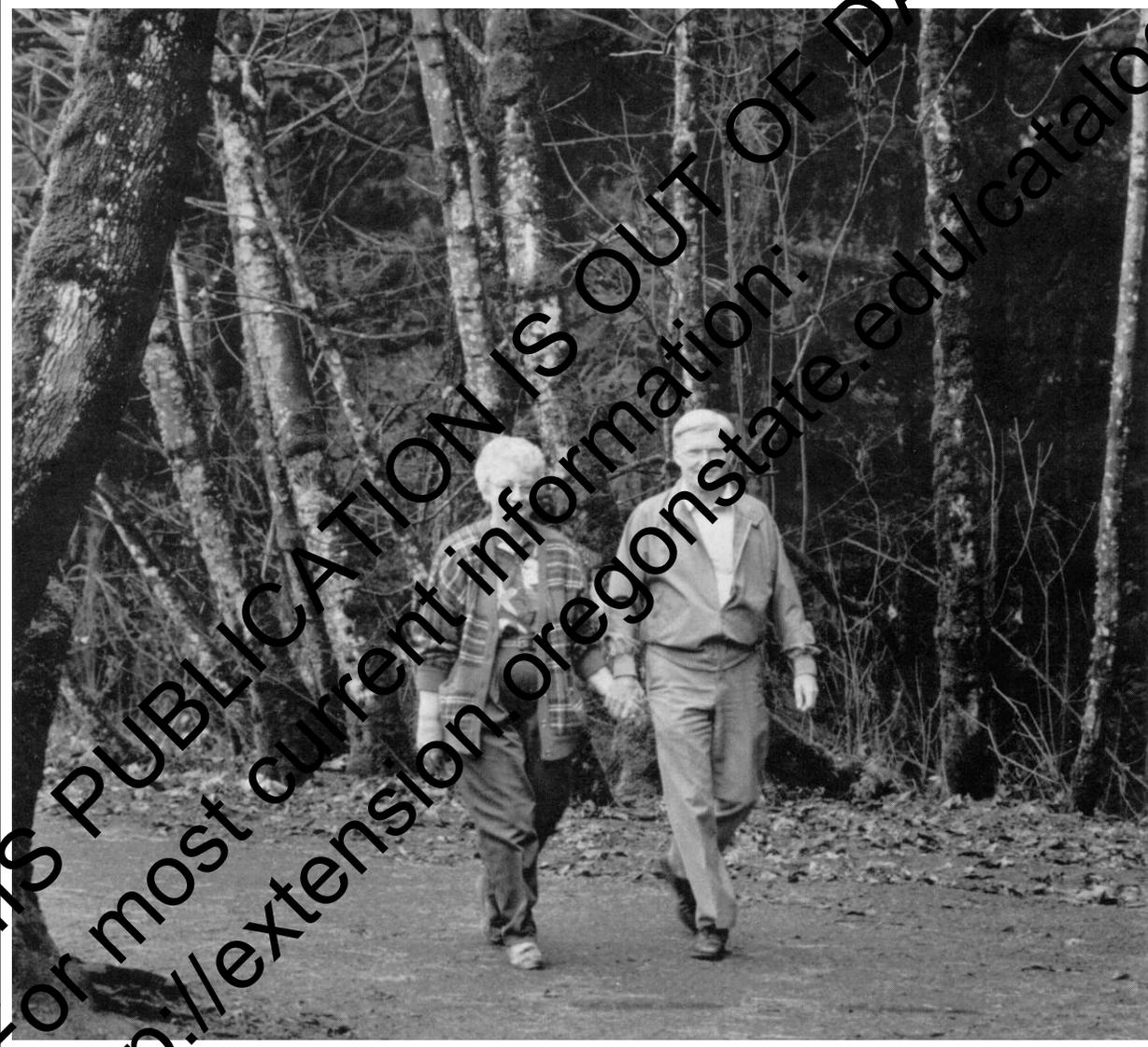


*Managing*  
**Urinary Incontinence**  
*for Healthy Aging*



PNW 408-E

REPRINTED JANUARY 1993

A PACIFIC NORTHWEST EXTENSION PUBLICATION

OREGON STATE UNIVERSITY • WASHINGTON STATE UNIVERSITY • UNIVERSITY OF IDAHO

---

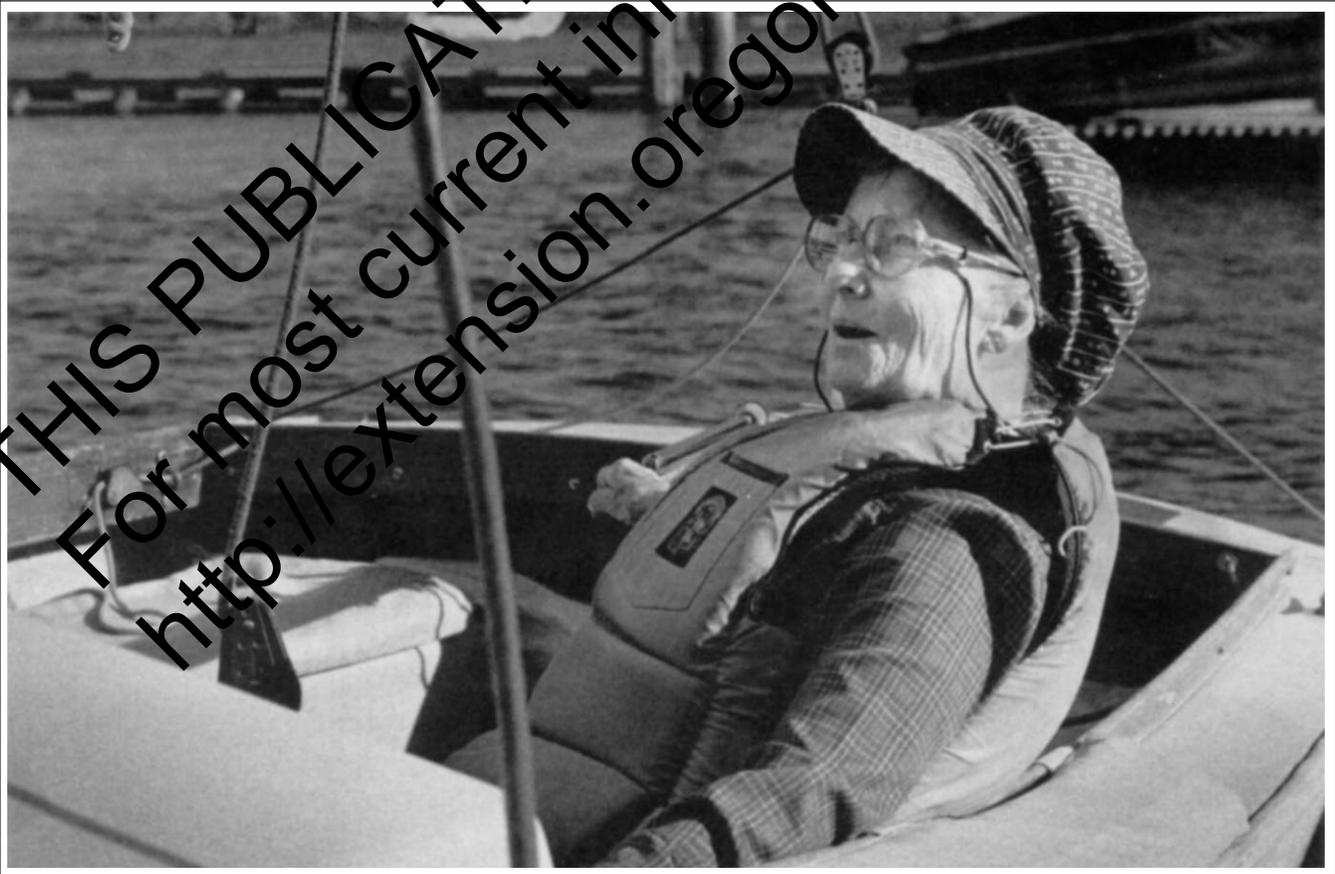
Nancy Kershaw, Extension Home Economist, Tillamook County, and  
Vicki Schmall, Extension Gerontology Specialist Emeritus, Oregon State University.

## Managing Urinary Incontinence for Healthy Aging

Mabel's problem with bladder control started when she was 52 years old. She leaked small amounts of urine when she laughed, coughed, or exercised. At first, it was a minor problem that she controlled by wearing a sanitary napkin and dropping her exercise class.

Gradually the problem became worse. Mabel had accidents because she could not make it to the toilet in time. She didn't tell anyone, not even her doctor. She began to wear adult absorbent undergarments to be certain that her leakage would not be detected by co-workers, but she still worried about odor.

When Mabel retired, she spent most of her time at home. When she did go out, she was preoccupied with the location of the next bathroom. Shopping and traveling became an ordeal. She further restricted her activities, and avoided leaving home for any reason, even family gatherings. Gradually she adopted an extremely sedentary and isolated life.



---

Mabel's story is not unusual. Urinary incontinence, the involuntary loss of urine, is a fairly common problem. At least 10 million adults in the United States experience urinary incontinence. Half of all women experience incontinence at some point in their adult lives; about one-third develop a regular problem with bladder control. Approximately 15 percent of men age 60 and older experience incontinence at some time. Urinary control problems can range from mild to severe.

Incontinence is more common among adults 60 years of age or older. It affects 15 percent or more of older adults who live at home and up to 60 percent of people living in nursing homes. It is one of the most common reasons for nursing home admission.

