

Surgery for stress urinary incontinence

Patient decision aid





What is stress urinary incontinence?

Stress urinary incontinence is when you leak urine accidentally, especially during exercise or when you cough, laugh or sneeze.

The diagram below shows what treatments NICE recommends as **options** for managing stress urinary incontinence. If you have tried to manage your condition without surgery, but this hasn't worked, you might like to think about surgery.

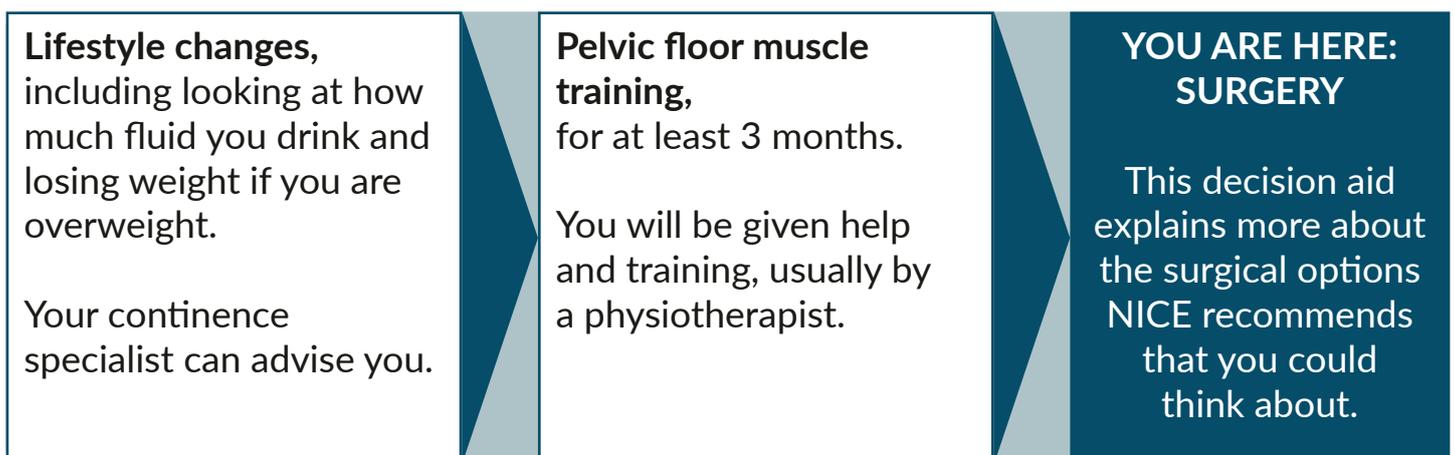
This decision aid can help you and your surgeon decide together which type of surgery is best for you. **You might also decide that you don't want to have any surgery.**

It is important to make the choice that you feel is right for you. This will depend on your individual circumstances and how you feel about each type of surgery.

Every woman is different, so this decision aid is only a guide.

Information about how this decision aid was produced and the evidence on which it is based is available on the NICE website.

Options for treating stress urinary incontinence



Pads and other things to contain leakage can be helpful alongside other treatments but NICE doesn't recommend using them as the main treatment in the long term, unless there's no alternative that is suitable for you or that you want to try.



What types of surgery does NICE recommend?

NICE recommends three types of surgical operation as **options** for managing stress urinary incontinence if other things haven't worked. They have technical names, but there isn't a short name for any of them. They are:

- colposuspension
- an autologous rectus fascial sling
- a retropubic mid-urethral mesh sling (mesh is sometimes called 'tape').

