

THE PELVIC FLOOR



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Help with Pelvic Floor Complaints

In this booklet, normal pelvic floor function is explained, and some common pelvic and pelvic floor complaints are discussed. This information is clarified with pictures and some basic exercises. Some tips and tricks are also provided to help you cope better in case of problems.

The exercises can be used for different complaints. You may not experience some of these complaints yourself. However, you will notice that some exercises overlap and integrate easily. I strongly recommend that you start to read them all first.

Focus on the exercises that were discussed during your treatment session, although it will do you no harm to try the others too. I recommend you perform the exercises with curiosity, rather than aiming for perfection. You will find it much easier to feel what you are doing coming from an open and curious state of mind.

Give yourself time to regain control over complaints and to learn some new behaviors. The latter takes a lot of time, many months, up to a year, and requires a lot of attention. In the beginning, you will have to think about how to perform, and you will not succeed often in the beginning. Making mistakes, however, is not a bad thing. It will help you learn, focus, and improve.

So, be persistent and you will notice your improvement. Also, the attention needed for the functional use of the exercises will lessen in time.

Practice every day attentively for a maximum of five to ten minutes, and translate your exercises into functional activities in your normal daily life. This way, your daily life is your exercise arena. You will notice that you will re-gain control using the tips and tricks from this booklet together with practice.

Changes and improvements are often very small and may not be so noticeable at first. Do not lose faith in your-self and be courageous!

Explaining the Pelvic Floor concerning our Organs

A pelvic floor is a group of muscles that functions as a whole.

These muscles are special, because of their double function. One task requires contraction and support, the other requires relaxation. This double function is due to the fact that the muscles support our organs in our lower abdomen. In women, these are the bladder, the uterus, and the rectum, and in men, the bladder, the prostate, and the rectum. The organs are positioned close to one another on top of the muscles, and they all have a passage through the pelvic floor muscles, giving it its double function.

For many people, the abdomen and pelvic floor area are very intimate parts of their bodies. This part of our body is used to discharge waste product at the toilet, and to have sex, either to enjoy it or aiming for a pregnancy. Negative or traumatic sexual experiences may also affect pelvic floor muscle function.

To have adequate control over our pelvic floor muscles, it is necessary to look after our bladder and bowel. They both need peace, and quiet to function properly. This means that we need to take care of their well-being, by providing the right input for their tasks and giving them room to do their work.

To keep our bladder and bowel happy we need to drink at least 1,5 to 2 liters of fluids per day. Make sure that these are not just coffee, fizzy drinks, and/or alcohol, because these fluids tend to disrupt normal bladder function by increasing the number of waste products in your urine, which may unsettle your bladder. If you have an unsettled bladder that urges you to go to the toilet often, you may be inclined to drink less to calm it. Unfortunately, this will not work. The concentration of waste products in your urine will then increase, thus increasing the urge. So do not limit your fluid intake.

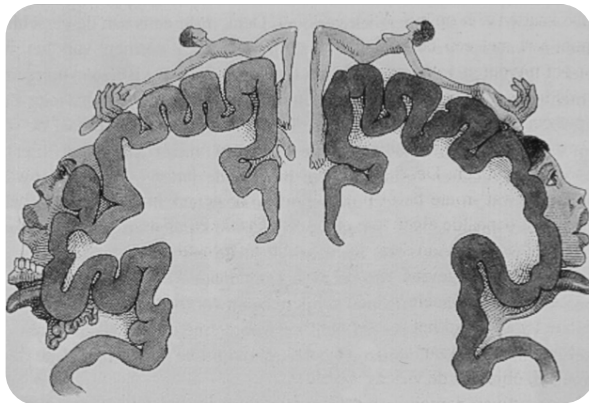
Also, your bowels need fluids to keep your stools soft and easy to pass. Less fluid intake may disrupt the production of soft stool and cause constipation. For a well-functioning bowel, we need to watch our fiber and fat intake too. Therefore, watch the three Fs: fluids, fibers, and fat, the latter in healthy quantities. Some fats will also help to soften your stools.



