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Postdates Pregnancy

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SPECIAL POINTS OF INTEREST:

- **Your estimated date of delivery**
- **How labour starts**
- **Risks of prolonged pregnancy**
- **Your options: watchful waiting or induction**
- **Stimulating labour**
- **Additional Resources**

Your Estimated Date of Delivery

The estimated date of delivery (EDD) you are given at the beginning of pregnancy is only an estimate. Research shows that only 5% of babies actually arrive on this day. In fact, most babies arrive *after* the EDD.

Why is this so? The EDD is usually calculated using Naegele's rule. Franz Naegele was a German obstetrician in the 1800s who figured that the normal duration of pregnancy was about 10 lunar cycles or 40 weeks, counting from the first day of the last menstrual period. This continues to be used as the standard, even though it is not evidence-based.

In fact, recent research suggests that the average duration of pregnancy is 41 weeks and 1 day for women having their first child and 40 weeks and 3 days for

women having their second or subsequent children.



In addition, some factors increase the uncertainty around your EDD:

- If you were unsure about the dates of your last menstrual period
- If your menstrual cycle is not regular (ie. it varies in length)
- If you recently stopped taking the birth control pill

If any of these was true for you, your doctor or midwife may have

offered you an ultrasound in the first few months of pregnancy to help determine the EDD. During the ultrasound, the fetus is measured from the top of its head to the bottom of its bum. This measurement gives a good estimate of how old the baby is (and when your EDD is).

Regardless of how your EDD was determined, it is still an *estimate*. If it comes and goes and nothing happens, you may become anxious. Your family and friends may begin to call you frequently, wondering why the baby hasn't arrived. Each day may seem like a week. It is important at this time to plan some activity and fun. Remind yourself that 9 out of 10 babies are born within 10 days of the EDD. There is nothing abnormal about a baby who is 9 days "late".

How Labour Starts

One of the unsolved mysteries of pregnancy and birth is the question of how labour starts. We do know that it involves a lot of coordination between you and your baby. This joint control helps to ensure that your baby is ready to be born at about the same time as you are physically and emotionally ready to give birth and nurture your baby. Hormones are secreted by both

your placenta and your baby's brain, triggering changes in the uterus that set the stage for labour. These changes include:

- Decreased levels of hormones that relax the uterus
- Increase in oxytocin receptors on the uterus (which make the uterus more receptive to the hormone oxytocin which causes la-

bour contractions)

- Increased production of prostaglandins, which soften and ripen the cervix

This system is sometimes called "the fetoplacental clock". The clock is faster in some women than others, which explains why healthy babies may be born any time between 37 and 42 weeks.





The Risks of Being “Overdue”

Although many women can continue their pregnancies beyond 42 weeks (or even 43 weeks) and give birth to a healthy baby, statistically, there are a few increased risks with prolonged pregnancy.

Bigger babies:

The longer your pregnancy lasts, the more likely you are to have a big baby (> 4500g). Bigger babies can sometimes be associated with more difficult or longer labours.

Aging placenta:

The placenta is a remarkable organ. Throughout pregnancy, it acts as a tireless advocate for the survival and health of the fetus. However, like every organ, it has a youth and an old age. Some placentas may continue to thrive and even expand in size past 40 weeks of pregnancy; other placentas may begin to deteriorate as the pregnancy becomes more prolonged. If this happens, the baby may be deprived of nourishment and may become distressed. In rare cases, this can result in stillbirth.

Options: Induction or “Watchful Waiting”

If you have passed your EDD, you should begin to discuss your options with your caregiver and come up with a plan for what you will do if labour hasn't started by the time you are 41 weeks.

Expectant Management

Also called “watchful waiting”, this involves increasing the monitoring of your baby after 41 weeks to help ensure that she is thriving. Usually, monitoring is repeated every 2-3 days. A *non-stress test* involves using an electronic fetal monitor to assess how the fetal heart rate responds when the baby moves. Ultrasound may be used to assess the *volume of amniotic fluid*. You may also be asked to count baby's movements occasionally. If all of these tests are reassuring, you may continue to wait for labour to start on its own.

Medical Induction

A medical induction involves using synthetic hormones to try to start labour. Prostaglandin gels may be inserted into the vagina to ripen the cervix. Oxytocin may also be introduced through an IV drip to stimulate uterine contractions.

One review of the research appears to demonstrate that induction of labour at 41 weeks is associated with fewer baby deaths when compared with expectant management. However, other reviews have found no significant differences in perinatal mortality between the two approaches.

Induction can have a significant impact on the course of labour:

- Contractions may be stronger, longer, and

more painful; as a result, you are more likely to use an epidural;

- Continuous electronic fetal monitoring will be required, which may limit your mobility and prevent you from using a bath;
- There is no guarantee that induction will be successful; if it fails, a C/S will be required. Some studies show that induction is associated with higher rates of cesarean section. However, it is not clear if this is true when the induction is for prolonged pregnancy.

At BC Women's Hospital, induction of labour is offered to you 10 days after your EDD. However, if the hospital is very busy, you may have to wait a day or two more before you start the induction.