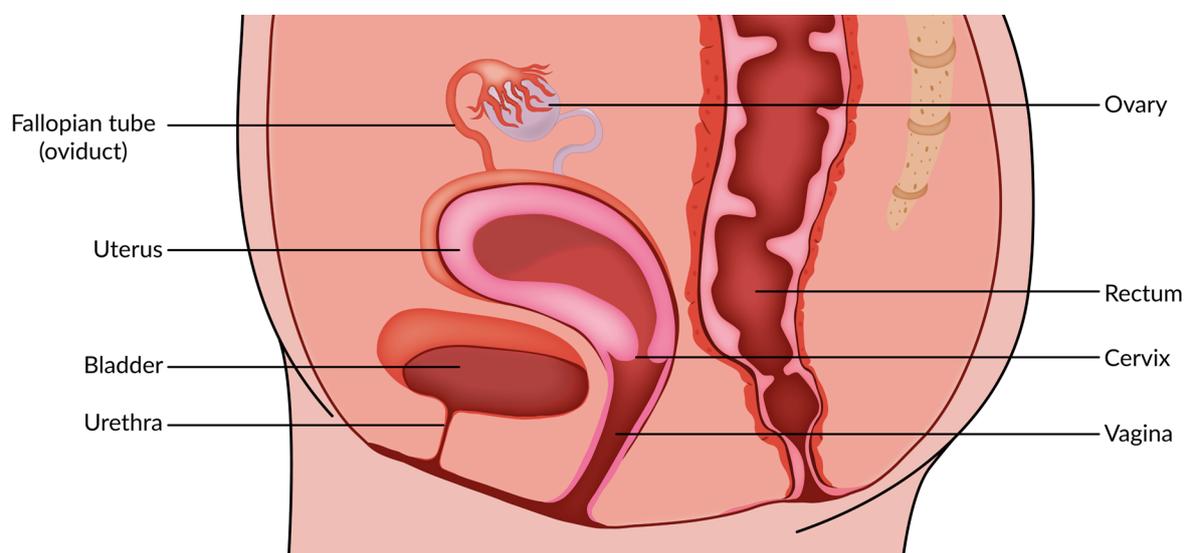
If the type of surgery you would prefer is not available in your local hospital, you can be referred to a different hospital.

If you decide you don't want any of these operations or they aren't suitable for you, you could have a substance called a **bulking agent** injected into the sides of the urethra (the tube that carries urine out of your body). This helps the bladder remain closed with more force so it's harder for urine to leak out. There is more information about this option on page 12 of this decision aid.

The rest of this decision aid talks about each type of treatment: what it involves, the risks and benefits, and how they compare to each other. To help you understand the explanations, the normal arrangement of organs in a woman's pelvis is shown in the diagram below.

If you decide you don't want to have any kind of surgery, or none of the options is suitable for you, your healthcare team will discuss other treatment options with you.

Normal arrangement of organs in a woman's pelvis





Which type of surgery works best, and which has the most complications?

There's limited evidence to answer these questions. All three types of operation can help some women, but not everyone. The choice of surgery will also be affected by any previous surgery you may have had.

Some women develop problems, known as complications, after they've had surgery. Some complications only develop several years later, and it's not known for certain what all of them might be. If they do develop they might not trouble you very much, or they could harm your quality of life a great deal. It is not always possible to treat complications successfully.

How do the options compare?

NICE looked at the best studies available about these operations when it published its guideline and found that:

- It's not possible to say for sure whether one of these types of operation is better or worse overall than either of the other two at treating stress urinary incontinence.
- It's also not possible to say for sure whether most kinds of long-term complications are more likely to happen with one type of operation than either of the other two, **except:**
 - Pelvic organ prolapse. This includes the rectum bulging into the vagina. This might not be troublesome but it can cause discomfort and problems with opening the bowels. Pelvic organ prolapse seems more likely after colposuspension than after a retropubic mesh sling.
 - Mesh-related complications after retropubic mesh sling, including pain and vaginal problems. **There is more information about possible complications from mesh surgery on page 11 of this decision aid.**
- A retropubic mesh sling often does not need an overnight stay in hospital and can be done without a general anaesthetic. You'd need to stay in hospital for 1 to 3 days after the other operations, which are done under general anaesthetic. Women generally recover more quickly after a retropubic mesh sling than after the other operations.

