



FOAL CPR: On-Farm Birth Resuscitation

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A majority of newborn foals initiate spontaneous respiration immediately after passage through the birth canal of the mare. However, some foals do not begin breathing right after birth and emergency resuscitation procedures may be needed.

It is recommended that all personnel involved in pregnant mare care and foaling receive annual training in normal foaling, obstetrical intervention, routine care of the newborn foal, and birth resuscitation procedures. A foaling kit, resuscitation equipment, emergency procedure codes, and contact phone numbers should be readily available.

In most cases, the foal will be delivered within 10 to 20 minutes after the mare breaks her water. Foals usually begin spontaneous breathing immediately after delivery. The heart of a newborn foal should be beating regularly at a rate of about 70 to 80 beats per minute. To check for the heart beat, place your hand (or a stethoscope) on the foal's chest just behind the left elbow. Foals should have sensory awareness at birth and exhibit a righting reflex within 5 minutes after birth.

In some instances, emergency birth resuscitation procedures will need to be implemented. Indications for intervention include complete lack of respiratory

movements after delivery, absence of a heart beat, and respiratory distress.

If resuscitation is needed, the foaling attendant should immediately call for assistance and then follow standard A-B-C resuscitation guidelines, as briefly explained below. First, make sure the airway is open. Remove the amnion from the nose (if needed) and remove any mucus, meconium, or debris from mouth or nose.

Second, attempt to stimulate the foal to breathe. Vigorously dry the foal with towels for 20 to 30 seconds. If breathing doesn't begin, tickle the inside of the nostrils with a clean piece of straw or stick your fingers in the ears. If the foal is still not breathing, provide emergency ventilation support. A resuscitation bag or tube attached to a mask can be a very effective way to ventilate a newborn foal on a breeding farm.

The foal should be positioned on the ground, preferably on its right side. The mask is placed over the nose of foal until the rubber gasket is firmly seated. If available, an assistant should extend the neck of the foal and apply firm pressure on the esophagus (along the left side of the neck) to prevent air from entering the gastrointestinal tract during resuscitation. The attendant should squeeze the resuscitation bag with two hands to force air from the bag into the lungs of the foal. Movement of the chest wall should be

evident when the bag is compressed. The bag should be released, allowing air to be expelled from the foal. The 'squeeze and release' resuscitation cycle should be performed at a rate of 10 to 20 breaths per minute.

Pause briefly at approximately 30-second intervals to determine if the foal has initiated spontaneous breathing. If an oxygen tank is available, an oxygen line can connect the tank to the resuscitation bag. The regulator on the tank should be adjusted to provide an oxygen flow of 9 to 10 liters of oxygen per minute. If the foal begins to breathe on its own, continue to provide oxygen to the foal by attaching a nasal tube onto the oxygen line and place the tube inside the nose of the foal for at least 5 to 10 minutes. Additional emergency procedures and support may be indicated and may be provided based on the recommendations of your veterinarian.

Foals that survive after emergency birth resuscitation procedures are at risk of medical problems early in life. They often do not have a strong suckle instinct and are consequently prone to failure of passive transfer. It is common to provide these foals with supplemental colostrum and/or plasma. At-risk foals should be monitored closely, especially for the first 3 to 5 days of life, as medical complications are not uncommon.

In summary, breeding farm personnel should be educated, trained, and prepared for the possible need for emergency birth resuscitation. Contact your equine veterinarian to discuss 1) when to call for veterinary assistance, 2) what procedures can be performed on the farm, 3) training for emergency intervention, and 4) what equipment and supplies to have on hand. Being proactive about birth resuscitation may just save the life of a newborn foal.

