



## Evidence on: Breech Version

### How common is the breech position?

Breech position (bottom first) is present in 3% to 4% of term pregnancies. Breech positioning is common prior to term—25% are breech before 28 weeks, but by 32 weeks only 7% of babies are breech. The vast majority of breech babies in the United States (U.S.) are born by planned Cesarean ([Table 1](#), page 2). The use of a safe procedure to help turn breech babies into a head-down position (aka cephalic position) may help lower the Cesarean rate ([ACOG, 2020](#)).

Originally published on October 11, 2012, and updated on March 29, 2021 by [Rebecca Dekker, PhD, RN](#) and [Anna Bertone, MPH](#).

### What is an external cephalic version?

External = from the outside, cephalic = head first, version = turning

An external cephalic version is when a care provider puts their hands on the outside of your belly and turns the baby, using either a forward or backward roll, into a cephalic (head-down) position. This is also called an ECV, version, or “hands to belly” procedure ([ACOG, 2020](#)).

We compiled some statistics from the Centers for Disease Control ([Table 1](#), page 2). There were 150,678 breech babies born in the U.S. during the year 2019, or 4% of all babies. Of these, 93.8% were born by Cesarean. The number of known breech births made up 11.8% of all Cesareans in 2019.

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**Table 1: Breech Positioning and Delivery Method in the U.S., 2019**

	Vaginal-Spontaneous	Vaginal-Forceps	Vaginal-Vacuum	Cesarean	Unknown	Total
Breech	5.9%	0.2%	0.1%	93.8%	0.0%	4.0%
Cephalic	68%	0.5%	2.6%	28.8%	0.0%	94.9%
Other	39.7%	0.4%	1.9%	57.8%	0.1%	0.8%
Unknown	38.8%	0.2%	1.4%	45.3%	14.4%	0.3%
Total	65.2%	0.5%	2.5%	31.7%	0.1%	100%

\*Preliminary 2019 data from personal correspondence in March 2021 with Anne Driscoll, Ph.D., at the Centers for Disease Control and Prevention.

Note: These statistics do not tell us how many of these were pre-term births or twin births.

## How many pregnant people with breech babies have a version?

We contacted the CDC for the most recent data in the U.S. (Table 2). In 2019, only 10,783 people (0.2%) underwent an external cephalic version (ECV) procedure, compared to 11,158 people (0.3%) in 2016. As you can see in the table below, the success rate decreased from 55.8% in 2016 to 48.5% in 2019. Of the people who had successful ECVs in 2019, 71.9% went on to have spontaneous vaginal births. On the other hand, the 2019 failure rate of ECVs was 51.5%, and 91.3% of those with failed ECVs went on to have Cesarean births.

**Table 2: ECV Success and Delivery Method in the U.S., 2016 and 2019**

	Successful ECV (2016)	Failed ECV (2016)	Successful ECV (2019)	Failed ECV (2019)
Total	6,221 (55.8%)	4,937 (44.2%)	5,233 (48.5%)	5,550 (51.5%)
Vaginal-Spontaneous	4,229 (68.0%)	545 (11%)	3,762 (71.9%)	456 (8.2%)
Vaginal-Forceps	89 (1.4%)	10 (0.2%)	50 (1%)	14 (0.3%)
Vaginal-Vacuum	330 (5.3%)	25 (0.5%)	184 (3.5%)	12 (0.2%)
Cesarean	1,568 (25.2%)	4,356 (88.2%)	1,235 (23.6%)	5,066 (91.3%)
Unknown	5 (0.1%)	1 (0.0%)	2 (0.0%)	2 (0.0%)

\* Table made for [www.evidencebasedbirth.com](http://www.evidencebasedbirth.com). Preliminary 2016 and 2019 data from personal correspondence in September 2017 and March 2021 with Anne Driscoll, Ph.D., at the Centers for Disease Control and Prevention.

There is general agreement in the U.S. that the Cesarean rate is higher than necessary, and changes should be made to safely bring it down. For this reason, there is a renewed interest in both ECV and vaginal breech birth. As the rate of successful ECVs and vaginal breech birth goes up, the Cesarean rate goes down (ACOG, 2020).





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Unfortunately, the ECV is an underused procedure. In the U.S., ACOG (2020) states that as many as 20-30% of people who are eligible for ECV are not offered it, even though attempting ECV lowers their chance of Cesarean.

