



The American College of
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WOMEN'S HEALTH CARE PHYSICIANS

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Committee on Obstetric Practice

This Committee Opinion was developed by the American College of Obstetricians and Gynecologists' Committee on Obstetric Practice in collaboration with committee member Michael D. Moxley, MD.

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Delivery of a Newborn With Meconium-Stained Amniotic Fluid

ABSTRACT: In 2006, the American Academy of Pediatrics and the American Heart Association published the 2005 guidelines on neonatal resuscitation. Before the 2005 guidelines, management of a newborn with meconium-stained amniotic fluid included suctioning of the oropharynx and nasopharynx on the perineum after the delivery of the head but before the delivery of the shoulders. The 2005 guidelines did not support this practice because routine intrapartum suctioning does not prevent or alter the course of meconium aspiration syndrome in vigorous newborns. However, the 2005 guidelines did support intubation of the trachea and suctioning of meconium or other aspirated material from beneath the glottis in nonvigorous newborns. In 2015, the guidelines were updated. Routine intubation and tracheal suctioning are no longer required. If the infant is vigorous with good respiratory effort and muscle tone, the infant may stay with the mother to receive the initial steps of newborn care. If the infant born through meconium-stained amniotic fluid presents with poor muscle tone and inadequate breathing efforts, the initial steps of resuscitation should be completed under the radiant warmer. Appropriate intervention to support ventilation and oxygenation should be initiated as indicated for each infant. Infants with meconium-stained amniotic fluid should no longer routinely receive intrapartum suctioning, whether they are vigorous or not. In addition, meconium-stained amniotic fluid is a condition that requires the notification and availability of an appropriately credentialed team with full resuscitation skills, including endotracheal intubation. Resuscitation should follow the same principles for infants with meconium-stained fluid as for those with clear fluid.

Recommendations

The American College of Obstetricians and Gynecologists makes the following recommendations:

- Infants with meconium-stained amniotic fluid, regardless of whether they are vigorous or not, should no longer routinely receive intrapartum suctioning. However, meconium-stained amniotic fluid is a condition that requires the notification and availability of an appropriately credentialed team with full resuscitation skills, including endotracheal intubation.
- Resuscitation should follow the same principles for infants with meconium-stained fluid as for those with clear fluid.

In 2006, the American Academy of Pediatrics and the American Heart Association published the 2005 guidelines on neonatal resuscitation (1). The most significant effect of these guidelines on obstetric practice related to the management of delivery of a newborn with meconium-stained amniotic fluid. Before the 2005 guidelines, management of a newborn with meconium-stained amniotic fluid included suctioning of the oropharynx and nasopharynx on the perineum after the delivery of the head but before the delivery of the shoulders (intrapartum suctioning). The 2005 guidelines did not support this practice because routine intrapartum suctioning does not prevent or alter the course of meconium aspiration syndrome in vigorous newborns (1). However, the 2005 guidelines did support intubation of the trachea

and suctioning of meconium or other aspirated material from beneath the glottis in nonvigorous newborns (1).

In 2015, the guidelines were updated to reflect new evidence in the management of nonvigorous newborns with meconium-stained fluid. Routine intubation and tracheal suctioning are no longer required. If the infant is vigorous with good respiratory effort and muscle tone, the infant may stay with the mother to receive the initial steps of newborn care. Gentle clearing of meconium from the mouth and nose with a bulb syringe may be done if necessary. If the infant born through meconium-stained amniotic fluid presents with poor muscle tone and inadequate breathing efforts, the initial steps of resuscitation should be completed under the radiant warmer. Appropriate intervention to support ventilation and oxygenation should be initiated as indicated for each infant and, if the airway is obstructed, this may include intubation and suction.

The new recommendation to no longer routinely suction nonvigorous infants arose from an emphasis on prevention of harm (ie, delays in providing bag-mask ventilation and potential consequences of unnecessary interventions) instead of the unknown benefit of the intervention of routine tracheal intubation and suctioning.

The Committee on Obstetric Practice agrees with the recommendation of the American Academy of Pediatrics and the American Heart Association that infants with meconium-stained amniotic fluid, regardless of whether they are vigorous or not, should no longer routinely receive intrapartum suctioning. In addition, meconium-stained amniotic fluid is a condition that requires the notification and availability of an appropriately credentialed team (Neonatal Advanced Life

Support) with full resuscitation skills, including endotracheal intubation (2). Resuscitation should follow the same principles for infants with meconium-stained fluid as for those with clear fluid.

References

1. American Heart Association, American Academy of Pediatrics. 2005 American Heart Association (AHA) guidelines for cardiopulmonary resuscitation (CPR) and emergency cardiovascular care (ECC) of pediatric and neonatal patients: neonatal resuscitation guidelines. *Pediatrics* 2006;117:e1029–38. [PubMed] [Full Text] ↗
2. Wyckoff MH, Aziz K, Escobedo MB, Kapadia VS, Kattwinkel J, Perlman JM, et al. Part 13: neonatal resuscitation: 2015 American Heart Association Guidelines update for cardiopulmonary resuscitation and emergency cardiovascular care. *Pediatrics* 2015;136(suppl 2):S196–218. ↗

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