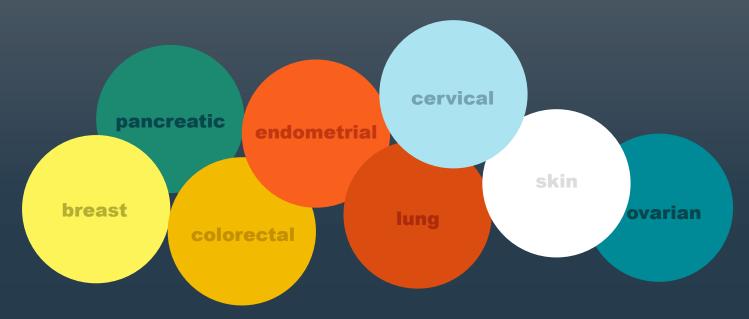


each year
540,000 women in the U.S.
have major surgery
for a benign condition



and that surgery results in up to a 7-fold increase in their likelihood to develop heart disease





## greater than all forms of cancer combined



# these women are having surgery to remove a major part of their endocrine system



# without understanding any of the consequences

#### those consequences include



cardiovascular disease coronary artery disease atherosclerosis high blood pressure stroke





Parkinson's disease dementia memory issues foggy thinking cognitive impairment decreased concentration

#### as well as

osteoporosis
bone loss
bone fractures
arthritis



decline in sexual function total loss of libido vaginal lining thinning vaginal dryness

doubled risk of lung cancer



#### and



poor wound healing joint pain

vision changes eye lesions



type 2 diabetes
glucose intolerance
insulin resistance
inability to lose weight
headaches
sugar cravings
high blood sugar





incontinence

#### not to mention



hot flashes
fatigue
night sweats
insomnia

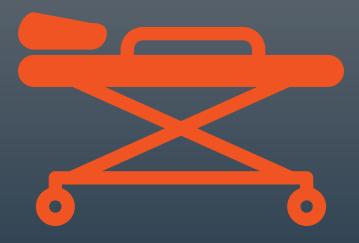
decline in psychological well-being suicidal thoughts depression anxiety panic attacks tearfulness irritability mood swings

#### and finally

loss of muscle mass poor exercise tolerance water retention weight gain

loss of collagen
wrinkles
thinning hair
puffy eyes
blotchy skin with brown marks
cold hands and feet
hair loss
dry skin

## to name a few.



# so...why are 540,000 U.S. women a year having a surgery that increases the risk of so many serious health problems?



## fear



# this is what they wish they'd known

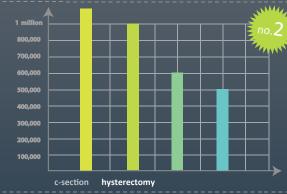
#### **HYSTERECTOMY & OVARY REMOVAL**



600,000

**HYSTERECTOMIES** IN THE U.S. **EVERY YEAR** 

20 MILLION **WOMEN IN THE** U.S. HAVE HAD A **HYSTERECTOMY** 



2ND MOST COMMON **MAJOR SURGICAL** PROCEDURE FOR U.S. **WOMEN** 

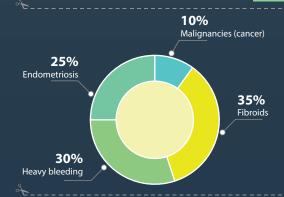
3RD MOST COMMON **MAJOR SURGERY IN** THE U.S. EVERY YEAR

1 in 3 WOMEN HAS HAD A **HYSTERECTOMY** BY AGE 60



are performed for a benign condition

of hysterectomies



MOST COMMON PRE-MENOPAUSAL **REASONS GIVEN FOR THE PROCEDURE** 

> **540,000 HYSTERECTOMIES A YEAR ARE FOR BENIGN CONDITIONS**

PRE-MENOPAUSAL WOMEN WHO HAVE A HYSTERECTOMY BUT KEEP OVARIES STILL **HAVE A 3X RISK OF HEART DISEASE** 

YOUNGER WOMEN ARE **TWICE AS LIKELY TO HAVE A HYSTERECTOMY FOR A BENIGN CAUSE AS WOMEN IN THEIR 50s & 60s** 



#### 340,000 OF THE WOMEN HAVING A HYSTERECTOMY EACH YEAR ALSO LOSE OVARIAN FUNCTION



55% of hysterectomies for benign conditions, healthy ovaries are also removed 300,000 women per year In the U.S.

15% another 40,000 women who keep ovaries at hysterectomy experience ovarian failure within a few years



95% OF WOMEN THINK OVARY REMOVAL SIMPLY RESULTS IN EARLY MENOPAUSE

#### IT IS NOT THE SAME.

WITHOUT OVARIES **HEART DISEASE RISK IS UP TO 84% GREATER RISK OF LUNG CANCER DOUBLES RISK OF PARKINSONS ALSO DOUBLES** 

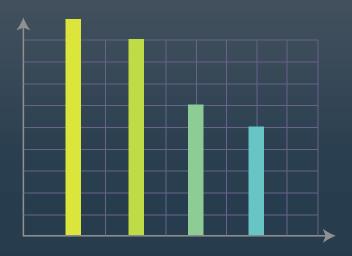
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According to the Centers for Disease Control & Prevention (CDC), there are 600,000 hysterectomies in the U.S. every year.

10% are related to cancer,

But the remaining 540,000 hysterectomies are performed for benign conditions, those that are not life-threatening.

The CDC's estimate that 33% of women have had a hysterectomy by age 60 may even be too low.



According to the U.S. Dept. of Health & Human Services, "In 2005–2006, nearly 40% of women aged 45–54 reported having had a hysterectomy..."

### either way, it's a lot

More than half of those 540,000 women also allow their healthy ovaries to be removed at the same time.

That's 300,000 women every year.

Of the remaining 240,000 women whose ovaries aren't removed, 15% lose the function of their ovaries within a few years due to decreased blood flow.

That's another 40,000 women each year.

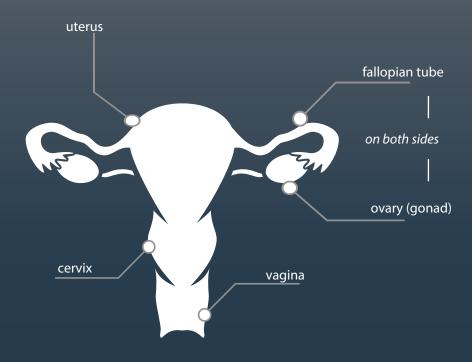
For a total of 340,000 women,

or an average of 930 women in the U.S. every single day who lose their healthy ovaries.

820 women a day lose them voluntarily.

Some people aren't quite sure what a hysterectomy is because there are a few variations.

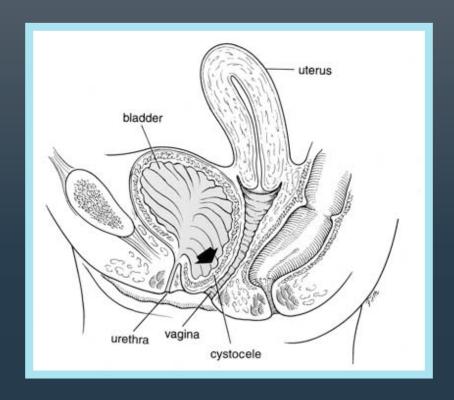
## types of hysterectomy



Subtotal: just the uterus | Total: uterus and cervix | Radical: uterus, cervix, both ovaries and fallopian tubes

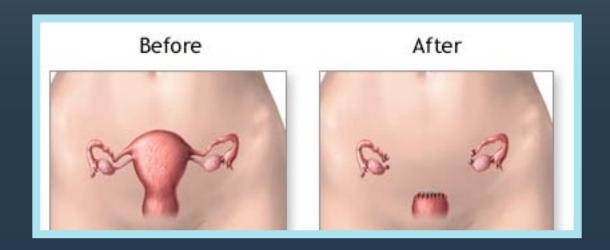
A hysterectomy is often misunderstood to include ovaries. It does not. However, hysterectomies all come with a 15% risk of ovarian failure that can occur from within a few weeks to a few years after surgery.

## the surgery



Many also don't realize that the uterus must be detached from the bladder and the bowel.

# Or that, even if left in place, ovaries are twice as likely to fail after hysterectomy as they were if the surgery hadn't been performed.



It's established that the loss of ovaries is very closely tied to the high rate of hysterectomy in the U.S.

The uterus is so unpopular that 540,000 women in the U.S. every year are willing to have surgery to remove it for benign conditions.

why?



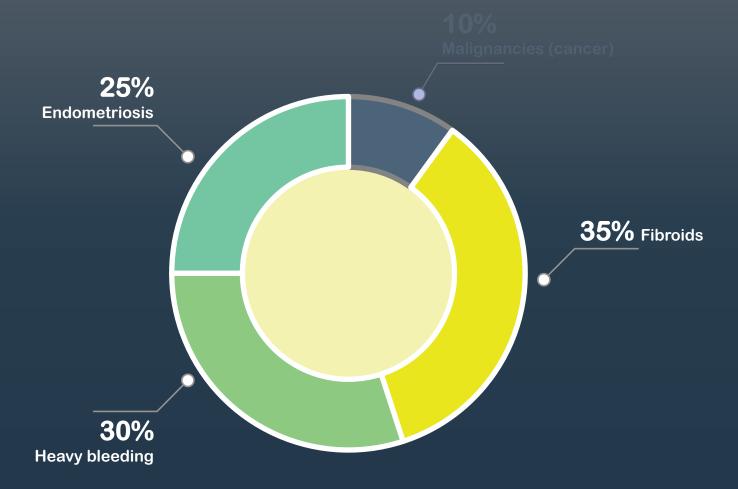


## And pain combined with fear and a lack of information can lead to



surgeries where the harm outweighs the benefits.

## benign conditions cited as the reason for hysterectomy



after the age of menopause, uterine prolapse is a common reason

#### **FIBROIDS**

#### **WHAT ARE FIBROIDS?**

uterus (area within green circle only)



fibroids are non-cancerous tumors that grow in various places in the uterus



IN NOVEMBER 2014, AN FDA PANEL, USING 30 YEARS OF DATA, CONCLUDED THAT 1 IN EVERY 352 WOMEN WHO HAD A HYSTERECTOMY FOR WHAT WERE BELIEVED TO BE FIBROIDS HAD SARCOMA (CANCER) INSTEAD. THE FDA LABELED MORCELLATORS USED IN MINIMALLY INVASIVE HYSTERECTOMIES RISKY.

