

kick counting:

Optimizes Expectant Mothers'
Likelihood of a Safe and Healthy Pregnancy



KICK COUNTING—WHAT IT IS AND WHY IT IS IMPORTANT

Fetal movement is an excellent indicator of a baby's well-being.

Kick counting is the systematic maternal counting and tracking of fetal movements during the third trimester.

A reliable kick counting record can document changes in the fetal movement pattern, allowing expectant mothers to alert their healthcare providers of potential pregnancy problems.

A timely evaluation can allow intervention and prevention of potential problems. Kick counting can help mothers become a part of their medical team, maintain a safe and healthy pregnancy, and reduce the risk of stillbirth.

KICK COUNT RECOMMENDATION

The American College of Obstetricians and Gynecologists (ACOG) recommends kick counting as one of the methods to monitor pregnancy health, particularly for mothers who are past their due date or have diabetes or high blood pressure.

Kick counting is widely recommended by healthcare organizations, advocacy and consumer groups.

An expectant mother can distinctly perceive her baby's movements by 24 weeks.

Kick counting is recommended starting at 28 weeks in normal pregnancies and as early as 24 weeks for complicated pregnancies. Movements include kicks, jabs, rolls, twists, and turns.

There are different methods of kick counting. ACOG recommends that expectant mothers note the time it takes for their baby to complete ten movements, at approximately the same time each day when the baby is usually most active.

Each baby is different. In general, healthy babies should complete ten movements within two hours and most babies achieve this in less than 30 minutes.

The healthcare provider should be alerted immediately of changes in the baby's normal pattern, or if the baby takes more than two hours to complete ten movements.

Expectant mothers should discuss kick counting instructions with their healthcare provider. Decreased fetal movement may indicate potential problems, which may need further evaluation.

THE KICK COUNTING MESSAGE

Kick counting is recognized as a simple and effective method to monitor a baby's well-being, however, many expectant mothers are still not aware of it.

National healthcare organizations are creating awareness of kick counting as a strategy to optimize their likelihood of delivering a healthy baby.

Understanding that babies have sleep cycles can alleviate mothers' anxiety toward kick counting. Mothers should count kicks once a day when the baby is usually most active.

Kick counting is easy. Most babies take less than 30 minutes to complete the recommended ten movements. The majority of mothers spend less than 15 minutes a day on kick counting.

Some healthcare professionals might think that advising kick counting results in increased patient calls.

Actually, clear directions about kick counting rationale and instructions lead to fewer unnecessary calls and visits.

Kick counting helps expectant mothers feel empowered toward ensuring a safe and healthy pregnancy.

Even though a stillbirth may not be avoidable, families often feel outraged to learn about kick counting after the fact, as this simple method may have altered their outcome.



The recent MOMS Study (Maternal Observation and Memories of Stillbirths) reveals that only 50 percent of moms were told to do kick counting by their doctors.

Studies show that expectant moms are not given enough information about the importance of their baby's movements. This can be changed with healthcare professionals having access to the emerging scientific data, reproducible kick count charts, and frequently asked questions for their patients. Many institutions are providing these documents in the prenatal packets.



ABOUT DECREASED FETAL MOVEMENT

Five percent to ten percent of all expectant mothers voice concern over decreased fetal movement. During the 1970s and 1980s, several reports showed a significant decline in fetal mortality with the institution of movement counting, where maternal perception of ten fetal movements within two hours was considered normal.^{1,2,3,4} In 1989, a widely quoted randomized study reported no significant benefit, thus halting further research on fetal movement.⁵ As a result, pregnant women have not routinely been given information about kick counting. Criticism of this study's methodology and conclusion emerged in 2004 and a review of world literature revealed the following:⁶

- **Reduced fetal movements are associated with adverse pregnancy outcome in both high- and low-risk pregnancies**
- **Maternal vigilance with fetal movement counting reduces stillbirth rate, in particular, stillbirths deemed avoidable**
- **The use of fetal movement charts in a population decreases the rate of avoidable stillbirths**

The 2007 *Cochrane Database of Systematic Reviews* further questioned the methodology of the 1989 study and stated that the potential effect on perinatal outcome may have been masked by contamination of the 'control' group.⁷ The control subjects were given information about kick count but were told not to use the information. Because of this practice, both the control and the studied groups together have a lower stillbirth rate than other population baseline rate.

