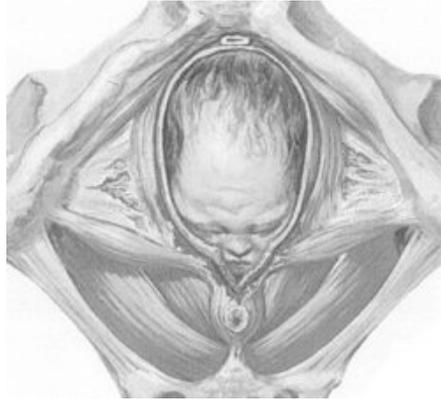


Interventions Obstétricales et risque Périnéal



Xavier FRITEL

Inserm



Prévention Périnéale

68

U R I

Les déchiremens de cette partie ont principalement lieu chez les femmes ; les accouchemens laborieux , ou la maladresse du chirurgien , en sont les causes les plus fréquentes ; la paralysie & le relâchement

ENCYCLOPÉDIE,

ou
Dictionnaire raisonné
des sciences,
des arts et des métiers,
par une société de gens de lettres.

Dit en ordre de publié par M. DIDEROT ; & quez à la Pariss matrisastique,
par M. D'ALEMBERT.

Trois fois (autrefois plus),
Trois de notre temps aussi (autrefois) Hic, etc.

TROISIÈME ÉDITION.

TOME TRENTE-SIXIÈME.

Interventions & Prévention

- Episiotomie
- Accouchement instrumental
- Accouchement debout
- Poussée retardée
- Massage périnéal
- Compresses chaudes
- Contrôle du dégagement
- Césarienne

EPISIOTOMIE

Episiotomie Histoire

- Sir Fielding Ould :
« an incision made towards the anus with a pair of crooked probe-sizors introducing one blade one blade between the head and the vagina »
Treatise of midwifery. Dublin: Nelson and Connor, 1742 : 145.

Episiotomie Rationnel

- *"Why not open the gates and close them after the procession has passed?"* [Pourquoi ne pas ouvrir les portes et les refermer une fois que le cortège est passé ?]
{Pomeroy. Shall we cut and reconstruct the perineum for every primipara? Am J Obstet Dis Women Child 1918}

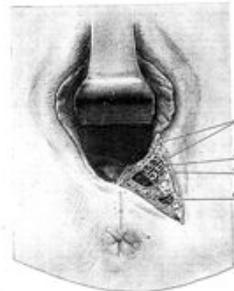


FIG. 2.—The perineum. (a) the vaginal opening, the lower border of the labia minora, (b) the perineal body, (c) the anal opening, (d) the perineal skin. The dotted line shows the position of the incision in the perineum. The dotted line shows the position of the incision in the perineum.

Episiotomie

DeLee et Pomeroy

- **DeLee JB.**
The prophylactic forceps operation.
Am J Obstet Gynecol 1920;1:34.
- **Pomeroy RH.**
Shall we cut and reconstruct the perineum for every primipara?
Am J Obstet Dis Women Child 1918;78:211.
- **« Indications for episiotomy are definitely established and need no defense ».**
Diethelm MW.
Episiotomy: technique of repair.
Ohio Med J 1938;34:1107.

Episiotomie

Thaker et Banta 1983

Benefits and Risks of Episiotomy: An Interpretative Review of the English Language Literature, 1860–1980

STEPHEN B. THACKER¹ and H. DAVID BANTA²

Epidemiology Program Office, Centers for Disease Control, Atlanta, Georgia,¹ and Office of Technology Assessment, Washington, D. C.²

The benefits and risks of episiotomy in labor and delivery as recorded in the English language literature in over 350 books and articles published since 1860 are reviewed and analyzed. Episiotomy is performed in over 60 per cent of all deliveries in the United States and in a much higher per cent of primigravidas. Yet, there is no clearly defined evidence for its efficacy, particularly for routine use. In addition, although poorly studied, there is evidence that postpartum pain and discomfort are accentuated after episiotomy, and serious complications, including maternal death, can be associated with the procedure. Therefore, carefully designed controlled trials of benefit and risk should be carried out on the use of episiotomy.

Episiotomie Woolley 1995

Benefits and Risks of Episiotomy: A Review of the English-Language Literature Since 1980. Part I.

Robert J. Woolley

Boynton Health Service, University of Minnesota, Minneapolis, Minnesota

The professional literature on the benefits and risks of episiotomy was last reviewed critically in 1983, encompassing material published through 1980. This paper reviews the evidence accumulated since then. (Part II follows in this issue.) It is concluded that episiotomies prevent anterior perineal lacerations (which carry minimal morbidity), but fail to accomplish any of the other maternal or fetal benefits traditionally ascribed, including prevention of perineal damage and its sequelae, prevention of pelvic floor relaxation and its sequelae, and protection of the newborn from either intracranial hemorrhage or intrapartum asphyxia. In the process of affording this one small advantage, the incision substantially increases maternal blood loss, the average depth of posterior perineal injury, the risk of anal sphincter damage and its attendant long-term morbidity (at least for midline episiotomy), the risk of improper perineal wound healing, and the amount of pain in the first several postpartum days.

Episiotomie Hartmann 2005

CLINICAL REVIEW

CLINICIAN'S CORNER

JAMA, May 4, 2005—Vol 293, No. 17 2141

Outcomes of Routine Episiotomy A Systematic Review

Katherine Hartmann, MD, PhD

Meera Viswanathan, PhD

Rachel Palmieri, BS

Gerald Gartlehner, MD, MPH

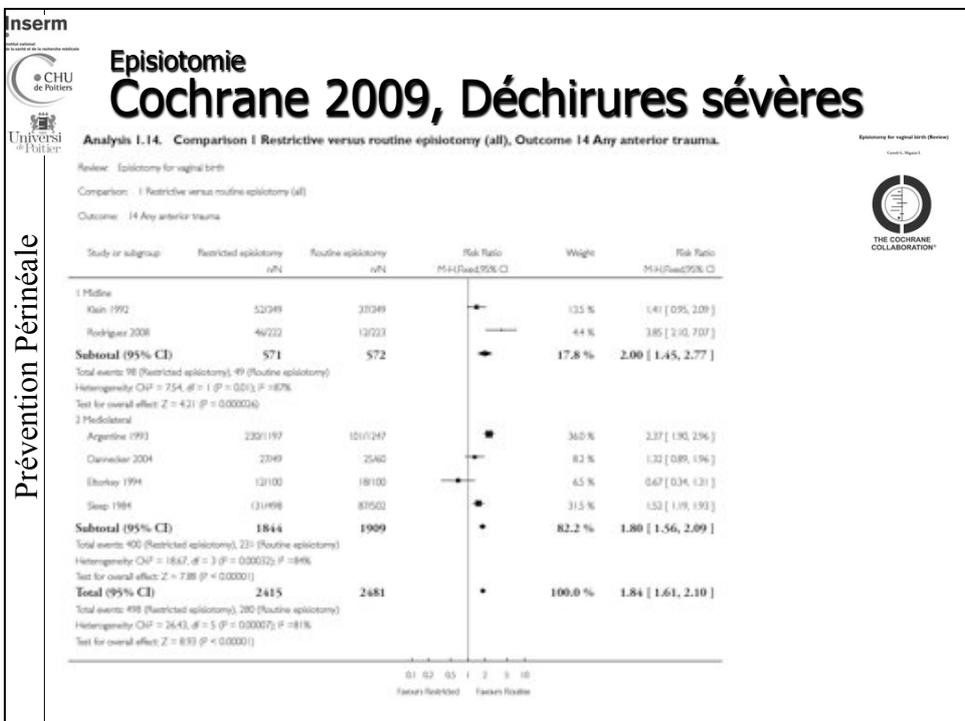
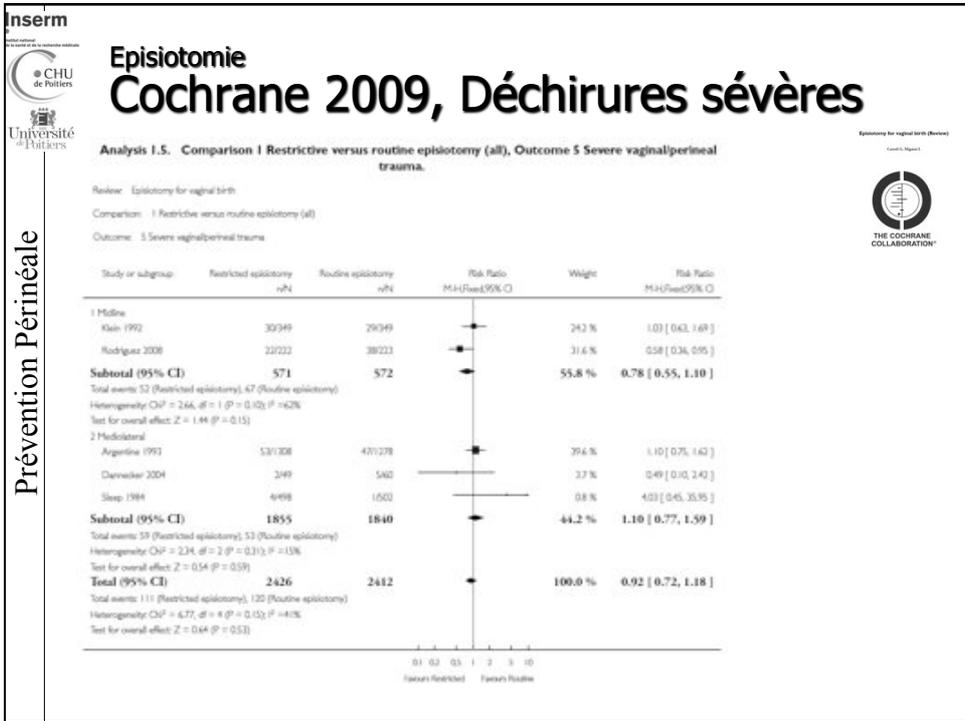
John Thorp, Jr, MD

