Surgery to Lower the Risk of Ovarian Cancer

Removing a woman’s ovaries by surgery to lower her risk of ovarian cancer is called a “risk-reducing oophorectomy.” It is also called a “prophylactic oophorectomy.” In the general population, one out of 58 (1.7 percent) women who live to be 90 years old will develop ovarian cancer.(1) Most women do not have a high enough risk of this disease to justify risk-reducing surgery. Even women with a very high risk of ovarian cancer do not always choose risk-reducing oophorectomy.

Surveillance is a way to try to find ovarian cancer at an early, more curable stage. This topic is covered in more detail in “Breast and Ovarian Cancer: Screening and Detection.”

Risk-reducing oophorectomy may be reasonable to consider if you have finished having your children and:

- Several of your close relatives (sister, mother, grandmother, aunt) had ovarian cancer at any age, or breast cancer before the age of 50.

- You have close relatives who had uterine cancer or colon cancer before the age of 50.

- You have a harmful change, called a mutation, in a cancer-predisposing gene such as BRCA1 or BRCA2.

- You have a high risk of breast cancer. Studies show that having a risk-reducing oophorectomy lowers the risk of breast cancer by 50 percent in women at high risk for breast cancer.
Risk-Reducing Oophorectomy

The goal of risk-reducing surgery is to remove tissue that is prone to developing cancer. Women at risk for ovarian cancer are also usually at risk of developing cancer in their fallopian tubes. For this reason, the tubes are always removed at the same time as the ovaries, and the surgery is technically called a “risk-reducing salpingo-oophorectomy.” Studies show that removing the ovaries and fallopian tubes lowers the risk of ovarian cancer by 95 percent.\(^2\) Unfortunately, surgery is not completely protective. Most women who have a high risk of developing ovarian cancer also have an increased risk for peritoneal cancer, a rare “ovarian-like” cancer that starts in the lining of the abdomen.

If you are thinking about having an oophorectomy because you believe you have a high risk of ovarian cancer, answers to these questions may be helpful:

**What is my actual risk of developing ovarian cancer?**

Studies show that most women believe their risk of cancer is much higher than it actually is.\(^3\) Having a family history of ovarian or breast cancer may increase your risk, as can certain personal factors. Specialists at the Cancer Genetics Clinic or at the Breast and Ovarian Cancer Prevention Program can help you understand your actual risk of developing ovarian cancer.

**What are the other ways I can prevent ovarian cancer or find it early?**

Surveillance is another option. This topic is covered in more detail in “Breast and Ovarian Cancer: Screening and Detection.” Studies show that taking birth control pills for more than 5 years lowers the risk of developing ovarian cancer for most women.\(^4\) Other studies show that having a tubal ligation (having your tubes tied) lowers the risk of ovarian cancer for most women.\(^5\) These other options may not suit you, and they may not be as protective for high-risk women.\(^6-8\) Ask your doctor whether these options would be helpful for you. NOTE: Yearly Pap smears are important for screening for cervical cancer, but they do not screen for ovarian cancer.

**Should I have a hysterectomy at the same time?**

Some women choose to have their uterus removed (a hysterectomy) at the same time as their oophorectomy. The very bottom of the fallopian tube is embedded in the uterus. Although cancer has never been reported to start in this part of the tube, there is concern about leaving it there in women who are at increased risk of developing cancer in the
fallopian tube. Women who are at high risk of developing uterine cancer clearly benefit from a hysterectomy to lower this risk. However, having both an oophorectomy and a hysterectomy is a bigger surgery than just having an oophorectomy. Ask your gynecologic oncologist what the benefits and risks would be for you.

_How is the surgery done?_

Risk-reducing oophorectomy can be done in several ways, and the method used depends in part on whether you are also having a hysterectomy. The surgery may involve making an incision through the abdomen (called laparotomy) or it may be done using a camera and instruments inserted through very small incisions near the belly button (laparoscopic techniques). You can discuss possible options with your gynecologic oncologist.

_What are the risks to my health from having an oophorectomy?_

Risk-reducing oophorectomy causes immediate menopause and menopausal symptoms. Symptoms of menopause include hot flashes, insomnia, mood swings, and vaginal dryness. Taking estrogen can improve many of these symptoms, but taking estrogen for a long time may increase the risk of breast cancer. This is a concern in women who have already had breast cancer or have a high risk of developing breast cancer. There are many non-hormonal ways to treat symptoms of menopause. (See “Menopause without Hormones.”) Also, your risk of developing osteoporosis and heart disease may go up after this surgery.

_Does the surgery affect my risk of breast cancer?_

Studies show that, for women who have a BRCA1 or BRCA2 gene mutation, having a risk-reducing oophorectomy also lowers the risk of developing breast cancer in the future. This effect is most dramatic when the oophorectomy is done before a woman goes through natural menopause.\(^2\) It is not yet clear whether this also applies to women who are already past menopause.

_What if they find cancer?_

If you have a mutation in BRCA1 or BRCA2, your surgeon should take special precautions during your surgery. Studies have shown that up to 10 to 15 percent of women with these mutations are found to have ovarian, fallopian tube, or peritoneal cancer at the time of surgery.\(^9,10\) Extra care needs to be taken when the ovaries and tubes are examined. Special washings of the abdominal cavity should be done at the time of surgery and the fluid tested for cancer cells. If
cancer is found during surgery, other tests may be done to see how advanced the cancer is and if it has spread. Chemotherapy may be recommended afterwards.

*When is the best time for a risk-reducing oophorectomy?*

Most women, even those at high risk, do not develop ovarian cancer until they are in their late 40s or early 50s. So in general, women should not consider having a risk-reducing oophorectomy until they are at least 35 years old and have finished having their children. This is because having working ovaries lowers your risk of heart disease and osteoporosis.

**Conclusion**

Risk-reducing surgery is permanent. It is worth careful, unhurried consideration after you have discussed your risks and options with your healthcare providers. Once you have answers to the questions listed above, it will be easier to decide if and when risk-reducing oophorectomy is right for you. It is a very personal decision, and no one answer is right for every woman.

**Glossary**

- **Estrogen** – a hormone important in female reproduction. In excess, it may increase risk of breast cancer.

- **Fallopian tube** – the small tube that connects the uterus to the ovary. Each egg a woman releases travels down this tube to be fertilized.

- **Insomnia** – difficulty in falling asleep, staying asleep, or both.

- **Menopause** – the time in a woman’s life when menstrual periods stop. It typically occurs at about 50 years of age.

- **Mutation** – a harmful change in a person’s DNA, the chemical that genes are made of.

- **Osteoporosis** – a loss of density in the bone to the point that fractures happen.

**To Learn More**

Breast and Ovarian Cancer Prevention Program
Seattle Cancer Care Alliance: 206-616-5241; www.seattlecca.org

Cancer Genetics Clinic
University of Washington Medical Center: 206-616-2135
References


Questions?

Call 206-616-5241

Your questions are important. Call your doctor or health care provider if you have questions or concerns. UWMC Clinic staff are also available to help at any time.

Breast and Ovarian Cancer Prevention Program
206-616-5241