It is not possible to know for sure what will happen to any individual woman



More information about the types of surgery

The tables on the following pages have information about the different types of operation. They cover the things most women may want to know about and that NICE has found evidence about. On page 14 you can write down how you feel about them.

There may also be other things that are important to you.

Talk to your surgeon about all your concerns so that you can make an informed choice.

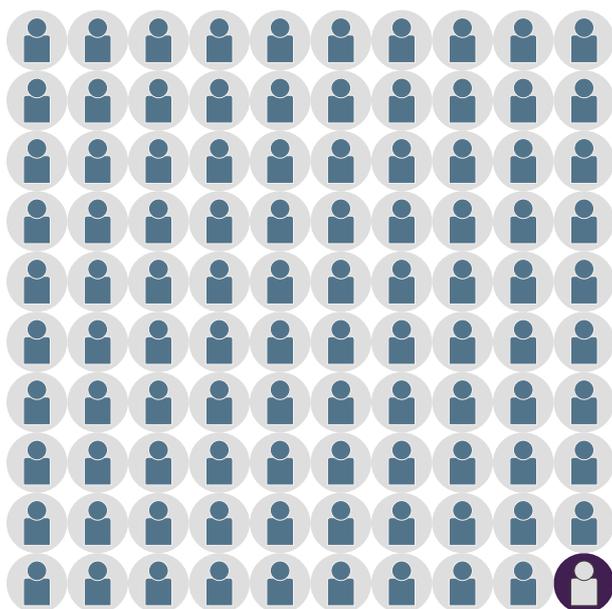


Your chance of getting complications

Sometimes it isn't possible to give very precise figures for the chances of different complications happening, so this decision aid gives a general idea. For example, "1 to 10 women in 100 get this complication (which means 90 to 99 don't)".

Some people find the type of diagram below makes it easier to picture the chances of something happening to them. People who have **experienced an effect** are shown in **purple**.

1 in 100



10 in 100 (or 1 in 10)



It is not possible to know in advance what will happen to any individual woman

Colposuspension

Rectus fascial sling

Retropubic mesh sling

What happens in this type of surgery?

The diagram on page 2 may be helpful to understand these descriptions.

This involves lifting up the tissue around the neck of the bladder, and suspending it in this lifted position using synthetic stitches.

Surgeons may use stitches that eventually dissolve or stitches that remain in the body permanently.

A sling is made using your own body tissue from your abdomen.

The sling is placed behind the tube that carries urine out of your body (the urethra) to support it. It is attached to the inside of your abdomen using synthetic stitches.

Surgeons may use stitches that eventually dissolve or stitches that remain in the body permanently.

This involves placing a strip of synthetic mesh behind the tube that carries urine out of your body (the urethra) to support it in a sling.

The strip of mesh is sometimes called a tape.

Synthetic mesh is a plastic product that looks like a net.

The mesh stays in your body permanently.

Colposuspension

Rectus fascial sling

Retropubic mesh sling

What does the operation involve?

This can be done in 2 different ways:

- open surgery – an incision (cut) is made in your lower abdomen
- keyhole (laparoscopic) surgery – the operation is carried out through small incisions in your lower abdomen.

It is done using general anaesthetic – you'll be asleep for the whole operation.

You'll usually need to stay in hospital for 1 or 2 days after the operation.

The recovery time is usually about 6 weeks.

This is done by open surgery. An incision (cut) is made in your lower abdomen and inside your vagina.

It is done using general anaesthetic – you'll be asleep for the whole operation.

You'll need to stay in hospital for 1 to 3 days after the operation.

The recovery time is usually about 6 weeks.

Small incisions (cuts) are made in your lower abdomen and inside your vagina. This can be done under:

- general anaesthetic – you'll be asleep for the whole operation, **or**
- spinal anaesthetic – you'll be awake but numb from the waist down and won't feel pain, **or**
- local anaesthetic with sedation

It is often done as day surgery (so you don't need to stay in hospital), but some women may need to stay overnight.

