



The Children's Bowel & Bladder Charity

Pelvic Floor Muscle Training: Optimising Activation, Preventing Compensations, and Facilitating Progression

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The Aims of this session

- Develop skills in connecting with the pelvic floor, verbal/tactile cueing and verbal imagery, observation, and clinical reasoning
- Assessment, activation, and progression of pelvic floor muscle (PFM) training
- Identify correct pelvic floor muscle contractions
- Recognise and prevent common compensatory movement strategies
- Modify exercise positions and loading to optimise activation
- Progress exercises from supported low-load activation to functional, task-specific activities
- Explore the role of biofeedback as an adjunct to PFM training

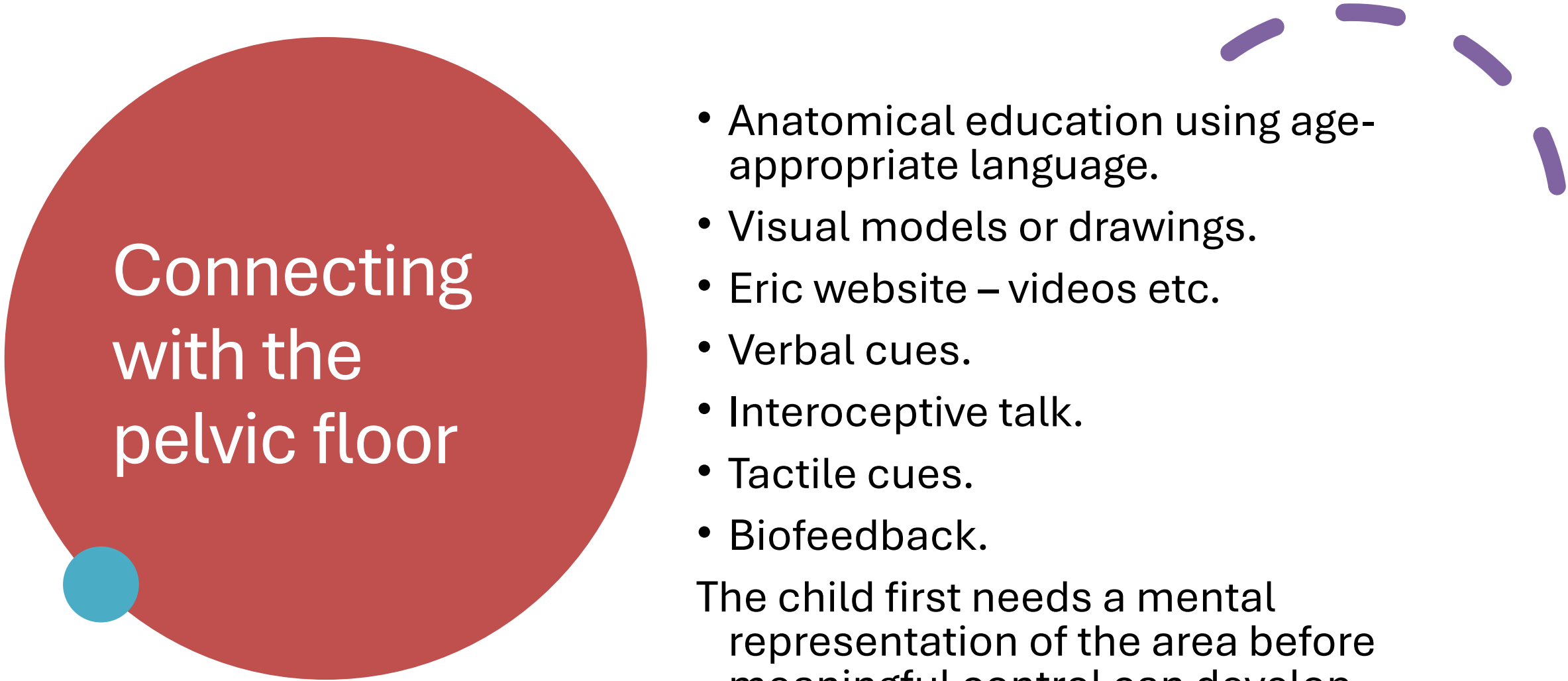
When to consider PFM exercises

- From a physiotherapy perspective –
- No constipation
- Breathing
- Tone
- Posture
- Interoception
- Body awareness

Understanding the unseen....

