

Using an Esophageal Tube Feeder for a Beef Calf

A Guide for Beef Cattle Producers

When should a tube feeder be used?

- ▶ If the calf is unable to suckle colostrum from the dam or a bottle
- ▶ To take care of sick calves that are unable to drink or eat, e.g., weak scouring calves.

General Precautions

When used properly, esophageal tube feeders have many benefits and can be lifesaving.

- ▶ Do not tube feed a calf that exhibits extreme weakness or an inability to swallow (i.e., calves that cannot lift their head or have no suckle reflex).
- ▶ Do not attempt to tube feed non-responsive calves, as the risk for fluids entering the lungs is high (called aspiration).
- ▶ Proper training is required to successfully tube feed a calf. Have an experienced person show you before you attempt this yourself. Refreshers on technique are available on YouTube (see Additional Resources Pg. 9).
- ▶ Esophageal tube feeders can injure or kill the animal if used improperly. However, with proper use and sufficient training, the benefits to calf health are significant.
- ▶ Calves that are too weak to suckle need to have I.V. fluids administered.

Required Materials

Calf Esophageal or Tube Feeder

There are several designs and models.

Some calf tube feeders available on the market are:

- Coburn CF85 Oral Calf feeder (**Image 1**)
- Trusty Tuber Calf Drencher tube
- Jorgensen Labor Oral Calf drencher
- Perfect Udder reusable Esophageal tube



Image 1: Coburn CF85 Calf feeder

Hints:

- Keep tube feeders used for colostrum feeding (to be used in day-one calves only) separate from tube feeders used for sick calves to prevent disease transmission from sick calves to newborn calves.
- Do not use if the tube has cracks or sharp edges.
- Make sure feeder is cleaned and disinfected after each use – see pg. 8 *Removing the Tube Step #3* for cleaning and disinfection instructions.
- Store in a dry and cool place when not in use.
- Keep spare feeders in case a replacement is needed.

Water-based lubricant



Disposable gloves



The fluid to be delivered (e.g., colostrum, milk, milk replacer, electrolytes)

Kitchen Thermometer



This is to check the fluid temperature:

- Warm fluids to 98°-105°F at time of administration.
- Caution: overheating (> 105°F) can burn the calf's mouth. Heating colostrum to >140°F will damage important nutrients.
- Cold fluids should be avoided as they can cause GI problems or lead to cold shock and death.

