

Controlling Bladder Problems in Multiple Sclerosis



The National Multiple Sclerosis Society
is dedicated to ending the devastating
effects of multiple sclerosis.



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Note to health-care providers: Clinical Practice Guidelines—Urinary Dysfunction and Multiple Sclerosis can be found at www.pva.org, click on “PVA Store”.

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The Society publishes many other pamphlets and articles about various aspects of MS. To ask for these, or for other information, call the National MS Society at 1-800-FIGHT-MS (1-800-344-4867).

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We welcome your comments by mail or to **editor@nmss.org**.

Controlling Bladder Problems in Multiple Sclerosis



by Nancy J. Holland, RN, EdD, MSCN



Restricting fluids can make you miserable and irritate your bladder.

Introduction

This booklet explains how multiple sclerosis may affect the urinary system and what can be done to keep problems under control. Urinary dysfunction, or bladder problems, are common in MS, though not everyone with MS will have them. For those who do, symptoms vary from person to person. They must always be handled on an individual basis—but they can be handled, and they should be, for both health and quality of life.

When problems with urination first occur, they often feel overwhelming, especially if a person loses bladder control. It's common for people to resort to self-help first—restricting fluids and using absorbent pads—in order to deal privately with an embarrassing or frightening situation.

Self-help does play an important part in effective management, but it cannot substitute for medical help. Some self-help techniques will actually make matters worse. Restricting fluids, for example, increases the risk of infection and irritates the bladder.

Getting a proper diagnosis is an essential first step. It is important to inform your physician

or other health-care provider as soon as any problems occur.

Understanding how the bladder works normally, what causes symptoms, the tests and procedures used to make a diagnosis, and the measures used to relieve symptoms and preserve urinary tract function are all part of the process of managing bladder problems.

Goals

The goals of bladder management are:

- ❖ To preserve normal urinary tract function and prevent potentially dangerous complications.
- ❖ To relieve symptoms.

The focus of the health-care professional is on preserving function, especially kidney function, as this is critical to life itself. The focus of people living with MS is usually to relieve the distressing symptoms. Both goals can be attained through an active partnership between the professional and the person with MS. Since individuals respond differently to interventions, a trial-and-error period may be

needed to identify the medical measures that are most effective. In short, it may take time to achieve successful management.

A self-help partnership

The best self-help also involves a partnership between the person and the health-care professionals, and again, a trial-and-error period may ensue before the most helpful techniques are identified.

Drinking at least 6 to 8 glasses of fluid every day is recommended for general health and the health of the urinary system. This often requires learning how to spread fluid intake over the course of the day, and perhaps drinking less at night if awakening to urinate is a problem. Restricting fluids is not recommended for managing bladder problems!

Avoiding beverages containing caffeine is a positive step. Caffeine can be a bladder irritant, which worsens some symptoms. Taking a cranberry tablet or drinking cranberry juice daily is a positive step. Cranberry contains a chemical that reduces the risk of infection by preventing bacteria from sticking to the bladder wall. Talk with a nurse, physician, or reg-

istered dietitian about other possible diet changes and adaptations.

Avoiding exercise and social life because of bladder problems is a negative step. Planning can help. Learn where the bathrooms are at your gym, house of worship, movie theater, bowling alley, shopping mall.

For some, absorbent pads provide security, which is essential for living a full life. While pads should not be used as the sole solution to bladder problems, they can make a positive contribution to daily living. The ideal outcome is to eliminate leaking or loss of control so pads are not needed.