The 2006 data from the *Harvard FEMINA (Fetal Movement Intervention Assessment)* Study indicates that pregnancies with decreased fetal movement are at increased risk for adverse pregnancy outcomes including fetal growth restrictions and stillbirths.⁸ Recommended strategies to reduce adverse outcomes include:

- **Educating patients on the importance of fetal movement in an effort to reduce the delay of intervention**
- **Educating providers that an assessment of fetal growth status should be included in the evaluation of patients with decreased fetal movement**

The MOMS Study data from 5,000 stillbirths revealed the following:

- **50% of the women perceived gradual decreased fetal movement several days prior to fetal death**
- **56% of women reported decreased fetal movement as the first reason to believe that the baby was not doing well**

This data strongly suggests that both fetal movement and mothers are good predictors of fetal well-being.

Researchers in the United States, Europe and Australia are active in stillbirth research and are continuing with the collaborative study "FEMINA" to improve pregnancy outcome through better understanding of reduced fetal movement activity.

about stillbirth



While stillbirth is a significant public health issue, it remains a silent subject in the United States. Stillbirth is the unexpected death of a baby after 20 weeks of pregnancy. According to the National Institutes of Health, stillbirth claims the lives of 26,000 babies—70 per day—ten times that of Sudden Infant Death Syndrome (SIDS) in the United States. One in 150 pregnancies or 6.5 in 1000 pregnancies end in stillbirth. More than half of all stillbirths happen after 28 weeks and most of those happen after 36 weeks when families are expecting a healthy baby.

“Unexplained” stillbirths happen when no obvious causes are found despite thorough investigations. They represent 25 percent to 60 percent of all fetal deaths with risk increasing late in pregnancy, particularly after 37 to 39 weeks of gestation. More than half of unexplained stillbirths have intrauterine growth restriction.⁹ Perhaps unexplained stillbirths are not “sudden,” suggesting that there may be a time window for intervention and prevention.

Even low risk pregnancies with decreased fetal movement are associated with having a higher risk of fetal distress during labor, restricted intrauterine growth, higher frequency of stillbirth and neonatal deaths. Low risk pregnancies with decreased fetal movement should be considered high risk and thus should have increased surveillance.^{10,11}

Though many stillbirths remain unexplained, medical research supports the daily kick counting method as a simple, effective, harmless and reliable way to screen fetal well-being during the third trimester in both low-risk and high-risk pregnancies.



WHAT WOMEN AND THEIR DOCTORS CAN DO

Kick counting is much more than just knowing that the baby moves. Kick counting can be a bonding time for mothers and their partners as they both proactively protect their baby. It is best to systematically record daily kick counting to learn about the baby's baseline movement rather than rely on memory recall.

ACOG recommends that a healthy baby should have ten movements within two hours. It is best to keep track of the time it takes for the baby to move ten times—once a day at around the same time when the baby is usually most active.

A mother's familiarity with her baby's movements helps identify changes that may indicate potential pregnancy problems, which can allow her provider to institute timely intervention.

Healthcare providers should educate women about the importance of decreased fetal movement and encourage kick counting as a part of prenatal care.

CONCLUSION

Kick counting is noninvasive and safe for both mother and baby. Emerging scientific studies validate the importance of educating expectant mothers about fetal movement in an effort to reduce adverse pregnancy outcomes including stillbirth.

Daily kick counting familiarizes expectant mothers to their baby's movements. Kick counting is widely accepted by public health agencies, healthcare organizations and providers worldwide, as a part of prenatal care to decrease adverse pregnancy risks.

