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MATERNITY & NEONATAL

Queensland Maternity and Neonatal **Clinical Guideline**

Perineal care

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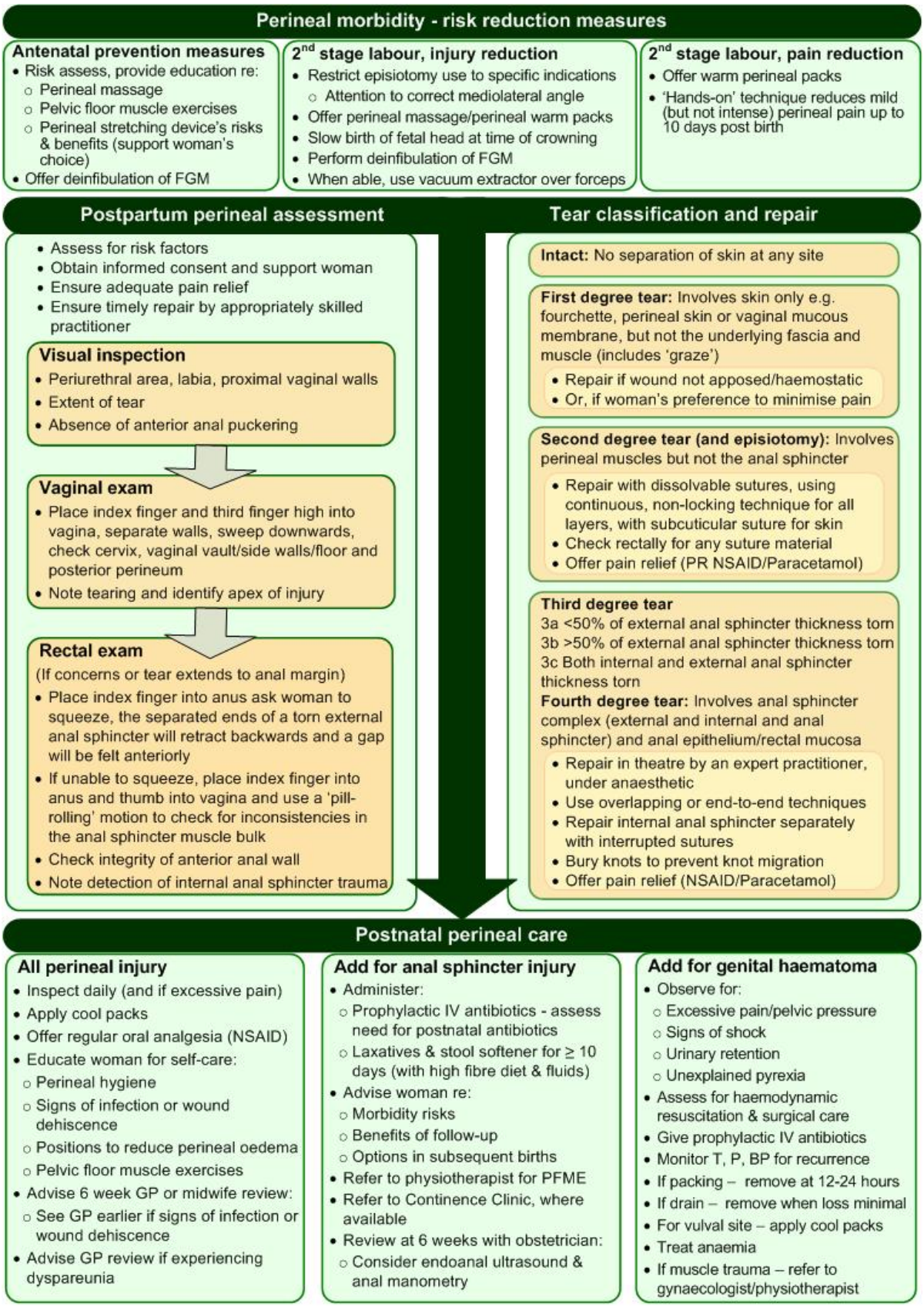
Clinical care carried out in accordance with this guideline should be provided within the context of locally available resources and expertise.

This Guideline does not address all elements of standard practice and assumes that individual clinicians are responsible to:

- Discuss care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes the use of interpreter services where necessary
- Advise consumers of their choice and ensure informed consent is obtained
- Provide care within scope of practice, meet all legislative requirements and maintain standards of professional conduct
- Apply standard precautions and additional precautions as necessary, when delivering care
- Document all care in accordance with mandatory and local requirements

Flow Chart: Perineal care



Queensland Maternity and Neonatal Clinical Guideline: MN12.30-V1-R17 Perineal care

Abbreviations

ACHS	Australian Council of Healthcare Standards
CT	Computed tomography
FGM	Female genital mutilation
IAP	Intraabdominal pressure
IV	Intravenous
NSAID	Non-steroidal anti-inflammatory drugs
PFME	Pelvic floor muscle exercises

Definition of terms

Crowning	When the widest part of the fetal head (biparietal diameter) has passed through the pelvic outlet.[1]
Deinfibulation	A surgical procedure to reverse infibulation, i.e. to open the vaginal introitus.[2]
Dyspareunia	Pain on vaginal penetration and/or pain on intercourse or orgasm.
Fourchette	The labia minora extend to approach the midline as low ridges of tissue that fuse to form the fourchette.
Hands-on	The accoucheur's hands are used to put pressure on the baby's head in the belief that flexion, will be increased, and to support ('guard') the perineum, and to use lateral flexion to facilitate the delivery of the shoulders[3] – modification includes use of the modified Ritgen's manoeuvre.[4]
Hands-poised (or off)	The accoucheur keeps hands poised, prepared to put light pressure on the baby's head in case of rapid expulsion but not to touch the head or perineum and allows spontaneous delivery of the shoulders[3] – modification includes hands-on to birth the shoulders.[5,6]
Infibulation	A type of female genital mutilation that involves the excision of part or all of the external genitalia and stitching/narrowing of the vaginal opening.[2]
Obstetrician	Local facilities may as required, differentiate the roles and responsibilities assigned in this document to an "obstetrician" according to their specific practitioner group requirements; for example to general practitioner obstetricians, specialist obstetricians, consultants, senior registrars and obstetric fellows.
Pelvic floor muscle exercises	Exercises aimed at strengthening abdomino-pelvic and pelvic floor muscles.
Pelvic floor muscle training	A program of exercises used to rehabilitate the function of the pelvic floor muscles.
Perineal injury	Includes perineal soft tissue damage, tearing and episiotomy.
Perineal tears	Includes perineal tearing but not injury such as bruising, swelling, surgical incision (episiotomy).
Reinfibulation	A procedure that reinstates infibulation.[2]
Restrictive use episiotomy	Where episiotomy is not used routinely during spontaneous vaginal birth but only for specific conditions (e.g. selective use in instrumental deliveries or if fetal compromise).[7]
Modified Ritgen's manoeuvre	Lifting the fetal chin anteriorly by using the fingers of one hand placed between anus and coccyx, and thereby extending the fetal neck, while the other hand is placed on the fetal occiput to control the pace of expulsion of the fetal head. The modification in the manoeuvre is used during a uterine contraction rather than between contractions.[8]
Sitz bath	Warm bath to which salt has been added.[9]
Slow birth of fetal head	Refers to measures taken to prevent rapid head expulsion at the time of crowning (e.g. counterpressure to the head (as needed) and minimising active pushing, it does not include measures such as fetal head flexion or the Ritgen manoeuvre).

