

ROLE OF PELVIC FLOOR MUSCLE THERAPY IN FEMALE WITH STRESS INCONTINENCE

Seema Singh¹

1. Physiotherapist, National Programme for Health Care of Elderly, Division of Geriatrics Medicine, Institute of Medical Sciences, Banaras Hindu University, Varanasi – 221 005.

Introduction

Incontinence appears to be a growing problem in our society. The subject of incontinence differs from other health problems in that incontinence deals with a medical complaint that bears a strong taboo, and is rarely spoken about in public. The quality of life is considerably impaired for those affected. Urinary incontinence is seen world wide as a common problem and appears in all cultures. Women are notably more often affected than men (2:1).

Definition of Incontinence as stated by

ICS : In 2002, the International continence society (ICS) issued the following definition-

- “Urinary Incontinence is an involuntary loss of urine which is objectively demonstrable and a social or hygienic problem.”
- According to the World Health Organization (WHO), urinary incontinence is a “widespread global disease and one of last medical taboos to many people.”

Types of Urinary Incontinence:

Stress Incontinence: is involuntary urine leakage on effort or exertion or on sneezing or coughing. Stress incontinence is the predominant form of incontinence in women. It is due to a functional weakness of the urinary tract caused by a defective shutter function of the detrusor – detrusor instability. This form of incontinence is often associated with a weakened pelvic floor, for example, as a result of childbirth.

Urge Incontinence: is involuntary urine leakage accompanied or immediately preceded by urgency (a sudden compelling desire to urinate that is difficult to delay).

Mixed Incontinence : is involuntary urine leakage associated with both urgency and exertion, effort sneezing or coughing.

Overactive Bladder (OAB) : is defined as urgency that occurs with or without urgency urinary incontinence and usually with frequency and nocturia. OAB that occurs with incontinence is known as ‘OAB Wet’. OAB that occurs without incontinence is known as ‘OAB Dry’

Epidemiology of Urinary Incontinence:

Urinary incontinence is a common, distressing and unpleasant problem affecting approximately 30% to 40% of older women. Approximately, 50 million people worldwide suffer from urinary incontinence where in women to men ratio is 2:1 and an estimated of 41% to 51% of older women above 40 year of age in the US suffer from this disabling condition. In a latest survey done in Asia, 53.7% population is bothered to certain degree due to urinary incontinence. In a survey done in India, the prevalence of urinary incontinence in India was 12%.

In a latest survey done in 2013, the prevalence of UI in India found to be 20% - 25% of the total numbers of women having incontinence, highest numbers were found to have stress incontinence (more than 50%) followed by urge UI and then mixed urinary incontinence (UI).

Risk factors of urinary Incontinence:

1. **Being obese:** Obese people have increased pressure on their bladder and surrounding muscles, compared to people of normal weight. This weakens the muscles and makes it more likely that a leak occurs when the person sneezes or coughs.

2. **Smoking:** Regular smokers are more likely to develop a chronic cough, which may result in episodes of incontinence. A chronic cough (coughing a lot over the long term) places undue stress on urinary sphincter, leading to stress incontinence.
3. **Gender:** Women have a significantly higher chance of experiencing stress incontinence than men. Certain aspects of a female's life, such as child birth and menopause make incontinence more likely. A men's risk is higher if he has prostate gland problems.
4. **Old Age:** The muscle in the bladder and urethra weaken during old age. This means the bladder cannot hold as much liquid as before, raising the risk of involuntary leakage.
5. **Some diseases and condition:** People with diabetes and some kidney diseases are more likely to suffer from urinary incontinence.
6. **Coffee (caffeine):** Men who drink approximately two cups of coffee each day are much more likely to suffer from urinary incontinence than males of the same age who drink less or no coffee at all.

- **Cystoscopy:** A thin tube with a tiny lens (cystoscope) is inserted into urethra. Abnormalities in urinary tract are checked.

Pelvic floor Muscle Training (PFMT) in females with Stress Urinary Incontinence: Pelvic floor training exercises have already been widely used to improve bladder control by strengthening and exercising the muscles responsible for bladder control. They are also known as sphincter muscle exercises or Kegel exercises. Dr. Kegel first developed these exercises to assist women before and after childbirth, but they are very useful in helping to improve continence for both men and women.

The general approach for learning and practicing Kegel exercise is as follows:

Since the muscle are sometimes difficult to isolate, the best method is to first learn while urinating. The patient brings to urinate and then contracts the muscle in the pelvic area with intention of slowing or stopping the flow of urine. Women should contract the vaginal muscles as well. They can detect this by inserting a finger inside the vagina. When the vaginal wells tighten, the pelvic muscles are being correctly contracted. Patients should place their hands on their abdomen, thighs and buttocks to make sure there is no movement in these areas while exercising.

- Begin by emptying the bladder.
- The first method is used for strengthening floor muscles. The patient slowly contracts and lifts the muscle and holds for 5 seconds, then releases them. There is a rest of 10 seconds between contractions.
- The second method is simply a quick contraction and release. The object of this exercise is to learn to shut off the urine flow rapidly.
- In general, patients should perform 5-15 contractions, three to five times daily.
- It needs to be continued for 3-4 months

Some points of caution:-

- Once learned, Kegel exercises should not be performed while urinating more than about twice a month, since this

Tests and Diagnosis:

Common tests:

- a) **Bladder diary:** Record how much you drink, when urinate, the amount of urine you produce and the number of incontinence episodes.
- b) **Urinalysis**
- c) **Blood tests:** Blood is checked for various chemicals and substances related to causes of incontinence.

