GEM PATIENT EDUCATION CENTER

Endometriosis and Fertility

Version 1.1 · Reviewed 13 September 2026

Natural conception, ovarian reserve, endometrioma, surgery, IUI, IVF and fertility preservation – explained simply

Endometriosis does not mean infertility. Options can include natural conception, intrauterine insemination (IUI), in vitro fertilization (IVF), surgery or fertility preservation. The best plan depends on age, symptoms, ovarian reserve, tubes, sperm factors, prior treatment and your preferences.

1. Can I become pregnant naturally?

Yes. Many women with endometriosis conceive naturally. The chance depends on age, ovarian reserve, fallopian-tube function, sperm factors, how long pregnancy has been attempted, and the location and extent of disease. Endometriosis does not automatically mean infertility or IVF.

2. Why does ovarian reserve matter?

Ovarian reserve means the remaining egg supply. Anti-Müllerian hormone (AMH) and antral follicle count (AFC) help estimate egg quantity and response to stimulation. They do not directly measure egg quality or reliably predict an individual natural pregnancy. Age remains important.

3. Ovarian endometrioma: why timing matters

An endometrioma is an ovarian endometriosis cyst. It may be associated with inflammation and reduced ovarian reserve. This does not prove inevitable egg loss or benefit from immediate surgery. GEM supports early expert evaluation, followed by individualized monitoring, medical care, fertility treatment or surgery.

4. Should endometriosis be treated before fertility treatment?

Plan early with your clinicians. Surgery may help selected patients with pain or anatomical problems, but routine endometrioma surgery before IVF solely to improve live-birth rates is not recommended. Surgery can reduce ovarian reserve. You, the surgeon and fertility specialist should weigh symptoms, risks and priorities together.

5. When endometrioma surgery is needed, expertise matters

Ovarian reserve can fall even after careful expert surgery, especially with bilateral disease, repeat surgery or low reserve. GEM supports experienced surgeons who minimize injury to healthy cortex and blood supply. These techniques reduce avoidable injury; they cannot eliminate the risk.

6. IUI – when can it help?

IUI with ovarian stimulation may help selected patients, particularly with mild disease, open tubes and suitable sperm factors. Age, ovarian reserve, duration of infertility and preferences guide the choice. It is not the right next step for everyone.

7. IVF – when should it be considered?

IVF is an important and appropriate treatment for endometriosis-associated infertility. It may be favored when tubes are damaged, sperm factors are present, ovarian reserve is low, time is important because of age, previous approaches have failed, or the chance of natural conception is low. IVF and surgery are not competing philosophies – the goal is to choose the right sequence for the individual patient.

8. Fertility preservation

For extensive ovarian endometriosis, discuss the possible benefits, risks and costs of egg or embryo freezing, ideally before ovarian surgery when feasible. Evidence for its overall benefit in this setting remains uncertain. Freezing does not guarantee a future baby.

9. Fertility after endometriosis surgery

After surgery, age, tubes, sperm factors, ovarian reserve and the Endometriosis Fertility Index (EFI) can guide natural trying, IUI or IVF. Endometriosis suppression should not be prescribed solely to improve spontaneous pregnancy. Hormones used in fertility-treatment protocols are a different situation.

10. One team – two areas of expertise

You, the endometriosis surgeon and fertility specialist should plan together. Choices may include trying naturally, monitoring, surgery, egg or embryo freezing, IUI or IVF. Agree on the sequence and when to reassess, considering your goals and the likely benefits and risks.

11. Questions for my endometriosis surgeon

- **Could surgery improve my chance of natural conception?**
- Could it reduce my ovarian reserve?
- How will you protect healthy ovarian tissue?
- Do I have deep disease or an endometrioma?
- Should I see a fertility specialist or consider egg/embryo freezing before surgery?
- How long should I try naturally after surgery?

12. Questions for my reproductive endocrinologist

- **What is my ovarian reserve and how does my age affect the plan?**
- Are my tubes open and is there a sperm factor?
- Is natural conception realistic?
- Would IUI be reasonable, or should we move to IVF?
- Would surgery help me – or could it reduce my egg supply?
- Should I preserve eggs or embryos now?
- Can you coordinate with my endometriosis surgeon?