In an Australian study, only 66% of pregnant people had ever heard of an ECV, and most of them (87%) had learned about version from books or family/friends—not from care providers. Only 39% of participants said they would choose an ECV if they had a breech baby, and 22% were undecided. The participants who did not want an ECV said that they had concerns about effectiveness and safety for the baby (Raynes-Greenow et al., 2004).

In 2017, another Australian study looked at over 32,000 people who had singleton breech pregnancies of  $\geq 36$  weeks between 2002 and 2012 (Bin et al., 2017). Only 10.5% of the group attempted an ECV. As many as 67.2% did not attempt an ECV even though they were considered to be good candidates for the procedure according to Australian practice guidelines. The practice guidelines identified 22.3% of the group as too high risk for the procedure. The authors note that it is not clear whether the low rate of ECV attempts is related to care providers failing to offer it or pregnant people declining the procedure.

In a Dutch study, investigators estimated that less than half of people in the Netherlands with a breech baby at term had an ECV. Approximately 20-30% of them refused an ECV and decided to have a planned Cesarean instead. It was estimated that anywhere from 4% to 33% of pregnant people are not given the option of a having an ECV by their care providers (Vlemmix et al., 2010).

In the U.S., it could be that care providers aren't offering versions as readily because health insurance plans (including Medicaid) consider it to be a part of regular, routine prenatal care (Personal correspondence, Johansson, 2017)—thus preventing hospitals and clinics from being adequately reimbursed for an ECV. An ECV takes time and resources, especially considering the potential need for medications (and in some cases, an epidural), and the need for pre- and post- procedure tests and monitoring for wellbeing.

### Are external cephalic versions effective for reducing the risk of Cesarean?

Many people believe that the U.S. Cesarean rate is higher than necessary and that we should explore ways to bring the overall rate down. Since breech babies are almost always born by Cesarean, there is a renewed interest in attempting ECV to increase the chance of vaginal birth (ACOG, 2020). Also, versions are cost-effective when compared to a scheduled Cesarean (Tan et al., 2010).

In a 2015 Cochrane review, Hofmeyr et al. combined the results from eight randomized, controlled trials with 1,308 participants who were randomly assigned to either ECV or no treatment. The quality of the studies was mixed. In order to control for quality of the studies, the researchers looked at the results both with and without the poorer quality studies. When they did so, the results stayed the same.

Overall, the researchers found that attempting an ECV at term decreased the relative risk of breech birth by 58% and decreased the relative risk of Cesarean by 43%. There were no differences in any other outcomes, including Apgar scores, neonatal admission, or infant deaths. The studies did not look at maternal satisfaction (Hofmeyr et al., 2015).

It is important to note that five of the eight studies in this review took place between 1981 and 1991, a time when breech vaginal births were more common. Since the publication of the “Term Breech Trial” in 2000, breech vaginal births have become extremely rare, and most breech babies are born by planned Cesarean. Therefore, it is possible that if these randomized trials were replicated today, having an ECV might result in an even larger reduction in the risk of Cesarean.





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In a different systematic review published in 2020, Devold Pay et al. reviewed two randomized trials (conducted in 1981 and 1984) and seven observational studies (carried out between 1985 and 2014) comparing the effects of ECV or no ECV on pregnant people who were eligible for an ECV at  $\geq 36$  weeks. Altogether, the review included 7,091 attempted ECVs. Studies were conducted in high-resource settings: northern, western, and central Europe, the U.S., Canada, Australia, and New Zealand. When the review authors combined the data, they found that attempted ECV was linked to a significant reduction in Cesarean and non-cephalic presentation at birth. They estimated that a policy of attempted ECV (compared to no attempted ECVs) would probably result in between 320 to 710 fewer non-cephalic presentations at birth and 271 to 376 fewer Cesareans per 1,000 labors.

The authors also found that ECV attempts were linked to a slightly increased rate of Apgar score  $< 7$  at 5 minutes compared to no ECV attempt (24 vs. 19 per 1,000). They estimated that attempted ECV would probably result in 2 to 10 more low Apgar scores at 5 minutes per 1,000 labors. Attempted ECV had no effect on low Apgar scores at 1-minute, perinatal death, or NICU admission.

