

# Tension-Free Vaginal Tape

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## **What is a Tension-Free Vaginal Tape (TVT) surgery?**

It is a surgery to place a narrow ribbon of polypropylene mesh underneath the urethra. The urethra is the tube that allows urine to pass out of the body. The ribbon of mesh acts as a layer of support so that the urethra is closed off when there is downward pressure, like when you sneeze. This helps to hold in the urine. During this surgery, the mesh is put in through an incision in the vaginal wall, then passed behind the pubic bone and brought out through two very small (1/2 inch) incisions in the pubic hair skin. Once in place, it has a 'U' shape, like a sling or hammock. The ends of the mesh are trimmed so they are below the skin.

## **When is this surgery used?**

It is used to treat stress urinary incontinence, which is leaking of urine that happens when you cough, sneeze, laugh, lift something heavy, or exercise.

## **What is polypropylene mesh?**

Polypropylene mesh is a surgical suture material that has been woven into a fabric. It is a permanent mesh that will not dissolve over time. It has been used for many years in various surgeries, including hernia repairs. The warnings about "vaginal mesh" that you may have heard about are for mesh placed through the vagina to support prolapse. The risk of mesh-related problems from the narrow ribbon of mesh used in the TVT procedure is much lower. If you have more questions about mesh, please talk with your surgeon. There are options for surgery without mesh that you can discuss.

Please visit the U.S. Food and Drug Information webpage below for more information about mesh use in Urogynecology surgery:

<https://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/ImplantsandProsthetics/UroGynSurgicalMesh/default.htm>

### **How do I prepare for surgery?**

- You will return for a visit at one of our Preoperative Clinics 2-3 weeks before your surgery. At this visit, you will review and sign the consent form, get blood drawn for pre-op testing, and you may get an electrocardiogram (EKG) done to look for signs of heart disease. You will also receive more detailed education, including whether you need to stop any of your medicines before your surgery.
- You may also get preoperative evaluation from your primary care doctor or cardiologist, especially if you have heart disease, lung disease, or diabetes. This is done to make sure you are as healthy as possible before surgery.
- Quit smoking. Smokers may have difficulty breathing during the surgery and tend to heal more slowly after surgery. If you are a smoker, it is best to quit 6-8 weeks before surgery.
- Be active. If you can, walk every day or do other activities you enjoy.

### **When will I go home after surgery?**

Most women are able to go home the same day the surgery is done. However, depending on your overall health and your condition at the end of surgery, you may need to spend 1 night in the hospital. Check with your doctor to see what is expected.

- You must arrange for someone to come with you, stay while you are having surgery, and drive you home afterwards.
- If you do not know someone who can do this, please call the Guest Assistance Program at: (734)764-6893 or (800)888-9825.

***You will not be able to have your surgery if there is no-one with you.***

If you live more than a 4-hour drive away from the hospital, or live in an area without easy access to an emergency department, we recommend you plan to spend another night or two close to the hospital before you go home. For assistance in reservations, contact the Patient and Visitor Accommodations Program at 800-544-8684.

### **Do I need someone to stay with me after surgery?**

If you live alone, we recommend you ask a friend or relative to stay with you at least until noon the day after you get home. It is good to have someone who plans to check on you in person or by phone every day for the first week you are home. You should stock your home with food before you leave for the hospital, but you may still need someone to shop for you or drive you to the store during your first week home. If you don't know someone who can help you, call the Guest Assistance Program at (800) 888-9825 Monday to Friday between 9 am and 5 pm.

### **What can I expect during the surgery?**

1. In the operating room, you will receive general anesthesia (medicine to produce deep sleep, loss of feeling and muscle relaxation) or spinal anesthesia (medicine injected near the spinal cord to produce loss of feeling from your abdomen to your toes). The choice of anesthesia is a decision that will be made by the anesthesiologist based upon the planned surgery, your history and your wishes. Most women receive general anesthesia.
2. After you are asleep, a tube (catheter) will be placed in your bladder to drain urine and monitor the amount of urine coming out during surgery. The catheter will usually be removed before you go home.
3. Compression stockings will be placed on your legs to prevent blood clots in your legs during surgery. You may get a shot, with a small needle placed under your skin, of a blood-thinning medication called heparin.

