

The Role of Cord Clamping in the Birthing Process

Objectives

- Discuss the physiology of placental transfusion
- Summarize benefits of delayed core clamping in healthy and compromised neonates
- Identify conditions that increase potential risks that can occur with placental transfusion
- Review special situation indications for delayed cord clamping
- Explain how delayed cord clamping affects umbilical blood gases

Content Outline

1. Physiology of Placental Transfusion
 - A. Arterial oxygen saturation and heart rate
 - B. Hemodynamic parameters and cerebral oxygenation
 - C. Fetal and neonatal blood volume
 - D. Circulation
 - E. Timing of cord clamping
 - F. Gravity and position of the neonate
 - G. Cord pulsations
2. Benefits of Delayed Cord Clamping
 - A. Extra placental transfusion
 - B. Higher hemoglobin/hematocrit
 - C. Increased iron stores
 - D. Protection against anemia
 - E. Optimal neurodevelopment
3. Conditions that Increase Potential Risks of Placental Transfusion
 - A. Small for gestational age
 - B. Intrauterine growth restriction
 - C. Monochorionic twins
 - D. Alloimmunization
 - E. Fetal hydrops
4. Effects of Delayed Cord Clamping on Umbilical Cord Gases

Reading Material Resources

Module WB2456: The Role of Cord Clamping in the Birthing

Process is based on the resources listed below. A copy of each resource is included with the module.

Delayed core clamping in healthy term infants: More harm or good? Bruckner, et al., Seminars in Fetal and Neonatal Medicine, Elsevier, 26 (2021), 1-5

Cord Management of the Term Newborn, Andersson, et al., Clinics in Perinatology, Elsevier, 48 (2021), 447-470