

What Is the Evidence for Perineal Massage During Pregnancy to Prevent Tearing?

lamaze.org/Connecting-the-Dots/what-is-the-evidence-for-perineal-massage-during-pregnancy-to-prevent-tearing

December 18, 2012

By: Sharon Muza, BS, LCCE, FACCE, CD/BDT(DONA), CLE | 2 Comments

By Rebecca Dekker, PhD, RN, APRN of Evidence Based Birth

Do you talk about perineal massage with your students, clients and patients and state that perineal massage during pregnancy will/will not reduce tearing during birth? today, Rebecca Dekker, of Evidence Based Birth takes a look at the research on perineal massage during pregnancy and provides information on the outcomes for women who practiced this and those who didn't. Does the research support what you have been saying? - Sharon Muza, Community Manager

<http://flic.kr/p/5XmjL/p>>

Tearing during childbirth is a common occurrence among women who have a vaginal birth. In studies where the use of episiotomies was restricted, the rate of spontaneous tearing was recorded to be anywhere from 44-79% (Soong and Barnes 2005; Dahlen, Homer et al. 2007). Studies have consistently shown that women are more likely to experience tearing during a first vaginal birth and with forceps and vacuum assistance (Aasheim, Nilsen et al. 2011).

Spontaneous tears can be classified as first, second, third, or fourth degree tears. First degree tears involve only the perineal skin, while second degree tears involve both the skin and the perineal muscle. Third degree tears involve the anal sphincter, while fourth degree tears involve the anal sphincter and tissues.

Third and fourth degree tears happen at 0.25% to 2.5% of spontaneous vaginal births (Byrd, Hobbiss et al. 2005; Groutz, Hasson et al. 2011).



Women are more likely to have a third or fourth degree tear if they are giving birth vaginally for the first time, if a baby is in the posterior position or has a heavier birth weight, and if forceps, vacuum, or episiotomy are used (Christianson, Bovbjerg et al. 2003; Groutz, Hasson et al. 2011; Hirayama, Koyanagi et al. 2012).

What is perineal massage?

It is thought that massaging the perineum during pregnancy can increase muscle and tissue elasticity and make it easier for a mother to avoid tearing during a vaginal birth. Typically, women are taught to spend about 10 minutes per day doing perineal massage, starting at about 34-35 weeks of pregnancy. Women are taught to insert 1-2 lubricated fingers about 2 inches into the vagina and apply pressure, first downward for 2 minutes, and then sideways for 2 minutes. The massage can be done by the woman or her partner, and sweet almond oil is sometimes used for lubrication (Labrecque, Eason et al. 1999).

What is the evidence for perineal massage?

In 2006, Beckmann and Garrett combined the results from four randomized, controlled trials that enrolled 2,497 pregnant women. Three of these studies involved only women without a previous vaginal birth (mostly first-time moms). One study enrolled women with and without a previous vaginal birth. All four of the studies were of very good quality.

Beckmann and Garrett found that **women who were randomly assigned to do perineal massage had a 10% decrease in the risk of tears that required stitches** (aka 'perineal trauma'), and a 16% decrease in the risk of episiotomy - but these findings were only true for **first-time moms**.

It is important for you to understand that this is a 10% reduction in **relative risk**, and relative risk is different than absolute risk. Let me give you an example. Say you are a first-time mom, and let's pretend your absolute risk of perineal trauma is 50%. A 10% decrease in relative risk means that your absolute risk decreases by 5% (because $.5 \times .1 = .05$). So for you, doing perineal massage reduces your **absolute risk** of perineal trauma from 50% to 45%.

*As a side note, all of the numbers I am reporting below are changes in *relative risk*.

Importantly, for **second-time moms who had already had a vaginal birth, prenatal perineal massage did not reduce the risk of perineal trauma** (any tearing requiring stitches). However, second-time moms who massaged did report a 32% decrease in the risk of ongoing perineal pain at 3 months post-partum.

Surprisingly, Beckmann and Garrett found that **the more frequently women used perineal massage, the less likely they were to see any benefits**. Women who massaged an average of 1.5 times per week had a 17% reduced risk of perineal trauma and a 17%

reduced risk of episiotomy. Women who massaged between 1.5-3.4 times per week had an 8% reduced risk of perineal trauma.

Interestingly, women who massaged > 3.5 times per week experienced NO benefits and had a longer pushing phase of labor by an average of 10 minutes. So basically the finding was: **the less frequent the massage, the better off the outcomes.**

However, this finding was unexpected, and the researchers had a hard time explaining it. I think we should interpret this result with caution, because in the largest clinical trial on perineal massage (included in

Beckmann and Garrett's review), Labrecque et al. (1999) found that the more often women did the massage, the more likely they were to avoid any tears.



