



## **PROCEDURE EDUCATION LITERATURE**

We recommend that you read this handout carefully in order to prepare yourself or family members for the proposed procedure. In doing so, you will benefit both the outcome and safety of the procedure. *If you still have any questions or concerns, we strongly encourage you to contact our office prior to your procedure so that we may clarify any pertinent issues. "An educated patient is the best patient."*

### **LAPAROSCOPIC-ASSISTED VAGINAL HYSTERECTOMY (LAVH)**

#### **Definition**

Laparoscopic – examination of, or surgery on, abdominal structures by means of an illuminated (lighted) tubular instrument passed through a small incision in the wall of the abdomen; "telescopic" surgery

Hyster – of or denoting the womb (uterus)

Ectomy – denoting surgical removal of a segment or all of a part or an organ

Hysterectomy, the surgical removal of the uterus and cervix, is the most common non-pregnancy related major surgery performed on women in the United States. Approximately 600,000 women undergo this procedure every year, 90% of the time the procedure is elective (non-emergent).

The most common reasons for hysterectomy are:

- Fibroid tumors – non-cancerous tumors that can cause pelvic pain and pressure, heavy uterine bleeding, painful intercourse, abdominal distortion and other symptoms
- Endometriosis – a condition in which tissue like that normally found within the uterine lining grows in other parts of the abdomen or uterine muscle (adenomyosis) where it can cause pain
- Uterine prolapse – the sinking or downward movement of the uterus from its normal position into the vagina
- Cancer of the uterus or cervix – these conditions are usually best treated by a gynecologic oncologist specially trained to perform surgery for cancer

Hysterectomy can be subdivided into total hysterectomy, which includes removal of the uterus and cervix, or sub-total hysterectomy, removal of only the upper part of the uterus and leaving the cervix in place. Hysterectomy does not require removal of the ovaries; in fact, only around half of hysterectomies are done with removal of both ovaries. (See *Salpingo-Oophorectomy Procedure Education Literature* for more information)

Hysterectomy can generally be accomplished through several different approaches:

- Vaginal hysterectomy: operating entirely through the vagina to remove the uterus and (usually) cervix. Removal of the tubes and ovaries can also be performed vaginally.
- Laparoscopic Assisted Vaginal Hysterectomy (LAVH): operating through the abdomen with telescopic vision and small instruments to release the normal attachments of the uterus as well as scar tissue attachment that may be present, before finishing the operation through the vagina.
- Robot Assisted Laparoscopic Hysterectomy (DaVinci surgery): operating through the abdomen with telescopic vision and small instruments using robotic assistance to release the normal attachments of the uterus as well as scar tissue attachment that may be present.
- Laparoscopic Supra-Cervical Hysterectomy: operating through the abdomen with telescopic vision and small instruments to release the normal attachments of the upper uterus as well as scar tissue attachment that may be present. The cervix remains attached to the vagina. The part of the uterus that was removed is then cut into tiny pieces (morcellated) and removed through the small abdominal incisions. Removal of the tubes and ovaries can also be done if desired.
- Robot Assisted Laparoscopic Supra-Cervical Hysterectomy: operating through the abdomen with telescopic vision and small instruments using robotic assistance to release the normal attachments of the uterus as well as scar tissue attachment that may be present. The cervix remains attached to the vagina. The part of the uterus that was removed is then cut into tiny pieces (morcellated) and removed through the small abdominal incisions. Removal of the tubes and ovaries can also be done if desired.
- Laparotomy: traditional "open" abdominal surgery that allows the surgeon to see and reach into the pelvis. This is often used when a larger uterus is present or other procedures are planned.





Before hysterectomy it is important to consider alternative treatments. There are many treatments for fibroids, endometriosis or prolapse that can help give relief of your symptoms while allowing you to keep your uterus. Careful (timely) planning of cancer surgery can be made. Only when faced with a severe pelvic infection or uncontrolled uterine bleeding does hysterectomy become an emergency surgery.

The approach to hysterectomy will depend on your symptoms, the size of your uterus, any previous surgeries you might have had, treatment goals and the preference of you and your doctor. The pros and cons of each will be discussed with you in your consultation.

#### **Preparation**

As with all procedures in which general anesthesia is administered, you will be asked not to eat or drink anything after a certain time, usually midnight, on the evening prior to your surgery. You may brush your teeth in the morning but should not swallow the water. If you are on medications that must be taken, you will have discussed this with us and/or the anesthesiologist and instructions will have been given to you. The procedure will not be performed if you are currently taking, or have recently taken any medication that may interfere with your ability to clot your blood ("blood thinners, aspirin, anti-inflammatory medicines, etc..."). The most common of these medications are aspirin and all related pain relievers or anti-inflammatory compounds (whether prescription or over-the-counter). ***Please refer to the attached list and tell us if you took any of these within the past 10 days.*** If your new medication is not on the list, alert us immediately so that we may ensure optimal procedure safety. We will have reviewed all of your current medications with you during the pre-operative/pre-procedure consultation. You are obligated to inform us if anything has changed (medication or otherwise) since your previous visit.

