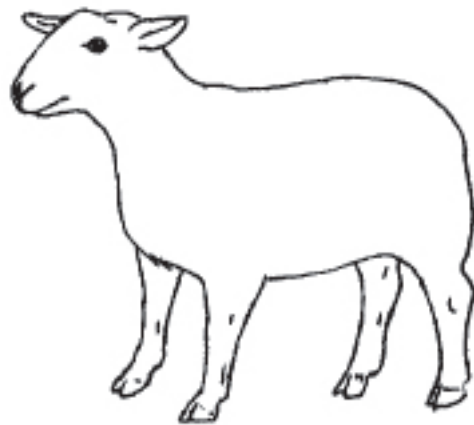
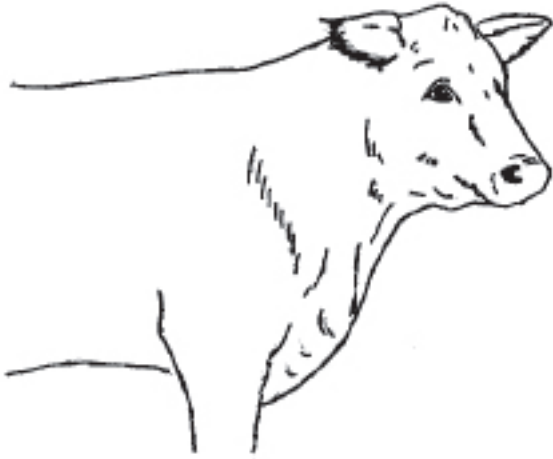


Pictures taken from Food Safety and Quality Assurance, Iowa State University



## Healthy Animal Medications (resource)

Indicate where you would give intramuscular injections with a triangle. Indicate the subcutaneous injection sights with a circle.



intramuscular injections (IM)



subcutaneous injection (SQ)



# Healthy Animal Medications (answer key)



intramuscular injections (IM)



subcutaneous injection (SQ)