## What happens after the surgery?

You will go to the recovery room where you will be monitored until you are ready to go home.

- You will be checked to see if your bladder empties normally. It is common to temporarily have trouble completely emptying your bladder after this surgery. If you cannot empty your bladder normally, then either:
  - You will have the catheter put back in for a few more days and then come to the Urogynecology Clinic for a second check, or
  - You will be taught how to catheterize yourself with a short, straight, narrow tube. You will do this after each time you urinate (or after 4 hours if you cannot go) until you can empty your bladder normally. For most women, this takes a few days, but for some it may take weeks.
  - We know no one wants to go home with a catheter, but it is important to protect your bladder.
- Use Miralax to keep your stool soft like toothpaste. You should not strain or have discomfort with bowel movements.

## What are possible risks from this surgery?

We work very hard to make sure your surgery is as safe as possible, but problems can occur, even when things go as planned. It is important that you are aware of these possible problems, how often they happen, and what will be done to correct them.

### Possible risks during surgery include:

- **Bleeding:** If there is excessive bleeding, you will receive a blood transfusion. **If you have personal or religious reasons for not wanting a transfusion, you must discuss this with your doctor before the surgery.** The risk of having a blood transfusion is less than 1 in a 100.

- **Damage to the bladder, ureters** (the tubes that pass urine from the kidneys to the bladder), **or bowel:** The risk of damage is less than 1 in 100. If damage occurs, it will be repaired while you are in surgery if possible.
- **Adding a surgery requiring an abdominal incision:** The location and size of the incision will depend on what kind of additional surgery you need. If you have an abdominal incision, you may need to stay in the hospital for one to two nights.
- **Nerve damage:** We are very careful to position you in the operating room so that there is no harmful pressure on your nerves during surgery, but there is a small risk that this will happen. Your nerves can also be damaged by the surgery itself. The overall risk of nerve damage is 2 to 10 in 100. Nerves often recover, but it can take many months.
- **Death:** All surgeries have a risk of death. Some surgeries have a higher risk than others. The chance of dying from this kind of surgery is less than 1 in 10,000.

**Possible risks that can occur days to weeks after surgery:**

- **Blood clot in the legs or lungs:** A blood clot in a vein blocks blood flow and can cause leg swelling and pain. It can travel to the lungs and cause shortness of breath, chest pain and death. The risk of getting a blood clot after surgery is about 2 in 1,000.
- **Bowel obstruction:** A blockage in the bowel that causes abdominal pain, bloating, nausea and vomiting. The risk of bowel obstruction is less than 5 in 1,000.
- **Discomfort during sexual activity:** If this occurs, we can help you reduce it. The risk of new discomfort following surgery is less than 5 in 100.
- **Exposed mesh:** The permanent mesh used for the TVT can erode through the vaginal tissue or, rarely, into the bladder or urethra. This can cause pain or infection and you may need surgery to remove the exposed mesh. The risk of mesh complications is about 2 in 100.

- **Infection:** This includes urinary tract infection and also infection where the surgery was done. Infections are treated with antibiotics. The risk of getting a urinary tract infection is about 40 in a 100. The risk of other surgery-related infections is about 7 in 100.
- **Scar tissue:** Tissue thicker than normal skin forms where surgery was done. There may be pain at the scar tissue. Scar tissue rarely requires treatment.
- **Urinary symptoms:**
  - Temporarily unable to empty your bladder normally when you urinate. Within the first 2 weeks after surgery, the risk of incomplete bladder emptying is up to 50 in 100. If needed, you will be taught how to use a catheter.
  - Continued leaking with laughing, coughing, sneezing or exercise. The risk of this is 10 to 15 in 100.
  - Urine stream is slower than before surgery or stops and then restarts. It will improve with time. Do not try to push your urine out; pushing will stop urine flow, just like when you sneeze.
  - New or worse bothersome urinary urgency or leaking because of urgency. These symptoms often gradually go away by around 6 months after the surgery. The risk of this is not the same for everyone. Talk to your doctor if you have questions about this.