- If a child cannot locate the muscle, cannot recognise its activity, and cannot understand its function, strengthening exercises alone are unlikely to be successful.





Connecting with the pelvic floor

- Anatomical education using age-appropriate language.
- Visual models or drawings.
- Eric website – videos etc.
- Verbal cues.
- Interoceptive talk.
- Tactile cues.
- Biofeedback.

The child first needs a mental representation of the area before meaningful control can develop.



Pair the Muscle With a Meaningful Function

Motor learning improves when movement has a purpose.

Muscle → Action → Function → Outcome

Rather than saying:

"Squeeze your pelvic floor."

We might say:

"Can you imagine stopping a wee escaping?" "What does that feel like?"

"Can you close the zipper at the bottom?"
"When I do that, I feel movement like a tightening near my bum hole"

"Can you help the lift go up?" I wonder what that feeling means" "Maybe it's your muscle squeezing"



Verbal Imagery



PFM Exercises

But where do
we start....



Reduce Demands and Build Success

If we ask for pelvic floor activation in standing or activity, the child may use compensations:

- Hold their breath.
- Squeeze their thighs together.
- Brace through their trunk.
- Grip with their gluts.

Starting in supported positions reduces these competing demands and allows the child to focus attention on the target movement.

Starting position - Gravity counterbalanced

Positioning: Supine, with legs over your thighs (feeling for glut activation), place one hand on the tummy (feeling for breathing pattern), one hand between the knees (to feel adductor activation)





Modifications to avoid compensations

Pelvic Floor Muscle Exercises

Contraction types

- Concentric – muscle creates a lift of the perineum or pulling up and in. Shortening contraction.
- Eccentric – Lengthening contraction described as a ‘descending elevator’
- Isometric – muscle tension equal to the load like a squeeze without the lift.

EXERCISE ONE - Practical Concentric contraction

Lift and lower

A good starting point to find
the pelvic floor!

Pick your favourite verbal
imagery cue

Try sitting on a gym ball

Exercise one - Tightening and relaxing your pelvic floor muscles

Cues for the child

- Use the verbal imagery cues and agreed terminology
- Lift the pelvic floor, squeeze the back passage and the front passage
- Emphasis the relaxation or 'letting go' of the pelvic floor muscle.
- Encourage breathing slowly and consistently throughout the exercise.
- Provide feedback to ensure that other muscles, such as the buttocks or inner thighs aren't active, and that the contraction is isolated to the pelvic floor.

Practice this exercise two or three times a day, working towards 10 lifts, until the child finds it easy to tighten and relax the pelvic floor muscle.

EXERCISE TWO - Practical Lift and hold

Work on strength and
endurance

Essential for maintaining
continence with a full bladder

Pick your favourite verbal
imagery cue

Try sitting on a pillow

Exercise Two – Tighten and hold

Cues for the child

- Breathe slowly and consistently through the exercise
- Use the imagery and terminology discussed to contract the pelvic muscle upward.
- Ensure that the buttock muscles and stomach remain relaxed.
- Hold the pelvic muscles in this contracted position for five seconds.
- Gradually relax the pelvic muscles over a period of five seconds.
- Encourage full relaxation

Repeat the contraction, hold and relax sequence four to five times , and increase as able.

