



**Pearl W. Yee, M.D. Inc.**

*Obstetrics • Gynecology • Medical Aesthetics  
Fertility • Menopause • Urinary Incontinence  
Advanced & Minimally Invasive Female Surgery*

[www.pearlyeemd.com](http://www.pearlyeemd.com)

■ 2661 Ocean Avenue, San Francisco, CA 94132  
(415) 405-0200 • (415) 405-0201 (Fax)

■ 1447 Powell Street, San Francisco, CA 94133  
(415) 43-DrYee (433-7933) • (415) 433-1622 (Fax)

## **Hysterectomy, Myomectomy and Alternatives Patient Information Handout**

Hysterectomy is the second most common major female surgery performed in the United States (approximately 5/1000 US women); second only to cesarean section. The most common benign causes for hysterectomy are uterine fibroids 33%, menstrual disorders 17%, prolapsed uterus 13% and endometriosis 9%. Female cancer accounts for 11.2% of hysterectomies.

A hysterectomy is recommended when patients have completed childbearing and needs surgery for uterine fibroids. Hysterectomy is an acceptable choice for symptomatic myomas in patients with significant bleeding, pain, pressure, or anemia that is refractory to therapy. For patients who desire to preserve fertility, have a solitary sub-serous pedunculated fibroid or a submucous myoma that is assessable to the hysteroscope; a myomectomy is recommended. Patients who have extensive adenomyosis of the uterus are recommended to have a total hysterectomy. Patients with multiple uterine fibroids may elect to proceed with a myomectomy for uterine preservation for fertility and personal preference reasons. The final decision regarding which procedure to use is ultimately up to the patient. We respect are patient's decisions with full informed consent.

In the United States, approximately 61% of hysterectomies are performed abdominally, 21.8% are performed vaginally and 11.8% are performed laparoscopically. These nationwide statistics are not true for areas where advanced technology is available and surgeons skilled in laparoscopic surgery are performing minimally invasive surgeries on a regular basis. The different approaches to hysterectomy have different advantages and depends on the individual surgeon. The vaginal hysterectomy as compared with abdominal hysterectomy has advantages of a shorter duration of hospital stay, faster return to normal activity and a reduced postoperative fever incidence. A vaginal hysterectomy compared with laparoscopic hysterectomy has a shorter operating time. A laparoscopic hysterectomy in comparison with and abdominal hysterectomy has a longer operative time, faster postoperative recovery, shorter hospital stay, lower intra-operative blood loss and smaller drop in hemoglobin, decreased postoperative fevers, fewer wound or abdominal wall infections and a faster return to normal activity. If a patient has a vaginal hysterectomy, she should also have a McCall's culdoplasty performed at the same time to prevent and enterocele or apical vaginal prolapse after surgery. Approximately 15 to 18% of patients after a vaginal hysterectomy experience an enterocele prolapse at 3 years post-op if this closure is not performed. Patients who need an evaluation of air ovaries, lysis of known adhesions or have severe endometriosis will need to have a laparoscopic approach to their hysterectomy. Patients with severe pulmonary disease limiting their ability for ventilation are not candidates for the laparoscopic approach. Patients with a very large uterus will need to be evaluated before the decision between a laparoscopic or open approach that hysterectomy may. Obesity is not a factor in limiting a laparoscopic approach. The increased morbidity from laparotomy in patients with a high body mass index can be minimized laparoscopy. Abdominal incisions on obese patients are at a high risk of infection if made in the crease under the panniculus. Alternative midline incisions or a panniculectomy may be needed to provide the

safest access to hysterectomy. The main complications from laparotomy includes infection, hematoma, nerve injury and wound dehiscence.

Occasionally, the approach to hysterectomy is changed during the surgery. If a laparoscopic or vaginal surgery is converted to an abdominal approach; this is not considered a complication but simply good judgment to safely carry out the intended procedure.

In addition to a preoperative health assessment, patient may need preoperative sampling of the endometrial lining if they are risk for a malignancy. Women who have postmenopausal bleeding, a history of polycystic ovarian syndrome, symptoms of abnormal bleeding over the age of 35 to 39 years of age have been advised to have endometrial sampling prior to the hysterectomy. Patients with chronic pelvic pain should have tried medical therapy, physical therapy possible suppressive therapy or a referral to a pain specialist before undergoing a hysterectomy.

