Umbilical cord blood is a baby’s lifeblood until birth. It contains many wonderfully precious cells, like stem cells and red blood cells—and recently, scientists have discovered that umbilical cord blood contains cancer-fighting T cells, as well.

Yet common practice is to cut this source of valuable cells off from the baby at the moment of birth, due to unsubstantiated claims that it can cause complications. Not only that, but new businesses have been set up for the purpose of storing this precious cord blood for you, in case it’s needed in the future. This all sounds great in theory, but why deprive a baby of those super cells at birth and hold them back on the very small chance that a problem will appear later in life? Could there be a link between not having those super cells at birth and those illnesses? Storing cord blood is extremely expensive, so it is worth finding out exactly what illnesses cord blood has been successful in helping, and how common those conditions really are.
According to Dr. Sarah Buckley, in her well-researched book Gentle Birth, Gentle Mothering (2005):

- The likelihood of low-risk children needing their own stored cells has been estimated to be 1 in 20,000.

- Cord-blood donations are likely to be ineffective for the treatment of adults, because the number of stem cells is too small.

- Cord blood may contain pre-leukemic changes, and may increase the risk of relapse.

- Autologous cord blood is only suitable for children who develop solid tumors, lymphomas or auto-immune disorders.

All other uses of cord blood are speculative.

The practical use of cord blood is limited. Leukemia is the most common reason for cord-blood transplantation, but in the majority of those cases, the most appropriate source of stem cells is a family member or an anonymous stem-cell donor.
Nonetheless, the collection of cord blood can be very lucrative. Midwives are offered training in the practice; some decline, while others opt to do it. Collectors are well paid for the procedure. A midwife who formerly collected cord blood describes the process as “stealing babies’ blood.”

Timing of Cord Clamping

An increasing number of studies have been published with regard to the timing of cord clamping, including a 16-month study which was published by the University of California Davis in 2006. It was conducted at Hospital de Gineco Obstetrica in Mexico City, where more than 350 mother/baby pairs were part of the study. This study and several others have provided solid evidence of the benefits of delayed clamping. The main benefits being:

- Increased levels of iron
- Lower risk of anemia
- Fewer transfusions
- Fewer incidences of intraventricular hemorrhage

A two-minute delay in cord clamping increased the child’s iron reserve by 27mg to 47mg of iron, which is the equivalent of one to two months of an infant’s iron requirements. This could help prevent iron deficiency from developing before 6 months of age. A 2007 study from the University of Granada had similar findings, and in 2010, a third study (at the University of South Florida Health) showed that early clamping may interfere with the transfer of cord blood, nature’s original stem-cell transplant.

While delayed clamping is beneficial for babies across the board, the studies found that the impact of delayed clamping is particularly significant for infants who have low birth weights, are born to iron-deficient mothers, are premature, or who do not receive baby formula or iron-fortified milk. Given that Mother Nature provided breastmilk for babies and not formula, you would think she also supplied that valuable source of iron for a reason, too. (You may have noticed that formula companies promote iron deficiency rates to sell their products.)

The studies suggest that delayed clamping, for as little as two minutes, should be implemented as standard practice. However, this has yet to happen at many hospitals. Some couples choose to leave the cord unclamped until it has stopped pulsating, which could take only a few minutes,
or up to 20. Either way, the baby is able to get his or her supply of placental blood.

Delayed cord clamping is usually not compatible with cord blood donation. Some cord blood collectors say that they need the cord cut so the blood can be used for storage or donation. So if you would like your baby to have its full supply of cord blood, you may need to reconsider your plans to donate or store cord blood.

The 2010 University of South Florida Health study includes the following comments on cord-blood collection: "There remains no consensus among scientists and clinicians on cord clamping and proper cord blood collection," concluded co-author and obstetrician Dr. Stephen Klasko, senior vice president of USF Health and dean of the USF College of Medicine. “The most important thing is to avoid losing valuable stem cells during and just after delivery.” Prevention is clearly better than cure—babies are better off keeping what is rightfully theirs.

Delayed Cord Clamping & Jaundice

Your doctor or hospital might tell you that delayed clamping causes jaundice in babies. This is not true.