For many people, losing control of one's own body is among the worst things that they can imagine happening. In part this is because of the images people have of people who are incontinent and the feelings incontinent people have about themselves.

Because of the social stigma attached to incontinence, people who lose bladder control often restrict outings and social activities because they fear "having an accident" or that others will smell the odor of urine. Even short trips to the grocery store may be planned in relation to the availability of a toilet.

A vicious cycle can develop. Incontinence can lead to isolation and inactivity, which may lead to depression, which further increases isolation. The irony of this cycle is that 80 percent of incontinence cases are treatable.

## Normal Bladder Function

Each person has his or her own schedule for urination. Normal bladder habits may range from urinating every 3 hours to every 6 hours.

Conditions for successful bladder function include:

**Adequate bladder capacity.** The muscles of the bladder wall must be able to stretch enough to store urine so you don't have to constantly go to the bathroom.

**Ability to feel the urge to go.** You must be able to recognize and act on the sensation of a full bladder. This requires an intact nervous system to relay information to the brain. The brain must be able to interpret the message and initiate appropriate bladder action.

**Mobility.** You have to be able to get to the toilet or a portable receptacle.

**Ability to control bladder muscles.** The muscle that holds the urine in the bladder is called a bladder sphincter. You need to have voluntary control of your sphincter muscle and good muscle tone in your bladder and pelvic area to initiate or delay urinating.

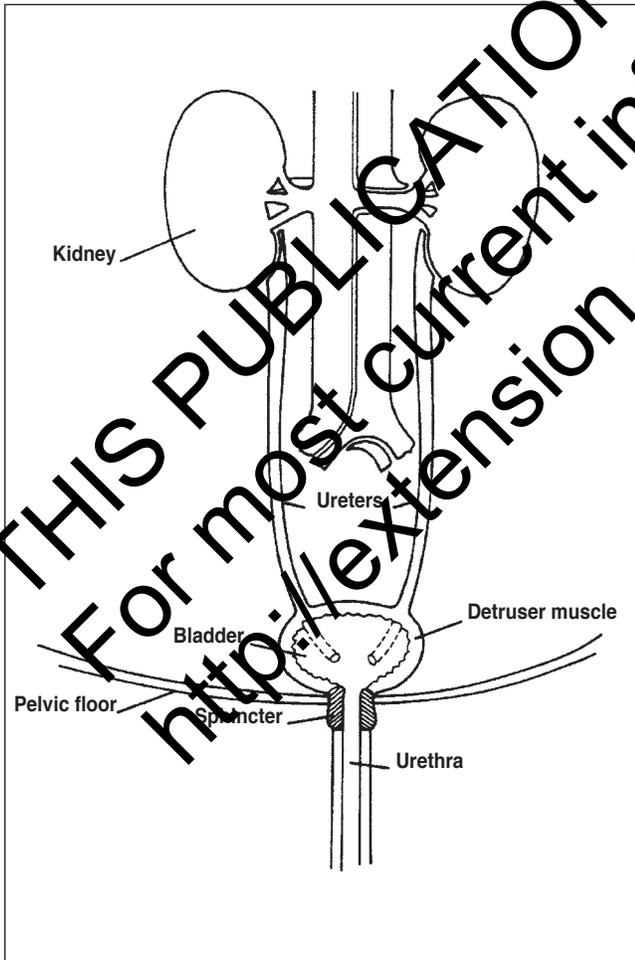
**Ability to empty the bladder completely.** If you can't empty the bladder, the need to urinate will recur shortly. It also increases the risk of urinary tract infection.

## The Urinary System

Urine forms in the kidneys and flows down narrow tubes called ureters into the bladder where it is stored. A muscle at the neck of the bladder, called a sphincter, holds the urine in the bladder.

When you urinate, the sphincter relaxes and the muscles of the bladder wall (detrusor muscle) contract to empty the bladder. Urine passes out of the body through the urethra. The sphincter muscle must keep the bladder closed until you reach the toilet.

The nervous system (which includes the brain) coordinates these activities. Disruption of nearly any part of this system can lead to incontinence.



## Incontinence and Aging

Urinary incontinence is not normal or inevitable in later life. However, bladder habits and control are affected by several physical changes associated with aging.

**Reduced kidney function.** Eventually the kidneys lose up to 50 percent of their capacity to filter body wastes.

**Reduced bladder capacity.** The amount of urine the bladder can store decreases with age. By age 65 the bladder holds about 1 cup of urine (compared to over 2 cups at age 25). Because the volume of urine the bladder can hold decreases with age, frequency of urination increases.

**Weakened bladder sphincter muscle.** It becomes more difficult to delay urination because the waiting period between the desire to urinate and actual urination is shortened.

**Decreased bladder muscle tone.** This can result in the bladder not emptying completely. When urine remains in the bladder, the risk of bladder infections and incontinence increases.