This review was limited by unclear risk of bias for the 2 RCTs and serious risk of bias for the 7 observational studies. The largest study in the review had serious risk of bias, largely due to its reliance on U.S. birth certificate data from 2006 (Balayla et al., 2014). Devold Pay et al. concluded that more high-quality research is needed, but the available evidence suggests that when ECV is attempted at or near term, there is a substantially reduced risk of Cesarean and a slightly increased risk of a low Apgar score at 5 minutes.

A separate observational study published in 2016 (Weiniger et al.) found several additional benefits to ECV. This study examined data from a U.S. healthcare utilization database and was not included in either the Cochrane Review or the Devold Pay et al. review. Researchers compared 56,409 people who had a successful ECV with 1,023,166 people who had a persistent breech baby at the time of birth. The Cesarean rate was 20.2% in the successful ECV group vs. 94.9% in the persistent breech group. The researchers also found that people with successful ECV also had overall better maternal outcomes including lower rates of infection (endometritis and sepsis), shorter hospital stays, lower hospital charges, but higher rates of inflammation of the membranes (chorioamnionitis).

Overall, a successful ECV can have important personal benefits for an individual by helping someone avoid major abdominal surgery. Versions can also have population-level benefits by lowering the overall Cesarean rate. If everyone with a breech baby at term attempted an ECV, then about half would be successful. Of those with successful ECVs, about three quarters give birth vaginally. This means that more than a third of people with term breech pregnancies could avoid a Cesarean if everyone attempted an ECV. Given that 3% to 4% of all term pregnancies are breech, the overall Cesarean rate would come down by 1% to 2%. Obviously not all people with breech pregnancies at term are good candidates for the procedure, and some would refuse the procedure, so the real reduction in the Cesarean rate may not be as large. But it's important to understand that the real benefit in reducing the number of Cesareans from breech pregnancies comes later on, in subsequent pregnancies—since many of those would result in repeat Cesareans, which carry additional risks.

### Are there any other risks of an ECV?

The sample sizes from the previously mentioned reviews were too small to give an accurate picture of rare risks of an ECV. In order to look at risks, we need to look at a study with a larger number of ECV procedures.





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In 2008, Grootsholten et al. combined the results of 84 studies that included 12,955 participants who experienced an attempted ECV. They only included studies that reported on complications from attempted versions on single babies done after 36 weeks of pregnancy. The average success rate for turning a baby out of the breech position was 58%. The overall complication rate was 6%, and the rate of serious complications (placenta abruption or stillbirth) was 0.24%. There were 12 stillbirths out of the 12,955 cases, and two of these deaths were related to the ECV. The other deaths were un-related to the ECV or unexplained. The unexplained stillbirths were diagnosed 10 to 31 days after the version. Placenta abruption occurred in 0.18% of participants (11 abruptions out of 12,955 ECVs), and 10 of these abruptions resulted in an emergency Cesarean ([Grootsholten et al., 2008](#)).

Other complications included cord prolapse (0.18%), temporary abnormal fetal heart rate patterns (4.7%), vaginal bleeding (0.34%), and water breaking (0.22%). There was one urgent Cesarean for every 286 ECVs. In summary, researchers found that ECV is safe, but they recommended that an ECV should take place in a setting where an urgent Cesarean could be performed if necessary.

### Is an ECV painful?

The potential pain or discomfort from an ECV may discourage some people from attempting the procedure. Several studies have asked mothers about their experiences during and after an attempted ECV. Researchers at a large teaching hospital in the Netherlands conducted a study of 249 people attempting an ECV ([Truijens et al., 2014](#)). Before the ECV attempt, researchers spent about 30 minutes interviewing participants about symptoms of depression and fear of the ECV. Immediately after the procedure, a different researcher (who was blind to the earlier interview) assessed each participant's pain perception.

They found that the most important factor influencing pain perception was whether the ECV was successful at turning the baby or not. To put it another way, people who had successful ECVs reported significantly less pain than people with failed ECV attempts. The average ECV attempt lasted just under four minutes and ranged from less than a minute to 16 minutes. As would be expected, people who underwent longer procedures reported more pain. The important takeaway, however, is that the length of the procedure—or any other factor for that matter—didn't totally explain why people with failed ECV attempts reported more pain. It appears that the negative emotions that follow a disappointing outcome influence how much pain a person recalls. Data from the pre-ECV interviews showed that depression and fear also independently influence pain perception. This means that people who have signs of depression or expect the procedure to be painful are more likely to actually find it painful compared to people without signs of depression or fear going into the procedure.