The recovery time is usually about 2 weeks.

Colposuspension

Rectus fascial sling

Retropubic mesh sling

How do these types of surgery compare for treating stress urinary incontinence?

The diagrams on pages 15 and 16 may help make sense of the numbers.

In the studies NICE looked at, for every 100 women **on average:**

between **1 and 5 years** after surgery:

- about 70 women felt their symptoms were improved, and 30 did not

more than **5 years** after surgery:

- about 55 women felt their symptoms were improved, and 45 did not.

In the studies NICE looked at, for every 100 women **on average:**

between **1 and 5 years** after surgery:

- about 75 women felt their symptoms were improved and 25 did not

more than **5 years** after surgery:

- about 55 women felt their symptoms were improved and 45 did not.

In the studies NICE looked at, for every 100 women **on average:**

between **1 and 5 years** after surgery:

- about 75 women felt their symptoms were improved, and 25 did not

more than **5 years** after surgery:

- about 60 women felt their symptoms were improved and 40 did not.

The evidence is very limited and it isn't possible to say for sure whether one type of operation is better at treating stress urinary incontinence overall than either of the others.

Colposuspension, rectus fascial sling and retropubic mesh sling

What are the possible complications during and soon after surgery?

The diagrams on page 4 may help make sense of the numbers.

Needing a blood transfusion. Some bleeding is quite common with surgery but this doesn't usually cause problems. In the studies NICE looked at, about 1 woman or fewer in 100 needed a blood transfusion (so 99 or more did not). It isn't possible to say for sure whether this is more likely to happen with one of these types of operation than either of the other two.

Damage to the bladder. In the studies NICE looked at, 1 to 10 women in 100 had this (so 90 to 99 women did not). It's usually straightforward for your surgeon to deal with and doesn't usually cause long-term problems (although they can happen). This kind of damage to the bladder is more likely to happen with mesh surgery than either of the other two types of operation.

Damage to the bowel. In the studies NICE looked at, 1 to 10 women or fewer in 100 had this (so 90 to 99 women or more did not). It isn't possible to say for sure whether this is more likely to happen with one of these types of operation than either of the other two.

Damage to nerves. This could potentially lead to loss of sensation or persistent pain. The number of women who had these problems wasn't recorded in the studies NICE looked at.

Colposuspension, rectus fascial sling and retropubic mesh sling

What are the other possible complications?

(Continued on the next page.)

The diagrams on page 4 may help make sense of the numbers.

Problems emptying the bladder fully. In the studies NICE looked at, 1 to 10 in 100 women got these up to several years after surgery (so 90 to 99 did not). It isn't possible to say for sure whether these problems are more likely to happen with one of these types of operation than either of the other two. You may need a catheter for a few days or weeks, or possibly longer.

Having to get to the toilet quickly to urinate, or not getting to the toilet in time. Generally in the studies NICE looked at, 1 to 10 in 100 women who didn't have these problems before surgery developed them afterwards (so 90 to 99 women did not). The evidence is very limited, and in some studies more women than this got these problems (up to about 30 women in 100, so 70 women did not). It isn't possible to say for sure whether they are more likely to happen with one of these types of operation than either of the other two. The problems can usually be treated with bladder retraining, physiotherapy or medicines, although these don't always work.

Infections, including wound infections, vaginal infections and urinary tract infections. In the first year after surgery, up to about 30 women in 100 got these in the studies NICE looked at (so more than 70 did not). It isn't possible to say for sure whether they are more likely to happen with one of these types of operation than either of the other two. They can also happen up to several years after surgery. These later infections may be less likely after rectus fascial sling surgery than after colposuspension but the evidence is very limited.

Colposuspension, rectus fascial sling and retropubic mesh sling

What are the other possible complications?

(Continued from the previous page.)

The diagrams on page 4 may help make sense of the numbers.