Other factors that can contribute to incontinence are:

**Reduced mobility.** Severe arthritis, for example, may make it difficult to reach the bathroom in time after the bladder signals the need to urinate.

**Childbirth.** Prolonged labor or many births may weaken the pelvic muscles.

**Neurological changes.** Damage to nerves can impair a person's ability to sense a full bladder. Such damage may be caused by:

- ❑ Diabetes
- ❑ Stroke
- ❑ Parkinson's disease
- ❑ Multiple sclerosis
- ❑ Spinal cord injuries

**Drugs.** Older adults take more prescription and over-the-counter medications that can trigger incontinence, for example:

- ❑ **Diuretics or "water pills."** These medications greatly increase urine output and may overwhelm the bladder's ability to handle the volume of urine.
- ❑ **Sedatives and tranquilizers.** These drugs can reduce awareness of the urge to urinate and slow a person's response.
- ❑ **Anticholinergic medications.** Many different medicines can interfere with the action of acetylcholine, a brain chemical that stimulates the muscles of the bladder wall. Drugs of this type (anticholinergics) weaken bladder contraction and can contribute to incontinence.

Alcohol abuse can also cause loss of urinary control. Alcohol dulls the senses, causing lack of awareness of the urge to urinate. It can also affect control of voluntary muscles.

**Illness.** Incontinence can develop as a result of illness, particularly an illness that limits movement or causes confusion, such as a high fever. Sometimes incontinence is the first sign of a urinary tract infection or other serious illness.

**Mental changes.** A variety of mental conditions can contribute to incontinence.

- ❑ Severe depression can cause a person to lack the incentive to get to the bathroom.
- ❑ Confusion or delirium caused by illness or medications frequently results in incontinence as a secondary problem.
- ❑ Severe memory loss can affect a person's ability to find the bathroom and remember toileting procedures.

**Irritation and infection of the urinary tract.** Irritation and infection (such as cystitis, urethritis, and prostatitis) in or near the urethra and bladder are often responsible for the sudden onset of an incontinence problem. Bladder infections are particularly common among older women.

Atrophic vaginitis, a thinning and inflammation of vaginal tissue due to decreased levels of estrogen after menopause, is common among women. In this condition, the urethral opening is vulnerable to inflammation and infection.

**Obstructions in the urinary system.** Blockage of the urethra may be caused by:

- ❑ **Enlarged prostate.** The prostate, a small organ that surrounds the urethra in men, can enlarge and obstruct the urethra. This can significantly impair the normal storage and emptying functions of the bladder. Enlargement of the prostate affects approximately 50 percent of men aged 60; 80-90 percent of men by age 80.
- ❑ **Fecal impaction** (a retention of a mass of stool in the rectum). Feces retained in the rectum can exert pressure on the bladder, which is located near the rectum. Fecal impaction is a relatively common cause of incontinence in frail older people.

---

---

## Types of Incontinence

There are several types of incontinence, each with many different causes. The type and cause of incontinence determines the appropriate treatment.

### Urge incontinence

Urge incontinence refers to the inability to hold urine long enough to reach the toilet because the bladder contracts involuntarily. It is the most common form of incontinence, accounting for up to 65 percent of cases among older men and women.

In urge incontinence, the bladder reacts to relatively small volumes of urine by contracting suddenly and sharply. Symptoms include:

- ❑ Urgent need to empty bladder.
- ❑ Emptying the entire bladder without control.
- ❑ Having to urinate more frequently than normal.
- ❑ Urinating frequently at night.

Urge incontinence can be caused by:

- ❑ Irritation or infection in the urinary tract.
- ❑ Diseases or injuries affecting the nervous system.
- ❑ Radiation treatment.

In many cases, however, a cause cannot be found.

### Stress Incontinence

Stress incontinence is the leakage of a small amount of urine when pressure on the bladder is increased by coughing, sneezing, laughing, exercising, or lifting. It usually occurs when a person is awake. The problem is more common in women than men and accounts for about 35 percent of incontinence among women.

Stress incontinence occurs because the sphincter muscle is weakened or damaged, allowing small amounts of urine to leak when abdominal pressure is greater than the pressure holding urine in the bladder. Factors contributing to stress incontinence include:

- ❑ Weakness in the pelvic floor muscles due to many births or prolonged labor.
- ❑ Estrogen deficiency after menopause which thins vaginal walls.
- ❑ Obesity, which increases abdominal pressure on the bladder.
- ❑ Urinary tract infections.
- ❑ Urologic surgery.

### Overflow Incontinence

Overflow incontinence is the leakage of small amounts of urine from a constantly full bladder. It is the most common form of incontinence in older men. Even after urinating, the bladder remains full because the bladder muscles cannot contract enough to empty the bladder completely. When the bladder becomes too full, urine begins to leak or dribble

---

out through the urethra. Even when the bladder is full, there is no urge to urinate. Symptoms of overflow incontinence include:

- ❑ Continuous dribbling of urine or frequent unpredictable dribbling.
- ❑ Inability to urinate voluntarily.
- ❑ Overdistended bladder.
- ❑ Reduced stream of urine.

