

Delivery after a previous caesarean section: making a joint decision using a decision aid

This decision aid is intended for pregnant women who have had a caesarean section in a previous pregnancy. A decision will have to be made together with your partner and gynaecologist about the delivery method for the current pregnancy: to strive for a vaginal delivery or choose for a planned caesarean section. The table below sets out the options and what they involve.

	Vaginal delivery	Planned caesarean section
What does this involve?	You deliver in hospital with constant monitoring of the baby (CTG). If the baby can't be delivered vaginally, then a(n) (emergency) caesarean section is performed.	The baby is born at 39 weeks with a planned operation.

We strive towards making a timely provisional decision together with your gynaecologist. Naturally changes can still occur later in the pregnancy that can change this decision. This means that the delivery method will be discussed with you once again between weeks 38 and 40.

Using a step-by step plan, you will be discussing the important points for choosing between a vaginal delivery or a planned caesarean section with your gynaecologist. These points of discussion are:

1. your possible preference **before** the meeting
2. your experiences with a previous delivery
3. information about the pros and cons and possible complications of a vaginal delivery and a planned caesarean section.
4. your considerations for weighing up the two options
5. the wishes and/or conditions under which you would decide on a vaginal delivery
6. a provisional decision
7. what next?

Step 1

It is possible you already have a preferred choice before going through this decision aid.
What is your current preference?

- ☐ Vaginal delivery
- ☐ Planned caesarean section
- ☐ Not applicable, I have no preference as yet

Step 2 My own experience

Do experiences of your past delivery/deliveries play a part in your decision?

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What are other important factors that are influencing your decision on this delivery, such as experiences in your immediate environment?

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Step 3 Comparing

In step 3, the pros and cons and risks of a vaginal delivery and a planned caesarean section are discussed. Some disadvantages of a planned caesarean section also occur when women who, in the end, still need a(n) (emergency) caesarean section. The table below offers a general overview of what a vaginal delivery or a planned caesarean section can mean for mother, baby and the post-natal period. The chance of complications and the consequences for future pregnancies are explained later on.

Overview of the significance of vaginal delivery and planned caesarean section

	Vaginal delivery	Planned caesarean section
What does this mean for the mother?	More involvement in the baby's birth Experiencing a 'normal birth': baby on the breast, quickly commencing possible breastfeeding, more control over the first hours after birth. Contraction pains Possibility of vaginal tearing and stitches Risk of (emergency) caesarean section	More control over how and when the delivery takes place (unless the delivery begins early anyway) Initial period after the birth often spent in the operating theatre/recovery room without the baby Pain after the operation Risks accompanying every operation: higher risk of thrombosis, infection, bleeding Chance that a general anaesthetic must be applied instead of an epidural
What does this mean for the baby?	A natural birth better prepares the baby for breathing independently	The overall chance of complications is a little less with a planned caesarean section
What does this mean for the post-natal period?	Quick return to home 'Normal activities' can be resumed after 2-3 days	3-4 days in hospital 'Normal activities' can be resumed after 6 weeks

