

What is **Endometriosis?**

Of all the diagnoses we see in gynecology, endometriosis can be one of the hardest for patients to understand. That's because even OB-GYNs are still learning about its causes. However, great strides have been made in diagnosing and treating this disease, which affects about 1 in 10 women in their lifetime.

Today we will cover what endometriosis is, who it affects, how it is diagnosed and the initial treatment options.

What is endometriosis? Endometriosis occurs when cells from the lining of the uterus (the endometrium) grow outside of their normal location. It often affects the ovaries, fallopian tubes and the lining of the abdomen (the peritoneum), but it can also occur elsewhere.

These cells respond to normal hormonal changes of the menstrual cycle, so the tissue grows and bleeds each month. This can lead to inflammation, swelling and sometimes internal scarring.

Normal periods can already come with cramps, pain, bloating, digestive changes, and changes to bowel or bladder habits. If endometriosis is present, these symptoms can be more severe or happen outside of a woman's normal cycle. Women may also experience pain

with activity or during sexual intercourse, which can greatly impact their quality of life. Some patients do not have symptoms, but endometriosis may be found during workups for fertility issues. Patients with endometriosis can have a harder time getting pregnant, and their chances of pregnancy can improve with proper diagnosis and treatment.

Who does it affect? Endometriosis can affect any woman who is having periods, but is most commonly diagnosed in women in their 20s or 30s. Symptoms tend to worsen over time but can improve with pregnancy, breastfeeding or the use of hormonal birth control. Because endometriosis is responsive to hormones, it also improves after menopause.

How is it diagnosed? I often hear from patients: "I have always had painful periods -- do I have endometriosis?" The answer is maybe. Endometriosis is certainly not the only cause of painful periods. Because of this, the diagnosis can often be delayed.

Diagnosis usually starts with a detailed history of symptoms. A pelvic exam can help identify where the pain is worst and give the physician information about

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What are Endometriosis Symptoms?

Endometriosis often causes severe pain in the pelvis, especially during menstrual periods. Some people also have pain during sex or when using the bathroom. Some people have trouble getting pregnant.

Some people with endometriosis don't have any symptoms. For those who do, a common symptom is pain in the lower part of the belly (pelvis).

Pain may be most noticeable:

- During a period
- During or after sex
- When urinating or defecating

Some people also experience:

- Chronic pelvic pain
- Heavy bleeding during periods or between periods
- Trouble getting pregnant
- Bloating or nausea
- Fatigue
- Depression or anxiety

Symptoms often improve after menopause, but not always. Endometriosis symptoms are variable and broad, meaning that healthcare providers may not easily diagnose it. Individuals with symptoms may not be aware of the condition.

Source: World Health Organization, Endometriosis, March 2023



Women's Health • OVERVIEW

newsletter is published quarterly for health care professionals and the general public with special interest in women's health issues by the Olson Center for Women's Health.

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From the Chair

Greetings!

I'm thrilled to join the University of Nebraska Medical Center as your new Chair of the Department of Obstetrics and Gynecology. Throughout my career, I have been passionate about making pregnancy safer and ensuring all women receive excellent healthcare, no matter where they live or their background.

At the University of Chicago, I led programs that transformed how we care for pregnant women. I helped bring new FDA-approved blood tests to hospitals that can predict preeclampsia (persistent high blood pressure that develops during or after pregnancy) and other hypertension-related complications weeks before symptoms appear. These tests are now available nationwide. I've also built successful partnerships between major medical centers and community clinics, ensuring that women in under-served areas get the same quality care as those in big cities.

Our Vision for Nebraska Nebraska's rural areas present unique challenges. Many women must travel hours for prenatal care. We are going to change that through our new initiatives through engagement of our community partners. Think of it as building bridges between our medical center and every corner of the state, so no woman is too far from excellent care.

What This Means for You

- For rural communities: We will use video visits and home monitoring devices so
 pregnant women can see specialists without long drives.
- For all mothers: We will use proven safety protocols to reduce pregnancy complications, working with the Nebraska Perinatal Quality Improvement Collaborative (NPQIC) network and programs such as STAMPP Hypertension (Systematic Treatment and Management of Postpartum Hypertension).
- **For high-risk pregnancies:** We will use the new, FDA-approved blood tests to catch problems related to preeclampsia to improve outcomes.
- For our healthcare teams: We will provide advanced training and career advancement opportunities.

Building Our Future Together Beyond pregnancy care, we will strengthen all aspects of women's health - from cancer treatment to pelvic floor disorders - and pursue major research funding to bring the latest treatments to Nebraska. We will also train the next generation of women's health specialists.

I am already meeting with team members and community leaders to hear their ideas. What's working well? What needs improvement? How can we better serve our patients and support our staff? Their feedback will shape our path forward.