Table of Contents

List of Tables

1 Introduction

Perineal injury is the most common maternal morbidity associated with vaginal birth.[10] Anal sphincter injury is a major complication that can significantly affect women's quality of life.[11]
In Queensland in 2010[12]:

- Genital tract trauma affected 71.5% of women giving birth vaginally
- The majority of tears were minor, involving only the perineal skin or underlying muscles
- Where trauma was reported, 2.4% involved the anal sphincter
- For women birthing vaginally the overall risk of anal sphincter injury (3rd and 4th degree tears) was 1.7%

1.1 Definition of perineal injury

Anatomically the perineum extends from the pubic arch to the coccyx and is divided into the anterior urogenital triangle and the posterior anal triangle.[13] Types of perineal injuries are defined in Table 1.

Table 1. Types of perineal injury

Type	Definition
Anterior perineal injury	Injury to the labia, anterior vagina, urethra or clitoris[13]
Posterior perineal injury	Injury to the posterior vaginal wall, perineal muscles or anal sphincter that may include disruption to the anal epithelium[13]
Episiotomy	A surgical incision intentionally made to increase the diameter of the vulval outlet to aid delivery[13]
Female genital mutilation	A cultural or non-therapeutic procedure that involves partial or total removal of female external genitalia and/or injury to the female genital organs[14]

1.2 Perineal tear classification

Perineal injuries sustained during childbirth are most often classified by the degree to which the perineum tears. The perineal tear definitions in Table 2 are aligned with the Australian Council on Healthcare Standards (ACHS) Obstetric Clinical Indicators (Version 6, 2010).[11]

Table 2. Types of perineal tearing

Type	Definition
Intact	No tissue separation at any site[15]
First degree	Injury to the skin only[11,16] (i.e. involving the fourchette, perineal skin and vaginal mucous membrane; but not the underlying fascia and muscle[17] sometimes referred to as a 'graze')
Second degree	Injury to the perineum involving perineal muscles but not involving the anal sphincter[11,13,17]
Third degree	Injury to perineum involving the anal sphincter complex[11,16]: • 3a: Less than 50% of external anal sphincter thickness torn • 3b: More than 50% of external anal sphincter thickness torn • 3c: Both internal and external anal sphincter torn
Fourth degree	Injury to perineum involving the anal sphincter complex (external and internal anal sphincter) and anal epithelium[11,16] (i.e. involving anal epithelium and/or rectal mucosa)

1.3 Counselling of women

To reduce the risk of morbidity and to promote collaborative care:

- Inform women antenatally of the overall risks of perineal injury associated with vaginal birth [refer to Section 1]
- Provide antenatal and intrapartum counselling to women who may be at increased risk of anal sphincter injury
- Provide emotional support, reassurance and adequate information prior to undertaking repair procedures[10]
    - Encourage presence of women's preferred support person(s)
    - Encourage women to report ineffective pain relief
- Give written information and fully inform women, particularly when there is anal sphincter injury, about[16,18]:
    - The nature and extent of the injury
    - Details of short and any long term morbidity and treatment
    - Benefits and importance of required follow up
- Counsel women undergoing deinfibulation and seek involvement from health care professionals experienced in the care of women with female genital mutilation [also refer to Section 3.4]
- Utilise interpreter services for women from a non-English speaking background
- Document outcomes of discussions in the woman's record
- For counselling of women prior to discharge refer to Section 7

1.4 Clinical training

Appropriately trained health care professionals are more likely to provide a consistently high standard of perineal assessment and repair.[7,16,19] Perineal assessment training is important because:

- Increased vigilance, particularly in the presence of risk factors, can double the detection rate of severe perineal injury and reduce associated morbidity[16]
- Failure to detect and repair anal sphincter tears has resulted in a poorer outcome for those women, and occasionally, recourse to litigation for substandard care[16,20]

Recommendations for staff training include:

- Midwifery and medical education and skills training on antenatal and intrapartum risk reduction measures [refer to Sections 2 and 4] to minimise perineal morbidity[8,21]
- Audiovisual aids[10] with information on the principles of recognition and management of perineal trauma[18,20,22]
- Surgical skills workshops with the use of models[10,18]
- Case scenarios and perineal repair simulation exercises[10,18]
- As part of obstetric training, formal training (as per the Royal Australian and New Zealand College of Obstetrics and Gynaecology credentialing processes) in anal sphincter repair techniques[16]
- Physiotherapists – attendance at an accredited course in pelvic floor muscle assessment and rehabilitation
- Use of local procedures to set a minimum standard for staff training, competency development and recognition of previous skills training in perineal assessment and repair

2 Risk factors for anal sphincter injury

Knowledge of anal sphincter injury risk factors is not generally useful in the prevention or prediction of anal sphincter injury.[16] However, risk factor awareness when combined with thorough perineal examination may increase detection rates.[16] Risk factors for third and fourth degree tears include:

- Primiparity[16,23-27] including vaginal birth after primary caesarean section[28,29]
- Asian ethnicity[23,27,30]
- Infibulation of genitalia[7,31]
- Previous anal sphincter disruption[32]
- Induction of labour[16,23,29]
- Persistent fetal occipitoposterior position[16,27,29]
- Augmented labour[23]
- Epidural analgesia[16,23,29]
- Second stage longer than 1 hour[16,24]
- Episiotomy[23,24,26,28], particularly midline[16,33]
- Instrumental delivery[23,27,28,33] particularly forceps[16,24-26]
- Shoulder dystocia[16,23,28]
- Birth weight over 4 kg[16,23,28,33]

3 Antenatal risk reduction

Offer all women information and antenatal education on measures that may have a protective effect against perineal morbidity. This includes measures that protect against:

- Perineal injury (incidence or severity)
- Perineal pain, and/or
- Pelvic floor dysfunction

Inform women also about the importance of reducing the incidence of episiotomy which confers an increased risk of second degree or worse tear in a subsequent birth.[34]

Undertake perineal assessment early in the antenatal period (e.g. by detailed history taking, visual inspection) and consult with an obstetrician if a history of anal sphincter trauma or genital mutilation is identified.

3.1 Digital perineal massage

Table 3. Digital perineal massage

Digital perineal massage	
Risks/benefits[35]	• **Injury incidence** – massage makes no measurable difference to the overall rate of perineal tearing • **Injury severity** – massage does reduce the rate of perineal injury requiring suturing (mainly episiotomy) in primigravidae: o Optimal frequency for massaging is 3 times per fortnight o *More frequent massaging decreases this protective effect* • Massage may cause transient discomfort in the first few weeks • Massaging in the presence of infection (e.g. genital herpes, thrush) may damage the vaginal mucosa and or cause infection to spread • **Perineal pain** (not related to episiotomy) is less likely to be reported by women at 3 months postpartum if they performed massage
Technique	• Commence massage at or near 35 weeks[35] and perform no more than 3 times per fortnight • Gently insert thumbs or 1-2 fingers, 3-5 cm into the vagina, and firmly sweep in a downward and side to side motion for 5 minutes, using a natural oil for lubrication[36] (avoid nut based oils if known allergies) • Warn of associated painful burning sensation which diminishes over time[36] • Advise **not to massage** if genital herpes or vaginal infection present • Most women consider partner's involvement as positive[35,36]
Recommendations: • Inform women about the technique and the likely benefit of perineal massage[35] • Include information in antenatal education classes	

3.2 Pelvic floor muscle exercises

The strengthening of the pelvic floor muscles [refer to Table 4] in the antenatal period can reduce women's risk of experiencing postnatal incontinence.[37]

Table 4. Pelvic floor muscle exercises

Pelvic floor muscle exercises	
Risks/benefits	• Intensive antenatal pelvic floor muscle exercises (PFME): o Reduce urinary incontinence in late pregnancy and the postpartum period[37,38] o Protect against postnatal faecal incontinence[37] o May be more beneficial for women with risk factors (e.g. large baby, previous forceps birth[37]) • For full benefit women need to adhere to exercise regime which requires education, support and supervision[39]
Technique	• No standardised program[39] [refer to Appendix A for an example program] • Offer multifaceted PFME antenatal education that includes[39]: o Two antenatal sessions that demonstrate PFME o Aids to encourage adherence (e.g. reminder strategies) o An information booklet o A time efficient home training program • Include a physiotherapist in antenatal care and/or education
Recommendation: Provide women with antenatal education regarding PFME and encourage adherence throughout pregnancy. [37-39]	

3.3 Perineal stretching device

Women may choose to purchase and use a perineal stretching device (Epi-No®) [refer to Table 5] to stretch the vagina and perineal tissues in preparation for fetal expulsion.[40]

Table 5. Perineal stretching device

Perineal stretching device	
Risks/benefits	Three studies[40-42] involving primiparous/primigravidae women show the device: • May be associated with bleeding, pain, contractions and dislocation of the balloon device in the vagina during training • Is not associated with vaginal infection if hygiene instructions are followed[40] • Injury incidence – reduces the likelihood of an episiotomy in high episiotomy-use settings[40,41] • Increases the incidence of intact perineum[40,42] not fully explained by a reduction in episiotomy rate o Does not consistently affect the overall rate of perineal tearing[40-42] • Possibly may reduce severity of perineal trauma[41] (very small study, n=32) • Has no observed negative influence on the pelvic floor (i.e. bladder neck mobility, pelvic floor contraction strength)[40]
Technique[42]	• Commence between 37 weeks and term • Perform technique for 15 minutes daily for 14 consecutive days • Insert balloon device into lower vagina • Pump-up gently until balloon is firm and then until a feeling of distension (with no pain) • Use vaginal muscles to control expulsion • Use guiding hand as necessary • Wash device with soap and water after use
Recommendations: • There is insufficient high quality evidence to promote the general use of this stretching device • Encourage women to continue to perform perineal digital massage and PFME	

3.4 Deinfibulation for female genital mutilation

Perineal assessment is recommended for women who come from countries where female genital mutilation (FGM) is performed [refer to Appendix B]. Infibulated genital mutilation increases the risk of perineal injury[31] and requires specialised care during childbirth

NB: Women with FGM may suffer from post traumatic stress disorder[31] and experience flashbacks to the original FGM procedure during painful obstetric procedures.[2,31,43] Detailed review of psychosocial care during pregnancy and childbirth is beyond the scope of this guideline.

