

CHAPTER SEVENTEEN INCONTINENCE

By Drs. Barton Wachs and Aubrey Pilgrim

Introduction

Incontinence is a major problem. About 17 million people, mostly women have this embarrassing problem. It also affects many men who have had treatments for prostate problems.

In a search of the Internet there were nearly 100 sites that offer products and treatment advice for incontinence. This may surprise you, but here is one of the sites:

4th Quarter, 1999 -November has been declared "[Incontinence Awareness Month](http://usrf.org/news/incontinence.html)," and perhaps no other non-fatal condition is so deserving of such a designation. Incontinence (involuntary loss of urine) is common: an estimated 17 million Americans, the majority women, experience it; incontinence is expensive, the annual U.S. price tag approaching \$20 billion; and for the afflicted individual, incontinence can be socially devastating.

<http://usrf.org/news/incontinence.html>

We list the rest of the web sites at the end of this chapter. The first part of this chapter is by Aubrey Pilgrim, the second part is by Barton Wachs, MD. His father has advanced prostate cancer, so he is very much interested in prostate cancer. He set up a support group at the Long Beach Memorial Hospital. Dr. Wachs mother and father usually attend the monthly meetings. He has been very generous of his time in helping people.

Types of Incontinence

There are five basic types of urinary incontinence:

Stress Incontinence

The involuntary loss of urine associated with increased pressure on the bladder such as coughing, sneezing, laughing, bending, or lifting.

Urge Incontinence

The compelling need to urinate and the inability to stop leakage long enough to reach a toilet.

Mixed Incontinence

The most common form of urinary incontinence. Inappropriate bladder contractions and weakened sphincter muscles usually cause this type of incontinence. This type is a combination of the symptoms for both stress and urge incontinence.

Overflow Incontinence

This form of incontinence results in continued leakage of urine because the bladder is full beyond capacity.

Functional Incontinence

Factors outside the lower urinary tract, such as deficits in physical and/or cognitive function cause this form of incontinence.

Prostate Cancer Surgery and Incontinence

One of the major problems men have after prostate surgery is incontinence. A quality of life (QOL) study done by UCLA found that for those men who were incontinent, it was more of a problem than impotence. Some statistics say that most men are able to regain control by the end of 24 months in about 98% of cases. Other estimates place the number of men who are incontinent to some degree as high as 10% especially during the first year or so after a radical prostatectomy. A few have incontinence problems that may be long term and severe. Some may have to use several pads or adult diapers per day.

Generally, the more procedures a doctor has done, the greater his expertise and less complications with incontinence and impotence.

Sphincters

A sphincter muscle is usually a circular muscle that surrounds an opening, such as the pyloric sphincter that controls the emptying of the stomach, the sphincter vesicae or urethral sphincter that controls the emptying of the bladder and the anal sphincter. The urethral or bladder sphincter is a donut shaped muscle just below the bladder neck. The base of the prostate is intimately connected to the primary sphincter. It may be difficult to determine where the sphincter ends and the prostate begins. So it is often damaged during a removal of the prostate.

Men have two sphincters that control the urine. The main or primary valve is the sphincter vesicae just below the bladder. It is also sometimes called the internal sphincter. The second valve is a musculo-membraneous sphincter just below the prostate. This sphincter is sometimes called the external valve or sphincter. Nature did not necessarily design it to control urine flow. If it was not damaged during the radical prostatectomy, it can be trained to work fairly well to control the urine after a prostatectomy.

Kegel Exercises

Since women don't have a prostate, they have a very short urethra. They have a very rudimentary musculomembraneous sphincter which blends in with their primary bladder sphincter. They have far more incontinence problems than men. If you don't believe this, just go into any drugstore and check the many shelves that are stocked with adult diapers such as Depends and Attends. Most of these products are purchased by women.

Kegel exercises can strengthen the musculomembraneous sphincter and the pubococcygeus muscles of the pelvic floor. This can help shut off and control the urine flow.

Dr. Arnold H. Kegel, a gynecologist, developed the exercises for his women patients who were having incontinence problems. He would have the women start and stop the flow of urine while seated on the toilet with their legs spread wide apart. Once they had learned which muscles to control, he would ask them to exercise these muscles up to 300 times during each day. This strengthened the pubococcygeus muscle so that many of them overcame their incontinence.

Many of the women were surprised to find that the exercises greatly improved their sexual pleasure and contributed to their attainment of orgasm. The women's sexual partners also received the benefits of added pleasure due to women's exercise. They were able to squeeze and tighten the vaginal muscles at will.

