



# Primary Ovarian Insufficiency

## WHAT IS PRIMARY OVARIAN INSUFFICIENCY?

Primary ovarian insufficiency (POI), also called premature ovarian failure, occurs when the ovaries stop working before a woman turns 40. Normally, the ovaries make the hormone estrogen and release a mature egg during each monthly cycle. In POI, the ovaries don't produce normal amounts of estrogen and don't produce and release an egg each month.

The most common signs of POI are irregular or missed menstrual periods, especially if a woman also has hot flashes. Periods may occur off and on, or may start again many years after POI is diagnosed. Due to the drop in estrogen levels, women with POI may also have menopause-like symptoms, including

- Night sweats
- Vaginal dryness
- Irritability, depression, or anxiety
- Trouble sleeping
- Trouble with concentration or memory

## DID YOU KNOW?

**The symptoms of POI are like the symptoms women have when they are going through menopause.**

## WHAT CAUSES POI?

In most cases the cause of POI is unknown. Women with certain genetic disorders, such as Turner syndrome and fragile X syndrome, are more likely to develop POI. Also, exposure to toxins (through chemotherapy and radiation therapy, for example) can damage genetic material in cells and lead to POI. Sometimes autoimmune disease—when your immune system attacks your own ovarian tissue—may be responsible for POI.

The risk of developing POI increases if you have a family history of the disorder.

## WHAT ARE THE HEALTH RISKS OF POI?

Because women with POI have low levels of estrogen at a young age, several health problems are more common than in women without POI:

- **Infertility.** Most women with POI cannot get pregnant naturally. No known fertility treatments are effective for POI. Most women with POI can carry a pregnancy but most often need to use donor eggs.
- **Osteoporosis.** Low levels of estrogen increase the risk of bone loss and fractures.
- **Heart disease.** Low estrogen early in life appears to increase the risk of heart attack as a woman ages.
- **Depression.** Many women with POI feel a lingering sadness about their unexpected loss of ovarian function. Women with POI may want to talk to a therapist or may benefit from medication for depression, if the symptoms are severe.

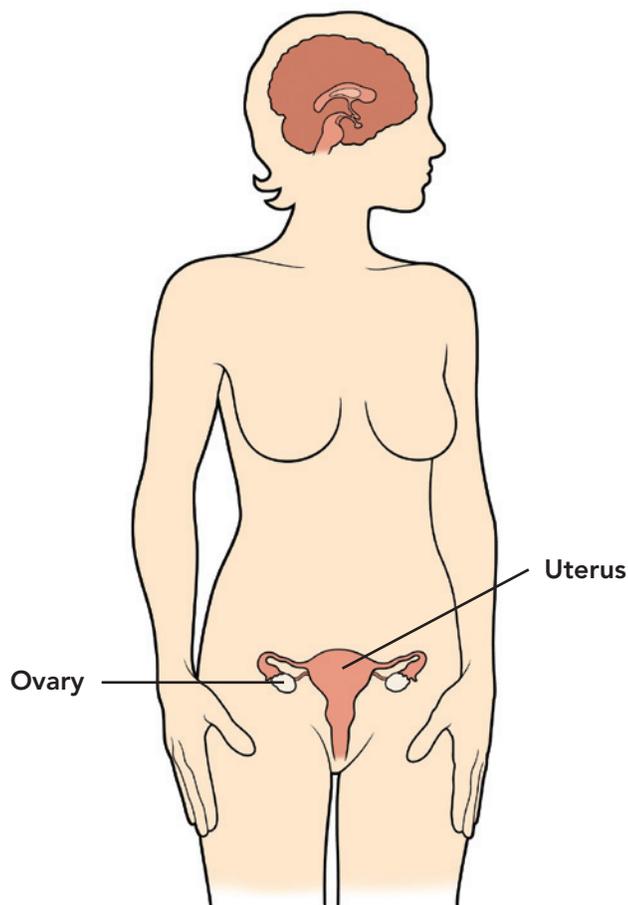
If you have POI, you may also be more likely to develop other hormone-related disorders. Women with POI should be checked periodically for deficiencies in thyroid and adrenal gland hormones.

## HOW IS POI DIAGNOSED?

If you are younger than 40 and have stopped having periods or are having irregular ones, talk with your doctor to find the cause of the problem. Your doctor will ask about your menstrual history and any menopause-like symptoms you may be having. Blood tests will be done to check hormone levels and determine if your ovaries are working properly. Additional tests should also be done to check for possible genetic or autoimmune conditions that may be related to the ovarian failure.

## HOW IS POI TREATED?

Treatment depends on whether you have symptoms or are at risk for serious health problems. Hormone therapy (HT) is the most common treatment. HT combines estrogen and progesterone, another sex hormone. Together these two hormones mimic the natural balance of hormones in your body. HT relieves menopausal symptoms and also helps prevent osteoporosis. HT can be taken as a pill or applied to your skin as a gel, spray, or patch. Vaginal rings can also supply estrogen to the body.



In older, postmenopausal women, HT may increase risk of breast cancer, heart disease, and stroke. In younger women with POI, these risks are thought to be much lower, since it's normal for women in this age group to have high estrogen levels. Usually, HT is stopped when a woman with POI reaches the age of natural menopause (around age 50).

If you cannot or do not want to take HT, you might benefit from non-hormonal treatments. In addition to medical treatment, you can lower your risk of osteoporosis and heart disease by eating a healthy diet and exercising regularly.

## Questions to ask your doctor

- What are my treatment options?
- What are the advantages and disadvantages of each of my treatment options?
- What else can I do to stay healthy?
- After treatment, will I still be able to get pregnant?
- Should I see an endocrinologist for my condition?

## RESOURCES

- Find-an-Endocrinologist: [www.hormone.org](http://www.hormone.org) or call 1-800-HORMONE (1-800-467-6663)
- Hormone Health Network information on early menopause: [www.hormone.org/Menopause/upload/meno-mgmt-early-menopause-052709.pdf](http://www.hormone.org/Menopause/upload/meno-mgmt-early-menopause-052709.pdf)
- Eunice Kennedy Shriver National Institute of Child Health & Human Development (National Institutes of Health-NIH): [www.nichd.nih.gov/health/topics/premature\\_ovarian\\_failure.cfm](http://www.nichd.nih.gov/health/topics/premature_ovarian_failure.cfm)
- MedlinePlus (NIH): [www.nlm.nih.gov/medlineplus/prematureovarianfailure.html](http://www.nlm.nih.gov/medlineplus/prematureovarianfailure.html)
- Mayo Clinic: [www.mayoclinic.com/health/premature-ovarian-failure/DS00843](http://www.mayoclinic.com/health/premature-ovarian-failure/DS00843)
- International Premature Ovarian Failure Association: [www.ipofa.org](http://www.ipofa.org)

## EDITORS

Marcel Cedars, MD  
William Evans, MD  
Nanette Santoro, MD

The Hormone Health Network offers free, online resources based on the most advanced clinical and scientific knowledge from The Endocrine Society ([www.endo-society.org](http://www.endo-society.org)). The Network's goal is to move patients from educated to engaged, from informed to active partners in their health care. This fact sheet is also available in Spanish at [www.hormone.org/Spanish](http://www.hormone.org/Spanish).

