



“Smile If You Just Peed A Little”

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When I was running my first half marathon (about 5 years ago), I could not help but admire the beautiful course. The scenery was filled with amber and caramel leaves rustling in the gentle breeze. The lake was peaceful and statue still. The air was crisp and cool. It was a perfect autumn day, and a peaceful run... until mile 7 when one particular “scenic object” caught my eye. Picture this: a little boy, maybe 5 years old, holding a sign saying, “smile if you just peed a little.” I think I peed a little from laughing at the image. While many runners may be preoccupied with shin splints, muscle strains, knee pain, and chafing, one thing that is often overlooked is urinary incontinence.

A common complaint amongst female athletes, including runners, is urinary incontinence, specifically stress urinary incontinence (SUI). Urinary incontinence is considered any uncontrolled leakage of urine regardless of the amount leaked. It is a common issue present in individuals of all ages, impacting one’s quality of life. Women often reduce physical activity secondary to the embarrassing condition of SUI. So, why does this occur? Although research is limited currently on the incidence of SUI, there is research regarding SUI and pelvic floor functions in the female runner.

You mean there are muscles down there?!

The pelvic floor is a sling of muscles and connective tissues that span underneath the pelvis, providing support to the pelvic viscera (bladder, intestines, and uterus in females), *AND assists with continence through the control of urinary* and anal sphincters. The pelvic floor lengthens downward as we inhale and contracts and lifts as we exhale. Gradual adaptation of scaling of the pelvic floor contractions is an important factor related to SUI. As we increase the level of activity, we increase the pelvic floor muscles and abdominal activation; sneezing, jumping, etc. and yes, running. **HOWEVER**, this does not necessarily mean you need to do 500 Kegel exercises 3 times per day. It likely means you are bringing out your inner hulk and contracting too much, and do not know how to scale the contraction.

Tell me more!

During running, the pelvic floor lengthens downward in preparation for heel strike phase. This elongation activity prior to heel strike, prepares the system for the absorption of ground reaction forces when contacting the ground. As running speed increases, the ground reaction forces increase, thus triggering an increase in pelvic floor and abdominal activation to accommodate for the higher demand on the muscles. Research has not indicated any difference in contraction timing between continent and incontinent women. However, women with SUI, actually have a stronger pelvic floor contraction.

Okay, I have a strong contraction, then why am I leaking?!

During impact activities like running, pelvic floor muscle contraction occurs *before* other trunk muscles in continent women. However, in incontinent women, pelvic floor contraction occurs *after* other trunk muscles. The delay between heel strike and contraction of the pelvic floor muscles is therefore prolonged. The pelvic floor muscles are also likely very tight in women with SUI. This muscle tightness causes an increase in intra-abdominal pressure. The increase in pressure and delay in contraction, contributes to SUI. Women who leak with running, are often constantly activating pelvic floor musculature, at a higher intensity without scale, in an attempt not to leak. However, it only increases leakage.

I’m not a runner, but I tend to leak a little when I ... cough, laugh, lift my baby, all the time etc. How does this apply to me?

Urinary incontinence is often due to underactive pelvic floor musculature and lack of coordination of the pelvic floor. When the pelvic floor becomes weak or is unable to function appropriately, the bladder is not supported resulting in leakage with increased intra-abdominal pressure. Urinary function can be compared to stepping on a garden hose. The water faucet represents the bladder, while the hose represents the urethra, or the tube in which urine passes. The foot represents the muscles surrounding the urethra. Without pressure of the foot on the hose, water continues to flow out if water is introduced through the hose. When one steps on the hose applying pressure, in other words, contracting the muscles surrounding the urethra, the hose closes, preventing any water from expelling. The severity of dysfunction can vary from

no symptoms to severe symptoms impacting one's daily life. Urinary incontinence can be classified by various symptoms including, but not limited to:

- Stress urinary incontinence: loss of urine with physical exertion or effort (coughing, laughing, lifting, running)
- Urgency urinary incontinence: loss of urine with the sudden urge to go to the restroom
- Postural urinary incontinence: loss of urine with changing positions (sitting, standing, lying in bed, etc.)
- Nocturnal: loss of urine while sleeping
- Mixed: loss of urine with any combination of symptoms
- Continuous urinary incontinence: continuous loss of urine

But I do Kegel exercises all the time...

Kegel exercises are an excellent way to strengthen your pelvic floor musculature; however, most individuals perform Kegels incorrectly. Studies have shown that many individuals are unable to correctly perform a pelvic floor muscle contraction without being provided instruction AND *appropriate feedback*. Having both instruction and appropriate feedback is strongly associated with correct pelvic floor muscle contractions, or Kegels.

What do I do?

Smile if you peed a little! You are not alone, and your symptoms can be treated. If you are experiencing any of the following, contact your local pelvic floor physical therapist for an evaluation.

- Urinary incontinence: any uncontrolled loss or leakage of urine
- Urgency or the sudden sensation of needing to rush to the bathroom
- Difficulties starting the flow of urine
- Feeling the need to urinate again after having just urinated
- Feeling of incomplete bladder emptying
- Straining with urination
- Pain with intercourse
- Feeling of pressure, fullness, or falling out in the pelvic area
- Have been diagnosed with pelvic organ prolapse
- Recently gave birth, regardless of delivery-type
- Recently underwent urogynecologic surgery
- Pelvic pain

Certification

I have recently completed the Pelvic Health Physical Therapy Level 1 certification course through the Section on Women's Health. This course focused on treating patients with pelvic health dysfunction, primarily patients with under active pelvic floor muscle conditions. Safe evaluation can be performed to develop a physical therapy diagnosis and prognosis regarding the pelvic girdle, surrounding structures, and their function. Interventions can then be provided to address the individual's signs and symptoms including but not limited to: instruction on the proper technique of pelvic muscle exercises and abdominal exercises for rehabilitative purposes, instruction on appropriately strengthening the muscles of the pelvic floor, and bladder training. If you are experiencing any of the previously stated symptoms or have any questions concerning your pelvic health, contact me for an evaluation.

I don't think the 5-year-old knew he was promoting pelvic health physical therapy.

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2. Leitner M, Moser H, Eichelberger P, Kuhn A, Radlinger L. Evaluation of pelvic floor muscle activity during running in continent and incontinent women: An exploratory study. *Neurourol Urodyn*. 2016;36(6):1570-1576. doi:10.1002/nau.23151.
3. Moser H, Leitner M, Baeyens J, Radlinger L. Pelvic floor muscle activity during impact activities in continent and incontinent women: a systematic review. *Int Urogynecol J*. 2017;29(2):179-196. doi:10.1007/s00192-017-3441-1.