

Objectives

- List maternal conditions, both medical and obstetric, that potentially influence newborn adaptation to extrauterine life and recall the significance of intrapartum fetal monitoring in predicting potential complications.
- Outline the process of respiratory transition from fetal to neonatal existence including the role of pulmonary blood flow transition and surfactant production
- Diagram the cardiovascular adaptations necessary to transition from fetal circulatory pathways to neonatal circulation.
- Recall the mechanisms of heat loss and heat production in the early neonatal period including interventions to provide thermoregulatory stability.
- Explain the process of immune response specific to the fetus and neonate with potential areas of impact after birth.

continued on next page

Content Outline

1. Maternal Risk Factors with Potential Fetal and Neonatal Impact
 - 1.1 Intrapartum monitoring for complications
 - 1.2 Specific complications by maternal factor
2. Neonatal Adaptation
 - 2.1 Respiratory adaptation
 - 2.1.1 Role of various stimuli
 - 2.1.2 Surfactant production
3. Cardiovascular Adaptation
 - 3.1 Fetal circulatory transition
4. Mechanisms of Thermoregulation
 - 4.1 Heat production
 - 4.2 Heat Loss
5. Immune System Adaptation
 - 5.1 Immunoglobulins
 - 5.2 Immune response and implications for care
6. Neonatal Resuscitation
 - 6.1 Equipment
 - 6.2 Steps in NRP
7. Newborn Assessment
 - 7.1 Apgar score
 - 7.2 Physical Assessment
 - 7.2.1 Skin
 - 7.2.2 Head & neck
 - 7.2.3 Respiratory system
 - 7.2.4 Cardiovascular system
 - 7.2.5 Abdomen
 - 7.2.6 Genitalia
 - 7.2.7 Neurologic
8. Newborn Identification & Safety
9. Routine Newborn Care
 - 9.1 Vitamin K
 - 9.2 Eye prophylaxis
 - 9.3 Umbilical cord
 - 9.4 Maternal-newborn attachment
10. Complications of Transition
 - 10.1 Group B streptococci
 - 10.1.1 Intrapartum screening & management
 - 10.1.2 Newborn management
 - 10.2 Neonatal hepatitis B vaccine recommendations

Objectives *continued*

- Identify both the equipment needed to support neonatal resuscitation and the algorithm steps recommended by the AAP and AHA to effectively resuscitate the newborn.
- Describe in detail the process of systemic physical assessment of the newly born infant to include immediate evaluation after birth using the Apgar score.
- Know the general aspects of well newborn care including the importance of infant safety and psychological adaptation.
- Discuss common complications impacting neonatal transition including intrapartal management of group B streptococcal screening and therapy as well as recommended approaches to hepatitis B screening and neonatal management

Reading Material Resources

This self assessment module is based on the resources listed below.

Access from the Lippincott Williams and Wilkins publisher site OVID. Login information available at the online testing center once module is purchased.

Chapter 11, Newborn Adaptation to Extrauterine Life, Perinatal Nursing, Simpson, et al, LWW, Philadelphia, 2008, pages 527-545