Other results:

There were **no differences** between women who did prenatal perineal massage and those who did not with regard to:

- First degree tears
- Second degree tears
- Third or fourth degree trauma
- Use of forceps or vacuum during delivery
- Sexual satisfaction 3 months post-partum
- Pain with sexual intercourse 3 months post-partum
- Uncontrolled loss of urine or bowel movements 3 months postpartum

Wait, I'm confused. You say that there was a significant decrease in perineal trauma requiring suturing. But there was no difference in 1st, 2nd, 3rd, or 4th degree tears. How can this be?

It's important for you to understand that perineal trauma is an 'umbrella' category that means all types of trauma requiring stitches, including episiotomies. Perineal massage during pregnancy decreased the overall risk of perineal trauma (the umbrella outcome), but the effect was too weak to see any difference with each of the individual outcomes (first degree, second degree, etc.). Also, the researchers think that the overall decrease in perineal trauma may have been due to the decreased episiotomy rate in the perineal massage group.

Why would perineal massage during pregnancy reduce the rate of episiotomies, but

not tears?

The researchers guess that the women who were trained in perineal massage were highly motivated to birth with an intact perineum, so maybe they were more likely to refuse an episiotomy. Fewer episiotomies would then mean fewer incidents of trauma requiring stitches.

So what can we learn from the evidence?

During pregnancy, massage of the perineum can reduce the risk of tearing requiring stitches, but this benefit is only seen in moms giving birth vaginally for the first time. It is thought that most of the decreased risk of perineal trauma was due to a decrease in the episiotomy rate. In the largest study included in this review ([Labrecque et al., 1999](#)), there was an overall episiotomy rate of 38%. In the U.S., 25% of women have an episiotomy during a vaginal birth ([Declercq, Sakala et al. 2007](#)), and rates are even lower for some providers. It is possible that these research findings might not apply to birth settings where episiotomies are extremely rare.

Second time moms who use perineal massage will not see any decrease in their risk of tearing, but they may reduce their risk of ongoing perineal pain at 3 months postpartum.

So in summary, for first-time moms only:

Perineal massage during pregnancy

Decreased risk of episiotomy

Decreased risk of trauma requiring stitches

If women choose to use perineal massage during pregnancy, there is no consensus on the amount of massage needed to reduce the risk of tearing.

Questions for discussion: Do you recommend prenatal perineal massage to others? Have your thoughts about this intervention changed after reading this article?

References

[Aasheim, V., A. B. Nilsen, et al. \(2011\)](#). 'Perineal techniques during the second stage of labour for reducing perineal trauma.' *Cochrane Database Syst Rev*(12): CD006672.

[Beckmann, M. M. and A. J. Garrett \(2006\)](#). 'Antenatal perineal massage for reducing perineal trauma.' *Cochrane Database Syst Rev*(1): CD005123.

[Byrd, L. M., J. Hobbiss, et al. \(2005\)](#). 'Is it possible to predict or prevent third degree tears?' *Colorectal Dis* 7(4): 311-318.

Christianson, L. M., V. E. Bovbjerg, et al. (2003). 'Risk factors for perineal injury during delivery.' *Am J Obstet Gynecol* 189(1): 255-260.

Dahlen, H. G., C. S. Homer, et al. (2007). 'Perineal outcomes and maternal comfort related to the application of perineal warm packs in the second stage of labor: a randomized controlled trial.' *Birth*34(4): 282-290.

Declercq, E. R., C. Sakala, et al. (2007). 'Listening to Mothers II: Report of the Second National U.S. Survey of Women's Childbearing Experiences: Conducted January-February 2006 for Childbirth Connection by Harris Interactive(R) in partnership with Lamaze International.' *J Perinat Educ*16(4): 9-14.

Groutz, A., J. Hasson, et al. (2011). 'Third- and fourth-degree perineal tears: prevalence and risk factors in the third millennium.' *Am J Obstet Gynecol* 204(4): 347 e341-344.

Hirayama, F., A. Koyanagi, et al. (2012). 'Prevalence and risk factors for third- and fourth-degree perineal lacerations during vaginal delivery: a multi-country study.' *BJOG* 119(3): 340-347.

Labrecque, M., E. Eason, et al. (1999). 'Randomized controlled trial of prevention of perineal trauma by perineal massage during pregnancy.' *Am J Obstet Gynecol* 180(3 Pt 1): 593-600.

Soong, B. and M. Barnes (2005). 'Maternal position at midwife-attended birth and perineal trauma: is there an association?' *Birth* 32(3): 164-169.

About Rebecca Dekker

Rebecca Dekker, PhD, RN, APRN, is an Assistant Professor of Nursing at a research-intensive university and author of www.evidencebasedbirth.com. Rebecca's vision is to promote evidence-based birth practices among consumers and clinicians worldwide. She publishes summaries of birth evidence using a Question and Answer style.

Connecting the Dots is a Lamaze International blog that shares research and resources for perinatal professionals. To contribute an article or idea, please contact [Sharon Muza](#).