- EXERCISE
THREE –
Practical
Quick
squeeze
and relax

- Concentric but working on speed fast twitch fibres
- Essential for maintain continence during a cough or sneeze
- Try sitting on a wobbly cushion

Exercise Three -Quick squeeze and relax

Cues for child

- Breathe slowly and consistently
- Use the imagery and terminology discussed to contract the pelvic muscle upward.
- Ensure that the buttock muscles and stomach remain relaxed.
- Squeeze the pelvic muscles as tight as you can, as quickly as possible.
- Release the contraction immediately, and ensure full relaxation before the next squeeze.
- Repeat this quick and tight contraction-relaxation sequence five to ten times.

EXERCISE FOUR - Practical The Ascending and Descending elevator

Focus on grading of pelvic floor contraction

Essential for maintaining continence with a full bladder

Pick your favourite verbal imagery cue

Try sitting across a rolled towel like a bike saddle

Exercise Four – The descending elevator

Cues for children

- As you engage the pelvic floor, think about lifting in stages from relaxed being the ground floor of a lift, and then lifting to level one, two and three, back to two and one finally back to the ground floor. This works on your muscle grading and awareness.
- Once you have got the idea of lifting up and down between the ground floor and the third floor, introduce the idea of a basement level. This focuses in on the pelvic floors ability to contract whilst lengthening, and heighten the awareness of the pelvic floor, how to access it and control.
N.B. CAUTION



Progressions

Co- ordinate with diaphragmatic breathing

Co-ordinate with the exhale

Co-ordinate with the inhale

Introduce more challenge through gravity

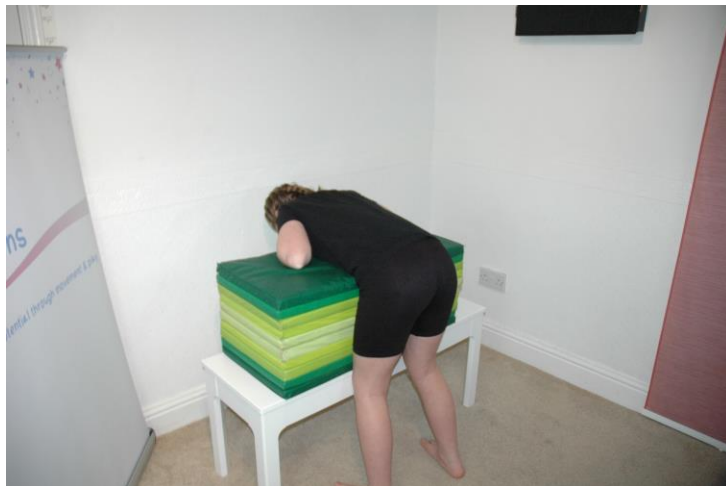
Complete whilst doing functional activities

Introducing more gravity

Sitting (coming up against gravity but still good for adductor over use too)

Sitting with a pillow under the pelvis (good position for increasing proprioceptive feedback in the perineal area and to put the pelvis into a neutral position)

Sitting on the gym ball (good position for increasing proprioceptive feedback in the perineal area)

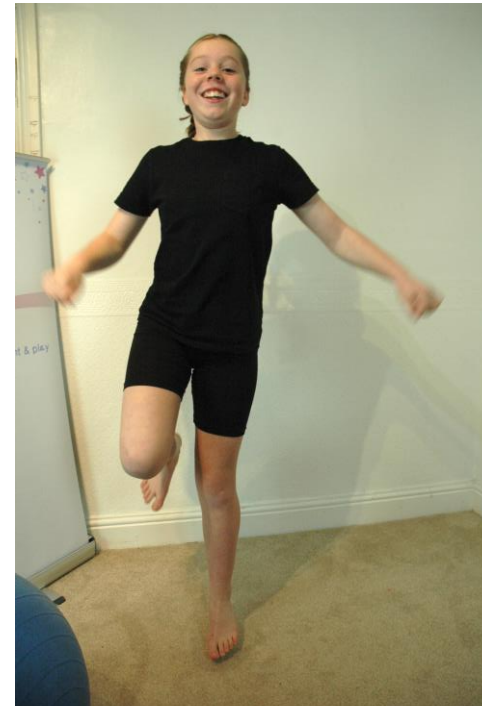


Standing forward bend isolated or over adult knee (feet adducted with internal rotation of hips if overactive gluts)

Functional exercise

Functional exercises –
squat, lunge

Functional for their sport
– Star jumps, running in
place



Which pelvic floor exercises should we be doing?

