



VBAC: When is it safe?

When do risks outweigh benefits, in light of ACOG's newly cautious advisory? What conditions call for extra concern?

A woman's first cesarean may be more fateful than ever, because 1 low-transverse cesarean delivery is the new limit for a trial of labor in subsequent pregnancies, advises a 2004 practice bulletin from the American College of Obstetricians and Gynecologists (ACOG).¹ The previous bulletin on vaginal birth after cesarean (VBAC) recommended a limit of 2.

The new bulletin reaffirms the previous recommendation that obstetric and anesthesia personnel be immediately

available throughout active labor, in case emergency cesarean is necessary.

VBAC is still within the standard of care, but rates were declining even before the new bulletin was released: from a high of 28.3% in 1996 to 12.6% in 2002.²

Benefits of VBAC may outweigh the risks in most women with 1 previous low-transverse cesarean,³ but even with optimal facilities and personnel, numerous factors warrant special caution, according to recent studies I'll review in this article.

Recent studies of risks and benefits

No randomized trials. ACOG notes,¹ “Despite thousands of citations in the world’s literature, there are currently no randomized trials comparing maternal or neonatal outcomes for both repeat cesarean delivery and VBAC.”

Success rates are similar for gravidas with previous cesarean for a nonrecurring indication and those with no previous cesarean.^{4,6}

Uterine rupture is more likely during a trial of labor, but the rate is usually below 1%.⁷⁻⁹

Other limiting factors may include labor augmentation and induction, maternal obesity, gestational age beyond 40 weeks, birth weight over 4,000 g, and an interdelivery interval of less than 19 months.¹⁰⁻¹⁷

When a trial of labor fails, women face a heightened risk of uterine rupture, hysterectomy, transfusion, and endometritis.^{3,4,9}

Perinatal death is more likely during VBAC than planned repeat cesarean, although the death rate is usually less than 1%.^{3,8,9,18}

Indications and contraindications

The **TABLE** (page 67) outlines potential candidates, ineligible gravidas, resources needed, and situations that warrant caution.

Don’t assume:

Check the previous operative note

It is all too easy to presume that a previous cesarean section at term was performed through a transverse incision in the lower uterine segment.

While this may be true in the majority of cases, the actual operative note may reveal information relevant to the delivery decision: an extensive tear of the uterine incision, previously unrecognized uterine anomalies, or the need to perform a classical or T-shaped incision to facilitate delivery of the infant.

For these reasons, review the actual operative report whenever possible before a trial of labor.

2 prior low-transverse incisions

While this is not an absolute contraindication to VBAC, in today’s cautious climate ACOG recommends VBAC proceed only when there is also a history of successful vaginal delivery.^{1,19} Otherwise, women with 2 or more previous cesareans should undergo repeat abdominal birth.

Prior low-vertical incision

Although successful VBACs have been reported in women with a prior low-vertical uterine incision, many experts feel that these incisions often extend superiorly into the upper uterus and thus increase the likelihood of uterine rupture in subsequent labors.^{20,21}

Greater risk with single-layer closure

Single-layer uterine closure appears to increase the likelihood of rupture during subsequent labors.²² As a result, many physicians have returned to 2-layer closure of the lower transverse uterine incision. It is unclear whether single-layer closure is a contraindication to subsequent labor, but it does warrant caution due to a 4-fold increase in the risk of rupture.²²

Discourage closely spaced gestations

The shorter the interval between deliveries, the more likely is uterine rupture during a trial of labor.^{23,24} For those considering a

KEY POINTS

■ **Selection criteria useful for identifying candidates for VBAC** include: a limit of 1 prior low-transverse cesarean, clinically adequate pelvis, no other uterine scars or previous rupture, and no contraindications.

■ **Offer VBAC only if obstetric care and anesthesiology** are available throughout active labor, in case emergency cesarean is necessary.

■ **Single-layer uterine closure** may increase the risk of rupture during subsequent labors.

■ **Epidural anesthesia is safe** for women undergoing a trial of labor.

subsequent VBAC, I recommend trying to space their next delivery at least 18 months after cesarean birth.

Labor induction increases risk

Spontaneous labor leads to successful VBAC more often than does labor induction or augmentation. In addition, a recent study found 5 times the risk of uterine rupture when oxytocin was used to induce labor, compared with elective repeat cesarean—although the rate of rupture was less than 1% in both groups.²⁵

The use of prostaglandins in labor induction greatly increases the risk of rupture, with rates of 24.5 per 1,000 reported, compared with 5.2 per 1,000 in women with spontaneous labor.²⁶ ACOG strongly discourages the use of prostaglandin cervical ripening agents in labor inductions.²⁶

Seek out other factors

Women who initially appear eligible may harbor other characteristics or conditions that warrant special attention.^{15,26-28}

External cephalic version. Although 1 study²⁹ concluded it is effective in women undergoing a trial of labor after cesarean, vigilance is recommended.

Twin gestations. Two retrospective studies involving a total of 45 women found VBAC to be safe in twin gestations. Because of the limited number of women studied and the lack of randomized, controlled trials, caution is strongly advised.^{30,31}

Macrosomia. The rate of uterine rupture rises in women who have not had a previous vaginal delivery.²⁷

Postdates. Although VBAC is less likely to succeed after 40 weeks' gestation, the risk of uterine rupture increases only with induction of labor.¹¹

Analgesia. Women undergoing a trial of labor can receive epidural anesthesia without increasing the risk of rupture or failed VBAC and without obscuring the signs and symptoms of uterine rupture.^{32,33} In fact, as ACOG notes, effective pain relief may encourage more women to try VBAC.¹

Previous vaginal delivery. Women who have delivered vaginally are more likely to

succeed at VBAC—by a factor of 9 to 28—than those who have not.^{34,35}

Other conditions such as maternal obesity and advanced age should be evaluated in light of the patient's overall risk-benefit profile. Although caution is recommended, definitive data are lacking.

■ Prognostic formulas

One decision analysis³⁶ concluded that VBAC is a reasonable option when the chance of success exceeds 50% and the desire for future pregnancy is 10% to 20% or more. Although scoring systems have been proposed to predict the likelihood of success, individualized assessment of each patient is ideal. (See "Case by case: Adding up the decisive factors," page 68.)

■ VBAC is not an option where facilities fall short

Despite meeting VBAC criteria for previous incision or pelvic adequacy, many US women do not have the option of a trial of labor. The reason: the need for obstetric care providers throughout active labor and the ability to perform an emergency cesarean.¹ As a result, many midwives and family practitioners can no longer care for VBAC patients independently.

Continuous monitoring is a must

It is the potential for uterine rupture that places patients at risk for unfavorable obstetric outcomes—and rupture can be hard to predict. A nonreassuring fetal heart rate is the most frequent sign.¹ Others are uterine or abdominal pain, vaginal bleeding, loss of station of the presenting part, and hypovolemia.¹

Continuous electronic monitoring of the fetal heart has the potential to detect nonreassuring events earlier than intermittent auscultation. Thus, continuous fetal heart rate monitoring has become the standard for women attempting VBAC. When it is unavailable, VBAC should not be offered.

Women who at first appear eligible may harbor conditions that call for special vigilance.

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