Endometrial Ablation Procedures

Endometrial ablation is a very popular treatment for abnormal, painful, irregular and/or heavy uterine bleeding. Procedure involves permanently destroying the cells that line the uterine cavity and create menstrual blood. Women report higher rates of satisfaction when treated with endometrial ablation compared to medical treatments such as birth control pills or a progesterone-containing intrauterine device. This procedure can be performed in the operating room or, less expensively, in the office. Endometrial ablations require no hormones whatsoever and do not alter your own natural hormone levels.

At the Artemis Center, we offer two different methods.

Bipolar Radiofrequency Ablation (Novasure)

Cryoablation (Her Option)

Novasure  Bipolar Radiofrequency Ablation

Bipolar radiofrequency endometrial ablation utilizes a 3-dimensional bipolar mesh which opened to fill the uterine cavity. The mesh delivers a radiofrequency current (a type of electrical energy) until a specific tissue impedance is reached. The NovaSure generator applies up to 180 watts of power.
After receiving medication for pain and in order to relax, the cervix is gently dilated. The Novasure device is inserted into the uterine cavity and the mesh is expanded until it is in contact with the uterine walls. Suction is applied to draw the endometrium closer to the mesh probe and also removes debris and vapor that can increase impedance and reduce the depth of energy penetration. The system will shut down when complete desiccation has occurred (calculated at a tissue impedance of 50 ohms of resistance) or after a total treatment time of two minutes. The average treatment time is just over one minute and the average depth of ablation is 4 to 5 millimeters.

The system also evaluates cavity integrity by emitting carbon dioxide and assessing for leaks. This method works optimally on a triangular shaped uterine cavity.

Outcome — Studies in which women who underwent Novasure ablation were followed for five or more years reported high rates of reduced uterine bleeding (97 to 98 percent) and 75 to 97 percent of women reported no menstrual periods at all! (amenorrhea). There were low rates of repeat ablation (1 to 4 percent) and hysterectomy (3 to 8 percent).

Prior to any ablation, hysteroscopy and D&C are performed to evaluate the lining of the uterus.
Her Option Cryoablation

Cryoablation — Cryoablation is a technique in which, after the patient is medicated and the cervix gently opened up, a cryoprobe is inserted into the uterine cavity. The probe is cooled either by liquid nitrogen or by differential gas exchange. An elliptical ice ball approximately 3.5 by 5 centimeters forms around the probe when it is cooled to less than -90°C. At the edge of the ice ball, the tissue temperature is 0°C, which is nondestructive. A temperature of -20°C is lethal to tissue; this temperature is reached approximately 3 to 5 mm from the edge of the ice ball. Therefore, the endometrial tissue exposed to this low temperature, including the basalis layer of the endometrium is permanently destroyed.

The number of ice balls that must be created to destroy the entire uterine cavity is dependent upon the size of the cavity. Intraoperative ultrasonography is used to monitor probe placement and depth of tissue freezing. In general, two to three ice balls are sufficient. Each freeze cycle takes two to ten minutes.

Outcome — A randomized trial compared Her Option with rollerball ablation in 279 women. At two-year follow-up, women in the Her Option group compared with the rollerball group had similar rates of either reduced uterine bleeding or amenorrhea (94 versus 92 percent). Rates of hysterectomy (7 and 8 percent) and repeat ablation (3 and 1 percent) were similar between groups.
Advantages/disadvantages — Use of cold to destroy tissue causes numbness. Therefore, cryoablation is less painful than the other techniques which all use high temperatures.

This procedure was engineered to be done in the office. It is an ideal method for patients with a heart-shaped uterus or other uterine anomaly and for patients whose uterine cavity is too thin for a NovaSure.

**Endometrial Ablation FAQS**

What can I expect after my ablation?

Following the procedure, you might have some moderate to intense uterine cramps that can last 4-6 hours. We ask that you take your pain pills upon arriving home after your procedure to reduce discomfort and allow you to sleep comfortably. Most people find they sleep through a majority of the cramping and awake feeling little discomfort. For some fortunate women, they do not experience any cramping at all.

You may return to work the day following your procedure, but we ask that you avoid sexual intercourse for 2 weeks to avoid infection of the uterus. You may have a watery or bloody discharge for up to 6 weeks following your procedure until the uterine lining heals. If you are not happy with your bleeding pattern after 3-6 months, you may opt to try hormonal therapy, consider a repeat ablation, or consider a hysterectomy to control your abnormal bleeding.

Is ablation a form of birth control?