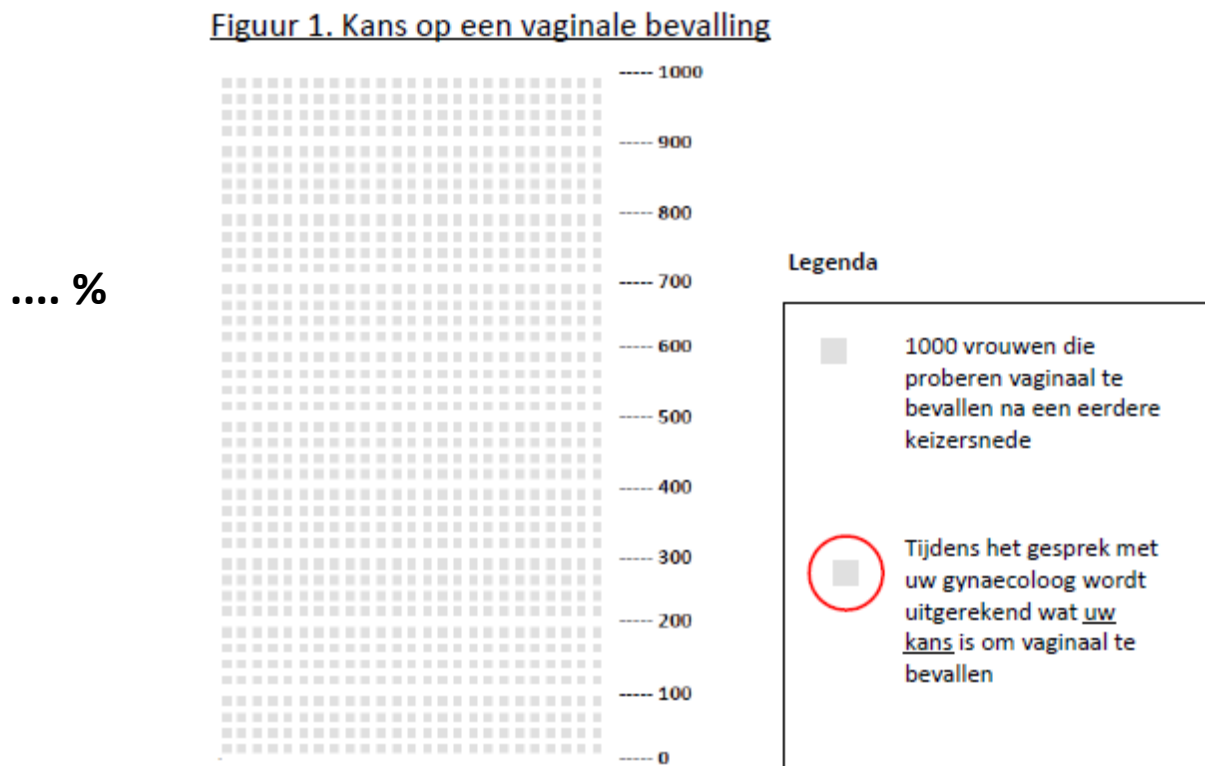
What are my chances of a successful vaginal delivery?

The overall chance of complications is less with women who deliver vaginally. An average of 70-75% of women who attempt a vaginal delivery succeed: a planned caesarean section is therefore not better for the group as a whole. However, if your chance of success is much smaller or much greater, this can play a part in your decision.

Mathematical model: your personal chance of delivering vaginally (from the 32nd week of pregnancy)

From the 32nd week of pregnancy, we can calculate your chances of success on the basis of your medical history and current situation. Your gynaecologist can calculate this for you during the appointment using a mathematical model.

If you have opted for a vaginal delivery, your personal chance of an actual vaginal delivery is



When the delivery begins before the calculated date, the chances that you will deliver vaginally are possibly greater. However, if the delivery must be induced, you have a slightly smaller chance of delivering vaginally and the calculation aid must be completed anew.

Figure 1. Chances of a vaginal delivery
Legend

1,000 women who try to deliver vaginally after a previous caesarean section

Your chances of delivering vaginally will be calculated during the discussion with your gynaecologist.

What are the chances of serious complications for me or the baby?

The complication that people fear most is a 'uterine rupture', the tearing open of the old scar on the uterus. This can have serious consequences for mother and baby, but the risk of lasting consequences is small with a rapid intervention. The chance of this varies around the world from 2 to 15 per 1,000 women who commence a vaginal delivery and is probably dependant on risk factors, such as the use of induction medication. The numbers below are average figures.

Risk of uterine rupture per 1,000 deliveries

	Vaginal delivery	Planned caesarean section
Uterine rupture	8 (2 to 15) per 1,000	0.3 per 1,000