Body and Mind

Besides these physical points of attention, you need to be aware that any kind of stress can unsettle our organs and influence pelvic floor muscle function. When we feel stressed, we tend to tighten muscles, also around our abdomen, which is also known as the center of our emotions. This tension will hamper bladder and bowel function, as they have less room to fill and function properly. Not properly functioning organs, will in turn keep our minds occupied. So, there is always some sort of interaction between the body and the mind.

Of all the muscles in our body, the pelvic floor muscles are not the easiest to control. They are situated in a place where we cannot easily see them, and they are not so well represented in our sensory and motor brain maps in comparison to arm or leg function. This limited representation can make it hard for some people to be able to feel their pelvic floor muscles and to have conscious control over them.



Lack of control may cause problems regarding support of the organs (more common in women) and being continent for urine and feces. Too tight or too slack muscles can influence control over the urge to go to the toilet, the frequency of the urge, and your ability to react appropriately when coughing, sneezing, or jumping. When you are unable to relax your pelvic floor muscles completely, sexual functioning may be jeopardized. Penetration may be painful, orgasm difficult, and erectile function impaired.

Pelvic Floor Muscle Function

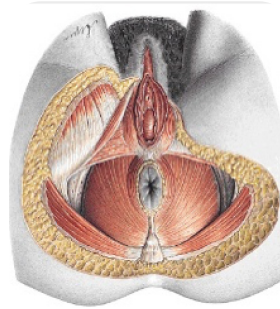
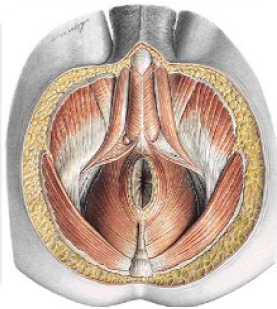
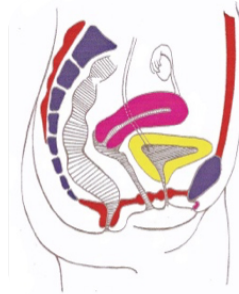
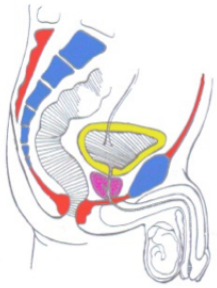
The pelvic floor can be compared with a trampoline that is situated at the bottom of our pelvis, supporting our organs as explained before. The muscles need to be bouncy and resilient, as if elastic, which is needed for them to function properly. From its basic tension, which keeps our organs in place against gravity and stops the bladder and bowel from leaking, you need to be able to contract and relax this muscle easily.

When feeling urge for micturition or defecation, you will then be able to use your pelvic floor muscles as a handbrake under your organs to prevent leakage, control the urge, and be able to reach the toilet in time. During activities that require effort, such as lifting, the pelvic floor muscles need to be activated to help reduce the build-up of intra-abdominal pressure (when exhaling), and to prevent (the increase of) pelvic organ prolapse, and/or involuntary loss of urine or defecation. When coughing or sneezing the muscles need to contract short and fast to prevent leakage. When squatting or bending the muscles need to relax a little, still preventing leakage, to give you the freedom to move. The pelvic floor muscles need to relax fully during micturition and defecation to empty the organs and to be able to enjoy sexual intercourse. For men, this means they then have an adequate erectile function, and for women, it means they can be penetrated without experiencing pain from tight pelvic floor muscles.

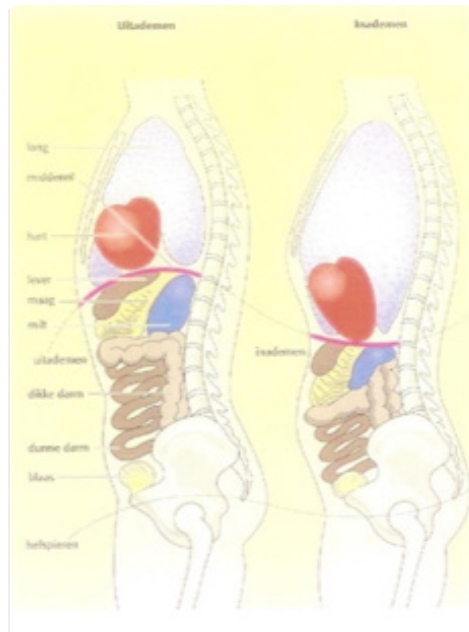
To manage all this, you need to be able to feel the movement of the muscles and to use them adequately. Relaxation of the pelvic floor is just as important as its contraction. A tight and stiff muscle lacks pliability, flexibility, and elasticity, and therefore, loses some of its function. A slack and weak muscle, on the other hand, will also not function properly.