AN MRI USING Gd-DTPA CONTRAST COMBINED WITH AN LDH BLOOD TEST IS VERY ACCURATE IN DIAGNOSING SARCOMA PRIOR TO SURGICAL FIBROID REMOVAL

#### TREATMENT OPTIONS

Gn-RH MEDICATION
MRI-GUIDED FOCUSED ULTRASOUND SURGERY (NEW)
UTERINE ARTERY EMBOLIZATION
MYOLYSIS



MYOMECTOMY (OFTEN BEST CHOICE, BUT ONLY 30,000 PERFORMED PER YEAR TODAY)
ENDOMETRIAL ABLATION

WOMEN DO NOT NEED HYSTERECTOMIES TO TREAT FIBROIDS

FIBROIDS ARE THE #1 REASON GIVEN FOR HYSTERECTOMIES



#### 210,000 WOMEN

IN THE U.S. EVERY YEAR

- ✓ NEW FIBROIDS MAY GROW, BUT FIBROIDS DO NOT GROW BACK ONCE REMOVED
- ✓ AFTER MYOMECTOMY (see TREATMENTS), RISK OF NEW FIBROIDS LARGER THAN 2 cm IS ONLY 15% OVER 3 YEARS
- ✓ FIBROIDS GENERALLY DISAPPEAR ON THEIR OWN AT ABOUT AGE 51, AROUND THE TIME MENOPAUSE ENDS

FIBROIDS RANGE IN SIZE FROM



MICROSCOPIC TO OVER A FOOT IN DIAMETER



#### FIBROIDS USUALLY DEVELOP DURING CHILDBEARING YEARS

#### **SYMPTOMS**

HEAVY BLEEDING
CRAMPING
PAIN DURING SEX
FREQUENT URINATION
LONG PERIODS (7+ DAYS)
CONSTIPATION
PELVIC PAIN
BACK +/OR LEG PAIN

#### **3 OUT OF 4 WOMEN**

HAVE FIBROIDS AT SOME POINT MANY WON'T REALIZE IT





#### **BUT FOR SOME WOMEN**

THEY ARE THE SOURCE OF A GREAT DEAL OF PAIN

#### DIAGNOSIS OPTIONS

PELVIC EXAM (GOOD) | ULTRASOUND (BETTER) | MRI (BEST)

#### HORMONES

SOME DOCTORS BELIEVE PROGESTERONE CREAM SHRINKS FIBROIDS SOME BELIEVE IT MAKES THEM GROW



95% OF WOMEN THINK OVARY REMOVAL SIMPLY RESULTS IN EARLY MENOPAUSE

#### IT IS NOT THE SAME.

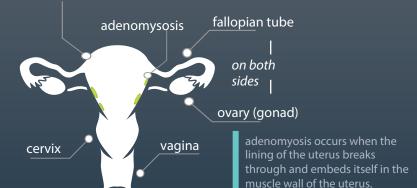
HEART DISEASE RISK IS UP TO 84% GREATER
RISK OF LUNG CANCER DOUBLES
RISK OF PARKINSON'S ALSO DOUBLES

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#### **HEAVY BLEEDING**

#### ONE COMMON CAUSE OF HEAVY BLEEDING IS **ADENOMYOSIS** uterus





#### ADENOMYOSIS COULD BE CAUSED BY

THE STRESS OF CHILDBIRTH, INCLUDING C-SECTION, ON THE WALL OF THE UTERUS, ALLOWING THE LINING TO BECOME EMBEDDED.

IT CAN ALSO OCCUR AS THE UTERUS IS INITIALLY FORMING, IF THE LINING GETS INTO THE MUSCLE WALL.

#### OTHER CAUSES OF HEAVY BLEEDING

(ALSO CALLED MENORRHAGIA)

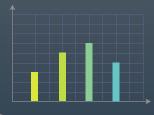
- HORMONAL IMBALANCE
- MISCARRIAGE OR ECTOPIC PREGNANCY
- PELVIC INFLAMMATORY DISEASE
- PROBLEMS WITH AN IUD
- USE OF BLOOD THINNERS
- UTERINE, OVARIAN, OR CERVICAL CANCER
- MEDICAL CONDITIONS THAT PREVENT BLOOD CLOTTING

**HEAVY BLEEDING IS THE #2 REASON FOR HYSTERECTOMIES** 



#### **180,000 WOMEN**

IN THE U.S. EVERY YEAR



**ADENOMYOSIS IS MOST COMMON IN WOMEN IN THEIR** 40s AND 50s

**ADENOMYOSIS IS** COMMON IN WOMEN **WHO HAVE ENDOMETRIOSIS** 



#### INDICATIONS OF HEAVY BLEEDING

**NEEDING TO CHANGE PADS OR TAMPONS DURING THE NIGHT ANEMIA** 



#### **DIAGNOSIS OPTIONS**

PELVIC EXAM (GOOD) | ULTRASOUND (BETTER) | MRI (BEST)

#### TREATMENT OPTIONS

FOR ADENOMYOSIS:

**NSAIDs** HORMONE THERAPY **Gn-RH MEDICATION UTERINE ARTERY EMBOLIZATION ENDOMETRIAL ABLATION** 



FOR THE MANY OTHER CAUSES OF HEAVY BLEEDING, SEE YOUR DOCTOR, **BUT ALSO BE INFORMED.** 

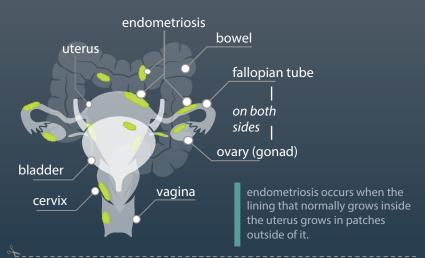
APART FROM RELATED CANCERS, A HYSTERECTOMY +/OR OVARY REMOVAL IS NOT THE SOLUTION.

A 67% INCREASE IN MORTALITY FOR WOMEN UNDER 45. IN MOST CASES OF HEAVY BLEEDING, THERE IS NO NEED TO REMOVE OVARIES. BE INFORMED. VISIT GYNREFORM.COM



#### **ENDOMETRIOSIS**

#### WHAT IS ENDOMETRIOSIS?



THE LINING OF THE UTERUS ENTERS THE PELVIC AREA THROUGH THE FALLOPIAN TUBES AND MAY GROW ON:

THE OUTSIDE OF UTERUS, OVARIES, CERVIX, VAGINA, BLADDER, BOWEL, APPENDIX, TISSUE THAT LINES THE PELVIS (CALLED THE PERITONEUM)



#### **SYMPTOMS**

SEVERE PAIN IN PELVIS, BOWEL, INTESTINES, & LOWER BACK **MOST PAINFUL DURING PERIOD PAIN DURING SEX BLEEDING BETWEEN PERIODS** INFERTILITY

STOMACH PROBLEMS

ENDOMETRIOSIS MAY SPREAD THROUGHOUT THE ENTIRE PELVIC AREA HYSTERECTOMY WITH OR WITHOUT REMOVAL OF THE OVARIES DOES NOT CURE ENDOMETRIOSIS

**ENDOMETRIOSIS IS THE #3 REASON GIVEN FOR HYSTERECTOMIES** 



#### 150,000 WOMEN

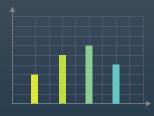
IN THE U.S. EVERY YEAR

**DOCTORS DO NOT KNOW WHY SOME WOMEN** DEVELOP ENDOMETRIOSIS AND OTHERS DO NOT, **BUT ENDOMETRIOSIS IS LIKELY GENETIC** 

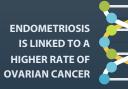
AT LEAST 5 MILLION WOMEN IN THE U.S.



HAVE **ENDOMETRIOSIS** 



**ENDOMETRIOSIS IS MOST COMMON IN WOMEN IN THEIR 30S AND 40S** 





#### **DIAGNOSIS OPTIONS**

ULTRASOUND (POOR) | MRI (POOR) | PELVIC SURGERY (BEST)

#### TREATMENT OPTIONS

**BIRTH CONTROL PILLS PROGESTERONE PAIN MANAGEMENT with Ibuprofen or Naproxen Gn-RH MEDICATION** LAPAROSCOPIC SURGERY to remove just the endometriosis TYPICALLY DISAPPEARS AT TIME OF MENOPAUSE (average age 51)



REMOVING OVARIES RESULTS IN A ..... SIGNIFICANTLY INCREASED MORTALITY. THERE IS NO NEED TO REMOVE OVARIES TO TREAT ENDOMETRIOSIS. BE INFORMED. VISIT GYNREFORM.COM





### treatment

### From medication to relieve pain or suppress hormones



to surgery to remove only the cause of pain...

many appropriate alternatives exist to treat the most common reasons women have hysterectomies without the catastrophic effects of ovary removal.

However, the truth is that hysterectomy, in particular vaginal, as opposed to abdominal or laparoscopic/robotic, hysterectomy is the most cost-effective way to treat these conditions.



Most of that cost savings is based on the simple fact that there are fewer surgeons trained to perform what are often more appropriate surgeries.



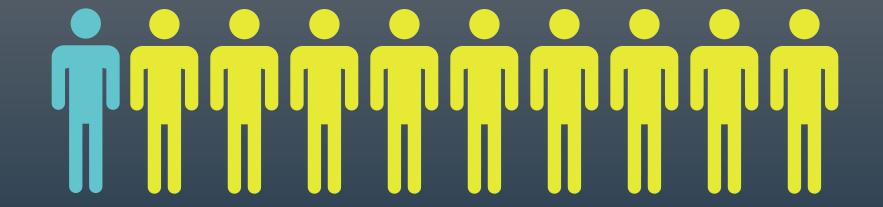
In those more appropriate surgeries, just the fibroids, endometriosis/adenomyosis, or the uterine lining are removed. Cost savings is not a good reason to remove women's healthy body parts.



For example, in the field of urology, when a kidney tumor is found, doctors do not automatically remove the entire kidney, even when they suspect cancer. They remove the smallest amount of kidney necessary.

That's considered good medicine.

### fear



10% of hysterectomies are performed to address a high risk or a diagnosis of cancer.



### In these cases, surgery is clearly a healthy decision.



# However, even in these cases, the surgeon should conserve the ovaries if possible.

Cancer is the only reason to use hysterectomy and/or ovary removal as a first line of defense.

## And not simply fear of cancer, but a proven high risk or diagnosed cancer.

#### **OVARIES & CANCER**



MALIGNANCY OR HIGH CANCER RISK IS
THE #4 REASON GIVEN FOR ALL HYSTERECTOMIES

#### HIGHEST RISK GROUPS INCLUDE WOMEN WHO

- HAVE THE BRCA 1 OR BRCA 2 GENE MUTATIONS
- HAVE A FIRST-DEGREE FAMILY MEMBER (MOM, SISTER, ETC.) WITH BREAST, COLORECTAL, OR OVARIAN CANCER
- HAVE NEVER TAKEN THE PILL
- HAVE NEVER GIVEN BIRTH
- ARE WHITE
- ARE CONSIDERED OBESE
- ARE OF ASHKENAZI JEWISH HERITAGE
- HAVE GONE THROUGH MENOPAUSE (AVERAGE AGE IS 51)





#### SYMPTOMS

ABDOMINAL BLOATING OR PELVIC PAIN
INCREASED FREQUENCY OF URINATION
LOSS OF APPETITE OR FEELING FULL QUICKLY AFTER EATING
PERSISTENT GAS OR INDIGESTION
INCREASE IN THE SIZE OF ABDOMEN
PAIN DURING SEX
CONSTIPATION
LOWER BACK PAIN
FATIGUE

ALTHOUGH OVARIAN CANCER IS VERY RARE, IT HAS A HIGHER MORTALITY RATE THAN MANY CANCERS BECAUSE IT IS DIFFICULT TO DETECT

ONLY 50% OF WOMEN WHO DEVELOPED OVARIAN CANCER HAD RAISED CA-125 IN BLOOD IN EARLY STAGES

OF THE 157 MILLION WOMEN IN THE USA ABOUT 20,290 WILL BE DIAGNOSED WITH OVARIAN CANCER THIS YEAR, AND ABOUT 14,180 WILL DIE



#### **DIAGNOSIS**

- 1. PELVIC EXAM
- 2. ULTRASOUND
- 3. MRI OR CT SCAN
- 4. BLOOD TEST FOR MARKERS HE4, CA-125, INHIBIN-B
- 5. EXPLORATORY SURGERY WITH GYNECOLOGIC ONCOLOGIST



MANY STUDIES SUGGEST THAT OVARIAN CANCER STARTS IN THE FALLOPIAN TUBES, NOT THE OVARIES





CONFUSING AS IT SOUNDS, OVARY REMOVAL DOES NOT GUARANTEE THAT A WOMAN WILL NOT GET OVARIAN CANCER. CANCER HAS A "FOOTPRINT" AND OVARIAN CANCER MAY OCCUR IN OTHER PARTS OF THE BODY IF IT MIGRATES BEFORE OVARIES ARE REMOVED.