Here is a quote from the Encyclopedia and Dictionary of Medicine, Nursing and Allied Health, 2nd Edition, published by W.B. Saunders Co.:

“Research has since demonstrated that this muscle (the pubococcygeus) has specialized nerve endings which contribute to a satisfactory sexual experience...Once the muscle has been strengthened it tends to maintain its strength and state of partial contraction at all times. Sexual activity helps to preserve the muscle tone.”

Men who have incontinence problems can also benefit from the Kegel exercises. To learn which muscles to strengthen, practice stopping the flow of urine several times. Then during the day clamp and hold the muscles tight for five to ten seconds. The exercises should be done at least 100 times per day. It would be even better to do 300 per day. These muscle exercises can allow the men to have a considerable amount of control over the movement of the penis, especially when it is erect. This muscle control can add to the pleasure of both male and female during the sex act.

The exercises can be done while watching TV, driving a car, sitting in church, or any where at any time. No one but you will know that you are doing them.

We spoke earlier about the fact that the primary bladder valve closed tightly when a man has an erection. This is so that the semen would be forced out of the end of the penis instead of taking the shorter route into the bladder. We also noted that the secondary musculomembraneous sphincter or secondary valve opens up when a man has an erection so that the semen can pass. This secondary valve usually closes down after a normal voiding of urine. This is the valve that lets you squeeze out the last few drops.

If a man has had a radical prostatectomy and the primary valve was severely damaged, it is usually possible for the man to regain normal control by using the

Kegels to strengthen the secondary valve. This secondary musculomembraneous valve can be trained to control the normal voiding functions. But, since this valve has always opened up when a man has an erection, no amount of Kegels will cause it to remain closed when he has an erection or even just trying to have an erection.

This may cause some very embarrassing situations if a man is preparing to have sex and he starts leaking urine. There may even be times when the man will start leaking if he has an erotic fantasy. One solution to the leaking problem is to use a rubber constriction ring such as those provided with vacuum erection devices (VEDs). Many of the men who have incontinence due to a radical prostatectomy, also have erectile dysfunction (ED) or impotence. So many of them must use the VEDs or some other aid in order to have intercourse. If they use some other form of aid, such as injections or Viagra, they may still have the urine leakage.

Another Type of Incontinence

Another type of incontinence that is rarely mentioned is fecal incontinence. One reason is because it is so embarrassing. Several men who have had radiation or some types of surgery have been left with the inability to control their feces. Kegel exercises may help in this situation, but usually, the nerves that control the anal sphincter have been damaged. So Kegels may not help much. There are also garments and pads that can be used for this problem.

Products

Several companies manufacture under garments for incontinence. Many of the materials are similar to the material used in baby diapers such as Huggies and Pampers. These two companies developed products with plastic outer layer and a layer of material that turns into a gel when it gets wet. The material can hold a large amount of liquid without leaking.

When first developed, both companies sued each other for infringement of patents. The judge who heard the case examined the products from both companies and refused to make a decision. He said that both cases seemed to hold water.

The same companies who make the baby diapers, also make the adult diapers or pads such as Attends and Depends. We have a listing of Companies and products at the end of this chapter.

Humor on the Internet

Sometimes we get a bit bored on the Internet and we resort to the lowest form of humor, namely puns.

Bob Southard wrote: Those radical prostatectomy guys are RP'ers. (Our pee-ers).

Aubrey Pilgrim wrote back: Shame on you Bob. Urine in a lot of trouble!

Then George Orick chimed in from France: Aubrey, Bob, aren't we all going off the deep ends here? (Depends).

DR. BARTON WACHS' ARTICLE ON INCONTINENCE

It has been estimated that up to 20 million Americans suffer from urinary incontinence. Many of these are men who have undergone treatment for their prostate cancer. Simply stated, urinary incontinence is the inability to control the storage or, for that matter, the release of urine. Normally, the urinary sphincter muscle controls the outflow of urine. When the abdominal pressure or bladder pressure overcomes the urethral pressure, incontinence ensues.

In men, the urinary sphincter muscle is located just below the bladder, surrounding the urethra. During radical prostate surgery, the prostate is removed, and the urethra, as well as the sphincters, are often damaged. The fine nerves adjacent to the urethra and prostate can also be damaged and thereby cause some form of incontinence. These nerves may also be damaged during radiation or cryosurgery.