Table 6. Care considerations for female genital mutilation

Considerations	Good practice points
Communication	• Use terminology such as 'female cutting' and avoid terminology that may be perceived as endorsing this practice (e.g. 'Sunna'[2]) • Have a kind, culturally sensitive, non-judgemental manner[2,31] • Use approved interpreter services (female, unknown to woman and family)[2] • Include woman's preferred support person(s) (do not use as an interpreter)[2] • Offer social worker support
Antenatal care	• Seek advice from an obstetrician, midwife or other practitioner experienced in the care and counselling of women with FGM[31,43]; refer as needed • Offer mental health referral as needed[31] • Offer late 2nd trimester deinfibulation as an elective procedure[7,31,44]: o Consider psychological needs when deciding anaesthesia o Use visual aids to explain anatomical changes o Discuss post surgery changes to flow of urine[44], menses and leukorrhoea • Inform women that during birth: o Vaginal assessment, catheterisation and fetal scalp clip application may be difficult[7,44] o There is an increased risk of spontaneous tearing[7] o Anterior episiotomy is required in 90% of cases[31] o Gender of care providers is subject to availability of skilled staff o Reinfibulation is not offered due to associated health risks and legislative restrictions[43] ▪ Offer referral to expert counselling services to reduce risk of non-medical reinfibulation • It is important that the FGM type and mutual decisions about deinfibulation, birth plans and perineal resuturing are documented by the obstetrician[31] o As far as possible, attend antenatally before the start of labour
Intrapartum care	• Consider IV access[31] • If vaginal examinations are distressing than offer an epidural to reduce the risk of psychological harm[31] • If anterior midline episiotomy required[31]: o Ensure adequate anaesthesia to reduce risk of traumatic flashbacks; either regional[31] or local[2,31] ▪ Weigh risks and benefits of anaesthesia ▪ Consider timing and accessibility o Catheterise first if possible, then o Start at the posterior end and cut along the vulval excision scar o Be vigilant at the anterior end so as not to cut into a buried clitoris[44] or urethral meatus[2] • Perform deinfibulation prior to assessing the need for posterior episiotomy[2] o For posterior episiotomy avoid midline cutting due to increased risk of anal sphincter injury and cultural restrictions[2]
Postnatal care	• Repair requires control of bleeding, placing subcuticular sutures on each side of the incision[44], apposing raw edges and preventing spontaneous reinfibulation[31] • Ensure adequate postnatal analgesia[31] • Arrange 6 week postnatal follow up with an obstetrician

4 Intrapartum risk reduction

The following clinical measures [refer to Table 7] and interventions [refer to Table 9] are shown to influence the risk of perineal injury and/or pain.

4.1 Intrapartum clinical measures

Table 7. Intrapartum clinical measures

Clinical measures	Risks and benefits
Maternal position	• A systematic review (of studies with variable quality), comparing positions in the second stage of labour showed that[45] *in relation to perineal morbidity*: o Upright positions versus supine positions: ▪ Reduced reports of severe pain at birth ▪ Reduced rates of episiotomies and assisted vaginal deliveries ▪ Increased the rate of second degree tears ▪ Had no effect on the rate of third or fourth degree tears o Use of birth stools/chairs versus supine positions: ▪ Reduced the rate of episiotomies ▪ Increased the rate of second degree tears • A more recent lower level study suggests the need for perineal suturing is[29]: o Less in the hands-knees and left lateral (with regional anaesthetic) positions o Associated with semi-recumbent positions
Pushing techniques	• Refer to Table 10, Uncorroborated clinical measures • A longer period of active pushing is linked to increased perineal pain at time of hospital discharge in women with nil or minor trauma[46] o Encourage women to commence active pushing in response to their own urges, when maternal/fetal wellbeing evident • Slowing the birth of the fetal head at the time of crowning may reduce the risk of perineal trauma[47] i.e. by: o Discouraging active pushing at this time, or o Using maternal effort between contractions when attempting fetal head delivery[15]
Hands-on and hands-poised (or off) techniques	• Both techniques incorporate the use of counter pressure to the fetal head to prevent rapid head expulsion[48] • Neither hands-poised (or off) or hands-on (with or without modification) reduces the overall rate of perineal trauma or the risk of severe perineal tears[48] o The modified 'Ritgen' manoeuvre compared to standard hands-on technique has no significant effect on the incidence of 3rd and 4th degree tears[48] • Hands-on reduces 'mild' perineal pain for up to 10 days post birth with no significant effect on 'moderate' or 'severe' pain levels[3] • Hands-poised (or off) results in fewer episiotomies[48] • Hands-poised (or off) is used in water birth to minimise tactile stimulation • Technique used requires women's informed consent
Perineal techniques	• Refer to Table 8. Second stage of labour perineal techniques
Recommendations: • Evidence currently does not support specific pushing techniques or positions *for the protection of the perineum* during active pushing, therefore encourage women to: o Adopt comfortable positions[45] o Be guided by their own urge to push[7] • High level evidence reports no significant difference between the hands-on or hands-poised (or off) technique in reducing the incidence or severity of perineal tears[48] • To prevent rapid head expulsion at the time of crowning consider[48]: o Minimising active pushing o Applying counter pressure to the fetal head	

4.1.1 Perineal techniques for the second stage of labour

Discuss with women during pregnancy the following intrapartum perineal techniques which are recently reported to significantly reduce the incidence of severe perineal trauma.[48] **Respect women's right to decline these techniques** as:

- The perineum is particularly sensitive to touch during birth
- Women may value avoiding invasive vaginal procedures (e.g. perineal massage) over reducing risk of perineal injury

Table 8. Second stage of labour perineal techniques

Techniques	Description
Perineal warm packs	• Packs applied during the second stage of labour reduce the risk of third and fourth degree tears[48] and intrapartum perineal pain (has a continuing effect for 1-2 days post birth)[15,49] **Technique** • Use standard hospital perineal pad[49] • Ensure safe temperature prior to application[50] by: o Adding 300mls of boiling water to 300mls of cold tap water (**pour cold water first**) – replace water entirely every 15 minutes or as needed o **DO NOT** 'top up' or add hot water as this increases the risk of burning • Check the woman is able to discriminate between cold (e.g. apply cool pack or ice first) and then, if cold felt, apply warm pack to perineum • DO NOT use when skin has reduced thermal sensitivity (e.g. epidural) • Warn the woman about the risk of overheating and to report any discomfort • Apply lightly, without undue pressure, and check skin after each application • Stop at the woman's request or if discomfort expressed
Perineal massage	• Use of perineal massage when compared to 'hands-off' or 'care as usual' is associated with a significant reduction in the risk of third and fourth degree tears[48] **Technique**[15,51] • Use a sterile, water-soluble lubricant to reduce friction o Do not use chlorhexidine based creams[52] • Gently insert 2 gloved fingers just inside the woman's vagina and move from side to side • Lateral strokes should last 1 second in each direction and apply mild downward pressure (toward the rectum) • The amount of downward pressure is dictated by the woman's response • Avoid strokes that are rapid or involve sustained pressure • Massage during contractions (consider use between pushes), regardless of maternal position • Stop at the woman's request or if discomfort expressed
Recommendations: In the second stage of labour: • Offer women with normal skin sensation perineal warm packs to reduce the risk of 3rd and 4th degree tears[48] and to reduce perineal pain[15,50] • Offer women perineal massage to reduce the risk of 3rd and 4th degree tears[48] • Ensure perineal techniques are only performed with women's informed consent	