Lower-Tech Tools to Stimulate Labour



It is quite reasonable to wait for labour to start on its own as long as you and your baby are healthy. However, if you are impatient for labour to start and want to avoid a medical induction, there are a number of things you can try. In general, it is believed that these methods will not work unless your body and your baby are ready for labour:

- **Sexual activity:** There are a number of mechanisms by which sexual activity may help to stimulate labour. Prostaglandins in semen may help to ripen the cervix. Nipple stimulation and orgasm may cause release of oxytocin, the hormone that causes labour contractions. There is no research to demonstrate that sexual activity triggers labour but it is safe to try if you feel interested.
- **Acupuncture and acupressure:** A growing body of research suggests that stimulating acupressure points such as “Large Intestine 4” and “Spleen 6” may help ripen the cervix and hasten the onset of labour. If you are interested, it is probably best to consult an acupuncturist with specialized training around pregnancy and birth.
- **Bowel Stimulation:** Castor oil has long been used to stimulate contractions. It is thought that it causes your bowel to spasm, which in turn stimulates your uterus to contract. It also increases prostaglandin production. The Labour Cocktail below has been used successfully by many women but its effectiveness and safety have not been studied.
- **Herbs and Homeopathics:** Herbs such as verbena and homeopathics such as caulophyllum are said to help stimulate labour but their effectiveness and safety have not been studied. See the “labour cocktail” recipe below.
- **Membrane stripping:** If your cervix is beginning to ripen, your midwife or doctor may offer to “strip your membranes”. This involves inserting a gloved finger into the opening of the cervix and “sweeping” between the membranes (bag of waters) and the uterus. This has been shown to reduce the duration of pregnancy by an average of 3 days and to reduce the need for medical induction. There is a rare risk of accidentally breaking the bag of waters. In addition, the procedure can sometimes cause uncomfortable cramping without leading to labour.
- **Walking**
- **Talking** with your partner or a friend about any anxieties you have about the birth or the baby

“A baby in the womb should be compared to fruit on the tree. Not all the fruit on the same tree is ripe at the same time.”

Michel Odent

Labour Cocktail Recipe

This recipe has been passed on from midwife to midwife over the years and is believed to help stimulate labour. However, its safety and effectiveness have not been evaluated with research. Some known drawbacks of using castor oil include uncomfortable cramping and diarrhea that does not result in labour.

Ingredients:

- 5 drops Verbena Oil (not available for purchase in Canada)
- 250 ml Apricot juice
- 2 tbsp. Almond butter
- 2 tbsp. Castor oil

Blend ingredients with ½ liter of water.

Repeat every 5-6 hours as needed.



Additional Resources

Research

Gülmezoglu, A. et al. (2008) Induction of labour for improving birth outcomes for women at or beyond term. *Cochrane Database of Systematic Reviews*, 2008(1), Issue 4. Article CD004945.

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Commentary

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Clinical Guidelines

College of Midwives of BC. Guidelines for Postdates Pregnancy. *CMBC Clinical Practice Guidelines*, December 2003.

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“The Tree and the Fruit”

Excerpt from an article by Michel Odent, French Obstetrician

OPINION

According to traditional wisdom in rural France, a baby in the womb should be compared to fruit on the tree. Not all the fruit on the same tree is ripe at the same time... It is the same with a baby. In other words, we must accept that some babies need a much longer time than others before they are ready to be born. If you have some apple trees in your garden, you will listen to your common sense and choose an individualized and selective approach: you will not pick all the apples on the same day.

What about human babies? Today, all over the world, a *routine approach* to postmaturity is typically adopted... Modern pregnant women are given a very precise due date... Long in advance, women are warned that if their babies are not born on a certain date, their labors will be induced. The first result of such attitudes is that in many hospitals more than one-quarter of labors are artificially induced. The other result is that more and more women doubt that they will go into labor without the help of

doctors.

At the root of this epidemic are statistics. When looking at a very large number of births, it is clear that outcomes are optimal when the baby is born between 38 and 40 weeks. The statistics are not as good when focusing on babies born at 41 weeks or after. Such data lead to simplistic conclusions: "If we routinely induce labor whenever the pregnancy has lasted more than a certain number of weeks, we'll eliminate the risks of fetal distress and even deaths related to postmaturity." *The risk of death related to postmaturity is not a legend, but it is usually overestimated.* It should be balanced with all the risks associated with induction. Is it wise to induce one-quarter of labors, in order to save one baby in thousands? *Are more individualized and selective strategies possible?* The answer is, "yes."

...The first step is always to try to determine when the baby was conceived, by listening to what the pregnant woman has to say about her private life, the regularity of her men-



strual cycles, and so on.

...After that, the principle is simple. If the baby has been in the womb for more than nine months, its condition is assessed on a *day-to-day basis*. As long as the baby is in good shape, it is possible to wait. From the time daily assessments have started, only the well-being of the baby is taken into consideration, whatever the duration of pregnancy. The most common scenario, by far, is that one day labor will start spontaneously and a healthy baby will be born. If the baby's skin is peeling, it means that it was already postmature.