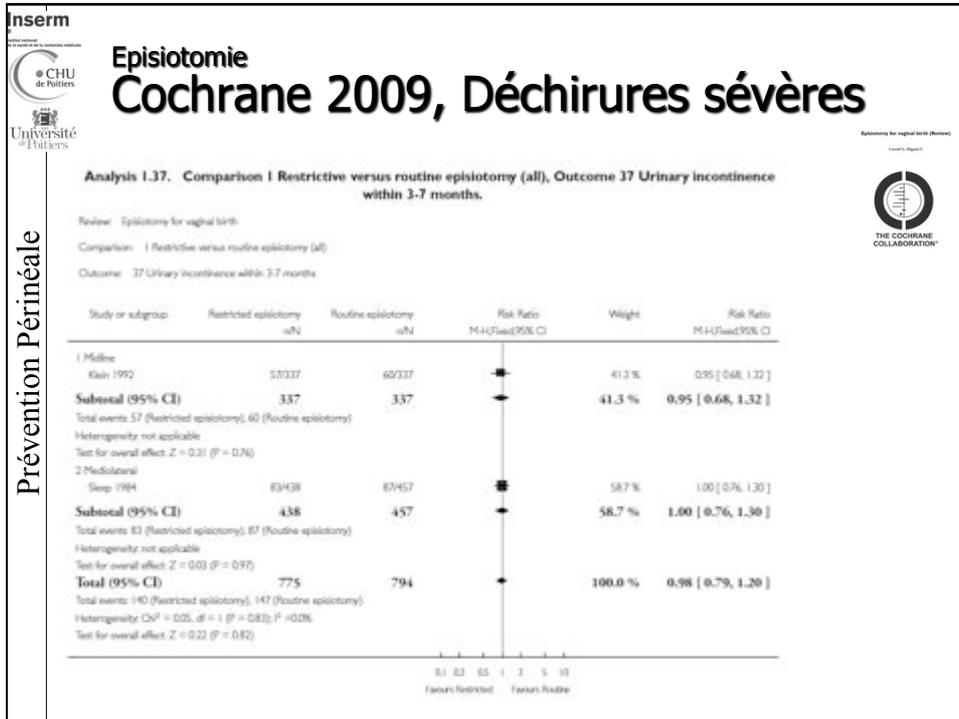
Kathleen N. Lohr, PhD

Context Episiotomy at the time of vaginal birth is common. Practice patterns vary widely, as do professional opinions about maternal risks and benefits associated with routine use.

Objective To systematically review the best evidence available about maternal outcomes of routine vs restrictive use of episiotomy.

Evidence Acquisition We searched MEDLINE, Cumulative Index to Nursing and Allied Health Literature, and Cochrane Collaboration resources and performed a hand search for English-language articles from 1950 to 2004. We included randomized con-





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 CHU de Poitiers
 Université de Poitiers

Episiotomie Hartmann 2005, Douleur

Table 2. Perineal Pain Outcomes of Clinical Trials of Routine vs Restrictive Episiotomy Use

Source	No./ Total Participants	Assessment	Timing of Assessment	Outcome Group	Study Group	
					Routine	Restrictive
Sleep et al. ¹⁹ 1984	885/1000	Pain severity in prior 24 h, %	10 d	Mild Moderate Severe	14.6 7.8 0.2	14.1 7.5 0.9
House et al. ¹⁸ 1986	165/165	Pain severity using VAS (1-3, minimal; 4-6, moderate; 7-10, severe), %	3 d	Minimal Moderate Severe	64.9 33.8 11.3	68.1 22.3 9.6
Klein et al. ¹⁹ 1992	703/703	Mean perineal pain severity score using 6-point McGill Pain Scale*	1 d 2 d 10 d		1.56 1.10 0.40	1.50 1.16 0.40
Argentine Episiotomy Trial Collaborative Group. ²⁰ 1993	2422/2606	Any perineal pain (not defined), %	Discharge		42.5	30.7
Damecker et al. ²¹ 2004	53/146	Mean (SD) maximum pain score using 100-mm VAS scale (0 = "not at all"; 100 = "very much")	1-5 d	Bed rest Sitting Walking Defecation	39 (28) 69 (23) 56 (24) 36 (30)	22 (21) 51 (25) 37 (24) 21 (21)

Episiotomie Hartmann 2005, Rapports sexuels

Table 4. Sexual Function Outcomes

Source	No. of Participants at Follow-Up	Timing of Assessment	Self-reported Symptoms	Outcome Group		Study Group		
				Routine	Restrictive	Routine	Restrictive	
Clinical Trials of Routine vs Restrictive Episiotomy Use								
Sleep et al., ¹⁷ 1984	895/1000 Routine, n = 457 Restrictive, n = 438	3 mo	Resumption of intercourse, %	89.9	90.0			
			Current pain with intercourse, %	18.0	21.8			
			Pain with intercourse in prior 3 mo, %	51.1	52.0			
Sleep and Grant, ¹⁸ 1987	674/1000 Routine, n = 329 Restrictive, n = 345	3 y	Any painful intercourse since birth, %	16	13			
Klein et al., ¹⁹ 1992	612/703 Routine, n = 303 Restrictive, n = 309*	3 mo	Time to resumption of intercourse, mean (SD), wk	Primiparous	5.8 (2.1)	5.9 (2.5)		
				Multiparous	5.8 (2.6)	5.4 (2.3)		
			Pain at first postpartum intercourse (8-point McGill Pain Scale), mean (SD)	Primiparous	2.2 (1.3)	2.2 (1.3)		
				Multiparous	1.3 (1.1)	1.2 (1.0)		
			Sexual satisfaction scale (items not provided), mean (SD)	Primiparous	3.1 (0.7)	3.0 (0.6)		
				Multiparous	3.3 (0.7)	3.3 (0.6)		

Episiotomie Mutilation ?

Episiotomy: a form of genital mutilation

Sir—In his 'Sketches from *The Lancet*' (April 24, p 1453)¹ Peter Kandela describes how over 130 years ago *The Lancet* played a part in turning support away from one form of female genital mutilation in the UK—clitoridectomy. Hopefully, you can play a part in turning support away from another form of female genital mutilation which is widespread in the UK today—episiotomy.

THE LANCET • Vol 353 • June 5, 1999

Episiotomy: a form of genital mutilation

Sir—Marsden Wagner (June 5, p 1977)¹ deserves to be heartily congratulated for daring to put episiotomy into the category of genital mutilation, and available evidence shows that he is right. At the birth of my children, some 20 years ago, it was difficult to have rational discussions on the subject: the only secure prevention was to be arrogantly demanding with obstetrician colleagues, and I have kept a vivid memory of their mockery, their warning on the risks I was exposing my wife to in order to avoid a procedure which, according to them, was trivial, safe, and painless.

THE LANCET • Vol 354 • August 14, 1999

Episiotomie médiane Ici et Là

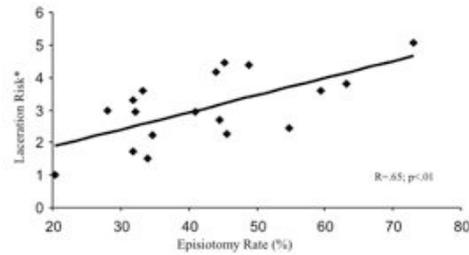


Fig. 1. Relationship between episiotomy rate and risk of third or fourth degree perineal laceration for 18 study hospitals. *Adjusted relative odds of third or fourth degree perineal tear, based on logistic regression analysis controlling for mother's age, race/ethnicity, and education, and infant birthweight.