Pelvic floor muscle function can also be jeopardized by for example pain, fear, stress, trauma, childbirth, bladder or bowel problems, heavy physical work, and combinations of these factors. Depending on the problems presenting, treatment needs to be adapted to the required functionality, focussing on strength, coordination, endurance, and relaxation in the right context. In many cases, focusing on strength of the muscles only will turn out to be insufficient to regain control over your pelvic floor muscle function.

The Male and Female Pelvic Floor



Breathing



Conscious Deep Breathing

Calm deep abdominal breathing is a prerequisite and resource to be able to perform pelvic floor exercises and feel pelvic floor movement. Functional use of breathing will also help to moderate intra-abdominal pressure.

Breathing is automatic, so follow your breathing pattern, focussing on feeling the movement, space, and relaxation in your abdomen. Whilst breathing, your diaphragm is moving up and down in line with your breathing pattern. Feel your abdomen rise when inhaling, and fall when exhaling. In a normal breathing pattern, you inhale and exhale about twelve to fifteen times per minute. When you find your frequency higher, to lower your breathing frequency, you can try to take a short break after every exhalation before inhaling again. Note that the inhalation after the break needs to be a normal one, not a gasp for air!

So, do not make the break too long.

Whilst being attentive to your breathing, be curious to feel your diaphragm lowering, your abdomen rising, and to notice some downward gentle pressure on your pelvic floor muscles when inhaling. When exhaling, feel that your diaphragm rises, your abdomen falls and the pressure on the pelvic floor disappears. Try and move your pelvic floor with your breathing rhythm (like a trampoline), relaxing when inhaling and contracting gently when exhaling. It may help to imagine your abdomen being a balloon. When inhaling it fills with air, which requires relaxation and expansion, and when exhaling the air will escape your lungs, releasing the air and pressure from the abdomen and pelvic floor. Be attentive to feel your pelvic floor movement. Remember to relax when inhaling and contract gently when exhaling. It can help to put both hands on your stomach to register your breathing pattern. When you lower your hands and place them just above your pubic bone be curious to feel your breathing there too (movement of your abdomen).

Practice this also lying supine with both knees bent, and register where you feel your breathing first. Lower your knees together to the left, and relax. In this position your trunk is elongated and you will notice it to be easier to breathe through your abdomen. When exhaling lift your knees back to the starting position and repeat this exercise towards the right. When you have done so a couple of times, register where you feel your breathing then. Most likely you will feel it more in your abdomen.

Then, let your left knee fall out to the side in a fluent movement and lift it back to its starting position. Repeat this alternating left and right 5-10 times per side. Where do you feel your breathing best after this? How is your pelvic floor moving now?

Pelvic Floor Exercises

When you are attentive, you can feel some room for movement in which you can contract and relax your pelvic floor muscles. Try and make this 'playroom' as large as you can when exercising. A contraction of the pelvic floor muscles is a very subtle, gentle feeling in between your legs. You are not meant to contract your buttock, leg, and stomach muscles during this exercise. Other people should not be able to notice you doing your exercises!

To make it easier to feel your pelvic floor move, you can go and sit on a punch balloon (blow it up to a diameter of around 6 inches), or use a rubber hot waterbag filled with some water to keep it flexible. The pressure that the balloon or hot water bag provides when sitting on them will tell you exactly where your pelvic floor muscles are, and where you should feel the movement. In case you have pain or pelvic organ prolapse it can be soothing to sit on a balloon or waterbag. In doing so, you will take away the impact of gravity on your muscles, so that they can relax completely. Because of the pressure of the balloon from underneath no organs can prolapse, and this way it is possible to exercise your pelvic floor sitting down, even in case of pelvic organ prolapse.