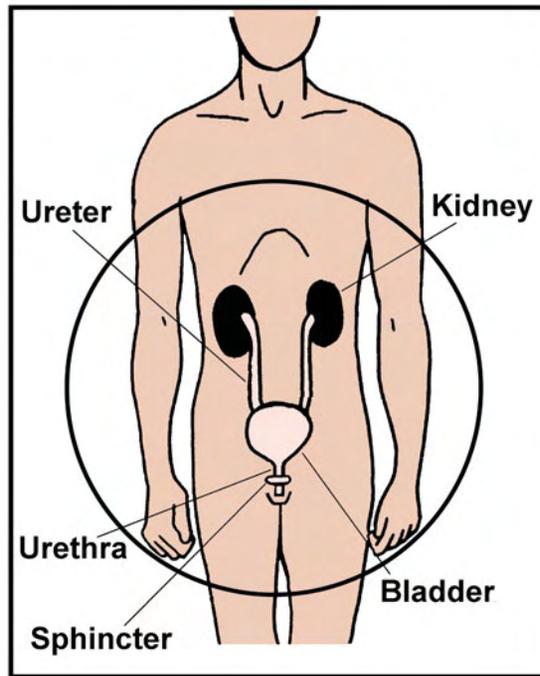


Figure 1

Anatomy: a portrait of the system

The urinary system, illustrated in Figure 1, removes waste products from the blood and eliminates them, together with the body's excess fluid, as urine. Urine is continuously formed in the kidneys, which lie on either side of the spinal column. Urine flows from the kidneys to the bladder through two connecting tubes called ureters. Finally the bladder expels urine from the body through a tube called the urethra.

The bladder, illustrated in Figure 2, is a muscular bag which slowly expands as urine collects, just as a balloon gradually enlarges as air enters it. The muscle part of the bladder is called the detrusor muscle.

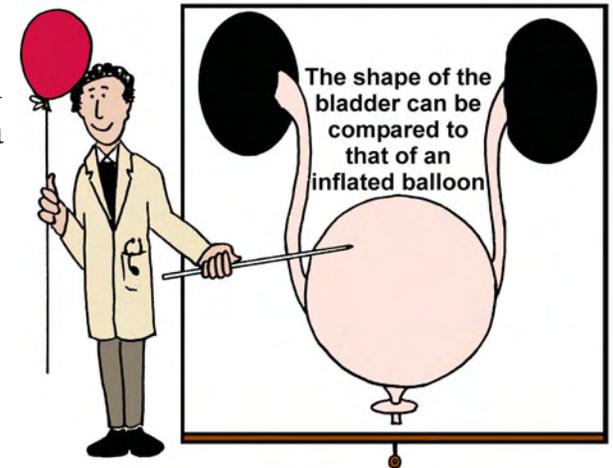


Figure 2

Where the bladder meets the urethra there is a muscle called the external sphincter which

remains contracted and closed between times of urination. The bladder and sphincter are normally under voluntary control, which means that a person has conscious control over when and where to urinate (or void).

Voluntary control of urination is managed by the brain. When the bladder is full, it signals this to the brain via impulses up the spinal cord. Impulses needed for normal urination are transmitted from the brain back to the bladder (see Figure 3).

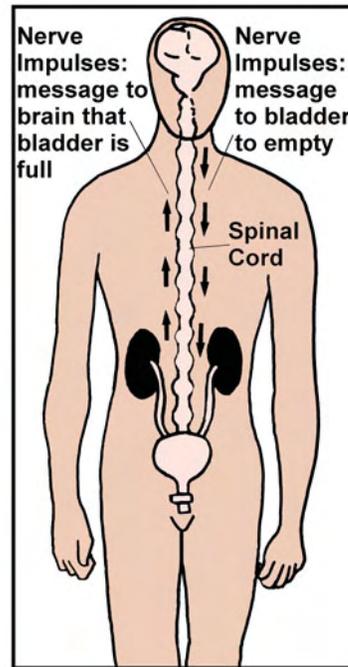


Figure 3

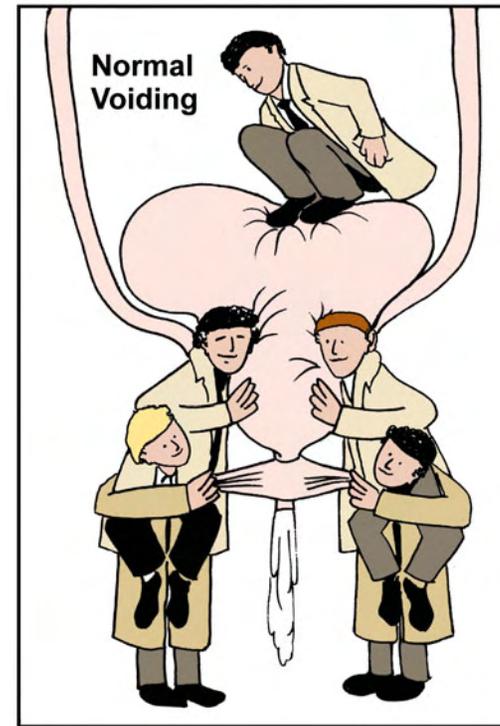


Figure 4

place simultaneously: the bladder detrusor muscle must contract to expel urine at the same time that the sphincter muscle relaxes and opens, permitting a free flow of urine out of the body. This process is illustrated in Figure 4.

