

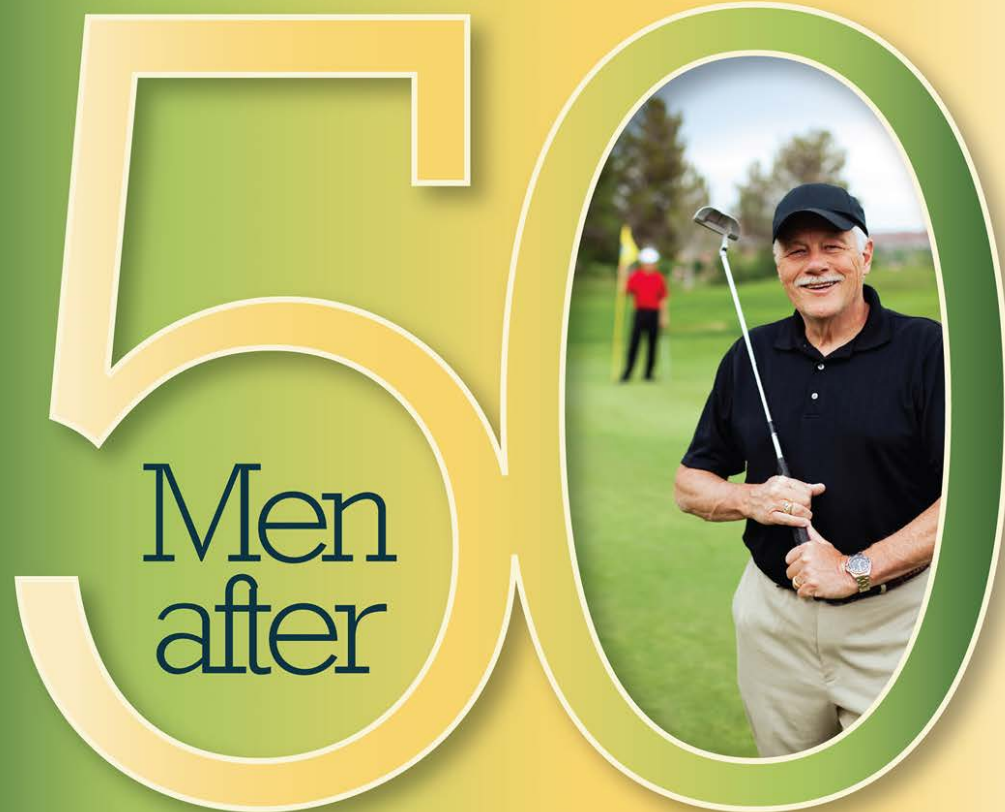
A handbook for Self Care and Treatment



NOW WHAT?

Janet A. Hulme, PT

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This book is dedicated to Tom, Dick and Harry, the special men in my life.

Men: What Happens After

Fifty?

John attends his son's football and basketball games but misses key plays when he goes to the restroom with overactive bladder symptoms. Joel stays at home with loss of bladder and bowel control after his radical prostatectomy surgery for prostate cancer. Before the surgery he golfed and hiked several times a week. Mark experiences pelvic discomfort and pain as he sits in a long meeting due to constipation and prostatitis (pelvic pain). Jim keeps busy outside until his wife is in bed and asleep because of his fear of erectile dysfunction that began when he turned fifty years old.

Most men experience one or more of five problems related to bladder, bowel and sexual function after fifty years old. The diagnoses include: prostate growth, prostate cancer, pelvic pain, erectile dysfunction and constipation. This book will discuss each of the five problems and provide concepts for prevention, self-care and treatment.

Some age related changes in men are influenced by changing hormonal levels. Hormones are chemicals in the body that direct the action of body systems. In men, testosterone is a major hormone that influences function of all body systems especially the skeletal (bone), muscle, bladder, bowel and reproductive systems. At adolescence, testosterone production increases significantly in men. Its influence builds strong efficient muscles and influences sexual, bladder and bowel function. Testosterone levels decrease after 35 years of age and by 50 years old the decline is more noticeable as it affects muscle, bladder and bowel function. These changes affect prostate size and condition, urinary frequency and flow patterns, bowel patterns, pelvic pain, and sexual function.

Some age related changes in men are influenced by changing physical activity levels. Physical activity like walking and participating in active sports and recreational activities are essential in maintaining healthy body systems. Bladder, bowel and sexual dysfunction are directly related to decreased walking and other weight-bearing activities.

Some age related changes in men are influenced by diseases and disabilities that become more prominent. These include diabetes, heart conditions, cancer, Parkinson's disease, multiple sclerosis, and Alzheimer's disease. Many diseases have secondary effects on bladder, bowel and sexual

function in men.

The purpose of this book is to describe common male urogenital system changes that occur after 50 years of age and provide conservative prevention and self-care strategies to minimize these problems. Men experience changes in bladder, bowel and sexual function yet have not had a vocabulary or background that facilitates questions to explore self-care solutions for common problems. Many men assume these changes are not preventable or are irreversible. They do not realize that with changes in diet, exercise and stress many men can minimize bladder, bowel and sexual changes similar to what has been done with cardiac disease.

There is not presently a vehicle for men, the women who care about them or clinicians to use for prevention and self-care of bladder, bowel and sexual dysfunction as part of aging. Janet A. Hulme PT has written this book based on her 40 years of clinical work with men and women in the specialty of bladder, bowel and sexual dysfunction. She has been a professor, private practice clinician, international lecturer and author of numerous books and audiovisual media in her specialty area. In her clinical practice she has helped many men with benign prostatitis, prostate cancer surgery, bladder, bowel and sexual dysfunction.

Chapter one of this book describes normal and abnormal urogenital anatomy and function. Chapters two through six describe specific dysfunctions- benign prostate hyperplasia, prostate cancer, pelvic pain/prostatitis, erectile dysfunction, and bowel dysfunction. Chapter seven contains a screening symptom questionnaire and bladder/bowel diary. Chapter eight describes prevention and self-care techniques. Chapter nine contains the easy to follow 4 Step Program for each dysfunction. You may want to read just the chapter that applies to your problem and then go directly to chapter nine for the appropriate 4-Step Program. Following the 4-Step Program can prevent vulnerabilities from becoming dysfunctions and improve problems that are preventing you from leading a fulfilling and complete life. It is time to get started!

CHAPTER ONE

What is Normal? What is not Normal?

The bladder stores urine and the bowel stores solid waste. These organs are designed to accumulate waste product most of the day while remaining in a relatively quiet, relaxed state. They are suspended in the lower pelvic region supported by muscle and connective tissue.

The Urinary System

The structures of the urinary system include:

- 1) kidneys,
- 2) ureters,
- 3) bladder or detrusor muscle,
- 4) urethra, and
- 5) prostate gland.

What is Normal?

The kidneys produce urine which is transported through the ureters to the bladder and then through the urethra to the outside. The bladder, a hollow muscular organ also called the detrusor, expands to hold approximately one pint of fluid. It contracts 6-7 times a day to push the urine through the urethra to the outside (fig. 1).

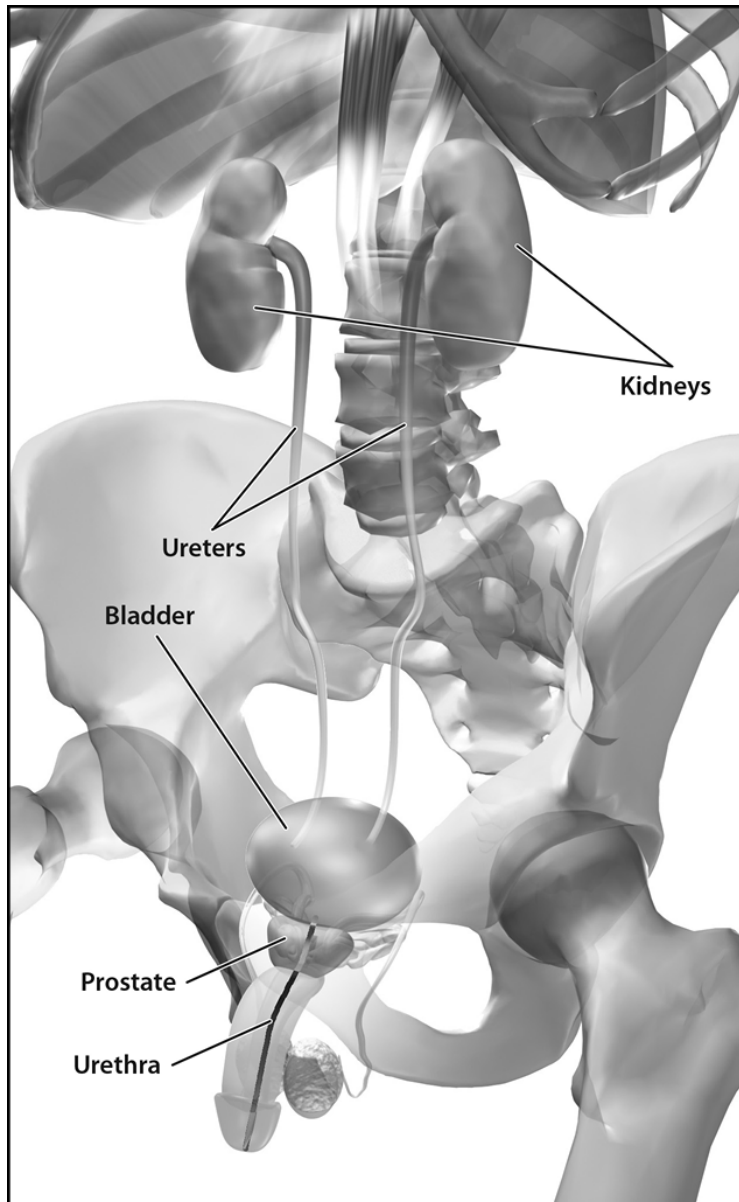


Figure 1 Urogenital Anatomy

The **urethra**, a hollow, muscle-lined tube is approximately the length of a straw (20cm) in men. It is located on the underside of the penis. The smooth muscle lining of the urethra maintains relatively high resting tone to keep urine in the bladder and relaxes to let urine flow out. The urethra is richly lined with mucous glands and blood vessels which produce fluids that cause the urethral surfaces to stick together. This is called coaptation. At rest, when not urinating, the urethra is a collapsed tube closed by coaptation and smooth muscle resting tone.

The **prostate** gland surrounds the urethra at the base of the bladder. The prostate gland produces fluids that transport sperm and contain germ-fighter cells to protect the bladder and prostate gland from infection. It also contains smooth muscle that helps to maintain closure of the urethra so urine does not leak out. It is walnut size until a man is about 35 years old. Then it gradually enlarges.

The **bladder** is a muscular organ that relaxes all day long as it fills up with urine. Pelvic muscles at the base of the bladder close the bladder outlet until it is time to toilet. During the day and night bladder control is achieved by continuous resting tone of the pelvic muscles maintaining closure at the bladder outlet. The bladder and pelvic muscles work together for bladder control (fig. 2).

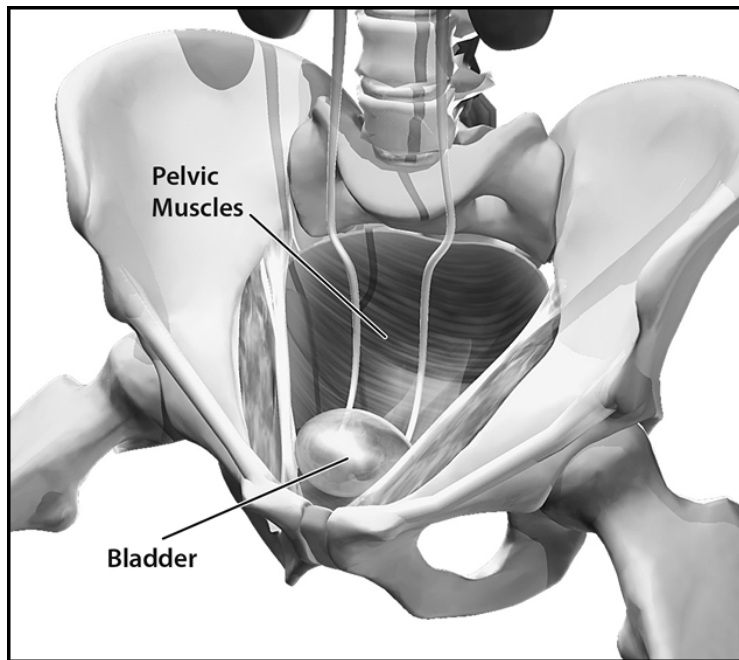


Figure 2 Bladder and Pelvic Muscles

Normal urination occurs in the following sequence:

Urine enters the bladder and the presence of urine is picked up by sensory nerve endings in the bladder muscle as it is stretched from the increasing volume of fluid. The sensation of fullness is transmitted to the brain where it is registered as a “need to urinate”.

If it is not appropriate to urinate immediately the pelvic muscles increase in tone to maintain urine in the bladder until it is safe to toilet. When it is

appropriate to urinate, the pelvic muscles relax so urine can flow through the urethra.

Urine is emptied through bladder muscle contraction aided by gravity. Abdominal tightening is not necessary for normal bladder emptying. Seven to eight times a day the bladder muscle contracts and the pelvic muscles at the bladder outlet relax so urine flows out.

As a young man the usual pattern is to toilet every 3-4 hours during the day and to go through the night without toileting. When toileting, the flow starts automatically, the urine flow pressure is strong and steady until the bladder empties and the flow then stops automatically and completely.

What is Not Normal?

Urinary pattern changes with age include an increased feeling of urgency to toilet (overactive bladder), more frequent toileting day and night, decreased urine flow pressure during emptying, incomplete emptying and uncontrolled loss of urine. These changes are not inevitable. In other cultures with a more active lifestyle, plant-based diet and lower chronic stress these changes often are minimal.

Overactive Bladder

Overactive bladder can occur after 50 years old when prostate growth and bladder aging increase urgency sensations. The result is increased frequency of toileting. Instead of toileting every 3-4 hours frequency can increase to every hour during the day and every 2-3 hours at night. Increased frequency is prompted by feeling the “need to go” and/or the fear of leaking with sudden urgency. Some men toilet frequently “just in case” there might be a leak. Fear of having to toilet inconveniently during business or social events is another driver that changes toileting frequency.

Urine Flow Pressure

Urine flow pressure, the force of the urine flow, changes with age. As the prostate gland grows it narrows the urethral tube and less urine flows out at one time. One man described the difference in urine flow as going from a fire hose putting out a fire with good aim and high volume to a garden hose spraying morse code—dot-dot-dash.

Incomplete Emptying

Incomplete emptying occurs as the urethral tube narrows and the bladder

muscle contractions become quieter. Beginning in adolescence testosterone stimulates vigorous bladder contractions to push urine out at appropriate times. Decreased testosterone after 50 years of age leads to more gentle contractions at the same time the urethral tube is narrowed from prostate growth. The result is that excess urine remains in the bladder after toileting is completed. One man described, “It feels like I haven’t emptied completely even though nothing more is coming out”. Incomplete emptying is related to narrowing of the bladder outlet and urinary tract infection (UTI). Urine retention can lead to depletion of vitamin B12 which is a factor in depression.

Uncontrolled Loss of Urine - Incontinence

Uncontrolled loss of urine (incontinence) is relatively uncommon in men before 50 years old and occurs more often after 65 years of age. It can occur with sudden extreme feelings of urgency (urge incontinence) from an irritated bladder or imbalanced autonomic nervous system. One man described it as “an explosion” with sudden urgency and loss of a large volume of urine. The bladder can be irritated because of urine build-up, urine concentration, increased nervous system activity or lack of oxygen to the bladder muscle.

Uncontrolled loss of urine can occur when the mechanisms to close the bladder outlet are damaged or become dysfunctional with age. Closure capability can be damaged with surgery such as during radical prostatectomy for treatment of prostate cancer or transurethral resection (removal) of the prostate gland for treatment of benign prostate enlargement. Loss of urine resulting from closure dysfunction can range from a few drops of urine to a running stream of urine. It can occur with physical activity such as getting up from a chair, walking or lifting heavy objects. This is called stress incontinence. Sometimes leaking is continuous throughout the day. This is called neurogenic bladder.

The Gastrointestinal (Bowel) System

The structures of the gastrointestinal system include:

- 1) mouth and esophagus,
- 2) stomach,
- 3) small intestine,

- 4) large intestine and colon,
- 5) rectum and anus.

What is Normal?

The mouth and teeth pulverize the food you eat and transfer that food down the esophagus to your stomach. In your stomach digestive juices continue to break down food into chemical compounds-nutrients. Then these nutrients are emptied into the small intestine. In the small intestine more digestion occurs and nutrients combine to form the building blocks that repair and replace all cells in your body. These nutrients also combine to form the chemical messengers that regulate and control all body functions. Chemical messengers are released through nerve transmission and through the blood stream. The remaining material is transferred to the large intestine and colon where water is absorbed back into the body (fig. 3).

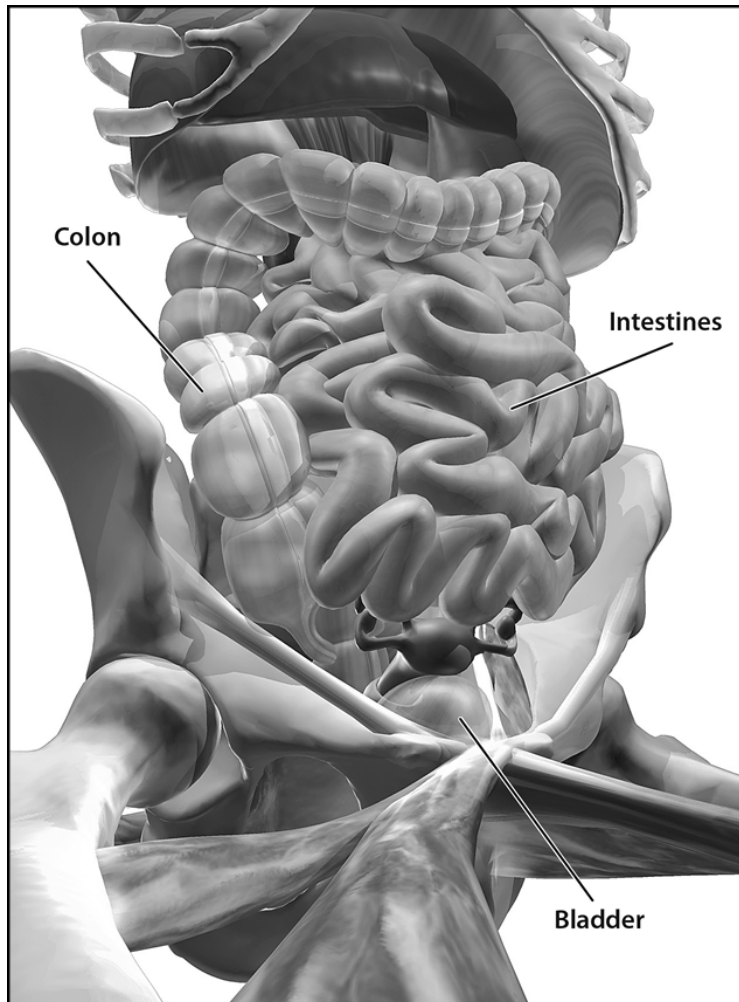


Figure 3 Intestines and Colon

Food material entering the lower colon, rectum and anus is called “feces”. The sensation of fullness is sent to the brain by nerves where it is registered as a “need to have a bowel movement”. The feces then moves to the lowest part of the bowel, the anal canal, where it is registered in the brain as “urgency to have a bowel movement”.

As the large intestine contracts to move the feces into the lower colon and rectum the internal sphincter relaxes. The external sphincter and pelvic muscle increases tone to maintain closure of the sphincter. When the toilet is available, the pelvic muscles and sphincter relax and the colon contracts to push the bowel movement out. It is normal to have a bowel movement every day or every other day that is soft but solid in consistency and does not require straining to eliminate.

What is Not Normal?

Bowel pattern changes with age include under-active bowel, incomplete emptying, uncontrolled gas or flatulence, overactive bowel and uncontrolled loss of bowel material. Many of these changes can be minimized with changes in diet, exercise and stress patterns.

Underactive Bowel

Underactive bowel can occur after 50 years old when the gut's nervous system ages and fewer messages are sent to the smooth muscles of the small and large intestine. The result is slower movement of food through the digestive tract. The longer food is in the large intestine the more water is absorbed back into the body. This leads to harder and drier bowel movements - constipation.

Underactive bowel can lead to infrequent and difficult emptying. Constipation, described as "dropping rocks" or impaction, a more severe form of solid, stuck feces, can be the result of long term underactive bowel. Instead of daily bowel movements men describe having fewer than three bowel movements per week. The bowel movements require straining to eliminate and there is a feeling of incomplete emptying. Constipation is the most common gastrointestinal complaint in men affecting 26% of men over 60 years of age.

