

## What is the endometrium?

- The uterus (often referred to as the womb) is the female reproductive organ where the fetus grows and develops during pregnancy
- The endometrium is the inner lining of the uterus that nourishes the developing embryo
- During the menstrual cycle, hormones cause the endometrium to thicken and prepare for pregnancy
- If pregnancy does not occur, the endometrium is shed and becomes menstrual flow

## What is endometriosis?

- Endometriosis occurs when the tissue similar to endometrial tissue grows outside of the uterus.
- The clumps of tissue growing outside of your uterus are referred to as implants, and these can grow on the ovaries, fallopian tubes, or intestines
- While endometriosis itself usually is not dangerous, it can cause pain and impact fertility
- Endometriosis is predicted to occur in about 6-10% of people with uteruses, 25-50% of people with uteruses and infertility, and in 75-80% of people with uteruses and chronic pelvic pain
  - The average age at diagnosis is 27 years.

## What causes endometriosis?

- The cause of endometriosis is still unclear
- The most widely accepted explanation is retrograde menstruation
  - This means that some menstrual tissue flows up through the fallopian tubes during menstruation instead of down through the vagina, then implants on other organs like the ovaries
  - Retrograde menstruation may occur due to heavy bleeding or abnormal structure of the uterus, cervix, or vagina
  - High amounts of the female hormone estrogen makes endometriosis worse, which corresponds with childbearing years
    - This is why endometriosis is most common in younger people
- Endometriosis may also be passed down through families, meaning you are at increased risk if you have a sibling or parent with endometriosis.

## What are the symptoms of endometriosis?

- While some people with endometriosis will not develop any symptoms, the most common symptoms are pain, infertility, and abnormal bleeding (blood in urine or stool, spotting between periods, or vaginal bleeding after sex)
- These symptoms are usually most severe just before and during your menstrual period, but some people may experience pain all the time
- Pain can be experienced as severe menstrual cramps, low backache a few days before your period, pain during sexual intercourse, rectal pain, or pain during bowel movements
- The symptoms can vary depending on the location of the implants

## How is endometriosis diagnosed?

- To check for suspect endometriosis, a doctor will ask you about your symptoms, periods, and family history.
  - You may have a pelvic exam where a physician will check for abnormalities in your reproductive organs
  - In rare cases, there may be implants on the vulva, cervix, or vagina, which can be detected during a pelvic exam
  - If your doctor suspects you have endometriosis, they may prescribe you treatment.
- If your symptoms improve after a few months of treatment, it is more likely that you have endometriosis
- Endometriosis is commonly misdiagnosed as pelvic inflammatory disease, urinary tract infection, or irritable bowel syndrome.
- The only way to definitively diagnose endometriosis is through a surgical procedure called laparoscopy
  - During this procedure, a surgeon will insert a small, lighted tube through an incision in your belly and look for signs of endometriosis
  - The surgeon may also remove any visible implants or scar tissue
- Sometimes, implants may be tiny or hidden from the surgeon's view
  - Therefore, a "no endometriosis" diagnosis is never certain
  - Imaging tests like ultrasonography cannot diagnose endometriosis alone, but they can show the extent of endometriosis and may be used to monitor the disorder after diagnosis

## How is endometriosis treated?

- If endometriosis is suspected or diagnosed, your doctor may advise you to take over the counter pain medicine such as ibuprofen to reduce bleeding and pain
- Oral contraceptives (birth control pills) may be prescribed, since they suppress the activity of the ovaries, slowing the growth of implants
  - If you are unable to take oral contraceptives, other drugs like progestins (medroxyprogesterone and norethindrone) or gonadotropin-releasing hormone (GnRH) agonists can be prescribed instead.
- Laparoscopy can relieve endometriosis pain, but does not guarantee long-lasting results
  - About 60-80% of patients report pain relief in the first months after laparoscopy, but more than 50% of people have symptoms return two years after surgery
- If medication cannot relieve your pain and you do not plan on becoming pregnant, the uterus can be removed in a surgical procedure called hysterectomy
  - Sometimes, your ovaries may be removed as well in a procedure called hysterectomy plus bilateral salpingo-oophorectomy
  - This surgery is usually done in those who want to completely eliminate the disorder
  - Since the ovaries are removed, menopause-like symptoms can occur after this surgery which can be managed with estrogen supplementation

## References:

- Government of Alberta. Endometriosis. 2021. [Cited 2022 Feb 10]. Available from: <https://myhealth.alberta.ca/Health/Pages/conditions.aspx?hwid=hw102998>
- Liu, James H. Merck Manual. Endometriosis. 2020. [Cited 2022 Feb 10]. Available from: <https://www.merckmanuals.com/en-ca/professional/gynecology-and-obstetrics/endometriosis/endometriosis>
- Government of Alberta. Laparoscopic Surgery for Endometriosis. 2021. [Cited 2022 Feb 10]. Available from: <https://myhealth.alberta.ca/Health/Pages/conditions.aspx?hwid=hw101171&lang=en-ca#hw101173>