4.2 Intrapartum interventions

Table 9. Intrapartum interventions

Interventions	Risks and benefits
Epidural	• Makes no difference per se to the rates of perineal trauma requiring suturing when compared to no epidural or no analgesia[53] • Increases risk of instrumental delivery which is a risk factor for anal sphincter injury[53,54] • More recent, lower level evidence suggests epidural used in combination with forceps and episiotomy may increase the overall risk of anal sphincter tearing in primigravidae women[54] o No study found that included multiparous women

Episiotomy	• In 2009 the National episiotomy rate for vaginal births was reported as 12.7% with the Queensland rate being 12.6%[55]
	• The ACHS recommended target episiotomy rate is simply 'low'[11]
	
	Technique principles:
	• Obtain the woman's informed consent and document
	• Administer and check that analgesia is effective prior to procedure
	• Cut an episiotomy by starting at the fourchette and directing the incision away from the perineal midline at an angle of 45 to 60 degrees[7] so as to reduce the risk of anal sphincter injury[7,16]
	
	Restricted episiotomy use:
	• Applies criteria to the use of episiotomy (e.g. fetal compromise, selective use in instrumental vaginal birth[7])
	• Requires the use of clinical judgement
	• Increases anterior perineal tears (minimal morbidity)[17]
	• Decreases[17]:
	  o Posterior perineal injury
	  o Severe perineal trauma
	  o Need for suturing
	  o Healing complications at 7 days postpartum
	• May have beneficial effects on the incidence and persistence of postpartum perineal pain[46]
	• Reduces the rate of episiotomy in the first birth which decreases the risk of perineal trauma in subsequent births[34,56]

Instrumental vaginal birth	• Forceps compared to Ventouse are associated with higher risk of[57]:
	  o Episiotomy
	  o 3rd and 4th degree tears with or without episiotomy
	  o Vulval and vaginal trauma
	  o Flatus incontinence or altered continence
	  o Requirement for general anaesthetic
	• The lower the fetal head on application of forceps or vacuum the less risk of anal sphincter tears[28]
	• Other clinical factors may influence the operator's choice of instrument[57]

Recommendations: • Implement a restrictive-use episiotomy policy[7,58] • Perform an episiotomy if there is a clinical need such as selective use in instrumental births or for suspected fetal compromise[7] • Cut a mediolateral episiotomy when indicated – start with the angle of the open scissors at the fourchette and cut away from the midline at an angle of 45 to 60 degrees[7,16,57] • Use a vacuum extractor rather than forceps for assisted vaginal delivery when clinically possible[57]	

4.3 Uncorroborated clinical measures

Current levels or quality of clinical evidence do not support the following measures to *significantly reduce perineal morbidity*.

Table 10. Uncorroborated clinical measures

Period	Uncorroborated clinical measures
Antenatal	• Raspberry leaf tea or extract[59,60]: o Insufficient evidence to recommend a safe standard for use o Unable to specify if the 'raspberry tea extract' used in the published evidence is consistent with other available products of the same name in terms of: ▪ Part of the plant used ▪ Preparation methods ▪ Manufacturing processes ▪ Equivalent dry weight ▪ Dose of active components[61]
Intrapartum	• Water birth[62,63] • Perineal lubrication[15] • Hyaluronidase injection[64] • Valsalva over spontaneous pushing techniques[65] – quality research needed regarding potential effects on pelvic floor structure and function • Delayed pushing versus immediate pushing for nulliparous women with epidural anaesthesia[66] • Midwifery led-care[67] • Continuous one on one support[68]
Postnatal	• Perineal ultrasound to treat perineal pain or dyspareunia[69] • Topical anaesthetics for perineal pain[70] • Sitz baths[71] • Herbal remedies (e.g. arnica) topical or ingested[60,71]: o Insufficient evidence to recommend a safe standard for use o Unable to specify if the 'herbal remedies' used in the published evidence is consistent with other available products of the same name (as above)[61] • Ray lamps

NB: The use of perineal 'donut' cushions is not recommended due to possible formation of dependent perineal oedema which increases the risk of perineal wound breakdown

5 Postpartum perineal examination and repair

Accurate diagnosis and effective care of perineal injuries requires systematic perineal assessment[72] [refer to Table 11] and best practice repair techniques [refer to Table 12].

5.1 Perineal examination

Maternal considerations:

- Ensure privacy and cultural sensitivity
- Provide support to the woman and her baby:
  - Encourage the woman's preferred support person(s) to be present
- Gain co-operation through informed consent[73]:
  - Discuss the need to perform vaginal and rectal examinations
- Ensure adequate pain relief[73] prior to and during the procedure (e.g. nitrous gas, epidural):
  - Note that 16% of women report severe pain levels during perineal procedures[74]

Procedural practice points:

- Optimise visualisation through lighting and maternal positioning (e.g. dorsal or lithotomy):
  - Ensure maternal comfort[73]
- Ensure procedure is performed by an experienced practitioner trained in perineal assessment and alert to risk factors[16] [refer to Section 2]
- Undertake a systematic assessment of perineal structures using an aseptic technique [refer to Section 5.1.1]
- Refer to a more experienced clinician if there is doubt as to the extent of the injury[73]
- Discuss findings and treatment with the woman at the conclusion of the procedure[75]
- Document assessment techniques and findings[73,75]

5.1.1 Systematic perineal assessment

- In the event of instrumental birth or extensive perineal trauma have a medical practitioner trained in recognition and management of perineal tears perform perineal assessment [16]
- Midwives require sufficient assessment skills to be able to reliably identify and refer severe perineal trauma, if in any doubt refer for medical review
- Visual examination alone often results in underestimation of the degree of trauma[73]