Medical publications report a significant improvement in quality of life for most women who have undergone hysterectomy and conclude that a hysterectomy does not adversely influence sexuality in women without pre-existing issues. Menopausal women also benefited from elimination of the need for progesterone agents if on estrogen hormone replacement. Studies on hysterectomy outcomes report very high patient's satisfaction with marked improvement of patient complains. Each study did however report approximately 8% of patients noted new symptoms such as depression and lack of interest in sex or lack of improvement in quality of life. There is considerable debate as to the effect of hysterectomy on sexual function. Most of the studies which showed that hysterectomy had little impact on the frequency of intercourse, libido and sexual interest. Orgasmic function before and after hysterectomy was somewhat more controversial but appeared similar if not increased after surgery possibly secondary to decreased pain and bleeding and improved body image.

A hysterectomy is a relatively safe procedure; however, is a major surgical procedure with all the possible complications of any abdominal surgery. The anatomical distortions from uterine fibroids increase the risk of damage to adjacent structures including the urinary tract and bowel. Patients with previous surgery have adhesions which increase the technical difficulty, time of surgery, and risk of injury. The incidence of a ureteral (ureter) injury at cesarean section is 0.4 per 1000 total hysterectomies. The risk of vesical-vaginal fistula ( hole between the vagina and bladder) is 1.0 per 1000. Despite the high degree of satisfaction after a hysterectomy, 4 out of 34 women developed stress incontinence later after surgery. Long term after hysterectomy, patients are still at risk of developing pelvic prolapse (pelvic organs and tissues loosening and dropping down the vagina). Studies regarding keeping the cervix to prevent relaxation problems in the future have not been proven. For difficult hysterectomies, a supracervical hysterectomy may be beneficial in reducing the risk of injury, reducing operative time, and possibly reducing prolapse issues in the future. National statistics show that a hysterectomy carries a 25% risk of infection, pelvic adhesions after surgery, small risk of bowel obstruction and a one out of 100,000 risk of mortality, which is true for all surgical procedures. The risk of a life-threatening event is 1%.

Patients requesting a bilateral oophorectomy (removal of both ovaries) at the time of surgery are reassured that the increased time for a BSO (bilateral salpingo-oophorectomy) procedure is minimal and does not increase morbidity from the surgery. Patients need to consider the potential use or requirement of hormone replacement for menopausal symptoms and the prevention of future ovarian cancer when considering a prophylactic oophorectomy. We offer prophylactic oophorectomy for all postmenopausal women and some perimenopausal (over 45 years old) at the time of hysterectomy for benign disease. Women between 30 and 50 who have

completed her childbearing and are genetically high risk for ovarian cancer are also candidates for preventative treatment. One out of 65 women in the general population will develop ovarian cancer in her lifetime; this fact has led to the traditional recommendation for all women to remove the ovaries at the time of hysterectomy if menopausal. A recent decision analysis suggests at the age for preventative oophorectomy should be closer to 65 years. There appeared to be 8.6% excess mortality by age 80 if prophylactic oophorectomy is done before the age of 55. Ovarian conservation until at least 65 benefits long-term survival for women at average risk of ovarian cancer when undergoing hysterectomy for benign disease. The lower risk of ovarian cancer in women after hysterectomy without ovary removal most likely due to the selection of women with normal-appearing ovaries. Certainly, if there is an unsuspected finding of an ovarian malignancy at the time of surgery it is prudent to have the ovaries immediately removed even if the preoperative plan was to leave the ovaries. Another study suggests some benefit to preserving the ovaries for the first 6 years after menopause.

The affect of hysterectomy on the ovarian function is contradictory, but related to the age of the patient at the time of surgery. It is estimated that women after hysterectomy with retention of both ovaries reached menopause 3.7 years earlier than women who did not have a hysterectomy. In the study, women with one ovary removed at the time of hysterectomy reached menopause 4.4 years earlier than women who have both ovaries left at the time of hysterectomy.

