

When and how cord is cut



What cord clamping and cutting mean

The umbilical cord connects the fetus to the placenta throughout pregnancy. Its vessels carry oxygenated blood and nutrients toward the fetus and return deoxygenated blood to the placenta. After birth, breathing begins, pulmonary blood flow rises, and the newborn's circulation transitions away from placental support.

Cord clamping closes the vessels mechanically, usually with a sterile plastic clamp or surgical instrument. Cutting then separates the newborn from the placenta. These are related but distinct actions: the cord is securely clamped before it is divided so that bleeding from the stump is prevented.

The cord has no pain-sensing nerves, so clamping and cutting do not hurt the newborn or the birthing parent. A baby may cry or move at the same time because of temperature change, handling, or normal adaptation rather than because the cut is painful. The fresh stump is soft and pale or bluish initially. It later dries, darkens, and usually separates naturally within the first few weeks of life.

When the cord is usually clamped

Recommendations distinguish early or immediate clamping from delayed clamping, although organizations define the categories somewhat differently. The World Health Organization describes early clamping as occurring within the first 60 seconds and generally recommends delayed clamping, commonly at about one to three minutes, when the newborn does not require immediate intervention. The American College of Obstetricians and Gynecologists recommends waiting at least 30-60 seconds for most vigorous term and preterm infants.

These recommendations are compatible in their central message: routine clamping at the instant of birth is usually unnecessary when parent and baby are stable. The exact interval may depend on the clinical setting, gestational age, whether the cord is still pulsating, and the team's ability to provide warmth and initial care near the birthing parent.

Delayed clamping can generally occur while the newborn is placed skin-to-skin, dried, and observed. It is not necessary to hold the baby below the level of the placenta. Some teams use a clock, while others combine a minimum interval with clinical observations. Cessation of cord pulsation is not required by all protocols and should not replace assessment of maternal and neonatal condition.

Why a short delay may benefit the newborn

Blood continues to move between the placenta and newborn briefly after birth. Allowing time before clamping increases neonatal blood volume and red-cell mass, a phenomenon called placental transfusion. In term infants, this can improve early hemoglobin levels and iron stores during the first months of life. Adequate iron is important for blood production and neurologic development.

Preterm newborns may receive particularly meaningful circulatory benefits. Evidence reviewed in professional guidance associates delayed clamping with improved transitional circulation and a reduced need for blood transfusion. Some preterm outcomes, including intraventricular hemorrhage, may also be reduced, although individual risks and the certainty of evidence vary by outcome and gestational age.

There are trade-offs. The additional red-cell volume may modestly increase the

likelihood that a term newborn will develop jaundice requiring phototherapy. This does not mean delayed clamping should routinely be avoided; rather, facilities using it should have appropriate newborn jaundice surveillance and treatment available. Available guidance does not show that a brief delay increases maternal postpartum hemorrhage in routine circumstances. Nevertheless, active bleeding, placental separation, or maternal instability may change the balance immediately.

How the cord is clamped and cut

After confirming that it is time to proceed, a clinician places a secure clamp on the baby's side of the cord. A second clamp is often placed farther toward the placenta, creating a controlled area between them. The cord is then divided with sterile scissors. The tissue is rubbery and may require firmer pressure than many parents expect.

The clinician checks the newborn's remaining stump for bleeding and confirms that the clamp is secure. A short segment remains attached to the abdomen. In some hospitals, the initial cord is cut long and then trimmed under controlled conditions once the baby is at the warmer or examination area.

If a birth partner wants to cut the cord, the clinical team usually positions the scissors and indicates exactly where to cut. Participation depends on safety, the sterile field, and the circumstances of delivery. The clinician may need to perform the first cut quickly or may offer the partner a later ceremonial trim. Nobody should feel pressured to participate; watching, declining, or changing one's mind are all reasonable choices.

What changes with vaginal, assisted, or cesarean birth

Delayed clamping can often be incorporated into an uncomplicated vaginal birth, including while the newborn rests on the birthing parent's abdomen or chest. Following an assisted vaginal birth, the team first evaluates the newborn's breathing, tone, and heart rate and considers any reason that closer assessment is needed. Use of vacuum or forceps alone does not automatically rule out a delay.

Delayed clamping is also possible during many cesarean births. The obstetric

and anesthesia teams must maintain the sterile operative field, monitor maternal bleeding, and prevent newborn heat loss. The baby may be held near the incision or positioned for assessment before the cord is divided. Local operating-room procedures determine whether a support person can make a second cut.

After the cord is cut, placental separation during cesarean is managed as part of the operation. In a vaginal birth, the placenta is delivered during the third stage of labor. Cord-cutting preferences should not interfere with management of hemorrhage, an incompletely separated placenta, or another urgent complication. The plan may therefore change even when delayed clamping was discussed beforehand.

When earlier clamping may be necessary

Immediate or earlier clamping may be appropriate when the benefits of rapid intervention outweigh those of continued placental transfusion. Maternal reasons can include severe hemorrhage, hemodynamic instability, suspected placental abruption, or another condition requiring urgent treatment. A damaged or avulsed cord may also need prompt control.

Neonatal reasons may include a need for resuscitation that cannot be delivered safely beside the birthing parent. Many initial measures, such as drying, stimulation, and assessment, may be possible with the cord intact in appropriately equipped units. More extensive ventilation or emergency procedures may require transfer to a resuscitation platform. Practices vary because bedside resuscitation equipment and trained personnel are not available in every setting.

Umbilical cord prolapse is a separate emergency that occurs before birth when the cord descends alongside or ahead of the presenting part and becomes vulnerable to compression. Management focuses on relieving compression and achieving urgent birth, not on preserving a routine clamping preference. Similarly, an abnormal fetal heart rate pattern or acute cord compression may affect delivery decisions, but does not by itself determine post-birth clamping time; the team reassesses the baby and parent at delivery.

Multiple birth, meconium-stained fluid, or a nuchal cord around the neck do not

invariably require immediate clamping. Decisions depend on how easily the cord can be managed and whether each newborn is vigorous.

Planning preferences and caring for the stump

Parents can raise cord-clamping preferences during prenatal visits and include them in a birth plan. Useful questions include what timing the facility normally uses, whether skin-to-skin contact can continue during the delay, how preterm births are handled, and whether bedside resuscitation is available. It is helpful to frame the preference flexibly: delayed clamping when maternal and neonatal conditions permit.

Banking or donating cord blood requires advance discussion. Delayed clamping may reduce the volume remaining for collection, although the extent depends on timing and technique. Families considering private banking or public donation should ask both the maternity team and collection service how priorities will be handled. The newborn's immediate clinical needs should remain central.

After birth, keep the stump clean and dry according to the maternity team's instructions. Fold the diaper below it when practical and avoid pulling it off. Seek professional advice for persistent bleeding, spreading redness, swelling, purulent or foul-smelling discharge, fever, poor feeding, unusual sleepiness, or other concerns. Practices such as lotus birth, in which the placenta remains attached until the cord separates naturally, do not provide the same established benefit as a short delay and may introduce infection and handling risks; discuss them carefully with qualified clinicians.