No. Endometrial ablations are not considered to be contraception. While ablations may stop your periods, ablations do not prevent pregnancy. A pregnancy that occurs after ablation can be high risk both to the baby and to the mother, as the lining of the uterus has now been altered and the pregnancy may not properly implant. This may lead to growth defects, bleeding, and possibly require emergency hysterectomy during pregnancy.

What’s the difference between ablation and hysterectomy?

While both procedures may have the desired effect of no more bleeding or cramps, the ablation can be performed in-office, in a matter of minutes, without general anesthesia. In contrast, a hysterectomy must be performed in the Operating Room (OR) under general anesthesia and may take one hour or more. The downtime after an ablation is minimal; typically the only time off
work a patient needs is the afternoon of the procedure. Recovery time and time off work after a hysterectomy is typically 2-4 weeks and sometimes even 6 weeks. For an ablation, no incisions are made in your abdomen, whereas a hysterectomy, even when performed laparoscopically or minimally invasively, incisions are required.

**Colposcopy**

Colposcopy is a diagnostic procedure in which a colposcope (a dissecting microscope with various magnification lenses) is used to provide an illuminated, magnified view of the cervix, vagina, vulva, or anus. The primary goal of colposcopy is to identify precancerous and cancerous lesions so that they may be treated early.

Colposcopy is used as further evaluation of abnormal cervical cancer screening tests (Pap smear or HPV test). Colposcopic evaluation is based on the finding that malignant and premalignant epithelium have specific visual characteristics in terms of contour, color, and vascular pattern that are recognizable using colposcopy. If an abnormality is seen, a cervical biopsy is
performed. This normally feels like a pinching sensation. Therefore we recommend that you take Motrin 800 mg approximately 1 hour prior to your colposcopic examination. Following the biopsy, Dr. Madejski places medicine on the cervix to stop any bleeding. This may result in a "coffee-ground" discharge for up to 3 days. We recommend that you abstain from sexual intercourse for 4 days following a colposcopy.

**Endometrial Biopsy**

Endometrial biopsy is a common office procedure to evaluate the cells that line the uterine cavity. It is performed for a variety of reasons:

1. Abnormal bleeding
2. An abnormal appearing uterine lining on ultrasound exam
3. Abnormal cells on pap smear that appear to be uterine, not cervical cells
The procedure typically causes menstrual like cramping and takes 5 to 15 seconds. We recommend that you take Motrin 800 mg about 1 hour prior to the procedure. The cervix is cleaned with betadyne, and a thin pipelle (3 mm wide tube) is inserted through the cervix to the top of the endometrial cavity. Gentle suction is applied to the tube and cells are suctioned in as the tube is spun and withdrawn from the uterine cavity.

It is normal to have cramping and light uterine bleeding for 2 days following an endometrial biopsy. Intercourse should be avoided for 48 hours after the procedure.

**Contraception**

At the Artemis Center we offer a full complement of the latest contraceptive technologies. In addition to birth control pills and Depo Provera shots which have been available for decades, we emphasize Long Acting Reversible Contraception, LARC for higher efficacy in preventing unintended pregnancies.

**Intrauterine Devices**

Invented by Buffalo, New York gynecologist Jack Lippes, MD, the IUD is the favored method of reversible contraception not only by the American College of Obstetrics and Gynecology, but also by the providers at Artemis. IUDs are highly effective (greater than 99%), affordable, and can also reduce menstrual flow and cramping.

Insertion of an IUD is a simple office procedure that normally takes about 10 minutes. We recommend that you eat and take Motrin 800 mg about 1 hour before the procedure. A speculum is used to visualize the cervix, just like during an annual exam. Local anesthetic is used to dull the cervical nerves. The cervix is gently dilated which will feel like menstrual cramps. The uterine cavity is measured and the device is introduced up to the upper part of the uterine cavity. The strings are trimmed to about 4 cm. Following the procedure, you will have light bleeding and cramping for a few days and should avoid intercourse for 1 week.

It is important to come in for an IUD check up about 4 weeks after the device is inserted to assure that it is in proper position and have the strings trimmed if necessary.
**Progesterone IUD**

![Progesterone IUD Image]

The most popular IUDs are the progesterone containing devices which include Mirena, Liletta, Kyleena, and Skyla. These work by releasing the hormone progesterone into the uterine cavity to thin the uterine lining and tighten the cervical mucous to form a sperm barrier and prevent conception. The devices work for between 3 and 5 years. The progesterone often lessens uterine bleeding and some women experience no bleeding whatsoever with a progesterone IUD. Very little progesterone escapes into the bloodstream. The most common unwanted side effect is irregular spotting or bleeding. Your provider can help you decide which device makes the most sense for you.

**Copper IUD**

![Copper IUD Image]

The Paragard IUD releases copper into the uterine cavity which kills sperm. It has the advantage of being completely hormone free and lasts up to 10 years.