BRCA 1: REMOVING OVARIES REDUCES OVARIAN CANCER RISK BY 85% BUT IT DOES NOT SIGNIFICANTLY REDUCE THEIR BREAST CANCER RISK BRCA 2: HAS A 72% DECREASE IN THEIR RISK OF BREAST CANCER AFTER OVARY REMOVAL, BUT IT DOES NOT SIGNIFICANTLY REDUCE THEIR RISK OF OVARIAN CANCER

#### CANCER PATIENTS REPORTED OVARY REMOVAL REDUCED QUALITY OF LIFE

73% OF PATIENTS REPORTED SEXUAL DYSFUNCTION, SUCH AS ABSENCE OF SATISFACTION AND PRESENCE OF PAIN

**61% HAD PROBLEMS SLEEPING** 

57% HAD SYMPTOMS OF MENOPAUSE SUCH AS HOT FLASHES, VAGINAL DRYNESS

56% HAD ELEVATED LEVELS OF STRESS

IF POSSIBLE, WOMEN ARE ENCOURAGED TO PRESERVE A HEALTHY OVARY

95% OF WOMEN THINK HYSTERECTOMY + OVARY REMOVAL SIMPLY RESULT IN EARLY MENOPAUSE

#### IT IS NOT THE SAME.

REMOVING OVARIES INCREASES ALL CAUSE MORTALITY.

BE INFORMED.



Citations: 4, 5, 7, 11, 14, 36, 40, 50, 57, 58, 63, 64, 65, 66, 67, 73, 84, 93, 97, 101, 103, 131

What is the average woman's risk of increased mortality from ovarian cancer that's prevented if she agrees to have her ovaries removed?

Less than ½ of 1%.



"This survival advantage (of keeping the ovaries) far outweighs the 0.47% (less than ½ of 1%) increased mortality rate from ovarian cancer prevented by oophorectomy."

### Understanding whether the benefits truly outweigh the risks



### is a better basis for a decision about surgery than fear.

### a lack of information

### This is the thing that 95% of women don't realize...



Removing ovaries does not simply result in the early arrival of inevitable, normal menopause.

Or, said another way,

having gone through menopause is not the same thing as having had ovaries removed.

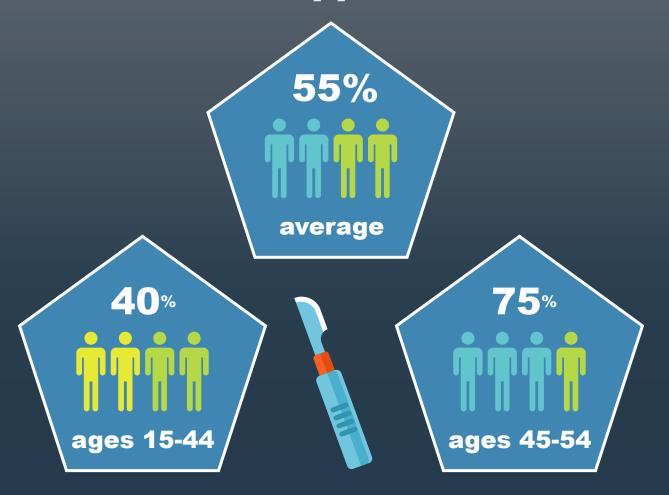


# Instead, the risk of long-term, life-threatening illnesses dramatically increases if ovaries are removed or fail.





### which happens a lot



% of time healthy ovaries are removed at time of hysterectomy

340,000 healthy pairs of ovaries are removed or fail as part of the 540,000 hysterectomies for benign conditions performed in the U.S. each year



### surgical removal of ovaries is called an oophorectomy

(pronounced OH-uh-for-ectomy)

### common terms used

"Bilateral salpingo-oophorectomy" (or BSO) just means removing ovaries on both sides ("bilateral") including the fallopian tubes ("salpingo").

"Prophylactic bilateral oophorectomy"
("prophylactic" means preventative), which
means having them out just in case. In highrisk women, this is good medicine, but in
undetermined or average risk women, it is not.

# Of the 340,000 women, 300,000 of them actually choose to do this every year.

why?



Women are told that removing their ovaries while the doctor is "in there anyway" for a hysterectomy decreases the women's risk of ovarian cancer, and agree to this additional surgery...

when the truth is that,

"In no analysis or age group was oophorectomy (ovary removal) associated with increased survival."

98% of U.S. women do not have an increased risk of breast or ovarian cancer.

It bears repeating: the increased mortality rate that prophylactic ovary removal actually prevents for the average woman is less than half of 1%.



### the truth



Though ovary removal decreases the heightened risk of breast and ovarian cancer that exists for 2% of all women,

#### it increases the risks of

- all-cause mortality
- fatal + nonfatal coronary heart disease
- Parkinson's
- dementia
- Alzheimer's
- lung cancer
- osteoporosisand more

in every woman who has her ovaries out.



### like pain, the word "cancer" is a big motivator

Without information about the risks, women believe they are simplifying their lives when they say,

"just take it all so i don't have to worry"

"i don't want/i'm done having kids"

"my period is a nightmare"

They believe that there is no down-side beyond the recovery from surgery.

### on the contrary

The likelihood that women will live to age 80 decreases significantly if they agree to this surgery.



### age at time of hysterectomy & likelihood to survive to age 80

45 and under \*



likelihood to live to age 80 is 43% lower

### ages 50-54



likelihood to live to age 80 is 8% lower

### ages 55-59



likelihood to live to age 80 is 4% lower

data for ages 46-49 unavailable | \* women in this age group who took estrogen may mitigate this risk, though the degree is unknown. However, fewer women take estrogen since the 2002 WHI study (citations: 14, 123) and the 2004 WHI estrogen-alone study (citations: 125-127).

Estrogen-alone hormone supplements carry their own increased risks incl. dementia, stroke and embolism from blood clots, and heart disease. Risks increase with age.

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### fear of cancer is powerful

Women do not have to guess about whether they are among the 2% of the population who are at an increased risk of breast or ovarian cancer.



They can, and should, visit a certified genetic counselor for an evaluation...

# which is the recommendation of the American Congress of Obstetricians & Gynecologists.





# During menopause, ovaries do not stop functioning, as many people believe.



# Instead, ovaries change the combination of the hormones they produce to suit the body's needs as it ages.

### **Taking away the ovaries**



means taking away those health benefits...



### and suffering the consequences.

## the doctors know

"Numerous studies link bilateral oophorectomy to an increased risk of cardiovascular disease in both premenopausal and postmenopausal women."



American Journal of Obstetrics & Gynecology
June 2010

"Rates of ischemic heart disease were 7-fold higher in women with a history of oophorectomy (ovary removal) younger than 45 years."



"...and that increased risk only decreases 6% every year after age 45."

(For example, if surgery is performed at age 46, the risk is 6% less.)

# Women under 45 who allow their ovaries to be removed have a mortality rate 167% that of women who keep their ovaries.



"Compared with ovarian conservation, bilateral oophorectomy (removing both ovaries) at the time of hysterectomy for benign disease is associated with a decreased risk of breast and ovarian cancer, but an increased risk of all-cause mortality, fatal and non-fatal coronary heart disease, and lung cancer.



In no analysis or age-group was oophorectomy associated with increased survival."

"Numerous studies link bilateral oophorectomy to an increased risk of cardiovascular disease in both premenopausal and post-menopausal women.

Considering the reported benefits of ovarian conservation, it seems reasonable to delay prophylactic bilateral oophorectomy or remaining oophorectomy at least until age 65 years if not indefinitely, in women with an average risk for ovarian cancer."



2010, American Journal of Obstetrics & Gynecology (AJOG)

"...unless you have a family history of ovarian cancer, there's no reason to remove the ovaries. Back in the 1960s, it was believed that the ovaries stopped working after a hysterectomy, and removing them prevented the possibility of ovarian cancer. Even though it's now known that the ovaries continue to make small amounts of important steroid hormones after menopause, half of all hysterectomies involve removal of the ovaries and tubes.

'There are still those who believe the ovaries should be removed in women after age 40 if the uterus is being removed. But the incidence of ovarian cancer is not high enough to justify the routine removal of the ovaries in a premenopausal woman,' insists Dr. Bartsich.

'Even if women are not having periods, they are still making steroid hormones essential for their well-being. So the hormonal status of the woman should always be checked beforehand. There are many biochemical interactions that are not well understood, and if the ovaries are still functional, their removal amounts to a castration.'

In fact, removing the ovaries in a woman in her 40s and even 50s greatly increases the risk of osteoporosis and coronary disease, and brings on an abrupt menopause with more severe symptoms."



Women's Health Advisor, Weill Medical College of Cornell University

"There is a growing body of evidence suggesting that the premature loss of ovarian function caused by bilateral oophorectomy performed before natural menopause is associated with several negative outcomes.

In particular, studies have revealed an increased risk of premature death, cardiovascular disease, cognitive impairment or dementia, Parkinsonism, osteoporosis and bone fractures, decline in psychological well-being, and decline in sexual function.

The effects involve different organs (e.g., heart, bone, or brain), and different functions within organs (e.g., cognitive, motor, or emotional brain functions). Estrogen treatment may prevent some of these negative outcomes, but not all."



#### "Facts (associations)

Bilateral oophorectomy performed before the onset of menopause is associated with an increased risk of cognitive impairment or dementia. The association is stronger with younger age at oophorectomy, is independent of the indication for oophorectomy, and may be offset by estrogen treatment.

Bilateral oophorectomy performed before the onset of menopause is associated with an increased risk of parkinsonism and Parkinson's disease. The association is stronger with younger age at oophorectomy and is independent of the indication for oophorectomy, but is not offset by estrogen treatment.

Bilateral oophorectomy performed before the onset of menopause is associated with an increased risk of long-term depressive and anxiety symptoms. The association is stronger with younger age at oophorectomy and is independent of the indication for oophorectomy, but is not offset by estrogen treatment."



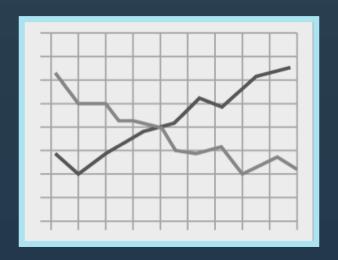
## playing doctor

Disregarding these studies, and giving a new definition to "playing doctor", two-thirds of doctors surveyed would still leave the decision entirely up to the patient...

and would remove the healthy ovaries of women in their 30's at their request.

These women, because of their young age when their ovaries were removed...

# would be in the very highest risk category for illnesses related to ovary removal...



including cardiovascular disease, lung cancer, Alzheimer's, dementia, Parkinson's, and osteoporosis.



# But in many cases, this is all the information women will receive about the risks...

#### Are there any risks?

The risks associated with hysterectomy are among the lowest for any major surgery. However, as with any major surgery, problems can occur, including:

- · Blood clot in the veins or lungs
- Infection
- Bleeding during or after surgery
- Bowel blockage
- Injury to the urinary tract or nearby organs
- Problems related to anesthesia
- Early menopause (if ovaries are removed)

where "early menopause" is just an inaccurate footnote.

Women are told about some of the risks that exist while they're on the operating table, "nicked bowel, urinary tract infection...",



but nothing about the well-established, long-term health risks that exist from the day of surgery onward.

In fact, some gynecologists recommend hysterectomy and ovary removal to women with benign conditions as a solution even when it is not, such as in the case of endometriosis.

Some doctors claim they need to remove the ovaries when endometriosis grows on them. However, it can also grow on the bowel, bladder, and pelvis, but they are not removed. The endometriosis is surgically removed, and the organs are left in place. The same should be true of the ovaries.

This surgery is performed even when less aggressive treatment is advised by the American Congress of Obstetricians & Gynecologists (ACOG).

Since the beginning of 2008, the ACOG has said, "strong consideration should be made for retaining normal ovaries in pre-menopausal women who are not at increased genetic risk of ovarian cancer."

Even before 2008, the ACOG suggested leaving the ovaries of women 45 and younger, except in cases of cancer.

But since 2008, they've expanded their recommendation to all women who haven't been through menopause (average age 51).

# However, too many gynecologists ignore the ACOG's guidance.

In 2000, the recommendations gynecologists made to 497 women in Southern California were studied, and it was revealed that 70% of hysterectomies were recommended inappropriately.

The study concluded that, though care had been taken by the ACOG to develop guidelines about when to perform hysterectomies, those guidelines weren't being implemented by doctors with the same amount of care.

