The role of Physiotherapy for the Management of pelvic floor dysfunction

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A specialist continence physiotherapist will take a detailed assessment discussing lifestyle issues with interventions, so that appropriate treatment can be provided. The therapist will explain the continence problem with the help of simple diagrams of the female pelvic floor. With consent, the physiotherapist will perform a gentle vaginal examination to assess the strength, endurance and integrity of the pelvic floor muscles. A correct pelvic floor exercise (contraction) can then be taught effectively with a tailor made exercise programme for each individual.
Should women put up with the problem and wear a pad without seeking help?
Is this our visual image of a woman with incontinence concerns?
Sexual prowess as a way to promote pelvic floor exercise
Trying to entice the younger women's attention!

Pelvic power key to good sex life
Diagram of pelvic floor muscle

- Side view of a woman's bladder and related structures
- Bladder outlet supported by pelvic floor muscles
- Urethra
- Vagina
- Pelvic floor muscles wrap around the underside of the bladder, uterus, and rectum giving support
- Uterus (womb)
- Spine
- Rectum
- Anus
Pelvic floor diagram innervated by pudendal nerve S2-S4
Pelvic Floor Muscles

- The pelvic floor consists of layers of muscles that are attached inside the pelvic bones and form a supportive sling or hammock across the pelvis.
- Provide support to the pelvic organs (bladder, rectum and the uterus)
- Maintain urinary and faecal continence
- Enhance sexual function
- Striated skeletal muscles, under voluntary control. PFM has two types of muscle fibres:
  - Type 1 or slow twitch muscle fibres
  - Type II, fast twitch muscle fibres
**Muscle Type 1 and 11**

**Type 1**
- 80% of the levator ani
- Slow, sustained but less intense contractions
- Over time, the continuous contraction maintains muscle support
- Fatigue resistant

**Type II**
- Fast twitch fibres
- Strong and forceful muscle contractions
- Contributing to urethral closure during sudden increases in intra-abdominal pressure
Pelvic floor Muscles

- Levator ani =
  - Iliococcygeus +
  - Pubococcygeus

- Puborectalis

- PF is as significant as quadriceps muscles
- Hammock shape? Or now ? dome shape

- Pubococcygeus is vital for bladder function
- Puborectalis is important for bowel function
PFM Exercise (Kegel Exercises)

- As with any other muscle in the body if it becomes weak the answer is regular exercise

- Unfortunately because the pelvic floor muscles are inside the body it can be difficult for many women to achieve.

- They have difficulty working out which muscles to exercise.

- They forget how to do a pelvic floor contraction and don’t do the exercises regularly
How to do a pelvic floor contraction

- Tuck up underneath as if trying to stop passing wind at the back passage, squeeze your vagina as if holding onto a tampon and tighten at the front passage as if trying to stop spending a penny. The feeling is one of squeeze and lift, closing and drawing up the back and front pelvic passages. This is called a pelvic floor contraction.

- We do not teach women to stop the stream of urine mid flow as it encourages a pelvic floor contraction whilst the bladder is still contracting and may force urine back to the kidneys.
Pelvic Floor Weakness

**Obstetrics causes:**
- Large babies
- Prolonged labour
- Forceps or ventouse deliveries
- Extended perineal tears

**Other causes:**
- Chronic constipation
- Heavy lifting
- Chronic cough
- Overweight
- Menopausal changes
Delivery

- Pubo rectalis stretched 3.2 times
- Vaginal birth ≥ 4 or more:
  - 2.5 risk of SI
  - 10 risk of prolapse
Outcome of Pelvic floor weakness

- Vaginal/uterine prolapse
- Urinary/faecal incontinence
- Sexual dysfunction
- Back pain
- Pelvic pressure or pain
Urinary Incontinence

- Stress urinary incontinence is the involuntary leakage on effort or exertion, or on sneezing or coughing.
- The abdominal pressure is raised causing an increased squeezing effect on the bladder and its contents.
- The pelvic floor muscles and tissues around the urethra should quickly resist this rise in pressure and prevent any urine escaping.
Clinical Guidelines

Clinical guidelines
for the physiotherapy
management of females
aged 16–65 years with
stress urinary incontinence
Sample of an Assessment form

If at this stage in the pathway a referral to the Women's Health Physiotherapist is identified, please telephone 01553 613389 to arrange a mutually convenient date and time for the patient's appointment.

