Female pelvic floor 2: assessment and rehabilitation

The pelvic floor muscles have a multitude of functions, one of the most important ones being to help maintain urinary and faecal continence. In women, weakened pelvic floor muscles can lead to pelvic organ prolapse and continence issues. Dumoulin et al (2018) concluded that pelvic floor rehabilitation can reduce – or even cure – symptoms of incontinence in women. However, despite this encouraging fact, women often lack knowledge on pelvic floor anatomy, dysfunction and rehabilitation (De Andrade et al, 2018).

This article – the second in a two-part series on the female pelvic floor – discusses pelvic floor assessment and rehabilitation, with practical guidance on how to examine patients and teach them pelvic floor exercises. Part 1 (Bit.ly/NTPelvicFloor1) described the anatomy and functions of the female pelvic floor and the causes and consequences of pelvic floor weakness.

Assessing the pelvic floor
Before assessing a patient’s pelvic floor, nurses need to conduct a comprehensive continence assessment that includes a full medical, surgical and obstetric history, medication, weight, presenting symptoms and lifestyle factors (National Institute for Health and Care Excellence, 2013). The pelvic floor assessment itself usually comprises an external visual examination followed by an internal examination – although the latter is not always appropriate or recommended (see below).
An internal examination should only be undertaken by a professional competent in pelvic floor assessment. Before conducting an internal examination, nurses need to check for:

- Infection, infestation or foreign body;
- Fragile tissues, soreness, pelvic pain, tension in the pelvic floor area;
- History of sexual abuse;
- Menstruation.

If any of the above is present, it may be better to postpone the examination until the problem has been resolved. An internal examination is contra-indicated if the patient:

- Is <18 years of age (due to consent issues);
- Has given birth in the previous six weeks;
- Has had pelvic surgery in the past three months.

**External examination**

For an external examination, the person should be in the supine position with knees bent, feet apart and pelvic area exposed, but dignity maintained (Haslam and Laycock, 2008). Staff must comply with all infection control procedures.

Wearing non-sterile, non-latex gloves and using lubricating gel, nurses will gently part the labia and examine the patient’s perineal area, checking it for:

- Red, excoriated skin;
- Infections, infestations, piercings;
- Skin tags;
- Abnormal lumps;
- Faecal and/or urinary leakage;
- Pelvic organ prolapse (see part 1);
- Signs of atrophic vaginitis and/or lichen sclerosus;
- Alterations to genital area that may indicate female genital mutilation (FGM); if nurses suspect FGM, they must report it as per the national guidance procedures. Wearing non-latex gloves, nurses will lubricate their index finger, introduce it into the vagina and:

- Ask the patient to cough, then check for prolapse (anterior, posterior or vaginal) or urinary/faecal leakage on coughing;
- Ask the patient to pull in their pelvic floor muscles, check how these are working using the PERFECTR method (Box 1), then grade their strength using the Modified Oxford Grading (MOG) classification system (Box 2).

The PERFECTR method allows health professionals to measure a range of factors relating to pelvic floor muscle contraction (PFMC) that will help them assess pelvic floor health. A PFMC with a MOG of ≥3 is issued by the Home Office (2015).

**Box 1.** PERFECTR method of pelvic floor muscle assessment

- **P (power)** – grade of muscle strength according to Modified Oxford Grading
- **E (endurance)** – time in seconds during which patient can tighten pelvic floor before muscle strength is reduced by 50% (usually around 10 seconds per contraction)
- **R (repetition)** – number of PFMCs patient can perform allowing 4 seconds rest between each (usually around 10)
- **F (fast)** – number of fast PFMCs patient can perform, contracting muscles as strongly as possible and relaxing them as quickly as possible
- **E (elevation)** – does the posterior vaginal wall lift during PFMC?
- **C (co-contraction)** – do the lower abdominal muscles (ancillary muscles) contract during PFMC?
- **T (timing)** – synchronous involuntary contraction of pelvic floor muscles on coughing
- **R (relax)** – ability to relax between PFMC

PFMC = pelvic floor muscle contraction.