Table 11. Systematic perineal assessment

Systematic perineal assessment[73]	
Visual examination	• Check the periurethral area, labia and proximal area of the vaginal walls • Check if the perineal tear extends to the anal margin or anal sphincter complex • Check for absence of anal puckering around the anterior aspect of the anus (between 9 and 3 o'clock) as may suggest anal sphincter trauma
Vaginal examination	• Establish extent of the tearing by inserting the index and third fingers high into the vagina, separate the vaginal walls before sweeping downward to reveal the cervix, vaginal vault, side walls, floor and the posterior perineum • Identify the apex of the injury, using vaginal retractors if required
Rectal examination	• Insert the index finger into the anus and ask the woman to squeeze: o The separated ends of a torn external anal sphincter will retract backwards and a distinct gap will be felt anteriorly • When regional analgesia affects muscle power, assess for gaps or inconsistencies in the muscle bulk of the sphincter by placing the index finger in the anal canal and the thumb in the vagina and palpate by performing a 'pill-rolling motion' • Assess the anterior rectal wall for overt or occult tears by palpating and gently stretching the rectal mucosa with the index finger • Note that it is often difficult to determine if the internal anal sphincter is damaged. Careful inspection by an expert medical practitioner is required

5.2 Perineal repair

In addition to perineal examination considerations, perineal repair requires:
Maternal considerations:

- Gain informed consent for the repair[13], discuss functional and/or cosmetic changes
- Time as soon as practicable after birth – balance risk of infection and blood loss with support of uninterrupted skin-to-skin contact post birth[7]

Procedural practice points:

- Ensure adequate topical[76], local, regional or general anaesthetic
- Ensure operator is competent in repair techniques or has direct expert supervision
- Refer to local workplace instructions for detailed procedural instruction
- Ensure availability of an appropriate selection of suture materials[13,16]
- Count/document needles, radio-opaque swabs or packs before and after procedure[75]
- Document: consent, anaesthetic, suture technique/materials, estimated blood loss, post-repair haemostasis and rectal assessment, advice given, date/time and operator's ID

Table 12. Perineal repair

Degree of injury	Good practice points
1st degree repair	• Suturing is not required if haemostasis is evident[10] and anatomical structures are apposed, unless suturing is preferred by the woman to reduce pain[77] • Repair skin with continuous subcuticular sutures or consider surgical glue[78] • Re clitoral tears – large volumes of local anaesthetic can damage nerve supply
2nd degree repair	• Limited evidence comparing outcomes of suturing versus non-suturing[79]: o Suturing improves short term healing in first 5 days[72] and up to 6 weeks post birth[80] – with comparable healing after this point[72,81] o Lack of data on long term outcomes i.e. dyspareunia or incontinence[79] o No difference in pain scores[72,79] yet non-suturing is associated with: ▪ Less use of analgesia[72,81], less reports of negative influence on breastfeeding[81], earlier return to feeling 'normal', starting PFME[72] • Ensure informed decision[79], if repair declined offer care as per Section 7 • To facilitate healing use: o Rapid absorbing synthetic suture (e.g. 2.0 Vicryl Rapide®)[7,77] o Continuous, non-locking suture technique for all layers (skin, vagina, perineal muscles) with a subcuticular stitch[77,82] or glue[83], for the skin • Undertake rectal examination post repair to exclude suture penetration[73]
3rd and 4th degree repair	• Anal sphincter repair is to be carried out or directly supervised by an expert practitioner (obstetrician)[16] to minimise risk of morbidity (e.g. fistula formation) • Will usually require transfer to operating theatre, except in exceptional cases • Use of an operating theatre for repair ensures[16]: o Aseptic technique o Access to optimal lighting and equipment o Adequate instrumentation and assistance • Use of regional or general anaesthetic enables[16]: o Anal sphincter relaxation o Retrieval of retracted torn ends o Approximation of the torn sphincter without tension • Use an over lapping or end-to-end method for primary repair[16,84]: o At 12 months the overlapping method has lower incidence of faecal urgency and lower faecal incontinence scores[15,54,81] • Repair: o Internal anal sphincter separately with interrupted sutures using a fine suture size (e.g. 3-0 PDS (polydiaxanone) or 2-0 Vicryl® (polyglactin)[16]) o External anal sphincter with either PDS or Vicryl®[16] o Anal epithelium with interrupted 2-0 Vicryl® (polyglactin) suture with the knots tied in the anal lumen o For long acting or non-absorbable suture materials, bury knots beneath superficial perineal muscle to prevent knot migration to skin[16]
Deinfibulation	• Refer to Table 6. Care considerations for women with FGM

6 Puerperal genital haematoma

Up to 87% of haematomas are associated with sutured perineal injuries; others can occur with an intact perineum.[85] Indirect injury can occur from radial stretching of the birth canal as the fetus passes through.[85]

6.1 Diagnosis of puerperal haematoma

Timely diagnosis [refer to Table 13] can reduce the risk of maternal morbidity or death.

Table 13. Diagnosis of puerperal genital haematoma

Considerations	Good practice points
Presentation	Presentation is dependent on the haematoma site, volume and rate of formation[85]: • Hallmark symptom is excessive pain or pain that is persistent over a few days[85] • Pain location varies according to the haematoma site[85]: o Perineal pain may indicate a vulval/vulvovaginal haematoma o Rectal or lower abdominal pain may indicate a paravaginal haematoma o Abdominal pain may indicate a supravaginal haematoma o Shoulder tip pain may or may not be present[86] • The woman may have[85]: o Signs of hypovolaemia or symptoms of shock disproportionate to the revealed blood loss o Feelings of pelvic pressure o Urinary retention o An unexplained pyrexia
Assessment and diagnosis	• Listen to the woman • Discuss with the woman the possible need for a vaginal and/or rectal examination and ensure adequate analgesia prior to performing • Undertake a thorough examination before attributing symptoms to other causes, check for[85]: o Vulval haematoma: appears as a swelling on one side of the vulva that may extend into the vagina or fascia of the thigh o Paravaginal haematoma: may be felt as a mass protruding into the vaginal lumen or as an ischiorectal mass o Supravaginal haematomas: may be felt as an abdominal mass causing the uterus to deviate laterally • Consider that vascular disruption (causing haematoma) may be associated with underlying 'macro' or 'micro' levator trauma[87]: o Clinical diagnosis – detection enhanced using 3 dimensional (3D) or 4D ultrasound techniques, where available[88] o Evidence regarding benefits of surgical repair remains unclear[89] • If accessible[90]: o Ultrasound (consider transvaginal) can be used to detect pelvic extraperitoneal haematomas o Computerised tomography (CT) and magnetic resonance imaging can identify the exact extent of the haematoma o Contrast-enhanced CT can detect active bleeding through extravasation of the intravenous contrast