- If the pelvic floor is weak due to low tone or over lengthening due to posture, or under activity – Exercises 1 and once this is achieved, 2, 3 and 4 are all important at the right time
- If the pelvic floor is hyperactive due to breath holding or high levels of intra abdominal pressures or a high resting tone – Exercises 1, exercise 3 (with a focus on the relaxation) exercise 4
- If the pelvic floor contraction is un-coordinated– Exercises 1 and 4





Case studies

Case

Case study one

Case

Case study two

Case

Case study three

Case

Case study four

Questions to consider

1. What are the key treatment goals?

2. Which PFM exercise do we choose and where do we start?

3. Demonstrate an appropriate PFM exercise for this case study

4. How would you know the child is ready to progress?

5. Demonstrate an appropriate later stage PFM exercise for this case study

Case Study One

Child A (Age 6)

- **Presentation**

- Daytime urinary incontinence.
- Wears continence pads daily.
- Reduced awareness of bladder filling and the need to void.

- **Background**

- History of developmental delay.
- Generalised low muscle tone (hypotonia).
- Reduced postural stability and endurance.

- **Clinical Reasoning**

- Due to delayed motor development and hypotonia, Child A demonstrates poor awareness and control of the pelvic floor muscles (PFM). Rather than generating a specific pelvic floor contraction, they often rely on compensatory strategies including:
 - Hip adductor activation.
 - Breath holding.
 - Trunk bracing and other holding techniques.
- These compensations may limit the development of effective pelvic floor function, contributing to an underactive and poorly coordinated continence mechanism.

Case Study Two

- **Case Study: Child B (Age 8)**
- **Presentation**
- Daytime urinary incontinence.
- Frequently does not reach the toilet in time, resulting in urinary accidents.
- Reports urgency but often delays responding until it is too late.
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- **Background**
- Diagnosis of ADHD.
- Generalised joint hypermobility.
- Low muscle tone (hypotonia).
- Difficulties sustaining attention to internal body signals, particularly when engaged in preferred activities.

- **Clinical Reasoning**
- Child B's continence difficulties are likely multifactorial. Whilst pelvic floor weakness may contribute, the presentation suggests challenges with both pelvic floor awareness and responding to bladder sensations in a timely manner.
- ADHD can impact the child's ability to attend to and prioritise internal body cues, particularly when competing with highly engaging external activities. Hypermobility and hypotonia may further contribute to reduced postural stability, lower muscular endurance, and an underactive pelvic floor muscle system.
- Consequently, the child may:
- Fail to recognise early bladder filling signals.
- Delay responding to urgency.
- Struggle to generate an effective continence response when urgency becomes significant.
- Demonstrate reduced pelvic floor strength and endurance compared to peers.
- Treatment should therefore address awareness, coordination, timing, and functional use of the pelvic floor, rather than focusing solely on strengthening exercises.

Case Study Three

- **Case Study: Child C (Age 10)**
- **Presentation**
- Urinary incontinence associated with sport and physical activity.
- May report leakage during gymnastics training, jumping, tumbling, landing, or high-impact movements.
- Symptoms may fluctuate depending on training load, fatigue, and stress levels.
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- **Background**
- Competitive gymnast.
- History of recurrent urinary tract infections (UTIs).
- High muscle tone and described as "always on the go".
- Difficulty relaxing and slowing down.
- Suspected overactive and over-recruited pelvic floor muscles.