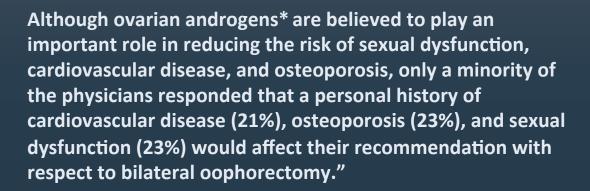
In a more recent 2014 survey, 66% of gynecological surgeons who responded said they were willing to perform ovary removal on women in their 30's at the women's request.

And more than 75% of gynecologists who responded said they didn't take a woman's personal medical history into account when deciding whether to perform the surgery.



### survey says...

"According to our study, most physicians do not rely heavily on a woman's personal history of cardiovascular disease or osteoporosis in their decision to perform bilateral oophorectomy (both ovaries removed), despite some recommendations to do so.





<sup>\*</sup> androgens – testosterone, androstenedione

## they'll do whatever.

"Although previous oral contraceptive use has been shown to significantly decrease the risk of ovarian cancer, only 15% of physicians took this into consideration when deciding whether to perform elective BO\*.

...This was evident in our finding that two-thirds of the respondents would honor a 30- to 35-year-old woman's request for elective BO\*."



<sup>\*</sup> BO/bilateral oophorectomy – removing both ovaries

When doctors leave the decision to patients, and only tell them that removal of ovaries decreases their risk of cancer, but don't tell them about the other risks involved,

this is what happens...

## At least 12 million women in the U.S.

no longer have their healthy ovaries and the protective hormones they produce due to a hysterectomy for a benign condition.

### what they don't know

Many women say they feel better after their hysterectomy.

This is understandable, but it is also misleading.

Because most of those 12 million women have no idea about the trade-off they made, or its connection to illnesses that arise as many as 15 years later.

(and, of course, the more common the surgery is, the less likely women are to question it) "Many of the adverse health outcomes manifest only after 15 or more years of follow-up.

Because of this long lag time, the associations had not been recognized in routine postsurgical follow-up studies.

In light of the current scientific evidence favoring ovarian conservation, clinicians have an obligation to offer thorough counseling and advice to patients who are considering prophylactic oophorectomy.

For women up to 65 years of age who are not known to be at increased risk for ovarian or breast cancer, prophylactic oophorectomy should be discouraged."

The women who say they feel better after a hysterectomy are simply saying, "that pain is gone."

That result can almost always be achieved in more appropriate ways.

The women may not understand the possible connection to their future illnesses...



### changed forever

# Why would the loss of ovaries increase the risk of so many seemingly-unrelated diseases?

An understanding of some of the body's basics allows for future conversations with doctors to be more meaningful...

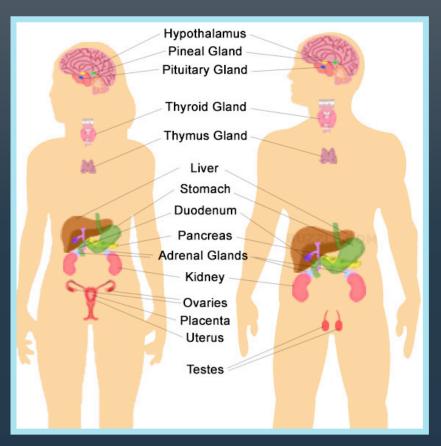
### the endocrine system

### the endocrine system

women's ovaries and men's testes are both gonads

gonads are a major component of the endocrine system

the endocrine system affects most every organ and cell in the body



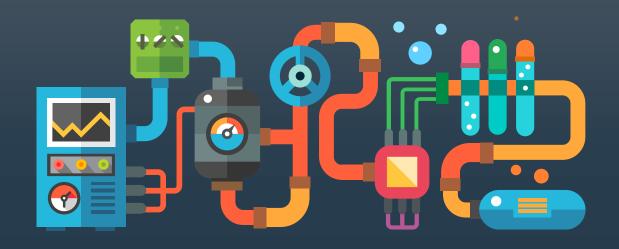
regulates:

the endocrine system

metabolism
growth & development
sexual function
reproduction
sleep
mood
heart function
muscle
fat
skin
bone
healing
etc.

pronounced EN-doh-crin

## It is referred to as a "system" because it all works together,

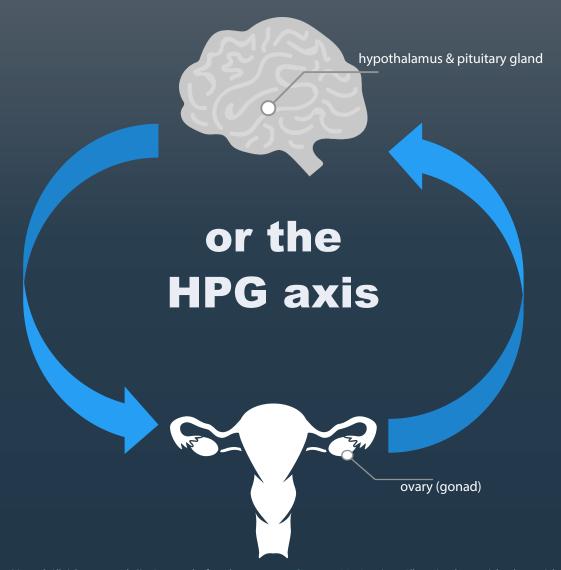


regulating much of what goes on within the body.



Within the system, the ovaries (gonads) have a chemical conversation with the brain that regulates the amount of hormones produced and influences the behavior of the rest of the body.

### hypothalamic-pituitary-gonadal axis



The gonads in male and female bodies are "homologues", meaning they are different but equivalent.

## (and, yes, removal of the ovaries is castration)

**castration** /cas·tra·tion/ (kas-tra'shun) excision of the gonads, or their destruction as by radiation or parasites.

female castration bilateraloophorectomy.

male castration bilateral orchiectomy.

"CITE" 👄 Dorland's Medical Dictionary for Health Consumers. © 2007 by Saunders, an imprint of Elsevier, Inc. All rights reserved.

#### cas-tra-tion (kă-strā'shən)

n.

- 1. Removal of the testicles or ovaries; sterilization.
- 2. A psychological disorder that is manifested in the female as the fantasized loss of the penis or in the male as fear of its actual loss.

"CITE" GD The American Heritage® Medical Dictionary Copyright © 2007, 2004 by Houghton Mifflin Company. Published by Houghton Mifflin Company. All rights reserved.

#### castration

[kastrā'shən]

Etymology: L, castrare, to castrate

the surgical excision of one or both testicles or ovaries, performed most frequently to reduce the production and secretion of certain hormones that may stimulate the proliferation of malignant cells in women with breast cancer or in men with prostate cancer. The patient must be informed that bilateral excision of the gonads causes sterility. See also **oophorectomy**, **orchidectomy**.

"CITE" S Mosby's Medical Dictionary, 8th edition. © 2009, Elsevier.

Though "castration" is generally used to refer to the procedure as performed on men when used outside of medical conversations, in medicine, it's used for both men and women.

For whatever reason, referring to ovary removal as "castration" in the same way it's used for orchiectomy (testes removed) may sound inflammatory and obscure the data.

There's no need for additional controversy because the data about risks speaks for itself. However, to be clear, removal of the uterus is not castration, but removal of the ovaries is.

### moving on...

(though it's probably worth pointing out that men are not routinely removing their equivalent equipment

even when they're done having children)

### rethinking the ovaries

Referring to the ovaries as "reproductive organs", and not as a fundamental part of the complex endocrine system, has fostered the idea that they are disposable after reproduction, or if reproduction isn't desired.

Understanding that ovaries actually increase hormone production after menopause must mean that we view them as essential.



### After menopause, the ovaries change from a focus on reproduction...

to a focus on sustaining health and vitality in later life.



Menopause doesn't usually take place overnight. It generally takes about 4-5 years, concluding on average at age 51.

Cycles become irregular, things get weird, hot flashes may or may not occur.

At completion, about a year after periods have stopped, women are referred to as being "post-menopausal".

In a typical woman with no illnesses, this is normal, even if aspects of it are distracting, uncomfortable, and frustrating.

But it is not the end of life for ovaries.





Studies in the 1970s demonstrated that ovaries continue to produce significant amounts of hormones after menopause ends.

A 1999 study added that, though hormone production drops at menopause, when menopause is over, levels increase until, by her 70's, a woman makes as much testosterone as she did when she was young.



That may not sound like a good thing, but testosterone is linked to many beneficial bodily functions, including muscle and bone formation, and a sense of well-being...

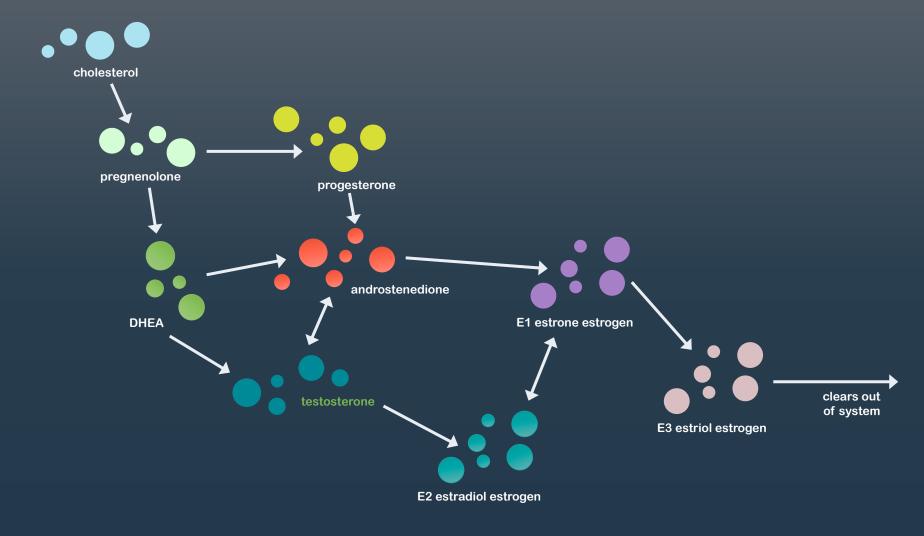
functions that are more useful past age 50 than a focus on reproduction.



### What's more, testosterone is not just testosterone.



### Testosterone converts to other hormones.



Testosterone and androstenedione are androgens. Androgens turn into estrogens in fat and skin (called aromatase), providing the majority of a woman's estrogen after menopause.



A 2007 study, with advanced assay (figuring out what things are made of) methodology, again confirmed the post-menopausal ovarian hormone production reported in previous studies,

and was able to be very specific about the difference between hormone levels in a woman who'd been through menopause versus a woman with no ovaries at all. Compared to a woman who'd been through normal menopause, a woman with no ovaries makes:

42% less testosterone
17% less androstenedione
18% less DHEA
26% less estrone (E1 estrogen)
8% less estradiol (E2 estrogen)

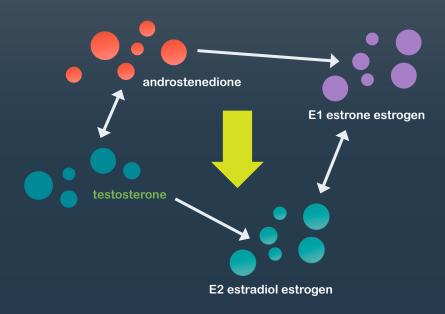
#### Low testosterone can cause or make worse

loss of motivation depression insomnia headache decreased sense of well-being thin, dry skin fatigue poor concentration increased fat difficulty creating or maintaining muscle inflexibility and soreness of joints and osteopenia or osteoporosis

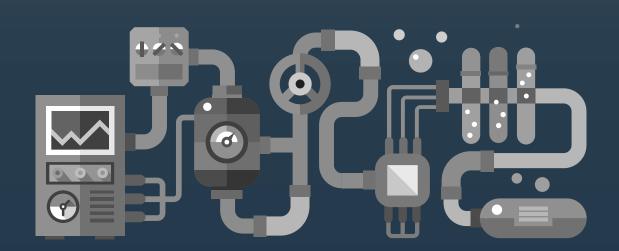


### pretty much the opposite of how anyone would want to feel

### The drop in testosterone results in a drop in all steroid hormones.



Testosterone is beneficial to arteries, insulin/blood sugar, prevention of blood clots, and support of good coronary artery circulation.



