# Needle Size and Selection

<table>
<thead>
<tr>
<th>Subcutaneous</th>
<th>Intramuscular</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gauge</strong></td>
<td><strong>Length</strong></td>
</tr>
<tr>
<td><strong>BABY PIGS</strong></td>
<td>18 or 20</td>
</tr>
<tr>
<td><strong>NURSERY PIGS</strong></td>
<td>16 or 18</td>
</tr>
<tr>
<td><strong>FINISHER</strong></td>
<td>16</td>
</tr>
<tr>
<td><strong>SOWS or BOARS</strong></td>
<td>14 or 16</td>
</tr>
<tr>
<td><strong>CALVES</strong> (&lt; 300 lbs)</td>
<td>18 – 20</td>
</tr>
<tr>
<td><strong>CALVES</strong> (300-700 lbs)</td>
<td>16 – 18</td>
</tr>
<tr>
<td><strong>CALVES &amp; DAIRY CATTLE</strong> (&gt; 700 lbs)</td>
<td>16 – 18</td>
</tr>
<tr>
<td><strong>SHEEP and GOATS</strong></td>
<td>18 – 20</td>
</tr>
<tr>
<td><strong>SMALL ANIMALS</strong> (All Ages)</td>
<td>20–22</td>
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</tbody>
</table>
**Handout 19**

**Beef Cattle Injection Checklist**

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**Choosing the correct needle**

✓ Size and length of needle are important for proper entry and safety to the animal.

- Subcutaneous (SQ) — 16- or 18-gauge, ½ or ¾ inch long
- Intramuscular (IM) — 16- or 18-gauge, 1 to 1½ inches long
- 14-gauge needle is NOT recommended because of associated risks to the animal.

✓ Replace needles about every 10 to 15 injections.

✓ Replace broken, bent or dull needles.

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**Choosing the best injection site**

✓ IM and SQ injections should be given in the neck muscle.

✓ Avoid making injections in damp or dirty facilities to minimize the risk of infection at the injection site.

✓ NEVER INJECT INTO THE HINDQUARTERS.

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**Handling vaccines and medications with care**

✓ Store in refrigerator, maintain correct storage temperature at the chute, and keep out of sunlight.

✓ Do not mix two different products together in the same syringe.

✓ Use separate needles for filling syringes and injecting calves to minimize contamination.

✓ Properly sanitize syringes.

✓ Use hot water in syringes with disinfectant residues.

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**Maintaining quality**

✓ Communicate with your veterinarian and work together to create a herd health program.

✓ Maintain records on health, treatments and vaccinations to share with buyers.

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Sheep Injection Techniques

When making a subcutaneous (under the skin) injection:

♦ Use small, short needles (20-gauge, ½-inch).
♦ Use loose flaps of skin in the flank, elbow, or behind and below the ear.
♦ Slide the needle under the skin away from the site of the skin puncture before depositing the product.

When making an intramuscular (into the muscle) injection:

♦ Use only if subcutaneous injection cannot be used.
♦ Use proper needle size (18-gauge, 1-inch).

General Injection Techniques

♦ Restrain animal (no movement) before injecting.
♦ Inject only into clean and dry areas.
♦ Make certain injections don’t just go into the wool.
♦ Use different needles to inject sheep from those used to remove product from multidose vials.
♦ Replace needles with a bent shaft, because they’re more likely to break.
♦ Before injecting, check needle point and replace if dull or bent to reduce the chance of carrying in foreign material and causing an abscess.
♦ Replace needles at least after every 20 injections.
♦ Record the product name, serial number and date used.

♦ Inject neck muscles, NEVER the leg.


Swine Injection Techniques

Subcutaneous (SQ): Deposits the drug under the skin
- Inject only into clean, dry areas.
- Use the loose flaps of skin in the flank and elbow of small pigs.
- Use the loose skin behind the ear of sows.
- Slide needle under the skin away from the site of the skin puncture before depositing the medication.

Intramuscular (IM): Deposits the drug into the muscle
- Use a spot on the neck just behind and below the ear.
- The neck area should be used for IM injections. (See area outlined in figure.)
- Damage to the ham or loin can result in condemnation of the meat cut.
- Use proper needle size to ensure medication is deposited in the muscle.

Intraperitoneal (IP)
- Should be used only after veterinary instruction and guidance, as serious injury to abdominal organs can occur.

Consult the product label for approved routes of administration.

Correct Injection Techniques
- Restrain the animal before injecting.
- Adjust the syringe properly.
- Make sure the needle is placed properly on the syringe.
- To prevent swelling or an abscess at the injection site:
  1. Use sterile needles.
  2. Inject only into clean, dry areas.
  3. Don’t use the same needle to remove product from the vial and to inject pigs.
- Consult with your veterinarian about possible drug and vaccine reactions.