Anatomy Review

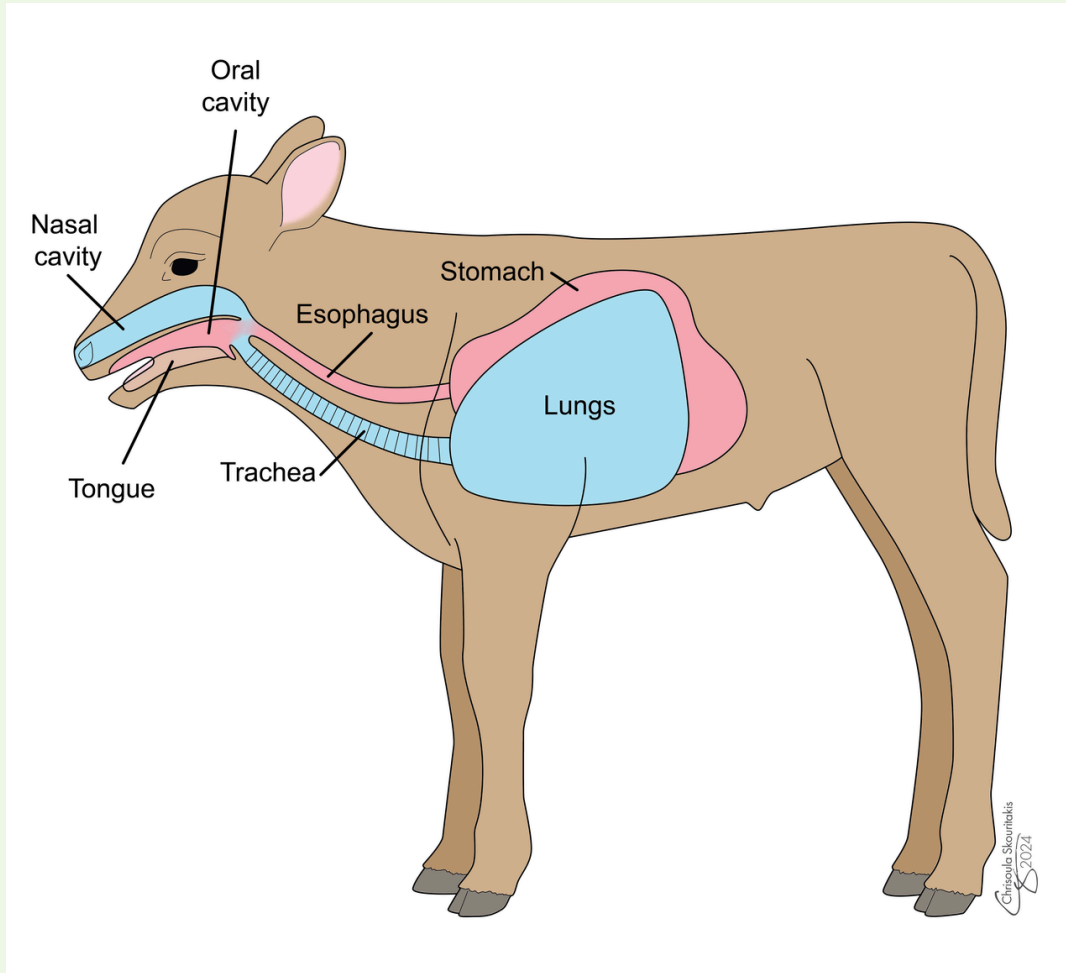


Figure 1: Location of esophagus, trachea, stomach, and lungs in a calf.
(Illustration by Chrisoula Toupadakis Skouritakis, PhD.)

Methods of Tube Feeding

Inspect the Tube

1. Ensure the tube is smooth and without cracks or sharp edges.
 - Cracked tubes can leak fluid and result in aspiration.
 - Sharp edges can traumatize the esophagus and cause infections, like diphtheria.

Measure the Tube

1. Measure the length of the tube to be inserted (mouth to shoulder) and mark with tape or marker pen (**Fig. 2**).



Figure 2: Position the calf to measure the feeding tube from the mouth to the shoulder. (Illustration by Chrisoula Toupadakis Skouritakis, PhD.)

Insertion of the Tube

1. Clamp the tube off, then lubricate the tip of the tube.
2. With the tube clamped off (**Fig. 3**), slowly and gently insert the tube over the tongue and toward the left side of mouth.
3. Gently slide the tube down the esophagus. Do not advance the tube by force (**Fig. 4**).