Overflow incontinence can be caused by:

- ❑ Blockage of the urinary tract by enlarged prostate (in men), tumors, or fecal impaction.
- ❑ Disease (such as diabetes) or injury that affects the nervous system.
- ❑ Medications that relax the bladder muscle.
- ❑ Bladder muscle weakness.

### Functional Incontinence

Functional incontinence refers to a situation in which the urinary tract is intact, but urine is lost because the person is not aware of the need to urinate or is unable or unwilling to reach the toilet. It is most common in individuals who have physical limitations.

Physical limitations causing functional incontinence include severe arthritis, muscle weakness, fatigue, broken bones, joint problems, and other disabling conditions. Impaired manual dexterity that makes it difficult to remove clothing can contribute to functional incontinence.

Other factors that can contribute to functional incontinence include dementia that impairs a person's memory; severe depression; or environmental barriers (such as strange surroundings, lack of light at night, inaccessible bathroom, or clutter that reduces easy access to the toilet). If the distance the person must either walk or travel by wheelchair to reach the toilet is longer than the time between the onset of the desire to urinate and actual urination, incontinence is certain to occur.

### Iatrogenic Incontinence

Iatrogenic incontinence is incontinence caused by medication or treatments such as surgery (including hysterectomy, caesarean section, rectal surgery, prostate surgery, and lower intestinal surgery), radiation, or chemotherapy. This form of incontinence can be either temporary or permanent depending upon the treatment or medication.

### Total Incontinence

Total incontinence is the complete loss of voluntary bladder control. There is either continuous leakage or periodic uncontrolled expulsion of urine from the bladder. This condition can be caused by disease or injury to the nervous system.

### Mixed Incontinence

A person may have more than one urinary incontinence problem. A combination of two or more types of incontinence is called mixed incontinence.

---

## Seeking Treatment for Incontinence

If you are experiencing a bladder control problem, the first and most important step is a complete medical examination. Urinary incontinence can be eliminated in one-third of the people who have it, and leakage of urine can be made much less frequent in another one-third. Others can be helped to live with incontinence. If left untreated, incontinence can lead to urinary tract infections, rashes, and other skin problems.

### Warning Signs

See your doctor if you experience any of these warning signs more than once a month:

- Leakage of urine that limits activities or causes embarrassment.
- Leakage of urine or inability to urinate following surgery.
- More frequent urination than usual (without a bladder infection) or frequent urination where only small amounts of urine are voided.
- Urgent need to urinate or losing urine on the way to the toilet.
- Pain or burning feeling when filling the bladder or when urinating.
- Frequent bladder infections.
- Progressive weakness of urinary stream.
- Full bladder feeling even after urinating.
- Any other change in bladder habits.

Your family doctor can determine whether you should see a specialist. You may be referred to a urologist, a doctor who specializes in diseases of the urinary tract. In some parts of the country there are continence clinics that specialize in treating incontinence.

## Helping Your Doctor Help You

Keep a “bladder diary.” This is a good way to find a pattern to your bladder habits. It will also help your doctor determine the type of incontinence you have and possible treatments. To keep a bladder diary, write down the following for at least 3 days:

- The exact times you go to the bathroom and approximate amount of your urine.
- When and how often any leakages or accidents occur, and the amount of urine leaked.
- Apparent reason for incontinence (for example, coughing, laughing, or not reaching the bathroom in time).
- What fluids you drink and when you drink them.
- How urgently you felt the need to urinate.
- Physical feelings that accompany the leakage (for example, burning, itching, or pressure).
- Whether the problem is better or worse at night.
- Characteristics of the urine (for example, odor and color).

**Make a list of all medications you are currently taking.** Include the name, strength, and dosage of each prescription and over-the-counter medication.

If you notice incontinence after beginning a new medication, either prescription or over-the-counter, check with your doctor. Your doctor may discontinue the drug, modify the dosage, or prescribe another medication.

---

**Prepare a medical history.** It should include the following:

- A list of allergies.
- Current medical problems for which you are being treated.
- All surgeries and when you had them.
- Urinary system history, such as past urinary tract illnesses, infections, and previous treatments for incontinence.

**Make a list of symptoms.** Write down all symptoms you are experiencing, such as urgency, frequency, pain, presence of blood, or cloudiness of urine. Be specific.

If your doctor responds to your concerns with “you’re just getting old,” or “you should expect this problem at your age,” do not accept this as an appropriate response. Tell the doctor there is a cause for the problem, you want to know what it is, and how it can be treated or managed. Your doctor or other health care professional should work with you to resolve the problem or refer you to a specialist, usually a urologist.