Hospital Variation in Episiotomy Use and the Risk of Perineal Trauma During Childbirth

David A. Webb, PhD, and Jennifer Culhane, PhD, MPH

Episiotomie médiane Avant vs Après

808 Bansal et al.

October 1996
Am J Obstet Gynecol

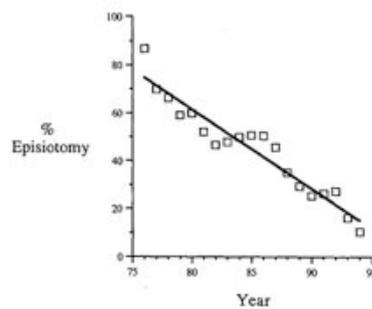


Fig. 1. Annual rates of episiotomy for 17,483 consecutive spontaneous vaginal deliveries between 1976 and 1994 ($R^2 = 0.92$, $p = 0.0001$).

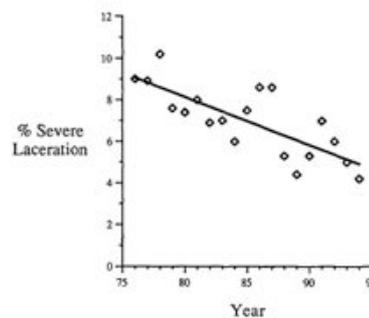
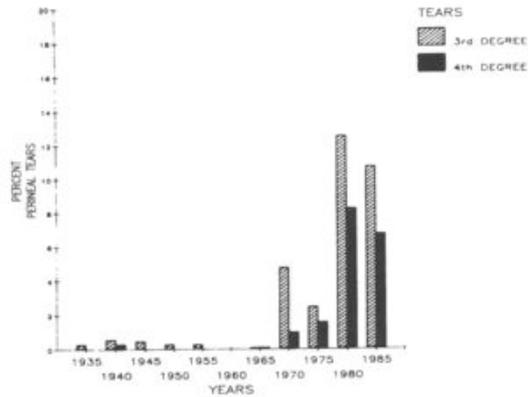


Fig. 2. Annual rates of combined third- and fourth-degree perineal lacerations for 17,483 consecutive spontaneous vaginal deliveries between 1976 and 1994 ($R^2 = 0.59$, $p = 0.0001$).

Épisiotomie médiane Avant vs Après

Third- and Fourth-Degree Perineal Tears
50 Years' Experience at a University Hospital

Lanny J. Legino, M.D.
Michael P. Woods, M.D.
William F. Rayburn, M.D.
Leon S. McGoogan, M.D.



Épisiotomie médio-latérale Ici et Là

DOI: 10.1111/j.1471-0528.2007.01541.x
www.blackwellpublishing.com/ijog

Urogynaecology

Pelvic floor disorders 4 years after first delivery: a comparative study of restrictive versus systematic episiotomy

X Fritel,^a JP Schaal,^a A Fauconnier,^a V Bertrand,^b C Levet,^a A Pigne^a

L'épisiotomie systématique ne diminue pas la prévalence de l'IU, de l'urgenterie, de l'IA, de la douleur périnéale ou de la dyspareunie [NP2] {Fritel BJOG 2008}

Table 2. Pelvic floor disorders in 627 women 4 years after delivery according to episiotomy (bivariate analysis, chi-square test)

Pelvic floor disorders 4 years after first delivery	Maternity A, restrictive episiotomies, n (%)	Maternity B, routine episiotomy, n (%)	P
UI			
No	231 (74)	207 (86)	0.09
Yes	82 (26)	99 (32)	
UI type (% among women with UI)			0.67
Stress	24 (29)	31 (31)	
Urge	6 (7)	6 (6)	
Mixed	51 (62)	58 (59)	
UI severity (Sandvik score)			0.45
Dry	231 (74)	207 (86)	
Slight	48 (15)	42 (20)	
Moderate	21 (7)	21 (7)	
Severe	8 (3)	8 (3)	
UI bothersome (% among women with UI)			0.33
Not a problem	7 (9)	17 (18)	
A bit of a problem	55 (67)	54 (56)	
Quite a problem	12 (15)	15 (16)	
A serious problem	7 (9)	10 (10)	
Urgency			0.22
Never	133 (63)	114 (38)	
Occasionally	102 (33)	116 (39)	
Sometimes	54 (17)	57 (19)	
Often or all of the time	23 (7)	14 (5)	
Difficult voiding			0.32
Never	224 (71)	217 (72)	
Occasionally	44 (14)	52 (17)	
Sometimes	27 (12)	24 (8)	
Often or all of the time	9 (3)	7 (2)	
Perineal pain			0.26
No	291 (94)	272 (92)	
Yes	17 (6)	23 (8)	
Pain during intercourse			0.45
No intercourse	7 (2)	9 (3)	
No pain	247 (80)	225 (76)	
Yes	54 (18)	62 (21)	
Anal incontinence			0.04
No	276 (89)	249 (84)	
Yes	33 (11)	49 (16)	
AI bothersome (% among women with AI)			0.85
Not a problem	0 (0)	1 (2)	
A bit of a problem	14 (42)	22 (45)	
Quite a problem	7 (21)	6 (12)	
A serious problem	12 (36)	18 (37)	
AI type			0.02
Fatus only	24 (80)	40 (13)	
Stool	9 (3)	9 (3)	0.94

UI, urinary incontinence; AI, anal incontinence.

Épisiotomie, Recommandations

OMS 2003

- Limiter le recours à l'épisiotomie à des indications strictes présente un certain nombre d'effets bénéfiques : la réduction du traumatisme périnéal postérieur, de la nécessité de suture et des complications. L'épisiotomie n'entraîne aucune réduction de la plupart des mesures de la douleur ni des traumatismes vaginaux et périnéaux graves, mais pourrait diminuer le risque de traumatisme périnéal antérieur.

Épisiotomie, Recommandations

CNOGF 2006

- La pratique libérale de l'épisiotomie ne prévient pas la survenue des déchirures périnéales du 3^o et 4^o degrés (Grade A). Elle réduit en revanche le risque de survenue de déchirures périnéales antérieures, de moindre gravité (Grade A).
- La pratique libérale de l'épisiotomie ne prévient pas la survenue d'une incontinence urinaire, qu'elle soit d'effort (Grade A) ou par urgenteries (Grade B).
- La pratique libérale de l'épisiotomie ne prévient pas la survenue d'une incontinence anale (Grade B), et semble même exposer à ce risque dans les trois premiers mois du postpartum (Grade C).
- Actuellement, il n'est pas possible d'évaluer le rôle préventif d'une politique libérale d'épisiotomies sur le risque de troubles de la statique pelvienne à long terme, en raison du manque de données scientifiques. Le seul élément objectif est la réduction de la force musculaire périnéale trois mois après l'accouchement dans le groupe avec épisiotomie libérale (Grade B).
- En conclusion, l'épisiotomie libérale en prévention des troubles de la statique pelvienne et des incontinences n'a pas atteint ses objectifs.

Episiotomie, Recommandations ACOG 2006

- Current data and clinical opinion suggest that there are insufficient objective evidence-based criteria to recommend episiotomy, and especially routine use of episiotomy, and that clinical judgment remains the best guide for use of this procedure
- Restricted use of episiotomy is preferable to routine use of episiotomy (Level A).
- Median episiotomy is associated with higher rates of injury to the anal sphincter and rectum than is mediolateral episiotomy (Level A).
- Mediolateral episiotomy may be preferable to median episiotomy in selected cases (Level B).
- Routine episiotomy does not prevent pelvic floor damage leading to incontinence (Level B).

Episiotomie médiolatérale Extraction instrumentale

Table 1. Risk factors for anal sphincter lesions during forceps deliveries

Risk factor	Present	%	Relative risk	Logistic regression Adjusted OR (95% CI)
Fetal birthweight per 500 g increase				1.26 (1.13-1.40)
Duration of second stage per 15 minutes increase				NS
Parity				
Multiparity	60/1070	5.60	1	
Primiparity	2885/408	4.49	0.80	1.43 (1.05-1.96)
Fetal position				
Occipitobasilar	2894/893	4.19	1	
Occipitoposterior	38/354	10.73	2.56	3.06 (2.08-4.50)
Other positions	21/231	8.79	2.10	2.44 (1.44-4.14)
Induction of labour				
No induction	2835/914	5.06	1	
Induced labour	65/1564	4.40	0.89	NS
Episiotomy				
No episiotomy	166/739	22.73	1	
Mediolateral	1756/657	2.60	0.12	0.08 (0.07-0.11)
Midline	7/82	8.54	0.42	0.28 (0.13-0.63)

DOI: 10.1111/1471-0541.12102

www.blackwell-synergy.com/doi/abs/10.1111/1471-0541.12102

Mediolateral episiotomy reduces the risk for anal sphincter injury during operative vaginal delivery