GEM FERTILITY MESSAGE

EVALUATE EARLY. BALANCE DISEASE AND TREATMENT RISKS.

Evaluate early. Treat when appropriate. Operate expertly. Preserve ovarian tissue. Coordinate surgery and fertility treatment from the beginning.

References & review

Early evaluation does not mean automatic surgery.

Evidence & review

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Individual fertility planning

Endometriosis does not automatically mean infertility. Age, duration of trying, symptoms, ovarian reserve, tubes, sperm factors, previous treatment and preferences guide whether to try naturally, use insemination, proceed to IVF or consider surgery. Ovarian reserve tests primarily estimate egg quantity and response to stimulation; they do not reliably predict an individual natural pregnancy.

Endometrioma and surgery

Both endometrioma and ovarian surgery may affect ovarian reserve. Skilled surgery aims to minimize injury but cannot eliminate it, particularly with bilateral or repeat surgery. Routine endometrioma surgery before assisted reproduction solely to improve live-birth rates is not recommended; pain, suspicious findings or follicle accessibility may lead to a different individualized decision.

What the 2026 diameter study can show

Younis and colleagues pooled 16 observational studies, 1,484 women and 30 cohorts without prior ovarian surgery. Their cohort-level age-adjusted analysis did not find a statistically significant association between endometrioma diameter and AMH. This is not proof that size has no individual relevance or that immediate surgery preserves fertility.

Mechanistic research is not a treatment trial

Orisaka and colleagues studied human endometrioma fluid using rat follicles in vitro. This supports investigation of possible mechanisms, not a measured rate of human egg loss over time or evidence that early surgery improves live birth.

Fertility preservation and hormone treatment

Discuss possible benefits, risks, costs and uncertain benefit of egg or embryo freezing in extensive ovarian disease, ideally before ovarian surgery when feasible. Freezing is not a guarantee. Endometriosis suppression should not be prescribed solely to improve spontaneous pregnancy after surgery. Hormones used in assisted-reproduction protocols serve a different purpose.

Medical information

Seek urgent or emergency assessment for severe or rapidly worsening symptoms.

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Full references

Numbers correspond to the sources cited in this revised guide. Access notes distinguish relevant full-text inspection from abstract-only checks. No source is presented as an endorsement of GEM.

- **[1]** ESHRE. Endometriosis guideline. 2022.
  Verification: Relevant full-guideline sections inspected online.
  Freely available — https://www.eshre.eu/-/media/sitecore-files/Guidelines/Endometriosis/ESHRE-GUIDELINE-ENDOMETRIOSIS-2022_1.pdf

- **[2]** Practice Committee of ASRM. Testing and interpreting measures of ovarian reserve: a committee opinion. Fertil Steril. 2020;114(6):1151-1157. doi:10.1016/j.fertnstert.2020.09.134.
  Verification: Relevant full committee opinion inspected.
  Freely available — https://www.asrm.org/practice-guidance/practice-committee-documents/testing-and-interpreting-measures-of-ovarian-reserve-a-committee-opinion-2020/

- **[3]** Working group of ESGE, ESHRE and WES, Saridogan E, et al. Recommendations for the Surgical Treatment of Endometriosis. Part 1: Ovarian Endometrioma. Hum Reprod Open. 2017;2017(4):hox016. doi:10.1093/hropen/hox016. PMID 31486802.
  Verification: Bibliographic record, abstract and relevant full-text sections inspected via Europe PMC.
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- **[4]** Younis JS, Glick L, Santulli P, et al. Does endometrioma diameter impact serum anti-Müllerian hormone levels? A systematic review and meta-analysis. Hum Reprod Open. 2026;2026(3):hoag048. doi:10.1093/hropen/hoag048. PMID 42333302.
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- **[5]** Orisaka M, Shirafuji A, Shimizu-Mizuno N, et al. Negative impacts of ovarian endometrioma on preantral follicle development: implications for endometriosis-related infertility. Front Endocrinol (Lausanne). 2026;17:1679042. doi:10.3389/fendo.2026.1679042. PMID 42199791.
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