

When is episiotomy warranted? What the evidence shows

Selective episiotomy appears to offer a number of important benefits compared to routine use, but the debate endures. Dr. Repke reviews the evidence on outcomes and indications.

Systematic study has established that so-called routine episiotomy should be abandoned, and restrictive-use protocols should be developed that aim, initially, for a rate of less than 30%.^{1,2} Yet episiotomy (or more correctly, perineotomy) remains perhaps the most commonly performed surgical procedure in obstetrics.³ Its rate—more than 60% of vaginal deliveries in the United

States—has not declined since Thacker and Banta's landmark 1983 review.⁴

Although a large body of evidence indicates reassessment is in order, prophylactic episiotomy is a contentious issue. Indeed, it has been controversial ever since the procedure first became "routine" in the United States, in 1920. Still, advocates and dissenters share the same goal: to prevent severe perineal tears and their potential for urinary and fecal incontinence and sexual dysfunction.

This article reviews research findings that indicate:

- Data are inadequate to recommend one method of episiotomy over another.
- Timing of episiotomy to shorten the second stage of labor may be less relevant in an era of decreasing forceps utilization and without evidence of improved neonatal outcomes.⁵
- Episiotomy, particularly midline episiotomy, remains the single greatest risk that a patient will sustain a third- or fourth-degree laceration. When such lacerations occur spontaneously, recovery is equivalent to episiotomy extension or deliberate proctoeepisiotomy.

CONTINUED

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KEY POINTS

- A Cochrane Database review concluded that restrictive episiotomy utilization is preferable to routine utilization. The review of 6 randomized trials found no differences in vaginal or perineal trauma, dyspareunia, or urinary incontinence between patients with and without episiotomy. Patients who had an episiotomy had less risk of anterior perineal trauma but an overall greater risk of posterior perineal trauma and other complications.
- Shoulder dystocia, operative vaginal delivery, and a "short" perineal body have been presumed indications for episiotomy, although data are inadequate to support these claims.
- The rationale for routine prophylactic episiotomy is to protect the pelvic floor, thereby minimizing the risk of urinary incontinence and pelvic floor dysfunction; however, episiotomy's role in preventing such dysfunction remains to be established.

TABLE**Incidence of third- or fourth-degree laceration with and without episiotomy**

	NO. STUDIES COMPILED	NO. PATIENTS	% WITH 3RD- OR 4TH-DEGREE LACERATION
Midline episiotomy	12	49,395	6.5
No episiotomy	13	38,961	1.4

Adapted from Thorp JM.³

Research does not support presumed indications

Episiotomy was first described in 1742 as a procedure that could assist the obstetrician in difficult vaginal deliveries.³ It was not until the work of DeLee⁶ and Pomeroy⁷ was published in 1920—coincident with deliveries beginning to move from home to hospital—that the procedure became “routine.” Still, some leaders in the field—specifically, J. Whitridge Williams of Johns Hopkins—vigorously dissented.⁸

Historically, episiotomy has been used to facilitate delivery in cases of protracted second stage, instrumented vaginal delivery, and suspected fetal compromise. However, data supporting episiotomy as a facilitating procedure are sparse, and evidence endorsing prophylactic episiotomy is largely anecdotal or descriptive.

Agreement is widespread that episiotomy is warranted under certain circumstances: Shoulder dystocia, operative vaginal delivery, and a “short” perineal body have been presumed indications. Data are inadequate to support these claims, however.

Shoulder dystocia. While it might seem to make sense to perform an episiotomy (or more likely, a proctoepisiotomy) in cases of shoulder dystocia, no data from controlled trials support this theory. Given the relative rarity of severe shoulder dystocia and the inability to conduct a truly randomized trial, physicians are left with only their clinical judgment as a guide in this circumstance.

