Podcast Script 1: The Science of Fertilization

 Welcome to *The Genesis of Conception*. My name is Rebekah David. Thank you very kindly for joining me today or tonight, whichever applies for you. This is a special episode because it is the launchpoint for this series. This podcast has been specifically crafted as a space between the picket lines where we talk about all things pro-life, but we come at it from a strictly scientific, logical, provable basis. Since today starts it all, we’ll begin at the beginning, focusing on the science of fertilization.

Today’s discussion revolves around the science of fertilization. This is important because it will answer two big questions for us: First, is a pre-born child human and second, is he or she living?. If either of those criteria are not met, then the entire rest of the conversation is null and void. And if both those criteria are met, then that changes everything.

Now I will be the first to say that those are gigantic questions. They have intricate and fascinating answers. So what better place to start than science? What does science say constitutes human? And what scientifically counts as being alive. And at what point, if any do those two merge in a human woman's womb?

So let's start at what science says is the beginning of any human life across all of human history - fertilization.

Thanks to the Center For Reproductive Health at UCSF, we know that fertilization is a 4-step process. Sperm Transport, Egg Transport, Fertilization & Embryo Development, and finally implantation. Let’s take a look at what those steps entail.

1. **Sperm Transport:** The sperm must be deposited and transported to the site of fertilization
2. **Egg Transport:** Ovulation must occur and the egg must be “picked up” by the tube
3. **Fertilization and Embryo Development:** Union between the sperm and egg **Implantation:** The embryo must implant and begin to grow in the uterus

So, where does this information leave us in regards to our two questions: is this pregnancy both human and alive?

To answer the humanity question, we’ll take a look at the part genetics plays. Thanks to the National Human Genome Research Institute, we know that Deoxyribonucleic acid or DNA is a molecule found within the nucleus of every single living thing on Earth. DNA contains the biological instructions which make each species unique. We also know that since both a human sperm and a human egg are required for fertilization to happen, the DNA of a new being in a human woman’s womb must be another human (or multiple other humans if they are twins or triplets or something). There is no alternate option. Therefore, yes, in every instance, across all of time, a new pregnancy within a human woman is a human infant.

But that is only half of the equation. Sure it’s human, but is it alive?

For this bit, we will look at what it means to be alive. First, morbid as it might sound, a child in the womb can die, which we call a miscarriage. At that point, it must be removed from the woman’s body or she will get very sick, very fast. And in order to die, you must first be living.

But on a much less morbid note, there are plenty of other indicators, such as the infant’s heartbeat / brainwaves / independent movement / thumbprint / senses / and breathing. We know compliments of Life Matters Worldwide and Health Fully that all of these things provably occur in fairly quick succession after the 4-step fertilization process has happened.

The heartbeat becomes distinct within 18 days of conception. Since science defines the end of life as when the heart stops, this becomes a good first indicator. Interestingly, 18 days is only a few days after the point when most women even begin to suspect that they could be pregnant.

Then there are the **brainwaves**, which can be detected by the 6 week and 2 day mark.

Next up are **fetal senses**, which start kicking into high gear by 8 weeks and 2 days. At this point, a fetus can feel pain.

Then, there is **breathing,** which is an incredibly basic need for all humans. An embryo can hiccup, which requires breathing, by the 7 week mark and their diaphragm is completely formed by 8 weeks.

Next, **independent movement**. The embryo actually begins to move on his or her own by 5-6 weeks. Now the mom probably won’t feel it for another 8 weeks, but that does not erase the fact that it is there.

And my personal favorite, the **thumbprint**. Now, every living human being has a unique thumbprint that has never existed before them and is wholly their own. Even identical twins have different thumbprints. The thumbprint is created in utero starting at about the 2 month mark of pregnancy. A thumbprint is created by a combination of the thumb itself scraping across the inside of the uterine wall during independent movement and how much amniotic fluid is in the womb.

All of this outlined, I submit to you that the scientifically proven answer to both of our big questions today is yes. Yes, a new pregnancy is a human being and yes, that human being is very much alive.

Granted, this only scrapes the surface of the amazing factors that go into pregnancy and if you are curious for more in-depth information, I have left a link down below to a Live Action article where you can read more if you’d like to.

Additionally, if you or someone you know is facing a crisis pregnancy, I have plenty of resources to guide you to. No judgement, only love and help. You can find me on social media by looking up proudlyprolifegenzwoman or under Bex (Bex) David for Facebook.

For the general populace, I would love to hear your thoughts, your agreements or disagreements, and any prayer requests or praises that you may have.

Next Friday, we are going to look at the different stages of fetal development and what they mean.

 Until then, be blessed, never forget how much our Creator loves you, and here’s a friendly reminder that you are welcome here no matter what your background or beliefs are. Let's be pioneers in the space between picket lines together.

Sources:

1. Center For Reproductive Health at UCSF (University of California San Francisco) - <https://crh.ucsf.edu/fertility/conception>
2. The National Human Genome Research Institute - <https://www.genome.gov/about-genomics/fact-sheets/Deoxyribonucleic-Acid-Fact-Sheet>
3. Life Matters Worldwide - <https://www.lifemattersww.org/Need-Help/Questions-about-abortion/When-Does-Life-Begin>
4. Healthfully - <https://healthfully.com/287440-the-development-of-fingerprints-in-babies.html>
5. Live Action - <https://www.liveaction.org/news/life-begins-at-conception-science-teaches/>