**Nexplanon**
The Etonogestrel

The Nexplanon device is the other major category of Long Acting Reversible Contraception (LARC). The implant is easily inserted just below the skin in a woman’s arm in the office after a local anesthetic is administered. It releases a form of progesterone slowly into the bloodstream and lasts for 3 years. It is similar to Depo provera injections, but does not require coming in for an injection every 3 months and does not cause bone loss over time. The most common side effect is irregular uterine bleeding or spotting.

Minimally Invasive Surgeries

Hysteroscopy, polyp removal

A hysteroscope is a telescope that is inserted into the uterus via the vagina and cervix to visualize the endometrial cavity, as well as the tubal ostia, endocervical canal, cervix, and vagina.
Hysteroscopy is performed for evaluation or treatment of the endometrial cavity, tubal ostia, or endocervical canal in women with:

- Abnormal premenopausal or postmenopausal uterine bleeding
- Endometrial thickening or polyps
- Submucosal, and some intramural, fibroids
- Intrauterine adhesions
- Uterine anomalies (heart shaped uterine cavity, uterine septum, double uterus)
- Retained intrauterine contraceptives or other foreign bodies
- Desire for sterilization

Using hysteroscopy for the initial evaluation offers the potential benefit of combining evaluation with treatment. Also, hysteroscopy avoids the risk of missing focal pathology, as may occur with blind endometrial sampling.
This is what an endometrial polyp appears like using a hysteroscope. The polyp can be safely resected through the hysteroscope.

FAQs

What are the risks?

Whenever a surgeon inserts a scope into the uterus, there is an approximately 1% risk of perforation of the uterus (creating a hole in the uterine wall). If this is suspected, you will be monitored closely for any postoperative problems. Normally the hole is small and will heal without intervention. Occasionally, a perforation of the uterus requires a laparoscope surgery to rule out internal bleeding or very occasionally a hysterectomy.

How long does the procedure take?

Normally a hysteroscopy, D&C will take approximately 30 minutes. It may take longer when there are extremely large polyps or a cervix that is difficult to dilate.

Is anesthesia required?

Dr. Madejski can perform your hysteroscopy in the office or at a hospital or surgical center. In the office, we administer medication to relax you and an injection of Toradol to prevent cramping. In addition, local anesthetic is used in the cervix.

If the procedure is performed at a hospital or surgical center, it is generally done with a stronger IV sedation or “twilight” anesthesia. Patients typically remember nothing of the surgery in this case. Office procedures are more cost effective and do not require bloodwork and fasting. You will require a driver in either case.

Laparoscopy
Laparoscopy is a type of abdominal surgery that utilizes small incisions and a fiberoptic scope to view the internal organs on a television screen in order to perform surgery. It offers faster recovery and less risk or scar tissue after surgery than open surgery (laparotomy). In gynecology, laparoscopy is used to evaluate and treat pelvic pain, perform a sterilization or removal of a tube or ovary or adhesions or to perform a hysterectomy. It does require general anesthesia.

**Robot Assisted Laparoscopy**

Dr. Madejski has been utilizing the daVinci Robot to perform hysterectomies and the more complicated laparoscopies (due to adhesions or a large mass) since 2012. It is now rare that an open surgery is required.

The robot assisted technology offers two huge innovations: wristed instruments and a high definition view of the organs (like never before!). Rather than an assistant holding the laparoscope and the surgeon using “straight stick” instruments to rotate and grasp, the daVinci technology allows the surgeon to drive the camera while simultaneously operating with hand simulators from a consul rather than stand at the operating table.
OR Set up. The assistant stands at the patient bedside. The surgeon operates from the consul.
The daVinci Robot has a camera arm and three operating arms.

The instruments have more degrees of freedom than a human wrist.

These advances result in less blood loss, less postoperative pain, a quicker recovery. We are also now able to use a minimally invasive approach for most surgeries. Most patients will go home on the day of surgery. Almost all require a less than 24 hour stay in the hospital.

**Hysterectomy**
Hysterectomy is the surgical removal of the uterus and cervix. It can be performed with or without removal of the ovaries which is referred to as bilateral salpingoophorectomies (BSO). Minimally invasive technologies have made hospital stays and recoveries much quicker. This surgery usually takes about 2 hours to perform. After a hysterectomy, you may never require another pap smear as long as you have never had a history of abnormal pap smears.

Hysterectomy is a major surgery with inherent risks.

**Major Risks of Surgery**

Operative injury to surrounding organs such as the bladder, ureters, intestines, and blood vessels

Bleeding that may on occasion require transfusion or moving to open surgery

Infection

Risks associated with general anesthesia