JW de Leeuw, C de Wit, SPA Kuijken, HW Bruinse

Table 2. Risk factors for anal sphincter injury during vacuum extraction

Risk factor	Present	%	Relative risk	Logistic regression Adjusted OR (95% CI)
Fetal birthweight per 500 g increase				1.47 (1.35-1.59)
Duration of second stage per 15 minutes increase				1.05 (1.02-1.09)
Parity				
Multiparity	128/3991	3.21	1	
Primiparity	518/17 263	3.00	0.94	1.94 (1.56-2.41)
Fetal position				
Occipitobasilar	543/18 852	2.88	1	
Occipitoposterior	68/1412	4.28	1.49	2.01 (1.54-2.62)
Other position	34/790	4.33	1.50	1.85 (1.28-2.67)
Induction of labour				
No induction	515/16 705	3.25	1	
Induced labour	131/4489	2.91	0.90	NS
Episiotomy				
No episiotomy	4084/340	9.40	1	
Mediolateral	228/16 730	1.36	0.11	0.11 (0.09-0.13)
Midline	10/134	7.46	0.75	NS

Episiotomie médiolatérale Ventouse

episiotomy was protective in vacuum assisted deliveries compared with vacuum-assisted deliveries without episiotomy (aOR, 0.60; 95% CI, 0.56-0.65; P < .0001)

RESEARCH

www.AJOG

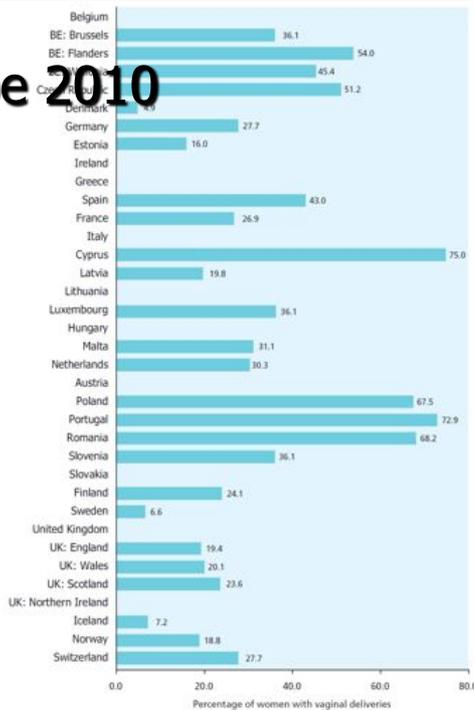
OBSTETRICS

Modifiable risk factors of obstetric anal sphincter injury in primiparous women: a population-based cohort study

Hanna Jungá, MD; Jms Langhoff-Ross, MD, DMSc; Susanne Rosthøj, MS, PhD; Abeleno Sakse, MD, PhD

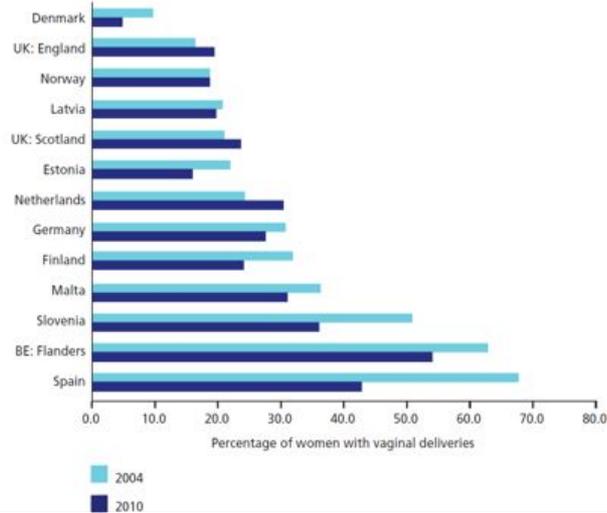
Potential risk factors	Univariable analysis n = 214,256			Multivariable analysis n = 209,687			
	OR	95% CI	P value	aOR	95% CI	P value	
Maternal factors							
Maternal age, y	1.03	1.03–1.04	< .0001	1.02	1.02–1.03	< .0001	
Prepregnant BMI ^a	1.01	1.01–1.02	< .0001	—	—	—	
Calendar year of delivery	1.02	1.02–1.03	< .0001	1.02	1.02–1.03	< .0001	
Fetal factors							
Birthweight, kg ^b	3.02	2.91–3.14	< .0001	2.76	2.62–2.90	< .0001	
Head circumference, cm ^c	1.25	1.23–1.26	< .0001	1.02	1.01–1.04	.0035	
Gestational age, d	1.03	1.02–1.03	< .0001	1.00	1.00–1.00	.1014	
Presentation^d							
Occiput anterior	1.0			1.0			
Occiput posterior	1.78	1.64–1.93	< .0001	1.34	1.22–1.46	< .0001	
Breech presentation	0.34	0.21–0.55	< .0001	0.57	0.35–0.93	.0244	
Other presentations	1.61	1.46–1.76	< .0001	1.19	1.08–1.32	.0005	
Obstetric factors							
Induction of labor	1.17	1.11–1.23	< .0001	1.04	0.99–1.08	.1261	
Oxytocin augmentation	1.55	1.50–1.61	< .0001	1.14	1.10–1.19	< .0001	
Epidural	1.12	1.08–1.17	< .0001	0.84	0.81–0.88	.0001	
Vacuum extraction							
Episiotomy							
"no"	"no"	1.0		1.0			
"yes"	"no"	3.42	3.29–3.56	< .0001	2.99	2.86–3.12	< .0001
"no"	"yes"	1.05	0.99–1.12	.1184	0.95	0.89–1.02	.1541
"yes"	"yes"	2.31	2.16–2.46	< .0001	1.80	1.68–1.93	< .0001
Forceps	2.61	1.88–3.61	< .0001	1.95	1.39–2.75	.0007	
Shoulder dystocia	3.18	2.79–3.62	< .0001	1.33	1.16–1.53	< .0001	

Episiotomies Disparités Europe 2010



Episiotomies Evolution 2004-10 Europe

Figure 5.11 Episiotomy rates in 2004 and changes between 2010 and 2004 among women with vaginal deliveries



Episiotomies Evolution 2004-11 Finlande

BMI open Changing associations of episiotomy and anal sphincter injury across risk strata: results of a population-based register study in Finland 2004–2011

Sari Räsänen,¹ Rufus Cartwright,² Mika Gissler,^{3,4} Michael R Kramer,⁵ Katarina Laine,^{6,7} Maija-Riitta Joukka,⁷ Seppo Heinonen⁸

