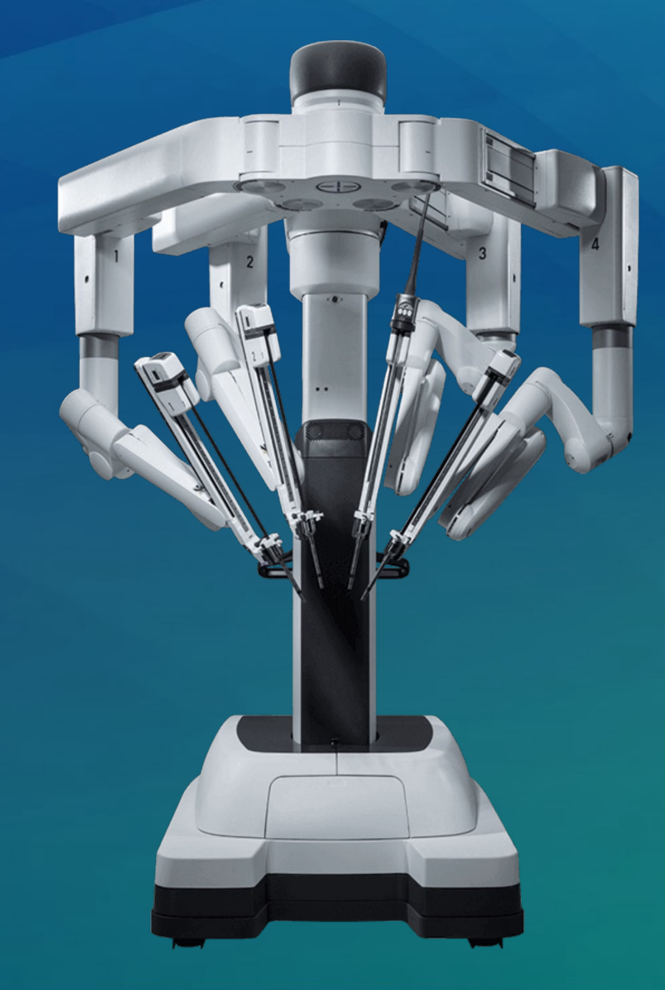
Hysterectomy Myths You Should Stop Believing – Demystifying the Procedure



Jeremiah McNamara, MD
Boulder Women's Care
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Disclosures

- Consultant for Medtronic.

Happy Pride Month!

In this talk, I will use the terms "woman/en" or "patient(s)" but acknowledge the experience here for all transgender, gender-diverse and gender-nonconforming individuals.

Boulder Women's Care

OBSTETRICS GYNECOLOGY

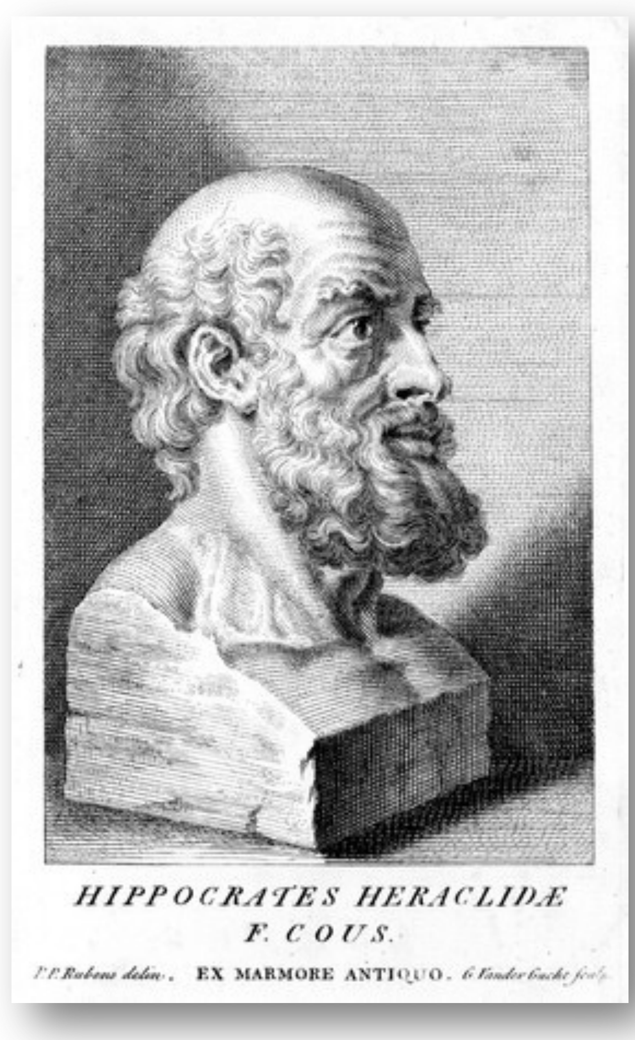
Agenda

- Introduction & History
- Common Indications for Hysterectomy
- Less-Invasive Alternatives
- Overview of the Surgery & The Surgery Experience
- Outcomes & Complications
- Questions, Myths & Misperceptions

Introduction: Hysterectomy

History of Hysterectomy

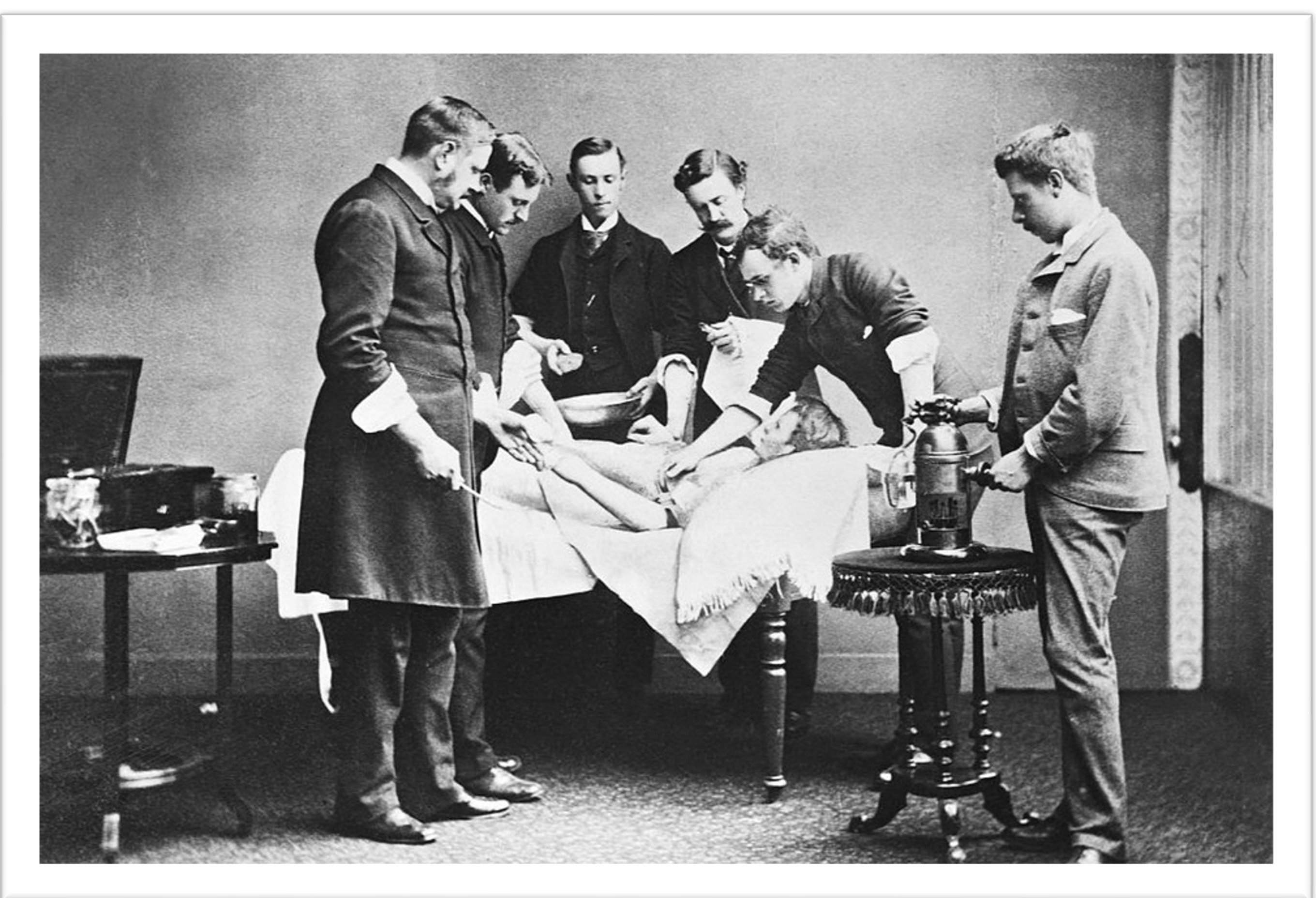
- The First Hysterectomy…
- The Old Days…
- The 90's…
- The Modern Era…