Imagine when you exercise that your pelvic floor moves as if you scoop up water with your hands, and be particularly curious about the range of movement you feel. Can you increase the range by relaxing further, and are you beginning to feel the movement more clearly? When lying supine with your legs extended, rotate your toes outward to feel the area around your anus contract better. Turning your toes inward will help you to feel the area around the urethra more clearly. Whilst exercising you may feel your lower tummy contract a little too. The muscles you feel there are your transverse abdominal muscles. It is no problem that they are activated when doing pelvic floor exercises.

Exercising to control the urge and postpone going to the toilet

When feeling an urge, contract your pelvic floor muscles slightly to give your bladder or bowel a signal to wait. This way you use your pelvic floor muscles as a handbrake. Hold the contraction for 4-6 counts and relax for 4-6 counts. Relaxing means taking the pressure on the organs to keep them calm and fill a little more. Repeat this 4-6 times.

With this exercise, the urge can subside or even disappear, which gives you more time to go to the toilet. Do not postpone going too long, use this exercise functionally to finish an activity, or to get home. Then use the toilet. In case the urge may have disappeared, your bladder or bowel will keep filling. When the urge returns do not postpone again, but go and use the toilet to empty your bladder or bowel.

Toilet Posture

Toilet posture during micturition

Sit straight, and yet as relaxed as you possibly can on the toilet with soft and relaxed buttocks. Put both feet flat on the floor, or use a stool if necessary. Put your feet a little apart and lower your underwear to your ankles. Put your arms lightly on your lap. Start relaxing your pelvic floor muscles. Whistle a little or relax your cheeks completely. Take your time to empty your bladder without pushing. Let the urine fall from your bladder as if it were flowing through a funnel.

Tip for women: When you have a prolapsed bladder it can help to tilt your pelvis when you have finished emptying your bladder, or to lift your bottom of the toilet whilst bending forward and then sitting back down again. You may find there is more urine to come and that you will be able to empty your bladder better this way.

Toilet posture during defecation

Sit straight with a slightly rounded back, but do not slouch forward! Put both feet flat on the floor, and if necessary, use a stool to position your knees a little higher than your hips. This way your anus is the lowest point above the toilet. Put your feet a little apart and lower your underwear to your ankles. Put your arms lightly on your lap. Start relaxing your buttocks and pelvic floor muscles. This way stools can easily glide from your rectum into the toilet. If you need to push a little bloat your tummy and push gently onto the anus, keeping it relaxed and downward. Do not push hard and keep your mouth open to avoid putting a lot of pressure on your head. Sometimes it can help to stop thinking altogether. Tip for women: When you have a prolapsed rectum it can help to support the perineum, the area of skin between the vagina and anus, with your hand (fingers). This can help to empty the rectum better and make defecating easier for you.

Attention!

A prerequisite to having a properly functioning bladder and bowel is to drink between 1,5 and 2 liters of fluids every day and to eat healthily. This means including sufficient fibers and some fat into your diet to make sure your stool is soft and compact at the same time. Make sure you follow a regular eating and drinking pattern.

A normal micturition frequency is 6-8 times per day. Preferably you empty your bowels daily, but without complaints and problems frequencies between twice a day and twice a week are okay.



Avoiding Intra-Abdominal Pressure

Be aware to exhale, when doing things that require effort or need force, such as lifting, carrying, pushing, pulling, getting up from a low chair, sofa or bed, or turning in bed. It is important to feel some activation of your pelvic floor muscles during your exhalation before you perform the activity. You do not need to contract your pelvic floor to a maximum beforehand. In being attentive to this, you make sure to reduce the downward pressure on your organs and pelvic floor, and in your pelvis.

By intercepting the build of intra-abdominal pressure, you support your organs more efficiently during pressure-increasing activities and avoid pushing them down on or through your pelvic floor muscles. In addition, you will support your low back and pelvis better during the activities mentioned. Know also, that when you are talking, you are always exhaling, so talk, sing, or hum during the risky moments when you suffer pelvic organ prolapses, incontinence, or low back or pelvic pain.