#### Tests to expect

For most people, a physical examination and a few simple tests are needed to identify the cause of incontinence. These include:

- Pelvic exam for women
- Rectal exam for both men and women
- Simple tests of reflexes, muscle strength, and gain
- Blood and urine samples

## Treatment Options for Urinary Control Problems

Incontinence is almost always treatable. Based on findings during the examination, your doctor will recommend a treatment. The recommendation will be based on:

- Your general health
- Your specific health problems
- Medications you are taking
- Your life situation
- Severity of incontinence

There is no single treatment that works for everyone, and each treatment has advantages and disadvantages.

For any given type of incontinence, there is more than one method of treatment. Ask your doctor these three questions:

- What are the treatment options?
- What are the advantages and disadvantages to each treatment?
- What are the risks, if any?

The goal of treatment is to promote normal urination. When incontinence cannot be completely eliminated, modern products and ways of managing the condition can ease the discomfort and inconvenience it causes. The most common treatment strategies are habit training, bladder training, Kegel exercises, medications, changing dietary and fluid intake, and surgery.

## Habit Training

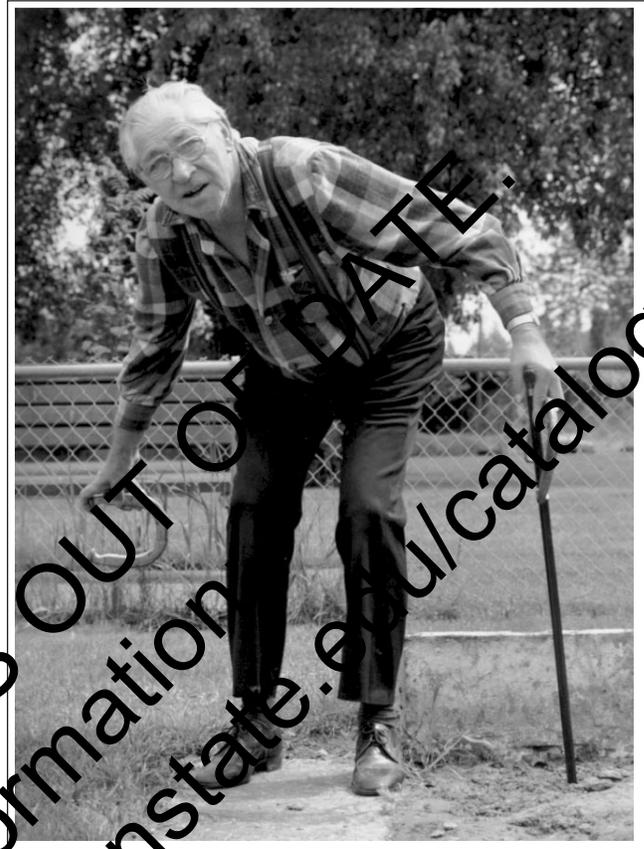
Habit training involves learning your bladder's limits and developing the habit of regular trips to the bathroom to avoid accidents. A bladder diary can help determine the best schedule. This strategy is especially effective for people with functional incontinence and may be recommended for urge and overflow incontinence.

## Bladder Training

The best time to urinate is before the urge or after successfully reducing or eliminating the urge. Rushing to the bathroom when an urge occurs contributes to accidents by jiggling and stimulating the bladder to empty. It increases abdominal pressure on the bladder and interferes with the concentration needed to control the bladder.

Bladder training involves learning to increase the length of time you can hold your urine. It has been effective for some people with urge or stress incontinence. Initially you go to the bathroom every 2 hours during the daytime, whether or not you feel a need to go. Gradually, you increase the interval between toileting by half an hour, until you reach 4-hour intervals, which is compatible with most social and travel schedules.

If you have an urge to urinate in between your scheduled visits to the bathroom, stop what you are doing and remain still. Squeeze the pelvic floor muscles several times quickly, but do not relax fully between squeezes (see Kegel exercises below). Try to relax the rest of your body by taking deep breaths, while at the same time concentrating on suppressing the urge. After the urge has passed, walk slowly to the bathroom and continue to squeeze your pelvic muscles.



As with all new skills, bladder training takes practice. Your first attempts may not work, but with commitment and practice, bladder control should increase.

## Kegel Exercises

Kegel exercises involve strengthening the muscles that control urination by squeezing and then relaxing the pelvic floor muscles. These exercises are often recommended for women in cases of stress incontinence and during pregnancy. To do Kegel exercises:

- ❑ Learn to contract and relax the correct muscle. With a full bladder, the woman sits on the toilet, starts to urinate, and then tightens to stop the flow of urine.
- ❑ Exercise the pelvic floor muscles without releasing urine. This may be done in the sitting, standing, or lying down position.