Charles Clay
Manchester, England in November 1843

History of Hysterectomy

- The First Hysterectomy…
- The Old Days…
- The 90's…
- The Modern Era…



History of Hysterectomy

- The First Hysterectomy…
- The Old Days…
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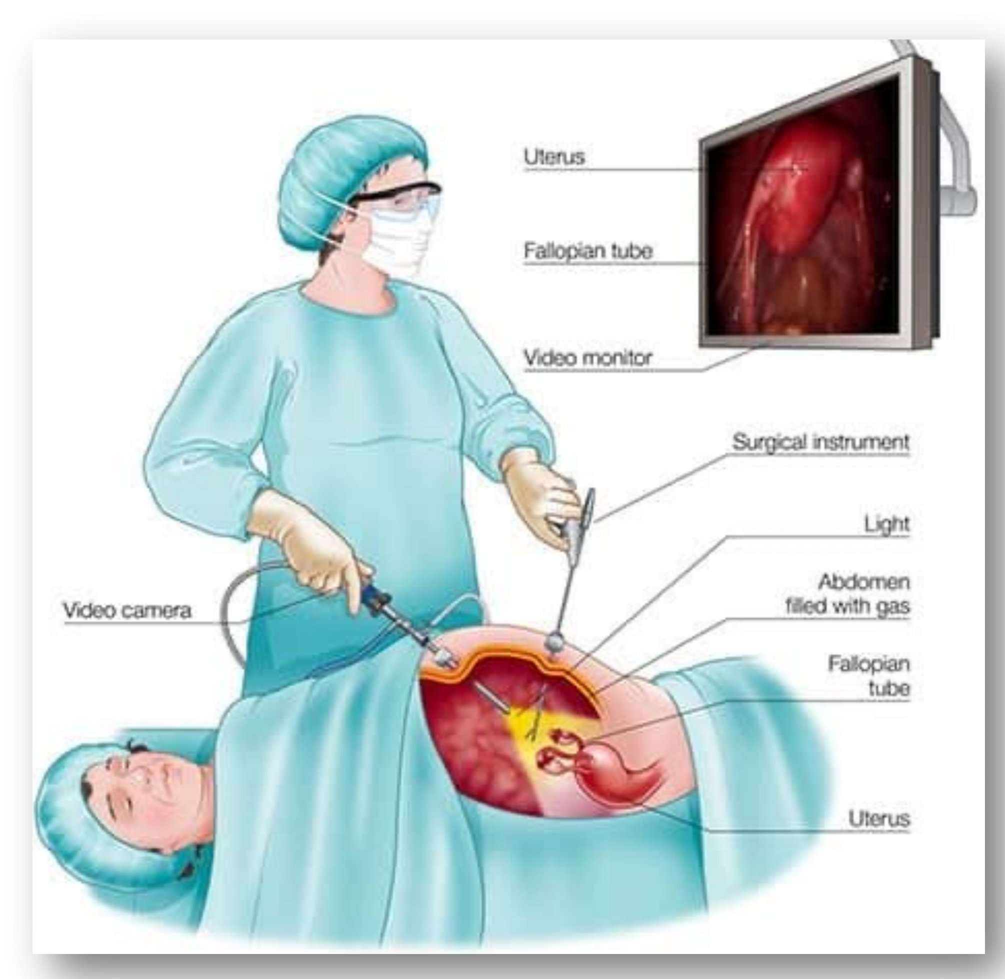

Harry Reich performed the first laparoscopic hysterectomy (LH) in Kingston, Pennsylvania in January 1988

History of Hysterectomy

- The First Hysterectomy…
- The Old Days…
- The 90's…
- The Modern Era…

Hysterectomy is VERY common.

Table 1. Operating room procedures performed most frequently during hospital stays, 2012			
Rank	**Procedure**	**Stays with OR procedure, n**	**Rate per 100,000 population**
Total stays		**7,958,700**	**2,535.7**
1	Arthroplasty knee	700,100	223.0
2	Percutaneous coronary angioplasty (PTCA)	534,600	170.3
3	Laminectomy, excision intervertebral disc	468,200	149.1
4	Hip replacement, total and partial	468,000	149.1
5	Spinal fusion	450,900	143.6
6	Cholecystectomy and common duct exploration	406,300	129.4
7	Partial excision bone	338,000	107.7
8	Hysterectomy, abdominal and vaginal	312,100	99.4
9	Colorectal resection	305,900	97.4
10	Excision, lysis peritoneal adhesions	305,800	97.4
11	Appendectomy	293,000	93.3
12	Treatment, fracture or dislocation of hip and femur	276,400	88.0
13	Oophorectomy, unilateral and bilateral	223,800	71.3
14	Coronary artery bypass graft (CABG)	202,900	64.6
15	Treatment, fracture or dislocation of lower extremity (other than hip or femur)	188,900	60.2

Notes: Includes only nonmaternal and nonneonatal stays. All-listed operating room procedures were identified using Clinical Classifications Software (CCS) procedure categories. Procedures designated as Other are not reported.
Source: Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2012