Wound complications. In the studies NICE looked at, 1 to 10 in 100 women got these problems during the first year after mesh surgery (so 90 to 99 did not). A few more women than this got these problems after rectus fascial sling surgery than after mesh surgery (but most still did not). NICE didn't find evidence on how likely they are to happen after colposuspension.

Persistent pain in the abdomen or pelvis, or during sex. Generally in the studies NICE looked at, 1 to 10 in 100 women got these problems (so 90 to 99 did not). The evidence is very limited, and in some studies more women than this got these problems. It isn't possible to say for sure whether these problems are more likely to happen with one of these types of operation than either of the other two. Painkiller medicines can help, but not always. The pain might not trouble you very much, or it might be severe.

Pelvic organ prolapse. This includes the rectum bulging into the vagina. This might not be troublesome but it can cause discomfort and problems with opening the bowels. In the studies NICE looked at, up to 25 women in 100 got this at some time after colposuspension (so 75 or more did not), but it's not clear how many of them would have had these problems if they hadn't had surgery. Pelvic organ prolapse seems more likely after colposuspension than after mesh surgery but the evidence is very limited. It isn't possible to say for sure whether these problems are more or less likely to happen with mesh surgery compared with rectus fascial sling surgery.

Mesh complications (if you have mesh surgery). See the next page of this decision aid.



Possible complications after retropubic mesh sling surgery

Particular complications can sometimes happen after retropubic mesh sling surgery. Some but not all of these are similar to problems that can also happen after surgery that doesn't include mesh.

It is not possible to say in advance whether these complications will happen at all, or know how bad they will be if they do happen (although if they do happen, they might harm your quality of life a great deal). They can happen soon after surgery or many years later. **It is not always possible to treat mesh-related complications successfully.** Surgery might be needed to try to treat the complications, but it may not be possible to remove the mesh completely.

What complications can happen?

The mesh can sometimes come through into the vagina if the skin of the vagina doesn't heal over properly. This is called **vaginal mesh exposure**. This can cause some or all of the following symptoms:

- **Pain**, in the vagina or groin.
- **Vaginal problems**, including vaginal discharge or bleeding, and vaginal infections.
- **Problems having vaginal sex**. These might include painful sex for you and your partner.

The mesh can also come through into the bladder or the urethra. This can happen soon after surgery or some time later. It is thought to happen much less often than vaginal mesh exposure. It can cause problems including frequent urinary tract infections (UTIs), blood in the urine, difficulty emptying the bladder, pain when passing urine or having sex, leaking urine or having to get to the toilet quickly.

Some women who have had mesh surgery experience **pain** or **changes in sensation** in the back, abdomen, pelvis, leg, vagina, groin or the area between the front and back passages (the perineum). Problems such as pain and recurrent UTIs can be severe, persistent, and difficult to treat, although there may not be an obvious cause, such as mesh exposure.

How likely are these complications to happen?

In the studies NICE looked at, 1 to 10 women in 100 had vaginal mesh exposure after retropubic mesh sling (so 90 to 99 women in 100 did not). The diagrams on page 4 might help make sense of these numbers. **The evidence is very limited, and it's possible that more women than this might get mesh exposure or other mesh-related complications.**



Bulking agent injection

If you decide you don't want any of the operations or they aren't suitable for you, you might like to think about having a bulking agent injected.

What does this involve?

A synthetic substance is injected into the walls of the urethra (the tube that carries urine out of your body) to increase its size and allow it to remain closed with more force. **The bulking agent stays in the body permanently.**

No incisions (cuts) are made. Usually, a thin camera called a cystoscope is passed into the urethra. Injections are made through this or around this. This is usually done with local anaesthetic. It can also be done under:

- general anaesthetic – you'll be asleep for the whole operation, **or**
- spinal anaesthetic – you'll be awake but numb from the waist down and won't feel pain.

It is often done as an outpatient or as day surgery (so you don't need to stay in hospital). The recovery time is usually 1 or 2 days.