Women's Health Physiotherapy Assessment

<table>
<thead>
<tr>
<th>Severity of Incontinence on Exertion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mild (several coughs, few drops, wet underwear)</td>
</tr>
<tr>
<td>2. Moderate (every cough, wets outer clothing)</td>
</tr>
<tr>
<td>3. Severe (walking, runs down legs)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>012345 oxford grading</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Endurance</td>
<td></td>
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<tr>
<td>Repetitions</td>
<td></td>
</tr>
<tr>
<td>Fast contractions</td>
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</tr>
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</table>

<table>
<thead>
<tr>
<th>Treatment Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise regime</td>
</tr>
<tr>
<td>Cones</td>
</tr>
<tr>
<td>Educator</td>
</tr>
</tbody>
</table>

**Comments:**

<table>
<thead>
<tr>
<th>Quality of life due to urinary symptoms</th>
<th>Tick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delighted</td>
<td></td>
</tr>
<tr>
<td>Pleased</td>
<td></td>
</tr>
<tr>
<td>Mostly satisfied</td>
<td></td>
</tr>
<tr>
<td>Mixed equally satisfied and dissatisfied</td>
<td></td>
</tr>
<tr>
<td>Mostly dissatisfied</td>
<td></td>
</tr>
<tr>
<td>Unhappy</td>
<td></td>
</tr>
<tr>
<td>Terrible</td>
<td></td>
</tr>
</tbody>
</table>

**Additional Comments and/or variances:** (i.e. back problems, abdominal weakness)

**Review Date:**

**Physiotherapist Signature**

**Initials**

**Date**
Sample of continuation form of further treatment with outcome measures

### Physiotherapy Outcome of treatment Visit 1

<table>
<thead>
<tr>
<th>Treatment Plan</th>
<th>Pelvic Stimulator</th>
<th>Pericalm Neuro Muscular Stimulator</th>
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<tr>
<td>Delighted</td>
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<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Pleased</td>
<td>1</td>
<td>Dry</td>
</tr>
<tr>
<td>Mostly satisfied</td>
<td>2</td>
<td>Wet</td>
</tr>
<tr>
<td>Mixed equally satisfied and dissatisfied</td>
<td>3</td>
<td>Degree of Inconvenience</td>
</tr>
<tr>
<td>Mostly dissatisfied</td>
<td>4</td>
<td>Mild</td>
</tr>
<tr>
<td>Unhappy</td>
<td>5</td>
<td>Moderate</td>
</tr>
<tr>
<td>Terrible</td>
<td>6</td>
<td>Severe</td>
</tr>
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**Additional Comments:**

**Review Date:**

**Physio Initials:**

### Physio Outcome of treatment Visit 2

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**Review Date:**

**Physio Signature and Initials**

*RF/Female Continence ICP/March 2003*
Consent form

Patient Consent Form

Vaginal Examination

I, the undersigned health professional, with the appropriate knowledge of the procedure, have explained that the patient is about to undergo.

The intended benefit of this particular procedure is:

Assessment of muscular tone
Serious of frequently occurring risks:

General: Variable discomfort during the procedure
Specific: Per-vaginal discomfort, infection

I have explained the benefits and risks of any available options (including no treatment) and any particular concerns of this patient.

Signed: ___________________________ Date: ___________________________

Name (Print): ___________________________ Job Title: ___________________________

Patient signature: ___________________________ Date: ___________________________

Name (Print): ___________________________

Witness (if the patient has indicated her consent but is unable to sign).

Witness signature: ___________________________ Date: ___________________________

Name (Print): ___________________________

Confirmation of consent

On behalf of the team treating the patient I have confirmed with the patient that she has no further question and wishes the procedure to go ahead.