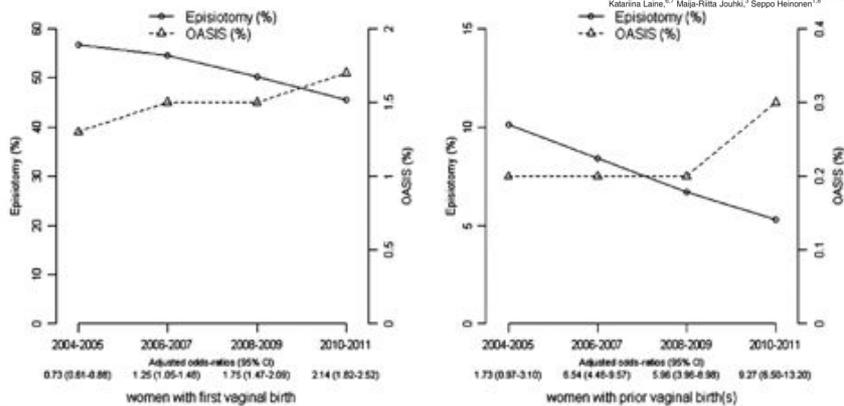
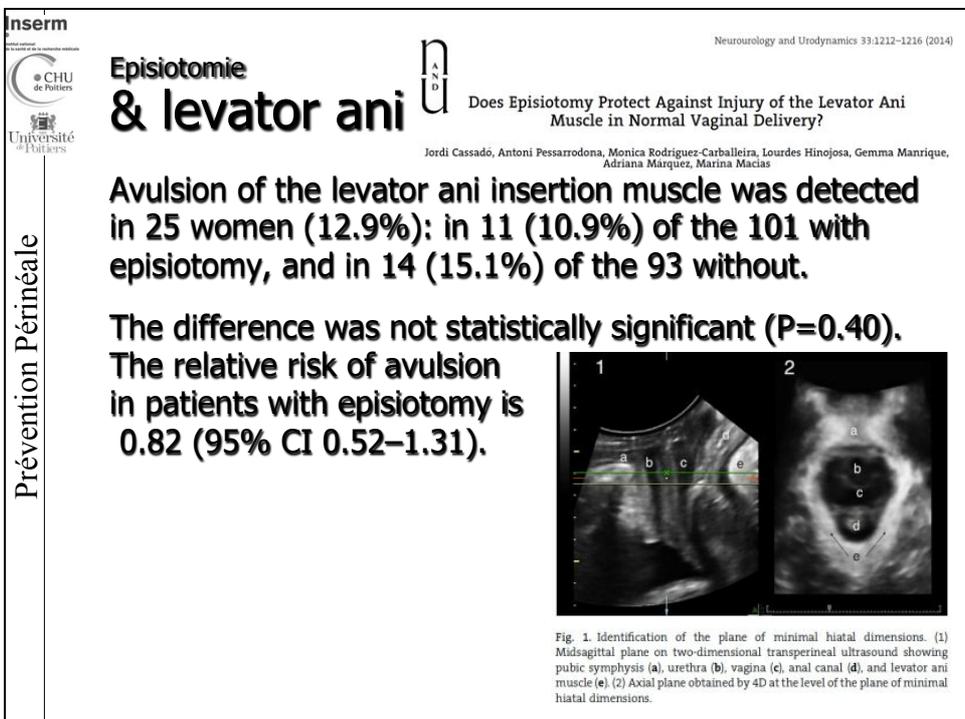
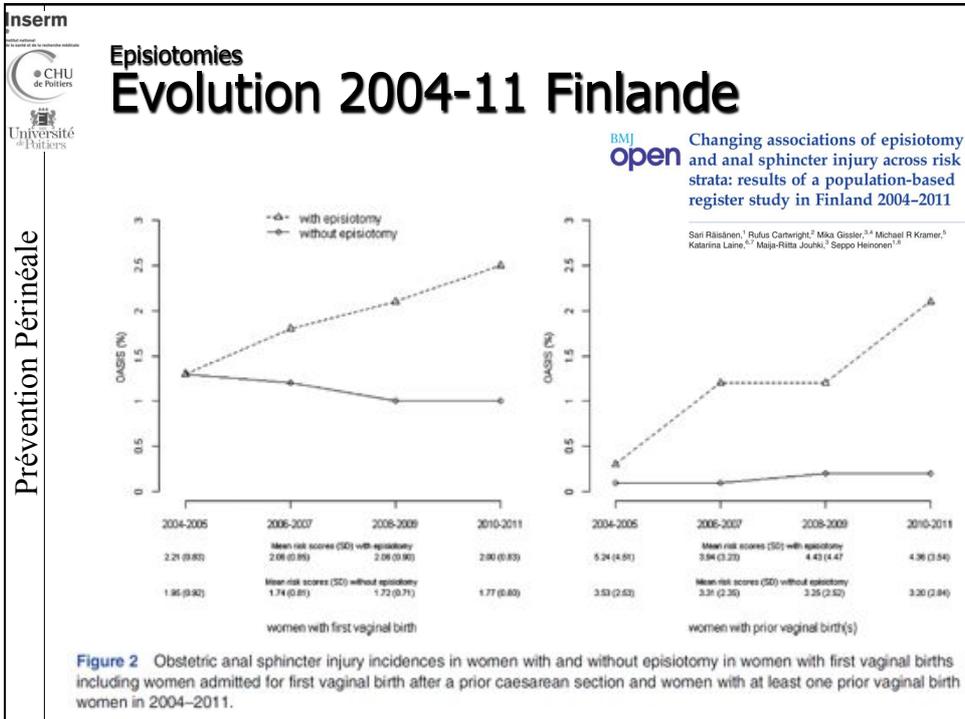


Figure 1 Changes in episiotomy rate and obstetric anal sphincter injury rate and their adjusted association, stratified by number of prior vaginal births 2004–2011.



FORCEPS

Accouchement Instrumental : Rationnel

- Raccourcir la durée de la 2^{ème} partie du travail
{De Lee AmJOG 1920}

THE PROPHYLACTIC FORCEPS OPERATION*

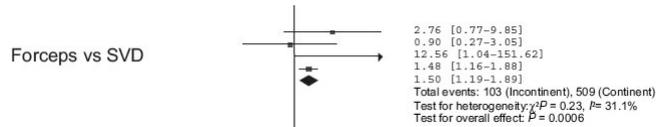
BY JOS. B. DELEE, M.D., CHICAGO, ILL.

which really comprises more than the actual delivery of the child. It is a rounded technic for the conduct of the whole labor, with the defined purpose of relieving pain, supplementing and anticipating the efforts of Nature, reducing the hemorrhage, and preventing and repairing damage.

[C'est une technique harmonieuse pour conduire l'ensemble du travail dont les objectifs sont de soulager la douleur, de suppléer et anticiper les efforts de la nature, de réduire l'hémorragie et de prévenir et réparer les dégâts]

Accouchement Instrumental : Résultats

- Le forceps
 - ↑ Risque de périnée complet [NP3]
 - ↑ Risque d'IA 1 an [NP3] {Pretlove BJOG 2008}



Pas d'effet sur l'IU [NP3]

↓ Risque de chirurgie de l'IU [NP3]
 {Persson Obstet Gynecol 2000}

- Forceps > Ventouse pour le risque d'IA [NP1]
 {Fitzpatrick BJOG 2003}

POSITION D'ACCOUCHEMENT

Accouchement debout ou assis : Rationnel

- **Méthode primitive**
{Russel BJOG 1982}
- **Augmenter les dimensions du bassin**
{Borrel Acta 1957}
- **Aligner le fœtus**
{Gold AmJOG 1950}
- **Utiliser la pesanteur**
- **Contractions plus efficaces**
{Caldeyro-Barcia AmJOG 1960}

Accouchement debout ou assis : Résultats

- **Méta-analyse sans APD [NP1]** {Gupta Cochrane 2012}
- = durée de l'expulsion
- ↓ nombre d'épisiotomies
RR=0,79 (0,70-0,90)
- ↑ déchirures du 2^{ème} degré
RR=1,35 (1,20-1,51)
- ↓ d'extractions instrumentales
RR=0,78 (0,68-0,90)
- Pas d'effet sur le périnée complet
- Pas d'effet connu sur les symptômes périnéaux

Position in the second stage of labour for women without
epidural anaesthesia (Review)

Gupta JK, Hofmeyr GJ, Shekhar M



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Accouchement debout ou assis : Résultats

- Méta-analyse avec APD [NP1] {Kemp Cochrane 2013}
- Aucune différence

Position in the second stage of labour for women with
epidural anaesthesia (Review)

Kemp E, Kingswood CJ, Kibuka M, Thornton JG



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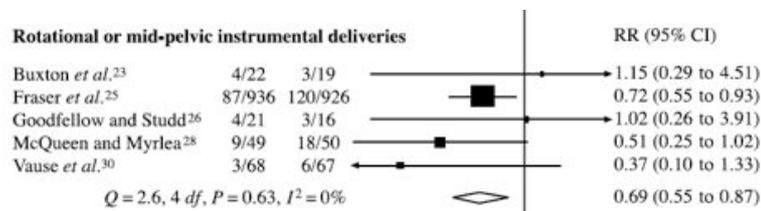
POUSSÉE

Poussée retardée : Rationnel

- Laisser descendre spontanément la présentation
- Réduire les extractions instrumentales

Poussée retardée : Résultats

- Méta-analyse [NP1] {Roberts BJOG 2004 }
- ↓ d'extractions à partie moyenne (0,69)
- Pas de différence pour l'incontinence fécale



Poussée : Résultats RCT

A randomized trial of the effects of coached vs uncoached maternal pushing during the second stage of labor on postpartum pelvic floor structure and function

J. I. Schaffer, S. L. Bloom, B. M. Casey, D. D. McIntire, M. A. Nihira, K. J. Leveno

• RCT [NP1] {Schaffer AmJOG 2005}

Table I Techniques used for coached and uncoached pushing

Coached group	
Step 1	Head of bed up 30°.
Step 2	Position patient, as she desires, on her back or either side.
Step 3	Coach patient to pull back on both knees and tuck her chin while the provider or partner supports the legs.
Step 4	Coach the patient to take a deep breath and hold during the peak of a contraction then bear down and push for 10 seconds; repeat this as long as the contraction continues.
Uncoached group	
Step 1	Head of bed up 30°.
Step 2	Position patient, as she desires, on her back or either side.
Step 3	The patient should be told simply to "do what comes natural or whatever the patient feels the urge to do while in bed."

Table III Selected obstetric characteristics in women coached to push during the second stage of labor compared with uncoached women

	Coached	Uncoached	P value
Prolonged second stage (> 2 hrs)	3/67 (4)	5/61 (8)	.385
Episiotomy	15/67 (22)	13/61 (21)	.883
3rd- or 4th-degree anal sphincter laceration	2/67 (3)	5/61 (8)	.195
Macrosomia	3/67 (4)	1/61 (2)	.357
Epidural analgesia	2/67 (3)	2/61 (3)	.924
Forceps delivery	2/67 (3)	3/61 (5)	.573
Oxytocin augmentation	5/67 (7)	10/61 (16)	.117

Data shown as n (%).

