Pelvic Floor Insufficiency

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Objectives

• Review the function of the pelvic floor muscles
• Discuss the prevalence of urinary incontinence through women’s lifespan
• Discuss the evidence supporting why and how physical therapy can help
The Pelvic Floor

- Pelvic floor muscles and fascia are involved in multiple functions including continence, pelvic organ support, sexual function, respiration and containment of intra-abdominal pressure, and also to some extent range of motion of the hip joint and projected pain to the lower limbs. (Carriere & Markel-Feldt, 2006; Chaitow & Jones, 2012; Wise & Anderson, 2012; Verral et al., 2007)

- Continence requires the complex coordination of bladder, urethra, pelvic floor muscles and supporting ligaments. Normal pelvic floor contraction exerts a pull on the anterior vaginal wall toward the pubic symphysis to close the urethra and prevent urine leakage. (Delancey et al., 1994)

- Postural changes from misguided exercises, pregnancy, childbirth, obesity and changes in physiological curves of the spine may modify the structure of the pelvic basin thereby leading to urinary incontinence. (Fozzatti et al., 2010).
“Urology department. Can you hold?”
Prevalence of Pelvic Floor Issues

• 1 in 4 US women report moderate to severe symptoms of urinary incontinence, pelvic organ prolapse or fecal incontinence (Nygaard & Barber, 2008)

• Pelvic floor disorders increase with age (Nygaard & Barber, 2008)

• There appears to be a correlation in women exceeding 7.5 hours of strenuous activity per week during the teen years. (Nygaard, 2015)

• Almost every aspect of urinary incontinence was present in nulliparous women of all ages and prevalence increased with advancing age between 25-64 years. (Othman et al. 2017)
Incontinence in Teens

- Elite trampolinists (mean age 15 years) 80% reported urinary leakage, 28% with perineometry showing good pelvic floor strength. (Eliasson et al., 2002)

- Carls et al. 2007 offered a small study. They found that greater 25% of female high school and collegiate athletes surveyed had stress incontinence with their sport.

- **90% had not told anyone about their symptoms**, nor had they heard of pelvic floor exercises.

- But say they would have performed the exercises if they knew how.
Incontinence in Teens

• Incontinence correlates to:
  • body mass index
  • self-reported psychological disorders
  • history of constipation
  • enuresis after age 5. (Bardino et al., 2015)

• Urge and stress incontinence was significantly more common in athletes with eating disorders (Bo & Borgen, 2001)
Incontinence in Athletes

• Urinary incontinence during exercise is common and is more prevalent in women during high impact sports Nygaard et al (2016)

• Nulliparous women (mean age 19.9) reported incontinence with their sport. Gymnastics (67%), basketball (66%), tennis (50%), field hockey (42%), track (29%), swimming (10%), volleyball (9%), softball (6%) and golf (0%). (Nygaard et al., 1994)

• Incontinence was first noted during their sport while in high school and junior high. (Nygaard et al., 1994)
Incontinence and Athletes

• Urinary incontinence is common among elite athletes and dancers (mean age 22.8 years), particularly during training, less in competition and daily life (Thyssen et al. 2002)
  • 51.9% had urinary incontinence with their sport
  • 42% had urinary incontinence during daily life.

• Cross-sectional studies have shown that involvement in high-level sports is a significant risk factor for urinary and anal (loss of gas) incontinence and sexual symptoms (Almeida et al., 2016, Goldstick & Constantini, 2014, Vitton et al., 2011, respectively)
Incontinence in Pregnant Women

• Incontinence, especially stress incontinence, is a common condition during pregnancy (Wesnes et al., 2010, Brown et al., 2010, Sangsawang et al., 2013)

• Positive correlation to the number of vaginal deliveries. (Nygaard et al. 1990)

• As a result women stop exercising, change the way they exercise or wear pads during exercise (Nygaard et al., 1990 & 2005)
Incontinence and Menopause

• Urinary Incontinence during menopause appears due to mechanical factors rather than menopause transition. (Sherburn et al., 2001)
  • BMI
  • History of gynecological surgery
  • History of urinary tract infection
  • Diarrhea or constipation
  • 3 or more children
Incontinence, the Athlete and Pelvic Floor Muscle Training (PFMT)

• PFMT has been shown to improve strength and reduced frequency and amount of urinary incontinence (Da Roza et al., 2012, Hay-Smith et al., 2001, Bo, 2012, Sherburn et al, 2011)

• PFMT reduced urinary leakage during jumping and running (Bo et al. 1999)

• Combined PFMT with biofeedback demonstrated a cure rate of 67% during high impact sports. (Morkved et al. 2002)
Incontinence, the Athlete and Pelvic Floor Muscle Training (PFMT)

• Instruction in proper breathing techniques to coordinate diaphragmatic and pelvic floor muscle contractions and modifications to the way athletes land and run can reduce repetitive stress to pelvic floor muscles and reduce incontinence during sport (Prather et al., 2009; Luginbuehl et al., 2016)

• Manual therapy of myofascial trigger points is an effective treatment method to decrease hypertonic pelvic floor and improve coordination of the pelvic floor muscle contraction. (FitzGerald et al., 2012)
Incontinence

- Is seen across the lifespan
- It is treatable
- Please ask the question
Thank You
References


References


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References