Signed: ___________________________ Date: ___________________________

Name (Print): ___________________________ Job Title: ___________________________

☐ See also Advance Directive / Living Will

☐ Patient has withdrawn consent
Voluntary contraction identified by vaginal examination and using modified Oxford Scale (Laycock, 2002)

-0 – no discernible contraction
-1 – flicker of movement or pulsation under examining finger
-2 – weak contraction without lift or squeeze
-3 – moderate contraction, lift of posterior wall and squeeze on finger
-4 – good contraction, elevation of posterior wall against resistance
-5 – strong contraction against strong resistance
Gravity and pelvic floor muscle

Although PF muscle assessment is carried out when the patient is lying down, exercises should also be performed in sitting and standing, so gravity and weight bearing have a part to play in muscle re-education.
Exercise prescription

- Regular maximum voluntary contractions followed by relaxation of PF muscle should be performed and also fast contractions to facilitate both Type 1 and 11 muscle fibres. The number of repetitions should be tailor-made for each patient.
BMJ Studies

- BMJ (Vol 323) Oct 2001 states that;
- ‘An important recent trial of the effects of training PF muscle in women with GSI has shown that doing eight near maximal PF muscle contractions three times per day for six months produces large reductions in the risk of incontinence related problems with social life, sex life and physical activity’
In addition to regular PF muscle exercises, women should be taught ‘the knack’. This is where they are instructed to contract the PF muscles prior to lifting, sneezing, coughing or any activity that may cause genuine stress incontinence. The knack works as a counterbalance.
Gadgets

- Many gadgets available, little research into their efficacy
- Biofeedback equipment - as proprioception enables the patient to see or feel the activity achieved by the pelvic floor muscles and includes:
  - Educator - visual indication
  - Vaginal cones - varying weights, placed into vagina like a tampon and indicate whether the PF muscle is contracting correctly by feeling the action of holding them in place (not for use with prolapse)
  - Electrical stimulation - may be used by women who are unable to contract their PF muscles. This involves passing a mild electrical impulse via a plastic electrode tampon device into the vagina to the PF muscle. The current is intended to stimulate the muscles to contract and tighten. The stimulation produces a tingling sensation and as the intensity of the current is increased, a muscle contraction should be felt.
Conclusion to a controlled trial by Kari Bo-`pelvic floor exercises are more effective than electrical stimulation, vaginal cones and no treatment for women with GSI. As such exercise seems to be safe and effective, it should be offered as first choice of treatment for GSI’
Your first step to a strong and healthy Pelvic Floor

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Mobilis Healthcare Group
Periform®

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May be programmed to suit each patient’s requirements, i.e. stress or urge, on/off and treatment times. Incorporates unique safety features.
For use with Periform® intra-vaginal or RP 001 rectal probes.
PF Muscle exercise positions to facilitate;

**More effective contraction of Anterior wall**

- Standing – toes together
- Flexion – mini bobs
- Combined – toes and flexion
- Leaning forward
- Sitting leaning forward

**More effective contraction of Posterior wall**

- Standing – heels together
- Heel raise (S1-4)
- Rectus abdominis (sit-ups)
Not just PF

- Transversus abdominus has vital role to play in PF rehabilitation
- Diaphragm also important (respiratory and pelvic diaphragms work together) – coughing, sneezing
- Multifidus works with the above muscles
- These muscles form a ‘cylinder of stability’ and work in a co-ordinated fashion, They should therefore be rehabilitated in this way
- Gym ball- ideal exercise to facilitate core stability, helpful to treat those unable to put into place a PF exercise routine (lack of understanding/compliance)
Education =

understanding = compliance = success

Happy patient and satisfied Health Care Professional
Take home message

- Assist people to help themselves
- Encourage simple and effective exercises
- Maintain good habits for life
- Gadgets help some people achieve exercises
- Spread the word that there is help and many types of treatment available for continence and pelvic floor dysfunction
A trial of supervised PF muscle training of at least 3 months duration should be offered as first line treatment to women with stress or mixed UI.

PF muscle training programmes should comprise at least eight contractions performed three times per day.

If PF muscle training is beneficial, an exercise programme should be continued.

PF muscle training should be offered to women in their first pregnancy as a preventative strategy for UI.