Poussée : Résultats RCT

Int Urogynecol J (2013) 24:453–460
DOI 10.1007/s00192-012-1884-y

ORIGINAL ARTICLE

Spontaneous pushing to prevent postpartum urinary incontinence: a randomized, controlled trial

Lisa Kane Low · Janis M. Miller · Ying Guo · James A. Ashton-Miller · John O. L. DeLancey · Carolyn M. Sampselle

• RCT [NP1] {Low IUGJ 2013}

Table 3 Comparison of change in urine leakage between baseline and 12 months postpartum in patients randomized to the four treatment groups (N=145)

	Assigned treatment condition				P value
	Directed pushing (N=39)	Perineal massage (N=32)	Spontaneous pushing (N=34)	Spontaneous pushing and perineal massage (N=40)	
Leakage Index					
Baseline	1.27±1.87	0.97±1.85	0.88±1.25	1.15±1.61	
12 months	2.17±2.5	0.97±1.65	1.20±1.76	1.41±2.01	
Change (final, baseline)	0.84±1.94	0	0.35±1.95	0.13±1.55	0.57

Mean scores are reported ± standard error of the mean

1. Directed pushing, or coached pushing using a closed glottis Valsalva maneuver, which was routine care provided at the recruitment hospital.
2. Spontaneous pushing, with instruction provided prenatally via a standardized training video. This method included instructing the woman to follow her bodily sensations and push as she felt the urge.
3. Prenatal perineal massage initiated in the third trimester with a standardized training regarding its use and then directed pushing during second-stage labor.
4. Combination of group 2 and 3 treatment, with spontaneous pushing plus perineal massage.

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MASSAGE PÉRINÉAL, DISTENSION VAGINALE, COMPRESSES CHAUDES

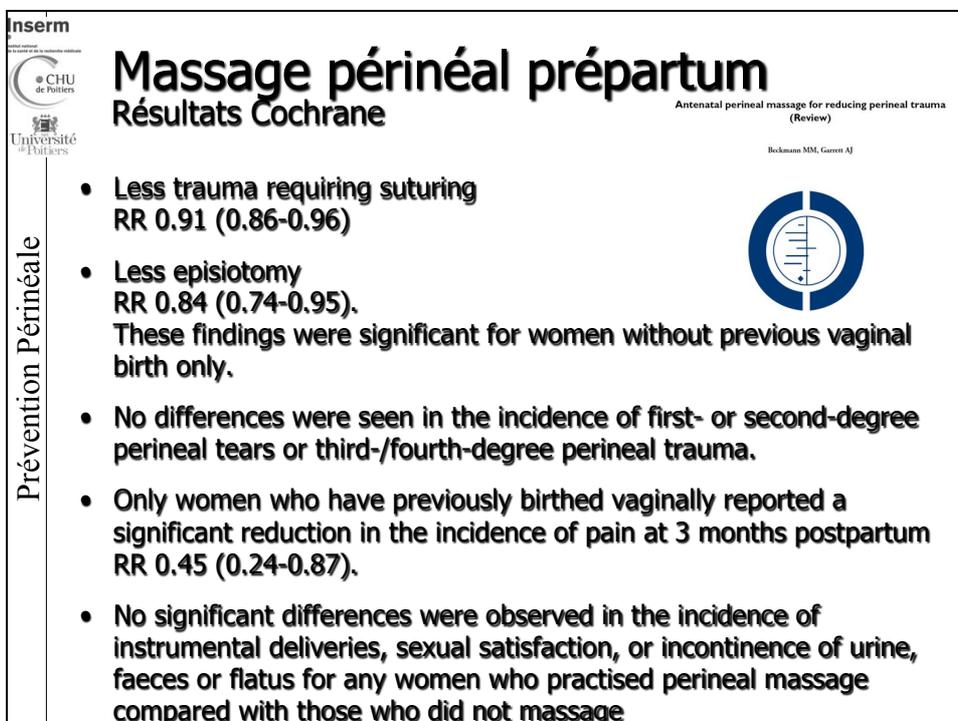
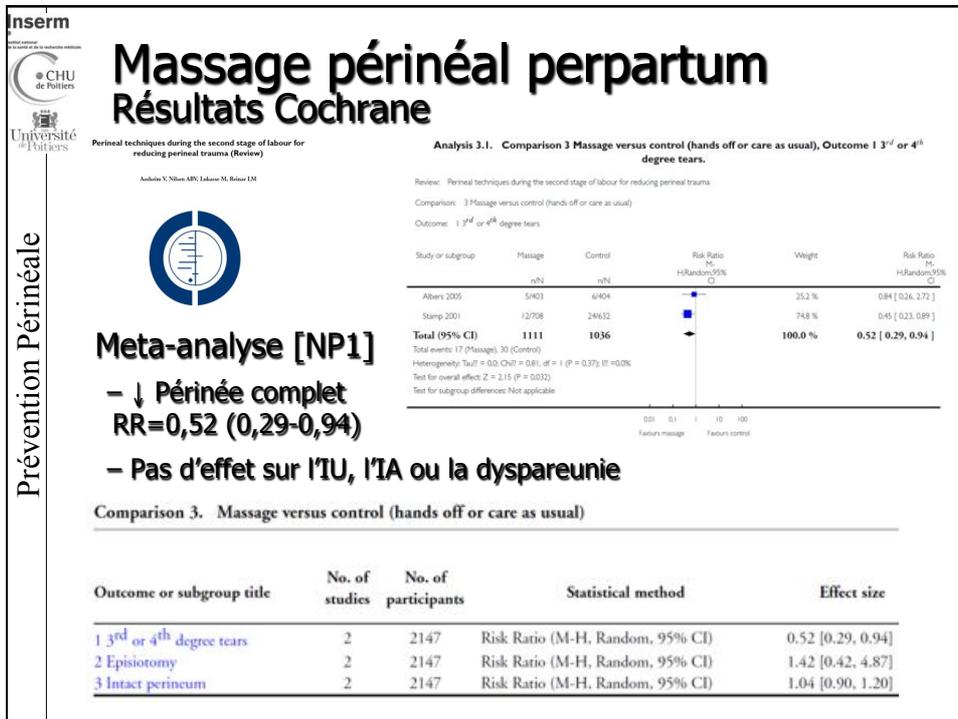
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Prévention Périnéale

Massage périnéal, Distension vaginale, Compresse chaude : Rationnel

- (D)étendre les tissus
- Baisser le seuil nociceptif



Massage vaginal prepartum : Résultats

Dietz H P¹, Langer S¹, Kamisan Atan I¹, Shek K L², Caudwell-Hall J¹, Guzman Rojas R³
1. University of Sydney, 2. University of Western Sydney, 3. Clinica Alemana and Universidad del Desarrollo, Santiago

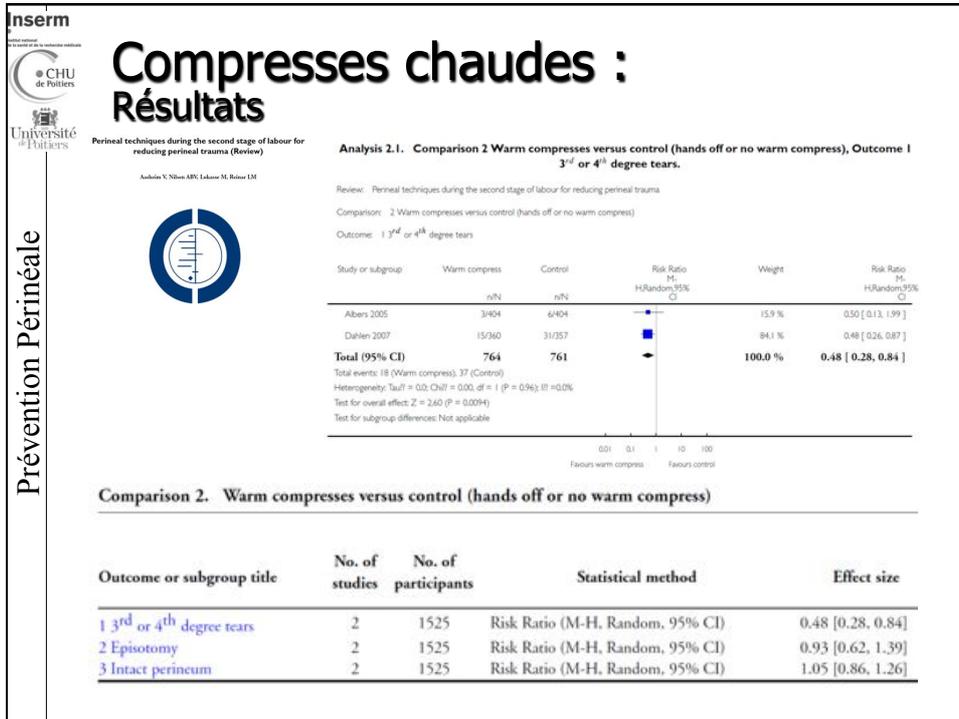
DOES THE EPI-NO PREVENT PELVIC FLOOR TRAUMA? A MULTICENTRE RANDOMISED CONTROLLED TRIAL.