The incidence of incontinence after radical surgery or radiation may be increased if one has had any of several problems. Neurologic problems such as multiple sclerosis may increase the risk of incontinence. The risk would be increased if the patient has undergone a stroke in the past, had a spinal cord injury or had surgery on the spine. A prior TURP may lead to incontinence after brachytherapy.

Urinary incontinence after cancer surgery or radiation is a significant and often devastating problem for both patients as well as the physicians. In this chapter, I will try to limit my comments to the involuntary loss of urine, or incontinence, after radical prostatectomy. Post-prostatectomy incontinence (PPI) is more common than incontinence after radiation therapy. The condition of incontinence can be temporary, mild, moderate, or permanent.

If you have an element of urinary incontinence after your surgery, it does not necessarily mean that your surgeon had a problem or performed the surgery wrong. It simply means that either the nerves, the sphincter, bladder neck, or even the bladder may have been altered as a result of the procedure. Purely from a statistical standpoint, the younger the patient, the better the continence after surgery.

Physiology Of Male Incontinence

There are three components responsible for continence in men. Of course, the bladder is important since it stores the urine. There is an internal or primary urinary sphincter that consists of the circular bladder neck muscles. The urethra

itself provides a passive continence mechanism. The pelvic floor muscles includes the striated rhabdosphincter or musculomembraneous sphincter. This sphincter is also sometimes called the external sphincter. It is primarily responsible for continence after prostate surgery.

The bladder neck can be rebuilt after the prostate is severed from the urethra, but the passive urethral mechanism is therefore altered. After prostate surgery, the internal sphincter, or those circular muscles around the bladder neck, are rendered incompetent. Just about the entire continence mechanism depends on the remaining muscles in the pelvic floor, or the external sphincter, and the urethra itself.

Medications that are sometimes given after prostate surgery to improve continence act on the nerve fibers around the external sphincter.

Causes Of Post Prostatectomy Incontinence (PPI)

The most obvious cause of post prostatectomy incontinence is that of damage to the sphincter muscle, as mentioned above. There are less obvious causes such as bladder and bladder neck obstruction or fibrosis, or a decompensated bladder, which is essentially a bladder that does not squeeze urine out well. One may also have problems if there is bladder instability, where the muscle or detrusor around the bladder becomes spasmodic.

There may also be neurologic causes of incontinence such as dementia, post stroke and Parkinson disease, and most worrisome, malignant infiltration of the sphincter mechanism.

Be sure your urologist rules out urinary tract infection. Having a catheter for up to two or more weeks while the urethral anastomosis heals, may cause many patients do have mild to moderate urinary tract infection. The catheter may also cause irritation of the bladder neck and urethra.

There are various medicines that can exacerbate, or make worse, minimal urinary incontinence. Any sort of irritant to the bladder itself, bladder nerves, or urethra can cause urinary incontinence, urinary frequency urge to void, and urge incontinence. When speaking of incontinence, one must always take into consideration any concomitant illness, including neurologic disorder, age of the patient, and surgical procedure.

Comparing radical prostatectomies done from the retropubic position or the perineal position, there were no statistical differences in incontinence rates.

Nerve-sparing techniques have allowed a much more careful anatomic dissection and therefore less blood loss during a radical prostatectomy. This allows better visualization when reconnecting the urethral stump to the bladder after removing the prostate.

Hardly a month goes by without an article in the Journal of Urology talking about yet another surgical technique to minimize urinary incontinence. There are new surgical devices, new catheters, and harmonic scalpels that can improve the surgical technique and therefore improve the continence rate.

CaverMap, (which was discussed in Chapter 9 on Radical Prostatectomy) is a device that will make nerve sparing a lot easier. It should also improve on the incontinence rates.

After radical prostatectomy, if the margins are positive for cancer, one may consider radiation therapy. In this scenario, the risk of incontinence after radical prostatectomy and receiving radiation is about 5% to 15%.

Diagnosis And Evaluation Of PPI

The evaluation of post prostatectomy incontinence (PPI) usually consists of cystoscopy and urodynamics. Cystoscopy is looking into the bladder through a lighted flexible tubular telescope. Urodynamics is essentially the placement of a catheter and a pressure transducer, then measuring certain parameters, as well as the leak-point pressure. Both these procedures need to be combined with a thorough history to be sure that other pathologic conditions be addressed such as neurologic causes unrelated to the surgery. Also medical causes, such as diabetes, lumbar disk disease, and generally the aging process should be taken into consideration.

