

Title	Physiotherapy for the Prevention and Management of Urinary Incontinence
Version	2.0

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1. Introduction

Urinary incontinence is the involuntary leakage of urine. There are two types of urinary incontinence: stress and urge.

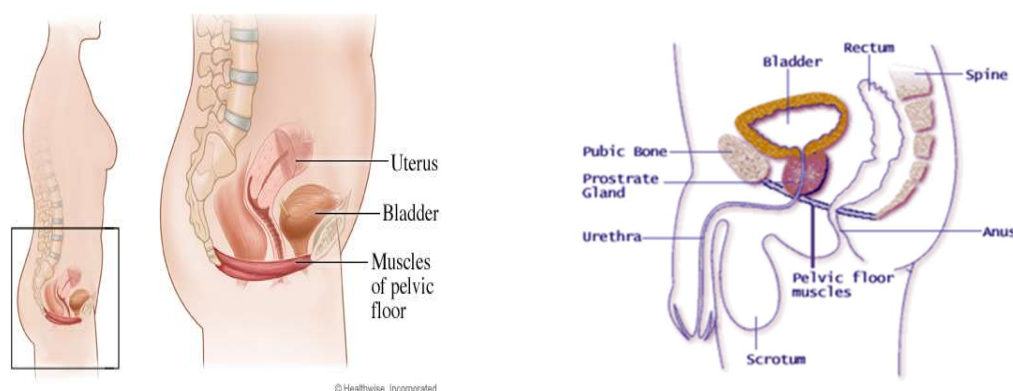
Prevalence of urinary incontinence has been reported as prevalence rates of between

- 30% and 68% in women with Cystic Fibrosis (CF)
- 4.8% in all men aged between 19 and 44 years though research of incontinence in younger men, or men with lung disease, is limited.

Urinary Incontinence is frequently due to weak pelvic floor muscles and is often exacerbated by periods of repeated coughing especially during a chest infection.

2. The Pelvic Floor

The pelvic floor consists of layers of muscle and ligaments that stretch from the pubic bone to the end of the spine (coccyx) and from side to side. The pelvic floor muscles are firm and support the contents of the pelvis – the bladder, bowel and the uterus in women. It also controls the openings of the urethra, rectum and vagina, which pass through it:



3. Symptoms

Sometimes the pelvic floor can weaken which means that the support for the openings of the bladder and bowel is not as effective – which may result in the leakage of urine from the bladder in situations whereby these muscles are put under stress.

Certain activities can increase the pressure within the abdominal cavity and may cause urine to leak. These include:

- Coughing and sneezing
- Airway clearance techniques

- Heavy lifting
- Vomiting
- Laughing
- Performing spirometry
- Aerobic exercise (e.g. running, cycling, jumping on a trampoline)
- Repeated straining to empty your bowels e.g. when constipated
- Following childbirth

Being unable to do regular exercise is a risk factor for stress incontinence

4. Screening

Incontinence can be an embarrassing subject to discuss with patients but is an important part of CF care.

Recommendations:

- screening for incontinence should be part of routine Physiotherapy care for both male and female patients.
- The ICIQ questionnaire should be used at Annual Review and also as an assessment tool to see if treatment/exercises are helping – see Appendix 1 below.

5. Management

5.1 Recommendations

It is recommended that patients should:

- a. be taught “the knack” i.e. a contraction of the pelvic floor prior to and during any activity that increases the load to the pelvic floor, and
- b. do strength and endurance training of the pelvic floor and lower abdominal muscles in order to prevent leakage.
- c. Patients are recommended to be taught optimal positioning during airway clearance therapy in upright sitting that enhance pelvic floor function (Sapsford et al, 2006).

5.2 Pelvic floor exercises

- a. Instruct patients how to contract their pelvic floor muscles and then encourage them to hold the contractions for as long as they can and then build up to 10 slow contractions and holding for up to 10 seconds with 4 seconds rest in between. Strengthening these slow twitch muscle fibres of the pelvic floor is needed to improve endurance and so improve urinary symptoms.
- b. To improve pelvic muscle strength, contract the pelvic floor as hard as they can and hold for 1 second and then repeat 10 times. Pelvic floor exercises can be done in crook lying, sitting or standing.
- c. For female patients please provide a copy of (and/or guidance on how to access) the CF Trust Pelvic Floor Exercises (Female) Information Leaflet – available via <https://www.cysticfibrosis.org.uk/the-work-we-do/clinical-care/supporting-clinicians/resources-for-clinicians/physiotherapy-leaflets>
- d. For male patients please provide a copy of the POGP pelvic floor muscle exercise and advice to men – via <http://www.pogp.csp.org>
- e. Another helpful adjunct is the squeezeapp, which is a specifically designed app to help women remember to do their pelvic floor exercises. To find out more visit www.squeezeapp.co.uk.

5.3 Airway clearance therapy in sitting should be carried out with feet flat on the floor with a 90-degree angle at the hips and knees, the lumbar spine should be held in a neutral or extended position.

5.4 Failure to Improve: if the problem persists then a referral to a specialist continence physiotherapist or continence service is advised which can be actioned via your GP.

6. Impact of triple CFTR modulator therapy on urinary incontinence in Cystic Fibrosis:

Faulkner, et al (2022) looked at the impact of triple therapy on urinary incontinence and they concluded that in the first 12 months of starting triple therapy there was an improvement in urinary incontinence symptoms, with the biggest change seen in the first six months. They also concluded that further studies are required to be able to understand the long term effects of triple therapy on urinary incontinence in patients with Cystic Fibrosis.

7. References

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8. Appendix: The ICIQ Questionnaire

Initial number

ICIQ-UI Short Form

CONFIDENTIAL

DAY MONTH YEAR

Today's date

Many people leak urine some of the time. We are trying to find out how many people leak urine, and how much this bothers them. We would be grateful if you could answer the following questions, thinking about how you have been, on average, over the PAST FOUR WEEKS.

1 Please write in your date of birth:

DAY MONTH YEAR

2 Are you (tick one):

Female Male

3 How often do you leak urine? (Tick one box)

- never 0
- about once a week or less often 1
- two or three times a week 2
- about once a day 3
- several times a day 4
- all the time 5

4 We would like to know how much urine you think leaks.

How much urine do you usually leak (whether you wear protection or not)?

(Tick one box)

- none 0
- a small amount 2
- a moderate amount 4
- a large amount 6

5 Overall, how much does leaking urine interfere with your everyday life?

Please ring a number between 0 (not at all) and 10 (a great deal)

0 1 2 3 4 5 6 7 8 9 10
not at all a great deal

ICIQ score: sum scores 3+4+5

6 When does urine leak? (Please tick all that apply to you)

- never – urine does not leak
- leaks before you can get to the toilet
- leaks when you cough or sneeze
- leaks when you are asleep
- leaks when you are physically active/exercising
- leaks when you have finished urinating and are dressed
- leaks for no obvious reason
- leaks all the time

Thank you very much for answering these questions.

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