	Control (N=325)	Epi-No (N=335)	P value
Delivery mode			0.37
Caesarean	75 (23%)	77 (23%)	
Normal vaginal delivery	180 (55%)	178 (53%)	
Ventouse	47 (14%)	50 (15%)	
Forceps	19(6%)	24(7%)	
Syntocinon use	147 (45%)	151 (45%)	0.32
Use of intrapartum epidural	135 (42%)	147 (44%)	0.71
Length of 2 nd stage (median, IQR)*	49 (16-104)	44 (12.5-98)	0.31
Neonatal birth weight (gram, SD)	3464 (413)	3434 (423)	0.37
Apgar score ≥7 at 1 minute	271 (83%)	275 (82%)	0.78
Apgar score ≥7 at 5 minute	293 (90%)	301 (90%)	0.33
Episiotomy (vaginal delivery)	66/246 (27%)	68/252 (27%)	0.99
Any perineal tear (vaginal delivery)	121/244 (50%)	126/249 (51%)	0.82
Major perineal tear (vaginal delivery)	13/244 (5%)	18/249 (7%)	0.39

	Control group (N=233)	Epi-No group (N=266)	Relative risk (95% CI)	P value
Levator avulsion	33/233 (14%)	31/266 (12%)	0.80 (0.47-1.35)	0.4
Significant microtrauma	30/233 (13%)	30/256 (12%)	0.86 (0.50-1.48)	0.58
Significant EAS defect	34/230 (15%)	56/258 (22%)	1.60 (1.00-2.56)	0.05
Any trauma	83/230 (36%)	97/258 (38%)	1.07 (0.74-1.54)	0.73

Compresses chaudes : Résultats

- **Compresses chaude vs massage vs no-touch [NP1] {Albers JMWH 2005}**
 - = Pas de différence pour le périnée complet (0,7 vs 1,3 vs 1,5%)
- **Compresses chaudes vs soins habituels chez la nullipare [NP1] {Dahlen Birth 2007 }**
 - ↓ de périnée complets (4,2 vs 8,7%)
 - ↓ de douleurs périnéales immédiates, plus de différence à 3 mois
 - ↓ d'IU à 3 mois (9,7 vs 22,4%)



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CONTRÔLE DU DÉGAGEMENT

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Contrôle du dégagement : Rationnel

- Guider et ralentir la tête foetale à partie basse {Laine OG 2008}



Fig. 1. The hands-on technique to control delivery of the head used in the study.
 Laine. *Anal Sphincter Rupture. Obstet Gynecol* 2008.

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Contrôle du dégagement : Résultats

Perineal techniques during the second stage of labour for reducing perineal trauma (Review)
 Ashwin V, Shiao AB, Lukosa M, Raine LM

[NP1] {McCandlish BJOG 98}
 ↓ Episiotomies
 Pas de différence entre mains croisées et contrôle manuel du dégagement pour le périnée complet, l'IU, l'IA, et la dyspareunie

Comparison 1. Hands off (or poised) versus hands on

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 3 rd or 4 th degree tears	3	6617	Risk Ratio (M-H, Random, 95% CI)	0.73 [0.21, 2.56]
2 Episiotomy	2	6547	Risk Ratio (M-H, Random, 95% CI)	0.69 [0.50, 0.96]
3 Intact perineum	2	6547	Risk Ratio (M-H, Random, 95% CI)	1.03 [0.95, 1.12]

Analysis 1.2. Comparison 1 Hands off (or poised) versus hands on, Outcome 2 Episiotomy.

Review: Perineal techniques during the second stage of labour for reducing perineal trauma
 Comparison: 1 Hands off (or poised) versus hands on
 Outcome: 2 Episiotomy

Study or subgroup	Hands off n/N	Hands on n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Mayerhofer 2002	51/502	103/574		41.4%	0.57 [0.41, 0.77]
McCandlish 1998	280/2740	351/2731		58.6%	0.80 [0.68, 0.92]
Total (95% CI)	3242	3305		100.0%	0.69 [0.50, 0.96]

Total events: 331 (Hands off), 454 (Hands on)
 Heterogeneity: $I^2 = 50%$; $Chi^2 = 3.68$; $df = 1$ ($P = 0.05$); $II = 72%$
 Test for overall effect: $Z = 2.21$ ($P = 0.027$)
 Test for subgroup differences: Not applicable

Contrôle du dégagement avant vs. après Résultats



Incidence of obstetric anal sphincter injuries after training to protect the perineum: cohort study

Katarina Laine,^{1,2} Finn Egil Skjeldestad,³ Leiv Sandvik,⁴ Anne Cathrine Staff

Table 2 Incidence of OASIS in different subgroups of women. Data are presented in frequencies (and numbers). p Values from χ^2 test

Time period	Primiparous women		Multiparous women	
	2003–2005	2008–2010	2003–2005	2008–2010
OASIS	6.1 (489/8051)	3 (263/8837)	1.5 (102/6736)	0.7 (53/8085)

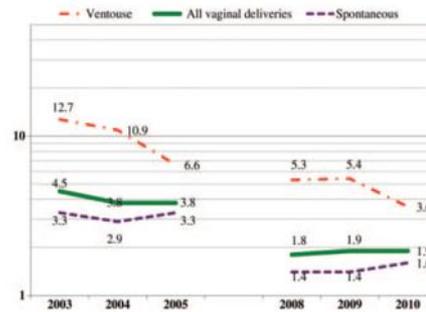


Figure 1 Frequency of obstetric anal sphincter injuries (%) for different delivery methods during the study years.

Contrôle du dégagement avant vs. après Résultats

DOI: 10.1136/bmj-2011-022812

www.bmj.org

General obstetrics

Risk factors for obstetric anal sphincter injury after a successful multicentre interventional programme

M Stedenfeldt,^{1,2} P Olan,^{1,2} M Gissler,^{3,4} E Blix,^{1,2} J Pirhonen⁵

Table 4. Odds ratio for OASIS for risk groups 0–4 comparing before with after the intervention

Risk category*	Before intervention n (N = 21 123)%	Crude OR (95% CI)	Adjusted OR (95% CI)**	After intervention n (N = 19 031)%	Crude OR (95% CI)	Adjusted OR (95% CI)**	Between study periods OR (95% CI)**
Group 0	114 (7997)	1.4	Reference	36 (7096)	0.5	Reference	0.35 (0.24–0.51)
Group 1	391 (9601)	4.1	2.93 (2.38–3.62)	155 (8744)	1.8	3.54 (2.46–5.09)	3.72 (2.58–5.37)
Group 2	327 (2877)	11.4	8.87 (7.13–11.03)	129 (2710)	4.8	9.80 (6.76–14.22)	10.35 (7.11–15.07)
Group 3	136 (610)	23.3	19.84 (15.21–25.87)	49 (453)	10.8	23.77 (15.29–37.00)	25.02 (16.04–39.33)
Group 4	6 (36)	15.8	12.96 (5.32–32.62)	6 (28)	21.4	53.49 (20.60–156.16)	59.41 (22.60–156.16)

*Group 0, birthweight \leq 4000 g, normal presentation, spontaneous vaginal delivery, second and third vaginal delivery; Group 1, one of following risk factors present; Group 2, two of following risk factors present; Group 3, three of following risk factors present; Group 4, all of the following risk factors present. Risk factors: birthweight \geq 4000 g, abnormal presentation, instrumental delivery, first vaginal delivery.