Urethral strictures or bladder strictures after surgery and residual obstructive tissue can also cause or make worse the PPI.

Kegel Exercise For Incontinence

You may ask what can be done to minimize the incidence of incontinence after surgery. One of the most simple maneuvers is simply to become proficient at Kegel exercises. (Kegel Exercises were discussed earlier in this chapter).

Kegel exercises were popularized in women to improve their continence rates. Men can also benefit from these exercises. Even before the actual surgery is performed, I teach men how to control their sphincter.

The best way to learn the Kegel exercises is to practice while urinating. That is to say, while you are standing up, start and stop your urinary stream during the midstream. Try to isolate and snug up the muscles and hold on to these for at least four or five seconds. No one really is going to know whether you are doing these exercises correctly, and therefore, biofeedback and pelvic stimulation machines sometimes provide the answer. It is reasonable to perform these exercises up to 15 times a day to strengthen these muscles if they have been traumatized by surgery.

Do not lose patience if you find yourself incontinent after your catheter comes out. Many men have at least partial incontinence up to a year after the surgery. Therefore it is important to continue to perform the Kegel exercises. I advise against any surgery, such as for an artificial sphincter, until all other alternatives have been tried.

Electrical Kegels

You may be shocked to know that most muscles can be stimulated to contract with an electrical signal. Some men and women have trouble identifying the proper muscles for performing the Kegel exercises correctly. Several years ago an electronic vaginal probe was developed for women.

After insertion into the vagina, a small voltage is sent to the probe which causes the pelvic floor muscles to contract. The same pelvic floor muscles can be stimulated from the rectum. So this probe can also be used by men. The advantage of the electrical stimulation is that the proper muscles needed for Kegels are always caused to contract.

Several companies manufacture these devices. The Empi Urologic Company is one of the foremost and largest.

Here is some information about the Empi products from their web site: Empi, Inc. develops, manufactures and markets non-invasive biomedical devices and accessories for use in the orthopedic rehabilitation and incontinence treatment markets.

Minnova and Innova are easy-to-use battery operated stimulation devices designed for use with a vaginal or rectal electrode. Recommended treatment is done in the privacy of the home for 15 minutes twice a day, every other day. Clinical studies using pelvic floor stimulation have demonstrated cure and improvement rates of up to 73%.

CAUTION: Federal law (USA) restricts this device to sale by or on order of a physician.

To find out more, visit their web site at <http://www.empi.com/>

The Hollister Company also has a Pelvic Floor stimulator and other Incontinence products. Hollister has been serving health care professionals and patients for more than 77 years. U.S.: 1.800.323.4060 Canada: 1.800.263.7400
<http://www.hollister.com/>

Other Treatments For Incontinence

The following are some other treatments for incontinence:

1. Absorption pads.
2. Biofeedback and Pelvic Stimulation

3. Medications.
4. Condom catheter.
5. Penile clamps.
6. Collagen, Teflon (Duraphase) and fat injections.
7. Artificial Urinary Sphincter.

Male Undergarments

Male undergarments are an effective way to absorb the urine that leaks. There are new types of undergarments that can effectively absorb this urine and decrease the smell. Undergarments together with medications and biofeedback may provide an effective way to control urinary incontinence. (Some of the companies are listed at the end of this chapter.)

Biofeedback

Biofeedback is an effective way of controlling incontinence. It is particularly effective when the incontinence is minimal and there is an urgency component secondary to either bladder instability, detrusor instability, or pelvic floor muscle abnormalities.

Biofeedback can be done passively, actively, and together with pelvic stimulation. Many urologists and physical therapists now have biofeedback machines. In my office I have a biofeedback machine and pelvic floor stimulator that is rather easy to use for the doctor, nurse, and the patient. It actually shows the patient that he is controlling the proper muscles and isolating the pelvic muscles instead of the entire abdominal wall muscles.

Medications

There are several medications that can be tried, but only a few that seem to be effective. These medications are the ones that act on the bladder neck and the pelvic floor muscles.

Medications such as decongestants are most effective. Sudafed, Entex, or Ornade seem to help by controlling or snugging up the urethral and pelvic floor muscles. If the incontinence is minimal, these medicines may be effective. If there is an urge component or some bladder instability, other medications seem to be effective, such as Ditropan, Pro-Banthine, Levsin and Detrol. These medicines act to relax the bladder, while the decongestants strengthen or tighten the sphincter muscles.