Figuur 2. Risico op uterusruptuur per 1000 bevallingen

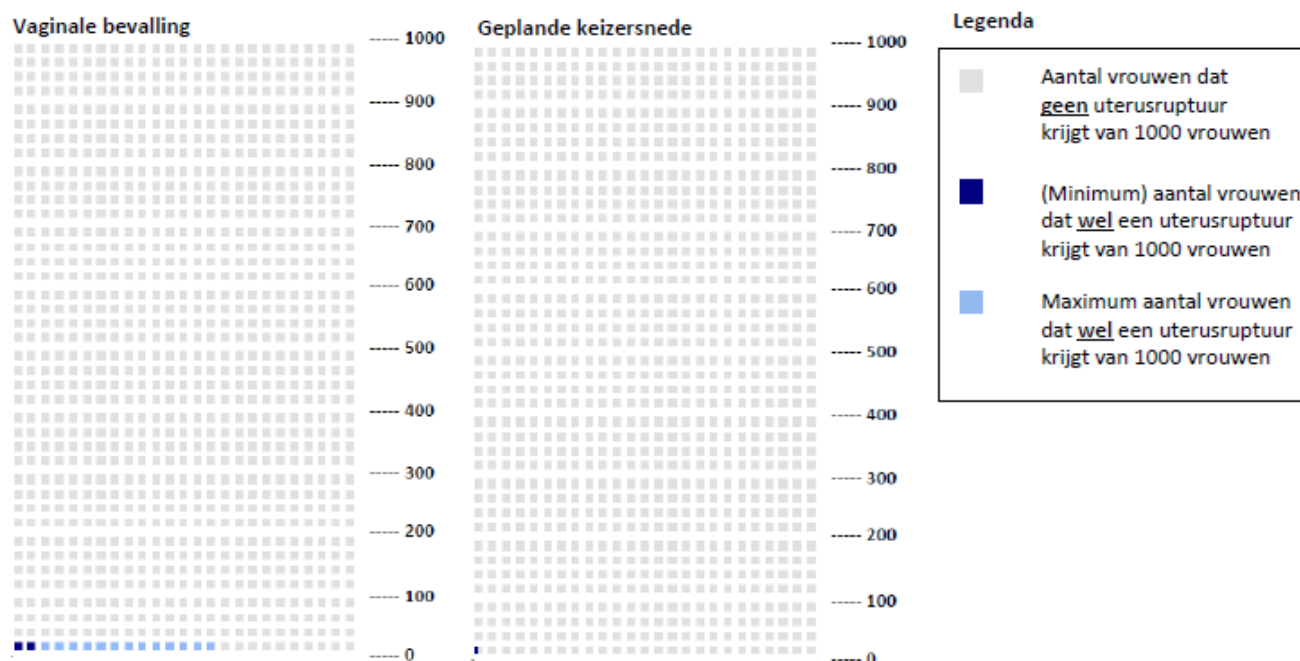


Figure 2. Risk of uterine rupture per 1,000 deliveries

Vaginal delivery / Planned delivery / Legend

Number of women per 1,000 without uterine rupture

(Minimum) number of women per 1,000 with uterine rupture
 Maximum number of women per 1,000 with uterine rupture

The chance of serious complications arising as a consequence of uterine rupture or other possible problems is very small and is described below.

Risk of mortality per 1,000 deliveries

	Vaginal delivery	Planned caesarean section
Mother mortality	0.04 per 1,000	0.13 per 1,000
Child mortality	1.30 per 1,000	0.50 per 1,000

Risk of serious injury to the baby

The milder complications for a planned caesarean section are similar to those of a vaginal delivery and occur in less than 5% of cases. Breathing problems are seen more often with planned caesarean sections, but with vaginal deliveries there are a larger number of problems when delivering the baby's shoulders. These differences are difficult to weigh up against each other and there is no difference in neurological damage or long-term outcomes. There is therefore no difference in the chance of serious lasting injury for the baby.

Risk of serious injury to the mother

The overall chances of serious complications with the mother (uterine rupture, hysterectomy or operation damage) are displayed in the table below. There is a difference in the chance of complications between women who actually deliver vaginally and women who eventually have to deliver by unplanned caesarean section, whether it concerns an emergency caesarean section or not.