Flatulence - Gas

Flatulence or excessive gas that is uncontrolled or odiferous is an increasing problem for some men as the digestive system ages. It can be caused by pelvic muscle and anal sphincter dysfunction or pathology of digestive functions.

Excessive and odiferous gas can be from inadequate digestion of certain foods or abnormal yeast levels in the digestive system. The aging digestive system can fail to completely breakdown certain foods which then ferment.

Overactive Bowel

Overactive bowel can occur at any age when nervous system messages cause increased activity and irritability of the gut's smooth muscles. That results in faster movement of food through the digestive tract and more frequent bowel movements. When food moves faster through the colon/large intestine less water is absorbed back into the body and feces are

softer consistency. At the extreme, diarrhea occurs three or more times a day. This pattern can also be caused by medication, abnormal gut absorption, inflammation or infection.

Fecal Incontinence - Uncontrolled Loss of Bowel Material

Uncontrolled loss of bowel material, also known as fecal incontinence, is different than diarrhea. As many as 18% of men over 65 years of age experience fecal incontinence. After 80 years of age it is the leading cause of nursing home admissions. Fecal incontinence can be caused by neurological conditions like Parkinson's disease or multiple sclerosis. It is common to have loss of bowel material that resembles pieces and liquid staining of underwear. It can be secondary to impaction - severe constipation. Colon irritation around the impaction creates secretions that uncontrollably leak out the rectum/anus and contains pieces of feces. This overflow type of fecal incontinence is solved when impaction is resolved.

The Pelvic Muscle System

The pelvic muscle system, also known as the Pelvic Rotator Cuff (PRC), is a group of muscles that work together as if they were one muscle. They optimize bladder, bowel, and sexual function as well as improve back function and standing balance. These muscles are located deep in the lower pelvis and travel externally to attach to the leg bones (femurs).

They are short stubby muscles and include:

Pelvic Bowel Muscles,
Roll-Out Muscles, and
Roll-In Muscles.

Pelvic Bowl Muscles

The Pelvic Bowl Muscles are the central core of support. This muscle group supports the bladder and bowel. It contains outlets for the bladder and bowel and functions to keep these outlets closed until it is time to eliminate urine or have a bowel movement. It also functions to improve sexual function in both men and women. The Pelvic Bowl attaches to the front and back of the pelvis at the pubic bone and sacrum and along the sides on the arcuate tendon (fig. 4).

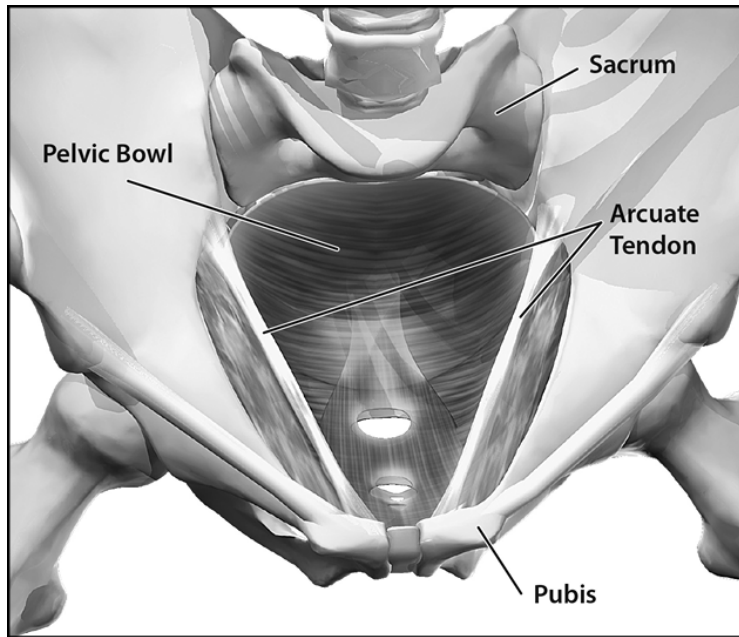


Figure 4 Pelvic Bowl

The Pelvic Bowl Muscles include:
Pelvic Diaphragm,
Urogenital Diaphragm, and
External Sphincters.

Roll Out and Roll In Muscles

The Roll Out and Roll In Muscles act to lift the Pelvic Bowl and close the bladder and bowel outlets. When one group works the other one rests. Roll Out Muscles roll the legs out from midline to hip width. Roll In Muscles roll the legs in to midline. Both groups work to improve tone in the pelvic bowl muscles for support of bladder and bowel function. When these muscles act they position bladder and bowel in the pelvis and close the bladder and bowel outlets. They are also active in sexual function.

Roll Out Muscles

The Roll Out Muscle Group connects with the Pelvic Bowl Muscles on both sides of the pelvis via the arcuate tendon and attaches to the upper leg bone. When the Roll Out Muscles act, they roll the leg outward from midline to hip width, lift the pelvic bowl up and close bladder and bowel outlets. This series of contractions also facilitate sexual function through improved circulation and valve closure to the penile chambers (fig. 5).

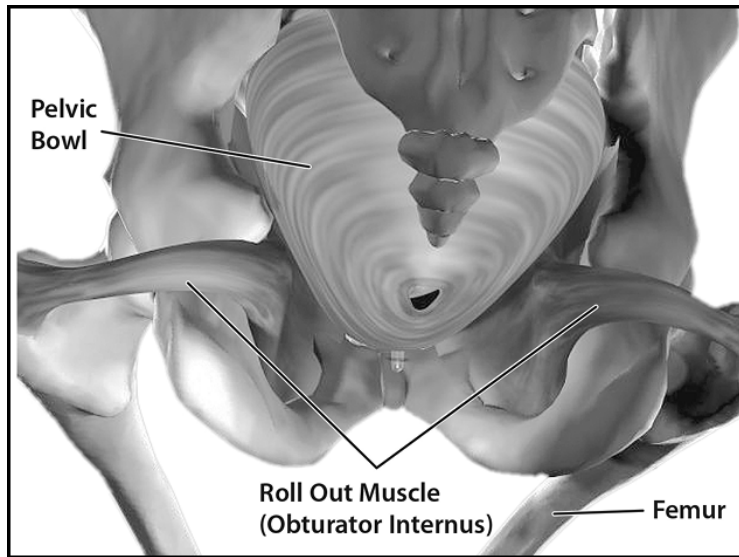


Figure 5 Roll-Out Muscles

The Roll Out Muscles include:

Obturator Internus,
Obturator Externus,
Superior Gemelli, and
Inferior Gemelli.

Roll In Muscles

The Roll In Muscle Group connects to the front of the pelvis very close to the Pelvic Bowl Muscle attachment. The Roll In Muscles also attach on the inner aspect of the upper leg bones (femur) (fig. 6). When the Roll In Muscles contract, they roll the legs inward, lift the pelvic bowl up and simultaneously close the bladder and bowel outlets. This series of contractions also facilitate sexual function through improved circulation to the penile chambers. Roll In and Roll Out Exercises can help with erectile dysfunction.

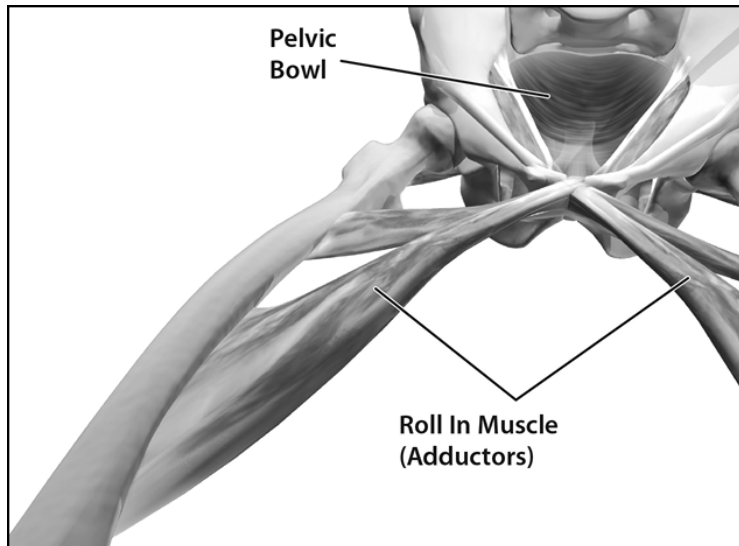


Figure 6 Roll-In Muscles

The Roll In Muscles include:

Adductor longus,
Adductor brevis, and
Adductor magnus.

The Pelvic Rotator Cuff muscles function as a coordinated system. No one muscle acts alone. The Pelvic Bowl Muscle Group is the central core of the system. The Roll Out and Roll In Muscles act as pulleys and guy wires to adjust the tension and support of the Pelvic Bowl Muscles.

CHAPTER TWO

Benign Prostate Enlargement

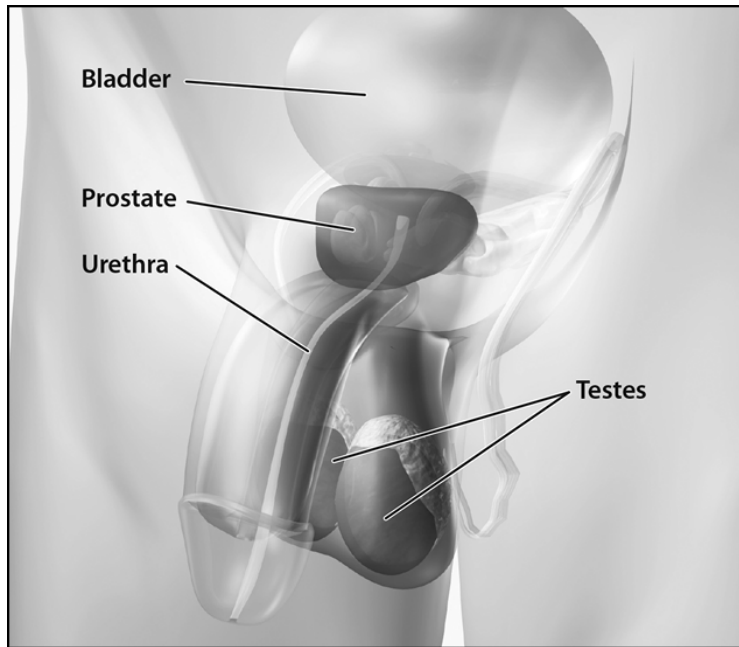


Figure 7 Normal Prostate

Benign Prostate Hyperplasia (BPH) is the non-cancerous growth of the prostate gland after 35 years old. After 35 years of age testosterone breaks down into less pure by-products that stimulate prostate growth. The prostate can enlarge from walnut size at 35 years old to small tomato size by 70 years old. Prostate cells that increase in size and number are located in the center core of the prostate surrounding the urethra. At the same time smooth muscle in the prostate tightens around the urethra more than usual. Prostate cell growth and its smooth muscle tightening narrows the urethral tube and alters urine flow (fig. 8).

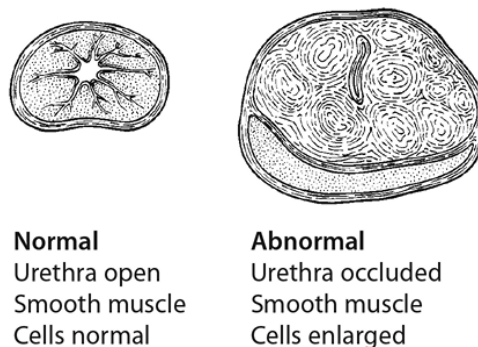


Figure 8 Benign Prostate Hyperplasia

The symptoms of prostate enlargement and muscle tightening include a

weak, slow stream of urine, pulsed urine flow, frequent feelings of urge to urinate and frequent toileting with poor urine output. There may be relatively small leaks of urine during physical activity or occasional large leaking episodes when there is the urge to toilet and it has been several hours since the last toileting or there has been considerable fluid intake.

Urethral narrowing by the prostate can cause incomplete emptying of the bladder. The medical term for urine left in the bladder is post-void residual (PVR). It is normal to have 30cc-50cc of urine remaining in the bladder after toileting. Excessive PVR can lead to urinary tract infection (UTI), irritated bladder lining, urine retention syndrome or urine reflux into the kidneys. All these conditions are serious medical problems that affect a man's overall health and daily function.

Screening

The International Prostate Symptom Questionnaire is a screening tool to help determine if BPH is a problem.

The questions asked include:

In the past month how often have you?

- 1) Had a sensation of incomplete emptying?
- 2) Found urine flow stopped and started repeatedly?
- 3) Had a weak urinary stream?
- 4) Had to push or strain to begin urination?
- 5) Gotten up at night to urinate?

A more extensive questionnaire is available in chapter seven.

Assessment

Evaluation for BPH includes a complete history and symptom picture, a digital rectal exam and Prostate Specific Antigen (PSA) test.

Digital Rectal Exam

The digital rectal exam (DRE) is an examination of the prostate gland through the rectum. This exam is another tool used to determine if BPH is present and a factor in the urinary symptoms. The prostate cannot be palpated externally so it is palpated through the rectum. The man usually leans over the exam table resting on his stomach. The physician inserts a

gloved finger into the rectum and palpates the prostate to assess if there are any lumps, enlargements or areas of hardness or bogginess. It is possible to feel the back wall not the middle or front of the prostate from the rectum. The digital rectal exam is described in more detail in chapter 3.

Prostate Specific Antigen Test (PSA)

The Prostate Specific Antigen (PSA) test measures PSA levels in the blood. This chemical, PSA, is made in the prostate.

Elevated PSA levels are an indication of prostate stress. It can be an indicator of BPH, infection or prostate cancer.

Treatment

Treatment options for benign prostate hyperplasia can include watchful waiting, Beyond Kegels[®] Protocol, medications or surgery (transurethral resection of the prostate).

Watchful Waiting

Watchful waiting is often chosen when prostate growth is causing minimal to moderate symptoms. Watchful waiting can include active surveillance of symptoms with regular PSA testing.

Beyond Kegels[®] Protocol

Beyond Kegels[®] Protocol includes lifestyle changes, Physiological Quieting[®], Roll for Control[®] Exercises and Wonder W'edge[®] Inversion. The Beyond Kegels[®] Protocol is described in detail in chapters eight and nine.

Medications

For moderate symptoms medications can be beneficial. There are two groups of medication that can improve symptoms. One affects the smooth muscle tightness around the urethra and is relatively fast acting. These medications are called alpha-blockers and help decrease smooth muscle clamping around the urethra. As the smooth muscles relax urine can flow out the open urethra more easily and completely. Improvement usually occurs within two weeks.

The second group of medications affect cell growth. These medications are called 5-alpha reductase inhibitors and alter the breakdown of testosterone to slow the increase in cell growth. Avodart (dutasteride) and Proscar (finasteride) are both effective in reducing symptoms when cell

growth is the main problem. The results are slow, sometimes up to a year, before significant changes are seen. It can be helpful to use both medications together, one for immediate results and the second for later improvement.

Transurethral Resection of the Prostate

Transurethral resection of the prostate gland (TUR or TURP) is removal of core prostate material through a surgical procedure (fig. 9). The procedure is performed through the urethra to widen the urethral opening by removing central prostate cells that are occluding the opening. It can be an effective and long term solution to urethral blockage. Sometimes damage to the urethra or sphincter can result in leaking or abnormal urination patterns.

CHAPTER THREE

Prostate Cancer

Prostate cancer is experienced by approximately thirteen percent of men. It is second only to skin cancer in frequency. Age, environment and genetics are causative factors for prostate cancer. Eighty percent of prostate cancer occurs in men over 65 years old. Five percent of prostate cancer is from environmental toxins. Ninety percent is a combination of environmental toxins with genetics and age. Genetics, hereditary prostate cancer, is a significant factor if a father or brother is diagnosed before 55 years old. When this occurs there is a fifty percent chance of the direct relative having prostate cancer. African-American men are at increased risk for prostate cancer compared to other ethnic groups.

Screening and Assessment

By the time a man has symptoms related to prostate cancer it is usually

too late to cure. Early screening is essential to find the cancer before it spreads and produces symptoms. Finding the small, localized cancer cells in the prostate gland through a digital rectal exam or a PSA test is important (fig 10).

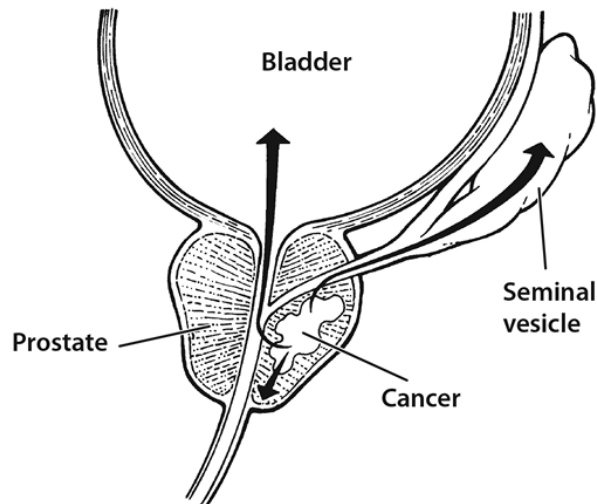


Figure 10 Prostate Cancer Spread

Prostate Cancer Screening questions can include:

In the past month have you:

- Been diagnosed with an enlarged prostate?
- Had your PSA evaluated as elevated?
- Been diagnosed with prostate cancer?

If yes to prostate cancer:

- What treatments, medications or surgical techniques have been used?
- What secondary problems do you experience?

Digital Rectal Prostate Exam

A digital rectal exam is done to assess the size and shape of the prostate gland, to find any abnormal growth or structural change. Most prostate cancer begins on the outside of the prostate so a palpation exam can pick up changes in shape or consistency such as a knot, lump or soft spot. Prostate cancer can spread into the bladder, urethra, pelvis or lymph nodes. Additional information on digital rectal exam is available in chapter 3.

Prostate Specific Antigen Test (PSA)

Prostate Specific Antigen is a chemical, called an enzyme, made in the

prostate and is measured in nanograms. When the prostate gland is under stress it tends to produce more PSA. Higher levels of PSA do not always mean cancer. There are other stressors, like BPH, that can cause the prostate gland to produce more PSA. The chance there is prostate cancer increases when the PSA is higher than normal or increases rapidly in a short time period.

Normal PSA Level at age 40=2.5, 50=3.5, 60=4.5, 70=5.5.

A higher PSA means a higher risk for prostate cancer. Another indicator is the rate of increase in PSA levels. An increase greater than .75 per year for 2 years is considered abnormal and warrants further testing.

Advanced Tests

When the digital exam or PSA indicate a potential problem other tests can be considered. These include a biopsy of the prostate and a bone scan.

Biopsy

A prostate biopsy removes deep core prostate tissue for examination to determine the stage of prostate cancer. Prostate cancer cells can be missed during a biopsy since not all prostate cells are cancerous and the needles used to remove the cells are very small. Samples or biopsies of other related structures such as the seminal vesicles (tubes from the testes to the prostate gland) and lymph nodes are analyzed to determine the possible spread (metastasis) of cancer cells.

Bone Scan

A bone scan of the pelvis and spine using radioactive tracers and a gamma camera can identify cancer spread to the bone, kidneys and bladder which are the most common areas for metastasis.

Treatment

Treatment options for localized prostate cancer can include watchful waiting, surgery (radical prostatectomy), radiation therapy and ultra heat or cold therapy.

Watchful Waiting

Watchful waiting is often chosen when the cancer is slow growing and/or other health related issues are of more immediate need of attention. Watchful waiting can include active surveillance with regular PSA testing

and prostate biopsy if there is indication of cancer progression.

Radical Prostatectomy

Radical prostatectomy is surgical removal of the prostate gland to eliminate prostate cancer. It is most beneficial for men with rapid growing cancer that is localized to the prostate gland without spread to other organs and men who are fit to undergo surgery and who will have a long enough life expectancy that a cure will be beneficial. In summary the best candidate for a radical prostatectomy is a man in his 40s, 50s or 60s, in otherwise good health, with curable localized cancer. It is not helpful for men with cancer that has spread widely and who are older or in poor health.

The prostate gland with cancer has an average of seven separate tumors inside it. It is important to remove every cancer cell during the surgery. That is why the complete prostate and associated urethra is removed during a radical prostatectomy.

The surgical procedure is usually scheduled 6-8 weeks after the prostate cancer diagnosis so the body can heal from the biopsy. The biopsy can cause inflammation and bleeding around the rectum and prostate.

Radical prostatectomy surgery can occur from the top (retropubic) or the bottom (perineal) of the prostate gland (fig 11). When the surgery is from the top an incision is made from the navel to the pubic bone. A spinal or epidural anesthetic is most often used. When the surgery is from the bottom an incision is made from the anus to the scrotum. General anesthesia is usually used. In both surgeries the prostate, the associated urethra and seminal vesicles are removed. The bladder is then reconnected to the distal portion of the urethra. In both surgeries care is taken to preserve the nerves and blood vessels that are essential to bladder and erectile function.

