



Evidence that Empowers!

By Rebecca Dekker, PhD, RN, APRN of EvidenceBasedBirth.com

Question: What are the different types of fetal monitoring?

Answer: *Electronic fetal monitoring* (EFM) is when the baby's heart rate is monitored with an ultrasound machine while the mother's contractions are monitored with a pressure sensor. Both of these sensors are linked to a recording machine. Nearly 90% of mothers who give birth in U.S. hospitals use EFM at some point during their labors (Declercq et al., 2014). EFM can be used *continuously* or *intermittently* (meaning at regular time intervals).

Another option is *hands-on listening*. The care provider uses a fetal stethoscope or handheld ultrasound machine (Doppler) to listen to the fetal heartbeat at regular time intervals. While listening, the provider places a hand on the mother's abdomen to assess contractions. Hands-on listening alone is used with about 11% of mothers giving birth in U.S. hospitals (Declercq et al., 2014), and is the primary method of fetal monitoring at planned home births and freestanding birth centers.

Question: What is the evidence on fetal monitoring?

Answer: Cochrane researchers combined the results of 12 randomized, controlled trials with more than 37,000 participants (Alfirevic et al., 2017). Mothers were randomly assigned to receive either continuous EFM or hands-on listening during labor. The researchers found no differences between groups in Apgar scores, rates of low-oxygen brain damage, admission to the neonatal intensive care unit, and stillbirth or newborn death. There was a lower risk of newborn seizures in the continuous EFM group; however, seizure events were rare overall (about one in 500 births, or 0.2%).

They also found that people in the continuous EFM group were more likely to have a Cesarean and more likely to experience the use of vacuum or forceps when compared to those in the hands-on listening group. This is not surprising since "non-reassuring fetal heart tones" is the second most common reason for first-time Cesareans in the U.S. (ACOG/SMFM 2015).

Question: Why is hands-on listening so rare?

Answer: Obstetric and midwifery guidelines support hands-on listening, but it is rarely seen in practice. If hospitals were willing to invest in more hands-on care for women during childbirth, we would likely see more hands-on listening.

Pros and Cons

Hands-On Listening

Pros	Cons
Lower rate of Cesareans, vacuum, and forceps	Higher rate of newborn seizures (0.3%)
Supports movement and upright positions during labor	May not be appropriate for people with complications
Can be used during water therapy in a tub or shower	Requires hands-on care, which is not supported in all birth settings
Devices are inexpensive and available in many birth settings	There is no automatic recording of the fetal heart rate readings
Leads to more continuous support from providers during birth	Hospital staff may not be well-trained in using this method

Electronic Fetal Monitoring

Pros	Cons
Lower rates of newborn seizures (0.15%)	Higher rates of Cesareans, forceps, and vacuum
Some monitors are wireless and water-resistant	Most monitors require you to be restricted to bed
Care providers can use the recording in the event of a lawsuit	The monitor may be uncomfortable and distracting
	Nurses may focus more on the monitor and pay less attention to you

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“ Hands-on listening is an evidence-based option for mothers and babies.”

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