## **Discharge Instructions**

**The rest of this handout includes the same information you will receive when you are discharged after surgery. We also include it in this handout because it will help you plan ahead.**

## **When should I call my doctor?**

**Call your doctor right away, any time of the day or night, including on weekends and holidays, if you have any of the following signs or symptoms:**

- A temperature over 100.4°F (38°C)  
*If you don't have one, please buy a thermometer before your surgery.*
- Heavy bleeding (soaking a regular pad in an hour or less)
- Severe pain in your abdomen or pelvis that the pain medication is not helping
- Chest pain or difficulty breathing
- Swelling, redness, or pain in your legs
- An incision that opens
- An incision that is red or hot
- Fluid or blood leaking from an incision
- New bruising after leaving the hospital that is large or spreading. A little bit of bruising around an incision is normal.
- Nausea and vomiting
- Heavy vaginal discharge (spotting and light discharge are normal)
- Skin rash
- Unable to urinate at all
- Pain or stinging when you pass urine
- Blood or cloudiness in your urine
- Non-stop urge to pass urine, but only dribbling when you try to go
- A sense that something is wrong

### **What phone number should I use to call my doctor?**

- Between 8am and 5pm Monday - Friday, call the nurse at the clinic where you went to see your doctor. Clinic phone numbers are:
  - Ann Arbor Von Voigtlander Clinic: (734) 763-6295
  - Chelsea Clinic: (734) 475-4003
  - Midland Clinic: (989) 837-9047
  - Northville Clinic: (248) 305-4400
  - West Ann Arbor Clinic: (734) 998-7380

- At night or on the weekend call (734) 936-6267 and ask for the gynecology resident on call. There is always someone on call to help you.

### **How do I prevent nausea?**

The best way to prevent nausea is to eat frequent small meals. It is especially important to eat something before taking pain medication.

### **What can I eat?**

- You can eat your regular diet after you go home. Frequent small meals are easier to digest than a few big meals.
- Eat high protein foods:
  - Beans and lentils
  - Nuts, including nut-based milks
  - Eggs
  - Dairy products (Greek yogurt is very high in protein)
  - Chicken and other meats
- Eat foods that are rich in vitamins that promote healing:
  - Bell peppers
  - Dark, green, leafy vegetables like kale and spinach
  - Broccoli
  - Sweet potatoes
  - Carrots
  - Squash
  - Tomatoes
  - Citrus fruit
  - Berries
  - Kiwi fruit
  - Cantaloupe
  - Apricots
  - Mango



- **If you have diabetes it is very important to keep your blood sugar under good control.** Take your medicines on time and follow your diet. Check your blood sugar every day and call the doctor who helps you manage your diabetes if your blood sugar is too high.

### **How often should I take pain medications?**

It is normal to have some pain after surgery. The goal of taking pain medications is to make you as comfortable as possible while keeping the risk of bad or bothersome side effects as low as possible. We want you to feel comfortable enough to get up, wash, get dressed, and do simple tasks in your home. Some discomfort is likely. We do not expect you to be completely free of pain.

### **The following recommendations are general guidelines for taking pain medications:**

- Unless your doctor gives you a different plan, ibuprofen is the main medicine you will use to manage your pain.
- You may be told to add acetaminophen if ibuprofen alone does not manage your pain.
- You may also get a prescription for an opioid such as hydrocodone or oxycodone. The opioid should be added as needed to reduce pain that is not adequately relieved by ibuprofen and acetaminophen.
  - Norco® contains hydrocodone and acetaminophen.
  - Percocet® contains oxycodone and acetaminophen.
  - Oxycodone does not contain any acetaminophen.

**If you cannot take acetaminophen (Tylenol®), ibuprofen (Motrin®), hydrocodone, or oxycodone, please talk to your doctor about this.**

Do not take more than 3,250 mg of acetaminophen (10 Regular Strength Tylenol® pills) in one 24-hour day. Remember that many pain relievers, such as Norco® and Percocet®, also contain acetaminophen. It is important to read labels.