Although many stillbirths are unexplained and unavoidable, evidence indicates that stillbirth is perhaps not a sudden event and that it may be averted with proper and timely medical intervention when mothers are aware of their babies' movement patterns.

A reliable kick counting record can document changes in the fetal movement pattern and can alert a mother to call the doctor for further evaluation.

A timely evaluation can allow intervention and prevention of potential problems. In this way, kick counting can help a mother maintain a healthy pregnancy, protect the health of the baby, and can help reduce the risk of stillbirth.



REFERENCES:

1. Pearson JF, Weaver JB. Fetal activity and fetal wellbeing: an evaluation. Br Med J. 1976 May 29;1(6021):1305-7.
2. Sadosky E, Yaffe H. Daily fetal movement recording and fetal prognosis. Obstet Gynecol. 1973 Jun;41(6):845-50.
3. Neldam S. Fetal movements as an indicator of fetal well-being. Dan Med Bull. 1983 Jun;30(4):274-8.
4. Moore TR, Piacquadio K. A prospective evaluation of fetal movement screening to reduce the incidence of antepartum fetal death. Am J Obstet Gynecol. 1989 May;160(5 Pt 1):1075-80.
5. Grant A, Valentin L, et al. Routine formal fetal movement counting and risk of antepartum late death in normally formed singletons. Lancet. 1989 Aug 12;2 (8659):345-9.
6. Froen JF. A kick from within--fetal movement counting and the cancelled progress in antenatal care. J Perinat Med. 2004;32(1): 13-24. J Perinat Med. 2004;32(1):13-24. Review.
7. Mangesi L, Hofmeyr GJ. Fetal movement counting for assessment of fetal wellbeing, Cochrane Database of Systematic Reviews 2007 Issue 1.
8. Fretts, R, Froen JF, et al. Optimal Management of Pregnancies with Decreased Fetal Movement. Poster 2006.

9. Froen JF, Gardosi JO, Thurmann A, Francis A, Stray-Pedersen B. Restricted fetal growth in sudden intrauterine unexplained death. Acta Obstet Gynecol Scand. 2004 Sep;83(9):801-7.
10. Fretts, RC. Etiology and prevention of stillbirth. Am J Obstet Gynecol. 2005 ec;193(6):1923-35. Review.
11. www.sidsalliance.org/conf2005/library/Preventin_of_Unexplained.pdf

CURRENT SCIENTIFIC RESEARCH

MOMS Study (Study of Maternal Observations and Memories of Stillbirths) 5000 moms with stillbirths participated for better understanding of stillbirths and prevention. www.momstudy.com

FEMINA (Fetal Movement Intervention Assessment) is an ongoing international, interdisciplinary collaborative research effort to improve pregnancy outcomes through better understanding of reduced fetal activity.

Stillbirth Collaborative Research Network (SCRN), five-year National Institute of Health study to understand the epidemiology and etiology of stillbirth. http://www.nichd.nih.gov/cdbpm/pp/research_programs.htm



**FOR MORE INFORMATION
PLEASE VISIT:**

www.babykickalliance.org
www.firstcandle.org
www.babykick.com

babykick™
kickTrak™

kickTrak™ is a safe, reliable, non-invasive, hand-held record-keeping device intended to assist women in keeping track of their baby's movements. It replaces the needs for paper records. The kickTrak™ tracks pregnancy progress, counts and times each movement as it is entered, then stores and recalls the ten most recent sessions.

www.babykick.com



VoiKex

VoiKex, Inc. • P.O. Box 1568
Manhattan Beach, CA 90267
1-877-4babykick or 1-877-422-2954

Copyright © 2007 VoiKex, Inc. All rights reserved. www.babykick.com
Babykick, kickTrak, make every movement count and count kicks for peace of mind are trademarks of VoiKex, Inc.