Risks of serious complications for the mother per 1,000 deliveries

	Vaginal delivery	Planned caesarean section
Serious injury to the mother	Actual vaginal delivery: 2 per 1,000	8 per 1,000
	Unplanned caesarean section: 38 per 1,000	

Figuur 3. Risico's ernstige schade moeder per 1000 bevallingen

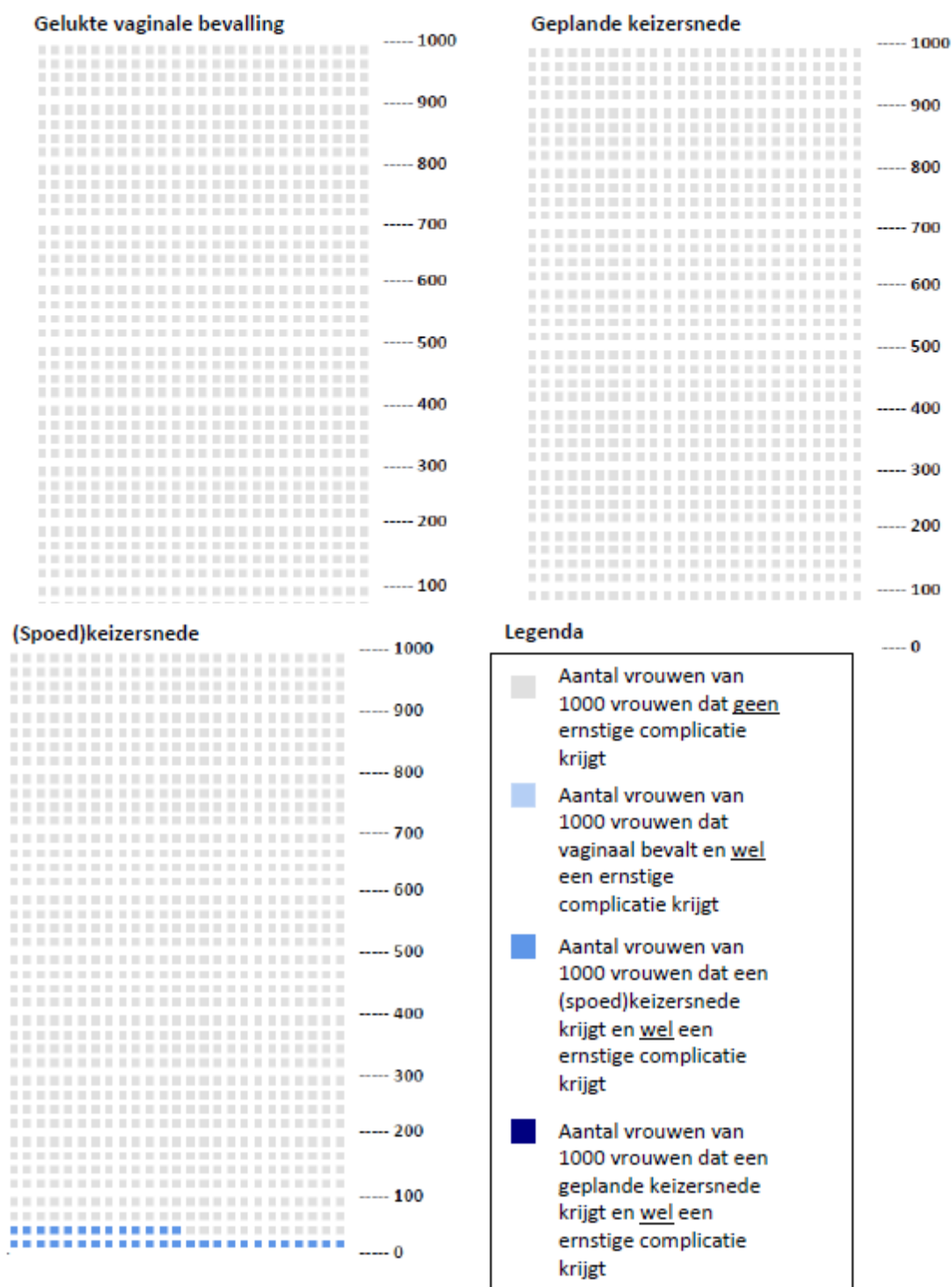


Figure 3. Risk of serious damage to the mother per 1,000 deliveries

Successful vaginal delivery / Planned caesarean section / (Emergency) caesarean section / Legend

Number of women per 1,000 without serious complications

Number of women per 1,000 with serious complications from vaginal delivery

Number of women per 1,000 with serious complications from a(n) (emergency) caesarean section

Number of women per 1,000 with serious complications from a planned caesarean section

Will my decision influence any future pregnancies?