**Logistic regression adjusted for maternal age.

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Prévention Périnéale

CESARIENNE

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Prévention Périnéale

Césarienne : Rationnel

- Eviter le traumatisme
Musculaire
Sphinctérien
Tissulaire
Neurologique de l'accouchement vaginal
{O'Boyle AmJOG}

Informed consent and birth: Protecting the pelvic
floor and ourselves

Amy L. O'Boyle, MD, Gary D. Davis, MD, and Byron C. Calhoun, MD
Tacoma, Wash

Césarienne : Résultats (1)

- ↓ d'IU postnatale RR=0,3 (0,2-0,5)
[NP3] {Wesnes BJOG 2009}
- Pas d'effet sur l'IU après 50 ans
[NP3] {Rortveit NEJM 2003, Fritel BJOG 2007}
- Pas d'effet sur l'IA ou la dyspareunie
[NP3] {Nelson DCR 2006, Pretlove BJOG 2008}
- ↓ de chirurgie de l'IU OR=0,2 (0,1-0,3)
[NP3] {Persson Obst Gyn 2000}
- ↓ de prolapsus OR=0,2 (0,2-0,2)
[NP3] {Larsson AmJOG 2009}

Césarienne : Résultats (2)

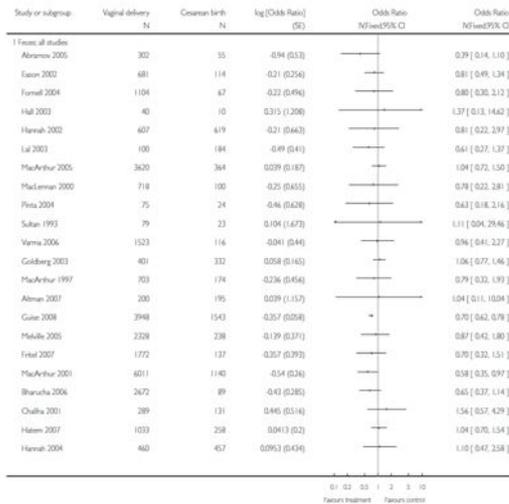
- Pas de différence sur l'IU, l'IA et la dyspareunie à 2 ans
[NP1] {Hannah AmJOG 2004}

Outcome	Planned CS n = 457 n (%)			Planned VB n = 460 n (%)			Relative risk (95% CI)	P
	CS n = 408	VB n = 49	Total n = 457	CS n = 203	VB n = 257	Total n = 460		
No sex ^{*†}	32 (7.9)	0 (0)	32 (7.0)	19 (9.4)	22 (8.6)	41 (8.9)	0.79 (0.50-1.22)	.33
Pain during sex ^{*††}	n = 369	N = 49	n = 418	n = 177	n = 235	n = 412		.84
No pain	329 (89.2)	47 (95.9)	376 (90.0)	159 (89.8)	210 (89.4)	369 (89.6)		
Almost no pain	5 (1.4)	0 (0)	5 (1.2)	4 (2.3)	4 (1.7)	8 (1.9)		
Mild or small amount of pain	26 (7.0)	2 (4.1)	28 (6.7)	11 (6.2)	18 (7.7)	29 (7.0)		
Quite a lot of pain	8 (2.2)	0 (0)	8 (1.9)	3 (1.7)	3 (1.3)	6 (1.5)		
Severe or excruciating/terrible pain	1 (0.3)	0 (0)	1 (0.2)	0 (0)	0 (0)	0 (0)		
Urinary incontinence ^{*†‡}	65 (16.0)	16 (32.7)	81 (17.8)	37 (18.4)	63 (24.5)	100 (21.8)	0.81 (0.63-1.06)	.14
Fecal incontinence ^{*†‡}	10 (2.5)	1 (2.0)	11 (2.4)	8 (4.0)	2 (0.8)	10 (2.2)	1.10 (0.47-2.58)	.83
Incontinence of flatus ^{*†‡}	53 (13.0)	7 (14.3)	60 (13.1)	29 (14.4)	24 (9.3)	53 (11.5)	1.14 (0.80-1.61)	.48

Césarienne & IA Résultats

Analysis 1.1. Comparison 1 Anal Incontinence, all studies, Outcome 1 Post Partum Fecal Incontinence.

Review: Cesarean delivery for the prevention of anal incontinence
 Comparison: 1 Anal Incontinence, all studies
 Outcome: 1 Post Partum-Fecal Incontinence



Cesarean delivery for the prevention of anal incontinence (Review)

Nelson RL, Funder SE, Westendorp M, Fauphar C



Césarienne Résultats

Table 2. Pelvic floor outcomes 6 months after delivery

Urinary incontinence	Vaginal birth n = 336	Cesarean delivery n = 138	P
Any urinary incontinence, (Q > 0) (%)	183 (55)	63 (46)	0.08
Moderate/severe	30 (9)	8 (6)	0.35
IS scores (%)			
Paper Towel Test wet (%)	56 (17)	8 (6)	0.002
Women with any urinary incontinence			
	n = 183	n = 63	
IS scores among those with any incontinence (mean ± SD)	1.76 ± 1.1	1.73 ± 1.0	0.30
IQ scores among those with any urinary incontinence (mean ± SD)	5.3 ± 11.3	6.6 ± 13.6	0.51
Questionnaire for Urinary Diagnosis			
Stress + urge scores (%)	88 (27)	22 (16)	0.02
Urge + stress scores (%)	68 (21)	34 (25)	0.33
Anal incontinence			
	Vaginal birth n = 336	Cesarean section n = 138	P
Any anal incontinence (Bleeker* ≥ 1) (%)	163 (50)	76 (55)	0.26
Fecal incontinence, positive response on Wexner scale (%)	27 (8)	18 (13)	0.12
Anal sphincter separation on physical exam (%)	11 (3)	3 (2)	0.77
Women with any anal incontinence			
	n = 163	n = 76	
Wexner Scores among those with any anal incontinence (mean ± SD)	2.0 ± 1.8	1.9 ± 1.1	0.53
Continental anal impact questionnaire scores (mean ± SD)	2.5 ± 9.7	2.0 ± 7.1	0.70
Pelvic organ prolapse			
	Vaginal birth n = 336	Cesarean section n = 138	P
POPQ Stage prolapse			
0	46 (14)	28 (22)	0.03**
1	209 (65)	81 (63)	
2	66 (21)	19 (15)	

Table 2. (Continued)

Pelvic organ prolapse	Vaginal birth n = 336	Cesarean section n = 138	P
3	1 (0)	0 (0)	
4	0 (0)	0 (0)	
Aa (mean ± SD)	-1.9 ± 0.8	-2.1 ± 0.7	<0.001
Ba (mean ± SD)	-1.9 ± 0.8	-2.1 ± 0.7	<0.001
Ap (mean ± SD)	-2.6 ± 0.5	-2.7 ± 0.4	0.16
Bp (mean ± SD)	-2.6 ± 0.5	-2.7 ± 0.4	0.18
C (mean ± SD)	-5.2 ± 1.4	-5.1 ± 1.5	0.80
D (mean ± SD)	-6.7 ± 1.6	-6.6 ± 1.8	0.48
Pb (mean ± SD)	3.4 ± 0.8	3.3 ± 0.8	0.96
Gr, rest (mean ± SD)	2.6 ± 0.9	2.7 ± 0.7	0.11
Gr, strain (mean ± SD)	3.0 ± 1.0	3.3 ± 0.8	<0.001
Total vaginal length (mean ± SD)	7.4 ± 1.4	7.1 ± 1.7	0.07
Pelvic organ prolapse impact questionnaire scores (mean ± SD)	2.2 ± 8.7	1.7 ± 6.6	0.53
Women with stage 2 or greater prolapse			
	n = 67	n = 19	
Pelvic organ prolapse impact Scores among women with stage 2 or greater POP (mean ± SD)	3.5 ± 11.8	1.3 ± 4.5	0.21
Transperineal ultrasound			
	n = 291	n = 119	
External anal sphincter separation (%)	2 (1)	2 (1)	0.98
Internal anal sphincter separation (%)	29 (10)	5 (4)	0.07
Sexual Function			
	Vaginal Birth n = 336	Cesarean Section n = 138	P
Sexually active (%)	281 (88)	123 (92)	0.14
Female Sexual Function Index scores (mean ± SD)	28.5 ± 5.4	26.6 ± 6.3	0.004
Desire (mean ± SD)	3.8 ± 1.2	3.3 ± 1.2	<0.001
Arousal (mean ± SD)	4.1 ± 1.8	4.1 ± 1.5	0.89
Lubrication (mean ± SD)	4.5 ± 2.0	4.4 ± 2.1	0.73
Orgasm (mean ± SD)	4.2 ± 2.0	4.3 ± 1.7	0.52
Satisfaction (mean ± SD)	4.7 ± 1.4	4.6 ± 1.3	0.49
Pain (mean ± SD)	5.1 ± 1.2	4.9 ± 1.3	0.37
Pain			
No perineal pain, PR = none (%)	301 (92)	131 (95)	0.27

DOI: 10.1111/1471-0528.12571
 www.hog.org

Contribution of the second stage of labour to pelvic floor dysfunction: a prospective cohort comparison of nulliparous women

RG Rogers,¹ LM Leeman,² N Borders,³ C Qualls,⁴ AM Fullilove,⁵ D Teaf,⁶ RJ Hall,⁷ E Bedrick,⁸ LL Albers⁹

IQ, Incontinence Impact Questionnaire; IS, Incontinence Severity Index; PP, Present Pain Intensity.
 *Wexner Fecal Incontinence Scale.
 **Jonckheere-Terpstra trend test.

Conclusion

- La césarienne est associée à moins d'IUE, mais la différence n'est plus mesurable à la cinquantaine.
- La césarienne est associée à moins de chirurgie de l'IUE, moins de prolapsus
- Pas de bénéfice démontrés à la césarienne programmée ou l'épisiotomie systématique.
- Deux facteurs modifiables à confirmer
 - L'extraction par forceps
 - Le dégagement de la tête fœtale