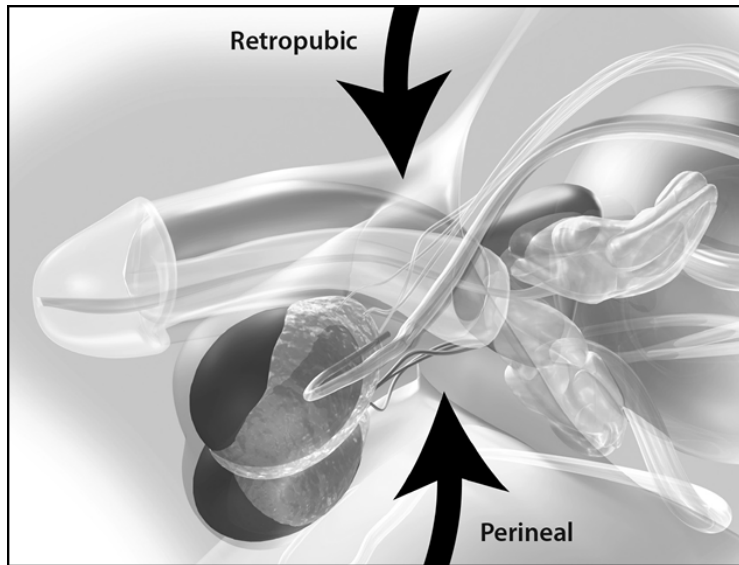


Figure 11 Retropubic and Perineal Radical Prostatectomy

After surgery a tube, called a catheter, is placed up the urethra into the bladder for 1-2 weeks to empty the bladder of urine while the incision site heals. When the catheter is removed it is common to have some uncontrolled leaking. Other complications can include blood clots, urinary leaking, constipation, and impotence.

Blood Clots: A man's body responds to any bleeding by producing clotting chemicals that will stop the bleeding. Blood loss can mean death so the body responds in a dramatic way to prevent death. However when blood clots form in deep leg veins after surgery they can travel to the lungs, heart or brain and cause death. It is important to prevent this from happening. Support stockings, leg elevation, ankle exercises and walking can prevent clots from forming. These techniques pump blood back to the heart preventing it from pooling in the legs and clotting. Warning signs of deep vein clotting (deep vein thrombosis) are swelling or pain in the leg, especially the calf and/or sudden chest pain that worsens with a deep breath. It is important to see the doctor immediately if these symptoms are noticed.

Urinary Leaking: Radical prostatectomy removes two major structures that help a man control urine. Those are the prostate gland and the internal sphincter muscle. That leaves the external sphincter and pelvic muscles to compensate for the loss and keep urine in the bladder. As a man ages pelvic muscle function decreases so a man over 70 years old may have more problems with leaking urine than a younger man. Another factor that can

lead to leaking is surgical damage to blood vessels and nerves that are essential to muscle function. Urinary incontinence is a major life quality issue. Men will isolate themselves and stop doing usual activities socially and recreationally when they fear leaking. Chapters eight and nine describe a comprehensive program to return control when it is lost.

Constipation: Constipation, straining to have a bowel movement, is common after surgery. Proximity of the surgical site to the bowel, anesthesia, pain medication and inactivity all can lead to disruption in a man's digestive system causing constipation. The prostate gland sits on top of the rectum so when it is removed the rectum is vulnerable to injury for up to 3 months after surgery. It is essential that a man not have an enema or have his temperature taken rectally during this time period as it can cause significant injury to the rectum. It is important to have a daily bowel movement of soft but solid consistency without pushing or straining to eliminate the bowel movement. Chapters eight and nine describe a comprehensive program to return the digestive system to normal elimination.

Impotence: Potency, the ability to achieve an erection, can be affected by radical prostatectomy surgery. The primary medical concern is whether the neurovascular bundles providing circulation and nerve supply to the penis are damaged or removed during the operation. The nerves involved in erection are very fragile and tiny. Even when the nerves are spared during surgery inflammation, traction or compression can lead to nerve death. Therefore a man can have a normal sex drive and sexual experience except for erection and penetration. Chapters eight and nine describe more detailed information and conservative treatment to improve erectile dysfunction.

Radiation

Radiation to destroy the cancer cells can be from external beams or from implanted radioactive seeds. The external beam therapy is often done 5 days a week for 7-8 weeks. It focuses the "scatter" of radiation only on the affected organs, not on the entire body. Side effects can be diarrhea, bladder urgency and cramping of bladder and bowel.

Implanted radioactive seeds in the target organ, called interstitial brachytherapy, is not as effective overall as external beam radiation and can have side effects including infection, bladder urgency and frequency, rectal

ulcers, diarrhea, impotence and ejaculatory pain.

Ultra Cold and Ultra Heat Therapy

Ultra cold therapy- cryoablation- “iceballs” the prostate. Five metallic probes are inserted in the prostate and freezing liquid nitrogen is injected into the probes. This technique is beneficial in localized cancer only. It has a short recovery period- usually only 2 days- and few urinary symptoms. It can lead to impotence for some men.

Ultra heat therapy- thermal ablation- “cooks” the prostate to kill the cancer cells. The concern with both of these techniques is whether the cancer cells have been destroyed without destroying the urethra since it is essential in emptying urine from the bladder.

Treatment for Advanced Prostate Cancer

Hormone therapy and surgical castration are two treatments used to manage advanced prostate cancer. The female hormones estrogen, or DES- diethylstilbesterol, shut off the production of the male hormone testosterone that is produced by the testicles. Testosterone stimulates prostate cancer cell growth so blocking its production decreases the growth of cancer cells. Surgical removal of the testicles, called surgical castration or orchiectomy, is another treatment for advanced cancer that slows cancer growth by eliminating the site where testosterone is produced.

Conservative treatment of secondary bladder, bowel and erectile dysfunction symptoms after a radical prostatectomy are described in chapters eight and nine.

CHAPTER FOUR

Chronic Pelvic Pain

Chronic pelvic pain is defined as pain in the pelvic, low back and abdominal regions that has been present longer than 6 months and significantly changes daily activity function. Pelvic pain in men is often present during urination or a bowel movement or during an erection. It can be a constant ache or pain in the genital or anal-rectal regions, lower abdomen and low back.

Types of Chronic Pain

Chronic Pelvic Pain can be related to pelvic muscle spasm, constipation, irritable bowel syndrome (IBS), chronic prostatitis, interstitial cystitis (IC) or proctalgia fugax.

Chronic Benign Prostatitis

Chronic benign prostatitis is pelvic pain related to past prostate infection and is experienced by approximately 50% of men at some time in their lives. There is no longer active infection or inflammation in the prostate but secondary pelvic muscle spasm, irritated nerves and decreased circulation remains and creates chronic pain. A man has difficulty starting urination, a poor urine stream flow, pain increase with urination and erection. It is difficult to sit for any length of time. Pain increases with erection during sexual activity resulting in poor erectile endurance.

Interstitial Cystitis (IC)

Interstitial cystitis, also called Bladder Syndrome, is chronic pelvic pain related to bladder irritability. It is a chronic condition of the bladder with symptoms of severe urgency and frequency to urinate. Men complain of lower abdominal pressure and pain especially during urination. It is common to feel like toileting every half hour to an hour during the day and hourly at night. Sleep disturbance is a major problem due to the number of times a man gets up to toilet during the night. Lower abdominal pressure and pain often increases with urination and physical activity.

Proctalgia Fugax

Proctalgia fugax is chronic anorectal pain. It can be sharp and fleeting pain lasting 20-30 seconds or it can be sharp and aching pain lasting for hours or days. Proctalgia fugax is often accompanied by excessive gas and rectal pressure. The anal spasm and pain can grab so suddenly that it stops a

man in mid stride. It can feel like a potato is shoved up the rectum. Some men describe the constant severe pain as taking over their thoughts with relief for a few minutes a day after a bowel movement. There is pelvic muscle spasm specifically in the puborectalis and external anal sphincter muscles. There can also be circulatory disturbance to the surrounding muscles.

Pelvic pain can also be caused by constipation and irritable bowel syndrome which are discussed in chapter six.

Screening

Chronic Pelvic Pain Screening questions include:

In the past month how often have you:

- Had pain or discomfort in the perineum between the scrotum and anus?
- Had discomfort in the lower abdomen?
- Experienced discomfort with urination?
- Experienced discomfort with erection?
- Had constipation, straining to eliminate bowel movements?

Assessment

Components of Chronic Pelvic Pain assessment include a complete history, a functional assessment and medical tests. Medical tests, x rays and blood tests are used to eliminate the possibilities that a tumor, cancer, inflammation, infection or neurological condition is the cause of the pain. Functional assessment indicates limitations or changes in work, social and recreational activities. It provides a picture of how well a man is going about his normal daily life.

Treatment

Treatment for Chronic Pelvic Pain includes medications, pain relieving modalities and Beyond Kegels® Protocol.

Medications

Medications for chronic pelvic pain are divided into two categories. One medication group treats specific bladder or bowel pathology. Antibiotics and sulphur drugs are in this category. Antibiotics are used for infections like urogenital tract infection or chronic inflammatory prostatitis.

A second group of medications are designed for effective pain management. Nonsteroidal anti-inflammatories (NSAIDs), Motrin, Advil, Naprosyn and Aleve block pain and inflammation at the pelvic tissue level. Central acting opiates, Stadol, Lortab, Demorol decrease pain and anxiety and improve sleep while they act on the brain and central nervous system.

Pain Relieving Modalities

Pain relieving modalities can include biofeedback and various types of electrical stimulation. Biofeedback facilitates improvement of central pain perception as well as local muscle resting tone and circulation. Electrical current with names like high voltage galvanic stimulation, functional electrical stimulation, transcutaneous electrical stimulation, interferential current stimulation, and microcurrent can increase circulation, facilitate local muscle relaxation and decrease pain and muscle spasm. There are few if any side effects with these modalities and they can be very beneficial in pain reduction.

Beyond Kegels® Protocol for Pain

Beyond Kegels® Protocol for Pain Control emphasizes improved circulation, normal muscle resting tone and desensitizing pain pathways to the brain. These techniques include autonomic nervous system rebalancing (Physiological Quieting®, pelvic muscle system rebalancing (Roll for Control® Exercises) and Wonder W'edge® Inversion. They are detailed in chapters eight and nine.

CHAPTER FIVE

Erectile Dysfunction

Erectile dysfunction (ED) is the decrease in ability to achieve or maintain

an erection of the penis sufficient for satisfactory sexual performance/intercourse. It does not usually affect sexual desire, orgasm or the ability to ejaculate semen.

Anatomy

The penis is composed of 3 elongated chambers separated by smooth muscle. Erection occurs when these chambers are filled with blood and the surrounding muscle closes off the outlets to maintain the erection pressure in the chambers (fig. 12). The penis becomes erect because blood is pumped into the penile blood vessels of these chambers and the valves close. This maintains the erectile function. If circulation is decreased or the valve closure mechanism does not work properly erection is short-lived or inefficient. The pelvic muscles as they contract are key in pumping blood into the the penile chambers and maintaining the erection function of the penis. The most important pelvic muscles for erectile function are the group called “Heel and Toe Click Muscles” or the medical term is urogenital diaphragm muscles (fig. 13). The Roll In and Roll Out Muscles are secondarily helpful in erectile function (fig. 13).

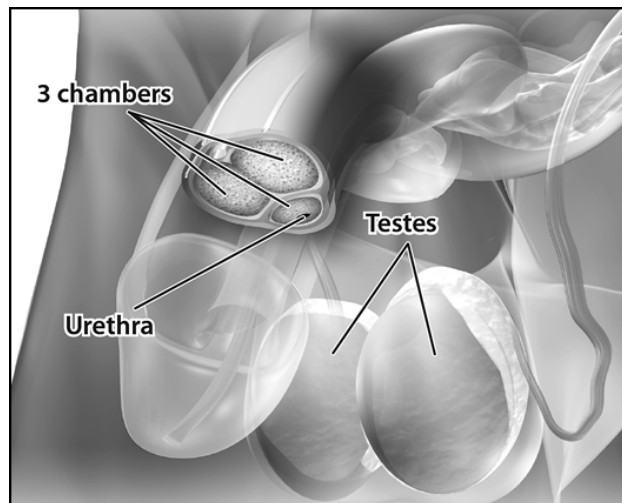


Figure 12 Chamber of the Penis

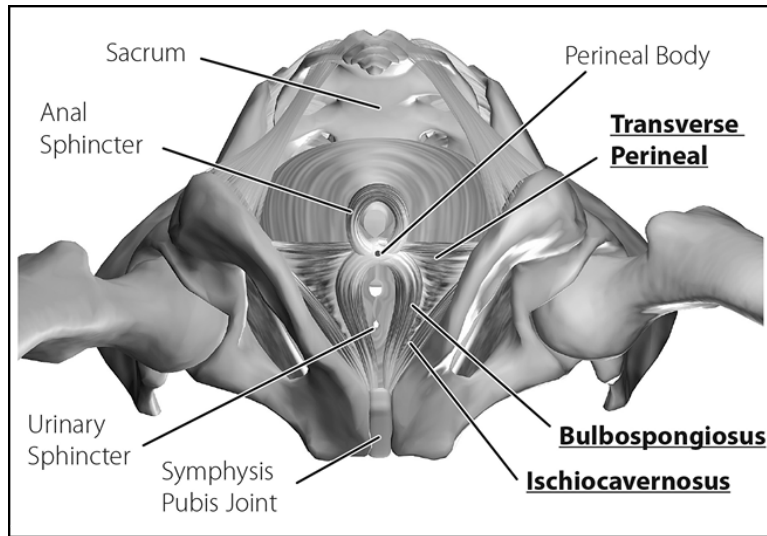


Figure 13 Heel and Toe Click Muscles

Incidence and Cause

Erectile dysfunction is related to age and surgery. At 55 years old a man has a 20% chance of experiencing ED. By 65 years old it is 30% and by 75 years old there is a 55% chance of erectile dysfunction.

Erectile dysfunction can be secondary to prostate cancer, surgery for cancer or BPH, diabetes, cardiovascular disease, spinal cord injury, Parkinson's disease, Alzheimer's disease or multiple sclerosis. Bike riding can lead to ED in young men in their 20s and 30s. Tobacco use can lead to ED in men by 40 years of age. Alcohol abuse can lead to ED by 50 years of age.

Medications can affect ED at any age. Medications affecting ED include tranquilizers, antidepressants, cold and allergy drugs, as well as medications for blood pressure and heart conditions.

Chronic pelvic pain can lead to erectile dysfunction. As the penis fills with blood for an erection pain increases from the pressure. The body's response is to open the valves and drain blood out so the pressure decreases and pain is relieved. Some men experience painful erections with the penis veering to one side at an inappropriate angle. This condition, called peyronies, is usually caused by plaque formation in the blood vessels.

Surgery for an enlarged prostate (transurethral resection of the prostate) or prostate cancer (radical prostatectomy) can result in erectile dysfunction due to nerve or blood vessel damage. When ED is caused by nerve damage

the likelihood of complete function return is poor.

Assessment

Initial assessment for ED includes a complete history and tests for thyroid, liver and kidney function, lipid and blood sugar levels and nerve connection to skin and muscles which includes testing nerves connecting to the groin, penis and anus.

Erectile Dysfunction Screening Questions include:

In the past month have you:

- Been sexually active?
- Experienced a problem obtaining an erection?
- Experienced a problem maintaining an erection?
- Experienced a problem completing intercourse with an erection?
- Experienced a problem with confidence that you can obtain an erection?
- Experienced a problem with satisfaction during sexual activity?

Treatment

Initial treatment can include sexual counseling, Beyond Kegels[®] Protocol, medication and/or vacuum constriction.

Counseling

Men experience anger, fear and anxiety as common reactions to erectile dysfunction. Conversely some men experience erectile dysfunction due to performance anxiety, depression or some other emotional reaction to sexual function. Counseling is appropriate to treat the psychological aspects of ED. Self confidence, anxiety and sexual satisfaction are areas of concern that can often be successfully resolved with cognitive behavioral therapy, biofeedback and ANS training. A program of improved nutrition, exercise and stress reduction can improve sexual function for many men as they age.

Medications

Medications to treat ED include Viagra (sildenafil), Levitra (vardenafil) and Cialis (tadalafil). These medications cause blood vessel dilation with penile stimulation that leads to erection. These medications cannot be used in conjunction with nitrates or alpha blocker medications.

Pelvic muscle exercises and autonomic nervous system training can help 40%- 50% of men with ED regain satisfactory function if nerve innervation

and circulation are intact. Chapter nine and ten describe conservative treatment measures to improve erectile function.

CHAPTER SIX

Bowel Dysfunction

Men over 50 years old often experience changes in bowel function secondary to aging, other illnesses and infections. Bowel dysfunction can include constipation, fecal impaction, flatulence, diarrhea, fecal incontinence and irritable bowel syndrome (IBS). These primarily affect the ascending, transverse, and descending colon (fig. 14).

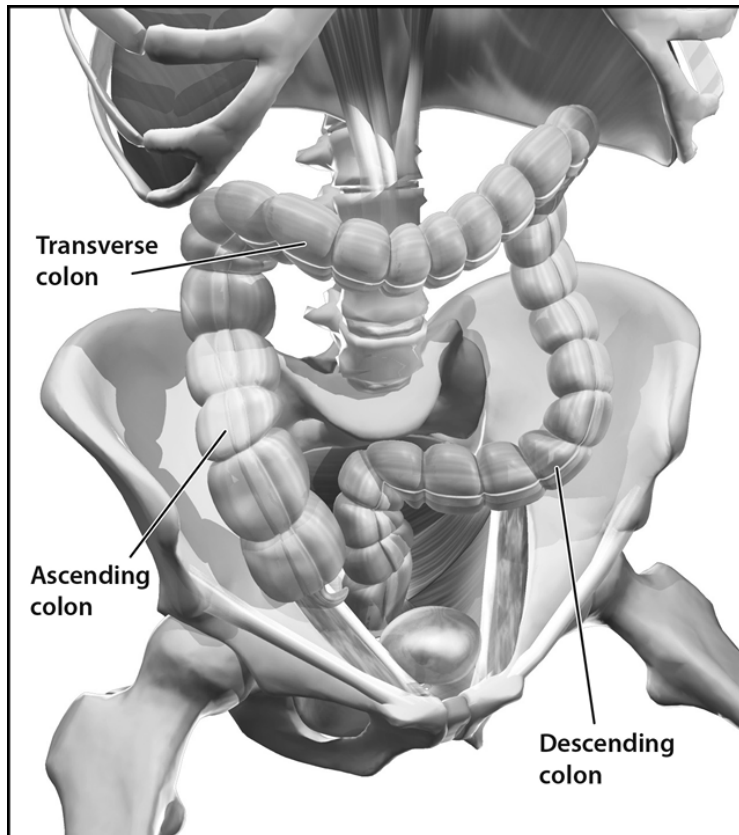


Figure 14 Large Intestine - Colon

Assessment

Bowel Screening Questions include:

In the past month have you experienced any of the following:

- Two or fewer hard bowel movements a week, straining to eliminate?
- The feeling of incomplete emptying?
- Frequent passage of unformed soft to liquid stool two or more times a day?
- Alternating constipation and diarrhea, bloating, gas and abdominal discomfort?
- Staining in underwear with small to large pieces of stool?

Types of Bowel Dysfunction

Constipation

Constipation is described as ‘dropping rocks’. The medical description is having fewer than three bowel movements per week, of hard consistency

that a man strains to eliminate with a feeling of incomplete emptying. It is the most common gastrointestinal complaint in men, affecting 26% of men over 60 years of age.

Fecal Impaction

Fecal impaction is the condition when the bowel movement is stuck in the rectum and irritating the sidewalls of the rectum. A man describes abdominal discomfort or pain on the left side and often experiences uncontrolled loss of liquid and pieces of feces in his underwear.

Flatulence – Gas

Flatulence or excessive gas that is uncontrolled or odiferous is an increasing problem for some men as the digestive system ages. It can be caused by an aging digestive system, pelvic muscle and anal sphincter dysfunction or pathology of digestive functions.

Excessive and odiferous gas can be from inadequate digestion of certain foods or abnormal yeast levels in the digestive system. The aging digestive system can fail to completely breakdown certain foods. The most common foods that cause problems are milk products (lactose intolerance) and wheat products (gluten intolerance). Excessive use of antibiotics and sugar are factors in gut yeast levels. Increased yeast levels can lead to excessive gas and abdominal discomfort.

The internal anal sphincter controls gas emission while the external anal sphincter and pelvic muscles control bowel movements. Dysfunction of the internal anal sphincter or its nerve supply can lead to uncontrolled gas emission.