Be careful of certain medications in that they can alter and elevate your blood pressure. When trying medications, remember that the therapeutic dose and the toxic dose may be closely associated. Please do not make your problem worse than the treatment.

Condom Catheter

There are a few other treatment modalities, such as the use of a condom catheter, that can be tried. As the name implies, the condom catheter is a condom that fits over the penis. They are usually held in place with some type of adhesive. There are several different types and sizes. For slight leakage, there are some that have an extension for collection of the urine. For more serious leakage, the condom may have a nipple so that a hose and leg bag can be attached. See fig. 17-1

Penile Clamps

Penile clamps have been around for a hundred years. They are still an effective way of controlling leakage. They are not my first choice because they are somewhat obtrusive and can cause problems if you leave them on too long. Some men who depend on these clamps forget to do their Kegel exercises, and this lack of motivation can, in fact, be a hindrance to learning to recontrol your muscles. In my practice, I discourage men from using these penile clamps unless all else fails.

Collagen Treatments

The use of collagen, a protein extract of connective tissue, can be injected adjacent to the urethra by a syringe under cystoscopic guidance. This is an extremely safe and easy treatment that can be performed under a local anesthesia. The problem is that collagen only works in selective cases. Collagen is much more effective in treating women with urinary stress incontinence than it is in men who have had prostatectomies.

Your own fat can also be used instead of collagen. The fat can be harvested through a technique that is similar to liposuction and then reinjected into the urethral tissues just like the collagen would be. Fat, of course, is much cheaper but probably not any more effective. After three to four collagen or fat injections, one should begin seeing control of the incontinence. It is my belief that after four collagen or fat injections and no results, this type of therapy should be abandoned. It is also important to note that collagen and fat injections are usually transient- the body absorbs them- so they only work for a period of months.

The Artificial Urinary Sphincter (AUS)

When all else fails, one can try to correct the incontinence by surgery. In my opinion, the artificial urinary sphincter is the gold standard by which all other treatments should be judged. See fig. 17-2

The artificial urinary sphincter is a device made from silicone. The silicone reservoir, however, is filled with sterile water or saline, and therefore there is no danger with regards to the silicone such as has been reported with breast implants.

The sphincter is made up of a reservoir, or bulb, that is implanted underneath the stomach muscles, a pump that is placed in the scrotum adjacent to the testicle,

and the cuff which is placed around the urethra. There have been over 15,000 artificial urinary sphincters placed since 1984. Medical studies report an average continence success of over 90% in properly selected patients. With the use of kink-resistant tubing, postoperative problems have been brought down to a minimum. The malfunction rate of urinary sphincters has also significantly dropped since the kink-resistant tubing and deactivation have been instituted. The cuffs are low pressure and do not generally cause a problem with erosion or significant pressure problems, although this can be a factor.

The surgery takes less than an hour, and in my practice, is performed on an outpatient basis. Of course, the sphincter is not visible outside the body; so no one would know whether you have one or not.

The sphincter is released or deactivated by squeezing the pump. Urine then flows from the bladder, out the urethra normally. Within a few minutes, the cuff around the urethra, or the sphincter, automatically closes, keeping the urine from spilling from the bladder.

In a recent article in 1996 in the Journal of Urology, it was concluded that the artificial urinary sphincter was an effective form of therapy for post-radical-prostatectomy incontinence.

Patients were generally quite pleased with the sphincter, and the study revealed that 90% of these patients were satisfied and had marked improvement in their control.

The urinary sphincter is made by the American Medical Systems (AMS) a division of Pfizer Company. (AMS is the same company who makes the penile prosthesis.) It is a surgically implantable prosthesis used to restore bladder control. It is usually recommended for people who, because of injury, do not have a working sphincter or for people who have had other forms of treatment or surgery which have not been successful.

The artificial sphincter is implanted by your urologist inside the body but outside of the bladder. The cuff is placed around the urethra, in between the bladder and where the prostate was removed. The pump is placed in the scrotal sac. It is located just under the surface of the skin; so it is easily grasped. The reservoir or balloon is placed in the abdomen, under the muscles.

How Does It Work?

The cuff is essentially a collar that squeezes the urethra shut to keep urine in the bladder. In order to pass urine from the bladder, the pump is squeezed in the scrotal sac, thereby releasing the cuff, and then the urine is passed from the bladder through the urethra. After a few minutes the cuff automatically reinflates and pressure is again placed around the urethra.

To help you understand how this device keeps you dry, imagine the cuff around the urethra is like a string around the neck of a balloon. When the string is tight around the neck of the balloon, no air can escape.