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4	Hip replacement, total a[illegible] partial	[illegible]	149.1
5	Spinal fusion	[illegible]	143.6
6	Cholecystectomy and co[illegible]	[illegible]	129.4
7	Partial excision bone	[illegible]	107.7
8	Hysterectomy, abdomin[illegible]	[illegible]	99.4
9	Colorectal resection	[illegible]	97.4
10	Excision, lysis peritonea[illegible]	[illegible]	97.4
11	Appendectomy	[illegible]	93.3
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13	Oophorectomy, unilateral and bilateral	223,800	71.3
14	Coronary artery bypass graft (CABG)	202,900	64.6
15	Treatment, fracture or dislocation of lower extremity (other than hip or femur)	188,900	60.2

Females, total stays with an OR procedure		**4,175,600**
1	Arthroplasty knee	432,800
2	Hysterectomy, abdominal and vaginal	312,000
3	Hip replacement, total and partial	274,400
4	Cholecystectomy and common duct exploration	253,600
5	Spinal fusion	242,000

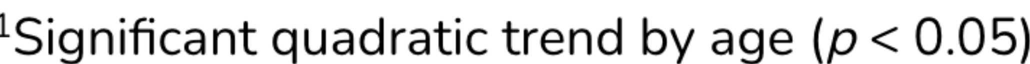
Notes: Includes only nonmaternal and nonneonatal stays. All-listed operating room procedures were identified using Clinical Classifications Software (CCS) procedure categories. Procedures designated as Other are not reported.

Source: Agency for Healthcare Research and Quality (AHRQ), Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2012

Rates of Hysterectomy

Figure 1. Percentage of women who have had a hysterectomy, by age group: United States, 2021

Age group	Percent
Total	14.6
18–44	[1]2.8
45–64	22.1
65–74	35.0
75 and over	41.8

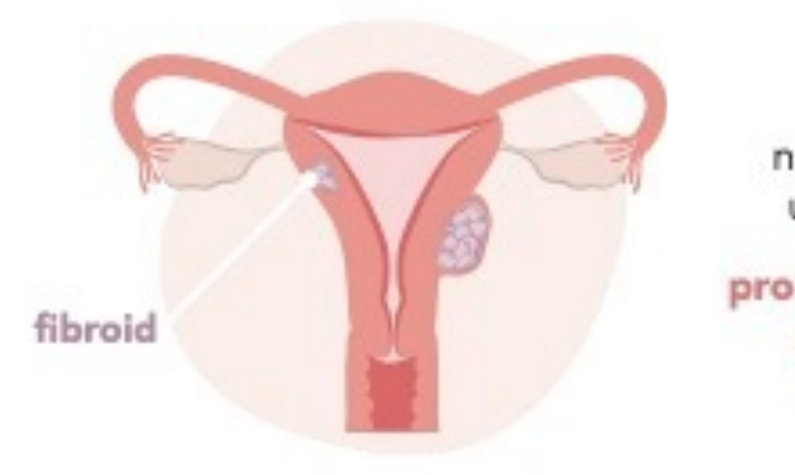

[1]Significant quadratic trend by age ($p < 0.05$).

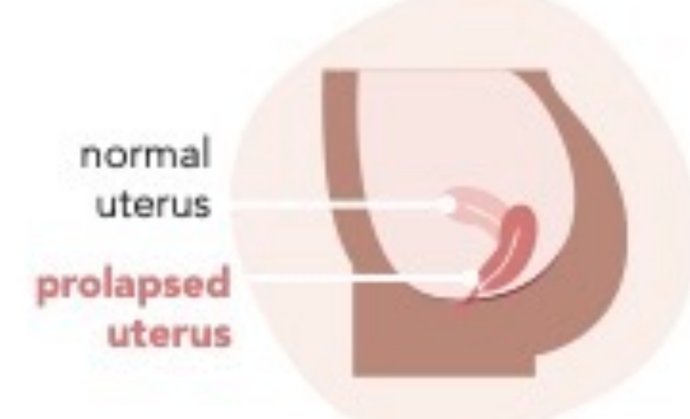
Indications for Hysterectomy

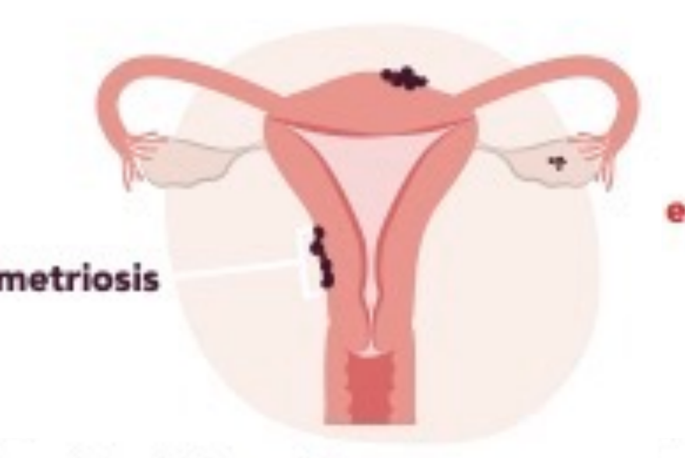
Most Common:

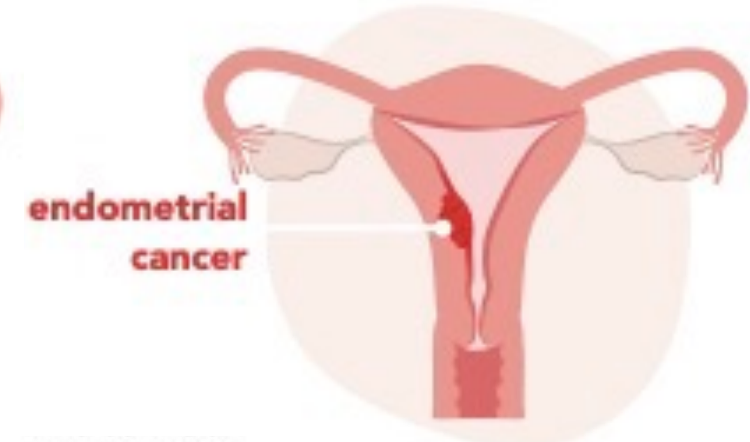
1. Uterine Fibroids (51.4%)
2. Abnormal Bleeding (41.7%)
3. Pain/Endometriosis (30%)
4. Pelvic Organ Prolapse (18.2%)
5. Cancer & Precancer (< 10%)

(Some indications overlap here)









Rates of Hysterectomy

Inpatient hysterectomies (n)
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
Year of surgery