- ❑ Do the Kegel exercise three times a day by following these steps:

1. Contract pelvic floor muscles and hold for three seconds.
2. Relax for 3 seconds.
3. Repeat 15 times.
4. Gradually extend the time you contract and relax the muscles to 10 seconds each.

Do the exercises along with something you do every day to help you to remember to do them, for example when showering, watching television, washing dishes, or talking on the telephone.

It takes 6 to 8 weeks for muscle strength to improve so that urine is no longer lost when coughing, sneezing, or doing other activities. The exercises must be continued even if incontinence is “cured” to maintain muscle strength and prevent the recurrence of incontinence.

### Medications

Medications can often improve bladder control. For urge incontinence, medications are prescribed that help prevent the bladder from contracting and reduce the feeling of urgency. For stress incontinence, medications are given to help contract the sphincter muscles.

Know the potential side effects of medications prescribed for incontinence. Any medication can have undesirable side effects, especially in people with multiple medical problems. Examples of side effects include:

- ❑ Dry mouth
- ❑ Blurred vision

- ❑ Dizziness
- ❑ Confusion
- ❑ Rapid heart beat
- ❑ Constipation

Tell your doctor if side effects occur. Side effects may be reduced or eliminated by adjusting the dosage or changing medications.

### Diet and Fluid Intake

What you eat and drink are important if you have bladder control problems. Your doctor may recommend that you modify your diet and fluid intake in these ways:

**Lose weight.** If you are overweight, a 5 to 10 percent drop in body weight can relieve pressure in your abdomen that may contribute to stress incontinence. If you have diabetes, check with your doctor before making changes in your diet.

**Drink more water.** Drink a minimum of six 8-ounce glasses of water a day. Drink most of the liquid during the day, before the evening meal. Limit liquid intake in the evening.

The last thing you should do is avoid fluids. Drinking too little water can cause constipation which can bring on more incontinence. Low water intake results in a smaller amount of urine which is more highly concentrated and irritating to the bladder. This will cause you to go to the bathroom more frequently and promotes infection which can cause incontinence.

**Avoid beverages with a diuretic effect.** Beverages containing caffeine (such as coffee, tea, and some cola drinks) or alcohol rob the body of needed fluids and increase the amount of urine.

---

## Surgery

Sometimes surgery is the best and only appropriate treatment, particularly when incontinence is related to a structural problem such as an abnormally positioned bladder or blockage of the urethra by an enlarged prostate gland. Surgery depends upon the type of incontinence and its cause.

**Prostate surgery.** If an enlarged prostate is the cause of incontinence, prostate surgery cures the problem in 95 percent of cases.

**Implantation of an artificial sphincter.** Stress or total incontinence can be due to a urethral sphincter that no longer closes tightly enough. Surgical replacement with an artificial sphincter can cure such incontinence.

**Suspension surgery.** This surgery, used to correct stress incontinence in women, lifts the urethra into better position where it can be adequately closed off during a sudden rise in abdominal pressure.

If you are considering surgery, be sure you understand the procedure, what you can expect following the surgery, risks, and when you can resume normal activity. As with any surgery, consider getting a second opinion.

## Managing Irreversible Cases of Incontinence

Treatment for incontinence can cure or help most incontinence problems. However, when incontinence cannot be completely eliminated it can be managed to make it easier to live with and to minimize its detrimental effects. Management techniques include changing the physical environment, wearing easy-to-remove clothing, wearing absorbent pads, or using a catheter.

### Change the Physical Environment

Changes in the physical environment may help reduce problems with urge or functional incontinence:

- Remove obstructions or hazards, such as electrical cords, furniture, or throw rugs along the path to the toilet from the bed and your favorite chair.
- Provide adequate lighting.
- Install a raised toilet seat and grab bars if an average height toilet is difficult to use.
- Get a portable commode for someone who has difficulty walking.

### Wear Easy-to-remove Clothing

Garments with elastic waists, wrap-around styles, and Velcro fasteners are easier to take off than garments with zippers or buttons. Avoid tight girdles and belts.

### Use Absorbent Products

Products for urinary incontinence soak up and hold urine and make hygiene fairly easy. They should be changed often to prevent

THIS PUBLICATION IS OUT OF DATE.  
For most current information: <http://extension.oregonstate.edu/catalog>

odor and rashes. These products are lightweight, nonbulky, and usually invisible under clothing. There are two major types of absorbent products.

**Absorbent shields or pads.** These are designed to be worn inside underwear. They are ideal for minor cases of incontinence. The advantages are maximum freedom and mobility, and ease of disposal, replacement, and transport. The disadvantage is that the products are designed primarily for use when standing or sitting.

**Absorbent undergarments.** Sometimes called “adult diapers,” these products are designed for major bladder control problems. They are available in both disposable and reusable forms. It is important that they fit firmly yet comfortably around the legs. Many of these garments are no more bulky than everyday underwear and can be worn easily under clothing.