Women who go through menopause experience a gradual increase in ovarian hormone production after menopause ends, but in a woman with no ovaries, levels never increase.

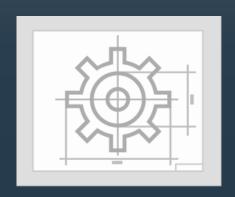
# For this reason, it's not accurate to say that a woman with no ovaries has gone through

"surgical menopause" or "early menopause"

The condition of her body and its chemistry is not at all the same as it would be if she had been through menopause, and it never will be.

#### ripple effect

When the endocrine system is cycling properly, the brain releases chemicals that look for the expected response from the other parts of the system.



But when it isn't functioning properly, the imbalance has consequences.

For example, an increase in one of those chemicals from the brain called luteinizing hormone (LH) is linked to Alzheimer's

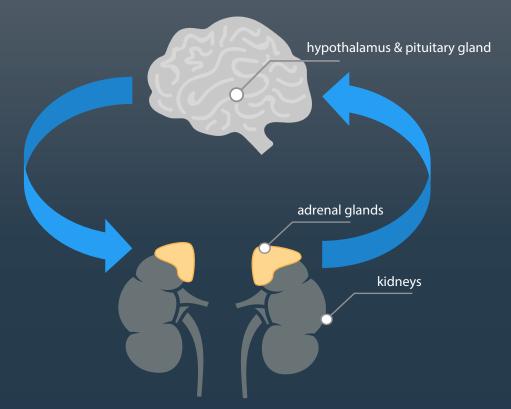
Normally, the ovaries produce hormones that say, "that's enough LH, brain."

Without this response, LH levels spike up, increasing the risk of Alzheimer's.

This is just one of many ripple effects when the endocrine system is disrupted.

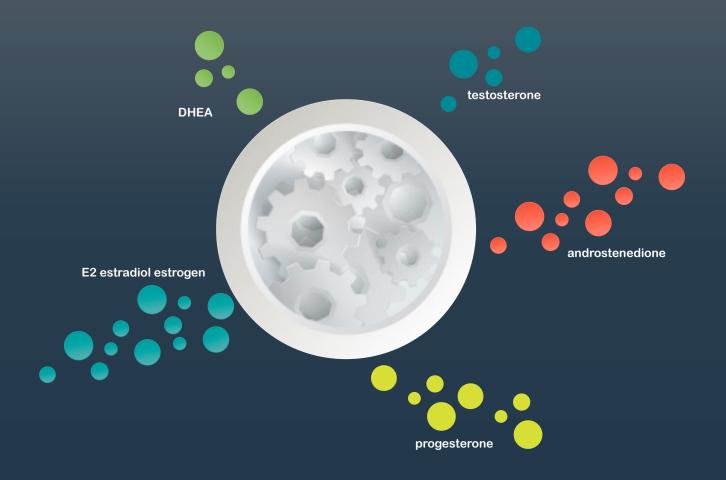
The adrenal glands make many of the same hormones that used to be made by the ovaries, so they try to help out when the ovaries are gone.

### The adrenal glands have their own biochemical conversation with the brain.

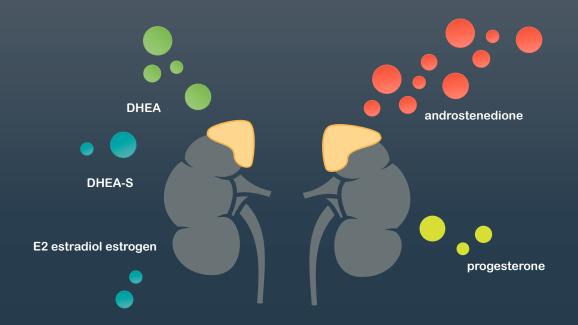


called the hypothalamic-pituitary-adrenal axis (or HPA axis)

#### ovaries



### adrenal glands



other steroid hormones made by the adrenal glands



another section of the adrenal glands makes these non-steroid hormones from dopamine



# The body likes things to remain stable and constant (homeostasis).

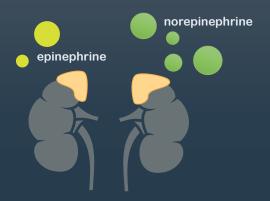
Without the ovaries in place to produce their share of hormones, the adrenal glands become overworked trying to do their own job and supplement hormones that were lost. This is a big piece of the puzzle with respect to all the illnesses that increase for women with no ovaries.

It's sort of the same thing that happens when a co-worker quits, and the manager expects one of the remaining employees to take over the co-worker's old job alongside their original job...

there's more stress
and neither job is done as well
as it was before.

The adrenal glands have a lot of responsibilities within the endocrine system.

# The adrenal glands produce epinephrine aka adrenalin + norepinephrine aka noradrenaline.



At a basic level, they regulate fear and anger, though their role in the body is complex.

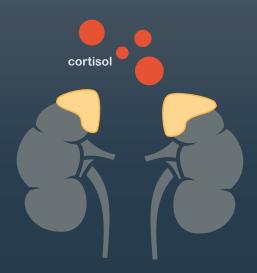
When the adrenal glands are multi-tasking, anger and anxiety are less predictable.

## Adrenal gland function affects the brain's production of dopamine.

Low dopamine levels are linked to:

- Parkinson's
- learning and memory issues
- difficulty concentrating
- problems starting or finishing tasks
- focusing on tasks or conversations
- lack of motivation and energy
- compulsive behavior
- and decreased enjoyment of activities

#### The adrenal glands also produce cortisol,



which regulates stress, inflammation, and blood glucose.

All are important functions. For example, stress can mean anything from sitting in traffic to job loss to the physical stress of surgery.

Inflammation creates an environment in the body conducive to cancer.

And blood glucose is, of course, tied to diabetes.

The right level of cortisol throughout the day is crucial to good health.

When a person experiences a lot of stress over a short time period, their cortisol level can become too high temporarily, but if they sustain stress for too long, the adrenal glands' production burns out, like an overheated engine, and cortisol goes down and stays low.



### Symptoms of unhealthy cortisol levels are the same as many of the issues that arise in women after ovary removal.

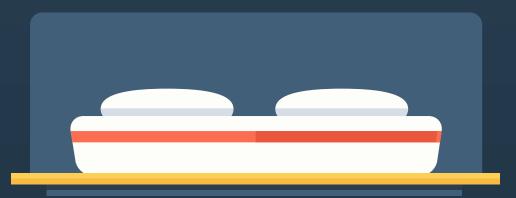
- heart disease
- type 2 diabetes
- inability to turn protein into muscle
- inability to lose weight
- a weakened immune system
- osteoporosis
- prevention of collagen formation
- slow wound healing
- bloating
- acid stomach
- learning and memory issues
- insomnia
- stress
- and depression

### sleep



The ovaries and the adrenal glands support the creation of dopamine, serotonin, norepinephrine, and melatonin, all of which play a role in the cycle of sleeping and waking.

When levels are low, insomnia can have a profound impact on focus, cognition, work, mood/depression, and general quality of life.



## Going to sleep and staying asleep are much more difficult, and many women suffer from insomnia.



Without ovaries, a woman's endocrine system, including brain, thyroid, and adrenal glands are all over-taxed and confused. When adrenal glands can't focus on their core tasks

- immunity is compromised
- healing is slower
- stress is more difficult to cope with
- temper and anxiety are harder to control
- memory and concentration are difficult
- and insomnia is more likely

Normal adrenal functions are diminished.



Hormone replacement therapy (HRT) can help to address the imbalance, but HRT comes with its own set of risks, and will certainly never adequately replace the intricate relationships of hormones that adapt and respond to a body's changing needs and complex chemistry.

So if ovarian loss comes with serious risks, and HRT comes with risks, the obvious question is...

## why create this situation in the first place?

### spare parts

Two lesser-known hormones, activin and inhibin, produced by the ovaries and the adrenal glands, are just starting to be understood.

Inhibin is important for several reasons.

Inhibin tells signals coming from the brain related to the ovaries that the messages are received and understood so the brain can stop sending those messages.

In addition, it can be used alongside HE4 and CA-125 as a blood test for ovarian cancer.

And doctors can test a woman's inhibin levels to evaluate how much time she has until menopause.

This is useful information if a woman is unsure whether she wants to wait for concerns such as fibroids or endometriosis to go away on their own, which they often do at the end of menopause.

The impact of the reduction in activin is even less clear than that of inhibin.

However, it's known to play a role in bone remodeling (meaning everyday bone resorption and new growth)...

as well as blood cell creation, wound healing, healthy scar formation, collagen formation, production of insulin and blood sugar levels, inflammatory responses, immune system...

similar in many ways to cortisol.

Activin was discovered in the 1980s, making it relatively new as hormones go, and not well-understood, but again, that's always a good reason not to remove something.

It's like the old joke about taking an engine apart and having "leftover parts" when it's put back together... not knowing what a part is doesn't mean it isn't needed.

The fact that activin is tied to wound healing should be a strong indication that it is important to the body.

It's also understood to regulate the growth of the lungs and the kidneys, and is important to connective tissue which, along with the drop in testosterone, could explain why so many women have joint pain after oophorectomy.

## It's an interesting area for future study,



and important to understand as another area of deficiency in the body after ovary removal.

## comparing risks



# One of the greatest issues is the significantly increased risk of heart disease.

How does that risk compare to the risk of ovarian cancer?

## Without looking at the numbers, taking it all out may seem like a sound decision.

uterine (endometrial) cancer diagnosed: 54,870 deaths: 10,170

ovarian cancer diagnosed: 21,290 deaths: 14,180

cervical cancer diagnosed: 12,900 deaths: 4,100

Of the 1.25 million women who die in the U.S. each year, these cancers in total account for about 2%.

number of U.S. women total, 157 million, U.S. census

### **Every year in the U.S.**

1 in 31 women dies of breast cancer 1 in 100 dies of ovarian cancer and 1 in 3 dies of heart disease And only 1 in 5 women is aware that heart disease is the number 1 killer of women.

According to the U.S. census, in 2010 there were 157 million women in the U.S.



About 1.25 million women die in the U.S. each year.



#### **Ovarian cancer**

- 1.1% of U.S. female deaths per year
- 21,290 diagnoses per year in the US
- 14,180 women die from ovarian cancer each year
- Average age at diagnosis is 64
- 5<sup>th</sup> most common cause of cancer-related death in women
- Women with the BRCA1 mutation have a 55-65% risk of developing breast cancer by age 70
- Women with the BRCA2 mutation have a risk of 45%

3% as many women die of ovarian cancer in the U.S. each year as die from cardiovascular disease



#### **Heart disease**

- 35.3% of U.S. female deaths per year are due to cardiovascular disease (CVD)
- 432,000 women die from CVD each year
- 267,000 women die each year from heart attack
- 435,000 women have heart attacks annually.
  - 83,000 are under age 65
  - 35,000 are under 55
  - average age is 70
- 42% of women who have heart attacks die within 1 year compared to 24% of men.
- Under age 50, women's heart attacks are twice as likely as men's to be fatal
- Over 159,000 women die each year of congestive heart failure, accounting for 56.3% of all heart failure deaths
- 8 million women in the US are currently living with heart disease
  - 35,000 are under age of 65
- · 4 million women suffer from angina





- Ovarian Cancer (14,180)
- Breast Cancer (38,000)
- Other Heart Disease (73,000)
- Stroke (96,000)
- Congestive Heart Failure (159,000)
- Heart Attacks (200,000)

## cause of death for women in the U.S. every year

(number of women)

Additionally, confusing as it sounds, ovary removal does not guarantee that a woman will not get ovarian cancer.

Cancer may show up in other parts of the body if it migrates before its origin is removed.