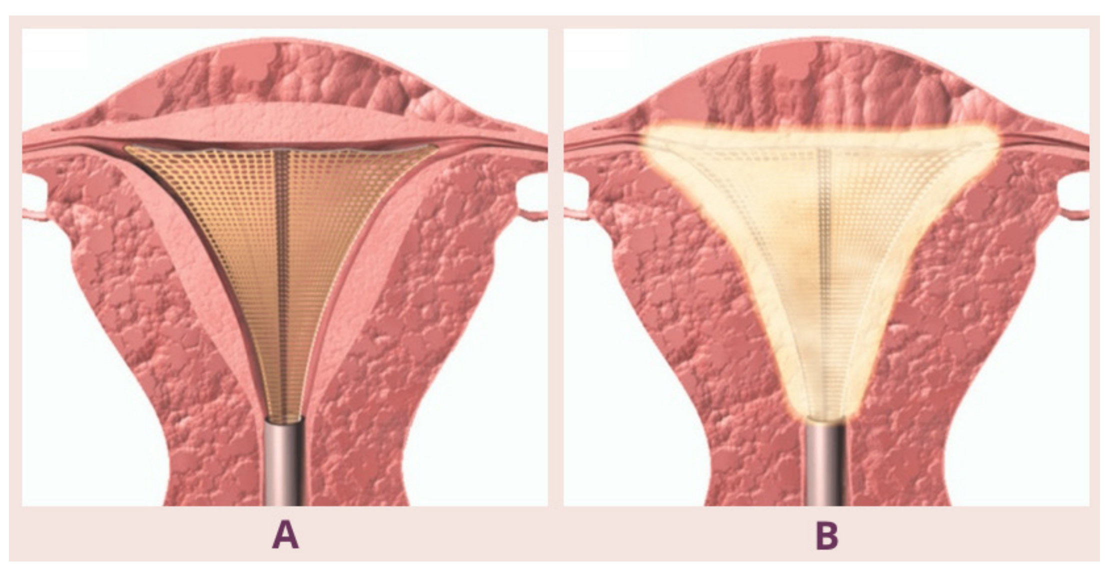
Leiomyoma
Abnormal bleeding
Benign ovarian neoplasm
Endometriosis
Pelvic organ prolapse
Gynecologic cancer
Procedures (n)
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
Year of surgery
B

Wright JD, Herzog TJ, Tsui J, Ananth CV, Lewin SN, Lu YS, Neugut AI, Hershman DL. Nationwide trends in the performance of inpatient hysterectomy in the United States. Obstet Gynecol. 2013 Aug;122(2 Pt 1):233-241. doi: 10.1097/AOG.0b013e318299a6cf. PMID: 23969789; PMCID: PMC3913114.

Less-Invasive Alternatives

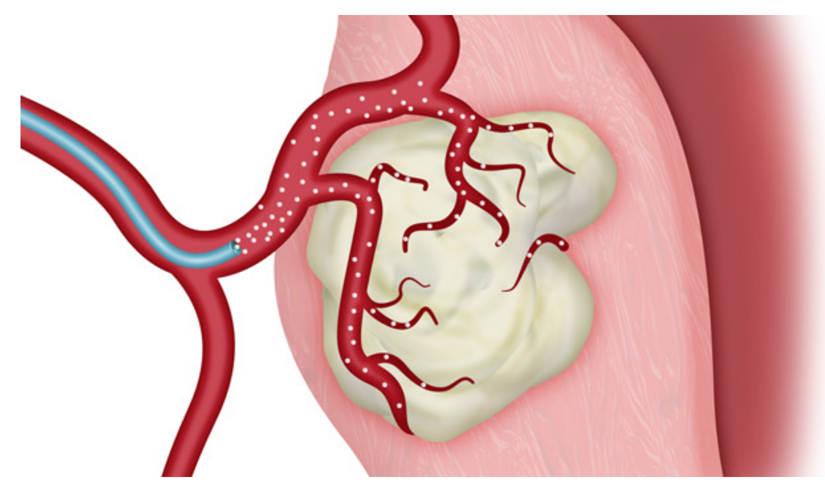
Alternatives

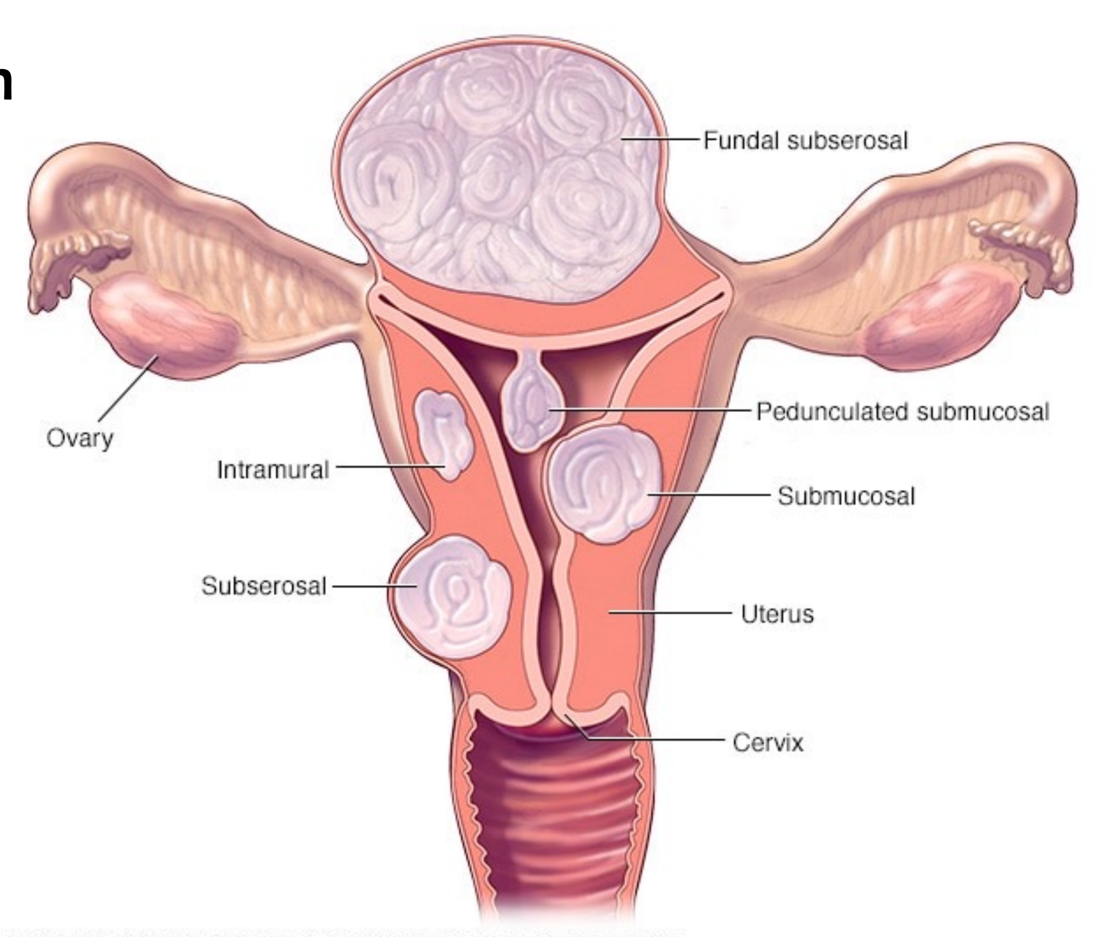
- Abnormal & Heavy Bleeding
  - NSAIDs, Tranexamic Acid (Lysteda)
  - Hormonal Therapies
    - OCP's
    - Long-Acting Reversible Contraception (LARC)
  - Endometrial Ablation



