

## IN FOCUS

### Using Products with Strategies for Safety

#### Excerpt from “Activities of Daily Living: Practical Pointers for Parkinson”

Parkinson's disease (PD) can affect an individual's ability to control the bladder. Urinary frequency and urgency may become more common problems. These tips may help with toileting practices and make them safer:

- Allow plenty of time to get to the bathroom and use the toilet. Try a regular schedule for going to the bathroom, such as urinating every two hours while awake.
- If getting up at night to empty the bladder is a problem, limit evening fluids at least two hours before bedtime. Avoid caffeinated, carbonated, and alcoholic drinks in the evening. If swelling in the feet and legs is present, see a healthcare provider about what is causing it and to find the best treatment.
- Ensure that lighting is adequate and that nightlights are used in the bathroom. Always have a flashlight or a headlamp available at bedside.
- Wear clothes that are easy to get off or open and out of the way to use the toilet. For men, pants with a Velcro<sup>®</sup> fly and Velcro<sup>®</sup> waist closure can be helpful. Men may find that sitting on the toilet to urinate helps makes relaxation and emptying the bladder easier.
- Do not rush voiding, and remain on the toilet until the bladder is empty. If there is still some urine in the bladder, stand up and then sit back down again and lean forward slightly over the knees, but do not strain or try to push the urine out. This is called “double voiding”.

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### in this issue

Our bodies have nerves that carry messages from the bladder to the brain when the bladder is full. These nerves also carry signals from the brain to the detrusor, or bladder muscles, to tell them to tighten or release. Certain health conditions cause these nerves to stop working properly. When these particular nerves are not functioning, individuals experience a **neurogenic bladder**, which is the focus of this issue of *Quality Care*<sup>®</sup>.

This newsletter introduces some of the conditions and diseases that affect the nerves responsible for carrying messages to and from the bladder. Experts share ways in which the urinary system may change based on the inability to rely on these nerves and the symptoms people may encounter due to having such health concerns. Since each person's body responds differently, management and treatment options vary. Read the articles that follow to learn how to live a high quality life with a neurogenic bladder. ❖

If you need assistance for safer transit to and from the bathroom, there are several aids that can summon help if you have a family member, friend, or helper nearby:

- A small hand bell is a simple option that is not costly. Make sure that it rings loud enough for someone elsewhere in the house to hear.
- A baby monitor is another option that is widely available at major stores for under \$50.
- Make the toilet facilities convenient. This may mean a bedside commode, bedpan, or urinal placed conveniently near or in the bed.
- Grab bars, which can be mounted on a wall beside the toilet, make it easier to sit down and get up commode. Commode frames, which have handles on either side of the toilet, help individuals raise and lower themselves and are usually covered by Medicare. Raised toilet seats also work but usually are not covered by Medicare. Individuals may have difficulty relaxing the pelvic floor to urinate if their feet are not fully on the floor. A lift commode chair helps a person get up from the toilet and is especially helpful if a caregiver is not always nearby. Also available is a 3-in-1 bedside commode that converts to a toilet, raised toilet seat, or shower-chair. With a physician's prescription, this aid is usually covered by insurance.
- A removable bidet can be purchased that easily attaches to the toilet rim. It has a warm water spray for easier hygienic cleansing, especially after a bowel movement. Warm water on the genitals may also help initiate voiding.
- Rubber mats used in showers to prevent slipping on wet surfaces might also be used to guard against falls in the night.

For improving safety and maintaining maximum mobility, ask a doctor or other healthcare provider to refer you to an occupational and/or physical therapist that has special training and experience with PD. Occupational and physical therapists typically can:

- Design an exercise program to meet particular needs
- Evaluate and treat problems of mobility and walking
- Evaluate and treat joint or muscle pain which interferes with the activities of daily living
- Help with poor balance or frequent falling
- Teach family caregivers and spouses or partners about proper body mechanics and techniques for helping someone with Parkinson's disease so that they do not injure their own body
- Treat difficulties accomplishing activities of daily living such as toileting
- Recommend and teach the correct use of various mobility aids, such as a cane for walking

*This article is excerpted from NAFC's newest publication "Continence Care for People Living with Parkinson's Disease." Content for this article is contained in the booklet's chapter that heavily draws on information from "Activities of Daily Living: Practical Pointers for Parkinson."*



## Multiple Sclerosis: Its Affect on The Bladder

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*Ms. O'Leary has disclosed that she has no financial interests related to this topic.*

