

Stress Urinary Incontinence (SUI) Shunzaburo “Jamie” Kida – University of Rhode Island – Biomedical Engineering

“Atchooo! Uh oh!” a slight moisture sensation emanates from the pelvic region. You have just experienced urinary incontinence. Urinary incontinence affects most people at some point in their life. It can be easily described as any involuntary release of urine.

There are several types of urinary incontinence: stress urinary incontinence (SUI), urge incontinence, neurogenic, functional, overflow, and mixed. Stress and urge incontinence are the most common types of UI.

Stress urinary incontinence is caused by the weakened state of the pelvic floor muscles (PFM). This most commonly is caused by increased intra-abdominal pressure, i.e. sneezing, coughing, laughing, extreme strenuous activity. SUI in women is closely associated with pregnancy, childbirth, and menopause.

The reason that SUI is observed the most is because the quality of life is degraded. Women suffering from SUI tend to view it as a shameful action. The areas of life that can be affected are emotional, social, physical, and sexual.

Treatment of SUI is primarily urged towards non-surgical means. Many times within the first year, women tend to resort to the surgical treatment within the first year if they do not observe any improvement in the strength of their PFM.

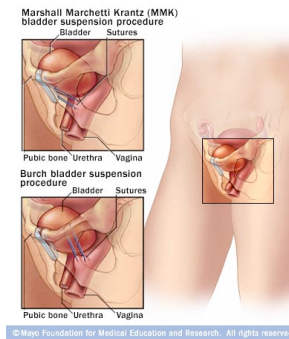
Non-surgical treatment consists of pelvic floor muscle training (PFMT) a.k.a. Kegel exercises, alone or with biofeedback, electrical stimulation, and or vaginal cones.

Surgical treatment includes the modified Burch Colposuspension, attaching the lateral vaginal wall to the Coopers’ ligament, or retropubic tension free vaginal tape, which is where a polypropylene mesh tape is placed underneath the urethra.

In the review observed, 24 study cases were followed. The females involved were all adult with no specific age group. They must show signs of incontinence and were not pregnant. Each study examined PFMT and different combinations of PFMT combined with any of the other three treatments.

Overall PFMT by itself was just as effective as the biofeedback combined with PFMT. All the women that took part in the PFMT, PFMT+BF, PMFT+BF+ES had a high rate of effectiveness (73% cured and 97% cured/improved).

With that conclusion, physical training and working with electronics had a high impact on the quality of life and reduction of SUI.



•Neumann, Patricia, Karen Grimme, and Yamini Deenadayalan. "Pelvic Floor Muscle Training and Adjunctive Therapies for the Treatment of Stress Urinary Incontinence in Women: a Systematic Review." *PubMed Central*. BioMed Central, 28 June 2006. Web. 3 Mar. 2010. <<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1586224/?to=pubmed>>.

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