Source: Adapted from Haslam and Laycock (2008)

**Box 2.** Modified Oxford Grading classification

- **Grade 0** – no discernible contraction
- **Grade 1** – very weak contraction (‘flicker’)
- **Grade 2** – weak contraction (increase in tension without lift or squeeze)
- **Grade 3** – moderate contraction with some degree of lift and squeeze
- **Grade 4** – good contraction producing elevation with some resistance
- **Grade 5** – strong contraction and strong resistance

Source: Adapted from Haslam and Laycock (2008)

**Internal examination**

For an internal examination, the patient should be in the same position as for an external examination. Nurses need to observe all local consent, chaperone procedures. Wearing non-latex gloves, nurses will lubricate their index finger, introduce it into the vagina and:

- Sweep in a circular motion to check muscle symmetry, assess the patient for pain and detect any ridges or valleys that may be the sign of scars caused by tears and/or episiotomy;
- Ask the patient to cough, then check for prolapse (anterior, posterior or vaginal) or urinary/faecal leakage on coughing;
- Ask the patient to pull in their pelvic floor muscles, check how these are working using the PERFECTR method (Box 1), then grade their strength using the Modified Oxford Grading (MOG) classification system (Box 2).

**“Women often lack knowledge on pelvic floor anatomy, dysfunction and rehabilitation”**

Asking the patient to cough will allow nurses to check whether there is descent – tissue protrusion that may indicate a degree of prolapse – and/or leakage of urine/faeces on coughing. Asking the patient to tighten (pull in) their pelvic floor muscles will allow nurses to observe whether there is contraction and thereby evaluate the strength of the muscles.

**Fig 1.** Female pelvic floor dermatomes
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usually discernible on visual perineal examination; it is called a ‘wink’.

Checking for nerve damage
After having examined the pelvic floor, nurses need to check dermatomes in the pelvic region (Fig 1) to identify potential nerve damage, as this could delay the effects of pelvic floor rehabilitation.

Recording findings
Before discussing an exercise programme with the patient, it is important that nurses record the findings of their investigations. This can be done in two ways:

- Using the ring of continence;
- Using the PERFECTR method.

The ring of continence is a schematic representation of the urethra, vagina and anus: the vagina is a clock, with the urethra positioned at 12 o’clock and the anus at 6 o’clock (Fig 2). Nurses can record their findings according to location. For example, Fig 2 shows that there is an anterior prolapse (1 o’clock), a posterior prolapse (5 o’clock), and a vaginal scar (8 o’clock).

Table 1 shows an example of pelvic floor assessment findings recorded with the PERFECTR method; the findings are explained as follows:

- **P**: muscle strength was 3 on the MOG;
- **E**: the patient was able to tighten their muscles for five seconds;
- **R**: the patient was able to perform four PFMCs;
- **F**: the patient was able to perform seven fast PFMCs;
- **E**: there was elevation of the posterior vaginal wall during PFMC;
- **C**: there was some use of ancillary abdominal muscles;

![Fig 2. Ring of continence](image)

Source: Adapted from Haslam and Laycock (2008)

T: there was no muscle contraction on coughing;
R: the patient was able to relax their muscles between each contraction.

This patient was able to contract their own pelvic floor, which is classed as moderately good. They can hold for five seconds – a moderate hold – and can undertake four PFMCs, but there is room for improvement. As such, they could be given supporting literature and undertake the course of rehabilitation themselves at home with frequent monitoring by the continence service or the professional instigating treatment to check for improvement.

Teaching pelvic floor exercises
Once a full continence assessment and pelvic floor examination have been carried out in line with NICE’s (2013) guidance, patients need education and a pelvic floor rehabilitation programme that has been tailored to their capabilities and needs. It is crucial that they understand:

- Where the pelvic muscles are;
- What they do;
- How they work;
- What the rehabilitation will hopefully achieve (Bø et al, 2007a).

Patients need to be told that it can take more than three months before they notice any improvement and that their perseverance with, and adherence to, the exercise programme will be paramount.