### Symptoms of Multiple Sclerosis

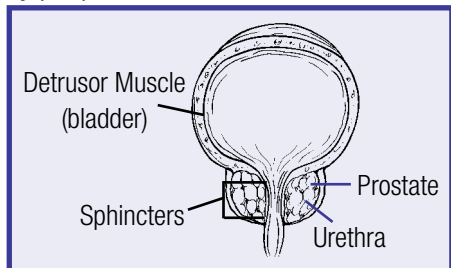
Multiple sclerosis (MS) is a chronic, neurological disease that affects the central nervous system. When any part of nerve fiber is damaged or destroyed, nerve impulses traveling to and from the brain and spinal cord are distorted, producing a variety of symptoms. Symptoms may be mild, such as early vision changes (blurring and blind spots), muscle weakness, and numbness in the limbs. However, there can also be severe symptoms, such as paralysis, loss of vision, abnormal sensation, abnormal cognition, and/or bladder or bowel dysfunction.

Symptoms may come and go over time. The severity and specific symptoms of MS are unpredictable and vary from one person to another. Although there is currently no cure for MS, effective strategies are available to manage symptoms, control disease progression, and treat relapses. Controlling these factors can greatly improve daily function and quality of life.

### Changes in the Urinary System

As many as 80% of people living with MS experience bladder dysfunction as a symptom of the disease. There are three primary bladder control problems that occur as a result of MS: detrusor overactivity (DO), detrusor (bladder) sphincter dyssynergia [dis'sə-nûr'je-ə] (DSD), and underactive bladder (UB).

**Detrusor Overactivity (DO)** - This is the most common type of bladder problem experienced by people with MS. With DO, the bladder spontaneously contracts, causing urine leakage. This



may result in urgency (a sudden compelling desire to pass urine), frequency (voiding too often) and incontinence. This can also be the cause of nocturia, which is when an individual gets up more than once during the night to urinate. Treatment focuses on relaxing the bladder and minimizing contractions

so the bladder may hold more urine for a longer period of time between voiding. Prescribed medications are also used to treat DO symptoms. (See Figure 1 on next page.) Extended-release drugs have less risk of dry mouth but may be more expensive. Higher doses than typically recommended may be needed to treat MS-related DO.

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Medication	Brand Name	Dosage
Oxybutynin (generic)	Ditropan®	2.5-5 mg / 2-4 times per day
Oxybutynin extended-release	DitropanXL®	5-30 mg once daily
Oxybutynin extended-release transdermal patch	OXYTROL®	3.9 mg per day system applied twice weekly (every 3-4 days)
Tolterodine	Detrol®	1-2 mg twice daily
Tolterodine extended-release	Detrol LA®	2-4 mg once daily
Darifenacin	ENABLEX®	7.5-15 mg once daily
Solifenacin	VESIcare®	5-10 mg once daily
Trospium chloride	Sanctura®	20 mg twice daily
Trospium chloride extended-release	Sanctura XR®	60 mg once daily

**Detrusor Sphincter Dyssynergia** - Another common problem seen in a bladder affected by MS is detrusor sphincter dyssynergia (DSD). Usually when the bladder contracts to empty, the sphincter relaxes to let the urine pass. With DSD, however, when the bladder contracts the sphincter contracts as well, preventing the urine from passing. Treatment is two-fold. First, treatment is geared toward emptying of the bladder. It is possible for increased pressure in the bladder over time to cause bladder and/or kidney damage. The second goal is to relax the bladder so that it can hold more urine. Alpha-blocker medications may be used to try to relax the smooth muscle of the sphincter. Examples of such medications are: Cardura®, Hytrin®, Uroxatrol®, and Flomax®. See the DO section on page 3 for treatment to relax the bladder. Other measures to assist with bladder emptying when medications do not work include the catheters used intermittently in self-catheterization.

**Underactive Bladder** - The nerve damage that occurs from MS can cause the bladder to weaken, and as a result, the bladder may not contract to release urine. Likewise, if nerve signals from the bladder cannot tell the brain to empty, the bladder continues to fill and expand. Eventually the bladder overflows, which may cause leakage of urine. Even if urination occurs, the bladder usually does not empty completely, resulting in urinary retention. In essence, what is occurring in the person with MS are impaired sensations. Bethanechol [be-than'-e-kol] may be prescribed, although its effect is limited. Use of a catheter to empty the bladder is often recommended; abdominal straining should be avoided.