Alternatives

- Uterine Fibroids
  - Symptomatic Management & Observation
  - Hormonal Therapies
  - Uterine Fibroid Embolization (UFE)
  - Radiofrequency Ablation
  - Myomectomy



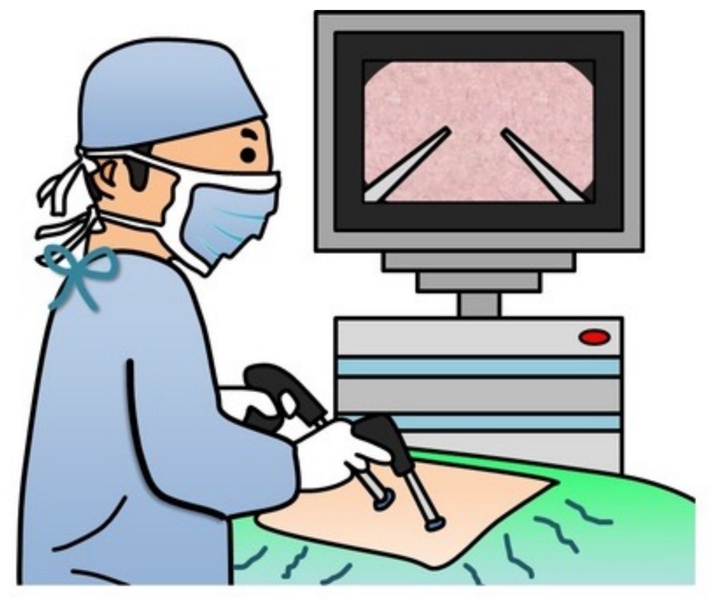


Alternatives

- Prolapse
  - Pelvic Physical Therapy
  - Pessary

Alternatives

- Endometriosis
  - Symptomatic Management
  - Hormonal Therapies
  - Excisional Procedures



Choosing Hysterectomy

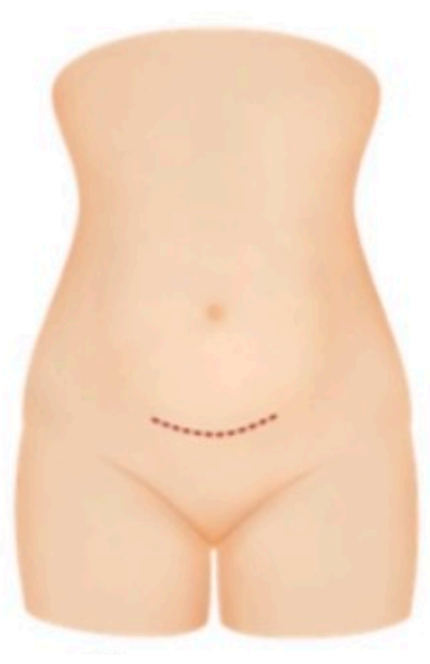
- Patients are offered a hysterectomy in several scenarios, including:
  - When medical or less-invasive interventions fail to alleviate symptoms
  - Medical treatment is contraindicated
  - There are no alternative effective therapies for their condition (e.g., cancer)
  - After counseling, the patient and surgeon choose surgical intervention over medical treatment

The Surgery & The Surgery Experience

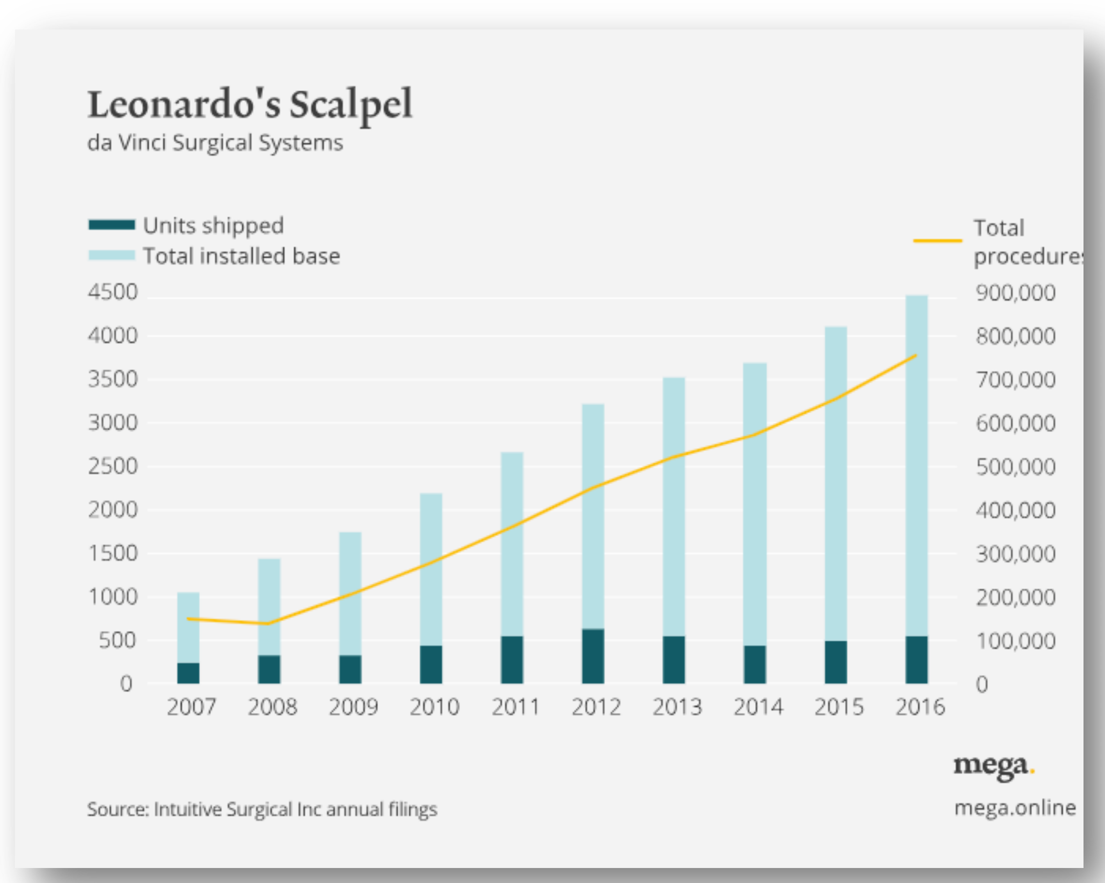
How do we DO a Hysterectomy?