Our Promise Together, we will make the University of Nebraska Medical Center and Nebraska Medicine the go-to destination for women's health in the Midwest—a place where cutting-edge medicine meets genuine care, and where every woman and baby get excellent treatment, no matter where they live.

I'm excited to work with all of you to make this vision a reality.

With enthusiasm and commitment,

Sarosh Rana, MD, MPH

Professor and Chair, Department of Obstetrics and Gynecology College of Medicine University of Nebraska Medical Center

ENDOMETRIOSIS research news

Research Needed to Identify Causes and Treatments for Endometriosis

Endometriosis is a condition in which tissue similar to the lining of the uterus, or endometrium, grows outside the uterus. The ovaries, fallopian tubes or other tissues in the pelvis are commonly affected.

Current estimates suggest that approximately 10% of reproductive-age women (around 190 million women worldwide) have endometriosis. However, a substantial number of women go undiagnosed, so this is likely an underestimate.

Pelvic pain is the most common clinical symptom. Between 71% and 87% of women with endometriosis report chronic pelvic pain. Painful menstrual cramps can be mistaken for normal cramps in teenage girls and young women, delaying diagnosis by several years. Over time, this delay can result in pelvic organ damage and an increased risk for infertility.

Although multiple theories have been proposed, the exact cause of endometriosis remains unknown. Research suggests that retrograde menstruation, in which menstrual tissue flows backward through the fallopian tubes and attaches to pelvic tissues, can cause the development of endometrial lesions.

Endometriosis is more common among women who begin menstruating at a younger age and thus, have longer exposure to estrogen. Preliminary studies suggest a link between certain foods and the development of endometriosis. Diets high in fruits, vegetables, fish oil, omega-3 fatty acids and dairy products rich in calcium and vitamin D may lower overall risk. At the same time, consumption of alcohol

and foods rich in certain fats, including red meat, can increase the risk for endometriosis. Exposure to environmental toxins, such as dioxin-like compounds, are also suspected to play a role.

More research is needed to understand the biology of endometriosis, how it develops and why it persists. This knowledge will help researchers find more effective treatment options.

The World Endometriosis Research Foundation (WERF) formed an international working group of experts to develop guidelines and protocols for studying endometriosis. The results of this working group were published in a series of four articles in the July 2025 issue of Molecular Human Reproduction. The articles provided a look at research protocols and model systems for understanding the development of endometriosis and the pain and infertility caused by endometriosis. Standardization of research documentation across clinics and laboratories worldwide may speed up translation of findings to clinical practice. The WERF publications are an excellent resource for new investigators and potential collaborators in the field.

Research goals related to endometriosis include (but are not limited to) the following:

- Improved diagnosis: Currently, surgery is the only way to diagnose endometriosis definitively. Researchers are seeking less invasive ways to determine if a woman has this condition.
- Better treatments: There is currently

no cure for endometriosis, and even the most invasive surgical treatments don't provide definite relief. Researchers focus on the two most common symptoms: pain and infertility.

- Although painkillers can treat milder cases, severe pain often requires hormone treatments or surgery, which may only provide temporary relief.
 A better understanding of how the disease is related to pain is crucial to developing more effective pain treatments.
- Even though endometriosis may be common among women with fertility problems, researchers still do not fully understand the link. Studying how endometriosis decreases fertility will help improve treatment options.
- The causes of endometriosis: The
 exact causes of endometriosis remain
 unknown, making the development
 of better treatments for, and ways to
 prevent, the disease more difficult.
 Researchers are examining inflammation, epigenetics, genetics, hormonally
 active environmental contaminants, and
 other mechanisms as possible causes.

Contributed by **John S. Davis, PhD** *UNMC Department of OB-GYN*

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possible scarring. But, not all patients are comfortable with exams, especially if they have a history of trauma that makes an exam difficult. It is important to inform your physician about any of these concerns so that you can plan the diagnostic approach together.

Imaging tests, such as ultrasound or MRI, can sometimes detect endometriosis.

Ultimately, the gold standard is exploratory surgery, and should be offered to patients who are fit for surgery and when endometriosis is suspected. Once diagnosed, a combination of medical and surgical options is used for treatment.

Treatment options: Surgery for endometriosis should be performed in a minimally invasive fashion with an experienced surgeon. A camera (laparoscope) is inserted through a small incision in the belly to examine the organs. The surgeon may sometimes use a robot to assist with the procedure, but it is not necessary for complete treatment. Areas of endometriosis can be removed (excised) or destroyed (ablated). Excision is usually preferred for complete treatment, though ablation may also reduce symptoms.

It is important that the patient and surgeon have had a detailed conversation about their goals before surgery. For women who want to get pregnant, surgeons aim to remove endometriosis with as little disruption to the uterus, tubes and ovaries as possible. For women who do not want to become pregnant, surgery may include a hysterectomy (removal of the uterus) or removal of one or both ovaries to reduce the risk of endometriosis coming back.

