

Your Baby's World

Your unborn baby knows when you're drinking a cup of coffee, laughing out loud, even when you are stuck in traffic. Until recently, a baby's life in the womb was a total mystery. Today, because of ultrasound we can watch a baby as he or she lives in the womb. Fiber optics is another development that opened a huge window to the womb. Fiber optics allow researchers to insert a threadlike fiber into the womb. The fiber carries light into the womb and also carries the image of the baby out to a camera. This doesn't harm the baby, but it gives clear, detailed pictures of the baby inside the womb.

One of the most exciting discoveries is how much babies actually learn while still in the womb. Your baby's life begins inside the warm, protected environment of your womb. The world inside the womb actually prepares her for life outside by providing a wide range of experiences that are very important to her mental and physical development. Did you know that your baby plays while in the womb? Ultrasound studies have shown that unborn babies spend a lot of time playing with their umbilical cord by squeezing and pulling it.

Here are some other things your baby is doing in the last trimester:

- Listening in on your conversations¹
- Understanding the difference between male and female voices²
- Monitoring your moods
- Remembering music
- Developing a preference for specific types of music
- Waking, sleeping, and playing
- Developing a taste for certain foods

Surround Sound in the Womb

Sometimes we think that a baby inside a womb lives in a dark, silent cocoon, but nothing could be farther from the truth. When your baby is awake, he or she hears a constant symphony of sounds. Scientist have been able to actually hear what a baby hears by putting a tiny microphone close to the uterus. Here are some of the things your baby hears every day:

- Your heart beating
- The swishing of your blood through the placenta
- Your lungs filling with air
- Your stomach gurgling and growling
- Your voice
- Car doors opening and closing

Studies have found that an unborn baby can hear sounds as early as fifteen weeks. Their sense of hearing becomes much better between thirty-two and thirty-five weeks. In these later months, the voices your baby hears from outside the womb reinforce the connection between the growing baby and his fellow human beings, actually molding an emotional link that will be extremely important after birth.

Your voice is what your baby hears constantly. It is carried directly to your baby through your body. He likes the sound of your voice. It is a comforting, appealing sound. Without understanding a single word, he KNOWS your voice. Compared to everyone else's voice, your voice is much more clear. Even though your unborn

baby cannot understand words, listening to conversations provides him or her with a wealth of different and stimulating experiences. He or she becomes familiar with the special qualities of language and is born with the ability to recognize it from all other sounds.³

The Sound of Music

Your unborn baby has the same emotional response to music like any other person. He or she likes some kinds and definitely doesn't like others. Hard rock and songs that have screeching and a jumbled beat are upsetting to them. On the other hand, songs with a defined beat can cause your unborn baby to "get down" to the rhythm and move his or her body to the beat. At thirty-two weeks, an unborn baby will remember music that she or he has heard daily. As a newborn he or she will actually recognize the piece of music.

An Early Sweet Tooth

Your unborn baby regularly fills his mouth with the amniotic fluid in which he floats. The taste of the amniotic fluid can actually change depending on what you eat. Studies have shown that unborn babies prefer sweet tastes. Your eating is much more predictable than you realize. Researchers actually believe that becoming familiar with your favorite foods prepares your baby for the flavor of your breast milk.

If you regularly eat certain foods and not others, your baby is getting used to the "taste" of your amniotic fluid. The same thing happens to your breast milk. It is flavored by the things you eat. Your unborn baby gets used to certain tastes in the womb so the breast milk is appealing after birth.

Comfort Is Found in a Thumb

For your baby, tasting things is a way of learning. Even in the womb, babies get upset, anxious, or agitated. What do they do for comfort? They suck their thumbs! The sucking reflex is one of the most important survival tools of a baby. It develops long before birth. Babies in the womb don't need food, yet they have a need to suck. Their thumbs are the most obvious object to put into their mouths in such a cramped world.

Sucking not only prepares your baby for breast-feeding, but it also helps her discover interesting things about her own body, such as the feel of her skin and the size of her thumb. Her nerve endings on her tongue can feel textures long before her fingers can.

Your Mood Matters

Your baby does the same thing. When you are arguing, or even if you're simply upset because you are stuck in traffic, your unborn baby senses it. Your raised voice, your angry tone, your agitation, all increase her arousal. Her own heartbeat will increase, and she will kick more. If you are under a lot of stress, it can even affect her sleeping patterns.⁴

Although you can't avoid all stressful events, you can balance them with more positive feelings. By doing so, you will actually be teaching your baby about emotions - something she will need in life outside the womb.

Referenced works:

¹ Fagard, Jaqueline et al. "Fetal Origin of Sensorimotor Behavior." *Frontiers in neurorobotics* vol. 12.23. 23 May. 2018, doi:10.3389/fnbot.2018.00023, Accessed on 16, July, 2021.

² Wright, T. (2014, July 22). UF research shows rhymes can inspire reasoning during the third trimester in the womb. University of Florida News. <https://news.ufl.edu/archive/2014/07/uf-research-shows-rhymes-can-inspire-reasoning-during-the-third-trimester-in-the-womb.html>, Accessed on 16, July, 2021.

³ David Maximiliano Gómez, Iris Berent, Silvia Benavides-Varela, Ricardo A. H. Bion, Luigi Cattarossi, Marina Nespore, Jacques Mehler. "Language universals at birth". *Proceedings of the National Academy of Sciences* Apr 2014, 111 (16) 5837-5841; DOI: 10.1073/pnas.1318261111, Accessed on 16, July, 2021.

⁴ Coussons-Read, Mary E. "Effects of prenatal stress on pregnancy and human development: mechanisms and pathways." *Obstetric medicine* vol. 6,2 (2013): 52-57. doi:10.1177/1753495X12473751, Accessed on 16, July, 2021.

Additional Referenced works:

⁵ Hepper, Peter G. "The developmental origins of laterality: fetal handedness." *Developmental psychobiology* 55.6 (2013): 588-595.