In summary, normal urination is under voluntary control. When the bladder has collected 1 to 2 cups of urine, the person will experience the urge. When the person decides the time and place are right, the bladder contracts to push out the urine, while the sphincter opens to allow urine to exit.

Normal voiding

Urine collects in the bladder until 1 or 2 cupfuls (250 to 500 milliliters) have accumulated. The bladder gradually stretches as this takes place. When the bladder nears capacity, the person will experience an urge to urinate.

For urination to occur, two events must take

MS can disrupt the system

MS plaques in the brain and spinal cord may interrupt the transmission of signals to and

from the brain. This in turn can result in problems storing urine to normal capacity or problems emptying the bladder completely.

Any of these symptoms may occur, regardless of the underlying problem:

Urinary urgency: A very strong sensation that urination is imminent and cannot be postponed.

Incontinence: Loss of urinary control.

Nocturia: Urinating several times during the night.

Urinary hesitancy: Difficulty initiating the flow of urine.

Overflow incontinence: Loss of urinary control due to a very full bladder, usually described as “dribbling” or “leaking”.

Sensation of incomplete emptying: A feeling that some urine remains in the bladder after voiding. (Sometimes bladder sensation is decreased in MS, and a person may have incomplete emptying with no awareness that urine is being retained.)

Weak urinary stream: The flow is noticeably thin and slow.

Consultation

Consultation with a physician (Figure 5) is essential to establishing an accurate bladder diagnosis. The symptoms alone cannot determine whether the basic problem involves storage or emptying—or something else! Virtually all these symptoms could signal a urinary tract infection, or UTI. A UTI may not be related to the MS at all. However UTIs should be promptly treated with an appropriate antibiotic, which is determined by urine

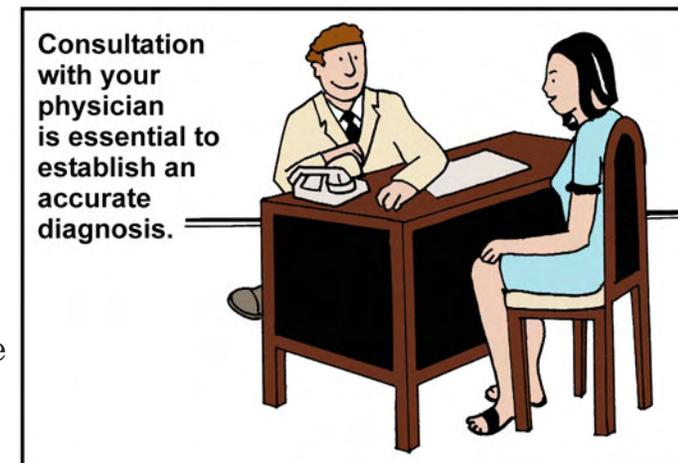


Figure 5

culture (See below). UTIs are often associated with an increase in other MS symptoms, such as spasticity and fatigue.

If a urine culture rules out a UTI, one or more other bladder function tests will be needed to help identify the problem and determine the best medical management.

Tests of bladder function

Urinalysis and urine culture: These are lab tests done with a fresh sample of urine to determine if infection is present, and which antibiotic is appropriate if infection is detected.

Post-void residual urine: A person urinates normally, followed by catheterization to determine how much urine has remained in the bladder. While this is the simplest test to determine bladder function, a noninvasive alternative, the bladder sonogram, may be an option.

Bladder sonogram: An ultrasonic scan to evaluate the urinary system. Conductive jelly is applied to the abdomen, and a microphone-like instrument is moved slowly over the area to obtain an image of the bladder and any residual urine.

