

# **BrightBaby**The Stages of Pregnancy

## First Trimester (Weeks 1–12)

- Baby starts as tiny as a poppy seed and grows to about the size of a plum by week 12.
- Early movements are spontaneous twitches of arms and legs.
- Baby begins to touch their face and explore their surroundings in the womb.

## Second Trimester (Weeks 13–26)

- Baby learns to swallow and can taste flavors from what the mother eats.
- Hearing develops, allowing baby to recognize and respond to sounds, such as the mother's singing.
- Movements become intentional—baby practices body mapping (feeling and moving around in the womb).
- By the end of the trimester, baby is about the size of a papaya.

## **Third Trimester (Weeks 27–40)**

- Baby can sense light and dark, even with eyes closed.
- Hearing is fully developed; baby can recognize familiar songs and voices.
- Baby continues to grow until birth, reaching about the size of a watermelon at full term.
- After birth, baby can recognize their mother's voice and face, strengthening the bond formed before birth.

# **Bonding Tips During Pregnancy**

- Talk and sing to your baby—your voice will become familiar and comforting.
- Touch and gently press on your belly; your baby can feel it.
- Cherish each stage of growth, from the earliest weeks to full term.

#### **References:**

1"Fetal Development: What Happens during the 1st Trimester?" Mayo Clinic, Mayo Foundation for Medical Education and Research, 30 June 2020, www.mayoclinic. org/healthy-lifestyle/pregnancy-week-by-week/in-depth/prenatal-care/art-20045302.

2 Beauchamp, Gary K, and Julie A Mennella. "Flavor perception in human infants: development and functional significance." Digestion vol. 83 Suppl 1, Suppl 1 (2011):

1-6. doi:10.1159/000323397. www.ncbi.nlm.nih.gov/pmc/articles/PMC3202923/

3 Fagard, Jaqueline et al. "Fetal Origin of Sensorimotor Behavior." Frontiers in neurorobotics vol. 12 23. 23 May. 2018, doi:10.3389/fnbot.2018.00023. www.ncbi.nlm.nih. qov/pmc/articles/PMC5974044/

4 Webb, Alexandra R., et al. "Mother's Voice and Heartbeat Sounds Elicit Auditory Plasticity in the Human Brain before Full Gestation." PNAS, National Academy of Sciences, 10 Mar. 2015, www.pnas.org/content/112/10/3152.

5 Marx, Viola, and Emese Nagy. "Fetal Behavioural Responses to Maternal Voice and Touch." PLOS ONE, Public Library of Science, 8 June 2015, journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0129118.

6 Reissland, Nadja, et al. "Can Healthy Fetuses Show Facial Expressions of 'Pain' or 'Distress'?" PLOS ONE, Public Library of Science, journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0065530.
7 Bardi, Jason. "Light Exposure During Pregnancy Key to Normal Eye Development." | UC San Francisco, 16 Jan. 2013, www.ucsf.edu/news/2013/01/98768/light-exposure-during-pregnancy-key-normal-eye-development."

8"UF Research Shows Rhymes Can Inspire Reasoning during the Third Trimester in the Womb." News, 22 July 2014, news.ufl.edu/archive/2014/07/uf-research-showsrhymes-can-inspire-reasoning-during-the-third-trimester-in-the-womb.html.

9 Gómez, David Maximiliano, et al. "Language Universals at Birth." PNAS, National Academy of Sciences, 22 Apr. 2014, www.pnas.org/content/111/16/5837?ijkey=64859199949f2cf5b9c04858e894c94c72783127&keytype2=tf\_ipsecsha.



# **BrightBaby**The Stages of Pregnancy

# **References Continued:**

10 Partanen, Eino, et al. "Prenatal Music Exposure Induces Long-Term Neural Effects." PLOS ONE, Public Library of Science, 30 Oct. 2013, journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0078946.

11 Coussons-Read, Mary E. "Effects of Prenatal Stress on Pregnancy and Human Development: Mechanisms and Pathways." Obstetric Medicine, SAGE Publications, June 2013, www.ncbi.nlm.nih.gov/pmc/articles/PMC5052760/.

12 "Stress During Pregnancy." American Pregnancy Association, americanpregnancy.org/healthy-pregnancy/pregnancy-health-wellness/stress-during-pregnancy/