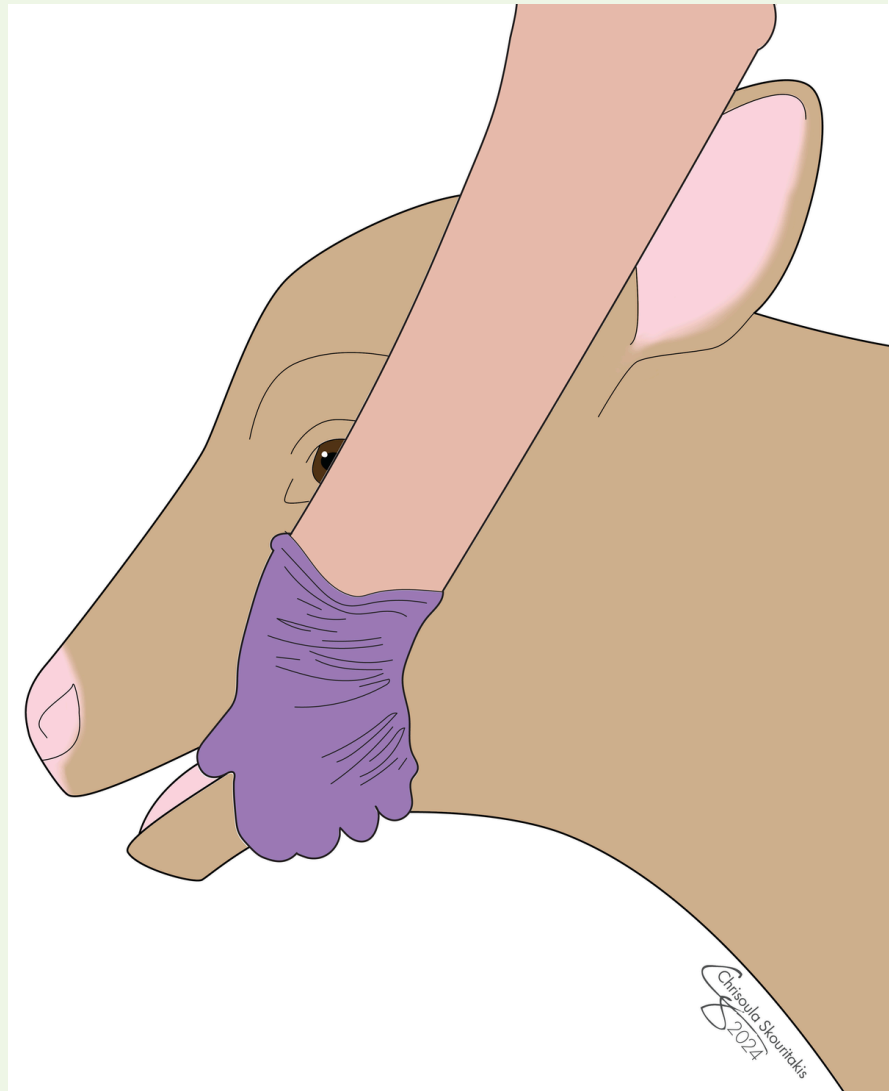


Figure 3: Inserting a thumb into the corner of the calf's mouth will make it open its mouth and facilitate tube placement. (Illustration by Chrisoula Toupadakis Skouritakis, PhD.)



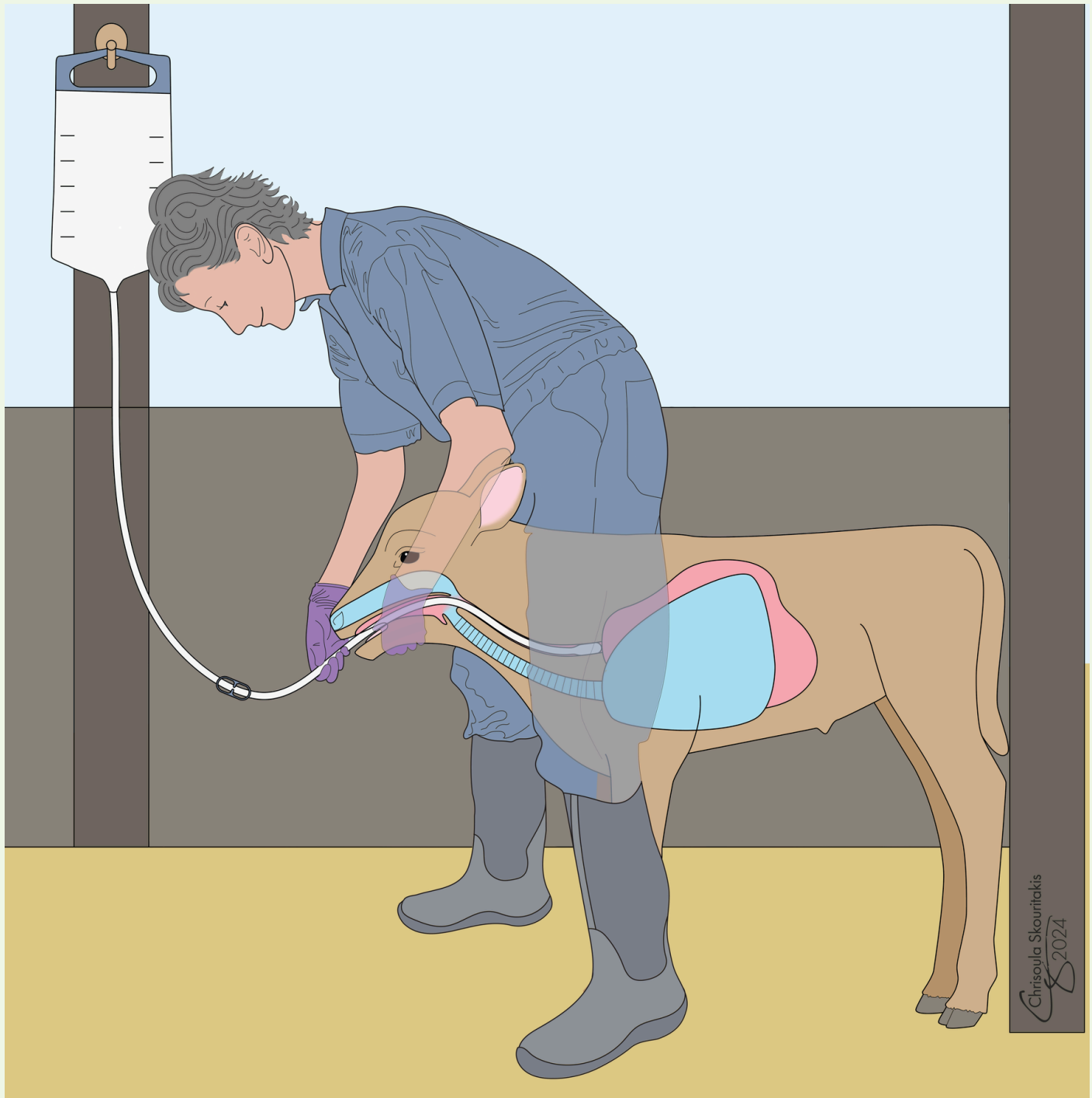


Figure 4: Hold the head in a neutral position, and gently slide the tube down the esophagus and toward the stomach. Do not advance the tube by force. (Illustration by Chrisoula Toupadakis Skouritakis, PhD.)