Box 3 shows an example of a pelvic floor exercise programme as it might be explained and handed out to a patient. While there is no recognised agreed programme for pelvic floor rehabilitation (Dumoulin et al, 2018; NICE, 2013), there seems to be a consensus that, in most cases exercise should be:

- Undertaken in a variety of positions – lying down, sitting and standing – to improve function;
- Performed to maximum strength;
- Stepped up progressively to muscle overload to increase bulk;
- Patients should be instructed to:
  - Imagine that they are trying to stop themselves from passing wind;
  - Tighten around the back passage (anus) and pull up towards the front passage (urethra);
  - Try to avoid holding their breath, pulling their abdomen, squeezing their legs together or tensing their buttocks.

Previously, women were instructed to try to stop the urine flow when passing
Obstetric and Gynaecological Physiotherapy (2018); Dorey (2003), but there is a lack of studies on the benefits of pelvic floor education and exercise before symptoms occur. However, as is so often the case, instead of treating symptoms once they have occurred, prevention is better than cure: prophylactic patient education and exercise may well be the most beneficial courses of action to take to prevent the negative consequences of pelvic floor weakness discussed in this series. NT

References

Treat or prevent?
Usually, pelvic floor rehabilitation is only initiated when a woman presents with symptoms. There is evidence that pelvic floor rehabilitation is beneficial (De Andrade et al, 2018; Dumoulin et al, 2018; Radzimińska et al, 2018; NICE, 2013), but there is a lack of studies on the benefits of pelvic floor education and exercise before symptoms occur. However, as is so often the case, instead of treating symptoms once they have occurred, prevention is better than cure: prophylactic patient education and exercise may well be the most beneficial courses of action to take to prevent the negative consequences of pelvic floor weakness discussed in this series. NT

Box 3. Example of a pelvic floor rehabilitation programme
Rehabilitation comprises exercises in three positions: lying down, sitting and standing.

Slow muscle contractions
Lying down: lie down on your back on your bed with your knees bent and feet slightly apart. Tighten your pelvic floor as if trying to stop wind escaping. Hold contraction for _____ seconds. Relax for four seconds. Avoid holding your breath or tensing buttock muscles.

Sitting: sit on the edge of a chair or bed with your knees apart and feet facing forward. Tighten your pelvic floor and hold contraction for _____ seconds. Relax for four seconds. Avoid holding your breath or tensing buttock muscles.

Standing: stand with weight evenly distributed, and feet apart and facing forward. Tighten your pelvic floor and hold contraction for _____ seconds. Relax for four seconds. Avoid holding your breath or tensing buttock muscles.

Perform three contractions to maximum strength three times daily in each position, building up to 10 three times daily.

Fast muscle contractions
In the same three positions as above, tighten pelvic floor as if to stop wind escaping but do not hold. Relax and repeat.

Perform three contractions to maximum strength twice daily in each position, building up to 10 three times daily.

Other activities
50% lift: contract your pelvic floor to 50% of the maximum strength only while walking, climbing stairs and so on. This will increase endurance.

The knack: tighten your pelvic floor strongly and quickly before coughing, sneezing, getting up from a chair, lifting, and so on. This will help prevent leakage.

After urinating: tighten your pelvic floor strongly to ‘squeeze out’ the last few drops before leaving the toilet.

After defecating: tighten your pelvic floor to ‘push back’ any faecal matter left in the anal canal into the bowel.

During sexual activity: tighten the pelvic floor, as this will help enhance sexual intercourse.

Remember to do your exercises
- Put an alert on your phone
- Try using a pelvic floor exercise app
- Maintain an exercise routine (such as morning and evening, like brushing your teeth)

Other useful tips
- Avoid constipation and straining
- Eat the recommended five portions of fruit and vegetable per day
- Shed those extra pounds
- Drink plenty (1-1.5 litres daily) of fluids, preferably water
- Favour low-impact exercise (such as walking, swimming and pilates)
- Avoid smoking
- Remember that relaxing your pelvic floor muscles is just as important as contracting them

Sources: Adapted from Pelvic Obstetric and Gynaecological Physiotherapy (2018) and Dorey (2003)