How do bulking agents compare with the operations for treating stress urinary incontinence?

NICE found very limited evidence to compare bulking agent injections with the operations. **Although many women find a bulking agent helps, experts agree that it is less likely to work at treating your stress urinary incontinence than the operations and the benefits wear off over time.** You may also need repeat injections for this option to work. You can still choose to have an operation later on if you try a bulking agent.

What are the possible complications with bulking agents?

The studies NICE looked at gave very limited information about possible complications, especially in the longer term, and it's not possible to say how likely they are to happen. But experts agree that risks are less likely to be serious than with the operations.

Some women get a burning sensation or bleeding when passing urine for a short period after the bulking agent has been injected. In studies NICE has previously looked at, including studies of older bulking agents, some women got the following complications (see over):

Continued over the page...

- an abscess where the bulking agent was injected
- problems emptying the bladder fully
- having to get to the toilet quickly to urinate
- urinary tract infection.

Having a bulking agent injected is **not** thought to lead to long-term wound complications or pelvic organ prolapse.



Other things to think about

If you might become pregnant

Surgery won't affect your ability to get pregnant. Being pregnant and giving birth can cause stress urinary incontinence to come back, even if you've had successful surgery for it. If it's possible that you might become pregnant, it's usually recommended that you don't have an operation until later. You could still think about having a bulking agent injected, and you may want to discuss this with your surgeon.

Risks of surgery

There are some possible problems that come with any kind of surgery. These depend on your medical history, how long the operation lasts and what it involves. Your surgeon will discuss these with you, but in general:

- **Infection.** All surgery carries the risk of infection, although you will be given antibiotics to reduce this risk.
- **Blood clots.** After an operation, blood clots can sometimes form in the veins of the legs (called deep vein thrombosis, or DVT), or in the lungs (called pulmonary embolus or PE). On average, 1 person or fewer in 100 gets problems from blood clots, so at least 99 people in 100 will not. If blood clots do happen they can usually be treated. More rarely, if blood clots occur they can cause serious problems and may even be fatal. To help stop this happening you will be given surgical stockings to wear during the operation and for a short time afterwards, and/or given medicines.
- **Back pain.** You may be lying on your back with your legs raised during the operation. This might lead to back pain for a short while afterwards, especially if you already have back pain problems. Talk to your surgeon and anaesthetist if this is a concern for you.

There is also a risk of problems from the anaesthetic. These are unlikely to happen unless you have particular medical problems, for example problems with your heart or breathing. Your anaesthetist will discuss these risks with you separately.

How do you feel about the options?

Issue	How important is this to me?			
	Very important	Important	Not that important	Not at all important
How troublesome my symptoms are now				
How effective the options might be at improving my symptoms				
The length of time I would have to spend in hospital and recovering				
My plans for pregnancy in the future				
The possibility of complications from mesh surgery				
The possibility of damage to other organs				
The possibility of pelvic organ prolapse				
The possibility of problems emptying my bladder properly or other problems urinating				
The possibility of pain or other problems having sex				
The possibility of pain in the pelvis				

Other things I want to talk about:

My current choice is (please circle your choice)

Colposuspension • Rectus fascial sling • Retropubic mesh sling • No surgery
 Bulking agent • Not sure

This is because:

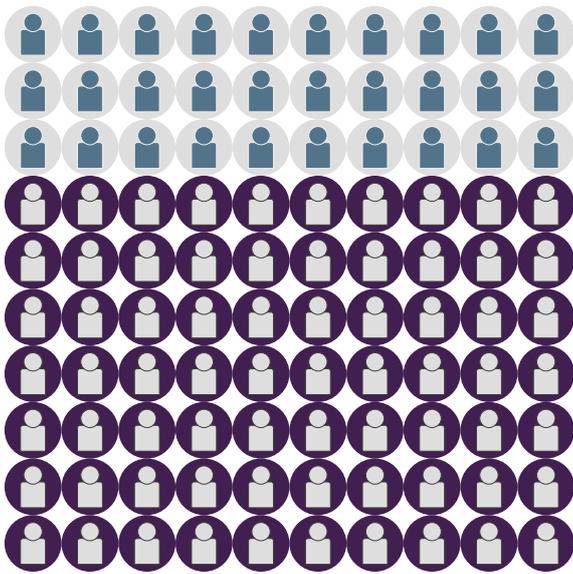
I realise I can change my mind.