Specialized Testing :

- Post Void Residual (PVR) Measurement
- **Pelvic Ultrasound:** To check for abnormalities.
- **Stress Test:** Patient is asked to cough vigorously and doctor examines for loss of urine.
- **Urodynamic Testing:** These tests measures pressure in bladder when it is at rest and when it is filling.
- **Cystogram:** In this X-ray of bladder, a catheter is inserted into urethra and bladder. This images help reveal problems with urinary tract.

practice may eventually weaken the muscles.

- Over exercise can tire muscles and cause more leakages.
- Incontinence will return to the original severity if these exercises are discontinued.
- It may be several months before the patient sees significant improvement (approximately 3 months).

In adjunction to *Kegel* exercises – bladder training, diet considerations, lifestyle changes and *Yoga Asanas* could be incorporated to enhance the effectiveness of *Kegel* exercises:-

1. Bladder Training: Bladder training involves a specific and graduated schedule for increasing the time between urinations:-

- Patients start by planning short intervals between urinations, then gradually progressing with a goal of voiding every 3-4 hours.
- If the urge to urinate arises between scheduled voiding, patients should remain in place until the urge subsides. At the time, the patient moves slowly to a bathroom.

2. Lifestyle Changes:

(i) Hygiene tips: Keeping skin clean:- Proper hygiene is essential for patients with incontinence. **(a)** After a urinary accident, clean any affected areas right away. **(b)** When bathing, use warm water and do not scrub forcefully; hot water and scrubbing can injure the skin. **(c)** Apply cleansers, **(d)** After bathing, apply a moisturizer plus a barrier cream. Barrier creams include petroleum jelly, zinc oxide, cocoa butter, kaolin or paraffin. Those products are water repellent and protect the skin from urine, and **(e)** Anti-fungal creams that contain miconazole nitrate.

(ii) Dietary consideration: In women, pelvic floor muscle tone weakens with significant weight gain. Weight loss can help reduce the frequency of urinary incontinence episodes in overweight women. Women should eat healthy foods in moderations and exercise regularly. Constipation can worsen UI, so diet should be high in fiber, fruits and vegetable.

(iii) Fluid intake: A common misconception among people with incontinence is that drinking less water will prevent accidents. In reality, limiting fluid intake has the following effects: **(a)** The lining of the urethra and bladder becomes irritated, which may actually increase leakage. **(b)** Concentrated urine also has a stronger pungency, so drinking plenty of fluids can help reduce odor.

People with incontinence, however, should stop drinking beverages 2-4 hours before going to bed, particularly those who experience leakage or accidents during the night.

Fluid and food restrictions: A number of food and beverages may increase incontinence; people who drink caffeinated or alcoholic beverages should try eliminating them to see if incontinence improves.

Considerations for exercising: Sometimes otherwise healthy adults stop exercising because of leakage. There are a number of methods for preventing or stopping leakage during exercise.

The following are some tips: **(a)** Limit fluid intake before exercising (but be sure not to become dehydrated). **(b)** Urinate frequently, including right before exercise. **(c)** Women can try wearing pads or urethral inserts.

3. Yoga Asanas:

No matter which type of incontinence you suffer from, yoga poses can come in handy for regaining control of bladder. Urination is a mostly reflexive action. Many yoga exercises are geared specifically toward building the pelvic muscles as well as raising consciousness of specific parts of the body by bridging the gap between the physical self and the mind.

Some Asanas will improve stress incontinence:

1. **Utkatasana:** The chair pose is especially useful for overcoming incontinence, because it can strength then the pelvic floor while making you more conscious of the bladder. To conduct this posture, start off in the mountain pose

(Tadasana) with feet together. As you inhale, reach your arms up to the sky with palms facing each other. Bend your knees as you exhale, bringing your knees parallel to the ground. Bring your shoulder blades into your upper back, stretching your elbows back towards your ears. Elongate your tailbone toward the ground, then slowly rotate the pelvis toward your back until you feel a soft contraction of the pelvic floor.

Hold this position for one minute, focusing your attention on the lower abdominals. Squeeze your urinary sphincter as though you are attempting to stop urinary flow, hold this contraction for several breaths, release, and then repeat several times.

(ii) **Moola Bandha** : The word “Bandha” means “to bind” or “to lock”. With Moola Bandha, this is in reference to the locking of the muscle of the perineum. Start doing this asana in a quiet room and sit in a comfortable asana such as Sidhasana (the Perfect pose) or Sukhasana (the easy pose). The back and spine need to be straight. No slouching. Now, pull up the perineum by contracting the entire pelvic floor just as if trying to stop urine from flowing. At the same time, contract the muscles around the anus. Concentrate on the perineal area and the energy, which may be perceived as Muladhara Chakra, located here. Hold for 3 seconds. Now release and relax all muscles contracted previously for a

count of 10. Repeat above steps nine more times for a total of 10 – three second contractions with intermittent relaxation. Perform this beginning stage of Moola Bandha daily for three months. During that time, gradually increase the amount of time spent to be seconds.

Complications of Stress Urinary Incontinence:-

1. **Skin problems:** Urinary Incontinence can lead to rashes. Skin infections and sores (skin ulcers) from constantly wet skin
2. **Urinary tract infections:** Urinary incontinence increases risk of repeated urinary tract infections
3. **Changes in your activities:** due to Urinary incontinence people stop exercising, quit attending social gatherings or even stop venturing away from familiar areas.
4. **Changes in work life:** may negatively affect work life. The problem may disrupt concentration at work or keep awake at night, causing fatigue.
5. **Changes in personal life:** Perhaps most distressing is the impact incontinence can have on personal life. It's not uncommon to experience anxiety and depression along with urinary incontinence.

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