The origin is known because cancer has a "footprint" that differentiates one kind from another, so ovarian cancer in, say, the lungs can be traced back to the ovaries/fallopian tubes.

1 in 500 women in the US has BRCA 1 or 2 mutation.

BRCA 1 & 2, when not mutated, are tumor-suppressor genes. if they're mutated, they can't do their job, which is to suppress cells from growing out of control, leading to cancer.

#### **BRCA1** mutation:

removing ovaries reduces ovarian cancer risk by 85% but it *does not* significantly reduce breast cancer risk

#### **BRCA 2 mutation:**

removing ovaries reduces breast cancer risk by 72%, but it *does not* significantly reduce the risk of ovarian cancer

Wouldn't all those health risks be the same after menopause, anyway?

Studies demonstrating the increased risk of all of these diseases in women without ovaries make it clear that the answer is no.

The hormonal changes in women who go through natural menopause do create increased risk of disease compared to younger women,

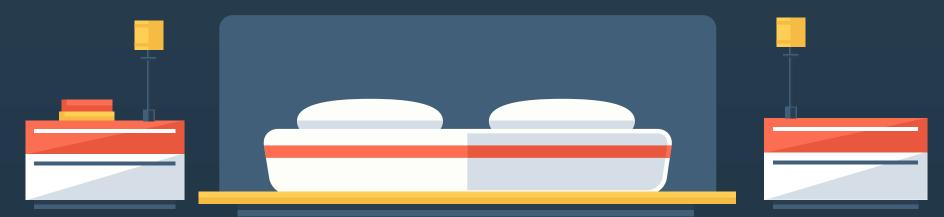
but their risk is much higher if they lose their ovaries.

## time to talk about sex





It's less well-known that it's also tied to sex drive in women.



Women's bodies make testosterone, men's bodies make estrogen.

They simply make different amounts.

With respect to sex, testosterone is linked to arousal, fantasy, and enjoyment. When a body's testosterone levels are low, sex drive and enjoyment are impacted.



In a 2005 study of over 9,000 women, 5 years after surgery, the women whose ovaries were removed scored much higher on negative outcomes compared to women who only had endometrial ablation.

80% libido loss, 82% difficult sex arousal, and 69% vaginal dryness

Women surveyed whose ovaries had been removed due to BRCA risk reported...

73% had sexual dysfunction, such as the absence of satisfaction and presence of pain.

61% had insomnia, 57% had symptoms of menopause such as hot flashes and vaginal dryness, and 56% had elevated levels of stress

So, why aren't women being asked whether they value their sex lives at the time they're being offered oophorectomies?

## Antiquated ideas about women and sexuality appear to stand in the way.



Frequently, the nature of the advice found on the internet is that the issue is likely psychological, not physical.

Some articles say that simply being part of a loving relationship will improve women's physical situation.

This can make women feel guilty and inadequate when they believe they have valid, physical complaints.

Consider this current example from a medical advice site:

What causes painful intercourse after hysterectomies?

Q: My partner had a hysterectomy more than a year ago, but it seems like intercourse has never become normal for her since then. She doesn't like to talk about it, but it's clear that it's causing her a lot of pain. Is this normal, or is it some sort of complication?

A: Painful intercourse is known as dyspareunia. This can happen both in the post-hysterectomy setting as well as in the normal setting. I encourage you to have your partner see her OB/GYN as there are a few complications that should be ruled out.

First off, probably the most common complication after hysterectomy that affects sexuality is depression. We know that women are at risk for depression after a hysterectomy. This is likely due to the strong association of the uterus with womanhood. We also known that sexual dysfunction is extremely common in depression. I would consider this as a possible problem that should be addressed.

There are some anatomic (sic) problems that can occur as well. Firstly, some women report a decrease in vaginal lubrication after hysterectomy. This depends on if the ovaries were also removed--but could happen even if they were not. Some women will require artificial lubricants for sexual comfort.

Another problem is bladder prolapse or rectal prolapse. Hysterectomy can weakened (sic) the vaginal walls. Her OB/GYN can rule this out. The other consideration is pain at the vaginal apex (the end of the vagina were uterus was and is now closed). Scar tissue can form their. (sic) This rarely causes pain with intercourse and can sometimes require blocking the nerves to the area or even another surgery. Talk to her OB/GYN as he or she can help.

## Much as the information about the decision about whether to have a hysterectomy does,

"It is normal to have mixed feelings about hysterectomy. Some women are sad to lose part of what makes them a woman. Other women just want their symptoms to go away. If you are thinking about hysterectomy, learn all you can about it. This will help you make the choice that is right for you."

### thanks.

Women are concerned about physical pain or are trying to evaluate the risks and benefits of a major surgery, but are receiving responses that primarily address emotion and psychology.

Another example, in the summary of a 2008 study about the effects of testosterone replacement therapy in women.

## The introduction said,

"A woman must decide whether decreased desire poses a difficulty for her personally, in her intimate relationship, or, indeed, in her motivation to form or sustain such relationships.

With more research being published, it is clear that many women value their sexuality well past menopause, and when circumstances curtail their enjoyment they are prepared to seek help."

### And concluded with,

"At the end of the trial, those using the 300-μg patches had significant improvement from baseline in the areas of desire, arousal, orgasm, and the number of pleasurable sexual episodes per month.

There was a clear placebo effect, but the efficacy of the higher dose of the active medication was still significant.

Whether this "near doubling to 2" of episodes indicates a successful intervention must be up to women with depressed desire to decide."

Comparable studies about low testosterone and its effect on libido in older men never question whether a healthy sex drive or sexual enjoyment is important to the men.

### There's no

"just in case you still feel like having sex in the second half of your life, men..."

Is the assumption that older women don't care as much about sex a factor when doctors don't share this information with patients considering ovary removal?

Women without ovaries have 40-50% less testosterone compared to women who've been through natural menopause.

This is crucial information if sex drive past the age of surgery matters, but is not routinely part of the information provided to the women before surgery. In terms of a replacement for the dramatic reduction in testosterone, the drug estratest hasn't been sold in the U.S. since 2009.

There is no FDA-approved testosterone therapy for women to help them with low libido, low muscle mass, bone loss, increased fat, and other consequences of low testosterone.

Testosterone supplements do carry the risk of blood clots, but so do estrogen supplements, which are available.

A better understanding of the value of a safe testosterone replacement should be a clinical research priority. In addition, doctors must be aware of their biases when sharing or withholding information about the impact on a woman's sex life,

and make it more comfortable for women to advocate for their own ongoing need for a sex life past their 40's.

The reality is that issues of sexual dysfunction in women are often both medical and measurable.





A hormone panel that tests for levels of free and bound testosterone, SHBG, estrone, estradiol, cortisol, and DHEA will give women a starting point for a conversation with their GP or endocrinologist about whether there is a hormone deficiency behind their issue.

It's also important to understand that women who say that their sex life improved after hysterectomy are likely just saying that the pain that had interfered with enjoying sex is now gone. There's nothing inherently sexy about being down one uterus.

It's usually the pain that led to the surgery that prevented a more fulfilling sex life before surgery.

That result could almost always be achieved in ways that preserve the ovaries.

Doctors may also say, 
"your sex life will improve,"

but again, this can be misleading.

The pain that interfered may be gone, but that doesn't necessarily translate to that surgery being the most appropriate way to get rid of the pain.

## The cervix should also be preserved.

"The cervix is essential for the support of the vagina, bladder, bowel and the rectum. By removing the cervix, the surgery takes longer, and increases the risk for bleeding and injuries to the bladder and ureter," says Dr. Bartsich.

After removal of the cervix, the vagina and bladder may prolapse, and a woman may experience a lessening of vaginal lubrication and sexual sensation.

The cervix is also an important nerve center, Dr. Bartsich notes. A key group of nerves merges behind the uterus and cervix, and the muscles and nerves that run through the cervix itself are felt to be important in sexual response.

"There's a parallel with the problems that occur in men after a radical prostatectomy. If important nerves are cut, a man becomes impotent. A woman can become impotent, too."

Some studies say women report feeling better after a hysterectomy, and that their sex lives even improve. But Dr. Bartsich stresses that it's important to know whether pain and bleeding had interfered with a woman's sexuality before the surgery.

## **Angelina Jolie's ovaries**

Angelina Jolie went on record in a New York Times' editorial in March 2015, describing her choice to have her ovaries removed in January 2015.

She wrote that she had had genetic testing that revealed that she has the BRCA 1 gene mutation, which means that she had a 50% risk of ovarian cancer.

Two years after a double mastectomy, she'd chosen to have her ovaries removed.

Let's see what was accurate and inaccurate about the information she says was behind her decision.



## 1) "...including about my next preventive surgery, the removal of my ovaries and fallopian tubes."

#### **ACCURATE**

Since 2012, doctors have been discussing the idea that ovarian cancer may actually originate in the fallopian tubes.

## 2) "...mapping my hormones for estrogen or progesterone replacement."

#### **Both ACCURATE & INACCURATE**

Accurate: Mapping baseline hormone levels before surgery is good practice and should be done more often than it is so that post-surgical levels can be compared.

Inaccurate: Some of her hormones are being replaced through the hormone replacement therapy she describes using, but the hormones that decrease the most are not. Though safe replacements for testosterone aren't available in the United States, and supplements are linked to blood clot risks, the greatest difference in hormone level for a woman whose ovaries have been removed compared to awoman who experienced natural menopause is actually testosterone.

## 3) "CA-125 has a 50 to 75 percent chance of missing ovarian cancer at early stages..."

#### **ACCURATE**

CA-125 blood level is often not elevated in early stages of ovarian cancer, which is one of the reasons it's so hard to detect early. Inhibin and HE4 can also be used to test for ovarian cancer.

## 4) "I know my children will never have to say, 'Mom died of ovarian cancer."

#### Unfortunately, INACCURATE

As a BRCA 1 carrier, she has only reduced her risk of ovarian cancer by 85%. A woman can be diagnosed with ovarian cancer in other parts of her body – lungs, peritoneum, etc. – after having her ovaries removed. It can be identified as ovarian cancer because all cancers have a footprint that makes it possible to understand where they originated. Ovarian cancer cells can migrate before the ovaries are removed, which is why it's important for BRCA 1 and 2 gene mutation carriers to have their ovaries removed once they're done having children.

5) "...doctors I met agreed that surgery to remove my tubes and ovaries was the best option, because on top of the BRCA gene, three women in my family have died from cancer... My mother's ovarian cancer was diagnosed when she was 49. I'm 39.."

#### ACCURATE

39 is a good age at which to have this surgery, if it must be done. It's a balance between having surgery early enough to decrease risk, and closer proximity to age at natural menopause (average age, 51) than if she'd had the surgery at a younger age. However, she was young enough at the time of ovary removal to need to be monitored for her newly-increased risks of cardiovascular disease, stroke, osteoporosis, Parkinson's, Alzheimer's, dementia, lung cancer, etc.

6) "A progesterone IUD was inserted in my uterus. It will help me maintain a hormonal balance, but more important it will help prevent uterine cancer."

ACCURATE. With a disclaimer.

Oral progestins, which are synthetic approximations of progesterone, were proven harmful in the WHI study that concluded in 2002 (Provera/PremPro), and so, progestins delivered via UID should also be approached with caution. Women without ovaries who retain their uterus certainly need to supplement with progesterone (ideally, bioidentical) to protect against endometrial (uterine) and cervical cancer. Bioidentical progesterone is believed to be safer.

7) "Regardless of the hormone replacements I'm taking, I am now in menopause...I feel at ease with whatever will come, not because I am strong but because this is a part of life." INACCURATE. Angelina Jolie may have made the right choice in terms of balancing benefits and risks, but she is not in menopause. Menopause is a gradual process whereby the ovaries continue to contribute to the balance of hormones within the endocrine system throughout a woman's entire life. Though she is supplementing one of the three forms of estrogen (estradiol – E2) and progesterone, her system now has 40-50% less testosterone, and 20% less androstenedione and DHEA than a woman does when she is naturally menopausal. Those hormones confer strength, muscle mass, energy, proper metabolism, lower visceral fat, and sexual feeling. What she may now be attributing to post-surgical fatigue and other symptoms may stay with her long-term.