In Australia, researchers interviewed 16 first-time mothers and six experienced mothers who had attempted an ECV but it did not successfully turn the baby ([Watts et al. 2016](#)). The mothers went on to have either planned Cesareans (45%) or planned vaginal breech births (55%). When asked how they felt about the attempted ECV, the majority of people replied that the procedure was painful.

Some people reported pain that lasted for a while after they were home. Nearly half of the people interviewed (46%) said that they would not attempt a version in a future pregnancy. It's important to remember that the people being interviewed did not have successful ECVs, and as we saw in the study from the Netherlands, an attempted ECV's outcome can greatly influence your pain perception. The authors concluded that attempting an ECV should be only one of multiple options that pregnant people with term breech can consider—other options include planned Cesarean or vaginal breech birth.





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- To learn more about vaginal breech birth, visit our podcast interview with Breech Without Borders, available here (<https://ebbirth.com/172>)
- To learn more about family-friendly Cesareans, visit our Signature Article (<https://ebbirth.com/cesareancare>)

### Pain management during an ECV

Some therapies can be used to reduce the discomfort of a breech version attempt. A study in Spain compared 300 people who received nitrous oxide, or laughing gas (a 50:50 mix of nitrous and oxygen) starting three minutes before attempting an ECV with 150 people who did not receive gas with the procedure (Burgos et al., 2013). There were no differences in the rate of complications, the Cesarean rate, or the success rate of the ECV, but people who received gas were 49% less likely to report severe pain from the procedure.

A study in China randomly assigned 72 people to intravenous (IV) remifentanyl and 72 people to a saline IV solution (placebo) during an attempted ECV (Wang et al., 2017). All of the people in this study were giving birth for the first time. Remifentanyl is a synthetic opioid that is sometimes used to manage pain during labor. The researchers found that the people who received the remifentanyl reported less pain immediately after the procedure and more satisfaction 10 minutes after the ECV. They also found a difference in the success rate of the version between groups—the people who received remifentanyl had a success rate of 57% and the placebo group had a success rate of 39%. There were no differences as far as complications. Earlier studies have also found that remifentanyl decreases pain during ECV attempts, but findings are conflicting regarding whether it increases the success rate or not.

A review paper found that people who receive epidurals, spinals, or a combination of both report less pain and discomfort during an ECV than those who do not (1.2% versus 9.3%) (Magro-Malosso et al., 2016). An additional benefit to epidural, spinals, or combination epidural-spinal pain management is that researchers have found that these methods increase the success rate of the version (discussed further below). It's thought that epidurals, spinals, and combined spinal-epidurals help keep your abdominal muscles relaxed, which may allow the care provider to more easily rotate the baby (Carvalho & Bateman, 2017).

### When is the best time to have an ECV?

You can choose to have an ECV before term (34 to 37 weeks), at term (>37 weeks), or even during labor.

In the largest randomized controlled trial to compare ECVs before term and at term, researchers found that doing an ECV before term increases the chance that the baby will be head down at birth (59% versus 51%). However, they also found that having an early ECV does not lower the risk of having a Cesarean. There was also evidence that doing an ECV before term may increase the risk of premature birth (Hutton et al., 2011). In a later analysis of the data, the researchers found that lower gestational age was a predictor of success during an ECV among people who had given birth before, but that a more important predictor of success was if the baby was still floating above the pelvis (had not yet descended into the pelvis) (Hutton et al., 2017).

A Cochrane review from 2015 combined five trials to study ECVs attempted before term. The review was dominated by the large Hutton et al. (2011) trial, so not surprisingly the results are consistent

with that trial's results. The Cochrane reviewers concluded that an ECV done between 34 and 36 weeks does result in more babies that are head-down at the time of birth compared with an ECV at gestational





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age  $\geq$  37 weeks. However, the decrease in breech presentation at birth did not lead to an overall lowering of the Cesarean rate. Based on these findings, the first attempt at an ECV is usually scheduled at gestational age  $\geq$  37 weeks ([Lim & Lucero, 2017](#)). People should discuss the potential benefits and risks of an early ECV with their care providers—weighing the greater likelihood of successful ECV before 37 weeks against the rare complication of birthing a preterm infant.