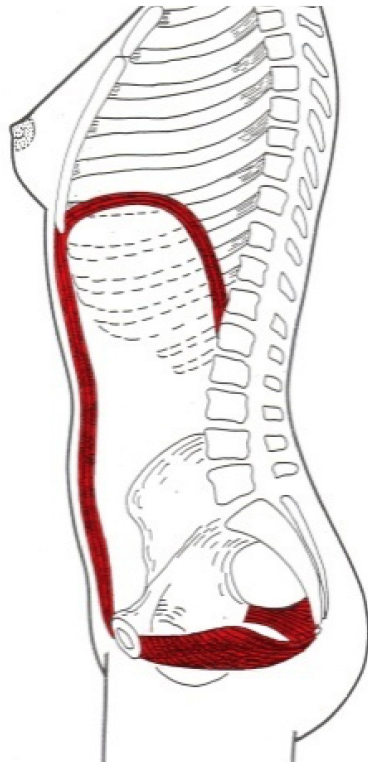
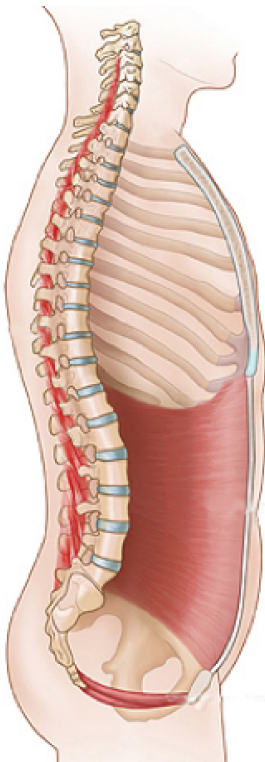
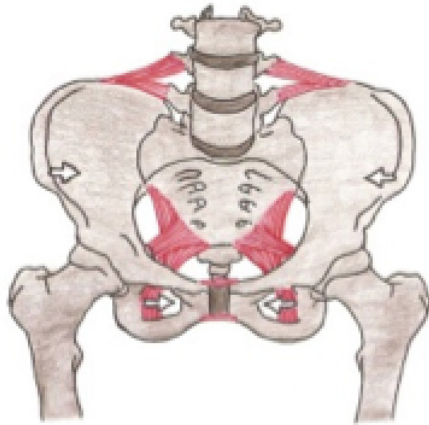
Coughing and sneezing are also activities involving possible increase in abdominal pressure. A cough and a sneeze are exhalations involving a lot of force in which your pelvic floor muscles need to contract short and fast to support your organs and keep you dry.

When you are able to feel your pelvic floor move in with your breathing rhythm, you can practice some faster and more forceful contractions with more forceful exhalations. Pretend to blow out a candle, whilst being alert to feel if you manage to contract your pelvic floor adequately, to then relax it fully again. If you find it difficult to feel the combination of exhaling and contracting, and inhaling and relaxing, extend an exhalation focusing on the sense of pelvic floor contraction that will then come automatically. This combination has already been pre-programmed into your body. However, many people turn the motion around and inhale deeply and hold their breath during forceful activities. Monitor yourself, and experiment with the tips and exercises in this booklet.

Handling coughing and sneezing better

Contract your pelvic floor muscles 3-5 times to the max and relax them completely straight after. Contract your muscles fast and forcefully as if blowing out a candle. Timing and coordination are very important here. Be aware not to hold your breath by tightening your diaphragm and thus increasing intra-abdominal pressure. Practicing this will help you to control incontinence during coughing and sneezing. Turning your head to the side may also help reduce the risk of incontinence because this reduces the build of pressure on your organs.

The Pelvis and its support



Relaxation in the Pelvis when suffering Pelvic Pain

A good way to relax your pelvis and pelvic floor is the 'frog' exercise. Go and lie supine for this and bend your knees. Then, let your knees each fall to the side and put the soles of your feet together. Make sure you do not feel stretched on the inner side of your upper legs. If you do, put pillows underneath your knees or tie your knees together with a scarf, so that you eliminate the stretch. Just relaxing in this position may help to reduce your pelvic pain.

