



Reduced fetal movement in pregnancy

Background

Maternal perception of fetal movement is one of the first signs of fetal life and is regarded as a manifestation of fetal wellbeing. Movements are first perceived by the mother between 18 and 20 weeks of gestation and rapidly acquire a regular pattern. Fetal movements have been defined as any discrete kick, flutter, swish or roll.

A significant reduction or sudden alteration in fetal movement is a potentially important clinical sign. It has been suggested that reduced or absent fetal movements may be a warning sign of impending fetal death. Studies of fetal physiology using ultrasound have demonstrated an association between RFM and poor perinatal outcome. The majority of women (55%) experiencing a stillbirth perceived a reduction in fetal movements prior to diagnosis. A number of studies of fetal deaths in Norway and the UK identified that an inappropriate response by clinicians to maternal perception of RFM was a common contributory factor in stillbirth.

What are considered normal fetal movements during pregnancy?

Most women are aware of fetal movements by 20 weeks of gestation. Clinicians should be aware (and should advise women) that although fetal movements tend to plateau at 32 weeks of gestation, there is no reduction in the frequency of fetal movements in the late third trimester.

Are there factors which influence a woman's perception of this activity?

Women should be advised of the need to be aware of fetal movements up to and including the onset of labour and should report any decrease or cessation of fetal movements to their maternity unit. Fetal activity is influenced by a wide variety of factors. There is some evidence that women perceive most fetal movements when lying down, fewer when sitting and fewest while standing. It is therefore not surprising that pregnant women who are busy and not concentrating on fetal activity often report a misperception of a reduction of fetal movements.

Prior to 28⁺⁰ weeks of gestation, an anteriorly positioned placenta may decrease a woman's perception of fetal movements. Sedating drugs which cross the placenta such as alcohol, benzodiazepines, methadone and other opioids can have a transient effect on fetal movements.

From 30 weeks of gestation onwards, the level of carbon dioxide in maternal blood influences fetal respiratory movements, and some authors report that cigarette smoking is associated with a decrease in fetal activity. Fetuses with major malformations are generally more likely to demonstrate reduced fetal activity. Fetal presentation has no effect on perception of movement. Fetal movements should be assessed by subjective maternal perception of fetal movements. Objective assessments of fetal movements use Doppler or real-time ultrasound to detect fetal movement.

Should fetal movements be counted routinely in a formal manner?

There is insufficient evidence to recommend formal fetal movement counting using specified alarm limits. Women should be advised to be aware of their baby's individual pattern of movements. If they are concerned about a reduction in or cessation of fetal movements after 28⁺⁰ weeks of gestation, they should contact their maternity unit. Women who are concerned about RFM should not wait until the next day for assessment of fetal wellbeing. If women are unsure whether movements are reduced after 28⁺⁰ weeks of gestation, they should be advised to lie on their left side and focus on fetal movements for 2 hours. If they do not feel 10 or more discrete movements in 2 hours, they should contact their midwife or maternity unit immediately. Clinicians should be aware that instructing women to monitor fetal movements is potentially associated with increased maternal anxiety.

What should be covered in the clinical examination?

When a woman presents with RFM in the community or hospital setting, an attempt should be made to auscultate the fetal heart using a handheld Doppler device to exclude fetal death. Clinical assessment of a woman with RFM should include assessment of fetal size with the aim of detecting Small for gestation fetuses.

What is the role of CTG?

After fetal viability has been confirmed and history confirms a decrease in fetal movements, arrangements should be made for the woman to have a CTG to exclude fetal compromise if the pregnancy is over 28⁺⁰ weeks of gestation.

What is the role of ultrasound scanning?

Ultrasound scan assessment should be undertaken as part of the preliminary investigations of a woman presenting with RFM after 28⁺⁰ weeks of gestation if the perception of RFM persists despite a normal CTG or if there are any additional risk factors for Fetal Growth Restriction/stillbirth. Ultrasound scan assessment should include the assessment of abdominal circumference and/or estimated fetal weight to detect the SGA fetus, and the assessment of amniotic fluid volume.

Ultrasound should include assessment of fetal morphology if this has not previously been performed and the woman has no objection to this being carried out. There are no randomized controlled trials of ultrasound scan versus no ultrasound

What is the optimal surveillance method for women who have presented with RFM in whom investigations are normal?

Women should be reassured that 70% of pregnancies with a single episode of RFM are uncomplicated.

There are no data to support formal fetal movement counting (kick charts) after women have perceived RFM in those who have normal investigations.

Women who have normal investigations after one presentation with RFM should be advised to contact their maternity unit if they have another episode of RFM.