#### **Procedure**

LAVH involves the detachment of blood vessel and supporting structures of the uterus through the abdomen and removal of the uterus through the vagina. You will be lying flat on the operating table with your knees and hips bent and your heels in stirrups much like you would for a pelvic examination. General anesthesia is administered and the operation is started.

After your vagina and abdomen are cleaned with an antibacterial soap and you are covered with surgical drapes, a small incision is made at the belly-button. A needle is placed through this incision and carbon dioxide gas gently pumped into the abdomen to make space for clear vision and operating. The laparoscope is then placed through this incision and additional incisions are made to allow insertion of surgical instruments. Using the laparoscope and small instruments, the blood vessels to the uterus are tied, stapled or cauterized to prevent bleeding and the tissues supporting it are detached to allow removal. The surgery is then completed through the vagina by detaching the uterus and closing the top of the vagina with suture.

In the case of a subtotal hysterectomy, the top of the uterus is cut free from the cervix using the laparoscopic tools. The cervix remains attached to the vagina. The part of the uterus that was removed is then cut into tiny pieces (morcellated) and removed through the small abdominal incisions.

Other procedures, such as removal of the ovaries, prolapse surgery, or anti-incontinence surgery can be performed using the laparoscope. The incisions on the abdomen are then closed and dressings applied.

#### **Post Procedure**

You will be in the recovery room for a short time before being sent to your hospital bed. Most patients usually will stay one or two nights in the hospital, although it is possible to have a LAVH as an ambulatory procedure. There may be some discomfort around the incision sites, within the vagina, and on the lower abdomen depending on the procedure you had performed. Most patients have some sense of urgency (the feeling of a need to urinate). There will be a small dressing over the abdominal incision site, which is to remain until your follow up visit unless otherwise instructed. Sometimes a catheter is left in the urethra and removed the afternoon or morning after surgery, when you are better able to walk to the toilet.

There may be small blood staining on the abdominal dressing or menstrual pad. If the dressing or pad becomes blood-soaked, or you see active blood oozing, please contact us immediately. You may shower the day after surgery, but no bathing or swimming (unless otherwise instructed). It is normal to have some bloody discharge from the vagina for a day or two. If you have significant bleeding, you should call our office. We ask that you refrain from any strenuous activity or heavy lifting until your follow up office visit. Every patient has some degree of swelling and bruising, and it is not possible to predict in whom this might be minimal or significant.

We strongly encourage you to take two to three weeks off from work following LAVH; with longer time off if your occupation requires strenuous activity or heavy lifting. In the first 48 hours, it is to your advantage to minimize activity and to often rest in a lying down position. Periodic walking is encouraged. Some patients have almost no discomfort while others are somewhat uncomfortable for a few days to weeks. Severe pain is unlikely but possible. You will be provided with a prescription for pain medication to alleviate most of the discomfort. Take this medication as prescribed and as needed. An antibiotic prescription may also be given and should be taken until completion. If any side effects occur, contact our office immediately.

*\*You must refrain from any strenuous activity or heavy lifting until we tell you otherwise. Sexual activity of any sort is absolutely prohibited (usually six to eight weeks) until we tell you that you may resume.*





#### **Expectations of Outcome**

Hysterectomy is a major surgery and you will need several weeks of recovery before you feel well again. With passing days and weeks, you will see improvement and gradually resume your normal activities. It is common for women to report feeling tired and weak six weeks after this surgery.

Most women will feel better following hysterectomy, both in improved mood and sense of well-being. Some women will experience feelings of loss or depression following hysterectomy, especially when childbearing was not completed or surgery was because of cancer. Many women report an improved sex-life after surgery. This can be from relief of constant pain, improved energy, and no worry of becoming pregnant.

#### **Possible Complications of the Procedure**

All surgical procedures, regardless of complexity or time, can be associated with unforeseen problems. They may be immediate or even quite delayed in presentation. While we have discussed these and possibly others in your consultation, we would like you to have a list so that you may ask questions if you are still concerned. Aside from anesthesia complications, it is important that every patient be made aware of all possible outcomes, which may include, but are not limited to:

- **Laparoscopy:** Please see *Laparoscopy Procedure Education Literature* for possible complications of laparoscopic surgery.
- **Urinary Tract Infection or Sepsis:** Although we may give you antibiotics prior to and after the operation, it is possible for you to get an infection. The most common type is a simple bladder infection (after the catheter is removed) that presents with symptoms of burning urination, urinary frequency and a strong urge to urinate. This will usually resolve with a few days of antibiotics. If the infection enters the bloodstream, you might feel very ill. This type of infection can present with both urinary symptoms and any combination of the following: fevers, shaking chills, weakness or dizziness, nausea, and vomiting. You may require a short hospitalization for intravenous antibiotics, fluids, and observation. This problem is more common in diabetics, patients on long-term steroids, or in patients with disorders of the immune system.
- **Wound Infection:** The incision sites can become infected. While it typically resolves with antibiotics and local wound care, occasionally, part or all of the incision may open and require revision and or catheter replacement.
- ***\*If you have symptoms suggesting any of the above after your discharge from the hospital, you must contact us immediately or go to the nearest emergency room.***
- **Blood Loss/Transfusion:** The vaginal region is quite vascular. Usually blood loss in this procedure is minimal to moderate. In some cases blood loss can be significant enough to necessitate transfusion.
- **Injury to Urinary Tract:** The uterus sits between the ureters (tubes that carry urine from the kidneys to the bladder) on either side and behind the urinary bladder. All of these structures are subject to injury, both with complicated and seemingly routine hysterectomy. These injuries can be immediately recognized or become evident in the days and weeks following surgery.
- **Organ Injury:** During any part of the surgical procedure, any organ in the abdomen or pelvis (liver, spleen, colon, intestine, bladder, stomach, ureter, etc.) can be inadvertently injured. Often the injury is minor and can be treated with relative ease. In other instances, when the injury is major or the repair is complicated, more extensive surgery may be necessary. Treatment depends on the particular organ injured and the severity of the injury.
- **Death:** When hysterectomy is performed for reasons other than cancer or pregnancy complication, the risk of death is six to 11 per 10,000 hysterectomies. When hysterectomy is performed for complications of pregnancy, the rate is 29 to 38 per 10,000 and from 70 to 200 per 10,000 when hysterectomy is performed for cancer.
- **Painful Intercourse and Vaginal Shortening:** After hysterectomy, the shape of the vaginal vault can change. In certain cases, the depth of the vagina may be lessened and the angle changed. While usually not a problem, some women may complain of pain or difficulty with intercourse. Sometimes it is temporary, but it can also be permanent.
- **Cervical Bleeding/Need for Pap Smear:** After a sub-total (supracervical) hysterectomy, it is possible to have bleeding from the cervix. This can be due to the monthly hormone (menstrual) cycle or from other, more concerning causes. You will need to continue to have regular, periodic Pap smears to help detect any abnormalities of the cervix.
- **Deep Vein Thrombosis (DVT)/Pulmonary Embolus (PE):** In any operation (especially longer operations), you can develop a clot in a vein of your leg (DVT). Typically, this presents two to seven days (or longer) after the procedure as pain, swelling, and tenderness to touch in the lower leg (calf). Your ankle and foot can become swollen. ***If you notice these signs, you should go directly to an emergency room and also call our office.*** Although less likely, this blood clot can move through the veins and block off part of the lung (PE). This would present as shortness of breath and possibly chest pain. We may sometimes ask the medical doctors to be involved with the management of either of these problems.
- **Bleeding/Hematoma:** When a small blood vessel continues to ooze or bleed after the procedure is over, the area of collected blood is referred to as a hematoma. The body normally re-absorbs this collection over a short period of time, and surgical drainage is rarely necessary.
- **Lower Extremity Weakness/Numbness:** This, too, is a rare event which may arise due to your position on the operating table. It is possible in procedures in which you are in the lithotomy (legs up in the air) for a long period. The problem is usually self-limited, with a return to baseline expected.
- **Chronic Pain:** As with any procedure, a patient can develop chronic pain in an area that has undergone surgery. Typically, the pain disappears over time, although some feeling of numbness may persist. If persistent, further evaluation may be necessary.



- Unintentional dissemination of an unrecognized uterine malignancy through the use of morcellation technique: Uterine morcellation is commonly performed intracorporeally to remove the uterus through small incisions. Most commonly, morcellation is performed to reduce the size of an enlarged uterus so that it may be removed through small laparoscopic incisions or through the vagina, thus minimizing the morbidity of a larger “open” incision. Less than one out of 1000 women who undergo hysterectomy for fibroids (leiomyomas) will have an underlying malignancy. Currently there is no reliable method to differentiate between benign fibroids from malignant fibroids (leiomyosarcomas or endometrial stromal sarcomas) before they are removed. These tumors have a very poor prognosis even if they are removed intact. The risk of spreading an unknown occult uterine malignancy through morcellation is thought to be very low at approximately 0.1%-0.25%.

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Patient

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Date

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Physician

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Date

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Witness

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Date

The information contained in this Medical Informed Consent Form (“Consent Form”) is intended to solely inform and educate and should not be used as a substitute for medical evaluation, advice, diagnosis or treatment by a physician or other healthcare professional. Please call your doctor if you have any questions.