

TREATMENT OF DETRUSOR OVERACTIVITY "OVER-ACTIVE" BLADDER TECHNIQUES FOR IMPROVING URGENCY AND FREQUENCY

The passage of urine is caused by the bladder muscle squeezing coordinated with the sphincter muscles relaxing. Under normal circumstances, the bladder muscle does not squeeze until it becomes convenient to do so, because the brain is able to inhibit and control the bladder reflex. When the ability of the brain to control the bladder reflex is lost or diminished, the bladder can squeeze at any time without warning, giving rise to the symptoms of urgency and frequency.

Behavioral treatments are based on the idea that the patient can be educated about the condition and develop strategies to minimize or eliminate the problem. The goal of the following behavioral techniques is to re-establish control of the bladder. Providing that the following recommendations are carried out with diligence and determination, the results can be extremely satisfactory with improvement—if not cure—of the incontinence. Having a positive attitude is a prerequisite for this form of treatment.

1. FLUID MODERATION

Bladder over-activity often will not occur until a "critical" urinary volume is reached, and by moderating fluid intake, it will take a longer time to achieve this critical volume. Try to *sensibly* restrict your fluid intake. This will not always be possible, but a moderate fluid intake will always decrease the volume of urinary output. By the same token, over doing fluid restriction can result in super-concentrated urine that can be an irritant to the urinary tract. Caffeine and alcohol increase urinary output and are urinary irritants, so it is best to limit intake of these beverages. Caffeine is present in relatively high concentrations in tea, coffee, cola and chocolate. Additionally, many foods—particularly fruits and vegetables—have hidden water content, so moderation applies best here as well. It is important to try to consume most of your fluid intake before 7:00 PM to improve nocturnal frequency.

Taking a diuretic medication (water pill) may be contributing to your symptoms. It may be worthwhile checking with your medical doctor to see if it is conceivable to change to an alternative, non-diuretic medication. This will not always be possible, but if so, may substantially improve your symptoms.

2. TIMED VOIDING

Your own sense of urgency may not be giving you reliable information about the status of your bladder filling. Urinating by the "clock" and not by your own sense of urgency will keep your bladder volumes more appropriate. Voiding on a two-hour basis is usually effective as a starting point, although the specific timetable has to be tailored to the individual, based upon the bladder diary. A gradual and progressive increase in the interval between voiding can be achieved by consciously delaying urinating. A goal of an increase in the voiding interval by 15-30 minutes per week is desirable. Eventually, a return to socially acceptable intervals is possible. Remember to always urinate immediately prior to going to sleep.

3. BOWEL MANAGEMENT

Avoidance of constipation is an important means of helping control bladder over-activity. Because of the anatomical proximity of the rectum and the bladder, a rectum that is full of stool can put unwanted pressure on the urinary bladder resulting in worsening of urgency and frequency.

4. PELVIC FLOOR MUSCLE EXERCISE

The pelvic floor muscle (PFM), present in both men and women, is a muscle that provides support to the bladder, vagina, and rectum. Increasing PFM strength and tone is one of the most effective and natural remedies of combating urgency, frequency and incontinence, both urgency and stress types.

You must first become aware of the presence, location, and nature of this muscle and then exercise it to increase its strength and tone. This is *not* the muscle of the abdominal wall, thighs or buttocks. A simple means of recognizing the PFM for a woman is to insert a finger inside your vagina and squeeze the PFM until the vagina tightens around your finger. A simple means of identifying the PFM for either gender is to start urinating and when about half completed, to abruptly stop the stream. Once you are fully aware of the location and nature of this muscle, you can then exercise it anywhere and at any time. These exercises can be done in various positions such as lying down, sitting, or standing and can be integrated into your daily activities. "Down times", such as sitting in your car at a red light or waiting in line at the market checkout are convenient times to exercise your PFM.

For maximum benefit, three sets of these exercises should be done over the course of the day. During each set, 25 repetitions should be performed. For several seconds this muscle should be squeezed, and then for several seconds relaxed. After completion of 25 repetitions of alternating "squeeze, relax" etc., the set is completed. Gradually, the strength and tone of the PFM will increase. Given the potential success of these exercises, they are well worth your effort. You may notice some soreness in the pelvic floor muscles once you start exercising regularly. Do not worry about this—it is only soreness associated with increased muscle activity. The benefits of these exercises will continue only as long as you do them. "Use it or lose it" applies here. As in any muscle-conditioning program, it may take 6 to 12 weeks of exercising before you notice an improvement in urinary control.

It is important to recognize the specific *triggers* that induce your urgency: hand washing, key in the door, rising from sitting, running water, entering the shower, cold or rainy weather, etc. Please pay careful attention to these and other activities and events that previously have resulted in urgency. Defensive urge control methods need to be employed prior to exposure to a trigger or at the time of the perceived urgency—specifically, rhythmic PFM exercises—"snapping" the pelvic floor muscles several times to try to preempt the bladder contraction before it may occur or diminishing or aborting the bladder contraction after it begins. Thus, by actively squeezing the PFM just before and during these activities, the urgency can be diminished. At the initial sensation of urgency, instead of running to find a toilet, several vigorous and rhythmic snaps of the PFM should be performed. Such vigorous squeezes can often preemptively abolish an unwanted bladder contraction and thus eliminate or decrease the sense of urgency.

Desensitization exercises can be very useful—after emptying the bladder, expose yourself to the trigger, and use the aforementioned tactics to try to "blunt" your typical conditioned response to the specific trigger.

5. BLADDER RELAXANT MEDICATION

There are a variety of medications that are useful to suppress bladder overactivity. It may take several trials of different medications or combinations of medications to achieve optimal results. The newest medications include the following: Tolterodine (Detrol LA), Oxybutynin (Ditropan XL), Transdermal Oxybutynin (Oxytrol patch), Trospium (Sanctura), Solifenacin (Vesicare), and Darifenacin (Enablex). The most common side effects are dry mouth and constipation. These medications cannot be used in the presence of urinary or gastric retention or uncontrolled narrow-angle glaucoma.

6. WEIGHTED VAGINAL CONES

Weighted vaginal cones are an adjunct to PFM exercise for women using a set of cones that are of identical shape and volume but of increasing weight. You insert the weighted cone into the vagina like a tampon and attempt to retain it for 15 minutes twice daily while walking. As the PFM becomes stronger, the heavier cones can be used.

7. BIOFEEDBACK

Biofeedback is an adjunct to PFM exercise in which electronic instrumentation is used to relay auditory and visual feedback information about your PFM contractions. This can enhance your awareness and strength of the PFM. Biofeedback can be obtained at the physical therapy department under the guidance of a physical therapist.

8. INTERSTIM THERAPY —SACRAL NERVE STIMULATION

Neuromodulation is a novel technique used when bladder over-activity does not respond to conservative therapy. It uses mild electrical pulses to stimulate and modulate your sacral nerves. Stimulating the nerves may relieve the symptoms of urgency incontinence as well as urgency/frequency. A neurostimulator provides the mild electrical pulses, very similar to a pacemaker for the heart. A small lead, or thin wire, carries the pulses to stimulate the selected sacral nerves.

9. BOTOX TREATMENT

This formulation, when injected directly into the bladder of patients with overactive bladder, can help reduce symptoms by “paralyzing” those areas of the bladder into which it is injected.