After 2 caesarean sections, in most cases the next delivery will once again be a caesarean section. The chances of complications with each 'additional' caesarean section rise for the following pregnancy. The most important risks for a following pregnancy are: greater chance of a placenta previa (placenta fully or partially blocks the cervix) and an ingrown placenta, where the placenta grows into the uterine wall. There is also a greater risk of blood loss, intensive care admission and the need for a hysterectomy. Naturally these problems can be related and the total number is an estimate of the number of women who will develop 1 or more problems. Less serious operation risks such as infections also occur more often after multiple caesarean sections.

The chances of serious complications occurring with future pregnancies per 1,000 deliveries

	With the 3rd caesarean section	With the 4th caesarean section
Placenta previa	18 per 1,000	30 per 1,000
Ingrown placenta	6 per 1,000	21 per 1,000
Hysterectomy	9 per 1,000	24 per 1,000
IC admission of mother	6 per 1,000	16 per 1,000
Blood loss with transfusion of > 4 blood bags	8 per 1,000	16 per 1,000
Damage to urinary tract or bowel	12 per 1,000	24 per 1,000
Estimate of overall chance of 1 or more complications	40 per 1,000	80 per 1,000

Figuur 5. Kans op optreden van het totaal aantal complicaties bij toekomstige zwangerschappen per 1000 bevallingen

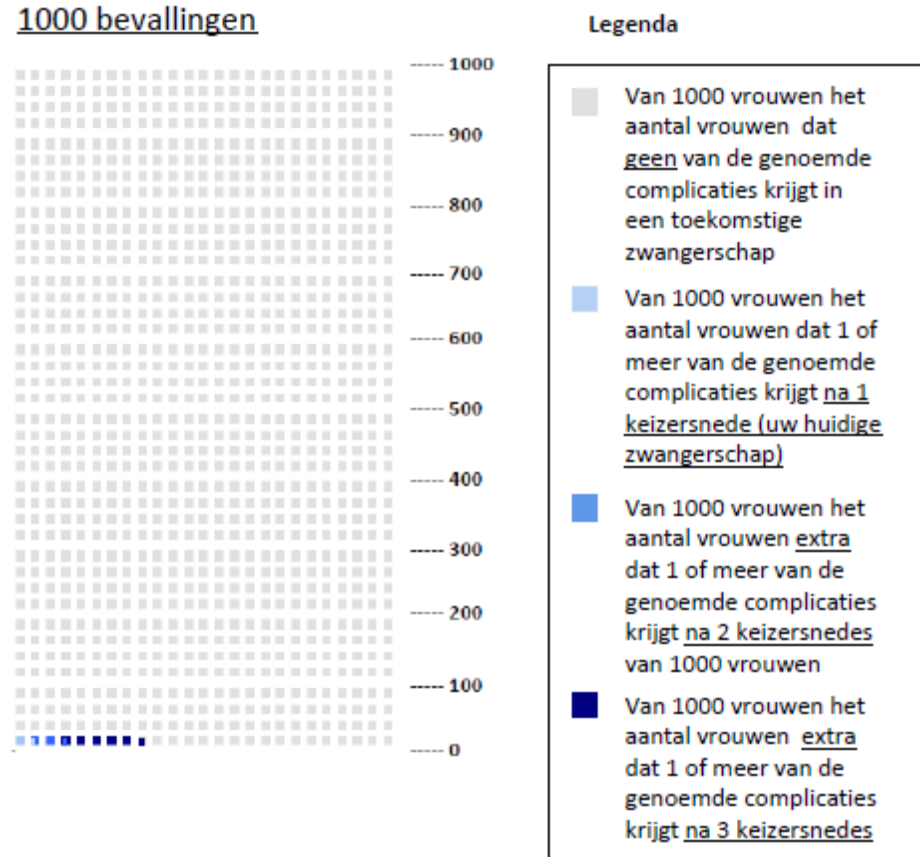


Figure 5 Chance of occurrence of total number of complications for future pregnancies per 1,000 deliveries / Legend

Number of women per 1,000 without any of the stated complications in future pregnancy

Number of women per 1,000 with one or more of the stated complications after 1 caesarean section (your current pregnancy)

Number of extra women per 1,000 with one or more of the stated complications after 2 caesarean sections

Number of extra women per 1,000 with one or more of the stated complications after 3 caesarean sections

Summary

No serious complications occur with mother or baby in more than 95% of all deliveries, no matter how the delivery began - planned caesarean section or vaginal delivery.