6.2 Treatment and care of puerperal haematoma

The care outlined in Table 14 is aimed at[85]:

- Preventing further blood loss
- Minimising tissue damage
- Managing pain
- Reducing the risk of infection
- Providing women with information and counselling

Table 14. Care of puerperal genital haematoma

Considerations	Good practice points
Treatment	Is dependent on the size and site of the haematoma: • **If signs of shock** o [Refer to Guideline: Primary postpartum haemorrhage] o Assess pulse, respirations, oxygen saturations and blood pressure every 5 minutes o Insert intravenous cannulae[85] (14g or 16g bilaterally if signs of shock) o Full blood count, cross match, group and hold and coagulation profile[85] o Provide aggressive fluid resuscitation if signs of hypovolaemic shock[85] [refer to] o Transfer to operating theatre for surgical procedures[85] after adequate resuscitation • **For large non-haemostatic haematoma** – clot evacuation, primary repair and/or tamponade of blood vessels through compression packing (for 12-24 hours)[85] o If persistent bleeding consider arterial ligation or embolisation ▪ Transfer to higher level service as required o Drain insertion is discretionary ▪ Monitor drainage for failed haemostasis[85] ▪ Remove once loss minimal (e.g. less than 50 mL in 12 hours o Administer intraoperative prophylactic antibiotics (e.g. Cephazolin 1 gram (adult 80 kg or more: 2 grams) IV plus Metronidazole 500 milligrams IV at the time of repair[91] o Insertion of a urinary catheter to prevent retention and to monitor fluid balance[85] • **For small static haematoma** – conservative treatment[85]: o Early application of ice packs to minimise vulval haematoma • If levator trauma detected refer to a physiotherapist and consider uro/gynaecologist consultation
Postnatal care	• Remove any vaginal packing 12-24 hours after procedure • Give prophylactic analgesia prior to pack removal • Offer regular analgesia • Review regularly as recurrence is common[85], assess: o Pain levels o Blood pressure and pulse o Temperature • Check for laboratory signs of coagulopathy and anaemia – treat as required[85] [Refer to the Primary postpartum haemorrhage guideline] • Offer the woman obstetric debriefing prior to discharge (document in chart) • Advise GP follow up

7 Postpartum perineal care

In the event of significant perineal injury, particularly if anal sphincter injury, offer women clinical disclosure, taking time to:

- Discuss:
  - The nature of the injury
  - The treatment and follow-up required
  - Potential effects on future pregnancies
- Answer questions and explore the woman's responses as part of debriefing
- Document details of the interaction in the woman's chart

Optimal postnatal care requires a multidisciplinary team approach that aims to minimise perineal morbidity [refer to Tables 15 and 16].

7.1 Minimising pain and the risk of infection

Table 15. Postnatal measures to reduce perineal pain and infection risk

Clinical measures	Good practice points
Reduce pain	• If tears are in close proximity to the urethra consider an indwelling catheter for 24-48 hours • Apply cold packs or gel packs for 10-20 minute intervals for 24-72 hrs[92,93] • Advise gentle perineal compression (e.g. straddle rolled hand towel) • Post 2nd degree/episiotomy repair offer rectal non-steroidal anti-inflammatory drugs (NSAID) as reduces use of oral analgesia for first 48 hours[94] • Offer: o Oral Paracetamol one gram early in the postnatal period[95] o Oral NSAID [47,96] in the absence of any contraindications o Urinary alkalisers soon after birth to reduce urine acidity an discomfort associated with open wounds[97] • Minimise use of Codeine and other narcotics to reduce risk of constipation
Other drugs	• For women with 3rd and 4th degree tears, administer: o Prophylactic IV antibiotics to reduce incidence of infection[16,98,99] (e.g. Cephazolin 1 gram (adult 80 kg or more: 2 grams) IV plus Metronidazole 500 milligrams IV at the time of repair[91] o At *least* 10 days of laxatives and stool softeners to prevent constipation and risk of wound dehiscence[16] and give oral/written advice to: ▪ Cease use and see GP if experiencing faecal incontinence ▪ See GP if bowels not open or constipated after discharge • For 4th degree tears (consider for complicated 3rd degree repair): o Continue IV antibiotics for 24 hours (as above) then o Follow with 5 days of oral broad spectrum antibiotics (e.g. Amoxycillin + Clavulanic 500 + 125 milligrams orally, 12-hourly for 5 days[91])

7.2 Promoting perineal recovery

Table 16. Postnatal measures to promote perineal recovery

Clinical measures	Good practice points
Positioning and movement	• Advise positions that reduce dependent perineal oedema, particularly in first 48 hours, such as: o Lying the bed flat and side-lying to rest and breastfeed, try pillow-supported 'recovery' position, avoid overuse of sitting/propped positions • Avoid activities that increases intra-abdominal pressure (IAP) for 6-12 weeks post birth such as: o Straining, lifting (e.g. use of over-bed bar in hospital), high impact exercise, sit ups – move in/out of bed through a side-lying position
Pelvic floor muscle exercises	• Commence 2-3 days postpartum, or when comfortable • For women with a 3rd or 4th degree tear refer to a physiotherapist[16] prior to discharge • Educate all women about the *correct* technique for PFME and the importance of long term adherence[16,39,47,97,100] [refer also to Table 4]: o NOTE: Incorrect technique can cause excessive IAP and repetitive downward displacement of the pelvic floor, over time, may disrupt tissue and muscle healing
Hygiene and healing	• Visually assess the repair and healing process at each postnatal check and share findings with the woman • Advise women to: o Support the perineal wound when defecating or coughing o Wash and pat dry the perineal area after toileting[96] o Change perineal pad frequently, wash hands before and after changing and to shower at *least* daily to keep the perineum clean[9] o Check the wound daily[9] using a hand mirror – provide education about the signs of infection and wound breakdown o Report concerns to their midwife or GP[96]
Diet	• Emphasise the importance of a healthy balanced diet to maximise wound healing and prevent constipation[97] – encourage high fibre food choices • Encourage 1.5-2 litres of water per day if ordered laxatives or Iron therapy • Treat anaemia, as needed, with Iron therapy (consider delaying start for 2 weeks) and/or dietary advice

7.3 Follow-up

Inform women who sustained perineal injury, particularly if suturing was required, of recommended follow-up [refer to Table 16].