Operative delivery. Many clinicians have advocated routine episiotomy before opera-

tive vaginal delivery, particularly with forceps. The intent is to increase the space available for delivery that has been diminished by the introduction of forceps. This rationale does not hold up as well for vacuum extraction; 1 study noted that when episiotomy is performed in cases of vacuum extraction, the likelihood of severe perineal trauma is increased.⁹

It has been reported¹⁰ that the greatest risk factor for both perineal trauma and third- or fourth-degree perineal laceration is episiotomy itself (TABLE), independent of mode of delivery (spontaneous or operative).

Short perineum. Many physicians, myself included, have performed episiotomies because they perceived that the perineum was short and that even a controlled delivery with optimal use of the Ritgen maneuver probably would not prevent a perineal laceration. That said, data on anal and flatus incontinence and postpartum sexual functioning suggest that spontaneous recovery from second-degree lacerations is no worse than recovery from midline episiotomy^{11,12} and, as stated, episiotomy itself is the leading risk factor for incurring a third- or fourth-degree extension—which imposes significantly greater recovery problems.

Two recent studies^{11,12} identified episiotomy as a specific, independent risk factor for fecal incontinence and delayed return of sexual activity postpartum. When matched for degree of perineal trauma, episiotomy without extension still resulted in poorer outcomes at 3 and 6 months postpartum than did

spontaneous second-degree lacerations, suggesting that routine episiotomy not only fails to prevent, but may actually increase risk of perineal injury and impaired function.

'Prophylactic' episiotomy is not preventive

Much debate has centered on optimal utilization of so-called prophylactic episiotomy. The intent of routine prophylactic episiotomy is to protect the pelvic floor, thus minimizing the risk of urinary incontinence and pelvic floor dysfunction. Data have suggested that absence of labor and cesarean delivery may protect against pelvic floor dysfunction; however, the role of episiotomy in preventing such dysfunction remains to be determined.

Cochrane Database review. This review¹ found no differences in vaginal or perineal trauma, dyspareunia, or urinary incontinence between patients with and without episiotomy. Patients who had an episiotomy had less risk of anterior perineal trauma but an overall greater risk of posterior perineal trauma and other complications. The reviewers concluded that restrictive episiotomy utilization is preferable to routine utilization.

The reviewers selected a total of 6 randomized trials; these examined:

- restrictive versus routine use of episiotomy;
- restrictive versus mediolateral episiotomy;
- restrictive versus routine midline episiotomy; and
- midline versus mediolateral episiotomy.

In the routine episiotomy group, 72.7% (1,752 of 2,409) of women underwent the procedure, versus 27.6% (673 of 2,441) in the restrictive episiotomy group.

Compared with routine use, restrictive episiotomy involved less posterior perineal trauma (relative risk [RR], 0.88; 95% confidence interval [CI], 0.84 to 0.920), less suturing (RR, 0.74; 95% CI, 0.71 to 0.77), and fewer healing complications (RR, 0.69; 95% CI, 0.56 to 0.85). Restrictive episiotomy was associated with more anterior perineal trauma.

ma (RR, 1.79; 95% CI, 1.55 to 2.07).

There was no difference in severe vaginal or perineal trauma (RR, 1.11; 95% CI, 0.83 to 1.50), dyspareunia (RR, 1.02; 95% CI, 0.90 to 1.16), urinary incontinence (RR 0.98; 95% CI, 0.79 to 1.20), or several pain measures.

Results for restrictive versus routine mediolateral and midline episiotomies were similar to the overall comparison.

Reviewers concluded that a policy of restrictive episiotomy appears to have several benefits over routine episiotomy: less posterior perineal trauma, less suturing, fewer complications, and no difference for most pain measures and severe vaginal or perineal trauma.

Risk of anterior perineal trauma with restrictive episiotomy was increased, however.

Restrictive-use protocols, likely to be institution-specific, essentially curb episiotomy use by stating that the procedure should not be “routinely performed.” Instead, episiotomy is restricted to cases in which the clinician believes it is warranted. Examples of such situations include use of forceps, shoulder dystocia, and an estimated fetal weight above 4,000 g. As discussed, the data cannot support the value of episiotomy use even in these circumstances; however, simply discouraging routine episiotomy would effectively lower the rate to the desired 30% range.