Many bladder symptoms besides urinary urgency, frequency and incontinence occur as a result of MS. Because urinary infections are common and may result due to urinary retention, treatment is focused on bladder emptying. Use of antibiotics should be reserved for use

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in symptomatic infections documented by laboratory testing to avoid overuse and potential antibiotic resistance that can result with frequent use of antibiotics over time.

Another frequent experience people with MS have is hesitancy, where voiding is delayed or difficult after having the sensation of a full bladder. This may be due to sphincter dyssynergia, an underactive bladder, or even prostate problems. Tests for all voiding dysfunction related to MS should be carried out by a healthcare provider to determine the appropriate diagnosis and treatment.

## Learn More

For further information on bladder function related to multiple sclerosis visit the National Association For Continence Web site at [www.nafc.org](http://www.nafc.org) or call 1-800 BLADDER. For information regarding multiple sclerosis go to the National Multiple Sclerosis Web site at [www.nmss.org](http://www.nmss.org) or call 1800-FIGHTMS. ❖

## IN THE SPOTLIGHT

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### International Council on Active Aging Presents: “Welcome Back to Fitness”

Spring is often that time of year when people decide to pay close attention to personal health. Now is the time to be conscious of physical activity and enjoy the outdoors at the same time! The International Council on Active Aging has dedicated a section of their Web site to offer guidance for anyone who is seeking to improve or maintain wellness. Some of their advice includes the following tips:

**Get a checkup** - Meet with your healthcare provider to see whether any special modifications should be considered

**Know your options** - Before starting a program, examine options. Pick a program that is enjoyable. Options include going to a gym for a structured workout or joining a neighborhood walking club. Either will improve fitness, ability to function, and quality of life if done regularly.

**Make a date** - Find a buddy with whom to exercise, and stay motivated. It can be a friend to walk with near home or a personal trainer at a gym. Scheduling an appointment makes it more likely the walk or workout will take place.

**Make choices** - To move forward, leaving some things behind is necessary. What can be given up to make room for exercise? Consider shedding bad habits, nonproductive activities, or nonbeneficial relationships.

**Keep moving all the time** - Stretch, walk, march in place, stand and sit as many times as possible when talking on the phone or watching television commercials.

**Don't quit** - Like brushing teeth, make exercise a party of daily life.

For more information, visit [www.icaa.org/welcomeback.htm](http://www.icaa.org/welcomeback.htm). ❖

**I recently began taking a medication prescribed by my doctor. Although I never had bladder control problems in the past, I have experienced what I believe to be urinary frequency and urgency. Sometimes I can make it to the restroom within enough time to urinate, although I have leaked on a few occasions. Could these feelings be related to my new prescription? What should I do?**

Although your recent episodes with urinary frequency and urgency could be completely unrelated to the medication you are taking, you are right in asking if there could be a direct relationship between the two. First and foremost, talk to your healthcare provider in more detail about your experiences. Make sure you keep a daily log of your habits, including when and what you eat and drink, when you use the bathroom, how much you void, and how many times per day you leak because of not getting to the toilet in time. NAFC has a downloadable Uro-log. You can find it on [www.nafc.org](http://www.nafc.org).

The following chart shows some of the prescriptions that may have an effect on the urinary system. There are three main types of drugs listed here. However, there are over a half dozen additional types of medications that may affect your bladder, including antidepressants and over-the-counter cold remedies.

Medications	Effect	Bladder Symptoms
<b>Diuretics (water pills)</b> Examples: Hydrodiuril® (hydrochlorothiazide-HCTZ), Lasix® (furosemide), Maxzide® (HCTZ-triamterene)	More urine is produced	Frequency, urgency, increased amount of urine output
<b>Sedatives, muscle relaxants</b> Examples: Valium® (diazepam), Librium® (chlordiazepoxide), Ativan® (lorazepam)	Sedation and drowsiness	Possible lack of appreciation of bladder events
<b>Narcotics</b> Examples: Percocet® (oxycodone-APAP), Demerol® (meperidine), morphine	Sedation, drowsiness, retention of urine because sensory signals are blocked	Lack of concern or desire to use the toilet, difficulty in starting the urinary stream, straining to void, voiding with a weak stream, urinating between voids, frequency

Use this guide as an educational tool, but do not stop taking any prescribed medications before consulting with your healthcare provider. Always work together to determine a treatment option that is best suited for a particular case. ❖

## The Bladder Following a Spinal Cord Injury

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*Dr. Linsenmeyer has disclosed that he has no financial interests related to this topic.*

### The Sacral Voiding Center

Spinal cord injury (SCI) can affect the bladder and sphincter in a number of ways, depending on what part of the spinal cord is damaged. The lowest part of the spinal cord is the sacral spinal cord. A very important part of voiding involves the sacral spinal cord that contains an area known as the sacral voiding, or “micturition” center.