For more information about the artificial urinary sphincter, you can write to the American Medical Systems at 11001 Bren Road East, Minnetonka, Minnesota 55343, or call 1-800-328-3881. <http://www.visitams.com/products/index.asp>

Satisfaction Survey

Here is a post on the internet from Russ Ingram, a young man who was diagnosed with prostate cancer at 39. He had a radical prostatectomy and hormone treatments. He was totally incontinent until he had an AUS:

Date: Mon, 3 Feb 1997
From: Russ D. Ingram
Subject: AUS Survey

I received a newsletter today from The National Association For Continence. (Their Web Site <http://www.nafc.org>). The part that was of interest to me in the newsletter is a report on a long term study of the QOL with the artificial urinary sphincter. Reports were for 68 men with an average follow up of 7 years. Here are the results, based on a 0 to 5 scale with 5 being best: Degree of improvement 4.1, Degree of satisfaction 3.9.

Mine was implanted in May 96. I would give it a rating of 6 on a 0 to 5 scale. I was almost completely incontinent before. My QOL is so much better after AUS implant.

Till later
Russell

Russ Ingram Lost the Battle

Russ put up a valiant fight, but lost the battle. He died on Dec. 28, 1998. He was 46 years old. He left a loving wife, two daughters and a son.

Be Informed

Taking all things into consideration, one should not go into radical prostate surgery without knowing about the incidence of incontinence and impotence. However, controlling the spread of cancer or removing the prostate cancer should be of foremost importance when deciding on a type of therapy.

In the future, there will be new forms of therapy to control urinary incontinence after prostatectomy. In Europe the use of poly-Teflon has proved effective as a bulking agent when used instead of collagen.

Silicone has also been used. Unlike the collagen and fat, these agents are not absorbed and removed by the body so they last for sometime. However, the FDA has not approved the use of these substances in the U.S. Maybe they will be approved in the future.

RESOURCES FOR INCONTINENCE PRODUCTS

There are several organizations and companies who specialize in providing information and products for incontinent patients.

The National Association For Continence

Mission: National Association For Continence (NAFC) was formerly known as Help for Incontinent People (HIP). The NAFC is a not-for-profit organization dedicated to improving the quality of life of people with incontinence. NAFC's purpose is to be the leading source of education, advocacy and support to the public and to the health professional about the causes, prevention, diagnosis, treatments, and management alternatives for incontinence. Funding: NAFC's activities are funded primarily by voluntary contributions from consumers, health professionals, and industry.

NAFC's challenges are to destigmatize incontinence, to provide consumer information, and to provide advocacy and service for those who are affected by this problem. To achieve its objectives, NAFC offers publications and services such as:

Quality Care, a quarterly newsletter that provides moral support and practical information to over 100,000 subscribers.

The Resource Guide - Products and Services for Incontinence, which assists people in finding the most helpful product for their type of incontinence.

Pamphlets, audio/visuals, and books designed to educate the general public and health care professionals.

Established: 1982, Founder: Katherine F. Jeter, EdD
Mailing Address: P.O. Box 8310, Spartanburg, SC 29305-8306
Telephone: 864-579-5700; Fax: 864-579-7902
Toll-Free HelpLine: 1-800-BLADDER (800-252-3337)

The Simon Foundation For Continence
P.O. Box 835, WILMETTE, ILL 60091. Free information packet;
Books, videos, tapes, quarterly newsletters (with \$15 membership fee)
support group referrals. Phone 800 23-SIMON

TransAqua

The TransAqua system has a Health Dri system of washable bladder control garments. They have several different types that are suitable for moderate to severe incontinence.

Phone 1-800-769-1899 for brochures and more information.

www.trans-aqua.com

Allstate Medical Products

Allstate has a large selection of undergarments, pads and linens. They are washable so they are long lasting. See fig. 17-3
1-800-322-1123 for a product catalog.

Internet Sites for Incontinence

I did a search of the Internet for Incontinence and got almost 100 different sites. Here are a few that offer products and information. To access one of the sites, log on to your Internet, then simply highlight the URL, then use Control + C to copy, place your cursor in the browser area of your on-line Internet and press Control + V to place URL text in the Browser area.

<http://www.everythingmedical.com/>

There are many web sites for incontinence supplies and products. Use the Internet search engines such as www.yahoo.com, www.excite.com, www.lycos.com, www.altavista.com and any of the others.

We wish you all the best and that you stay dry.