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Is My Baby too Big for a Normal Birth or Should I Have a Caesarean?

At some stage during a pregnancy that question will occur to you or be asked by some well meaning relative, friend, acquaintance or even your doctor or midwife. This document attempts to summarise the available medical facts about the estimation of birth weight during pregnancy and the results of research into deciding who will require a Caesarean birth.

Estimating Birth Size

First and foremost you need to be aware that all methods of estimating a baby's size before it is born are subject to error. Currently the best estimates are provided by ultrasound measurements of various body dimensions the most important of which is the abdominal circumference or high waist measurement. However, this is about as accurate as estimating your partner's weight from his waist measurement. Even given ideal circumstances, the error arising from the ultrasonic estimate of a baby's weight can be as much as plus or minus 20%. This means that a baby whose ultrasound estimate of weight is 8 lbs (or 3600g) may actually turn out to weigh as much as 9lb and 10 oz (4320g) or as little as 6 lbs and 3 oz (2880g). One study showed that a woman's own prediction of her baby's birth weight was more accurate than that predicted by ultrasound.

When I make an estimate of a baby's weight I take account of the mother's size (height, pre pregnancy weight and weight gained), her own birth weight, her race and body build and most importantly the weight of any previous babies if possible. I will also take into account the size of the uterus and the "feel" of the baby as well as a mother's own estimate based on her previous experience of pregnancy if possible. In most instances the size of the father and his birth weight or that of his relatives are only of secondary importance.

Estimating Pelvic Size

Most obstetricians have abandoned attempts to estimate pelvic size by physical examination. The technical term for this is pelvimetry. A variety of other techniques have been explored to attempt pelvimetry but contemporary research suggests that they are all flawed. X-ray pelvimetry, with or without modern computer enhancement (CT), has proven to be poor in predicting who will and will not require a Caesarean birth unless a significant contraction or pelvic abnormality is revealed. In most instances these do not require X-rays for their diagnosis but will be known to the woman and her doctor long before a baby is due to be born.

This failure of pelvimetry has lead to the obstetric maxim that "the baby is the best pelvimeter of the pelvis". That is to say it is a matter of letting nature take its course and seeing whether a baby, in the process

of a labour, comes progressively and safely through the birth passage. This has lead to the rather unfortunate obstetric term "trial of labour" but, put simply, this is a policy of "wait and see". Problems usually only arise when some party to the birth event is either unwilling to wait, refuses to see or tries to second guess with misguided foresight!

When I am asked to provide an opinion as to whether a baby will be born normally I try to take into account the mother's previous birth experiences (if possible), her family history, her age and above all her willingness to try. At the end of the day it is an obstetrician's responsibility to provide a professional opinion about whether it is reasonable and safe to proceed with an attempted vaginal birth. If you do not wish to do that then talk to your doctor or midwife about the pros and cons of an elective Caesarean birth. In some respects that is an even more difficult question See http://www.brinsmead.net.au/mdoc/CaesareanRisks.pdf

Factors that Increase the Chance of Caesarean Birth

In addition to the size of the baby there are four characteristics of the mother that influence the rate of Caesarean birth. These are her **age, height, pre pregnancy weight** and **the weight gained during the pregnancy.** These can be quantified and are cumulative (or compounding). For example:

- The rate of CS *doubles* from the age of 24 to 38 years
- The rate of CS is *halved* for a woman 5' 6" (or 167 cm) compared to one who is only 5' tall (or 152 cm).
- The rate of CS is *doubled* for a woman who is obese (body mass index greater than 35) compared to a woman whose weight is in the healthy weight range i.e. BMI 19 – 25.
- The rate of CS is 50% higher for a woman who gains 22 Kg or more during her pregnancy compared to a woman who gains the more usual 10-12 Kg in weight.
- The length of the cervix during pregnancy. This can be measured by vaginal ultrasound and is sometimes used to predict the risk of premature birth

My Baby's Head Has not Yet Engaged - Does this Mean a Caesarean is Required?

In the absence of inappropriate intervention there is a poor correlation between the failure of a baby's head to engage in the pelvis in the last month of pregnancy and the requirement for a Caesarean birth. A "high head" often has more to do with the position of the baby and the shape of the inlet to the birth passage. If a baby's head is not engaged and delivery is required because of concerns about prolonged pregnancy or some other problem then it may sometimes be wiser to proceed directly to caesarean section rather than attempt an induction of a labour that might be long and difficult.

I had a Caesarean Birth last time and the doctor said I have a Small Pelvis

Sometimes doctors say such things in order to make up for the disappointment of a failed labour experience. In fact, it is unusual for a woman taller than 155 cm to have a small pelvis. Contemporary studies have shown that up to 70% of women can safely have a normal birth even when a previous caesarean section was required for "failure to progress" in labour or "cephalopelvic disproportion" i.e. baby's head not fitting through the pelvis. Vaginal birth after caesarean requires some extra precautions because of the very small risk of scar rupture (less than 1:200) but it can proceed as normally as you wish or with the security and comfort of an epidural anaesthetic if required.

My Last Baby was very Large and Difficult and don't they only get Bigger?

There is little doubt that the first birth experience is usually the most difficult for most women. In general thereafter it gets easier because the uterus is more efficient and the birth passages have stretched and offer less resistance. Hence one of my favourite sayings: "Everyone should have their second baby first!"

In fact some women have their biggest baby first and there are some interesting physiological reasons why this may be so. Contemporary studies have shown that, if your first baby weighed more than 9 lb (4300g), then there is a very good chance (more than 80%) that your next baby will be smaller.

I Have Diabetes and a Large Baby - Should I have a Caesarean?

This is one situation in which the available data suggests that a Caesarean section might be the best option. You should discuss this matter carefully with your doctor.

I have a Breech Baby and the doctor has recommended a Caesarean Birth

The results of a large study published in 2000 suggests that there may be good reasons to have an elective Caesarean birth if your baby's weight is estimated to be greater than 3600g and is presenting as a breech. See also Breech Options.

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