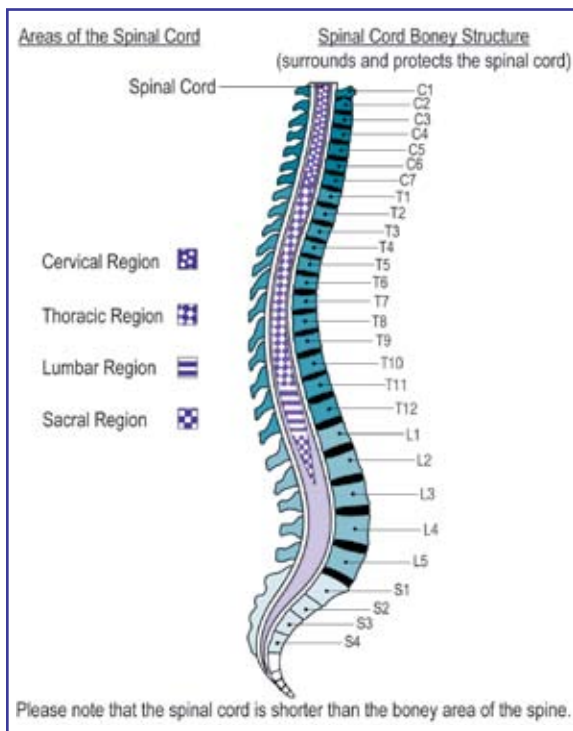


Image of spine courtesy of Medtronic, Inc.

When the bladder becomes filled with urine, it normally sends signals to the sacral center of the spinal cord that the bladder is full. The sacral center then sends signals to the brain, which helps to coordinate urination and sends signals back to the bladder to contract when once has reached a toilet, or not to contract if it is not an appropriate time to void. This keeps a person without injury from experiencing urinary incontinence.

Immediately after any type of SCI, the bladder usually undergoes “spinal shock.” During spinal shock, the bladder does not contract. Spinal shock frequently lasts two to three months but may last longer. What happens after spinal shock depends on the level of the SCI.

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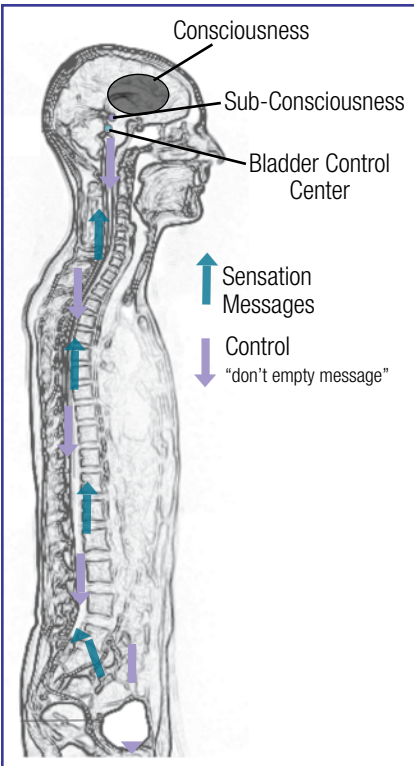
## Blocked Messages

If the spinal cord injury is above the sacral level (called supra sacral SCI), then the signals from the brain to the sacral center that would normally tell the bladder not to contract are blocked because of injury. Therefore, signals from the bladder that tell the sacral center it wants to contract are not stopped, and the bladder contracts and voiding occurs whether a person wants to void or not. Hence, an incontinent episode occurs in the individual who has sustained a SCI.

Another important consideration with a supra sacral SCI is what happens to the urinary sphincters. Between the brain and spinal cord is an area called the brainstem, which has another voiding center. This center is responsible for sending signals down the spinal cord to tell the sphincter to relax when a person's bladder contracts. The supra sacral SCI blocks these signals so that as the bladder contracts the sphincter does not relax, blocking urine from emptying from the bladder. This is known as detrusor sphincter dyssynergia (DSD). The detrusor is a layer of muscle fibers in the bladder. DSD can be dangerous because high blood pressures build up when the bladder contracts and urine cannot empty, and this pressure can be pushed back to the kidneys and cause kidney damage.