Intravenous Urogram (IVU or IVP): An X ray of the entire urinary system that provides information about the kidneys as well as the bladder. This hour-long test involves an injection of a contrast material, followed by X rays.

Radioisotope renal/residual urine scan: The information obtained is similar to that

obtained by IVP, but a radioisotope, an element that emits radiation, is injected and traced on its path through the body.

Urodynamics: Performed by a urologist, physiatrist, or nurse, the test employs a urinary catheter and rectal probe to determine the storage capacity of the bladder and functioning of the urinary tract.

Storage dysfunction

A storage problem occurs when the bladder is unable to retain urine as it accumulates. The most common form of storage dysfunction is illustrated in Figure 6. In this case, the detrusor muscle of the bladder is overly active. Contractions of the bladder occur when only a small



Figure 6

amount of urine has collected. The sphincter opens in a normal way, resulting in frequent and urgent urination.

Management of storage dysfunction

Management of the most common type of storage dysfunction is aimed at relaxing the bladder detrusor muscle so that a normal amount of urine may accumulate before the urge to urinate is experienced. This may be achieved by using medications such as Probanthine (propantheline bromide), Tofranil (imipramine), Ditropan (oxybutynin), or Detrol (tolterodine), all of which relieve spasms of the bladder.

Ditropan XL delivers oxybutynin, the most common drug for calming the bladder, packaged as a controlled release, one-a-day tablet that maintains a steady level of medication in the body. Detrol (tolterodine), works by reducing bladder muscle contractions.

All of these medications also reduce the frequency of bathroom trips by increasing the volume of urine passed each time.

A different kind of medication works by reducing the amount of urine the kidneys produce. This is DDAVP (desmopressin acetate) and is administered as a nasal spray, or a pill.

Emptying dysfunction

Emptying dysfunction is the inability of the bladder to completely eliminate stored urine. The most common form is illustrated in Figure 7. In this case, the urethra is blocked by a spastic or tight sphincter, which prevents the bladder from emptying completely. More specifically, the urinary sphincter tightens instead of relaxing when the bladder's detrusor muscle contracts to push the urine out. Usually some urine is eliminated, but a significant amount remains in the bladder.

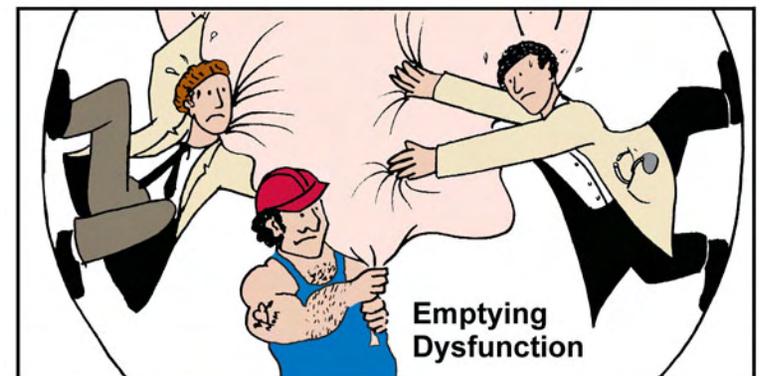


Figure 7

There is another form of emptying dysfunction in which the detrusor is too weak to expel all the urine, but this occurs infrequently in MS.

Management of emptying dysfunction

Some people with a mild emptying problem in which a small amount of urine is retained may respond well to the drug Lioresal (baclofen). Most people with emptying problems will need to use intermittent catheterization (IC). IC is the most successful management tool for emptying dysfunction. Urine is periodically drained by inserting a thin tube into the bladder through the urinary opening. It is a painless procedure, which is generally much easier to do than it sounds, even if MS has caused numb, uncooperative fingers. Minimal instruction and a few practice sessions with a nurse are required.

Women are initially more receptive than men to IC, perhaps because they are familiar with the process of tampon insertion. Men tend to be more psychologically resistant, but once they overcome this and realize the benefits, they have an easier time since the male urinary opening is more accessible. The proce-

cedure is most conveniently performed at the toilet.