Before you do this 'frog' exercise, it can be useful to check the height of your knees whilst lying supine with bent knees. Position your feet side by side, and you may find that there is some difference in height of your knees. If so, pull your highest knee to your armpit pushing your upper leg downwards. At the end of the movement range, you want to give it a little extra push. Then do the 'frog' exercise before checking the height of your knees again. Take a few minutes to relax. If you find no difference in height anymore you will have better balanced your pelvis yourself. This can also help to reduce any pelvic pain. If in any case, this does not help enough you may want to try pulling your other knee up as described above.

An additional way to reduce pain and relax more is to tilt your pelvis slightly forward when lying in the 'frog' position. This means that you hollow your lower back and roll your pubic bone in the direction of your feet. This way you subtly mobilize your pelvis.

You can release tender points or trigger points in your buttocks with a tennis ball. Use a rough, non-slippery wall for this. Put your weight onto the leg that you do not want to treat. Place the ball between the wall and your painful buttock and roll it until you find trigger points. In some cases, it can help to bend forward a little to find points lower down in your buttock. Keep pressure on the point, and know that this can be accompanied by a sharp pain to start with. After a little while, the pain should subside. When the pain increases you are putting too much pressure on the point and you need to adjust it by reducing the pressure.

Supporting your Pelvis and Low Back

Lie down supine and bend your knees. Put both hands with your hand palms down underneath the dimples in your low back, where the SI-joints are. The surface that you lay down on should not be too soft. Feel the pressure of the bony structures of your pelvis on your hands and check if the pressure on the left equals the pressure on the right. Try and balance this out. Then, lift one foot a tiny bit off the surface. What is happening to your hands? Does pressure change, and if so how? Repeat this with your other foot. What happens here? During this exercise, the pressure on your hands should not change. You use your hands only to check this, to make sure you support your pelvis and low back adequately, and you should not feel a shift in pressure when you lift your foot.

So, when practicing, apply a little tension around your pelvis by gently contracting the transverse abdominal muscles during exhalation as if accentuating your waistline. You should feel the contraction below your belly button. Then lift your foot and register the difference between just lifting a foot and lifting it on an exhalation. Notice the difference in ease and pain whilst exhaling during the action. Getting this straight will help you recognize the support needed to perform daily activities in which you experience pain.

Functional exercises will help you to relieve complaints during lifting and carrying, changing positions, and during sports and it will improve our toilet behavior. Our whole day is full of options and occasions to practice.

Exhale when rolling over in bed, or getting up from lying to sitting. Getting out of a chair will become easier if you generate power from your lower body and exhale during the action. Make sure when you get up from a chair to place your feet back a little and to bring your weight forward by pointing your nose up and over your knees. Only use your hands to balance yourself and not push yourself up from the chair.

Be also aware to avoid intra-abdominal pressure during forceful activities by exhaling during the moment when you lift or change posture. Being attentive to this by not holding your breath will increase the support around your pelvis and low back. Furthermore, it will lessen the risk of compensating in other muscles.

Watching your toilet posture will add to experiences of more ease during micturition and/or defecation, because you will find it easier to relax your pelvic floor muscles during these activities.

Dysbalance in the Pelvis

In the presence of pelvic pain, there is often a dysbalance in the biomechanics of your pelvis and a problem with the coordination and co-operation of the muscles around the pelvis. Besides the fact that providing optimum support around the pelvis during strenuous activities, large muscles often tend to want to help and compensate for any lack of support. One of the most prominent muscles here is called the iliopsoas, a strong hip flexor that attaches to the front of your spine at the level of your diaphragm. It runs through your abdomen to your groins, where it attaches to the bones of your upper legs. Part of this muscle disperses over the inner side of your pelvic bones and your SI-joints inside the pelvis supporting them in a compensatory manner in situations of dysbalance. The muscles in line with the A in the picture are tight and short in this situation. Through and over these muscles, and another muscle called quadratus lumborum run various nerves that stem from the level of your spine where your lumbar and thoracic vertebrae join. These nerves could get irritated when muscle tension increases too much. This can cause pain along the paths of these nerves, across the sides of your abdomen along with the pelvic bones to your groins and pelvic floor area. Sometimes this nerve activation affects bladder and bowel function. This then needs thorough examination to come to a proper diagnosis and treatment plan.