## A Closer Look

Another problem that can occur in individuals with supra sacral SCI at or above the level of the chest (thoracic level 6) of the spine is autonomic dysreflexia. The most dramatic symptom of autonomic dysreflexia is a sudden severe rise in blood pressure. With the high blood pressure people may experience a severe headache, sweating, flushing, goose bumps, chills, a feeling of anxiety, and a slower pulse rate. About 30 to 40 percent of people have elevated blood pressures with few, if any, other symptoms. This is called silent dysreflexia.



Autonomic dysreflexia may occur from anything uncomfortable or painful that is happening to a person's body (whether they can actually feel it or not). A common cause of autonomic dysreflexia is from an overfilled, or "distended", bladder. Forceful bladder contractions often cause autonomic dysreflexia as well, especially if the urinary sphincter is not relaxing (DSD). Other causes include constipation or sitting or lying on a pressure ulcer.

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Nerve signaling from the brain to the bladder while the bladder is filling.

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If a spinal cord injury damages the sacral spinal cord and the sacral voiding center, the bladder function is very different from the supra sacral injuries. If the sacral center is injured, it cannot send signals to the bladder, so the bladder usually does not contract, or keep the urine from leaking.

Fortunately, the urinary sphincter mechanism usually has enough tone that it will prevent urine from leaking out continuously. However, if the bladder is very full or a person is pushing or straining (such as transferring in and out of a wheel chair), leakage may occur. Since the bladder may not contract in individuals with a sacral SCI, they do not have DSD. Bladder infections are a common problem that may be related to a bladder that does not empty.

## Frequent Check-ups

One word of caution is that there are exceptions, and the bladder or sphincter may not always behave in the way just described. It is not always possible to know how forcefully the bladder and sphincter contract based on a person's level of injuries or symptoms. These questions can only be answered with bladder tests, called urodynamics, which are available through a healthcare provider. Individuals who have sustained a SCI should have routine checks at least annually with a urologist who specializes in such injuries to review symptoms as they surface as a preventive measure against serious medical episodes that may otherwise erupt. ❖

## NOTEWORTHY NEWS

### Be Prepared. Ask Questions. Speak Up™.

The Joint Commission is an independent, non-profit organization, whose mission is to continuously improve the safety and quality of care provided to the public. The group accredits and certifies over 15,000 healthcare organizations and programs in the U.S. They, along with the Centers for Medicare and Medicaid Services (CMS) are urging people to become involved with their healthcare team to prevent errors that could otherwise occur during treatment.

Speak Up™ reminds people to:

- S**peak up about questions and concerns.
- P**ay attention to the care you are receiving.
- E**ducate yourself about your diagnosis, medical tests you receive, and your treatment plan.
- A**sk a trusted family member or friend to be your advocate.
- K**now what medications you take and why you take them.
- U**se a hospital, clinic, or surgery center that has undergone serious on-site evaluations.
- P**articipate in all decisions about your treatment.

Specifically, The Joint Commission and CMS encourage people to ask healthcare professionals three basic questions during every visit. What is my main problem? What do I need to do? Why is it important for me to do this? Visit [www.myschospital.org](http://www.myschospital.org) to learn more. ❖

## Parkinson's Disease: How Does It Change the Function of the Urinary System?

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*Dr. Fowler is a consultant for Allergan and Medtronic, has received speaker honorarium from Allergan and Medtronic, has been a trial participant for Allergan, and has received research grants from Allergan and Pfizer.*

### What Really Happens?

A disease of the nervous system is highly likely to upset the ability to remain continent. The exact kind of bladder problems that result from a disease of the nervous system depends very much on which part(s) of the nervous system malfunctions. What is clear is that in Parkinson's disease several things seem to go wrong.

Until recently, it was thought that the major problem in Parkinson's disease was the loss of dopamine-producing cells in the brain which in normal health serve to hold the bladder switch "off" during storage and prevent the bladder from contracting. This is certainly a big part of the problem. However, it now appears as if it is more complicated than merely the loss of certain cells.

### Common Concerns Related to PD

People with Parkinson's disease (PD) commonly develop overactive bladder and develop uninhabitable contractions, which are difficult or impossible to stop. These may happen at a lower volume of filling, resulting in the complaint of urinary frequency and urgency. Due to a decreased amount of dopamine, during a sensation of urgency, leakage may occur, resulting in the complaint "I can't hold my urine."

