

The Wonder of it All: The Miracle of Birth

By Mark Jurkovich

How often have you heard someone say, or even said yourself, “what a little miracle” when you see a newborn baby. And truly every baby is a miracle. But now medicine has figured out some of the amazing, process that take place so a baby can safely go from living in a liquid environment to an air breathing environment. It shows how truly wondrous God is.

Virtually all my information in this article comes from an article by Dr. Randy Guliuzza in Acts and Facts titled “Made in His Image: Baby’s First Breath” (vol. 44 #3, March 2015). When I read it, I was truly awe struck at the amazing intricacies of God’s design for childbirth.

So how does a baby manage to get oxygen and not drown in amniotic fluid while in the womb? Then how does he successfully take that first breath? Many of you may already know that the placenta serves as the substitute lung among other vital functions for the baby. But other things are needed inside the baby to make this temporary oxygen source work. Inside the baby there is a temporary vein and two temporary arteries connecting the umbilical chord to normal vessels leading to and from the heart. And a bypass is setup in the heart so only a small amount travels to the lungs.

Now when the blood from the temporary vein merges in with the vein going to the heart, the two flows tend to not mix, and go in two different directions when they reach the heart! God designed a temporary one way valve between the left and right chambers of the heart. The stream from the placenta, with the higher oxy-

gen level, takes this opening to the other side of the heart and is then pumped to the rest of the body.

So with this beautifully designed system to let the baby grow in the womb, how is the transition made to the outside world? First the umbilical cord is specially designed to react to the birth by contracting its strong muscle, thus stopping the blood flow between placenta and baby. Second, decreased skin temperature (by exposure to the air) and increased carbon dioxide levels triggers an irresistible urge for the baby to take a strong first breath. A special compound in the lungs makes it possible for the lungs to inflate for the first time. The

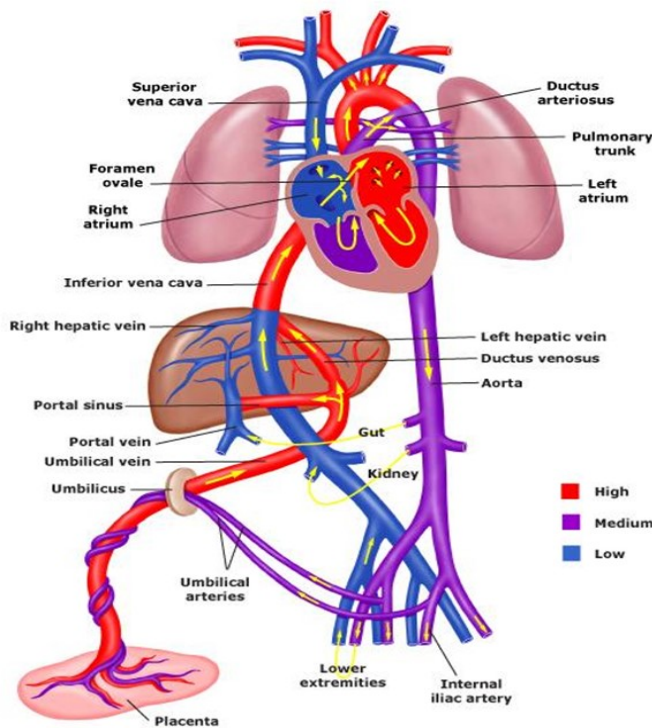
opening of the lungs results in a pressure change between the two sides of the heart, so the side that was higher in pressure is now lower. This causes the temporary one way valve to close, no longer needed. Special muscles even close off the temporary blood vessels.

Dr Guliuzza summarizes it best: “Given that a transplanted heart living inside someone is truly an incredible achievement—at what level of accomplishment is getting a whole

person to live inside another person? Absolutely incredible—which is what the Lord Jesus Christ is! As clearly seen, He creates, directs, provides, and cares—indeed, everything He does is beautiful beyond description.”

Read Randy’s full article at <http://www.icr.org/article/8642>

Image credit: <http://pixgood.com/fetal-circulation-pathway-diagram.html>



Fetal Circulatory System