Inflammation, cancer, or other pathology of this system often leads to a decrease of digestive enzymes or other chemicals essential to digestion and absorption.

Diarrhea

Diarrhea is frequent passage of unformed bowel movements, more than 3 times a day, for four weeks or more. It can be caused by abnormal gut absorption, inflammation or infection located in the intestines. Medications can also cause diarrhea. The most common medications causing diarrhea are antibiotics and nonsteroidal antiinflammatories (NSAIDs). Other causes include alcoholism, bowel surgery, dietary sensitivities and genetic

predisposition to malabsorption.

Fecal Incontinence

Fecal incontinence is different than diarrhea. It is uncontrolled loss of fecal material. Up to 18% of men over 65 years of age experience fecal incontinence. After 80 years of age it is the leading cause of nursing home admissions. Fecal incontinence can be caused by neurological conditions like Parkinson's disease or multiple sclerosis. It is common to have loss of bowel material that resembles pieces and liquid staining of underwear. This can be secondary to impaction when secretion of fluid around the impaction uncontrollably leaks out the rectum/anus and contains some pieces of feces. In this case the fecal incontinence is solved when impaction is resolved.

Irritable Bowel Syndrome

Irritable bowel syndrome (IBS) is described as alternating diarrhea and constipation with abdominal discomfort and gas. Some men have more constipation while others experience more diarrhea. Flatulence or gas can cause abdominal discomfort and embarrassment. A frequent need to have a bowel movement causes a man to stop participating in recreational and social activities. The Bristol Stool Scale by Lewis and Heaton is a useful guide to bowel patterns. You can find it at <http://www.ibsgroup.org>

Treatment

Treatment is based on the type of bowel dysfunction. Suggestions for improving bowel control are included in chapters eight and nine.

CHAPTER SEVEN

Screening Symptom

Questionnaire

This screening tool includes separate sections for bladder symptoms, bowel symptoms, prostate and prostate cancer symptoms, pelvic pain symptoms and erectile dysfunction symptoms. These questions function as a screening process and not as a diagnostic process.

Bladder Symptom Questions

In the past month you:

Had leaking with physical activity, coughing, sneezing, etc.? **Yes/No**

Had leaking with sudden uncontrolled urge to go? **Yes/No**

Had difficulty getting to the bathroom on time? **Yes/No**

Know where every bathroom is ? **Yes/No**

Limit trips because of frequency of urges? **Yes/No**

Had leaking due to mobility problems, dexterity problems? **Yes/No**

Had to use a bed pan, urinal, pads, adaptive clothing, equipment, or assistance:? **Yes/No**

Had slow and continual inappropriate leaking? **Yes/No**

Had feeling of incomplete emptying? **Yes/No**

Had a diagnosis of neurological problem, i.e. stroke, MS, Parkinson's disease, or spinal cord injury?
Yes/No

Had toileting every 1-2 hours? **Yes/No**

Had leaking at night? **Yes/No**

Prostate Symptom Questions

In the past month how often have you:

Had a sensation of incomplete emptying? **None / Weekly / Daily**

Found urine flow stopped & started repeatedly? **None / Weekly / Daily**

Had a weak urinary stream? **None / Weekly / Daily**

Had to push or strain to begin urination? **None / Weekly / Daily**

Gotten up at night to urinate? **None / Weekly / Daily**

Prostate Cancer Questions

In the past month:

Have you been diagnosed with enlarged prostate? **Yes/No**

Has your PSA been elevated? **Yes/No**

Have you been diagnosed with prostate cancer? **Yes/No**

If yes for prostate cancer? **Yes/No**

What treatments, medication or surgical techniques? **Yes/No**

What secondary problems do you experience? **Yes/No**

Pelvic Pain Symptom Questions

In the past month how often have you:

Had pain or discomfort in the perineum: between the scrotum & anus? **None / Weekly / Daily**

Had discomfort in the lower abdomen? **None / Weekly / Daily**

Experienced discomfort with urination? **None / Weekly / Daily**

Experienced pain or discomfort with erection? **None / Weekly / Daily**

Had constipation, straining to eliminate BMs? **None / Weekly / Daily**

Erectile Dysfunction (ED) Assessment Questions

In the past month:

Have you been sexually active? **Yes/No**

Have you experienced a problem obtaining an erection? **Yes/No**

Have you experienced a problem maintaining an erection during intercourse? **Yes/No**

Have you experienced a problem completing intercourse with an erection? **Yes/No**

Have you experienced a problem with confidence that you can obtain an erection? **Yes/No**

Have you experienced a problem with satisfaction during sexual activity? **Yes/No**

Bowel Health Questions

In the past month you:

Had two or fewer hard bowel movements a week, straining to eliminate? **Yes/No**

Had the feeling of incomplete emptying? **Yes/No**

Had frequent passage of unformed soft to liquid stool two or more two or more times a day? **Yes/No**

Had alternating constipation and diarrhea, bloating, gas, and abdominal discomfort: **Yes/No**

Had staining in underwear with liquid and small to large pieces of stool: **Yes/No**

Questions of Concern*

In the past month you:

Do you experience pain or discomfort in the abdominal or pelvic regions when toileting? **Yes/No**

Had problems emptying your bladder or bowel completely? **Yes/No**

Had problems starting your urine flow? **Yes/No**

Had sudden and extreme increased urination? **Yes/No**

Had experienced any rectal bleeding? **Yes/No**

*consult with physician

CHAPTER EIGHT

What Can I Do? The Beyond Kegels® Protocol

The Beyond Kegels® Protocol is described in the following chapters. This Protocol is designed to prevent and treat bladder, bowel, and erectile dysfunction. The Beyond Kegels® name came about after a significant number of individuals being treated for bladder and bowel dysfunction stated that Kegel exercises did not help them return to bladder and bowel health and control. A Kegel exercise is voluntarily contracting the pelvic muscles so the anus tightens and the penis rises slightly. This is confusing and hard for many men to do. The Beyond Kegels® program was developed to improve results and make it faster and easier to return to normal function.

Looking more completely into the structure and function of the pelvic muscles it was discovered that the support system for the bladder was more than the pelvic floor muscle that the Kegel exercise activated. The essential support system was actually a combination of muscles extending through the lower pelvis and to the leg (femur) bones. From this information the new Beyond Kegels®- Roll for Control® exercise program designed to stimulate action of the correct pelvic muscle and leg muscle combination, was developed. Our experience covers over 30 years specializing in treatment of patients with bladder, bowel and erectile dysfunction problems.

Research results by Hulme and Nevin (99) demonstrated the Beyond Kegels® Protocol to be more effective than traditional Kegel exercises. This research and years of clinical observation demonstrated that Kegels are not an activity the body ever does during functional activities but rather is an artificial exercise based on the early understanding of pelvic muscle function that is now expanded and improved. The program has been effective for men of all ages and conditions. As long as there is adequate nerve activity and circulation to the pelvic muscle system there is the ability to improve the function and balance of the urogenital and pelvic muscle systems as they work together to create continence.

The Beyond Kegels® Protocol has five components that work together for bladder, bowel and sexual health.

- 1) Lifestyle Changes

- 2) Bladder and Bowel Control Exercises- Physiological Quieting® Exercises
- 3) Pelvic Muscle Control Exercises- Roll for Control® Exercises
- 4) Wonder W'edge® Inversion Exercises (optional)
- 5) Modalities (optional)

Lifestyle Changes

Lifestyle changes are the foundation for bladder, bowel and erectile function. It is important to improve lifestyle behaviors of sleep, nutrition, exercise and social activities.

The three most critical lifestyle areas are:

- 1) sleep,
- 2) nutrition,
- 3) walking.

Sleep: Eight to nine hours of sleep a night without getting up to toilet is a general rule to follow. After 65 years of age it may be normal to get up once a night. Sleep is the time every cell in the body repairs or replaces itself. When nighttime frequency or leaking is a problem it can cause sleep disturbance. Try the following techniques to improve sleep. Recline for 30 minutes and then go to the toilet before going to sleep. This helps to empty the bladder and allows a longer sleep without needing to toilet. Use protective pads and sleep through the night rather than getting up just in case you might leak. When awakened with the the urge feeling to toilet, practice Physiological Quieting® and fall back to sleep.

Nutrition: Fluids keep the body hydrated and all body systems functioning. Dehydration is one of the most common factors leading to illness and disease. Six to eight 8-ounce glasses of non-caffeinated fluid a day is a general rule to follow. A man has taken enough non-caffeinated fluid when he is toileting every 3-4 hours for 10-20 seconds of good stream flow and the urine is a light yellow color and without a strong odor.

Fiber keeps the intestine healthy and moving food effectively from mouth to anus. The best fiber is found in fruits and vegetables rather than a pill or packet. Try eating six to eight half cup servings of fresh, raw or lightly cooked fruits and vegetables to provide adequate fiber in your diet. Fruits

and vegetables are essential for overall good health and normal bladder and bowel patterns. There are two types of fiber that help men have normal bowel movements. One type slows the movement of food through the gut so more water is absorbed back into the body. Men need to eat more of this fiber when they have diarrhea. The other type of fiber speeds the movement of food through the gut so less water is absorbed. Men need to eat more of this type of fiber when they have constipation.

When diarrhea is a problem, fruits that stabilize and slow the digestive system include bananas and apples. Beneficial vegetables include potatoes, carrots and peas.

When constipation is a problem the best fruit to eat is a fresh pear. Other good fruits that help normalize a bowel movement are peaches, plums, rhubarb, melons, berries and citrus fruit. Vegetables that are beneficial include dark green vegetables like broccoli, spinach, kale and beans. Beans are especially high in fast acting fiber. Eating half cup to a cup of cooked beans (black, red, white or a mixture) will help normalize bowel patterns. Spinach salad with extra virgin olive oil is another good food combination to help normalize the bowel.

Walking: Walking is the number one exercise to prevent bladder, bowel and erectile function. Walking an hour a day along with nutrition and stress control will often do more than any medication or surgery without side effects or cost. Walking helps to normalize bladder, bowel and erectile function. Walking stimulates normal action of the smooth muscles of the bladder and bowel so they hold and release urine and bowel movements appropriately. It strengthens the pelvic muscle system to support internal organs and maintains closure of the bladder and bowel until it is appropriate to urinate or have a bowel movement. An ideal program is walking 30-60 minutes a day.

A man can begin with 3-5 minutes a day if he has not been walking or has just had surgery. Two or three short walks a day are as good as a long walk for men recovering from surgery or illness. Gradually increase the time and distance of each walk. Walking can be at an easy to moderate pace. It does not have to be at an aerobic or cardiovascular tempo.

Bladder and Bowel Control Exercises- Physiological

Quieting[®]

Bladder and Bowel Control Exercises, called Physiological Quieting[®] exercises, strengthen control and balance of the bladder and bowel and the nervous system that controls them. These exercises strengthen control so the bladder and bowel can fill completely without leaking and empty completely at the appropriate time. Physiological Quieting[®] exercises improve efficient and effective bladder and bowel function. These same exercises re-balance the nervous system messages that control bladder and bowel function.

Since the bladder, bowel and nervous system that controls them are directed by a part of the brain that is not under our conscious control, the exercises are different than strengthening exercises for the pelvic muscles. The same principles apply to erectile dysfunction since it is controlled by the same nervous system and part of the brain as the bladder and bowel. Using these exercises can significantly improve function through improved brain direction to the bladder, bowel and penis.

An easy way to think about these exercises is that the body's engines (nervous systems) need to return to a humming sound instead of a screeching sound. A hum can be maintained for a long period of time easily and efficiently whereas a screech takes a lot of energy and wears out quickly. To return the bladder, bowel and nervous system to the easy, efficient hum of optimal function learn to raise your Q number.

Your Q number tells you whether your engines are humming or running rough. You can find your Q number in several easy ways. One way is to simply place your finger tips on your lips and assess if they are colder, warmer or the same relative temperature as your lips. A more precise technique to measure your Q number is using the PhysioQ (fig. 22). Hold the tip of the PhysioQ between your right thumb and index finger. Count to 30 slowly. Record the Q number of your right hand.

Then increase your Q number to 90 or above. There are three easy ways to raise your Q number to strengthen bladder, bowel and nervous system function. Listen to the Physiological Quieting[®] CD or digital download 1-2 times a day for 4-6 weeks to learn the following techniques.

- 1) Restore Body Breath
- 2) Restore Body Q-Core Control

3) Restore Body Balance

1) Restore Your Body Breath

Restoring your body breath can strengthen and restore bladder, bowel and nervous system function. Follow these simple steps to coordinate the systems so they are humming and not screeching.

Awareness

Focus on your breathing for 5-10 breaths.

Notice:

The pattern of your inhale and exhale.

The location of your inhale and exhale.

The smoothness of your inhale and exhale.

Connecting

Practice each step for 5-10 breaths or until it is easy.

Step 1:

As you inhale let your stomach rise.

As you exhale let your stomach fall.

Quiet shoulders, quiet chest.

Jaw released, teeth apart.

Tongue off the roof of the mouth.

Step 2:

Inhale through your nose

Filling your lungs from the bottom up.

Imagine air filling your lungs

Like water fills a pitcher.

The water fills the pitcher from the bottom up.

Exhale, let the pitcher tip and gently empty.

Exhale through your nose or mouth.

Step 3:

Inhale air through your nose

Letting your stomach rise.

At the end of the inhale

Pause for a moment

Before exhaling slowly.

Step 4:

Inhale air through your nose

Letting your stomach rise.

At the end of the inhale

Pause for a moment

Then exhale slowly.

At the end of the exhale

Press a little more air out

Using your lower stomach muscles.

Body Breathing allows your bladder, bowel and nervous system to work in balance with the brain to provide automatic control of these body functions.

Retest your hand and lip temperature. Did it change? Record your Q number again after the practice session. Did your Q number change? Practice these breathing steps 3-4 times a day to strengthen bladder, bowel and sexual function.

2) Restore your Q-Core COntrol

Another way to restore your bladder, bowel and nervous system strength and function is through returning your body to its Q-Core Control.

Awareness

Focus on your right and left hands.

Notice if they are warm or cold.

Notice if they are the same temperature or different.

Connecting

Practice each step for 1-2 minutes before going to the next step.

Step 1:

Imagine the warmest color.

Surround your hands with that color.

Let that color flow from your fingertips

Through your palms into your wrists while

Your hands get warmer and warmer.

Step 2:

Imagine the warmest safest place.

Feel the warmth of that warm safe place
Being absorbed into your hands.
Your hands feel warmer and warmer from
Your fingertips to your wrists.

Step 3:

Imagine flowing warmth and think,
'My hands are warmer and warmer'
'Warmth is flowing into my hands
Warmer and warmer.'

Retest. Record your Q number again after the practice session. Did your Q number change? Practice these Q-Core steps 3-4 times a day to strengthen bladder, bowel and sexual function.

3) Restore Your Body Balance

Another way to restore your bladder, bowel and nervous system strength and function is through returning your body to its best nervous system balance.

Physiological Quieting[®] (PQ) is the name of the process to rebalance the nervous system and promote efficient bladder, bowel and sexual function. Listen to the Physiological Quieting[®] CD or digital download 1-2 times a day for 4-6 weeks for maximal effectiveness.

One of the best times to use the PQ CD is at night as you go to sleep. It is all right to fall asleep while listening to the CD. You learn through the first two levels of sleep so it isn't necessary to stay awake. Just listen and sleep.

If you have time, use the PQ CD during the day to rejuvenate and rebalance your systems for a second time. You can practice at home or at work but do not drive and listen to the PQ CD.

Retest and record your Q number again after the practice session. Did your Q number change? Practice these Body Balance steps 3-4 times a day to strengthen bladder, bowel and sexual function.

Pelvic Muscle Control Exercises

Pelvic Muscle Control Exercises, called Roll for Control[®] exercises, strengthen control and balance of the pelvic muscles that support the bladder and bowel while maintaining closure of their outlets so urine and

bowel movements remain in the body until it is time for elimination.

Pelvic muscle resting tone can be excessively tight or high because of a conscious attempt to “suck it up” or an unconscious attempt to ‘keep things in that shouldn’t come out’ or because of a fear of losing control. High pelvic muscle resting tone is as much a problem as low tone. High tone can lead to pelvic pain, incomplete emptying, weak urine stream or erectile dysfunction.

Pelvic muscle resting tone can be low and ineffective in maintaining closure of the urethra, anus/rectum or penile chamber valves. This can lead to uncontrolled urine or fecal leaking as well as erectile dysfunction.

Roll for Control[®] exercises are designed to stimulate action of pelvic muscles to maintain or regain strength and control of bladder, bowel and sexual function. They are beneficial for men to prevent problems and to remediate problems with prostate enlargement, pelvic pain, post surgical and erectile dysfunction problems. These exercises are using the deepest and shortest muscles in your body. They are performed slowly through midrange of hip rotation, moving out no more than hip width and moving inward to midline. This is different than moving through a full range of hip motion as you might exercise on Nautilus or other exercise equipment. Your buttocks and stomach muscles should remain relaxed. Inhale as you do a roll out exercise and exhale as you do a roll in exercise. When you hold for a count of 10, breathe naturally and never hold your breath. These exercises are easy to do and take less than 5 minutes 2-3 times a day.

The Roll for Control[®] exercises include:

- 1) Roll In and Out Exercises
- 2) Heel Clicks and Toe Clicks
- 3) Standing Plié

Roll In and Roll Out Exercises

The Roll In and Roll Out Exercises can be done lying down, on the Wonder W’edge[®], or in sitting. If you are recovering from surgery begin in the supine (lying down) position. Use of the Wonder W’edge[®] is beneficial when pelvic or back pain or constipation are part of the symptom picture. As strength improves move to the sitting position for some of the exercises.

Roll In and Roll Out Exercises are usually done 2-3 times a day for 3-10 repetitions each time. Start with 3-5 repetitions after surgery or if pain is an

issue and progress gradually to 10 repetitions. Begin with 5-10 repetitions for other problems not related to pain or surgery.

Roll In and Roll Out Exercises can be done actively without any resistance or with added resistance of a ball and band. Begin with active exercises without resistance if pain is an issue or after surgery (fig. 15). As recovery progresses it may be possible to add resistance but there should never be any increase in pain with exercise and no significant fatigue with exercise. Resistance exercises are always at submaximal resistance with equal rest and work times.



Figure 15 Roll-in and Roll-Out Exercises

Roll In Exercise:

For this exercise you will be using a Roll for Control® ball, a 7"-9" soft ball. Sit or recline with your feet hip width apart. Place the ball between your legs just above the knees. Now roll your knees in against the ball. Hold for a count of 10. Now relax and release your knees for a count of 10 (fig. 16). Remember, as you do this exercise, maintain your breathing rhythm, and use the muscles of your inner thighs. The pelvic floor muscles tighten automatically when your knees roll in. When this is easy, pivot on your heels rotating your toes towards each other as you squeeze the ball with your thighs. Remember that rolling your knees in while using the adductor muscles assists the pelvic muscle action to support and close the bladder and bowel.

Repeat this exercise 5-10 repetitions two to three times daily.

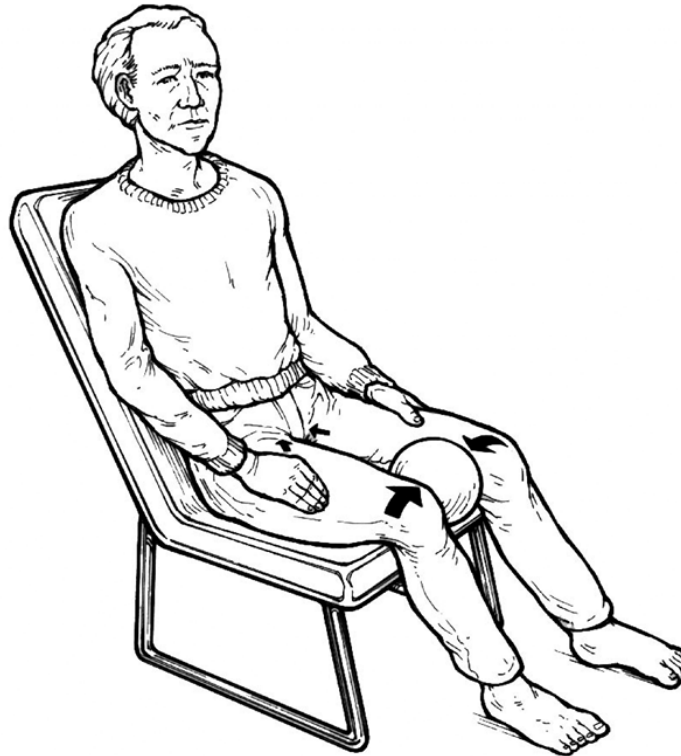


Figure 16 Roll-In Exercise - Resisted

Roll Out Exercise

For this exercise you will be using a Roll for Control® band. This elastic 1"- 2" wide band is secured around the thighs above your knees while you squeeze your thighs together and your heels are touching. To perform the Roll Out Exercise roll your knees out 3-4 inches against the elastic band. Make sure your knees roll out no more than hip width and your heels remain touching each other. Hold the position while you count to 10 slowly (fig. 17). Then relax the muscles completely and return to the neutral position for a 10 count. Maintaining your breathing rhythm, try this exercise again. When this is easy, pivot on your heels and rotate your toes away from each other at the same time you roll your knees out against the band. Remember that rolling your knees out while using the small hip rotator muscle (the obturator internus), assists the pelvic floor muscles in support and closure of the bladder and bowel.