Midline versus mediolateral incision. The most vocal debates focus on which type of episiotomy to perform and whether it should be performed earlier or later in the second stage of labor.

It has been proposed that by abandoning midline episiotomies in favor of the mediolateral technique, physicians can avoid injury to the sphincter and improve immediate birth outcome without compromising long-term function—though pros and cons of this approach are a subject of debate (see “*Comparison of midline versus mediolateral episiotomy*”).

Still, the data suggest that, when properly performed, median and mediolateral epi-

Comparison of midline versus mediolateral episiotomy

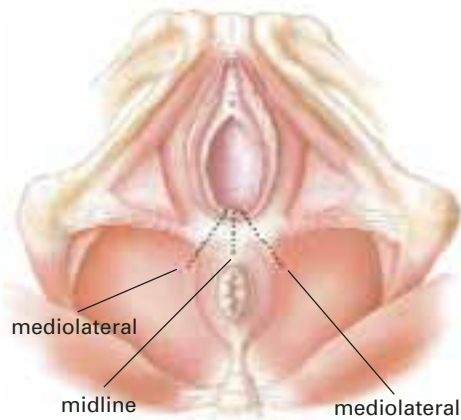


IMAGE: Maura Flynn

Data suggest that, when properly performed, midline and mediolateral episiotomy have equivalent rates of satisfactory recovery. It has been proposed that by abandoning midline episiotomies in favor of the mediolateral technique, physicians can avoid injury to the sphincter and improve immediate birth outcome without compromising long-term function, but this approach has pros and cons.

	MIDLINE	MEDIOLATERAL
Repair	Easier	Harder
Anatomic result	Good	Variable
Pain	Less	More
Bleeding	Less	More
Damage to rectum	More	Less

Adapted from Thorp JM³

siotomy have equivalent rates of satisfactory recovery,¹³ though the latter technique may require more technical skill for both its performance and repair.

Early versus late incision. Proponents argue that an episiotomy at the time the presenting part is crowning is “too little, too late.” They maintain that for the procedure to be truly protective, it should be utilized earlier in the second stage of labor.

Data are insufficient to confirm or refute the efficacy of early episiotomy. One would do

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Strongest predictor of episiotomy: Private practice provider?

The category of obstetric provider—midwife, faculty, or private provider—may be the most reliable predictor of episiotomy. Interestingly, use of episiotomy increased in the 1920s as delivery moved from home to hospital and birth attendants shifted from midwives to physicians.

In a study of demographic variables and obstetric factors associated with episiotomy in spontaneous vaginal delivery, researchers examined 1,576 term, singleton, spontaneous vaginal deliveries in nulliparas. They found that midwives had the lowest episiotomy rate (21.4%), compared with residents and full-time

faculty (33.3%) and private physicians (55.6%).¹⁵

After controlling for confounding factors with logistic regression, the authors determined that private practice provider was the strongest predictor of episiotomy, followed by faculty provider, prolonged second stage of labor, fetal macrosomia, and epidural analgesia.

The study concluded that the obstetric and demographic factors evaluated did not readily explain the link between type of provider and episiotomy rate. Numerous theories have been proposed, but factors that would clearly explain the differences have yet to be identified.

well to remember, however, that early episiotomy was endorsed as a method to help shorten the second stage of labor when used in conjunction with prophylactic forceps delivery—a method that is now less prevalent in obstetric practice.

Does vaginal birth trauma cause pelvic floor dysfunction?

The relationship between vaginal birth trauma, irrespective of episiotomy, and pelvic floor dysfunction remains a topic of investigation. A recent report generated much interest in the potentially protective role of prophylactic cesarean section, particularly if performed prior to the onset of labor.¹⁴ ■

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What is your opinion?

Where do you stand on the episiotomy debate?

We welcome your thoughts and will publish responses in a future issue.

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