Finally, for people who discover that they are pregnant with a breech baby during labor, there is some evidence showing that ECV can be successful when performed during early labor. In a study that used U.S. data from 1998 to 2011, the ECV success rate was 65% when it was attempted during hospital admission for birth. People with successful ECV in early labor were significantly less likely to have a Cesarean or have a hospital stay greater than 7 days compared to people who remained with breech presentation at the time of birth ([Weiniger et al., 2016](#)).

### Are there any techniques that increase the likelihood of a successful ECV?

Researchers have studied several techniques that could increase the chance of success with a breech version. **So far, the most helpful technique seems to be using drugs to prevent labor contractions (also known as tocolysis).** In a Cochrane review, researchers combined the results of 28 studies with more than 2,700 participants who were randomly assigned to receive an ECV alone or an ECV with an additional technique, such as tocolysis or having an epidural ([Cluver et al., 2015](#)). The participants who were randomly assigned to receive tocolytic drugs (drugs to prevent contractions) during the version were 23% less likely to have an eventual Cesarean for breech positioning compared to those who did not receive tocolysis. Participants who received tocolysis were also 68% more likely to have babies with head-first positioning at the start of labor.

In the Cochrane review, the participants who were randomly assigned to have an epidural or spinal (in combination with tocolysis) during the ECV were 39% more likely to have a successful ECV ([Cluver et al., 2015](#)). There were no differences in any of the other outcomes between participants with and without epidurals, such as cephalic presentation at the start of labor or rate of Cesareans, but the number of participants in the study (279 people) may not have been large enough to find an effect.

### The use of anesthesia during ECV is still controversial and should be considered on an individual basis.

One meta-analysis of nine randomized trials (934 people) found that the participants who received an epidural, spinal, or combination spinal-epidural had a higher rate of successful ECV compared to the participants who received IV pain medications or no treatment (58% versus 43%). The epidural/spinal group also had a higher rate of cephalic presentation at the start of labor (55% versus 40%) and a higher vaginal birth rate (54% versus 45%). The participants in both groups also received tocolysis. There were no differences in the rate of complications between groups ([Magro-Malosso et al., 2016](#)).

However, a different meta-analysis that included 18 RCTs and 1 quasi-randomized trial (2,296 people) did not find evidence that using anesthesia during ECV increased the vaginal birth rate ([Hao et al., 2020](#)). Using epidural, spinal, or a combination spinal-epidural significantly increased the success rate of ECV, but did not reduce the risk of Cesarean.

Some care providers recommend against epidurals and spinals for ECV attempts because it makes for a much longer and more complicated procedure. And even though epidural/spinal anesthesia is the most effective medication for a successful ECV, pregnant people report more satisfaction with intravenous and inhalation anesthesia ([Hao et al., 2020](#)).

One small study found that vibroacoustic stimulation (applying sound to the abdomen) resulted in successful ECVs in 86% of participants (19 of 22) compared to 8% of participants (one of 12) in the





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placebo group that only received sound into the nurse's arm ([Johnson & Elliott, 1995](#)). The current evidence is too weak to draw conclusions about the effectiveness of this technique. However, it deserves further research in larger studies since it is inexpensive, noninvasive, and has no known side effects.

Some people recommend using moxibustion, a type of Chinese medicine, to help turn a breech baby. To learn more about moxibustion, you can find the Cochrane review on that subject [here](#) (<https://bit.ly/3egAa6T>)

### Are there any other factors that may influence the ECV success rate?

One of our physician reviewers has found in his experience that there are three important factors for a successful version procedure (Personal correspondence, Morris, 2017):

1. A physician who believes in the benefits of the procedure and is skilled at performing it
2. A well-informed patient who is also motivated to avoid a first and therefore subsequent Cesarean
3. A willingness by the physician to abandon the procedure if it requires more than the normal amount of manipulation or the baby does not tolerate the procedure

One U.S. study found that there is an inverse relationship between the rate of successful ECV and a hospital's Cesarean rate. In other words, the higher the hospital's Cesarean rate, the lower their ECV success rate ([Weiniger et al., 2016](#)). It's not clear why this is the case- perhaps hospitals with high Cesarean rates are not following best practices for ECV success, or perhaps this relationship has to do with the type of patients who are seeking care at hospitals with high Cesarean rates

Researchers have also looked at factors specific to the individual and the pregnancy that may influence the success rate of versions. The researchers that conducted the randomized trial comparing early versus late ECV used the data from that trial (and an earlier pilot trial) to study the factors that influence the success rate of ECVs ([Hutton et al., 2017](#)). Of the 1,253 people who had an ECV, 742 were giving birth for the first time and 511 were people who had given birth before. The ECV was considered to be successful— meaning that the baby immediately turned and was still cephalic at the time of birth— in 33% of the people who were giving birth for the first time and 61% of those who had given birth before. Overall, 11% of the participants attempted more than one ECV. Note that it is not standard practice in the U.S. to attempt another version on a later day after a failed version attempt (Personal correspondence, Johannson, 2017).