Something that also bothers individuals living with PD and their partner or caregiver is night-time frequency. Difficulty sleeping is also a common problem for people with PD. It is not clear whether persons with PD have to go to the bathroom during the night because of the sleep problem or because of a bladder problem. Furthermore, older persons with PD may have other medical problems or be on medications that can cause increased urine production at night. Waking up often at night has recently been shown to be the most common, non-motor symptom (one which does not involve movement) affecting people with Parkinson's disease. This can be very tiresome for both individuals and their caregivers, and it is often a complaint for which medical help is sought. Furthermore, the risk of falls, specifically slips caused by navigating in the dark, and resulting bone fractures are serious concerns for an individual with Parkinson's disease, particularly in light of accompanying difficulties in walking.

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In addition to symptoms that are due to poor storage of urine, many people with Parkinson's disease also complain of difficulty in getting their urine flow started followed by a weak stream. This seems to be neurological too. If someone has been on prescribed medication for many years, they may experience "on and off" problems with symptoms, in which an individual may function well shortly after taking a drug, but when the it wears off their PD symptoms of tremor and slowness become very severe. Passing urine is easier and more efficient when the patient is "on" and the medication is working, compared with "off" times when the medication benefit has worn off.

## Identifying the Problem

Not all individuals with PD experience problems with urination, perhaps only about one-third of those attending a neurology clinic have such issues. In general, urination problems become worse as a patient's PD symptoms worsen over time. In fact, if urinary symptoms occur and are very troublesome at a stage of PD when movement symptoms (tremor and slowness) are minor, the question may arise as to whether the patient might have some other cause for their urinary symptoms. Multiple System Atrophy (MSA), or Shy-Drager Syndrome, is a neurological disease that may be mistaken for PD, and in which urinary symptoms usually occur and worsen before movement symptoms.

For instance, prostate conditions should be considered for men. Determining whether the prostate is the cause of urinary symptoms in men with PD cannot easily be determined, and usually requires a special evaluation called urodynamics. The questions of whether men with PD who also have obstruction from their prostate should have prostate surgery is difficult, as there are only two studies—one which suggested they don't do well and another that said they do have good outcomes.

Women can have co-existent PD and stress urinary incontinence (leakage when coughing or sneezing) or a gynecological problem such as organ prolapse (descent of pelvic organs), which may affect bladder function. Treatment of PD should include goals of maximizing mobility, physical therapy, and helpful toileting accessories (such as bedside commodes) since impaired mobility can lead to falls when individuals rush to use the restroom.

## Schedule An Appointment

As always, individuals should visit their healthcare provider at the first stages of changes in health. A family practice physician or nurse can address any questions about health-related concerns. If the symptoms require setting up an appointment with a specialist, they can offer assistance in finding one that can tend to a particular condition. ❖

In recent weeks, Lisa Belkin wrote a great essay published by The New York Times about the challenges that individuals face in managing painful, debilitating or degenerative illnesses in the workplace. She cited numerous stories, several of which involved neurological diseases such as multiple sclerosis (MS) and Parkinson's disease (PD). Much of the dilemma being confronted focused on the feeling that the condition needed to be closeted and held in secrecy from work colleagues and supervisors.

As noble as it is to “keep going” in the face of adversity, fear, or even embarrassment, it is also important to seek out help, resources, and the understanding of others. This can encompass not only fellow workers but family members. Reaching out is best accomplished with education. Not only is there power in knowledge, there is also comfort and a sense of control over circumstances that could otherwise be bewildering or discouraging. Getting educated about not only the disease process but also how to manage its toll on the body is what permits us the freedom and the confidence to remain as active and as engaged in life as we possibly can be. We don't secure quality of life by hiding and trying to “go it alone.”

When NAFC embarked on the first in our series of “Continance Care for People Living...” booklets targeted to those living with a specific disease or set of circumstances, we did so with the goal of inspiring meaningful hope for both patients and their caregivers. The text, however, is not spiritually charged, inspirational prose. Instead, it is practical and concrete in approach, offering simple instructions, explanations, and advice for coping. Each booklet also houses a section on research and future technological advances for anticipating additional options for improved bladder and bowel management.

How wide a circle of friends and colleagues you tell about your disease or condition is ultimately a private and personal decision. But don't exclude those who can be a part of the solutions that optimize your quality of life and maximize your safe well-being. Get them educated on the facts, too. And get them to help you keep “life” in living.

I'm so proud of our latest publication, “Continance Care for People Living with Parkinson's Disease.” Should you know anyone with PD, get a copy for them and one for yourself.



Nancy Muller  
Executive Director