### **How do I take Ibuprofen?**

Stay on a schedule. You will do better if you prevent pain by taking the ibuprofen every 6 hours on a regular schedule instead of waiting until you are in pain. A typical schedule is:

- 8 am - eat breakfast and take 600 mg ibuprofen
  - 2 pm - eat a snack and take 600 mg ibuprofen
  - 8 pm - eat a snack and take 600 mg ibuprofen
  - 2 am - if you wake up on your own, eat a small snack such as a cracker and take 600 mg ibuprofen (you do not need to set an alarm clock).
- When you are doing well with ibuprofen alone, you can gradually decrease how often you take it. It is a good idea to take a 600 mg pill before you start a more tiring activity such as going shopping or for a long walk.
  - Once you get more active, you may have a day when your pain gets a little worse. If this happens, take an ibuprofen 600 mg pill. If ibuprofen does not relieve the pain, add acetaminophen 650 mg (2 Regular Strength Tylenol tablets).

### **What if this schedule does not control my pain?**

- If ibuprofen alone, taken on an every 6-hour schedule, does not control your pain, add 650 mg acetaminophen (2 Regular Strength Tylenol tablets) in between the ibuprofen. For example, if you take ibuprofen at 2 pm and 8 pm, you would add acetaminophen at 5 pm. You can continue to alternate ibuprofen and acetaminophen on every 3-hour schedule. Do not take more than 10 Regular Strength Tylenol (325 mg) tablets in a 24-hour period.

- If alternating ibuprofen and acetaminophen does not relieve your pain, add an opioid pain medication. Take the opioid as instructed by your doctor. For example, prescriptions for oxycodone usually say, “Take 1 to 2 pills every 4 to 6 hours as needed for pain.” Use the smallest amount of opioid that you need to control your pain. Reduce the number and frequency of opioids as soon as you can.
- If your prescription is for Norco or Percocet (contains acetaminophen) substitute it for acetaminophen.
- Adding heat or ice is also very helpful and can be used any time.
- Do not push or press on your incision. It is normal for your incision to be sore for up to 6 weeks if you push on it.

**Important information about opioids:**

- Opioids are prescribed for short-term use and should be stopped as soon as possible after surgery.
- Take the lowest dose of opioids only as needed, and do not take more opioid medication than your doctor has prescribed.
- Common side effects and risks of opioids include drowsiness, mental confusion, dizziness, nausea, constipation, itching, dry mouth, and slowed breathing.
- Never mix opioids with alcohol, sleep aids or anti-anxiety medications. These are dangerous combinations that increase the harmful effects of opioid pain medication. Many overdose deaths from opioids also involve at least one other drug or alcohol.
- Keep opioid medications locked away from the reach of children. This also helps prevent theft.
- It is illegal to sell or share an opioid without a prescription properly issued by a licensed health care prescriber.

## **What should I do with unused opioid pain medication?**

Do your part to prevent opioid abuse by properly disposing of unused medication. Leftover pain medications make tempting targets for theft. They can also be dangerous if children or pets find them.

### **Safe Take-Back Locations**

- To find an opioid drop-off location in Michigan near you, type the following into an internet search engine such as Google or Bing: [michigan-open.org/takebackmap](http://michigan-open.org/takebackmap). This will take you to a web site with a map that shows all the opioid drop-off locations in Michigan.
- To find drop-off locations in other states, use [nabp.pharmacy/initiatives/awarxe/drug-disposal-locator](http://nabp.pharmacy/initiatives/awarxe/drug-disposal-locator)

## **What do I do if there is no take-back location near me?**

If there is no Take-Back program in your area, go to [michmed.org/MmA6N](http://michmed.org/MmA6N) to learn how to safely dispose medicines in your household trash.

## **When should I restart taking my usual medications?**

- Before you leave the hospital, ask your doctor when you can restart aspirin or any blood thinning medications.
- If you use vaginal estrogen, ask when you should restart it.
- Otherwise, start back on your usual schedule as soon as you get home.

## **How do I care for my incisions?**

- For incisions inside your vagina:
  - Incisions inside the vagina are closed with dissolvable stitches. When they dissolve you may see little bits of suture material that look like thin pieces of string on your underwear or on toilet tissue after wiping. This is normal.