People often feel embarrassed to purchase absorbent shields, pads, or undergarments because they don't want others to know they have a problem with bladder control. This is why some people purchase sanitary napkins in an attempt to deal with incontinence. Sanitary napkins, however, are not designed to absorb urine.

Products designed for urine absorption can be “lifesavers,” enabling people to participate in normal activities and reduce the potential for embarrassing accidents. When choosing an absorbent product, consider these factors:

- Appropriateness for the situation
- Absorbency (how long will it protect you?)
- Bulk (can it be seen under clothing?)
- Noise level (does it make noise before, during, or after use, for example, when you walk or sit?)

#### What you can do to help prevent incontinence

1. Urinate whenever the urge arises; never ignore it.
2. Drink a minimum of six 8-ounce glasses of water daily.
3. Eliminate or reduce beverages that have a diuretic effect (coffee, tea, cola, and alcohol).
4. Drink cranberry juice or take Vitamin C to help maintain the acid nature of the urine. Because bacteria thrive in an alkaline urine environment, this helps lower the chance of bladder infections.
5. Take diuretic medications in the morning.
6. Limit use of sleeping medications, sedatives, and alcohol since they decrease your feeling the need to urinate and can increase incontinence, especially at night.
7. Do Kegel exercises to strengthen the pelvic muscles and bladder sphincter.
8. Lose weight if you are overweight.

- ❑ Comfort (is it comfortable before and after use?)
- ❑ Availability (can you purchase it when needed?)
- ❑ Cost (is it affordable?)
- ❑ Ease of changeability and disposability

Absorbent products may be purchased in many outlets, including grocery, discount department, medical supply, and drug stores, home health product outlets, and through mail order catalogs.

### Catheterization

Catheterization is the insertion of a tube into the bladder to take urine from the body into a collector. It is most often used for overflow incontinence when the cause is a bladder with little ability to contract but that is not obstructed.

Intermittent catheterization, the insertion of a tube at periodic intervals, is preferable to indwelling catheterization. External condoms (collection devices) are occasionally used by men. These devices enclose the penis and collect urine in a draining bag.

Catheterization is a last resort treatment because it can cause infections. When needed, however, catheterization can provide significant relief from incontinence.

Catheters take ability and dexterity to use. Catheter care and hygiene are critical regardless of the type of catheter used.

### Conclusion

Many people who have a urinary control problem do not seek professional help and deny having a problem. Others accept incontinence as an inevitable consequence of aging and see no reason to discuss it with a health care professional.

Remember, incontinence is not inevitable with aging. Loss of bladder control is a symptom of an underlying disorder, a sign that something is wrong. The worst thing you can do is to ignore it. The best thing you can do is to seek medical advice.

Treatment for incontinence can be highly successful. The first step toward treatment is acknowledging the problem and telling a doctor about it. Getting treatment and learning how to manage incontinence can restore peace of mind and add quality to your life.



---

## Sources of Information About Incontinence

Organizations that serve as national clearing-houses for information about all aspects of incontinence include:

National Association for Continence  
PO Box 1019  
Charleston, SC 29402-1019  
[www.nafc.org/](http://www.nafc.org/)  
1-800-BLADDER

The Simon Foundation for Continence  
PO Box 815  
Wilmette, IL 60091  
1-800-23-SIMON  
[www.simonfoundation.org/](http://www.simonfoundation.org/)

Both of these organizations offer information on incontinence treatments, products, and advances in research.

## OSU Extension Publications

*Aging Parents: Helping When Health Fails*, PNW 246.

*Using Medicine Safely in Later Life*, PNW 393.

*Depression in Later Life: Recognition and Treatment*, PNW 347.

*Sensory Changes in Later Life*, PNW 196.

*Helping Memory-Impaired Elders: A Guide for Caregivers*, PNW 314.

You can view, download, and order copies of Extension publications online, at <http://extension.oregonstate.edu/catalog/>

Or, contact our office:

Publication Orders  
Extension & Station Communications  
Oregon State University  
422 Kerr Administration  
Corvallis, OR 97331-2119  
tel. 541-737-2513  
fax 541-737-0815  
email [puborder@oregonstate.edu](mailto:puborder@oregonstate.edu)

THIS PUBLICATION IS OUT OF DATE  
For most current information:  
<http://extension.oregonstate.edu/catalog>

---

© 1992 Oregon State University. Extension work is a cooperative program of Oregon State University, the U.S. Department of Agriculture, and Oregon counties. Oregon State University Extension Service offers educational programs, activities, and materials without discrimination based on age, color, disability, gender identity or expression, marital status, national origin, race, religion, sex, sexual orientation, or veteran's status. Oregon State University Extension Service is an Equal Opportunity Employer.

Published May 1992. Reprinted January 1993.