Table 16. Post perineal repair follow-up

Follow-up	Good practice points
Prior to discharge – anal sphincter injury	For women with anal sphincter injury: • Refer to obstetrician[100] for 6-12 weeks postpartum review • Refer to a physiotherapist for follow up and pelvic floor muscle training (PFMT)[16] • Refer to continence clinics (where available) prior to discharge
Discharge preparation – self care advice till 6 weeks post birth	Advise women with a perineal injury: • Obtain GP/midwife review around 6 weeks post partum for assessment of wound healing o If signs of wound infection or breakdown seek medical review earlier • Continence clinic review or follow-up is required, where available • Report to GP/midwife if experiencing dyspareunia, explain: o Women with perineal suturing are at increased risk[101,102] o Wound healing is one of many factors that influences the decision to resume sexual intercourse[97] o Ways to minimise discomfort (e.g. experimenting with sexual positions, use of lubrication)[97] o Delayed reporting is common due to median time of return to intercourse being 5-8 weeks postpartum[101] • Report to their GP/midwife if ongoing constipation or symptoms of urinary or faecal incontinence o Refer as indicated
After 6 weeks postpartum	For women with anal sphincter injury and those reporting symptoms of anal sphincter dysfunction: • Refer to a gynaecologist or uro-gynaecological or colorectal surgeon • Care considerations may include[16]: o Endoanal ultrasound o Anorectal manometry o Consideration of secondary sphincter repair • Refer to a physiotherapist for assessment and individualised PFMT to help manage pelvic floor dysfunction

7.3.1 Prognosis following repair of anal sphincter injury

Advise women:

- Following external anal sphincter repair approximately 60-80% of women are asymptomatic at 12 months[16]
- Symptomatic women mostly report experiencing incontinence of flatus or faecal urgency[16]
- Primary care givers in subsequent pregnancies need to be informed of anal sphincter repair and of any continuing urinary or faecal symptoms
- If symptomatic after repair and/or abnormal ultrasound or manometry findings are present elective caesarean section in subsequent pregnancies may be offered[16]:
  - The clinical relevance of asymptomatic defects demonstrated by ultrasound is currently unclear[16]
    - Inform women that best practice is unknown and discuss birth options[100]
- Vaginal birth in subsequent pregnancies is associated with a 17-24% chance of developing worsening symptoms afterwards[16]
- The risk of repeat severe perineal trauma is not increased in subsequent birth, compared with women having their first baby[7]
- There is no evidence to support the use of prophylactic episiotomy in subsequent vaginal births[16]

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Appendix A: Pelvic floor muscle exercises

Reproduced with the kind permission of the Continence Foundation Australia, excerpt from 'Pelvic Floor Muscle Exercises for Women'

Where are my pelvic floor muscles?

The first thing to do is to find out which muscles you need to train:

1. Sit or lie down with the muscles of your thighs, buttocks and stomach relaxed

2. Squeeze the ring of muscle around the back passage as if you are trying to stop passing wind. Now relax this muscle. Squeeze and let go a couple of times until you are sure you have found the right muscles. Try not to squeeze your buttocks

3. When sitting on the toilet to empty your bladder, try to stop the stream of urine, then start it again. Do this to learn which muscles are the right ones to use – **but do this no more than once a week**. Your bladder may not empty the way it should if you stop and start your stream more often than that

If you don't feel a distinct "squeeze and lift" of your pelvic floor muscles, or if you can't slow your stream of urine as talked about in Point 3, discuss with your midwife, doctor, physiotherapist or continence nurse. They will help you to get your pelvic floor muscles working right.

Women with very weak pelvic floor muscles can benefit from pelvic floor muscle exercises.

How do I do pelvic floor muscle exercises?

Now that you can feel the muscles working, you can:

- Squeeze and draw in the muscles around your back passage and your vagina at the same time:
    - Lift them UP inside
    - You should have a sense of "lift" each time you squeeze your pelvic floor muscles
    - Try to hold them strong and tight as you count to 8
    - Now, let them go and relax
    - You should have a distinct feeling of "letting go"
- Repeat "squeeze and lift" and let go. It is best to rest for about 8 seconds in between each lift up of the muscles. ***If you can't hold for 8, just hold for as long as you can***
- Repeat this "squeeze and lift" as many times as you can, up to a limit of 8 to 12 squeezes
- Try to do three sets of 8 to 12 squeezes each, with a rest in between
- Do this whole training plan (three sets of 8 to 12 squeezes) each day while lying down, sitting or standing

While doing pelvic floor muscle training: keep breathing; only squeeze and lift; do NOT tighten your buttocks; and keep your thighs relaxed.

Other things you can do to help your pelvic floor muscles:

- Use "the knack" – that is, always try to "brace" your pelvic floor muscles (by squeezing up and holding) each time before you cough, sneeze or lift anything
- Share the lifting of heavy loads
- Eat fruit and vegetables and drink 6 to 8 glasses of water daily
- Don't strain when using your bowels
- Ask your doctor about [treatment for] hay fever, asthma and bronchitis to ease sneezing and coughing
- Keep your weight within the right range for your height and age

Appendix B: Female genital mutilation classification and country

Type	Classification
I	Partial or total removal of the clitoris and/or the prepuce (clitoridectomy)
II	Partial or total removal of the clitoris and the labia minora, with or without excision of the labia majora (excision)
III	Narrowing of the vaginal orifice with creation of a covering seal by cutting and appositioning the labia minora and/or the labia majora, with or without excision of the clitoris (infibulation)
IV	All other harmful procedures to the female genitalia for non-medical purposes, for example: pricking, piercing, incising, scraping and cauterization

Countries in which FGM has been documented

Benin	Kenya
Burkina Faso	Liberia
Cameroon	Mali
Central African Republic	Mauritania
Chad	Niger
Cote d'Ivoire	Nigeria
Djibouti	Senegal
Egypt	Sierra Leone
Eritrea	Somalia
Ethiopia	Sudan
Gambia	Togo
Ghana	Uganda
Guinea	United Republic of Tanzania
Guinea-Bissau	Yemen

Incidences also documented in:

India	Malaysia
Indonesia	United Arab Emirates
Iraq	Thailand
Israel	

Source: World Health Organisation, An update on WHO's work on Female genital mutilation (FGM): Progress report, 2011 http://www.who.int/en/

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