Hutton et al. (2017) found that the following factors are strongly linked to higher ECV success rates:

- Having given birth to previous children
- If the baby is not engaged in the pelvis (described as floating or dipping)
- If the care provider can easily feel the baby's head on palpation (related to the baby's position as well as the maternal body fat)

Other factors that increase the likelihood of a ECV's success to a lesser extent are:

- If the placenta is posterior (on the back side of the uterus) ([Hutton et al., 2017](#))
- If the birthing person's BMI is less than 32.7 ([Hutton et al., 2017](#))
- If there are normal levels of amniotic fluid (an Amniotic Fluid Index >10) ([Lim & Lucero, 2017](#))
- If the waters are intact ([Lim & Lucero, 2017](#))
- If the uterus is normally shaped ([Lim & Lucero, 2017](#))
- If the abdominal wall muscles are relaxed ([Lim & Lucero, 2017](#))
- Non-frank breech presentation ([Lim & Lucero, 2017](#))







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Another way to look at it is that certain factors make a ECV less likely to work. People should have an honest discussion with their care provider before deciding to attempt a version. If someone has one or more of these factors then they should know that they have a lower chance of success—not to be discouraged, but to have realistic expectations about the outcome.

This is not a complete list, but some factors that decrease the success rate of an ECV are ([Ehrenberg-Buchner & Van De Ven, 2015](#)):

- First time giving birth
- The baby has already descended into the pelvis (engaged)
- The care provider cannot easily feel the baby's head on palpation
- Maternal body mass index  $\geq 32.7$
- The baby is small for gestational age
- The placenta is on the front, side, or top of the uterus
- Amniotic fluid volume is higher or lower than normal
- Abdominal muscles and/or uterus firm and tense
- Waters have already broken
- The baby's spine is located towards the back
- Frank breech presentation

Hutton et al. (2017) also found that gestational age of  $<37$  weeks was linked to successful ECVs in people who had given birth before. However, they recommend that care providers focus on the individual baby's descent rather than use a standard gestational age cut-off, so that an ECV can be planned before the baby becomes engaged in the pelvis while still doing as much as possible to avoid influencing preterm birth.

### Are there any reasons why someone cannot have an ECV?

Different guidelines list different reasons why certain people should not have an ECV. Whenever there is a reason not to do something, that reason is called a “contraindication.” In 2012, researchers did a systematic review to determine which contraindications are based on research evidence ([Rosman et al., 2012](#)). It's important to be clear that the failure to find research evidence to support a contraindication does not mean that there is evidence showing the factor to be safe. Rather, it means that there is a lack of evidence—we can't say that the factor is contraindicated but we also can't say that it is not.

For the 39 different contraindications listed in international guidelines, the researchers could only find research evidence for six of these. In other words, 33 of the 39 contraindications were based on clinical opinion alone. Of the six contraindications that had research evidence, five of these lacked strong evidence that they were, in fact, contraindications. The research evidence does not support these contraindications for an ECV: having had a previous Cesarean, fetal growth restriction, suspected big baby, low amniotic fluid, and high amniotic fluid.

The authors concluded that there is good evidence—based on both research and physiology—that people should NOT have an ECV if they have a history of placenta abruption or if placenta abruption is suspected, if there is a diagnosis of severe pre-eclampsia, or if there are signs of fetal distress. Also, if vaginal birth is considered to be contraindicated, then an ECV would also be contraindicated.

Again, it is important to note that although there may be little research evidence to back up some contraindications, many factors haven't been well studied, and some care providers may use their expert opinion to recommend against an ECV in certain circumstances. A care provider may anticipate





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a difficult version, a low likelihood of success, or perhaps that the benefits do not outweigh the risks. For example, a care provider may not want to perform an ECV on someone with very low amniotic fluid because that increases the difficulty of the procedure. Other care providers might not want to perform an ECV if the baby has the umbilical cord wrapped around the neck. Although there is no solid research on these topics, the care provider may base their clinical opinion on previous experience or the mechanism (means) by which the factor could affect the procedure—and find it to be too difficult, or that the risks of the procedure outweigh the benefits.