- Do not put anything inside the vagina, including tampons or your fingers, until your doctor evaluates you at a postop visit and tells you when it will be OK.
- Do not have vaginal intercourse until your doctor evaluates you at a postop visit and tells you when it will be OK.
- Do not douche.
- For incisions on your skin:
  - You may shower when you return home after your surgery. If there is a dressing over the incision, remove it before your first shower or bath. Leave the slim adhesive strips that are under the dressing in place. During the week after surgery, they will usually curl up at the edges and then come off on their own. If they are still there a week after surgery, gently remove them.
  - Your incisions will heal best if they are kept clean and dry.
  - To clean the incisions, first wash your hands, and then get your hands sudsy with soap and gently wash or let the sudsy water run down over the incisions.
  - Dry the incisions well after washing by gently patting with a towel. You may use a blow dryer, but it must be on a low-heat setting.
  - Do not put any lotion, oil, gel, or powder on or near your incisions.

### **What kind of vaginal bleeding is normal?**

Spotting of pink or red blood from the vagina is normal. Brown-colored discharge that gradually changes to a light yellow or cream color is also normal and can last for up to 6 weeks. The brownish discharge is old blood and often has a strong odor, this is okay. Call us if it becomes heavier or foul-smelling.

### **When will my bladder function get back to normal?**

- You received extra fluid through your I.V. while you were in the hospital, so it is normal to urinate (pee) more than usual when you first get home.

- It is normal for your bladder function to be different after surgery. You may notice a pause before your urine stream starts or that your urine stream is slower. This will gradually get better, but it may take up to 6 months before you are back to normal. Be patient, relax, and sit on the toilet a little longer.
- Drinking more water than usual will not help the bladder recover faster.

**If you are doing self-catheterization:**

- It is OK to wash, rinse, and reuse the catheters, but start each day with a new catheter. If you need more catheters, or any other supplies, please call a nurse using the clinic phone numbers in the section called “What phone number should I use to call my doctor?” Do not use the gynecology resident on call phone number for this situation.
- Go to the bathroom at least once every 4 hours while you are awake.
- Go to the bathroom often enough so that the total of the amount you urinate plus the amount you drain with the catheter is between 8 ounces (250 ml) and 13 ounces (400 ml) each time you go.
- You can stop doing self-catheterization when the amount you urinate is 150 ml or more **and** the amount you drain from your bladder after you urinate is less than 150 ml two times in a row.

**If you have an in-dwelling catheter:**

- Using soap and water, wash the skin around where the catheter leaves your body and the catheter tubing two times each day. Clean the outside of the tubing tips with isopropyl (rubbing) alcohol before changing bags.
- Make sure the tube is not kinked and the bag is well below the level of your bladder at all times.
- **Call a nurse**, using the clinic phone numbers in the section called “What phone number should I use to call my doctor?” if:
  - Catheter is not draining
  - Catheter falls out

- Urine has blood in it
- Urine smells bad
- Urine is cloudy
- Your temperature is over 100.4°F (38°C).

### **What do I need to know about bowel movements?**

- Starting as soon as you get home, take 17 grams of Miralax (one capful) twice a day to keep your stool soft and prevent constipation. It is important to prevent constipation because straining can damage your stitches. Your stool should be as soft as toothpaste. If your stool gets too loose, cut back to using Miralax only once a day.
- If you used a bowel prep before surgery, it is common not to have a bowel movement on the first and second day after surgery.
- If you have not had a bowel movement by 7 p.m. on the third day after surgery, do **one** of the following at bedtime:
  - Drink 1 ounce (2 tablespoons) of Milk of Magnesia (MOM). If you have used MOM before and know you need to take 2 ounces for it to work for you, it is OK to do this, or
  - Drink 1 cup of Smooth Move Tea, or
  - Take 2 Senekot tablets.
- Go for short walks. Walking and being active will help you have a bowel movement.
- If you have not had a bowel movement by noon on the fourth day after surgery, call a nurse using the clinic phone numbers in the section called “What phone number should I use to call my doctor?” Do not use the gynecology resident on call phone number for this situation.