In a reflexive reaction high tension in the flexors in line A will reduce tension in the gluteal muscles in line B, resulting in weakness of these gluteal muscles. The weakness in line B could in turn be compensated for by the pelvic floor muscles.

Effectively, the transverse abdominal muscles along with small intervertebral muscles in your back should support the bony pelvic ring and SI-joints in cooperation with the pelvic floor muscles and the diaphragm. Recovery of function can occur by optimizing the function of this system, relaxing and stretching the strong flexors, and activating the gluteal muscles. In this process deep abdominal breathing is important, see previous exercises, to optimize the range of movement in your pelvic floor muscles and diaphragm.

The diaphragm attaches to the spine at roughly the same level as the iliopsoas and resembles a roof over your abdomen at the bottom of your ribcage.

Hopefully, you will understand that the finetuning of these exercises and their results, will and need to be accompanied by trial and error, and lots of practice.

Regaining balance

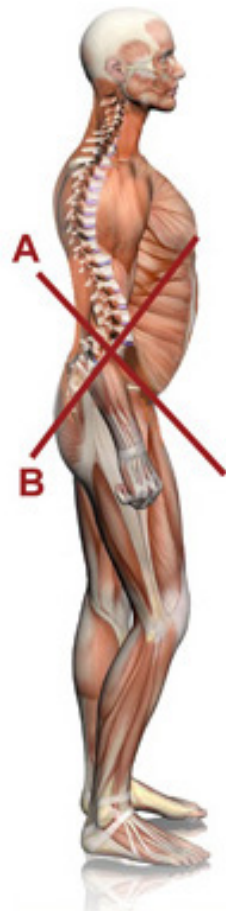
Strengthen the extensors and relax the flexors

Lie supine, bend your knees and put your feet a bit further apart. without letting your knees fall inward. Then push off with one foot from the surface that you lie on, only lifting your buttock from this surface on the same side of your body. Your other buttock remains on the surface. This way the only muscle that will contract is the gluteal muscle, and the output of this exercise will resemble half a bridge. You may need to practice a little to be able to single out the gluteal contractions. When the gluteal muscles contract, the reciprocal strong hip flexors relax more. This is a way to switch off the high tension in the iliopsoas, which may eventually also result in less irritation of the nerves described on the previous page.

An added advantage of this half bridging exercise is that you will gain more rotation capacity in your spine at the thoracic-lumbar level. This rotation will increase mobility and flexibility of your spine. This gain in mobility will also help to calm the nerves that stem from this level in your spine, and add to being able to breathe deeply through your stomach more easily.

Another way to activate the gluteal muscles is to lie prone and grab hold of your left ankle with your left hand, and place your knee out to the side. Push your foot gently into your hand as if you want to straighten your knee. This way you will avoid stretching the muscles at the front of your upper leg. Lift your knee a small distance from the surface by contracting your gluteal muscles. This is another way to stretch the large and strong flexors a little.

You could also activate your gluteal muscles more during walking by extending your pace length and complete your step fully, rolling over your big toe. Leave your arms to relax beside your body, swinging along during your walking, rotating your spine, increasing mobility there at the same time.



About Sex

During sexual intercourse, it is important to relax your pelvic floor muscles for optimal sexual pleasure. Sexual activities tend to start with either the desire to have sex or a sense of arousal due to a specific cue. In men, arousal is visible with the increase of penile erection. However, it is now known that women also have an erectile function of their clitoris. The clitoris is a much larger organ than always has been thought, and it resembles the male penis in many ways. The biggest difference is that the clitoris is hidden underneath the labia alongside the entrance of the vagina and therefore, less visible.