Check the placement of the tube

1. Feel the left side of the calf's neck to make sure that tube is inserted in the esophagus, and not in the trachea (windpipe) **(Fig. 5)**.
2. The trachea is firm and has rings or ridges that you can feel when touched. **(Fig. 5)**.
3. The esophagus is a hollow, soft, muscular tube. When the feeding tube is properly inserted, you should be able to feel both the tube within the esophagus on the left side of the calf's neck, as well as the trachea in the middle of the neck **(Fig. 5)**.

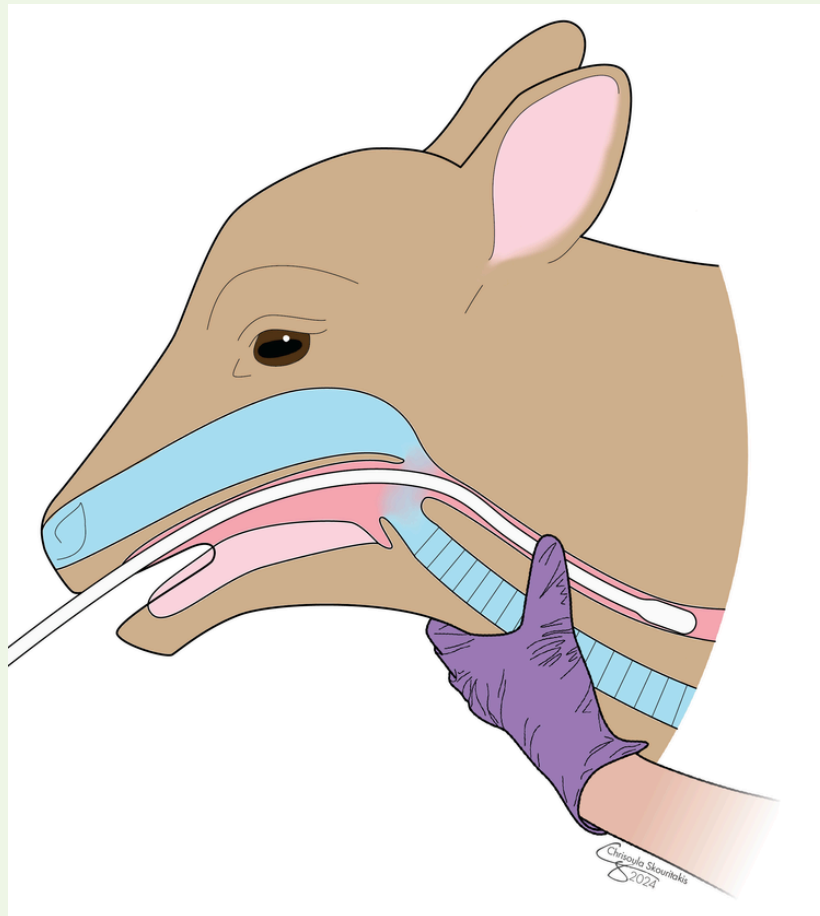


Figure 5: Feel for the esophagus on the LEFT side of the neck, when the tube is placed. The tube should feel firm. (Illustration by Chrisoula Toupadakis Skouritakis, PhD.)