Abdominal myomectomy is the treatment of choice when patients have multiple fibroids, large fibroids or evidence of extensive adhesions. With the advanced reproductive technologies available to patients, uterine preservation for future fertility is an option at any age. Patients are advised regarding the option to auto transfuse one to two units of blood before a myomectomy. Patients who are anemic but stable may need GNRH agonist treatment along with oral iron supplements prior to surgery to reduce the risk of blood transfusion. Antibiotics will be needed preoperatively and extended postoperatively if an intrauterine balloon is needed to assist in healing after surgery. If the uterine cavity is extensively entered, we commonly place a temporary trans-cervical balloon to prevent adhesions during the first week postoperatively. The foley balloon tubing may hang out the vagina and is easily removed in the office at one week post-op.

Multiple myomectomies are frequently a more time consuming procedure than a hysterectomy. We have the option of using a Cell Saver at the time of surgery if blood loss is extensive to immediately return your own red blood cells. Studies vary in comparing whether or not a myomectomy or hysterectomy is safer and which procedure has less complications. Most physicians will agree that patients with multiple extensive and large fibroids are at higher risk and recommend a hysterectomy. Patients with a solitary myoma experience a lower recurrence rate for fibroids. At 10 years after myomectomy, 27% patients have had recurrent fibroids. Hysteroscopy for removal of submucous myomas has been very effective to treat abnormal bleeding, recurrent miscarriage, and pain. The hysteroscopic approach is contraindicated in the presence of endometrial cancer, pelvic infection or an inability to distend the uterine cavity safely. 20 to 50% of patients will need an additional surgery in 5 to 10 years to treat recurrent and new myomas.

Laparoscopic myomectomy can be performed when the myomas are technically accessible. Patients with extensive, large, diffuse fibroids are not candidates for a laparoscopic approach. Large fibroids can be removed with the assistance of an electric morcellator with a significantly increased operative time. Patients must understand that all laparoscopic myomectomies may be converted to an open abdominal approach at the time of surgery if adhesions or technical issues

are encountered. The preoperative evaluation with ultrasound is gives an estimated chance of successful surgery; however, the decision is made at the time of surgery as to the final approach. Our practice has extensive experience in advanced laparoscopic procedures with many successful laparoscopic myomectomies and subsequent successful pregnancies. We have not personally experienced any uterine ruptures after myomectomy; which we believe is secondary to our attention to extensive repair. We also routinely use anti-adhesive materials at surgery. Please refer to the laparoscopic myomectomy patient education form and informed consent.

### Uterine Artery Embolization

Please refer to the UAE patient education form or refer to the CPMC Patient handout on [www.CPMC.org](http://www.CPMC.org). The procedure is performed by the invasive radiologist. A catheter is placed through the femoral artery to the arteries supplying the uterus and myomas. Under fluoroscopic guidance, embolization materials are passed through to limit the blood supply to the myomas and therefore causing ischemia and infarction. The uterine volume usually reduces by 30%. Some patients will need an epidural anesthesia for the procedure and most patients will stay overnight. An MRI will be needed for the pre-and postoperative evaluation. The satisfaction and success rate is very high from the procedure; however there are risks of complications. Some patients have postoperative pain or post embolization syndrome for two weeks, fever, severe pelvic cramps or infection. Ovarian failure is also reported in one to 2% of patients after embolization and higher if perimenopausal. Pregnancy is not recommended after this procedure. Hormonal therapy has been used to control uterine fibroids however are usually used to prepare for a surgical procedure. Patients in the perimenopausal years have used hormone therapy to control their symptoms and avoid surgery completely.

There are multiple endometrial ablation procedures have been successful in treating uterine bleeding due to fibroids or anovulation; therefore avoiding a hysterectomy. Please refer to the brochure and patient information and consent form regarding “Hydrothermal Ablation.” Extensive research is ongoing regarding other energies being used to stop bleeding and reduce fibroids using minimally invasive procedures.

Our practice has the experience and access to the full range of treatment options that affect the decision regarding hysterectomy, myomectomy or alternative procedure such as embolization, ablation or the use of a pessary. Although most causes for surgery are benign, we understand that they are quite distressful and affect woman’s quality of life severely. Following a review of your medical history, personal goals and priorities and physical examination; recommendations and a second opinion can be tailored to individual needs.

Pearl W. Yee Inc./ patient information handout update August 2008