TOTAL LAPAROSCOPIC HYSTERECTOMY (TLH)

We recommend that you read this handout carefully to prepare yourself or family members for the proposed procedure. A proper understanding of the procedure, its preparation, and post-procedure expectations and care can improve your safety and outcome. We strongly encourage you to contact your Care Center prior to your procedure if you still have any questions or concerns.

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 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. The procedure is elective (non-emergent) 90% of the time.

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 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 in 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 (the removal or 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 the hysterectomies are done with removal of both ovaries. (See salpingo-oophorectomy procedure education literature for more information.) Most hysterectomies involve removal of the fallopian tubes as they serve no purpose without an intact uterus.

Hysterectomy can be accomplished through three different approaches:

1. *Vaginal hysterectomy* – operating entirely through the vagina to remove the uterus and cervix. Removal of the tubes and ovaries can also be performed vaginally.
2. *Laparotomy or abdominal hysterectomy* – traditional "open" abdominal surgery that allows the surgeon to see and reach the pelvis. This is often used when a larger uterus is present or other procedures are planned.

3. *Total laparoscopic hysterectomy (TLH)* – Operating in the abdomen via small incisions and insertion of a camera into the abdomen. Much of the procedure is performed with surgical instruments in these small incisions. The remainder of the surgery is performed via the vagina and the uterus is often removed through the vagina.

Before hysterectomy, it is important to consider alternative treatments. There are many treatments for fibroids, endometriosis, or prolapse that can help relieve your symptoms while allowing you to keep your uterus. Only when faced with severe symptoms does hysterectomy become necessary.

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 where general anesthesia is administered, you will be asked not to eat or drink anything after a certain time 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 discuss this with your provider and/or the anesthesiologist at your pre-operative visit and instructions will be given to you. You are obligated to inform us if anything has changed (medication or otherwise) since your previous visit. The procedure may not be performed if you are currently taking or have recently taken any medication that may interfere with your ability to clot blood (blood thinners, aspirin, anti-inflammatory medicines, etc.). The most common of these medications is aspirin and all related pain relievers or anti-inflammatory compounds (whether prescription or over-the-counter).

Procedure

TLH involves the detachment of blood vessels 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. The operation begins after general anesthesia is administered.

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. An small plastic tube is placed through this incision and carbon dioxide gas is 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 the uterus 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.

Post Procedure

You will be in the recovery room following your surgery. Some patients stay one night in the hospital, while other go home a few hours later. There may be some discomfort around the incision sites, within the vagina, and in the lower abdomen. Most patients have some sense of urgency (the feeling of a need to urinate). There may be small dressings over the abdominal incision sites. Sometimes a catheter is left in the urethra and bladder 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 become blood-soaked, or you see active blood oozing, please contact us immediately. You may shower

the day after surgery, but you should not swim or bathe. It is normal to have some bloody discharge from the vagina for several weeks. Contact us if you have significant bleeding. 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 work following TLH, with a 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 rest often while lying down. 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 a prescription for pain medication to alleviate most of the discomfort. Take this medication as prescribed and as needed. If any side effects occur, contact our office immediately.

Sexual activity of any sort is prohibited until you are instructed it is safe to resume (usually six to eight weeks).

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 following 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 desired childbearing was not completed. Many women report an improved sex life after surgery. This can be from relief of constant pain, improved energy, and/or removal of the concern of becoming pregnant.