Repeat this exercise 5-10 repetitions two to three times daily.

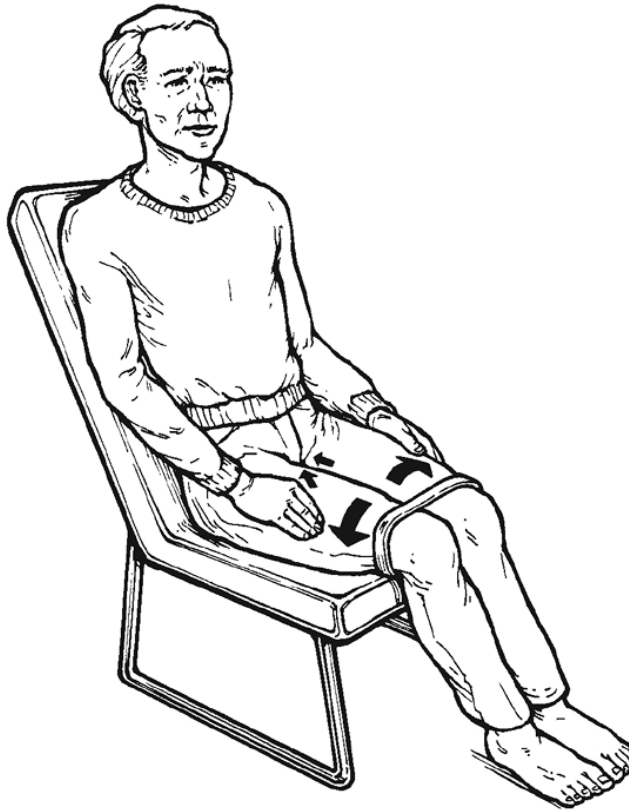


Figure 17 Roll-Out Exercise - Resisted

Heel Click and Toe Click Exercises

Heel Click and Toe Click Exercises can be done lying down or in sitting. After surgery or if pain is an issue begin in the supine (lying down) position. As strength improves move to the sitting position for some of the exercises.

Heel Clicks and Toe Clicks are usually done 2-3 times a day for 3-10 repetitions each time. Start with 3-5 repetitions after surgery or if pain is an issue and progress gradually to 10 repetitions. Begin with 5-10 repetitions for other problems not related to pain or surgery. Heel Click and Toe Click Exercises are performed without resistance.

Heel Click and Toe Click Exercises are used most often for overactive bladder, urge incontinence and erectile dysfunction. The exercises activate muscles that quickly close the urethra and anal sphincters and pump blood into the penis for an erection.

Heel Click Exercise

To perform this exercise, focus on your breathing rhythm maintaining that breathing rhythm during the exercise. Sit with your feet hip width apart. Pivot on your forefeet to squeeze your heels together for a count of two. Then return to the neutral position and rest for a count of two. Keep your heels sliding on the floor. Repeat this 5-10 times twice daily (fig. 18).



Figure 18 Heel Clicks

Toe Click Exercise

To perform this exercise, focus on your breathing rhythm maintaining that breathing rhythm during the exercise. Sit with your feet hip width apart. Pivot on your heels and squeeze your toes together for a count of two. Then return to the neutral position and rest for a count of two. Keep your feet sliding on the floor. Repeat this 5-10 times twice daily (fig. 19).

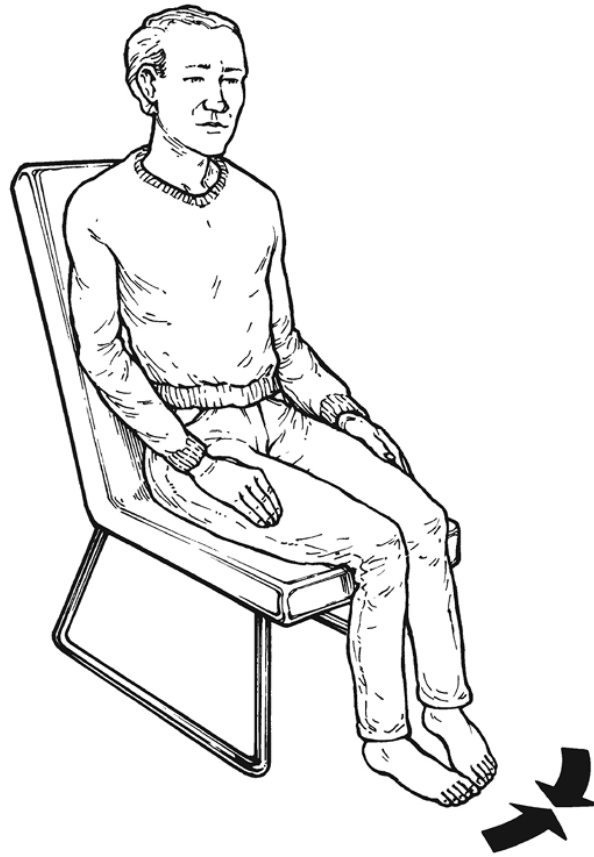


Figure 19 Toe Clicks

Standing Plié

Most daily activities involve standing and walking and most complaints of leaking and pain occur during upright activities. It is important that pelvic muscles function effectively during these upright activities. The standing plie exercise activates the pelvic muscle system automatically.

To perform the Standing Plié exercise stand with your feet hip-width apart with your feet turned outward. Now do a small plié (knee bend). Bend your knees 3"-4" for a slow count of five. Then return slowly to the upright position for a slow count of five as you rotate your knees over your toes. Knee straightening activates the adductor muscles in combination with the pelvic muscles.

The knee-bend position with the feet pointed outward activates the obturator internus muscles in combination with the pelvic muscles. Inhale as you bend your knees and exhale as you straighten your knees (fig. 20).

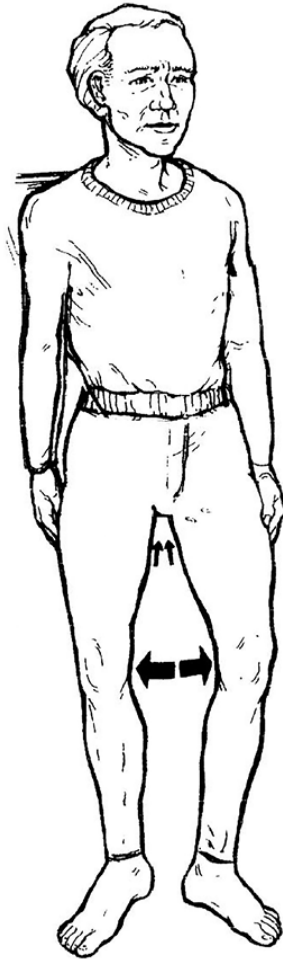


Figure 20 Standing Plié

Repeat this exercise five times initially. Gradually increase to 10 repetitions during an exercise session. If standing balance is a problem, perform this exercise standing against a wall, your head, shoulders and buttocks touching the wall and your feet 4"- 5" away from the wall.

Wonder W'edge® Inversion

Wonder W'edge® Inversion is an important part of the Beyond Kegels® Protocol when there is back pain, pelvic pain, constipation or post surgical recovery. The Wonder W'edge® Inversion position realigns bladder, bowel and pelvic muscles as well as releasing stress on the low back and sacroiliac joints. Then Roll for Control® exercises can be effective in bladder, bowel and sexual reeducation.

There are some individuals with cardiac, pulmonary and cervical neck

problems that cannot use the Wonder W'edge® for inversion. Each man should find a comfortable position on the Wonder W'edge® by adjusting his hips and back on the wedge with his neck and head in a neutral position.

Alignment on the Wonder W'edge®: To align for inversion on the Wonder W'edge® place the wedge on the floor or on the bed. Sit next to it and then lift your hips onto the high end of the wedge while your shoulders and head are off the wedge. Find a position that is comfortable with your hips as high on the wedge as possible. Your feet can be resting flat on the floor or on the wall (fig. 21).

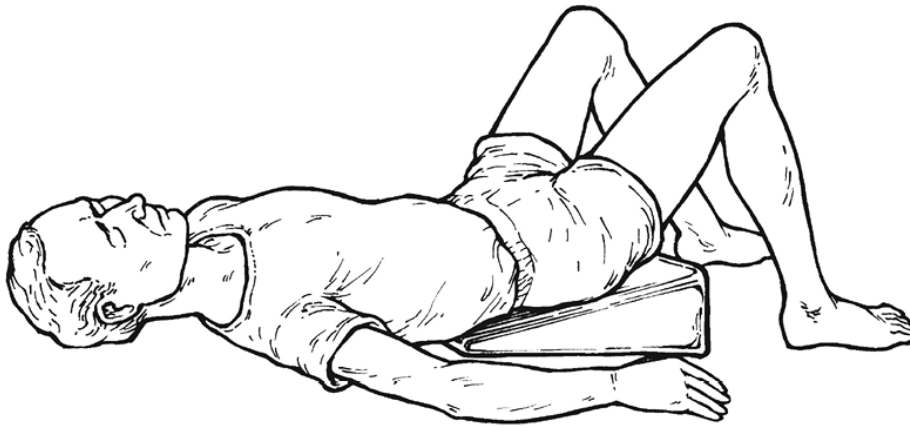


Figure 21 Wonder W'edge Inversion

Breathing Control on the Wonder W'edge®: Once you are comfortable on the wedge the next step is to practice 6-8 diaphragmatic breaths. First notice your natural breathing pattern. Notice your inhale and exhale. Then as you inhale think 'inhale let my stomach rise, exhale let my stomach fall'. Let your shoulders and chest remain quiet as your diaphragm does the breathing. Let your teeth separate and your jaw release as you inhale and exhale, thinking 'Quiet shoulders, quiet chest, jaw released, teeth apart, tongue off the roof of my mouth'.

Roll for Control® Exercises on the Wonder W'edge®: once you are comfortable on the wedge and have practiced diaphragmatic breathing you can add Roll for Control® Exercises- specifically the Roll In and Out Exercises and the Heel Click and Toe Click Exercises. If the Wonder W'edge® is helpful practice your exercises on the wedge at least once a day.

CHAPTER NINE

Special Considerations

There are special considerations for each diagnosis and individual. This chapter will provide guidelines for self-care and treatment of benign prostate hyperplasia, prostate cancer, chronic pelvic pain, erectile dysfunction and constipation/diarrhea. Go to the diagnosis you are interested in and follow the step-by-step program.

Benign Prostate Hyperplasia

Benign Prostate Hyperplasia is related to symptoms including weak and poor urinary stream flow, day and night time urgency and frequency, and sometimes leaking. The prostate cell growth and elevated smooth muscle tone narrows the urethra making it difficult for urine to flow out from the bladder.

Lifestyle changes are an important part of this protocol. Eliminating fluids that can irritate the bladder (caffeine and soda) will help to prevent urgency feelings and frequent toileting. Adequate sleep and walking 30-60 minutes a day will improve bladder, bowel and pelvic muscle function. Another important aspect of this protocol is returning normal bowel patterns. Constipation is often an issue and following the Constipation Protocol is important in relieving BPH symptoms.

Bladder and Bowel Control Exercises are another important part of this protocol. These Physiological Quieting® Exercises can help the urethra open by lowering the smooth muscle resting tone of the prostate and urethra. These exercises also return the bladder to optimal function so it can hold urine longer and contract to push urine out effectively.

Pelvic Muscle Control Exercises are the third part of this protocol. Roll for Control® Exercises, especially Roll-In and Roll-Out exercises help to open the urethra and coordinate urethral and bladder function. Start with active exercise and progress to resistance as the exercises become easier. Standing Plié Exercise can be added too.

Benign Prostate Hyperplasia (BPH)

Self-Care Program

Life Style Change - Sleep, Nutrition, Exercise

- a. Sleep 8-9 hours/night on a regular schedule.
- b. Drink 6-8 eight ounce glasses of non-caffeinated fluid /day. Spread fluid intake throughout the day.
- c. Eliminate caffeine and alcohol: coffee, tea, cola, chocolate, alcohol.
- d. Change food choices depending on bowel patterns. See bowel program.
- e. Walk 30-60 minutes a day.

Bladder & Bowel Control Exercises

- a. Restore Your Body Breath- practice diaphragmatic breathing 3-4 x/day for 6-7 breaths.
- b. Restore Your Body Q-Core Control - practice Q-Core exercises 3-4 x/day for 30-60 seconds.
- c. Restore Your Body Balance- listen to the PQ CD nightly.

Pelvic Muscle Control Exercises

Roll for Control® Exercises-

Week one-active exercises 2-3 x/day 5-10 repetitions

Week two-resistive exercises 2-3 x/day 5-10 repetitions

Week three-resistive exercises 2-3 x/day 10 repetitions

Roll In and Roll Out Active Exercise

Position

- Sit or recline with your feet hip width apart.

Step one

- Keep your heels stuck on the ground as you windshield wiper your feet in and out.
- Pivot on your heels to move your forefoot and toes out and in for 5-10 repetitions.

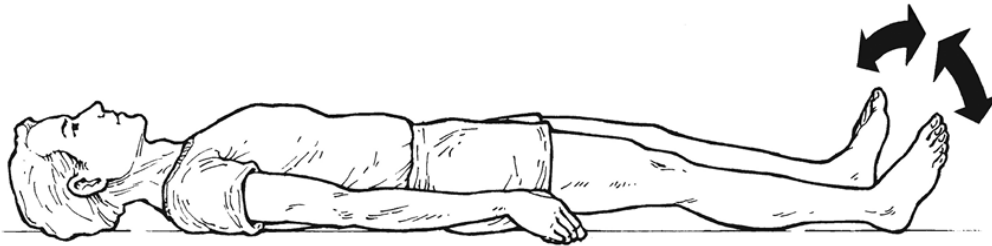
Step two

- Next roll your knees in and out following your feet as you do the heel pivots.

- As your feet rotate out your knees roll out. As your feet rotate in your knees roll in for 5-10 repetitions.

Step three

- Next inhale and exhale in relation to your heel pivots.
- Inhale as your feet and knees rotate out.
- Exhale as your feet and knees rotate in. Repeat 5-10 times.



Roll-In and Roll-Out Active Exercise

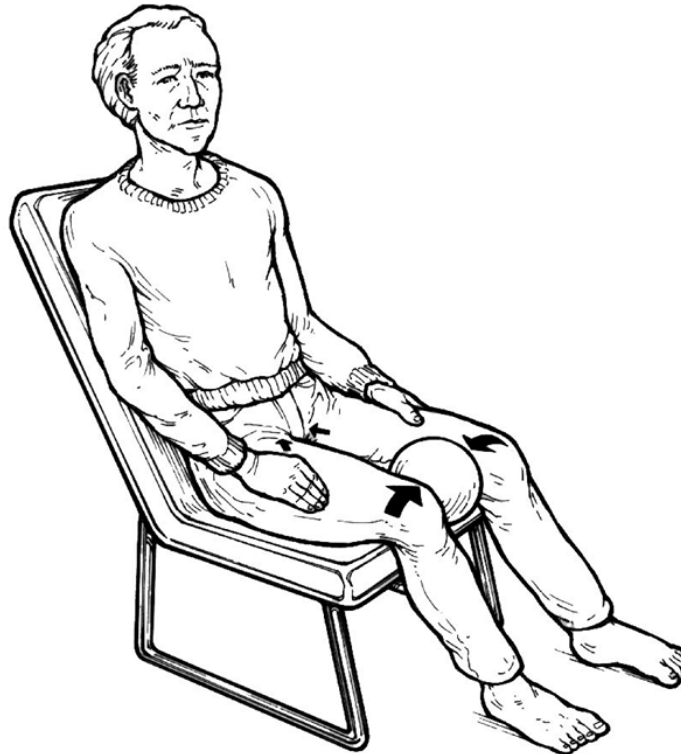
Roll-In Resisted Exercise

Position

- Place the Roll for Control[®] ball between your thighs above your knees.

Step one

- Roll your knees in on the Roll for Control[®] ball squeezing it between your thighs. Squeeze the ball for a count of five. Then rest for a count of five. When you squeeze the ball correctly it should compress to flatten on the sides. Breathe naturally as you perform this exercise. Do not hold your breath. Repeat 5-10 times.



Roll-In Resisted Exercise

Roll-Out Resisted Exercise

Position

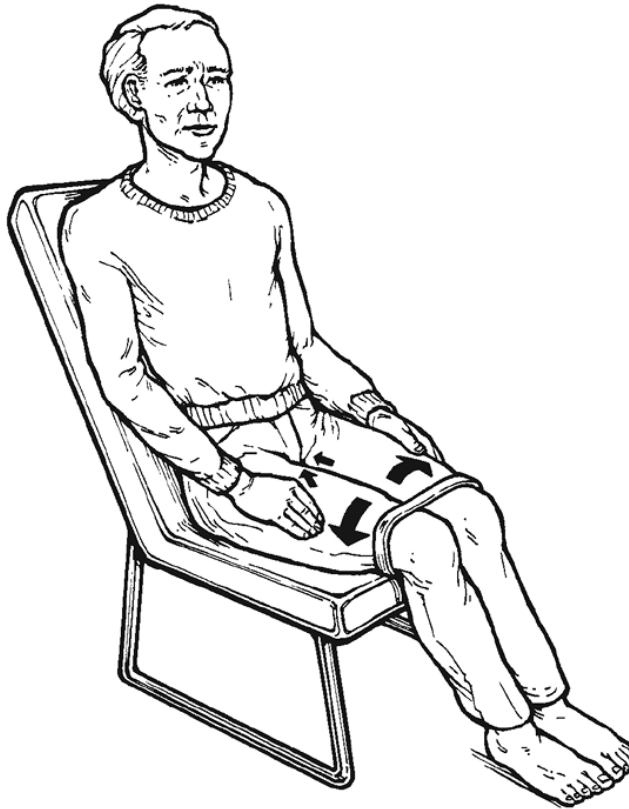
- Begin with your legs together, knees and heels touching,
- Wrap the Roll for Control® band around your thighs as you squeeze your thighs firmly together.

Step one

- Roll your knees out pushing against the band for a count of five. Then rest for a count of five. When you push against the band your knees will separate 5-6 inches. Breathe naturally as you perform this exercise. Do not hold your breath. Repeat 5-10 times.

Step two

- Once that exercise is easy to do, rotate your toes and forefeet out as you roll your thighs out against the band. Your knees should follow your toes as they roll outward. Hold for a count of five, then rest for a count of five. Repeat 5-10 times.



Roll-Out Resisted Exercise

Standing Knee Bends (Plié) Exercise

Position

- Stand with your feet approximately hip width apart & your toes point outward.

Step one

- Bend your knees 3-4 inches and let your knees roll out slightly for a slow count of five as you inhale.

Step two

- Return slowly to the upright position, straightening your knees and letting your knees roll in for a slow count of five as you exhale.

Step three

- Relax and breathe naturally in standing for a count of ten. Then repeat the exercise 5-10 times.



Standing Knee Bends

Wonder W'edge® Inversion

Position

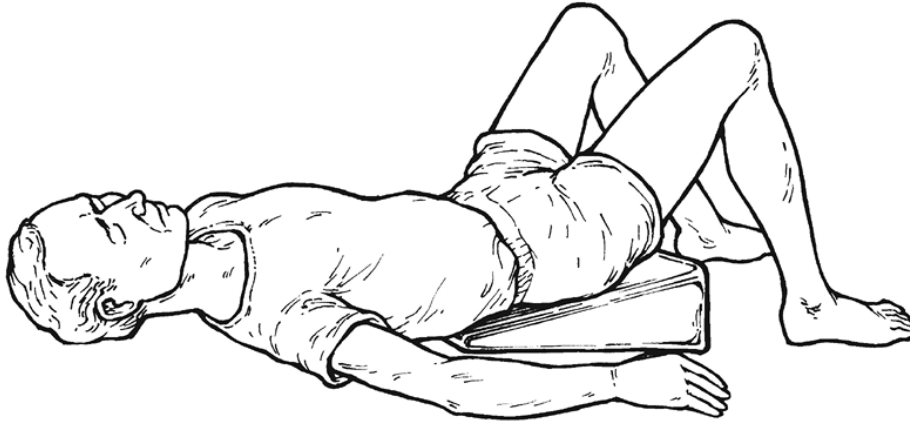
- Place the wedge on the floor or on your bed. Sit next to it and lift your hips onto the high end of the wedge while your shoulders and head are off the wedge. Find a comfortable position with your hips as high on the wedge as possible. Your feet can be resting flat on the floor or on the wall.