- **Clinical Reasoning**
- As a gymnast, Child C is repeatedly exposed to high-impact loading, postural demands, and core activation strategies that may encourage constant pelvic floor recruitment. Combined with a naturally high activity level, this may result in a pelvic floor that remains in a state of excessive activity and tension for prolonged periods.
- Whilst an overactive pelvic floor may appear strong, it is often inefficient. Muscles that are unable to fully relax can struggle to:
- Lengthen appropriately.
- Generate an effective contraction when required.
- Respond dynamically to changes in abdominal pressure.
- Coordinate with breathing and movement.
- The history of UTIs may also contribute to pelvic floor guarding behaviours, where the child unconsciously maintains increased muscle tension in response to discomfort, urgency, or previous symptoms.

The key clinical question is:

- Is the pelvic floor truly weak, or is it overactive, poorly coordinated, and unable to relax when needed?
- **This distinction is critical because traditional strengthening exercises may worsen symptoms if introduced too early.**

Case Study Four

- **Case Study: Child D (Age 7)**
- **Presentation**
- Daytime urinary incontinence.
- History of constipation and stool withholding behaviours.
- No significant current bowel symptoms reported.
- Continues to experience urinary leakage despite improvement in bowel function.
- **Background**
- Previous history of chronic constipation and withholding.
- Developed dysfunctional pelvic floor patterns associated with bowel emptying difficulties.
- Presents with a high resting pelvic floor tone.
- Hyperactive pelvic floor muscle activity.
- Difficulty relaxing the pelvic floor muscles when required for voiding.

- **Clinical Reasoning**

- Although bowel symptoms have improved, the child may have retained the movement patterns and muscle behaviours developed during the period of constipation and withholding.
- Children who withhold stool often learn to constantly "hold on" by recruiting the pelvic floor, gluteals, adductors and abdominal muscles. Over time, this protective strategy can become habitual and persist even after constipation resolves.
- As a result, the pelvic floor may remain in a state of chronic overactivity with:
 - Elevated resting tone.
 - Reduced ability to relax during voiding.
 - Poor coordination between bladder contraction and pelvic floor relaxation.
 - Incomplete bladder emptying.
 - Urinary urgency and leakage.
 - Dysfunctional voiding patterns.

The key clinical question is:

- Has the child resolved their constipation, but not the dysfunctional pelvic floor strategy they developed to manage it?
- Unlike a child with an underactive pelvic floor, this child may not require strengthening. In fact, strengthening too early may reinforce the problem.

Looking for a
bit more help
making the
decision?
Consider
biofeedback!

- A technique to present muscle activity as a visual signal.
- The signal is displayed on a screen in a quantitative way, and the patient is shown how to alter it by contracting and relaxing the muscle, thus control the basic physiological process.
- It can measure magnitude, timing of a muscle contraction and relaxation.
- Therefore, it can be used to teach proper muscle contraction relating to
 - Isolation
 - Discrimination
 - Relaxation



Biofeedback and exercise from a child's perspective

- **The Biofeedback Link**

- Biofeedback can be particularly powerful because it provides the missing link

Without biofeedback:

- "Contract your pelvic floor."

With biofeedback:

- "When I do this, the screen changes."

The child begins to develop an understanding that:

- "That movement on the screen is connected to something happening inside my body."
 - The invisible muscle starts to become visible and meaningful.
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Exercise guidance via biofeedback

- The data from the biofeedback can guide and or confirm your clinical opinion and support exercise prescription
- Exercise alongside bio-feedback can really help a child connect with their pelvic floor

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Implications to practice

Consider -

relevance of PFM exercises

clinical reasoning

specificity to enable success and
progression

Biofeedback



Let's Talk About Poo, Wee & Physiotherapy

- If your interested in more specific training please book on to the up and coming ERIC online training –

Let's Talk About Poo, Wee & Physiotherapy

It covers a physiotherapy view on body systems and impact on the bladder, bowel and pelvic floor, how physiotherapy can help, compensations to watch out for, lots more details on biofeedback and how to use it!

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