The chances of complications for the mother are related to the eventual method of delivery. For women who do deliver vaginally, the chances of serious complications are the lowest (2 per 1,000), followed by the group with a planned caesarean section (8 per 1,000). The group that starts a vaginal delivering but eventually undergoes a caesarean section has the greatest risk of complications (38 per 1,000). Of these, however, less than 5% of cases could be said to be an emergency caesarean section.

The chance of complications with future pregnancies increases with each additional caesarean section.

Step 4 My considerations

Below you can indicate the important elements for you to reach a decision.

What are important factors for you (and your partner)?	Very important	Important	Less important	Unimportant
<i>When delivering vaginally</i>				
1. I feel more involved with the baby's birth				
2. I experience a normal delivery				
3. It takes place in the natural way				
4. I experience contraction pains				
5. I have less control over the process				
6. I could tear/need to be cut				
7. There is a risk of needing an emergency caesarean section				
8. My personal chance of a vaginal delivery				
<i>When delivering by caesarean section</i>				
9. I have more control over how and when the delivery takes place				
10. I will definitely need to undergo an operation				
11. I will experience more pain after the operation				
12. There is an increased chance of complications, such as thrombosis, infection and bleeding				

What are important factors for you (and your partner)?	Very important	Important	Less important	Unimportant
<i>Serious risks</i>				
13. The risk of tearing of the scar on the uterus (uterine rupture) is greater with a vaginal delivery				
14. The chances of the total number of serious complications for the mother are smaller for a vaginal delivery				
15. The chance of mother mortality is greater with a caesarean section				
16. The chances of lasting injury to the baby are about equal for a vaginal delivery and a caesarean section				
17. The chance of baby mortality is smaller for a caesarean section				
18. Each new caesarean section brings a greater risk for the next pregnancy				
<i>After a vaginal delivery</i>				
19. I will recover more quickly				
20. I can usually return home earlier				
21. Other important reasons				

Step 5 Wishes

There is a possibility that your choice for a vaginal delivery depends on a number of conditions/wishes (e.g. proper pain relief, quick procedure). Please feel free to write these wishes/conditions down below so that they can be added to your file:

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Step 6 The provisional choice

- ☐ A vaginal delivery
- ☐ A planned caesarean section

Step 7 What next?

You have made a provisional choice together with your doctor. You have the option to, after thinking it through some more, change your decision. There is also the possibility that the situation changes: there can be a reason for labour to be induced, the baby can come too early or the baby could have become very large. This can change your chances of success and, with that, your choice as well.

Should you have chosen for a planned caesarean section, it is also possible that the delivery starts earlier than planned. Because of this, the chances of success for a vaginal delivery could improve, in which case you may well prefer to have a normal delivery.

An appointment will be made to go through this decision aid once again should your medical situation change.

Induced labour after a caesarean section

This part of the decision aid is for women who have opted for a vaginal delivery after a previous caesarean section and for whom there is now reason to induce labour.

Inducing labour

If a delivery does not start spontaneously, or if the delivery must take place sooner for medical reasons, then labour can be induced. With an induction, doctors try to get your labour to start using a 'balloon' or medication. The table below states that labour induction has consequences for your chances of actually delivering vaginally. Also, the chances of the uterus scar tearing (uterine rupture) are possibly a little greater when your labour is induced.

Induction after a caesarean section

	Induction of a vaginal delivery after a previous caesarean section
How are the chances of you delivering vaginally affected?	With an induction after a previous caesarean section, the chances of delivering vaginally are possible a little smaller. For this reason, your gynaecologist will calculate this for you once again. Your new chance is%
How are my chances of complications affected with an induction?	<u>With a balloon:</u> there is probably no difference in the chances of the uterus scar tearing (uterine rupture).
	<u>Medication:</u> this is 15 per 1,000 when using prostaglandins (gel, tablets); about 10 per 1,000 when using a drip.

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