### **What is a normal energy level?**

It is normal to have a decreased energy level after surgery. Listen to your body. If you need to rest, do it. Give yourself permission to take it easy. Once you

settle into a normal routine at home, you will find that you slowly begin to feel better. Walking around the house and taking short walks outside will help you get back to normal.

### **What kind of exercise can I do?**

- Exercise is important for a healthy recovery. We encourage you to begin normal physical activity, like walking, within hours of surgery. Start with short walks and gradually increase the distance and length of time that you walk.
- Ask your doctor when you can start specific activities like bicycling, swimming or dancing.
- Allow your body time to heal. Do not restart a difficult exercise routine until you have had your post-op exam and your doctor says it is OK.

### **What activities can I do?**

Listen to your body and gradually increase what you do. If you start to feel tired, sore, or in pain, lie down to rest.

- **Showers and baths:** You may shower starting 24 hours after your surgery. You may also take a bath, but do not soak for more than 10 minutes. Wash yourself and get out. Do not fill the tub above hip level. Do not get in or out of a tub without assistance. **It is very important to avoid anything that could cause you to slip and fall.**
- **Sitz bath:** You may be told to do a sitz bath. You can buy a sitz bath that sits on the toilet seat for less than \$15 at stores that sell home medical equipment such as Walgreens or Walmart. Or you can use a bath tub. If you use a tub, fill it to hip level with warm water. You can mix a tablespoon of plain Epsom Salt into the water. Do not stay in the tub for more than 10 minutes.
- **Can I douche?** No.



- **Stairs:** Walking up or down stairs is okay, but you may need some assistance at first.
- **Driving:** Do not drive while you are taking prescription pain medications. After you stop them, you may drive when you are sure you can move as quickly as you need to in an emergency without hurting yourself. Before you drive, sit behind the wheel and practice slamming on the brakes and turning to look over your shoulder. If this hurts, wait and check again in a few more days.
- **Lifting:** Unless you are given other instructions, for 6 weeks after your surgery do not lift anything that you cannot easily lift with one hand.
- **Sex:** Do not resume any intercourse before your follow-up visit with your doctor. Start when your doctor says it is OK. When you do start, expect that things may feel different than before the surgery. The first few times may be uncomfortable. Go slowly and use lots of lubricant. You will get back to normal with time.
- **Travel:** It is best if you do not go far away from home before your postop visit with your doctor. If you have travel plans, talk to your doctor about this before your surgery.
- **Work:** The amount of time you will be off work after surgery depends on both your surgery and your job. This should have been discussed with your doctor before surgery. If you have any questions about this, call your doctor.
  - If you have **disability or work release forms** that need to be completed, and you were seen at the Von Voigtlander Clinic, please fax them to (734) 615-9735, attention: Disability Paperwork. If you were seen at one of the other clinics, use the clinic phone number in the section called “What phone number should I use to call my doctor?” to find out where to fax your paperwork.
  - Send the forms **at least a week before** you need them completed. If you need to talk with a representative regarding your disability paperwork, please call the clinic where you were seen and ask to be

connected with the person who handles disability and work release forms for your doctor.

- After surgery, call if you need a back to work note before your scheduled post-op visit. Use the clinic phone numbers in the section called “What phone number should I use to call my doctor?”

## **How do I follow-up with my doctor?**

- Check the printed hospital discharge information for the day and time of your postop follow-up visit with your doctor. If you do not find one, call to schedule one on the first business day after you are home. Use the clinic phone numbers in the section called “What phone number should I use to call my doctor?”
- If you have not already done so, sign up for the online Patient Portal. Benefits of the portal include quick access to test results, appointment scheduling, and messaging your doctor’s office. Instructions for how to sign up are included in your printed discharge information.
- If any organs or tissue were removed during your surgery, they were sent to the Pathology Lab for analysis. Pathology Lab results take about a week to come back. Your doctor may release the pathology report to your online patient portal or send it to you in a letter. Some doctors prefer to wait and discuss it with you when you come for your postop visit. If you have questions about this, ask your doctor for more details.

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