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Suctioning: Who, When and Why?

The NRP Steering Committee receives many questions about the current recommendation for suctioning the newborn at birth.

This is Part 1 of a three-part series regarding newborn suctioning in the delivery room.



Where do Guidelines for Newborn Resuscitation Come From?

Members of the NRP Steering Committee and the American Heart Association (AHA) developed the [2015 U.S. Guidelines for Neonatal Resuscitation](#). The most recent guidelines are also reprinted in the appendix of the *Textbook of Neonatal Resuscitation*, 7th edition. The NRP education materials translate these guidelines into practice.

The Obstetric Provider and Newborn Suctioning

When the Amniotic Fluid is Meconium-stained

In the past, obstetric management of the meconium-stained newborn included procedures that were meant to reduce the risk of meconium aspiration syndrome (MAS). These procedures have historically included tracheal suction of vigorous and non-vigorous newborns and suctioning the hypopharynx before delivery of the shoulders (intrapartum suction). While intrapartum suctioning and tracheal suctioning of the vigorous newborn have not been recommended since the 2010 Guidelines, the 2015 Guidelines stated there was insufficient evidence to continue routine tracheal suctioning for non-vigorous babies born through meconium-stained amniotic fluid. A definitive randomized controlled trial is still needed.

In 2017, the American College of Obstetricians and Gynecologists (ACOG) published [Committee Opinion Number 689](#) that concurred with the 2015 U.S. Guidelines for Neonatal Resuscitation. The American Academy of Pediatrics, AHA and ACOG agreed that non-vigorous meconium-stained babies should be moved to the radiant warmer for initial steps and be resuscitated in the same manner as babies with clear amniotic fluid.

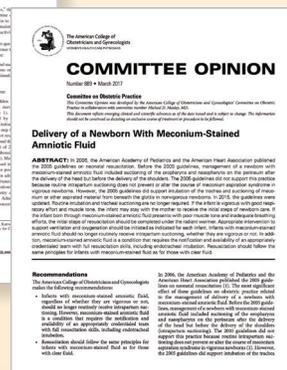
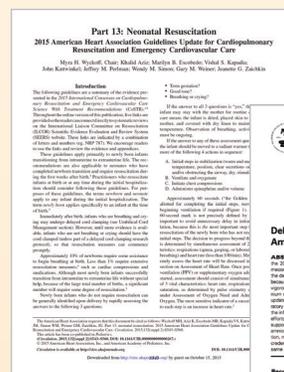
When the Amniotic Fluid is Clear

The current *Textbook of Neonatal Resuscitation*, 7th edition recommends bulb suction as part of the initial steps of newborn care if the newborn is having difficulty clearing the airway, if secretions are obstructing the airway, or if the baby is apneic or gasping and PPV is anticipated. Intrapartum suctioning is not ever recommended.

If a baby is unexpectedly born limp and apneic and the obstetric provider had planned to delay cord clamping, it is reasonable to quickly bulb suction the newborn's mouth and nose and gently stimulate the baby to breathe following delivery of the baby. If the baby does not begin to breathe immediately, the umbilical cord should be clamped and cut, and the baby moved to the radiant warmer for the initial steps of newborn care and further evaluation.

Download the guidelines mentioned in this article by visiting the following URLs:

- www.cercp.org/images/stories/recursos/Guias%202015/Guidelines-RCP-AHA-2015-Full.pdf
- www.acog.org/-/media/Committee-Opinions/Committee-on-Obstetric-Practice/CO689.pdf



NRP Online Exam – Test Your Knowledge



After chest compressions with coordinated ventilations are started, the heart rate should be assessed:

- A. After 60 seconds
- B. After 30 seconds
- C. After 90 seconds
- D. When spontaneous respirations return

See page 4 for the correct answer and explanation. ►



The NRP Roadshow – Coming Your Way!

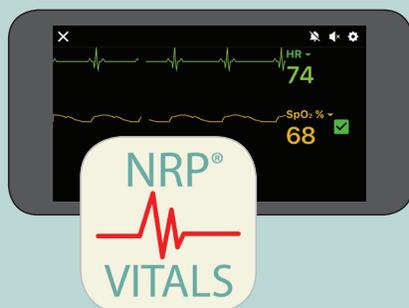
The NRP Steering Committee is planning a special one-day instructor workshop to be held in multiple locations around the country throughout 2019 and 2020. Workshop highlights include:

- Simulation scenario sessions featuring hands-on debriefing opportunities with expert faculty.
- NRP Live featuring NRP Steering Committee members/experts.
- Opportunity to dialogue on **your** questions.
- Discuss science, administration, simulation, technologies, and educational methodology.

Stay tuned – additional locations and registration information will be announced in early 2019!



THE FIRST NRP ROADSHOW
WILL BE HELD ON MARCH 29, 2019
IN DES MOINES, IOWA.



The application was developed in part through an unrestricted educational grant from Johnson & Johnson.

Johnson & Johnson

New NRP VITALS® App Bridges NRP Simulation and Your Smart Device

NRP VITALS® is a newly released app developed by the NRP Steering Committee to fill the need for a convenient neonatal patient monitor simulator. NRP VITALS allows users to enhance their simulation events by displaying those vital signs most important for newborn resuscitation. Users can perform timed simulations controlling heart rate, SpO₂, skin temperature, and ECG waveforms without additional computer systems or costly third-party apps. NRP VITALS can be used with a smartphone as a stand-alone monitor or be paired with another device via Bluetooth or Wi-Fi, allowing the smartphone to be used as a remote control for conveying vital signs to a tablet.

This application is available at no cost on the App Store and Google Play by searching for the keyword “NRP VITALS”.

2019 Call for Applications!

NRP Young Investigator Award | NRP Research Grant Program

The American Academy of Pediatrics Neonatal Resuscitation Program (NRP) Steering Committee is pleased to announce the availability of the 2019 NRP Research Grant and Young Investigator Awards. The awards are designed to support basic science, clinical, epidemiological, or educational research pertaining to the broad area of neonatal resuscitation.

Physicians in training or individuals within four years of completing fellowship training are eligible to apply for up to \$15,000 through the **NRP Young Investigator Award**. Any health care professional with an interest in neonatal resuscitation can submit a proposal for up to \$50,000 through the **NRP Research Grant Program**.

Grants are currently available to fund research projects in the U.S. and Canada.

The Intent for Application will be available in January 2019. To view the guidelines, a list of potential research topics, and a list of previously funded studies, please visit the NRP website at aap.org/nrp and select the "Science" box in the center of the page.

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Answer to NRP Online Exam — Test Your Knowledge



The correct answer is: A. After 60 seconds

The heart rate should be assessed after 60 seconds of continuous chest compressions with coordinated ventilations in 100% oxygen.

Studies have shown that it may take a minute or more for the heart rate to increase after compressions are started. When compressions are stopped, coronary artery perfusion is decreased and requires time to recover once compressions are resumed. Therefore, it is recommended that you provide 60 seconds of well-coordinated chest compressions and ventilation before briefly pausing compressions to assess the heart rate.

A cardiac monitor is the preferred method for assessing heart rate when chest compressions are required. Auscultation with a stethoscope can be difficult, prolong the interruption in compressions, and potentially yield inaccurate results. A pulse oximeter may not reliably detect the baby's pulse, especially when the baby's perfusion is very poor.

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