Babies are no more likely to become jaundiced by delaying cord clamping, and there is no relationship between jaundice and the time of the cord being clamped. In the studies, the bilirubin levels were within normal range, no matter when the cord was clamped. (Excess bilirubin levels are what is associated with jaundice.)

Some statements from recent studies back this claim. From a 2002 Argentinean study published in Pediatrics: “Plasma bilirubin values as well as hyperbilirubinemia rates were similar in the 3 groups, which goes along with other authors’ observations.”
Also, from the 2010 University of Granada study: “…the clamping of the umbilical cord of newborns from full-term pregnancies, two minutes after the infant is expelled from the womb, makes no difference to hematocrit or hemoglobin levels of the umbilical cord vein compared to clamping the cord within 20 seconds. Thus, the study shows that early clamping (which is widely performed) is not justified.”

In addition, Dr. Sarah Buckley’s well-researched article on Pregnancy.com.au, “Leaving Well Alone: A Natural Approach to the Third Stage of Labour,” states:

Some studies have shown an increased risk of polycythemia (more red blood cells in the blood) and jaundice when the cord is clamped later. Polycythemia may be beneficial, in that more red cells means more oxygen being delivered to the tissues. The risk that polycythemia will cause the blood to become too thick (hyperviscosity syndrome), which is often used as an argument against delayed cord clamping, seems to be negligible in healthy babies.

Jaundice is almost certain when a baby gets his or her full quota of blood, and is caused by the breakdown of the normal excess of blood to produce bilirubin, the pigment that causes the yellow appearance of a jaundiced baby. There is, however, no evidence of adverse effects from this. One author has proposed that jaundice, which is present in almost all human infants to some extent, and which is often prolonged by breastfeeding, may actually be beneficial because of the anti-oxidant properties of bilirubin.

Blood Volume and Maternal Hemorrhage

You may also hear of concerns over the increase in blood volume and red-blood-cell volumes, overloading the heart and causing respiratory difficulties, as a result of delayed clamping. Again, this is not substantiated.

According to “Care of the Umbilical Cord,” an article from the World Health Organization (WHO), “These effects have not, however, been demonstrated. In fact, there is probably a self-regulatory mechanism in the infant which limits the extent of placental transfusion. Moreover, there is evidence that the circulatory system of the newborn is capable of rapid adjustment to an increase in blood volume and viscosity by increased fluid extravasation and
dilation of blood vessels."

The risk of maternal hemorrhage is another unsubstantiated claim. As per the earlier studies, there was no significant maternal postpartum blood-loss volume. This finding is echoed in the WHO article: “Although there was some evidence that early clamping reduces the duration of the third stage of labor, there was no significant effect on the incidence of postpartum hemorrhage.”

Declare in Advance

Just after you have given birth, the last thing you'll be paying attention to is the umbilical cord! So if you decide not to have your cord clamped immediately, make sure you make it clear to your caregiver and the hospital that you want to delay clamping so your baby can have his or her full store of blood.

There are some circumstances where the cord will need to be clamped immediately, including if you choose to have the third-stage injection of syntocinon to expel the placenta faster. Obviously the cord will need to be cut right away in this managed form of third stage. You can choose a normal physiological third stage if you haven't had syntocinon during your labor (for inductions, augmentations or third stage).

All this leaves one question. Why isn’t it standard practice to delay cord clamping, if it means healthier babies and has no adverse effects? Despite the evidence, most obstetricians are reluctant to take up this practice.

Results of a 2009 survey sent to obstetricians all over the world on the "attitude of obstetricians towards delayed cord clamping" and published in the Journal of Obstetrics and Gynaecology were glaring: the stated reason the obstetricians who haven’t changed over to delayed cord clamping is "difficulty implementing it into practice." That seems to be a big cop-out. Why are many obstetricians really so reluctant to implement a simple process which benefits mother and baby? Why can’t the midwife clamp the cord later if the obstetrician is too busy? It’s yet another sensible and very healthy process that was practiced decades ago, before obstetrics even began and took over with a surgical approach.
Don’t be embarrassed or afraid to speak up if you feel your baby could benefit from delayed cord clamping. Photocopy this article as well as the studies referenced (links will appear on Pathways’ reference page) and present them to your caregiver if you would like to discuss delayed cord clamping with them.