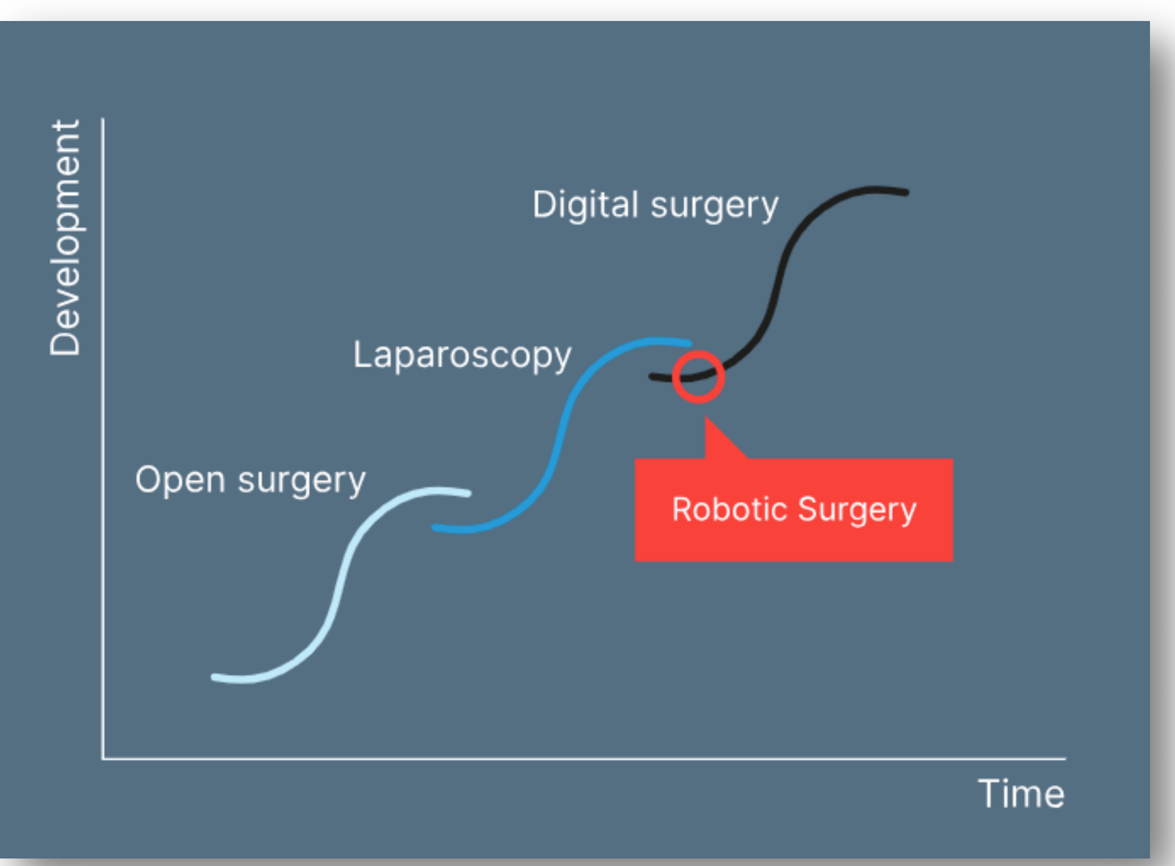
- Modes of Hysterectomy:
  - Vaginally
  - Open/Abdominally
  - Laparoscopically
  - Robotically

- Important Questions:
  - What are our goals with the surgery?
    - Evaluating/removing tubes and ovaries?
    - Looking for and treating endometriosis?
  - What risk factors are present?
  - Which route is safest?
  - Which does the surgeon use most?



The Rise of Robotic Surgery





The Patient Experience

The Patient Experience

The Patient Experience

The Patient Experience

Outcomes & Complications

- Outcomes/Benefits
  - Can be categorized into:
    - ➢ Patient Satisfaction
    - ➢ Symptom Relief
    - ➢ Psychosexual

Patient Satisfaction

Am J Obstet Gynecol. 2000 Dec;183(6):1440-7. doi: 10.1067/mob.2000.107731.

Patient satisfaction with results of hysterectomy

K H Kjerulff [1], J C Rhodes, P W Langenberg, L A Harvey

Affiliations + expand

PMID: 11120508 DOI: 10.1067/mob.2000.107731

Abstract

Objective: The objectives of this study were to measure patient satisfaction with the results of hysterectomy and to determine factors associated with dissatisfaction.

Study design: A total of 1299 women who underwent hysterectomy at 28 hospitals in Maryland were interviewed before and at 3, 6, 12, 18, and 24 months after the operation.

Results: At 12 and 24 months after the hysterectomy 95.8% and 96.0%, respectively, reported that the hysterectomy had completely or mostly resolved the problems or symptoms they had before surgery; 93.3% and 93.7%, respectively, reported that the results were better than or about what they expected; 85.3% and 81. 6%, respectively, reported that their health was better than before the hysterectomy; and 87.9% and 93.1%, respectively, reported being totally recovered. The factor most strongly and consistently associated with patient reports of negative outcomes was readmission because of a postdischarge complication.

Patient Satisfaction

Am J Obstet Gynecol. 2006 Mar;194(3):711-7. doi: 10.1016/j.ajog.2005.08.066.

A prospective study of 3 years of outcomes after ysterectomy with and without oophorectomy

ynthia M Farquhar [1], Sally A Harvey, Yi Yu, Lynn Sadler, Alistair W Stewart

ffiliations + expand

MID: 16522402 DOI: 10.1016/j.ajog.2005.08.066

bstract

bjective: This study was undertaken to determine the outcomes of hysterectomy with and without conservation of the ovaries.

tudy design: Data were collected prospectively for 3 years from 257 women undergoing ysterectomy (group 1) and 57 women undergoing hysterectomy with oophorectomy (group 2).

esults: Pelvic pain, abdominal pain, and depression scores were reduced in the 3 years after ysterector

f fertility 3

ears in bot

onclusion

atisfaction

Results: Pelvic pain, abdominal pain, and depression scores were reduced in the 3 years after hysterectomy. Twenty-one percent of the women in group 1 and 43% in group 2 regretted the loss of fertility 3 years after hysterectomy. Satisfaction with the operation was greater than 90% after 3 years in both groups. New symptoms of pelvic pain were infrequent in groups 1 (3%) and 2 (5%).

Symptom Relief

Two studies from one prospective multicenter study of 1,299 women who underwent hysterectomy for any benign indication reported:

- Substantial reduction of symptoms across these variables, and symptom reductions persisted at two years of follow-up.
- 96% of patients indicated the surgery had somewhat or completely resolved the symptoms for which they underwent surgery.
- The individuals who had at least as many problematic symptoms after surgery as they did prior to surgery were more likely to have had low income or depression compared with women who reported symptom improvement.

Symptom Relief

Symptom	Frequency before, percent	Frequency after, percent
Vaginal bleeding	59	<1
Pelvic pain	63	8
Back pain	43	17
Activity limitation	58	2
Sleep disturbance	41	21
Fatigue	70	25
Abdominal bloating	48	12
Urinary incontinence	20	8

Adapted from data in Kjerulff KH, Langenberg PW, Rhodes JS, et al. Obstet Gynecol 2000; 95:319.

Graphic 55870 Version 2.0

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Kjerulff KH, Langenberg PW, Rhodes JC, Harvey LA, Guzinski GM, Stolley PD. Effectiveness of hysterectomy. Obstet Gynecol. 2000 Mar;95(3):319-26. doi: 10.1016/s0029-7844(99)00544-x. PMID: 10711536.

Kjerulff KH, Rhodes JC, Langenberg PW, Harvey LA. Patient satisfaction with results of hysterectomy. Am J Obstet Gynecol. 2000 Dec;183(6):1440-7. doi: 10.1067/mob.2000.107731. PMID: 11120508.