Improvement in stress urinary incontinence symptoms 1 to 5 years after surgery

NICE looked at studies that compared the different types of operation. These diagrams show how many women who took part in those studies found their symptoms improved 1 to 5 years after having surgery.

The evidence is very limited and it's not possible to say for sure whether one of these types of operation is better than the others at treating stress urinary incontinence.

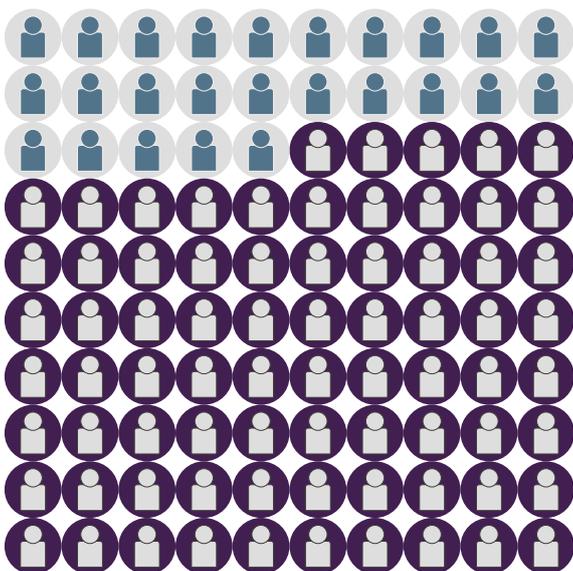
Colposuspension



In every 100 women who had colposuspension, 1 to 5 years after surgery **on average**:

-  70 women felt their symptoms were **improved**
-  30 women did not feel their symptoms were improved

Rectus fascial sling



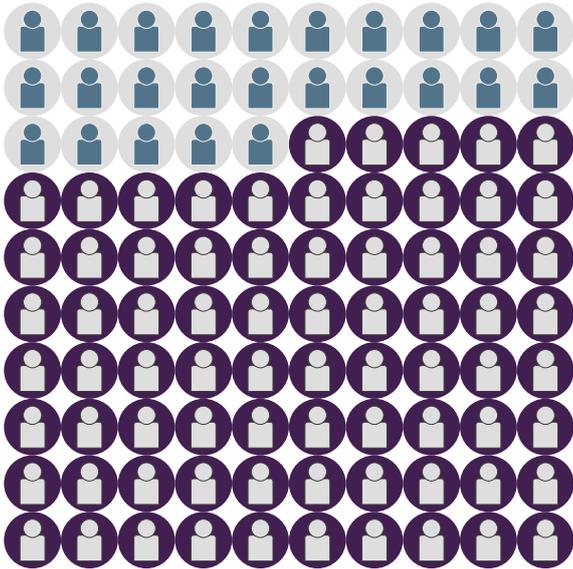
In every 100 women who had a rectus fascial sling, 1 to 5 years after surgery **on average**:

-  75 women felt their symptoms were **improved**
-  25 women did not feel their symptoms were improved

It is not possible to know in advance what will happen to any individual woman

Improvement in stress urinary incontinence symptoms 1 to 5 years after surgery (continued...)

Retropubic mid-urethral mesh sling



In every 100 women who had a retropubic mid-urethral mesh sling, 1 to 5 years after surgery **on average**:

-  75 women felt their symptoms were **improved**
-  25 women did not feel their symptoms were improved

It is not possible to know in advance what will happen to any individual woman