The state her body is in now is not typically "a part of life" because it doesn't have the same biochemical composition as a body that is in natural menopause, and it never will. Because she had her ovaries removed when she was well under the natural age for menopause, 51, she's now at at least a doubled risk of Parkinson's, osteoporosis, dementia, lung cancer, and cardiovascular disease than a naturally-menopausal woman.

#### Result

It's clear that Angelina Jolie wanted her surgery to be an opportunity to share information with other women, which is admirable.

Unfortunately, two of the things she didn't understand were two of the most crucial: her remaining risk of ovarian cancer; and whether the condition she is in after surgery is the same as natural menopause.

She has reduced her risk of ovarian cancer by 85%, not 100%; and her body is not in menopause. As an ongoing, functional part of the endocrine system, post-menopausal ovaries important, beneficial hormones throughout a woman's life. Without ovaries, her biochemistry will never be the same as a woman's who's been through menopause, and her risk of serious, life-threatening illnesses such as heart disease, lung cancer, dementia, Parkinson's, and osteoporosis have all increased.



The concern about Angelina Jolie's message isn't simply its accuracy, but about the risk of increasing the number of women who elect to remove their ovaries.

There's a "maybe I need this, too" celebrity effect which is especially strong when it comes to health.

And, unfortunately, it's been proven that a majority of doctors will accommodate the request.

## just in case

The risks related to ovary removal outweighing the benefits for the vast majority of women has been reported repeatedly in the medical community, but ovaries are still removed "just in case."

It's also well-established that, when there is no known illness or risk, it's not protocol to remove body parts "just in case."

Besides the familiar, "first, do no harm" in the doctors' Hippocratic Oath, there is also the less familiar, "twin traps of overtreatment and therapeutic nihilism,"

which cautions doctors to guard against treating to excess.

There's also, "above all I must not play at God,"

which means, a doctor must not decide that he or she knows best with respect to personal decisions versus medical decisions.

It's the doctors who have the information about the risks and benefits of ovary removal.

They know that the risk of ovarian cancer is tiny, they know there are tests they can do to determine risk, and they know that the ovaries produce beneficial hormones past menopause, the roles of which are still not fully understood.

They know that "just in case" is not a good reason for 340,000 U.S. women a year to lose a crucial part of their endocrine system.

And that removing healthy parts only to necessitate replacing them with drugs is not done with any other surgery.

## If that were common...

About 380 men die in the U.S. of testicular cancer every year compared to the 14,180 women who die of ovarian cancer, so, a better comparison in terms of cancer prevention is pancreatic cancer.

About 19,850 women in the U.S. will die of pancreatic cancer this year, whereas about 14,180 women will die of ovarian cancer.

## If the pancreas is removed,



# daily insulin shots and pills with digestive enzymes must be taken each day.

## Though the risk of pancreatic cancer is higher than that of ovarian cancer,

no one would ever remove their pancreas as a preventative measure...

because removing perfectly healthy organs only to try to recreate what those organs do with drugs

is not good medicine.

## the HRT question

After ovary removal or failure, the next step for many women is the question of hormone replacement therapy (HRT).







The average woman on HRT will spend 5 years trying brands, delivery method (cream, patch, oral), and dosage



in an attempt to get back the feeling of a fully-functional endocrine system.

If surgery is absolutely required, hormone levels should be measured beforehand.

Too often today, women are put on a 'one size fits all' dosage of estrogen and left to their own devices, rather than being monitored closely.

In terms of health risks, the jury is really still out.



In women younger than 51 without ovaries, the right HRT is likely more beneficial than not, but still risky.

Studies about the loss of ovaries say that some of the serious health risks are mitigated by the use of estrogen, but estrogen replacements are labeled with health risks, too, including heart disease, stroke, embolism, and high blood pressure.

Some doctors say that the NIH Women's Health Initiative studies that ended in 2002 and 2004 indicate that estrogen shouldn't be used, and some say the results were misinterpreted, and only apply to older women...

# all of which makes the decision difficult and confusing.

When HRT is included in studies about ovary removal, the results often conflict with previously-stated benefits.

"Since over 90% of this group had a history of hormone replacement therapy use, the finding that years since bilateral oophorectomy was associated with increasing atherosclerosis (hardening of the arteries) conflicts with a well-known finding that such therapy reverses the adverse effect of bilateral oophorectomy on coronary heart disease."

"It is uncertain to what extent the harmful effects of premenopausal bilateral oophorectomy are uniquely mediated by estrogen deficiency, or whether other mechanisms are involved.

Indeed, in the Mayo Clinic Cohort Study of Oophorectomy and Aging, estrogen treatment through age 50 years in women with early bilateral oophorectomy did not offset the increased risks of parkinsonism, anxiety symptoms, or depressive symptoms.

However, estrogen treatment through age 50 years did offset the increased risk of overall mortality, of cardiovascular mortality, and of cognitive impairment and dementia (see executive summary). Thus, we need new mechanistic hypotheses and new research to address these unresolved issues."

A woman without ovaries is at a 200% increased risk of lung cancer, whether or not she smokes or has smoked.

That risk goes up to 240% if she is using hormone replacement therapy.

Some studies link estrogen replacement to an increased risk of dementia.

Without attempting to cover all angles, it should be sufficient to say that there are unknown risks and uncertain benefits to HRT.

No matter which method is used, none can recreate the adaptive, natural, responsive process they attempt to replace...

which leads to the inevitable question,

"Why would a working system be removed to be replaced with drugs to begin with?"

# unbiased advice

Women with gynecological issues are often uncomfortable talking to friends, family, or even their doctor.

Many turn to the internet because it provides both anonymity and community at the same time.

Sometimes it's very difficult to differentiate between a site that is offering unbiased medical advice or support, and one that wants to sell something.

There are very few sites that do both well. As hard as it can be to understand the terminology sometimes, the Mayo Clinic and the NIH sites both offer access to real data without any fee.

**But no tiaras.** 



The website HysterSisters emerged 17 years ago as a forum for women to discuss these issues. Today it has a registered user base of over 350,000 women.

It's evolved from a site where women simply shared pain, support, and experiences to one that makes money.

In 2012, the website had 2.3 million page views per month. The CEO, Kathy Kelley, and her site have a profound influence on women's decision-making process.

It's important for women to understand what they're getting when they visit HysterSisters.com.

In the site's Terms of Use, it says HysterSisters can remove any user posts or contributions that they don't like,

and they do.

# terms of use

## DISABLING/EDITING OF POSTS/USERS:

You agree that the staff of Hystersisters.com may edit/remove the posts and/or disable the account of any member who does not comply with these community guidelines or any reason deemed appropriate by the administration for the good of the community and its safety. Requests for removal will entail removing personal data, location, avatar, etc,. to protect the privacy of the person but the member account will remain intact because of the nature of the threading of posts within the database.

# PUBLIC DISAGREEMENTS WITH ADMINISTRATION/STAFF OR GUIDELINES:

You agree that if you disagree with HysterSisters Website policy, Privacy Policy or action of a staff member, you will not post public arguments or disagreements nor attempt to petition the owner/administration to change policy through posts, polls, email, PM or any other service found within the HysterSisters Website. If you disagree, you may respectfully email the owner of HysterSisters.

## FREEDOM OF SPEECH?

You agree that "freedom of speech" does not apply to HysterSisters.com as an individually owned website. Although the constitution of the US guarantees that "Congress shall make no law abridging the freedom of speech", HysterSisters is not Congress. The TOS/Guidelines of this website governs the behaviors and activities of the members. If you choose not to follow the Terms of Service agreed to during registration, the result is a disabling of your account.

If users disagree, the Terms of Use prohibit users from making their disagreement public, which is a pretty unusual thing to add to a site's Terms of Use.

But it's there for good reason. The site has developed an agenda, and women who have come to understand that want to share it with other women.

Over time, the site has become a source of revenue, which allowed Kelley to quit her job as a schoolteacher in 2004.

Doctors pay \$20 a month to be listed in HysterSisters' directory.

30 volunteers moderate the forums, but Kelley charges women for things like avatars and online "tiaras".

Though use of the forums is free, rates for "memberships" range from \$10-25.

Women using its forums refer to one another as queens, princesses, divas, and angels, because they are brave women who are facing their seemingly-inevitable hysterectomies together.

Throughout the site, the hospital is referred to as "the castle".

# Carly's castle trip - HysterSisters

www.hystersisters.com > ... > Vaginal Hysterectomy Stories Articles ▼
TVH - Trip to the Castle. SHARING IS CARING. Well my trip was pretty darn good I
must say. We were expecting an early morning but there was an emergent ...

## SAH/LSO - My castle visit - HysterSisters

www.hystersisters.com > ... > Abdominal Hysterectomy Stories Articles ▼ TAH - My visit to the Castle! I LOVED reading these posts just two weeks ago. they definitely helped me with what to expect for my visit. Hope mine can help ...

# Why is the hospital called "castle?" | Preparing for Hysterecto...

www.hystersisters.com/vb2/showthread.php?t=360466 \*

Feb 25, 2009 - 3 posts - 2 authors

In quite a few posts, I have seen a reference to "going to the castle". Now I figured out that the hospital is the castle, but what I can't figure out is ...

HysterSisters extremely helpful for hysterectomy and ...1 postApr 26, 2015Grateful for HysterSisters | Kudos for Hyster Sisters ...1 postApr 22, 2015revisited the castle suspect adhesion colic and intestinal ...1 postMay 7, 2004TAH/BSO - Great Castle Experience: Grateful to ...1 postMay 19, 2003More results from www.hystersisters.com

## TAH/BSO - Great Castle Experience - HysterSisters

www.hystersisters.com > ... > Abdominal Hysterectomy Stories Articles This is a stories articles Artic

## LAVH/BSO - My trip to the castle - HysterSisters

www.hystersisters.com > ... > Vaginal Hysterectomy Stories Articles ~
After reading the various stories about others' experience with their trip to the castle, I decided to share mine. I'm sorry it's so long... just hope to help s.

## LAVH - My castle stay and other useful tips - HysterSisters

www.hystersisters.com > ... > Vaginal Hysterectomy Stories Articles ¬
Jan 26, 2005 - LAVH - My Castle Stay. SHARING IS CARING. Home from the hospital after 48 hours start to finish. It was an extremely stressful event but there ...

Over time, Kelley and her site have come down on the wrong side of several issues, most importantly, the prevalence of unnecessary hysterectomies and morcellation during minimally-invasive hysterectomies.

HysterSisters developed a relationship with a company called Intuitive Surgical, the makers of the daVinci robot that's used for almost all laparoscopic hysterectomies.

As a result, Kelley has been welcomed as a "faculty" speaker at the World Robotic Gynecology Conference.

In 2013, after a Boston anesthesiologist was diagnosed with uterine cancer that had been upstaged (advanced and spread throughout her body) by the use of a morcellator used during what was to have been a routine hysterectomy, she and her husband, also a doctor, became strong advocates to help doctors, the FDA, and prospective patients understand the risk.

(a morcellator is a tool attached to the arms of a robot in a laparoscopic hysterectomy that chops up what's being removed inside so it can fit through small abdominal holes)

When the FDA began considering the risk involved and what action it was going to take, Kathy Kelley came out in support of the morcellator, and against the woman who now had cancer throughout her system.

Kelley wrote an op-ed that was published on a site called empowher.com.

# a few words from the op-ed

"Based on one woman's unfortunate recent experience, there has been a lot of concern in the media about the possibility of spreading undiagnosed cancer, specifically uterine leiomyosarcoma (ULMS), during minimally invasive surgery (MIS) with morcellation. This has led to a national campaign, rallying support with the FDA.

The FDA has reported that this type of cancer occurs in 1 out of 350 women, but the American Congress of Obstetricians and Gynecologists (ACOG) and the American Cancer Society report a much smaller statistic of about 1 in 1,000. HysterSisters' member surveys support this smaller percentage."