Step one

- Practice breathing exercises on the wedge
1-2 x/day.

Step two

- Practice Roll for Control® exercises on the wedge 1-2 x/day.



Wonder W'edge® Inversion

Prostate Cancer and Radical Prostatectomy

Prostate Cancer and Radical Prostatectomy Surgery can result in bladder, bowel and sexual dysfunction. Since tissue is damaged with surgery, radiation or cancer there is the potential for improvement but not always total recovery. Recovery may take longer when more nerve and muscle tissue has been damaged. You may see improvement in as little as 2-3 weeks or as long as 12 months. The oncologist or surgeon will direct when these activities may be started. A suggested exercise progression is described below based on experience with many men in our clinical practice. Cycle One can be started while the catheter is still in after surgery. Cycle Two can be added when recovery has progressed. Cycles Three and Four are designed for men who have improved in function and energy.

Exercise Progression

There are four cycles of exercise progressing from easiest to most vigorous. Men who have had recent surgery or are undergoing radiation and experience fatigue and weakness should begin with Cycle One Exercises. Then progress through the cycles as energy and strength permits. It may be necessary to return to a previous cycle if you feel fatigued or weak on any given day or week. For men with more energy and strength you can start with Cycle Three Exercises and progress to Cycle Four exercises. Check with your physician for acceptable levels of exercise and permission to start exercising.

Prostate Cancer Self-Care Program

Cycle One Exercises

Every 2-4 hours:

Bladder & Bowel Control Exercises

- a. Restore Your Body Breath- practice diaphragmatic breathing 3-4 x/day for 6-7 breaths.
- b. Restore Your Q-Core Control - practice Q-Core exercises 3-4 x/day for 30-60 seconds.
- c. Restore Your Body Balance- practice nightly with the PQ CD.
- d. Active Roll In and Roll Out exercises reclining position.



Active Roll-In and Roll-Out Exercise

Pelvic Muscle Control Exercises

Roll-In and Roll-Out Active Exercise

Position

- Recline with your feet hip width apart.

Step one

- Keep your heels stuck on the ground as you windshield wiper your feet in and out.
- Pivot on your heels to move your forefoot and toes out and in.
- Repeat 5-10 times.

Step two

- Next roll your knees in and out following your feet as you do the heel pivots.
- As your feet rotate out your knees roll out. As your feet rotate in your knees roll in.
- Repeat 5-10 times.

Step three

- Next inhale and exhale in relation to your heel pivots.
- Inhale as your feet and knees rotate out.

- Exhale as your feet and knees rotate in.
- Repeat 5-10 times.

Cycle Two Exercises add:

Pelvic Muscle Control Exercises:

Roll-In and Roll-Out Active Exercises (standing)

Standing Knee Bends (Plié) Exercise

Position

- Stand with your feet approximately hip width apart & your toes point outward.

Step one

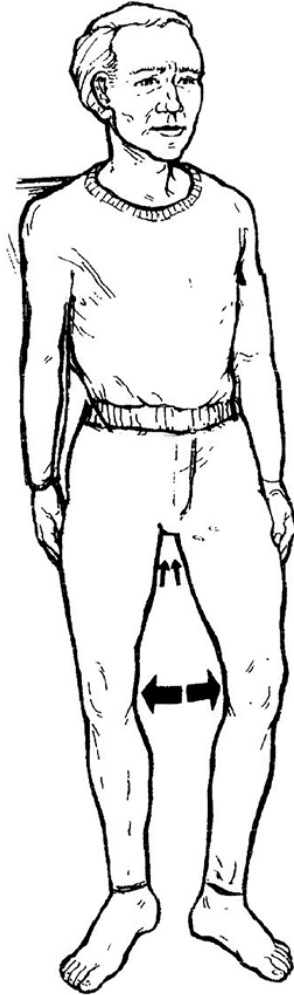
- Bend your knees 3-4 inches and let your knees roll out slightly for a slow count of five as you inhale.

Step two

- Return slowly to the upright position, straightening your knees and letting your knees roll in for a slow count of five as you exhale.

Step three

- Relax and breathe naturally in standing for a count of ten. Then repeat the exercise 5-10 times.



Standing Knee Bends (plié)

Walking short to longer distances

- Walk around the rooms in your house, then progress to the yard.

Cycle Three Exercises Add:

Pelvic Muscle Control Exercises:

Roll-In and Roll-Out Resisted Exercises (sitting)

Roll-In Resisted Exercise

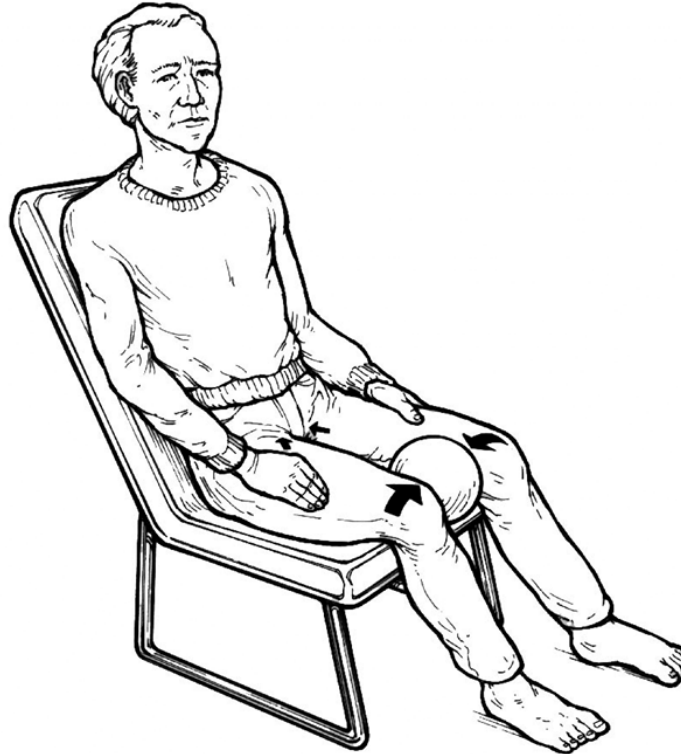
Position

- Place the Roll for Control[®] ball between your thighs above your knees.

Step one

- Roll your knees in on the Roll for Control[®] ball squeezing it between your thighs. Squeeze the ball for a count of five. Then rest for a

count of five. When you squeeze the ball correctly it should compress to flatten on the sides. Breathe naturally as you perform this exercise. Do not hold your breath. Repeat 5-10 times.



Roll-In Resisted Exercise

Roll-Out Resisted Exercise

Position

- Begin with your legs together, knees and heels touching.
- Wrap the Roll for Control[®] band around your thighs as you squeeze your thighs firmly together.

Step one

- Roll your knees out pushing against the band for a count of five. Then rest for a count of five. When you push against the band your knees will separate 5-6 inches. Breathe naturally as you perform this exercise. Do not hold your breath. Repeat 5-10 times.

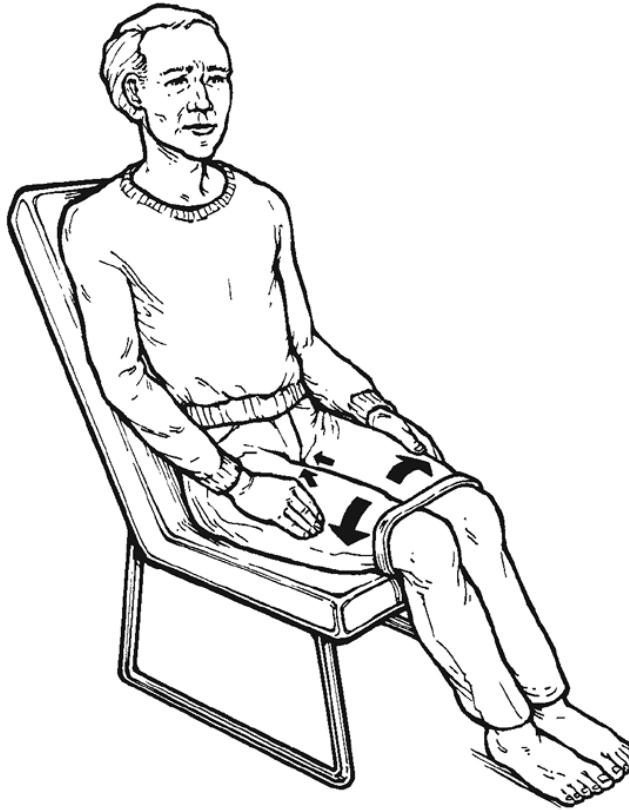
Step two

- Once that exercise is easy to do, rotate your toes and forefeet out as you roll your thighs out against the band. Your knees should follow your toes as they roll outward. Hold for a count of five, then rest for

a count of five. Repeat 5-10 times.

Walk longer distances

Walk 5-15 minutes 3-4 times a day initially then gradually increase the time until you are able to walk 60-90 minutes.



Roll-Out Resisted Exercise

Cycle Four Exercises add:

Aerobic Exercise

Stationary bike, pool exercises, hiking, etc.

It is important to remember that 'slow and steady wins the race'. Always do a little, even just once a day.

Chronic Pelvic Pain

Chronic Pelvic Pain includes secondary bladder, bowel and sexual dysfunction as well as the primary pain symptoms. Constipation is a frequent problem due to inactivity and medications. Bladder urgency and frequency are secondary symptoms of increased muscle tone and irritability.

Increased pain with erection can cause sexual dysfunction.

The Beyond Kegels® Protocol can be beneficial for men with Chronic Pelvic Pain. Lifestyle Changes with an emphasis on nutrition and sleep is the first step. Add Bladder Control Exercises and the Constipation Protocol within the first week. Walking can be added to Lifestyle Changes after the first week.

On the second week add Roll for Control® Exercises. Begin with active exercises rather than resistive exercises. Keep the repetitions low- 3-5 repetitions 3 times a day. Be sure rest time is equal to work time with each exercise. When the pain is significantly reduced gradually increase the number of repetitions until you are completing 10 repetitions 3 times a day without increased pain.

As part of the Roll for Control® Exercises and the Constipation Protocol include a trial on the Wonder W'edge®. It can be very helpful in pain reduction as it improves nerve transmission, muscle alignment and circulation of blood and lymph from the pelvic region to the heart.

Chronic Pelvic Pain Self-Care Program

Life Style Change- Sleep, Nutrition, Exercise

- a. Sleep 8-9 hours/night on a regular schedule.
- b. Drink 6-8 eight ounce glasses of non-caffeinated fluid /day. Spread the fluid intake throughout the day.
- c. Eliminate caffeine and alcohol: coffee, tea, cola, chocolate, alcohol.
- d. Change food choices depending on bowel patterns.
- e. Walk 30-60 minutes a day.

Wonder W'edge® Inversion

Position

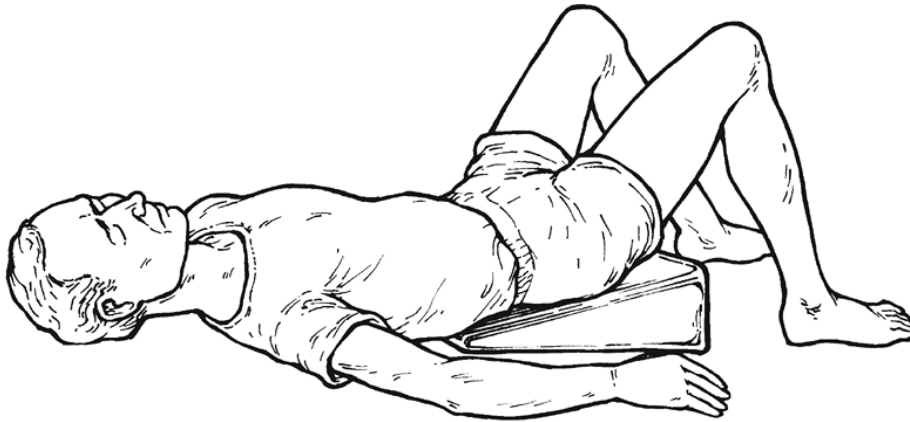
- Place the wedge on the floor or on your bed. Sit next to it and lift your hips onto the high end of the wedge while your shoulders and head are off the wedge. Find a comfortable position with your hips as high on the wedge as possible. Your feet can be resting flat on the floor or on the wall.

Step one

- Practice breathing exercises on the wedge 1-2 x/day.

Step two

- Practice Roll for Control® exercises on the wedge 1-2 x/day.



Wonder W'edge Inversion

Bladder & Bowel Control Exercises

- a. Restore Your Body Breath- practice diaphragmatic breathing 3-4 x/day for 6-7 breaths.
- b. Restore Your Body Q-Core Control - practice Q-Core exercises 3-4 x/day for 30-60 seconds.
- c. Restore Your Body Balance- practice nightly with the PQ CD.

Pelvic Muscle Control Exercises

Roll for Control® Exercises- Begin with Roll-In and Roll-Out Active Exercises 3-5 repetitions.

Progress to Roll-In and Roll-Out Resistive Exercises when the pain has decreased significantly.

Roll-In and Roll-Out Active Exercise

Position

- Recline or use the Wonder W'edge® with your feet hip width apart.

Step one

- Keep your heels stuck on the ground as you windshield wiper your feet in and out.
- Pivot on your heels to move your forefoot and toes out and in for 3-5 repetitions.

Step two

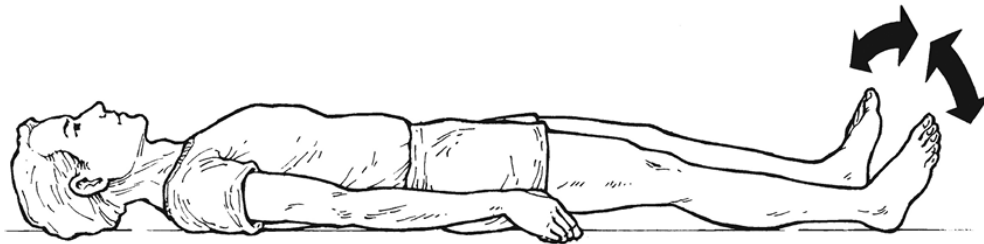
- Next roll your knees in and out following your feet as you do the heel

pivots.

As your feet rotate out your knees roll out. As your feet rotate in your knees roll in for 3-5 repetitions.

Step three

- Next inhale and exhale in relation to your heel pivots.
- Inhale as your feet and knees rotate out.
- Exhale as your feet and knees rotate in.
- Repeat 3-5 times.



Roll-In and Roll-Out Exercise

Standing Knee Bends (Plié) Exercise

Position

- Stand with your feet approximately hip width apart & your toes point outward.

Step one

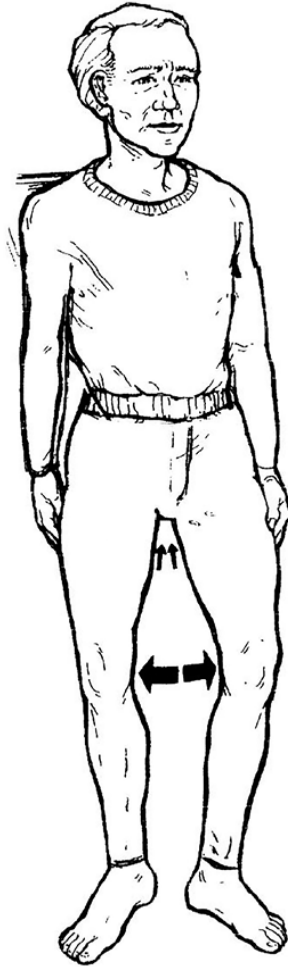
- Bend your knees 3-4 inches and let your knees roll out slightly for a slow count of five as you inhale.

Step two

- Return slowly to the upright position, straightening your knees and letting your knees roll in for a slow count of five as you exhale.

Step three

- Relax and breathe naturally in standing for a count of ten. Then repeat the exercise 5-10 times.



Standing Knee Bends (Plié)

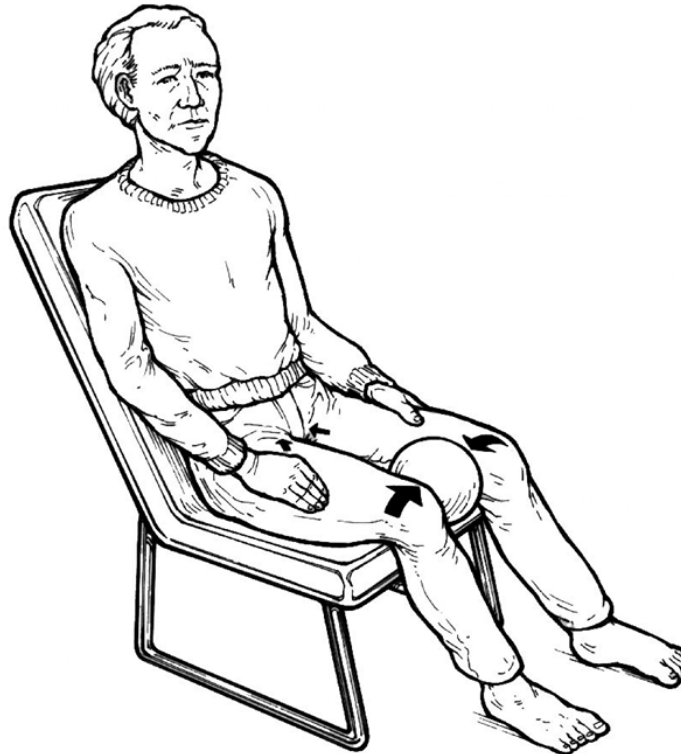
Roll-In Resisted Exercise (begin when the pain has decreased significantly)

Position

- Place the Roll for Control[®] ball between your thighs above your knees.

Step one

- Roll your knees in on the Roll for Control[®] ball squeezing it between your thighs. Squeeze the ball for a count of five. Then rest for a count of five. When you squeeze the ball correctly it should compress to flatten on the sides. Breathe naturally as you perform this exercise. Do not hold your breath.
- Repeat 5-10 times.



Roll-In Resisted Exercise

Roll-Out Resisted Exercise (begin when the pain has decreased significantly)

Position

- Begin with your legs together, knees and heels touching.
- Wrap the Roll for Control® band around your thighs as you squeeze your thighs firmly together.

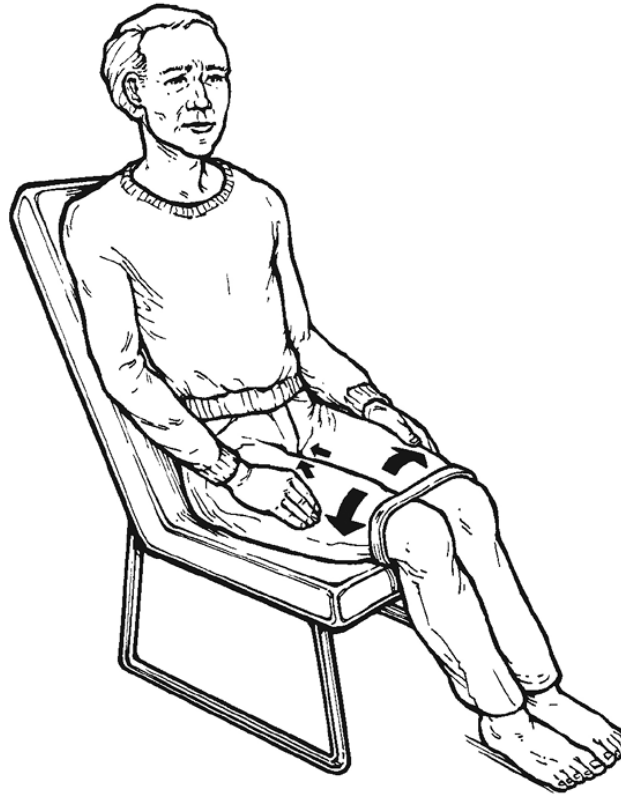
Step one

- Roll your knees out pushing against the band for a count of five. Then rest for a count of five. When you push against the band your knees will separate 5-6 inches. Breathe naturally as you perform this exercise. Do not hold your breath.
- Repeat 5-10 times.

Step two

- Once that exercise is easy to do, rotate your toes and forefeet out as you roll your thighs out against the band. Keep the heels touching. Your knees should follow your toes as they roll outward. Hold for a count of five, then rest for a count of five.

- Repeat 5-10 times.



Roll-Out Resisted Exercise

Walk- 30-60 minutes a day

Step one

- Begin walking around in your home
2-3 x/day.

Step two

- Progress to your yard, then around the block.