Psychosexual Outcomes

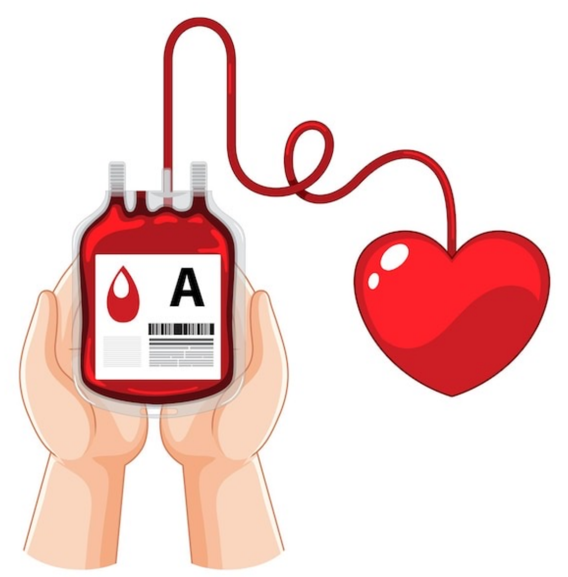
"Hysterectomy is unlikely to make sexual function or quality of life worse. Prospective studies have described positive effects on mood and quality of life.

Studies on sexual function following hysterectomy, with or without oophorectomy, have reported neutral to positive outcomes, presumably because the symptoms that lead to the hysterectomy, such as abnormal uterine bleeding or pelvic pain, have resolved.

These significant positive effects on postoperative sexual function and quality of life occur regardless of surgical technique used."

Complications

- Potential Complications from Hysterectomy:
  - Acute
    - Bleeding (<1%)
    - Intraoperative injuries (1.2-2.6% ureter, <0.5% bowel)
    - Urinary retention (situational)
    - Conversion to open surgery (3.9%)



  - Delayed
    - Bleeding (vaginal or intraabdominal) (1-3%)
    - Infection (UTI (7.3%), wound infection (1-3%), intraabdominal infection (<1%))
    - Unrecognized internal injury (<1%)
    - Pain, Adhesions (situational)

Trusted evidence.
Informed decisions.
Better health.

Aarts JW, Nieboer TE, Johnson N, Tavender E, Garry R, Mol BW, Kluivers KB. Surgical approach to hysterectomy for benign gynaecological disease. Cochrane Database Syst Rev. 2015 Aug 12;2015

Complications

Multicenter Study > BJOG. 2008 Nov;115(12):1473-83. doi: 10.1111/j.1471-0528.2008.01921.x.

Morbidity outcomes of 78,577 hysterectomies for benign reasons over 23 years

Spilsbury [1], I Hammond, M Bulsara, J B Semmens

Affiliations + expand

PMID: 19035986 DOI: 10.1111/j.1471-0528.2008.01921.x

Abstract

Objective: To investigate the associa...
morbidity outcomes in Western Austr...
factors into account.

Design: Population-based retrospect...

Setting: All hospitals in Western Aus...
2003.

Population: All women aged 20 years...

Method: Logistic and zero-truncated...
administrative health data.

Main outcome measures: Relative o...
admission or readmission and relative...

Results: There were 78,577 hysterectomies performed for benign reasons from 1981 to 2003. Procedure-related haemorrhage (2.4%) was the most commonly recorded complication, followed by genitourinary disorders (1.9%), infection (1.6%) and urinary tract infections (1.6%). Vaginal hysterectomy was associated with reduced odds of infection and haemorrhage compared with abdominal procedures during the hysterectomy admission. Readmission rates increased from 5.4% in 1981-84 to 7.2% in 2000-03 as average length of stay decreased by 53% over the same time period. Women who underwent laparoscopically assisted vaginal hysterectomies and vaginal hysterectomies had increased odds of readmission for haemorrhage and genitourinary disorders compared with abdominal hysterectomy. Young age, increasing number of co-morbid conditions and having a complication at hysterectomy admission were also associated with increased odds of readmission.

Conclusion: These findings identify women at risk of readmission following hysterectomy and highlight an opportunity to modify early discharge and patient follow-up practices to reduce this risk.

Questions, Myths & Misperceptions

- Will this involve a large C-section incision?
- Do you have to remove the cervix?
  - Will this negatively impact sex?
  - Will this predispose me to prolapse later in life?
- Do you have to remove the ovaries?
  - Will my hormones change?
- Will this be a long, difficult recovery?
  - How long will I be in the hospital?
  - Will I be on opioids after surgery?

Will this involve a large C-section incision?

(Usually not, only in rare circumstances)

Questions, Myths & Misperceptions

Do you have to remove the cervix?

(No)

Does removing the cervix…

…negatively impact sex?

(Many studies suggest No)

…predispose me to prolapse?

(No, but hysterectomy in general might if other risk factors are present)

Questions, Myths & Misperceptions

Fallopian tube

Ovary

Body of uterus

Cervix of uterus

Supracervical hysterectomy

Total hysterectomy

Total hysterectomy with bilateral salpingo-oophorectomy

Questions, Myths & Misperceptions

Will removing the cervix impact sex or risk of future prolapse?

2012 systematic review of nine randomized trials (n = 1,553 patients):

- No difference between groups in major outcomes such as urinary, bowel, or sexual function; recovery from surgery; complications; readmission rate; and transfusion.
- Major disadvantages of the supracervical procedure were continued need for cancer screening and cyclic vaginal bleeding, which occurred in 7 to 20 percent of patients with supracervical hysterectomy compared with 1 to 3 percent of patients with total hysterectomy.
- In addition, approximately 2 percent of patients subsequently needed trachelectomy. The patients in these trials were followed from two to nine years.

A subsequent study of individuals from a previous randomized trial reported on outcomes 14 years after surgery. Similarly, there were no differences in urinary incontinence, POP, and prolapse symptoms between women undergoing supracervical or total hysterectomy.

Trusted evidence.
Informed decisions.
Better health.

Lethaby A, Mukhopadhyay A, Naik R. Total versus subtotal hysterectomy for benign gynaecological conditions. Cochrane Database Syst Rev. 2012 Apr 18;(4):CD004993. doi: 10.1002/14651858.CD004993.pub3. PMID: 22513925.

Will hysterectomy in general predispose me to prolapse?

"Studies have reported mixed results on the role of hysterectomy in the development of subsequent pelvic organ prolapse (POP).

This discordancy likely reflects differences in patient populations (i.e., proportion of patients with preexisting prolapse, age, menopausal status), surgical technique (i.e., type of cuff closure and incorporation of support ligaments), lack of standardized outcome criteria, and differing lengths of follow-up."

* The highest risk for developing prolapse in the future seems to be having some degree of prolapse in the first place.

Questions, Myths & Misperceptions

Do you have to remove the ovaries?

(No)

Will this affect my hormones even if we don't remove my ovaries?

(Maybe)

Questions, Myths & Misperceptions

Will hysterectomy (even with leaving ovaries) affect my hormones?

Decreased ovarian function or earlier menopause even without removal of ovaries

- Not clear how much is directly attributable to the surgery versus the underlying disease process or predisposing factors.
- Mechanism: Alteration of the ovarian blood supply, even if the ovaries are retained.