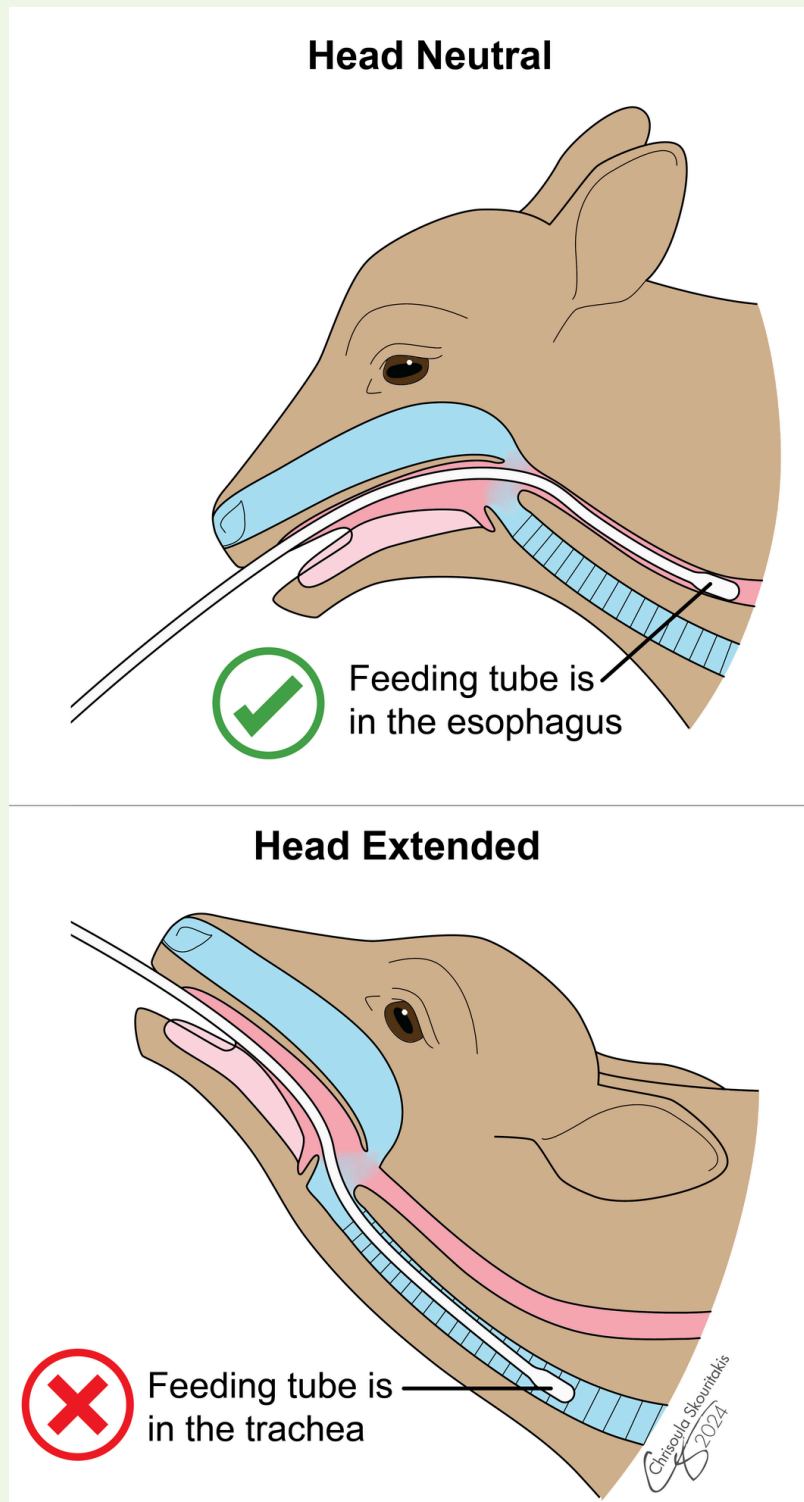


Figure 6: The esophagus and trachea when a calf's head is in a neutral position, vs. when the head and neck are extended. (Illustration by Chrisoula Toupadakis Skouritakis, PhD.)

Deliver the fluid while keeping the tube in place

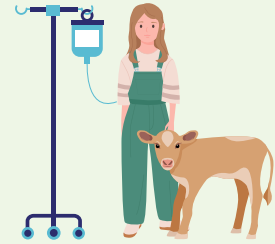
1. Keep the fluid bag elevated.



2. Unclamp the fluid bag.



3. Deliver all fluid. Stop fluid flow if calf is regurgitating.



Removing the Tube

1. Ensure the flow control valve is clamped. If the tube does not have a valve, kink the tube to prevent aspiration.

2. Remove the tube gently.

Rinsing the Tube

1. Rinse the tube and wash the feeder with soap and hot water.

2. Rinse with a disinfectant, such as iodine solution, and followed with a hot water rinse, then hang to drain and dry.

Additional Resources

• **Video:** [How to tube feed a calf \(esophageal feeding\).](#)



• **Article:** [Tube feeding a calf](#)



• **Product:** [Coburn CF85 Oral Calf feeder](#)



CDFA Antimicrobial Use and Stewardship | www.cdfa.ca.gov/ahfss/aus

UC Agriculture and Natural Resources | <https://ucanr.edu/site/newborn-beef-calf-health>

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