If symptoms are not controlled by IC alone, a medication such as Ditropan XL, Detrol, or one of the others mentioned above, may be added to the routine in order to relax the bladder.

The sometimes dramatic relief of symptoms and the prospect of avoiding serious complications in the long term usually encourage people to continue IC. Some people need to do IC for only a few weeks or months, as the bladder often returns to normal or near-normal function in time. For others, IC simply becomes a part of life.

Complications

Emptying dysfunction causes urine to be retained, and bacteria multiply freely in stagnant urine. Thus urine left in the bladder, which is known as “post-void residual urine”, may predispose a person to frequent UTIs, or urinary tract infections.

Kidney damage can occur from frequent upper urinary tract infections. Infected urine can

actually back up through the ureters into the kidneys if the exit is blocked by a contracted or tight sphincter. Bladder or kidney stone formation is another potential complication of incomplete emptying. Minute mineral particles normally expelled in urine may clump together to form stones which cannot be passed through urination. Stones can further complicate normal voiding. Frequent UTIs, kidney or bladder stone formation, and kidney damage all suggest a problem with chronic urinary retention.

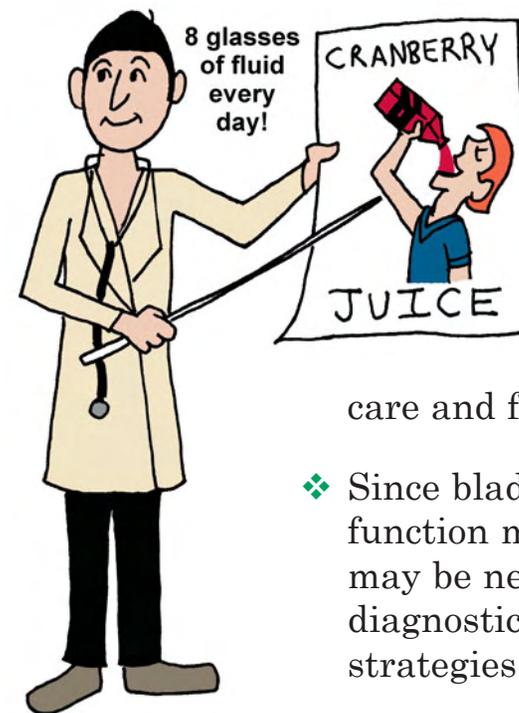
In the past, a technique called “credé” was sometimes taught to people with retention problems. It involved pushing down on the lower abdomen while voiding. It is now considered harmful. The pressure of credé often moves the urine up, not down. It is not recommended.

Some people experience more complex bladder problems which resist other strategies. There are options available. Some individuals may ultimately need a catheter (or drainage tube) inserted into the bladder on a more or less permanent basis. In other rare situations, surgery is required for an improved quality of life and better health.

Points to remember

- ❖ Bladder disturbance is common in people with MS. A good understanding of the potential solutions helps people come to terms with this upsetting problem.
- ❖ Control of symptoms is more easily accomplished with **early** treatment. Consultation with a knowledgeable health-care provider should take place at the first sign of a urinary problem.

- ❖ In most instances, bladder symptoms can be controlled successfully using strategies that include appropriate medication, management techniques, and self-help.



- ❖ Serious complications usually can be prevented with good care and follow up.
- ❖ Since bladder and sphincter function may vary over time, it may be necessary to repeat diagnostic tests and vary the strategies.

Sources of additional information and other services

1-800-FIGHT-MS (1-800-344-4867) can be used to reach the National MS Society chapter nearest you. Your chapter offers local referrals, education programs, counseling, self-help groups, and booklets and brochures on many aspects of living with MS.

If you join the Society, you will receive our national magazine, **InsideMS**, a bi-monthly packed with news and features of interest to anyone affected by MS, and **MS Connection**, a newsletter from the Society office closest to you, which covers nearby events and resources.

For the best MS information online, consult the National MS Society Web site. You can find information on diagnosis, treatments, medications, clinical trials, research news, issues in coping and management, MS publications, news on advocacy, events and services offered by your chapter, MS clinics, and how you can join the Society. Log on to: nationalmssociety.org.