Step three

- Increase the time walked gradually-
3-5 minutes a week.
- There should not be an increase in pain during or after walking.

Erectile Dysfunction (ED)

Erectile Dysfunction, the inability to achieve or maintain an erection, is often related to circulation and muscle function within the pelvis and urogenital structures. The Beyond Kegels® Protocol is able to help

40%-50% of men with ED.

Lifestyle changes are important for improving ED. Smoking, consuming alcohol, and obesity are all primary conditions that lead to erectile dysfunction. Eliminating alcohol and tobacco use and managing weight can have a significant affect on ED.

Physiological Quieting[®] Exercises improve circulation to the pelvic muscles and urogenital organs. The exercises also optimize pelvic and penis muscle function at an automatic, unconscious level. Practice these exercises at least once a day for 5-20 minutes. Using the Physiological Quieting[®] CD or digital download at bedtime is recommended.

Roll for Control[®] Exercises can be effective in improving circulation to the penile structures and maintaining an erection once there is blood pumped into the erection chambers. Heel Clicks and Toe Clicks are the primary exercises to use during sexual foreplay. These exercises use the 'pumper' muscles of the urogenital diaphragm to bring blood into the chambers and close the valves to maintain the erection. Roll In and Roll Out Exercises are also beneficial to practice 2-3 times a day along with the Heel Clicks and Toe Clicks.

Erectile Dysfunction Self-Care Program

Life Style Change- Sleep, Nutrition, Exercise

- a. Sleep 8-9 hours/night on a regular schedule.
- b. Drink 6-8 eight ounce glasses of non-caffeinated fluid /day. Spread the fluid intake throughout the day.
- c. Eliminate caffeine and alcohol: coffee, tea, cola, chocolate, alcohol as well as tobacco.
- d. Change food choices depending on bowel patterns. See Bowel Program.
- e. Walk 30-60 minutes a day.

Wonder W'edge[®] Inversion

Position

- Place the wedge on the floor or on your bed. Sit next to it and lift your hips onto the high end of the wedge while your shoulders and head are off the wedge. Find a comfortable position with your hips as high on the wedge as possible. Your feet can be resting flat on the

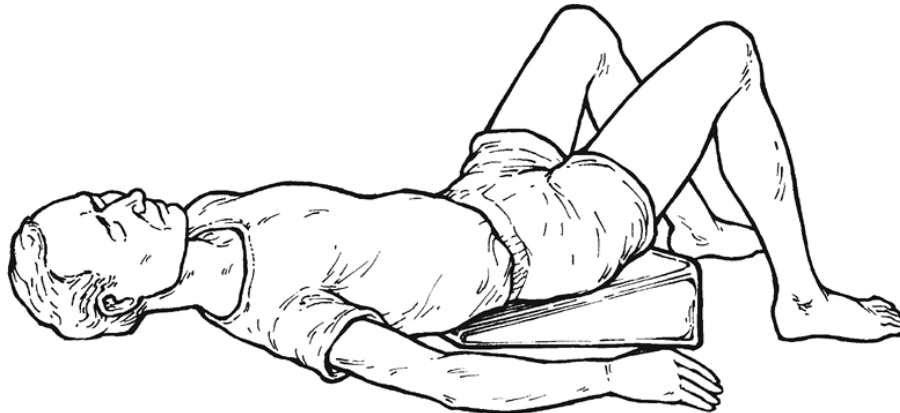
floor or on the wall.

Step one

- Practice breathing exercises on the wedge
1-2 x/day.

Step two

- Practice Roll for Control® exercises on the wedge 1-2 x/day



Wonder W'edge® Inversion

Erectile Control Exercises

- a. Restore Your Body Breath- practice diaphragmatic breathing 3-4 x/day for 6-7 breaths.
- b. Restore Your Body Q-Core Control - practice Q-Core exercises 3-4 x/day for 30-60 seconds.
- c. Restore Your Body Balance- practice nightly with the PQ CD or digital download.

Pelvic Muscle Control Exercises

Roll for Control® Exercises- Begin with Heel Click and Toe Click exercises.

Resisted Roll-In and Roll-Out exercises are also helpful.

Heel Click and Toe Click Exercises

Position

- Heel Click and Toe Click Exercises can be done lying down or in sitting. After surgery or if pain is an issue begin in the reclined position.

Heel Click Exercise

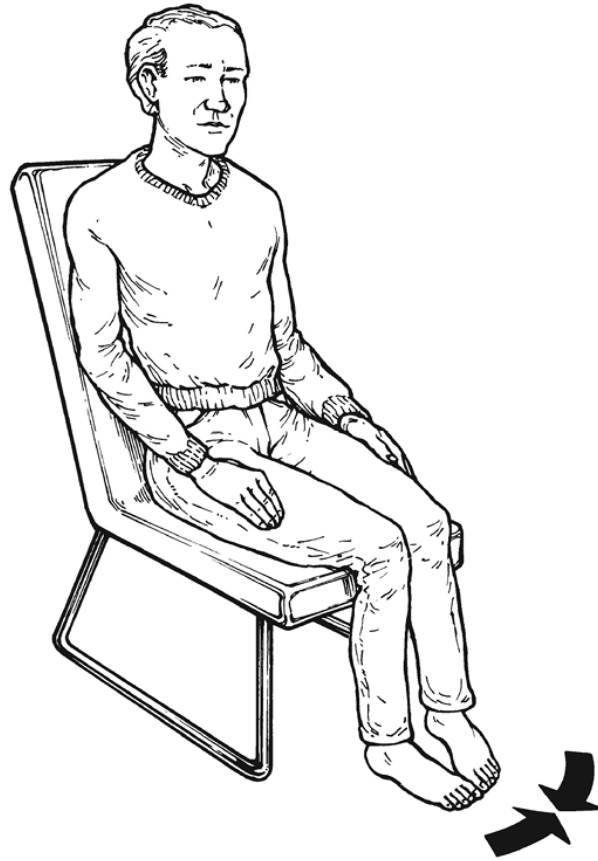
- Pivot on your forefeet and toes and squeeze your heels together for a count of two. Then return to the neutral position and rest for a count of two. Repeat this 5-10 times twice daily and just prior to sexual activity.



Heel Click Exercise

Toe Click Exercise

- Pivot on your heels and squeeze your toes together for a count of two. Then return to the neutral position and rest for a count of two. Repeat this 5-10 times twice daily and just prior to sexual activity.



Toe Click Exercise

Roll-In and Roll-Out Active Exercise

Position

- Recline or on the Wonder W'edge[®] with your feet hip width apart.

Step one

- Keep your heels stuck on the ground as you windshield wiper your feet in and out.
- Pivot on your heels to move your forefoot and toes out and in for 3-5 repetitions.

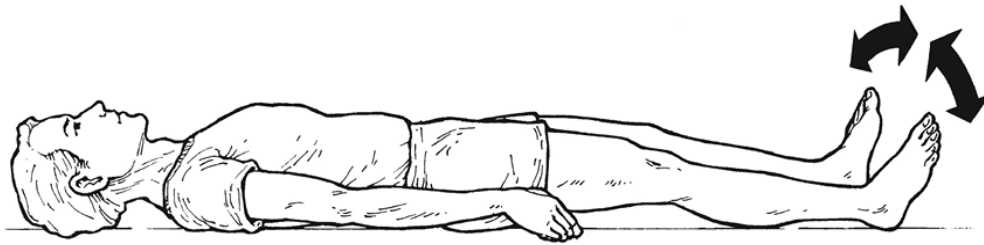
Step two

- Next roll your knees in and out following your feet as you do the heel pivots.
- As your feet rotate out your knees roll out. As your feet rotate in your knees roll in for 3-5 repetitions.

Step three

- Next inhale and exhale in relation to your heel pivots.

- Inhale as your feet and knees rotate out.
- Exhale as your feet and knees rotate in. Repeat 3-5 times.



Roll-In and Roll-Out Active Exercise

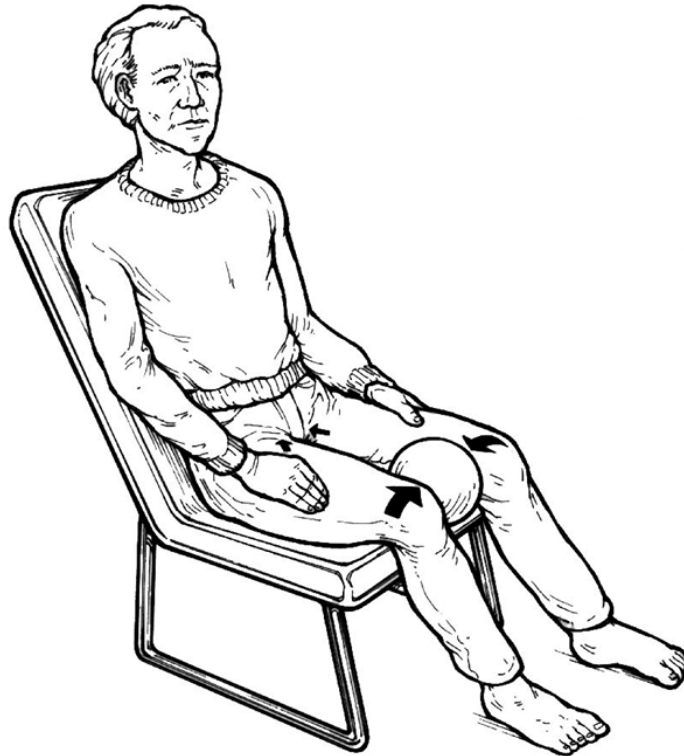
Roll-In Resisted Exercise

Position

- Place the Roll for Control[®] ball between your thighs above your knees.

Step one

- Roll your knees in on the Roll for Control[®] ball squeezing it between your thighs. Squeeze the ball for a count of five. Then rest for a count of five. When you squeeze the ball correctly it should compress to flatten on the sides. Breathe naturally as you perform this exercise. Do not hold your breath. Repeat 5-10 times.



Roll-In Resisted Exercise

Roll-Out Resisted Exercise

Position

- Begin with your legs together, knees and heels touching, Wrap the Roll for Control[®] band around your thighs as you squeeze your thighs firmly together.

Step one

- Roll your knees out pushing against the band for a count of five. Then rest for a count of five. When you push against the band your knees will separate 5-6 inches. Breathe naturally as you perform this exercise. Do not hold your breath. Repeat 5-10 times.

Step two

- Once that exercise is easy to do, rotate your toes and forefeet out as you roll your thighs out against the band. Your knees should follow your toes as they roll outward. Hold for a count of five, then rest for a count of five. Repeat 5-10 times.



Roll-Out Resisted Exercise

Standing Knee Bends (Plié) Exercise

Position

- Stand with your feet approximately hip width apart & your toes point outward.

Step one

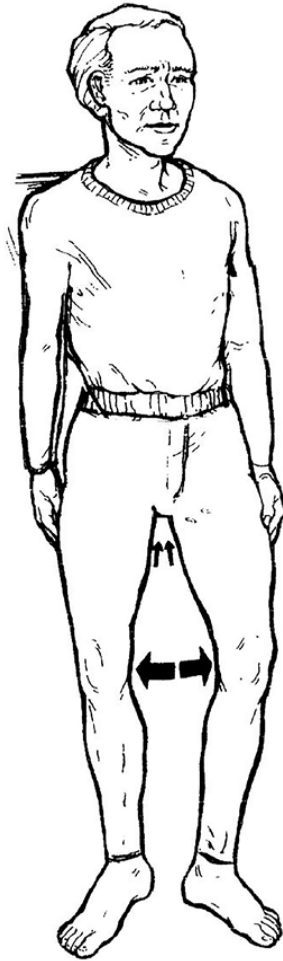
- Bend your knees 3-4 inches and let your knees roll out slightly for a slow count of five as you inhale.

Step two

- Return slowly to the upright position, straightening your knees and letting your knees roll in for a slow count of five as you exhale.

Step three

- Relax and breathe naturally in standing for a count of ten. Then repeat the exercise 5-10 times.



Standing Knee Bends (plié)

Bowel Dysfunction

Men over 50 years old experience changes in bowel function secondary to aging, illness and infections. The two most common complaints are constipation and diarrhea. Beyond Kegels[®] Protocol can be effective in improving bowel function for men of all ages.

Constipation Protocol

Lifestyle Changes: Lifestyle changes are very important with constipation. Adding foods that move through the intestines more quickly and reducing slow moving foods is a major emphasis in this protocol. Fast moving fiber foods include fresh pear, peach, plum, rhubarb, orange, grapefruit, melon, and berries. Fast moving fiber vegetables include fresh spinach, kale, broccoli and cooked beans of any type. Avoid white rice,

pasta and breads.

Adequate and appropriate fluids are also important to alleviate constipation. Six to eight glasses of non-caffeinated fluid consumed throughout the day is recommended. Minimize alcohol and soda.

Walking is another lifestyle change that is essential for normal bowel function. Walking stimulates normal function of the bowel and pelvic muscles. It stimulates movement of the food through the digestive system. Walking a minimum of 30 minutes a day will improve bowel function significantly.

Bowel Control Exercises: Physiological Quieting® Exercises improve bowel function and help food digest completely and transfer through the intestines efficiently. Practice Breath Control Exercise and Q-Core Control Exercise during the day and listen to the Physiological Quieting® CD or digital download at night.

Pelvic Muscle Control Exercises: Roll for Control® Exercises improve function of the sphincter muscles so a bowel movement can exit the body more easily. These same exercises stimulate the lower anal and rectal muscles to move a bowel movement through the system effectively.

Practice Roll In and Roll Out Exercises using resistance as long as there is not pain. Standing Plié Exercise can be started at the same time.

Wonder W'edge®: Wonder W'edge® Inversion is an important and effective tool to reduce constipation. Inversion helps to align the lower bowel and stimulate its action. Begin the day using the Wonder W'edge® while doing the Roll for Control® Exercises. Just before or after using the wedge drink 2 cups of warm water. This stimulates an automatic action of the lower bowel through the gastrocolic reflex.

Diarrhea Protocol

Lifestyle Changes: Lifestyle changes are important with diarrhea problems. It is important to add foods that move through the intestines more slowly. These include fruits like bananas and apples or applesauce and vegetables that grow underground like carrots and white potatoes. White rice and pasta are also helpful. Eliminate foods that move through the intestines quickly. They are listed under the constipation protocol.

Bowel Control Exercises: Physiological Quieting® Exercises improve

bowel function and help food digest completely and transfer through the intestines effectively. The goal is to have enough time for water to be absorbed into your body before the digested food arrives at the rectum. Practice Breath Control and Q-Core Control Exercises during the day and use the Physiological Quieting® CD or digital download at bedtime.

Pelvic Muscle Control Exercises: Roll for Control® Exercises improve function of the sphincter muscles and the lower colon function so bowel movements spend enough time for water to absorb before they need to be eliminated. Roll In and Roll Out Exercises, resisted, can be beneficial.

Sometimes diarrhea or constipation is caused by sensitivity to a certain food. Milk and wheat are two foods that can cause these symptoms. To test remove that product from your diet for 10 days and see if there is a change in bowel habits.

Bowel Self-Care Program: Constipation

Lifestyle Changes

Sleep

- 8-9 hours a night and a regular schedule.

Nutrition

Fluids

- 6-8 eight ounce glasses of non-caffeinated fluid daily spread throughout the day.

Avoid caffeine and alcohol.

Food

- Add foods that move through the intestines quickly:
- Fresh/Frozen Fruits: pear, peach, plum, rhubarb, orange, grapefruit, melon, berries
- Fresh/Frozen Vegetables: spinach, kale, broccoli, beans.
- Eliminate foods that move through the intestines slowly: White pasta, rice, potatoes, cheese.

Bladder & Bowel Control Exercises

- a. Restore Your Body Breath- practice diaphragmatic breathing 3-4 x/day for 6-7 breaths.
- b. Restore Your Body Q-Core Control - practice Q-Core exercises 3-4 x/day for 30-60 seconds.

c. Restore Your Body Balance- practice nightly using the PQ CD

Wonder W'edge® Inversion

Position

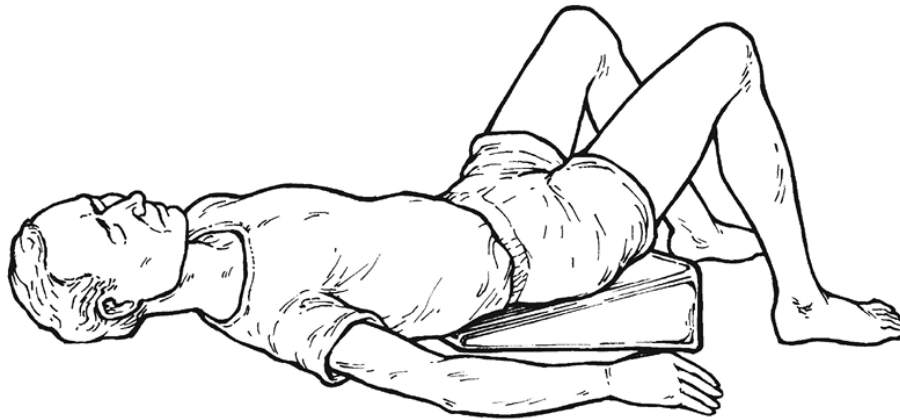
- Place the wedge on the floor or on your bed. Sit next to it and lift your hips onto the high end of the wedge while your shoulders and head are off the wedge. Find a comfortable position with your hips as high on the wedge as possible. Your feet can be resting flat on the floor or on the wall.

Step one

- Practice breathing exercises on the wedge 1-2 x/day.

Step two

- Practice Roll for Control® exercises on the wedge 1-2 x/day.



Wonder W'edge® Inversion

Pelvic Muscle Control Exercises

Roll for Control® Exercises-

Week one-active exercises 2-3 x/day 5-10 repetitions

Week two-resistive exercises 2-3 x/day 5-10 repetitions

Week three-resistive exercises 2-3 x/day 10 repetitions

Roll In and Roll Out Active Exercise

Position

- Sit or recline with your feet hip width apart.

Step one

- Keep your heels stuck on the ground as you windshield wiper your feet in and out.

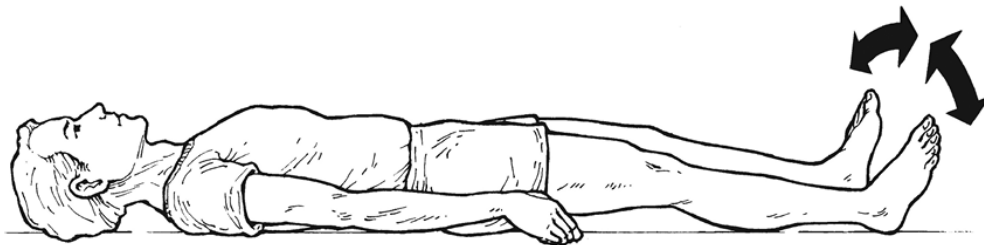
- Pivot on your heels to move your forefoot and toes out and in for 5-10 repetitions.

Step two

- Next roll your knees in and out following your feet as you do the heel pivots.
- As your feet rotate out your knees roll out. As your feet rotate in your knees roll in.
- Repeat 5-10 times.

Step three

- Next inhale and exhale in relation to your heel pivots.
- Inhale as your feet and knees rotate out.
- Exhale as your feet and knees rotate in.
- Repeat 5-10 times.



Roll-In and Roll Out Exercise

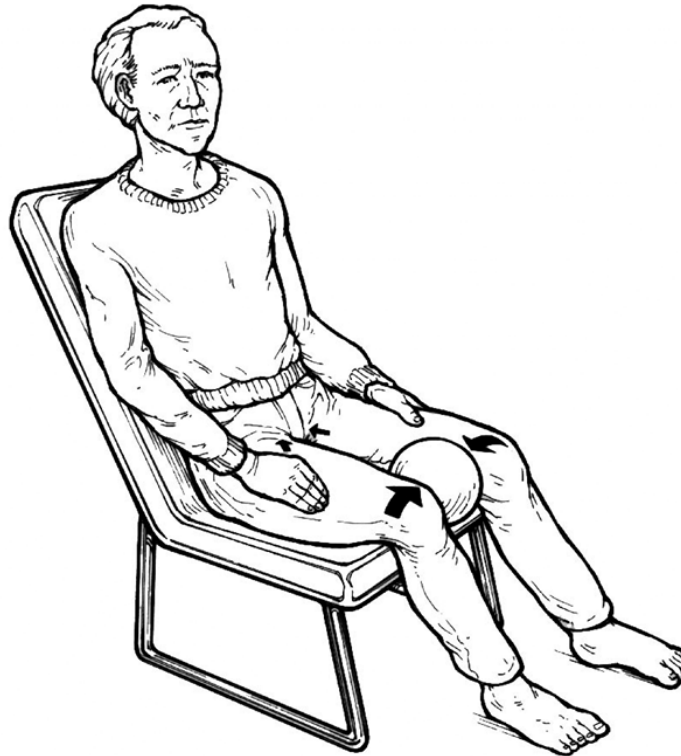
Roll-In Resisted Exercise

Position

- Place the Roll for Control® ball between your thighs above your knees.