Evidence:

Elevated follicle-stimulating hormone (FSH)

- Prospective study (1) (850 women) – Age 30-47 - who underwent hysterectomy had increased risk of reduced ovarian function (defined as FSH ≥40 international units/L) compared with women with intact uteri. Followed for 5 years.
- Actual numbers: 60 women out of 406 in hysterectomy group (14.7%) and 46 out of 465 (9.9%).

Earlier menopause

- Prospective study (2) of over 500 women who were followed for five years, women who underwent hysterectomy reached menopause, defined as FSH ≥40 international units/L, 3.7 years earlier than control women who did not undergo hysterectomy.
- Actual Numbers: Fifty-three women (20.6%) in the hysterectomy group and 19 women (7.3%) in the comparison group reached menopause over the five years of the study.

(1) Moorman PG, Myers ER, Schildkraut JM, Iversen ES, Wang F, Warren N. Effect of hysterectomy with ovarian preservation on ovarian function. Obstet Gynecol. 2011 Dec.

(2) Farquhar CM, Sadler L, Harvey SA, Stewart AW. The association of hysterectomy and menopause: a prospective cohort study. BJOG. 2005 Jul

Questions, Myths & Misperceptions

Will this be a long, difficult recovery?

(Usually not – 13.6 days on average)

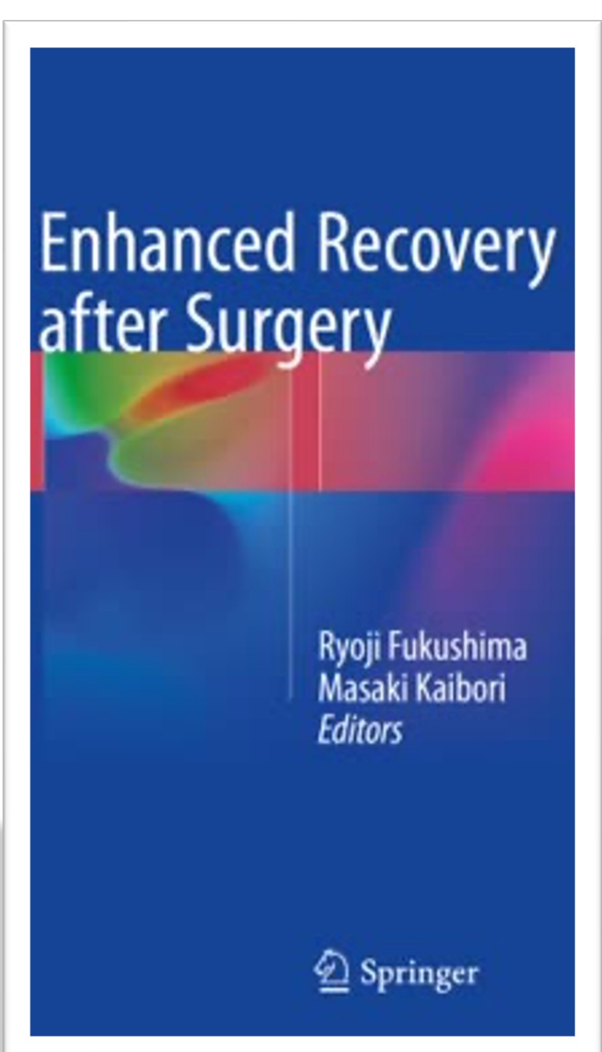
Will I be in the hospital for many days?

(No, 0-1 on average)

Will I need opioids for a long period of time?

(No, a short period if at all)

Questions, Myths & Misperceptions



Pre-op	Intra-op	Post-op
Preadmission counseling & education	Optimal fluid management	Early oral nutrition
Patient optimization	Short acting anesthetics	Optimal fluid management
No prolonged fasting	Regional analgesia	Multimodal non-opioid analgesia
Carb loading	Opioid-sparing anesthesia	Prevent PONV
PONV ppx	Small incisions	Stimulation of gut motility
No bowel prep	Avoid drains	Early removal of catheters and drains
	Normothermia	Early mobilization
	VTE prophylaxis	Audit compliance/outcomes
	Antibiotic prophylaxis	

Elements of Enhanced Recovery After Surgery

Source: Jeanette Amery, MSN, RN, AGACNP-BC. Used with permission.

Conclusion

- Hysterectomy is the second most common procedure performed on women, around the world, every day. And THE most common surgery performed on women regarding their reproductive organs.
- Hysterectomy is a very safe and effective procedure, but there are alternatives to consider for many common problems.
- Hysterectomy will likely have very positive outcomes regarding symptoms and quality of life, but may change someone's risk for prolapse or hormonal changes in the future depending on the patient.

Thank you!

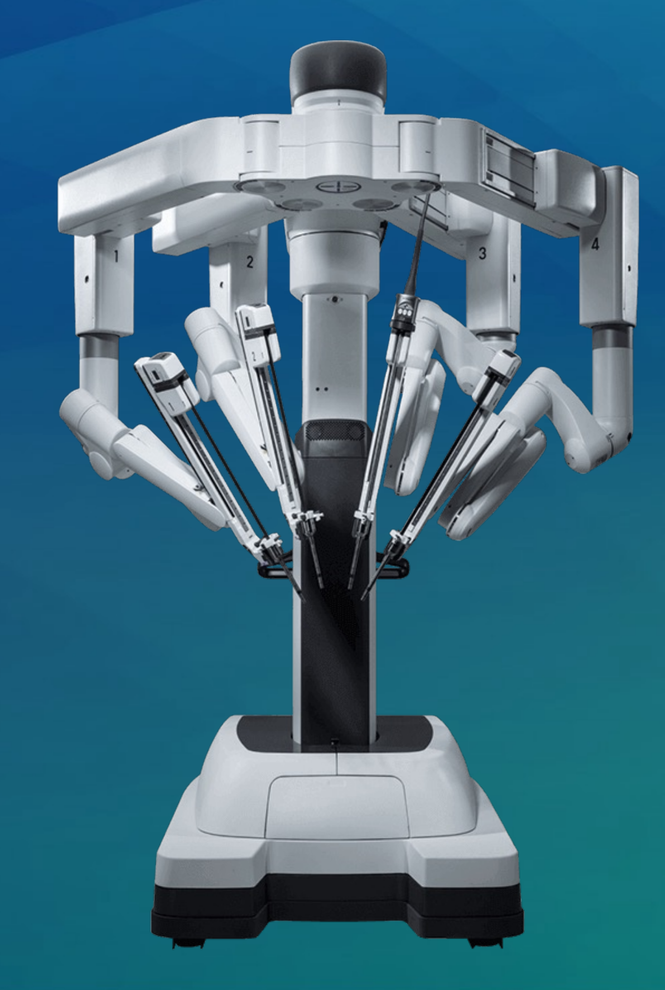
Sources & Citations

- UpToDate
  - www.uptodate.org

- CDC
  - www.CDC.gov

- ACOG
  - www.acog.org

Hysterectomy Myths You Should Stop Believing – Demystifying the Procedure



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