#### and

"This is a step backward for women's health," explained Kathy Kelley, founder and CEO of www.HysterSisters.com. "Hopefully this decision can be revised as doctors demonstrate the ability to offer minimally invasive surgery options with the safety of a protective sack when morcellation is needed. We certainly do not want to go back to the days of a large abdominal incision being our only surgery option."

HysterSisters Responds to FDA Communication Limiting Hysterectomy Choice, Kathy Kelley, empowher.com op-ed

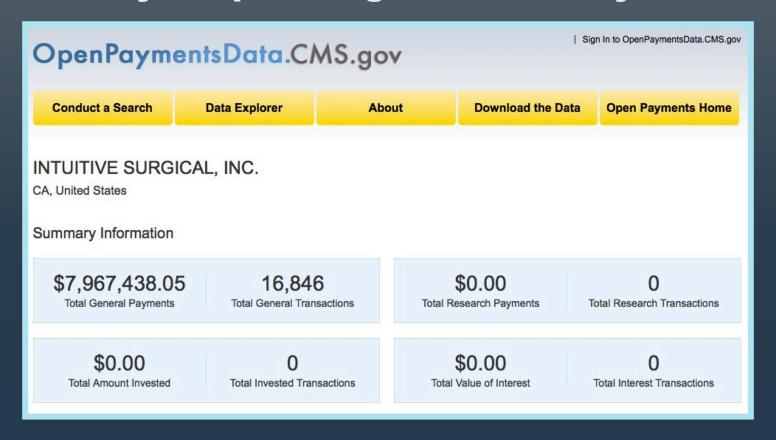
She did not disclose her company's financial relationship with the makers of the robotic system the morcellator works in conjunction with anywhere in the article.

When the CEO of a woman's health site is advocating risking the lives of either 1 in 1,000 or 1 in 350 women (1 in 350 is the right number; the FDA revised the ACOG's 1 in 1,000 number through extensive research), and mistakenly reports with authority that this one woman was the only person harmed when the reality is that at least 400 women have been harmed, that CEO and her company have lost their unbiased position...

It was announced in May 2015 that the FBI was investigating Johnson & Johnson to see how much they knew about the risks their morcellators posed as part of laparoscopic hysterectomies. Because HysterSisters is a private company, and likely to remain one, it's not clear how much Intuitive Surgical pays them as part of their sponsorship, but it's clearly enough.

Intuitive Surgical is listed on the NASDAQ, and has risen from its IPO of \$18 in 2000 to \$500 per share.

# And they're spreading lots of money around



# in gifts to hospitals and payments to doctors

When making a decision about surgery it's important to keep this in mind...

Surgery is not inevitable, it's not a rite of passage, and it should not be glorified as a shared "sister" experience.

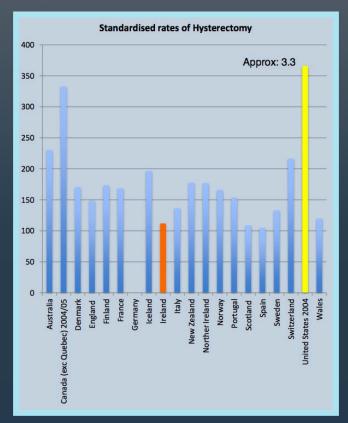
This is not to say that women should not share information and be supportive of one another. It means that women should not harm themselves in the spirit of camaraderie, or act unwittingly as billboards for often-unnecessary and always risk-filled surgery.

If there is pain, remove the source of pain only. If there is cancer, remove the cancer and preserve the ovaries, as safety and good medical judgment permit.

Leave the body intact to the extent possible, and view the ovaries as we do the rest of the body: something to protect for life.

\$17,000,000,000 women

## The U.S. leads the world in hysterectomies,



even after standardizing for its population.

The average cost for a hysterectomy with hospital stay, surgery itself, anesthesia, path report is over \$30,000.

With 540,000 being performed for benign conditions every year,

that's about \$16.2 billion per year.



# The Premarin hormone replacement many women take after surgery brings in another \$1.07 billion

per year,
according to Pfizer's 2014
revenue statement,
their 10<sup>th</sup> best-selling drug.



### informed consent

The question that gets asked every time oophorectomy data is shared is, of course,

why aren't doctors telling patients about these risks?

Really good question.

Whether it's a function of the fact that this surgery is a \$16B a year industry, or a situation where doctors are simply doing what they've been taught to do but are not sharing the health data is an open question,

but the risk to the women is not.

One answer is that,

in about 50% of the U.S.,

they don't have to.

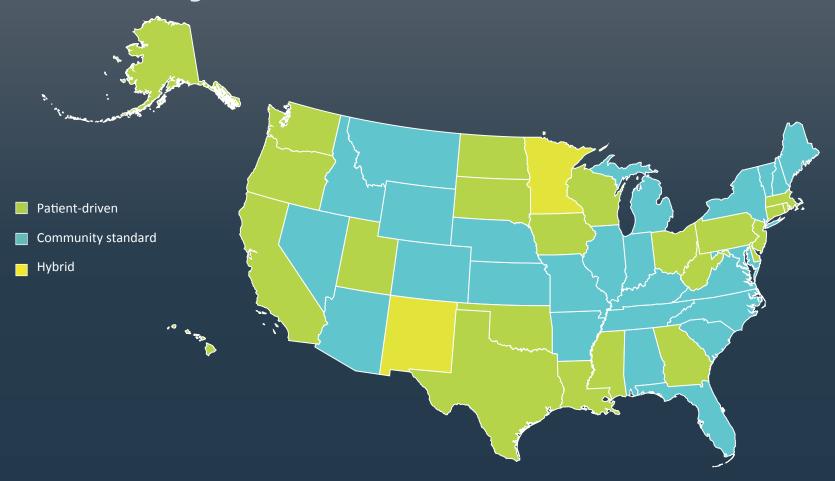
It's hard to believe, but it's on the books. In about half of the states in the U.S., the way informed consent law is structured, a doctor doesn't have to tell a patient all the risks of a proposed surgery if his or her surrounding community of doctors likely wouldn't share that information, either.

Those states are referred to as "community standard" states.

Whereas, in "patient-driven" states, the law effectively says, "You must provide enough information for a reasonable patient to make an informed decision," which is what most people probably assume is the case across the country,

but it's not.

## Informed consent: patient-driven vs. community standard states



American Journal of Law & Medicine, 32 (2006): Appendix A 2006, American Society of Law, Medicine & Ethics, Boston University School of Law, Rethinking Informed Consent: The Case for Shared Medical Decision-Making

The law in "community standard" states ought to outrage patients, but few know about it.

It's really the fox guarding the henhouse because it leaves the door open for this, "If other surgeons would make this bad decision on behalf of a patient, I can too."

And, bottom line, it's contributed to a rate of 55% of healthy ovaries being removed at hysterectomy, so we know it isn't sufficient for patients' best interests.

This is where hyper-simplified informed consent stating, "nicked bowel, UTI, early menopause" as the sum total of pre-surgical information comes from.

That information represents checking the "informed consent" box in half of the states in the U.S.

# surgery doesn't carry warning labels



It's for that reason that the American Congress of Obstetricians & Gynecologists' has guidelines embedded in their Code of Ethics.

Some excerpts,

"It is unethical to prescribe, provide, or seek compensation for therapies that are of no benefit to the patient."

"Physicians must provide the patient with accurate and unbiased information about her medical options and make appropriate referrals."

"The existing imbalance of power in this relationship, however, is a reminder to physicians of their greater obligation to ensure and facilitate the informed consent or refusal of each patient."

Yet most women have NO IDEA what they've agreed to when they agree to let their ovaries be removed.

Would 540,000 women a year trade their gynecological problems for the increased risk of death posed by this surgery?

Only one way to know, tell them.

### what now?

# The worst part of all this? It's already happened to 12 million women in the U.S.

**Best part? Totally preventable.** 

Women who have been asleep at the switch can say "no" to unnecessary, risk-filled surgery,

and hold out for the right treatment.

With this research, women now have over 200 reliable citations at their disposal allowing them to talk to their doctors with confidence about the fact that they are looking for the most appropriate treatment. They can make an informed decision and protect their health, their sex life, their mood, and their energy level.

### What else should happen?

- ✓ Understand that a woman with no ovaries is biochemically different from a naturallymenopausal woman. a) stop performing unnecessary hysterectomies, and b) develop safer treatments for women who have no alternative.
- ✓ End "community standard" informed consent practice and ensure that every patient deciding about surgery understands the risks beyond those that exist on the operating table. Provide patients with full disclosure and trust them to understand the data.
- ✓ Genetic counseling and full evaluation before ovaries are prophylactically removed.
- ✓ Cease morcellation whether in a bag or not
- ✓ Enforce guidelines set by ACOG
- ✓ Run hormone panels far more often to diagnose conditions. Don't simply prescribe antidepressants. Check hormones, thyroid, brain chemistry (dopamine, serotonin) levels first.
- ✓ Test bone density more frequently. Test before surgery and periodically after.
- ✓ More clinical research about safe and comprehensive hormone therapy, including androgen supplementation
- ✓ Make it safe and comfortable for women to advocate for their ongoing desire for a sex life.
- ✓ Stop telling women whatever it is can be overcome with positive thinking
- ✓ Determine remaining reproductive lifespan so a woman knows how far off menopause is by testing levels of Inhibin B
- ✓ Check for organ prolapse after hysterectomy

To name a few.

### So, whether you care about

- ✓ the rate of ovary removal in the U.S.
- ✓ or flawed informed consent law

please help spread the word,

or just tell a woman you care about that there are healthier alternatives to benign gynecological problems.

## American Congress of Obstetricians & Gynecologists coverel@acog.org (800) 673-8444

Find your senator and representative

http://www.senate.gov/senators/contact/ http://www.house.gov/representatives/find/

Please tweet about us, and share this issue on your Facebook page <a href="mailto:ogynreform">@gynreform</a> and <a href="mailto:on Facebook">on Facebook</a>

# For more information & source citations, please visit: www.gynreform.com

### **Bonus materials**

in-depth HRT (hormone replacement)
depression
hyperplasia + PCOS
weight gain

available at gynreform.com

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### about the author

My name is Deirdre Menard. I'm not a doctor/medical professional. For this reason, I've been especially diligent and rigorous about sourcing all studies, data, and other materials, which can be found at www.gynreform.com/citations.htm.

I've spent the last year and a half since my own hysterectomy/oophorectomy, in January 2014, conducting research full-time, largely using NIH studies as my sources, and have finally pulled together enough information and citations to feel that I have a solid footing to start fighting for gynecological surgery and informed consent reform. My goal is to put publicly-available information in one place so that we can make sense of it, learn from it, and share it. I hope you find it helpful.

In order to preserve the unbiased nature of my research, I don't accept any advertising or other financial support. I've stopped work, and used my own savings as I've worked full-time on this research for the last 1.5 years to bring women this information. I've set up a GoFundMe account for anyone who wants to make a donation in order to make it possible for me to continue to spend my time spreading the word. Thank you.

See your doctor, but be informed.

#### Credits:

Spanish translation TBD

woman statistics chart SHANNON DUDLEY

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**NOEL MENARD** 

medical sources,

please see Citations <a href="http://www.gynreform.com">http://www.gynreform.com</a>

GoFundMe http://www.gofundme.com/v92amd8

### thank you

### **Glossary**

oophorectomy: removal of one or both ovaries

**bilateral salpingo-oophorectomy:** removal of both ovaries and the fallopian tubes

meno: Greek for month

peri-menopause: around the time of menopause

**menopause:** doesn't actually mean the time in later life when "the change" is done; it means the 4-5 year timespan when hormone levels begin to change and a woman's cycle becomes irregular, hot flashes sometimes start

**post-menopausal:** is the time after menopause is done and the woman no longer gets her period at all, usually starting around age 51 or 52

**endocrine:** glands that secrete hormones directly into the blood or lymph