Step one

- Roll your knees in on the Roll for Control® ball squeezing it between your thighs. Squeeze the ball for a count of five. Then rest for a count of five. When you squeeze the ball correctly it should compress to flatten on the sides. Breathe naturally as you perform this exercise. Do not hold your breath.
- Repeat 5-10 times.



Roll-In Resisted Exercise

Roll-Out Resisted Exercise

Position

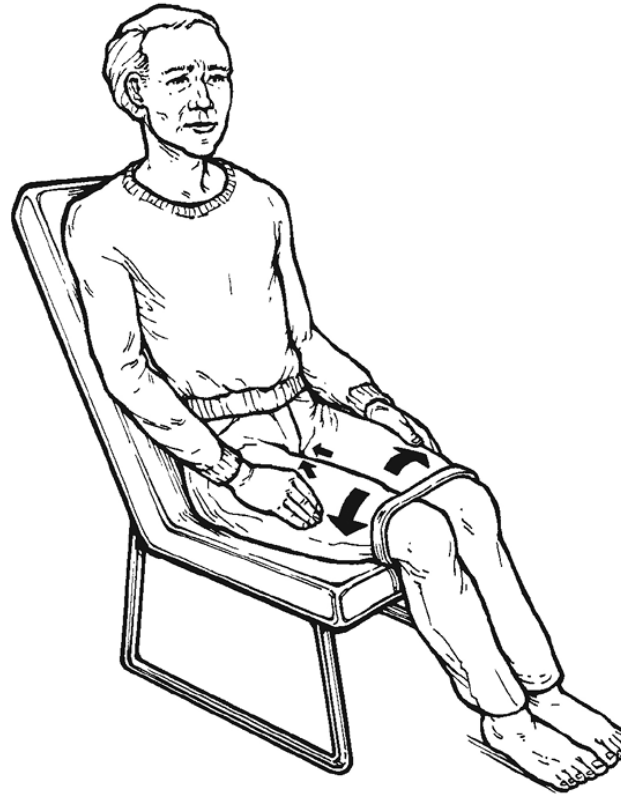
- Begin with your legs together, knees and heels touching,
- Wrap the Roll for Control® band around your thighs as you squeeze your thighs firmly together.

Step one

- Roll your knees out pushing against the band for a count of five. Then rest for a count of five. When you push against the band your knees will separate 5-6 inches. Breathe naturally as you perform this exercise. Do not hold your breath.
- Repeat 5-10 times.

Step two

- Once that exercise is easy to do, rotate your toes and forefeet out as you roll your thighs out against the band. Your knees should follow your toes as they roll outward and heels stay touching. Hold for a count of five, then rest for a count of five. Repeat 5-10 times.



Roll-Out Resisted Exercise

Standing Knee Bends (Plié) Exercise

Position

- Stand with your feet approximately hip width apart & your toes point outward.

Step one

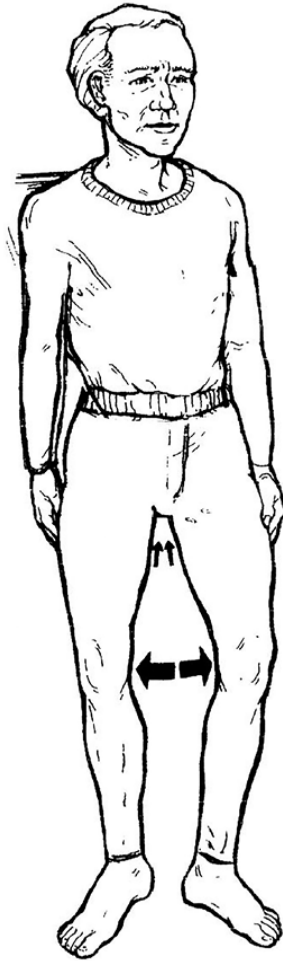
- Bend your knees 3-4 inches and let your knees roll out slightly for a slow count of five as you inhale.

Step two

- Return slowly to the upright position, straightening your knees and letting your knees roll in for a slow count of five as you exhale.

Step three

- Relax and breathe naturally in standing for a count of ten. Then repeat the exercise 5-10 times.



Standing Knee Bends (plié)

Bowel Self-Care Program: Diarrhea

Lifestyle Changes

Sleep

- 8-9 hours a night and a regular schedule.

Nutrition

Fluids

- 4-6 eight ounce glasses of non-caffeinated fluid daily spread throughout the day.

Avoid caffeine and alcohol.

Food

- Add foods that move through the intestines slowly:
 - White pasta, rice, potatoes, cheese.

- Eliminate foods that move through the intestines quickly:
 - Fresh/Frozen Fruits: pear, peach, plum, rhubarb, orange, grapefruit, melon, berries.
 - Fresh/Frozen Vegetables: spinach, kale, broccoli, beans.

Bladder & Bowel Control Exercises

- Restore Your Body Breath- practice diaphragmatic breathing 3-4 x/day for 6-7 breaths.
- Restore Your Body Q-Core Control - practice Q-Core exercises 3-4 x/day for 30-60 seconds.
- Restore Your Body Balance- practice nightly using the PQ CD or digital download.

Wonder W'edge® Inversion

Position

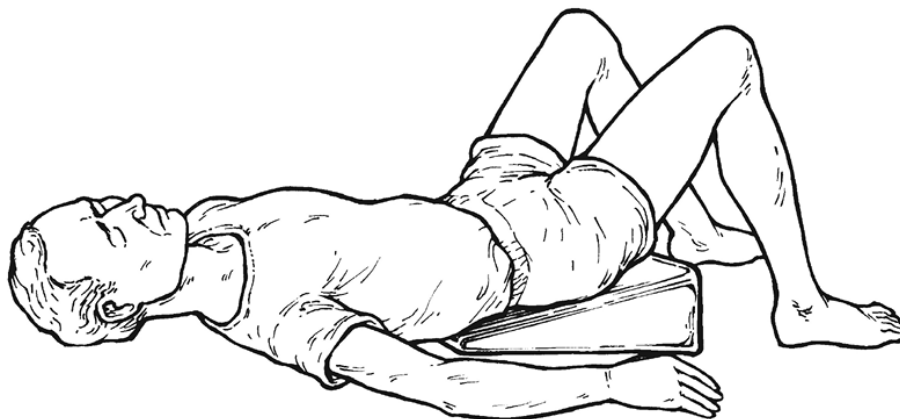
- Place the wedge on the floor or on your bed. Sit next to it and lift your hips onto the high end of the wedge while your shoulders and head are off the wedge. Find a comfortable position with your hips as high on the wedge as possible. Your feet can be resting flat on the floor or on the wall.

Step one

- Practice breathing exercises on the wedge 1-2 x/day.

Step two

- Practice Roll for Control® exercises on the wedge 1-2 x/day.



Wonder W'edge® Inversion

Pelvic Muscle Control Exercises

Roll for Control® Exercises-

Week one-active exercises 2-3 x/day 5-10 repetitions.

Week two-resistive exercises 2-3 x/day 5-10 repetitions.

Week three-resistive exercises 2-3 x/day 10 repetitions.

Roll In and Roll Out Active Exercise

Position

- Sit or recline with your feet hip width apart.

Step one

- Keep your heels stuck on the ground as you windshield wiper your feet in and out.

Pivot on your heels to move your forefoot and toes out and in for 5-10 repetitions.

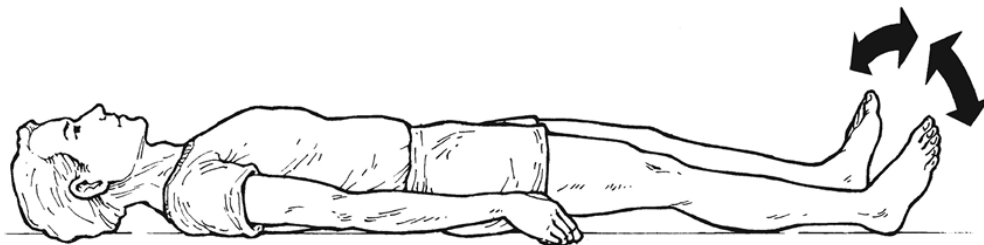
Step two

- Next roll your knees in and out following your feet as you do the heel pivots.

As your feet rotate out your knees roll out. As your feet rotate in your knees roll in for 5-10 repetitions.

Step three

- Next inhale and exhale in relation to your heel pivots.
- Inhale as your feet and knees rotate out.
- Exhale as your feet and knees rotate in.
- Repeat 5-10 times.



Roll-In and Roll-Out Active Exercise

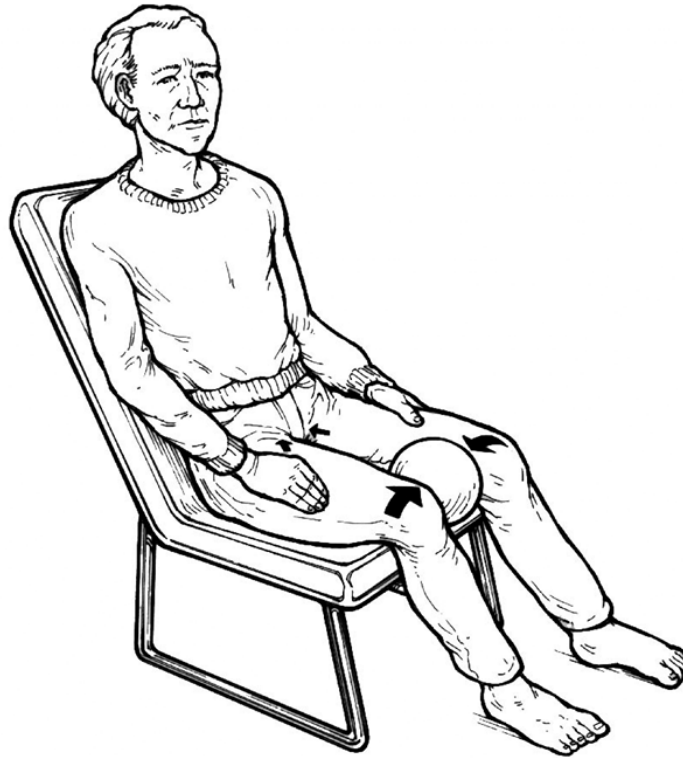
Roll-In Resisted Exercise

Position

- Place the Roll for Control® ball between your thighs above your knees.

Step one

- Roll your knees in on the Roll for Control® ball squeezing it between your thighs. Squeeze the ball for a count of five. Then rest for a count of five. When you squeeze the ball correctly it should compress to flatten on the sides. Breathe naturally as you perform this exercise. Do not hold your breath. Repeat 5-10 times.



Roll-In Resisted Exercise

Roll-Out Resisted Exercise

Position

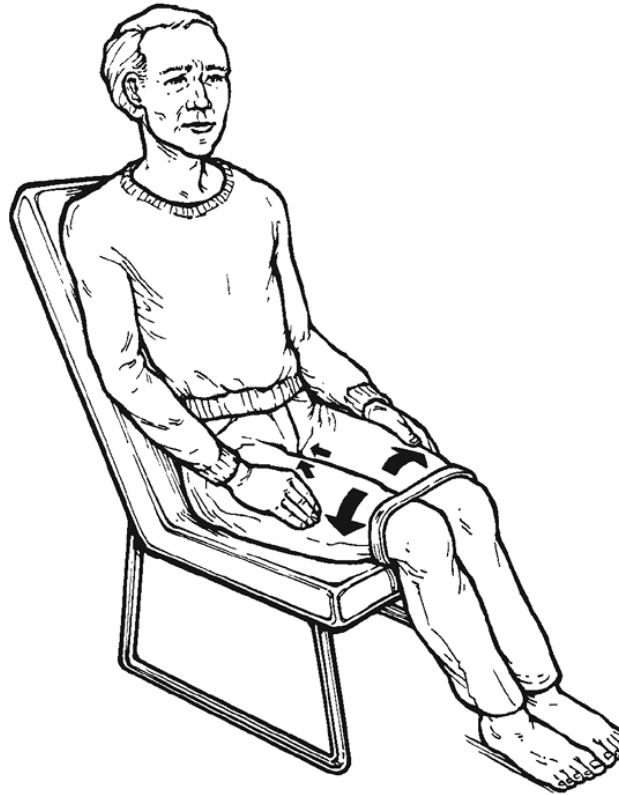
- Begin with your legs together, knees and heels touching, Wrap the Roll for Control® band around your thighs as you squeeze your thighs firmly together.

Step one

- Roll your knees out pushing against the band for a count of five. Then rest for a count of five. When you push against the band your knees will separate 5-6 inches and your heels will remain touching. Breathe naturally as you perform this exercise. Do not hold your breath. Repeat 5-10 times.

Step two

- Once that exercise is easy to do, rotate your toes and forefeet out as you roll your thighs out against the band. Your knees should follow your toes as they roll outward. Hold for a count of five, then rest for a count of five. Repeat 5-10 times.



Roll-Out Resisted Exercise

Standing Knee Bends (Plié) Exercise

Position

- Stand with your feet approximately hip width apart & your toes point outward.

Step one

- Bend your knees 3-4 inches and let your knees roll out slightly for a slow count of five as you inhale.

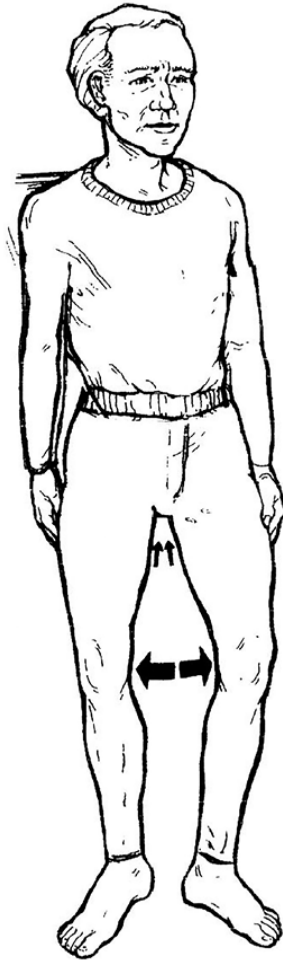
Step two

- Return slowly to the upright position, straightening your knees and letting your knees roll in for a slow count of five as you exhale.

Step three

- Relax and breathe naturally in standing for a count of ten. Then

repeat the exercise 5-10 times.



Standing Knee Bends (plié)

Glossary of Terms

Androgens: male steroid hormones, one is testosterone

Antibiotics: drugs that kill bacteria

Benign: not cancerous

Benign prostate hyperplasia: BPH , non-cancerous enlargement of the prostate gland

Brachytherapy: implantation of radioactive seeds into the prostate gland to kill cancer

BUN test: blood-urea-nitrogen test, blood test to check for kidney function

Capsule of the prostate: outer wall of the prostate

Catheter: tube inserted into the bladder through the penis/urethra to remove urine

Chronic prostatitis: long term pain syndrome of unknown origin

Corpora cavernosa: two chambers in the penis that become engorged with blood during erection

Corpus spongiosum: one chamber in the penis that becomes engorged with blood during erection

Cryotherapy: cryoablation, extremely cold liquid nitrogen used to freeze prostate to kill cancer cells when they rupture as they thaw

Cystometry: test in urodynamic testing that measures bladder pressure and function by filling the bladder with water using a catheter and monitoring the bladder response

Deep venous thrombosis: DVT, blood clots formed in the deep veins of the legs with the potential of breaking free and traveling to the lungs.

DHT: dihydrotestosterone, the active form of male hormone in the prostate

Digital rectal exam: physical examination of the prostate gland through the rectum to determine size and changes in shape for indications of cancer

Diuretics: medications that alter sodium absorption by the body and cause increased urine output in a short time period

Edema: swelling caused by fluid retention

Ejaculation: ejection of semen during sexual intercourse

Epididymis: structure where sperm is stored until ejaculation

Erectile dysfunction: ED, the inability to obtain or maintain an erection sufficient for sexual intercourse

Estrogens: female steroid hormones

External-beam radiation therapy: prostate cancer treatment involving beaming x-rays into prostate gland from the outside

5-alpha reductase inhibitors: medications that block formation of DHT, used to improve BPH by shrinking the prostate gland

Gleason score: classification of prostate cancer based on cell shape as seen

under a microscope

Hormonal therapy: use of hormones to treat advanced prostate cancer

Hot flash: sudden rush of warmth in the face, neck and upper chest secondary to changes in steroid hormone levels

Hyperplasia: increase in numbers of cells

Impotence: erectile dysfunction, inability to produce and/or maintain an erection for sexual intercourse

Incontinence: unintentional loss of urine (urinary incontinence) or bowel movement (fecal incontinence)

Intra-abdominal: in the abdomen

Kidneys: the body's main filters of fluid, they recycle useful material and send waste fluid to the bladder

Libido: sex drive

Localized prostate cancer: cancer confined within the prostate and considered curable

Metastasis, metastases: cancer that has spread from the main tumor and is growing elsewhere in the body

MRI: magnetic resonance imaging, gives a three-dimensional scan of the prostate

Nerve-sparing radical prostatectomy: surgery that preserves the neurovascular bundle to improve outcomes of bladder control and potency

Neurogenic bladder: lack of bladder control caused by nerve problems in the brain or spinal cord, i.e. from Parkinson's disease

Neurovascular bundles: group of nerves and blood vessels in the prostate that are essential for erection and bladder control

Nocturia: frequent night time urination

NSAIDs: nonsteroidal anti-inflammatory medications used to treat mild pain

Orgasm: climax in relation to sexual intercourse

Overflow incontinence: when urine leaks out of the bladder because it is too full to hold more

Palliative treatment: to ease or relieve symptoms for improved quality of life without consideration for a cure

Penis: male genital organ containing the urethra

Perineum: area between the scrotum and rectum

Peyronie's disease: connective tissue within the penis causes lateral curvature of the penis during an erection

Placebo: a "sugar pill" given in place of actual medication

Pressure-flow studies: tests that monitor bladder pressure changes during urination

Prostate gland: muscular, walnut-shaped gland that surrounds the urethra just below the bladder.

Prostatectomy: surgery to remove all or part of the prostate gland

Prostate massage: vigorous massage to force fluid out of the prostate gland into the urethra for analysis to determine reason for prostatitis

PSA: prostate-specific antigen, an enzyme produced by the prostate gland that increases during prostate stress, i.e. cancer or hyperplasia

Radical prostatectomy: surgery to remove the entire prostate, used to cure localized prostate cancer

Retropubic; behind the pubic bone, in retropubic prostatectomy an incision is made in the lower abdomen just below the pubic bone

Semen: fluid that transports sperm

Seminal vesicles: glands that produce fluid for sperm to flow in through the system

Stage of prostate cancer: how big the cancer is in the prostate and how far it has spread to other organs or tissues

Stress incontinence: uncontrolled loss of urine during physical activity that increases intra abdominal pressure, i.e. running, golfing, pushing, lifting etc.

Stricture: blockage caused by scar tissue

Suprapubic: just above the pubic bone, surgical incision just above the pubic bone to remove the prostate gland

Testes or testicles: male reproductive organs contained in the scrotum, produce testosterone and sperm

Testosterone: male steroid hormone essential for sex drive, secondary sex characteristics and fertility

Three-glass urine collection: test for prostatitis, first urine comes from urethra, second comes from bladder, third comes from prostate after prostate massage

TURP or TUR: transurethral resection of the prostate, standard operation to treat symptoms of BPH

Ultrasound: noninvasive imaging through high-frequency sound waves to determine prostate size and shape, used with prostate biopsy

Ureters: muscular tubes that drain fluid from kidneys to bladder

Urethra: muscular tube that drains urine from bladder to the outside

Urethral sphincter: circular muscle that helps keep urine in the bladder

Urethritis: urethral irritation

Urge incontinence: sudden strong uncontrollable urge and loss of urine

Urgency and frequency: overactive bladder, frequent feeling of need to toilet before bladder is full of urine

Urinalysis: chemical analysis of urine

Urinary retention: incomplete emptying of urine from the bladder sufficient to cause bladder dysfunction and potential reflux of urine into the kidneys

Urodynamic studies: tests that measure urinary flow, pressure and volume

Uroflowmetry: test to measure amount and speed of urine passed

Urologist: medical doctor specializing in urinary tract and male reproductive problems

UTI: urinary tract infection, presence of bacteria in the urine

Vacuum erection device: device creates suction using airtight tube placed temporarily around the penis

Vas deferens: hard muscular cord between the epididymis and the base of the prostate

Vasectomy: surgical procedure cut to prevent sperm from exiting

Watchful waiting: monitoring symptoms closely but delaying treatment

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