The American College of Obstetricians and Gynecologists (ACOG) recommends that:

“Because the risk of an adverse event occurring as a result of external cephalic version is small and the cesarean delivery rate is significantly lower among women who have undergone successful external cephalic version, all women who are near term with breech presentations should be offered an external cephalic version attempt if there are no contraindications.”

Since the data have yet to establish clear contraindications, they recommend that care providers should consider each patient individually as a potential candidate for ECV. The expert medical opinion is that care providers should assess contractions and fetal well-being before and after the attempted version and that ECVs should only be attempted in settings where Cesareans are immediately available.

ACOG recently updated their guideline to recommend consideration of the use of epidurals or spinals in combination with tocolytic therapy (medications used to suppress premature labor) to increase the ECV success rate (Level B-based on limited or inconsistent scientific evidence). People with this combination treatment had a higher rate of successful ECV, were more likely to have a head-down baby in labor, and had a higher rate of vaginal birth after successful ECV in some studies. ACOG stated that the data were insufficient to favor spinal versus epidural, or to evaluate the benefits of epidurals/spinals without tocolysis.

### Can someone with a previous Cesarean have an ECV?

The 2017 Australian study of over 32,000 people with breech pregnancies found that a previous Cesarean was the most common reason that people were told they were too high risk to attempt an ECV ([Bin et al., 2017](#)). However, as we've stated, there is little research evidence that a previous Cesarean should be considered a contraindication for a version ([Rosman et al., 2012](#)). In fact, the available evidence suggests that the risks of an ECV and the chance that it will be successful are similar between people who have had a prior Cesarean and those who have not.

The most recent and largest study on this topic was a systematic review published by Homafar et al. in 2020. The authors identified 8 observational studies with 14,515 participants who had an ECV—1,215 had a prior Cesarean (almost all of them only had one prior Cesarean), and 13,300 did not have a prior Cesarean. All 8 studies were rated as being at low risk of bias.

The researchers found that the median ECV success rate among people with a prior Cesarean was 74%, which was similar to those who did not have a prior Cesarean birth. Approximately 75% of people who had a successful ECV and a history of prior Cesarean went on to have a vaginal birth. The researchers estimated that for every 1.7 ECVs that are attempted in someone with a prior Cesarean, one subsequent Cesarean birth would be avoided.

In terms of side effects, 7 of the 8 studies reported on uterine rupture, and there were no cases of uterine rupture during ECV among people with or without a prior Cesarean. Other rare adverse effects included temporary fetal heart rate abnormalities (0.6%) and urgent Cesarean (0.2%).





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The authors concluded the majority of people with a prior Cesarean who have a successful ECV will go on to have a vaginal birth after cesarean.

### In summary, the evidence shows that:

- Attempting one or more ECVs will result in a baby who is head-down at the time of birth in 33% of first-time birthing people and 61% of people who have given birth before
- Having a history of prior Cesarean does not mean you should not be offered an ECV
- An ECV can be painful for many people, but it's less painful if the procedure is successful, and there are medications that can be used to manage pain
- Tocolytic drugs that prevent labor contractions have been shown to improve the success of ECV
- Benefits of the ECV include a significant decrease in the risk of Cesarean, a decrease in breech positioning at birth, and a decrease in the risk of needing repeat Cesareans with future pregnancies
- The most common risk is a temporary change in the infant's heart rate (highest rates reported in the research are 4.7%); serious complications requiring urgent Cesarean are rare (0.2%)

### Other resources:

- [Guidelines on version from the American College of Obstetricians and Gynecologists \(https://bit.ly/3mYTCsO\)](https://bit.ly/3mYTCsO)
- [Guidelines on version from the Royal College of Obstetricians and Gynecologists \(United Kingdom\) \(http://bit.ly/2xvTNRd\)](http://bit.ly/2xvTNRd)
- [Guidelines on version from the American Academy of Family Physicians \(http://bit.ly/2xvcbd1\)](http://bit.ly/2xvcbd1)
- Visit Breech without Borders at <https://breechwithoutborders.org>

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# Evidence on: Breech Version

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