Possible Complications

All surgical procedures, regardless of complexity or time, can be associated with unforeseen problems. They may be immediate or quite delayed in presentation. 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:

- *Urinary Tract Infection or Sepsis* – It is possible for you to get an infection after the operation. 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: fever, shaking chills, weakness or dizziness, nausea, and vomiting. You may require a short hospitalization with 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 typically resolved with antibiotics and local wound care, part or all of the incision may open and require revision.
- *Blood Loss/Transfusion* – The pelvic and vaginal regions are quite vascular. 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) and behind the urinary bladder. These structures are subject to injury,

both with complicated and seemingly routine hysterectomies. 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, ovaries, etc.) can be inadvertently injured. Often the injury is minor and can be treated with relative ease. In instances when the injury is major or the repair is complicated, more extensive surgery may be necessary. Treatment depends on the organ injured and the severity of the injury.
- *Death* – When hysterectomy is performed for reasons other than cancer or a pregnancy complication, the risk of death is 6-11 per 10,000 hysterectomies. When hysterectomy is performed because of pregnancy complications, the rate is 19-38 per 10,000. When a hysterectomy is performed because of cancer, the rate is 70-200 per 10,000.
- *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 shortened and the angle changed. While usually not a problem, some women may complain of pain or difficulty with intercourse. This can be temporary or 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 (precancer or cancer) of the cervix.
- *Deep Vein Thrombosis (DVT)/Pulmonary Embolus (PE*) – In any operation (especially longer operations), you can develop a clot in the vein of the leg (DVT). Typically, this presents 2-7 days (or longer) after the procedure as pain, swelling, and tenderness to touch in the lower leg (calf). Your ankle and foot can also become swollen. **If you notice these signs, you should go directly to an emergency room and contact your care center.** 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.
- *Subcutaneous Emphysema*: In rare instances, the carbon dioxide gas (CO_2) can escape into the subcutaneous (below the skin) tissue plane. In the post-operative period, this would present with minor to severe swelling and bruising (depending on the amount of gas in the tissue). The gas eventually gets reabsorbed by the body, and the swelling and bruising resolve with time.
- *Tension Pneumoperitoneum*: The pressure of CO_2 gas in the peritoneum (intra-abdominal space) is carefully monitored, and there are short intermittent fluctuations of no consequence. Sometimes, the pressure can remain high for a prolonged period. In this instance, the elevated pressure can push upward on the chest cavity and cause problems with proper ventilation (breathing). This may result in blood pressure fluctuation and problems with the heart. In rare instances, high intra-abdominal pressures can result in a tension pneumothorax (collapse of the lung due to high surrounding pressures). See pneumothorax below.
- *Gas Embolism*: This unusual problem results from a significant amount of CO_2 gas getting into the blood vessels. The result can be changes in heart rhythm and blood pressure. While cardiac arrest (complete stop of the heart) is possible, it is highly unusual.
- *Pneumothorax (Collapse of the Lung)*: This can occur if one of the instruments is inadvertently placed in the thoracic (chest) cavity or if dissection opens a small hole in the pleura (chest cavity lining). A chest tube (lung cavity drain) would be placed that will be removed in a few days. There are rarely long-term complications as a result. If this is not recognized however, CO_2 gas can force its way into the cavity outside of the heart and lung blood vessels (pneumomediastinum) or even directly around the heart (pneumopericardium). These very rare

complications can be life threatening and require immediate attention in an intensive care setting.

- *Ileus or Bowel Obstruction*: Because we operate near the intestines, they can go into prolonged spasm (ileus), or they may become blocked (obstruction). Treatment ranges from observation to open surgery.
- *Hernia*: Not all small incisions are sutured closed in the deep layers. It is possible to develop a small hernia (tissue protrusion) in the wound. Treatment can be observation (if it is only a cosmetic issue) or a surgery to repair the weak area of supportive tissue.
- *Lower Extremity Weakness/Numbness* – This is possible following procedures where the patient is in the lithotomy (legs up in the air) position on the operating table for a long period. This is a rare event and is usually self-limited.
- *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 pain or feeling of numbness may persist. If persistent, further evaluation may be necessary.

If you have symptoms suggesting any of the above after your discharge from the hospital, contact us immediately or go to the nearest emergency room.

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Patient Name Date

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Patient/Health Care Agent/Guardian/Relative Signature

_____

Physician Signature

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Witness Signature

Patient Initials _____