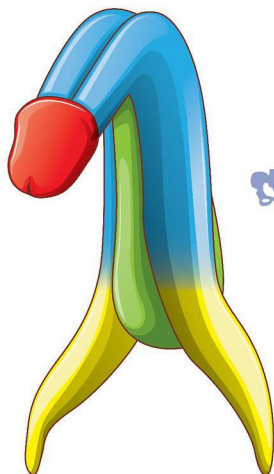
Similar to men, women need a good erection too, to have enjoyable sex. During the phase of arousal, the clitoris will swell and enlarge equally to a male penis. With that lubrication occurs, and in this process, the entrance of the vagina will enlarge. This process also tends to relax the pelvic floor muscles more. When the male and female erections are completed, penetration should be possible without pain. Men cannot penetrate without a proper erection, women should not be penetrated without one either.

So, painful sex in women can be due to a lack of clitoral erection, lack of lubrication, and lack of relaxation of the pelvic floor muscles. During sexual intercourse, when a vagina is not lubricated optimally, mechanical friction may irritate the vagina and therefore cause discomfort. This discomfort may increase muscle tension, and decrease lubrication even further. To avoid this, it may help to be more attentive to female arousal and take time during foreplay to stimulate a clitoral erection, just as penile erection.

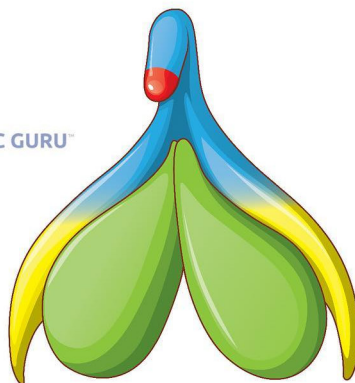
In orgasm, pelvic floor muscles contract rhythmically to climax. These rhythmic contractions support ejaculation in men. In situations where no orgasm is reached, or when this is painful, you may want to find out the reason for this. Hyperactive pelvic floor muscles can play a role in this discomfort, so experiment with the exercises in this booklet to see if you benefit from more relaxation during sexual activities.

Knowing that men orgasm after sufficient penile stimulation, which is provided during penetration sex, you may now understand why women do not climax often during penetration, but more with manual or oral stimulation of their clitoris that is situated on the outside of their bodies.

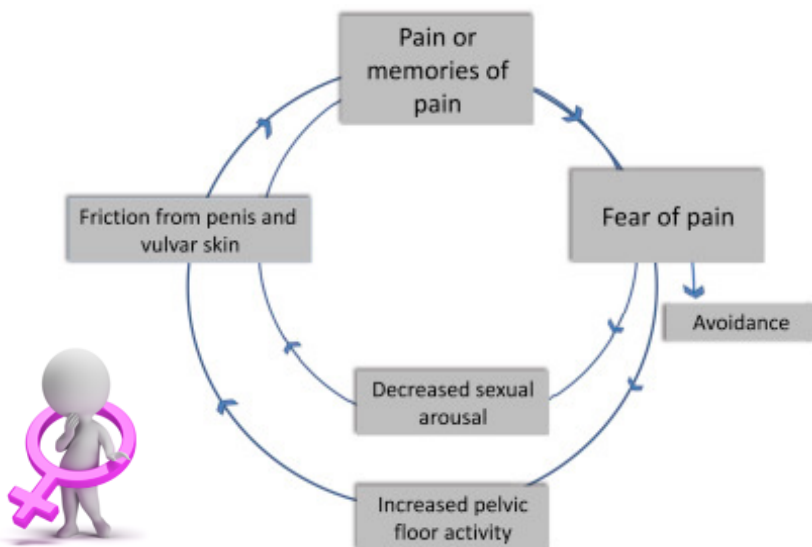
Penis



Clitoris



■ Glans / Head ■ Shaft ■ Bulbs ■ Crus



Good luck with these exercises!

These exercises are a compilation of the basic thing I teach my patients. Use and integrate them in all your daily activities. I hope you will find them supportive and helpful.

Alma Brand

**Pelvic Physical Therapist and Psychologist with NVVS
annotation in Sexology**