For women who want to avoid surgery, or those who may not be fit for surgery, there are several hormonal treatment options. Hormonal management is also recommended for patients after initial diagnosis and treatment to extend the period of symptom improvement. Other non-hormonal therapies target the symptoms of the disease. It is important that your physician discusses all the options with you so that together you can make an informed treatment decision.

In summary endometriosis is a disease that is likely under-diagnosed, affects women of all ages who menstruate and can present differently in patient to patient. While final diagnosis is only possible with surgery, a doctor will often use history, an exam, and ultrasound or MRI to help make the diagnosis.

The best treatment plan is one made with the patient's individual goals in mind

Contributed by **Nicholas Jesse, MD** *UNMC Department of OB-GYN*

Three new physicians at the Olson Center for Women's Health

The Olson Center for Women's Health is excited to welcome three new physicians, each bringing unique skills and expertise. Join us in extending a warm welcome to Sarosh Rana, MD, MPH, Marcela Pineda, MD and Nicholas Jesse, MD.

Dr. Rana joins as Professor and Chair for the UNMC Department of OB-GYN as well as a provider on the Maternal-Fetal Medicine team at the Olson Center. She received her medical degree from Jawaharlal Nehru Medical College. She completed her residency in Obstetrics and Gynecology at the University of Minnesota and the University of Chicago, which was followed by a fellowship in Maternal-Fetal Medicine at Brown University and Women & Infants Hospital of Rhode Island.

Dr. Pineda is a general OB-GYN provider. She received her medical degree from the Universidad Francisco Marroquin and then completed a residency at Jamaica Hospital Medical Center in Queens, New York. She is fluent in Spanish and is passionate about women's health and education as a critical component for improving health.

Dr. Jesse joins the Olson Center as a general GYN provider with a specialty in minimally invasive gynecologic surgery. He received his medical degree from the University of Nebraska Medical Center and then completed a residency in OB-GYN and fellowship in minimally invasive gynecology at Vanderbilt University Medical Center.



Mission Statement

The mission of the Olson Center for Women's Health is to provide a national comprehensive health science center at the University of Nebraska Medical Center (UNMC). Based in the Department of Obstetrics and Gynecology, the center enables UNMC to make distinctive strides in education, research and service through innovative approaches to women's health issues.

Want More Information?

Visit our website: OlsonCenter.com

Learn more about our health care providers, services and programs available at the Olson Center for Women's Health. Our website also offers women's health information. Here are a few topics:

- Breastfeeding
- Breast health and disease
- Cardiovascular health
- Gastrointestinal health
- Gynecologic health
- Incontinence
- Reproductive endocrinology/infertility
- Pregnancy
- Wellness

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28th annual



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- Sleep in Women
- The Science of Nutrition and Childhood Development and Behaviors
- Your Skin Through the Decades

Registration prices:

\$75 for general registration of community members \$110 for nurses/social workers requesting credit

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- A variety of health and educational exhibits will be available during the morning health fair.
- You may register for blood work and flu shots with an additional fee.

•	Comprehensive Blood Count	\$6
•	Comprehensive Metabolic Panel	\$8
•	Ferritin	\$15
•	Lipid Panel*	\$6
•	Glycohemoglobin A1C	\$12
•	Thyroid Stimulating Hormone	\$7
•	Vitamin D	\$23
•	Flu Shot	\$20

^{*}Patients should fast for 12-16 hours prior to blood draw.



In support of improving patient care, this activity has been planned and implemented by University of Nebraska Medical Center and Olson Center for Women's Health. University of Nebraska Medical Center is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

ANCC contact hours will be provided. Social Work continuing education credits will be provided.

For questions call the Olson Women's Health Resource Center at 402.559.6345 For more information, visit http://www.OmahaWomensHealthAndWellness.com/



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olsoncenter.com

A bracelet that could be a lifeline

Nebraska Medicine has partnered with Nebraska Perinatal Quality Improvement Collaborative (NPQIC) to provide a bracelet to patients who have recently experienced childbirth. It's a teal bracelet that says "#postpartum alert" to identify them as a postpartum patient. Ideally, patients will wear the bracelet for six weeks after childbirth.

Concerning symptoms after childbirth include heavy bleeding, severe headache that won't go away, extreme fatigue, and swelling, among others.

Research by the Nebraska Department of Health and Human Services shows that severe complications happen 100 times more frequently outside the hospital. In fact, the State of Nebraska ranks 17th in the nation when it comes to maternal mortality (with No. 1 being the worst). Maternal mortality is defined as the death of a woman during pregnancy or within 42 days of the end of the pregnancy.

The goal is for all hospitals in Nebraska to participate in the Postpartum Alert Program.

Contributed by **Kara Haworth, MHA** *Nebraska Medicine Marketing and Communications*

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