

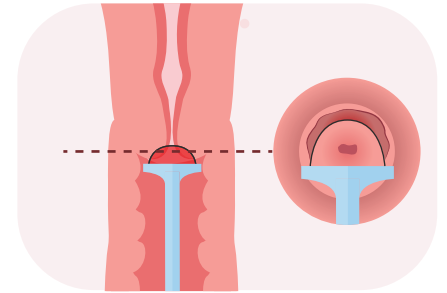
# Loop Electrosurgical Excision Procedure (LEEP)

## What is it?

**Loop electrosurgical excision procedure (LEEP)** is a treatment used to remove abnormal cells from the cervix.

LEEP is usually completed in a doctor's office, with the procedure taking 10 to 20 minutes. Patients are typically awake for the procedure.

It is performed with the help of a small wire loop attached to an electrical current which helps cut away a thin layer of cells from the cervix.



### When is it used?

The main goal of a LEEP procedure is to **diagnose and treat the abnormal (precancerous or cancerous) growth of cells** on the cervix. It is often used after an abnormal cervical cancer screening test (Pap test) or after an abnormal colposcopy result.

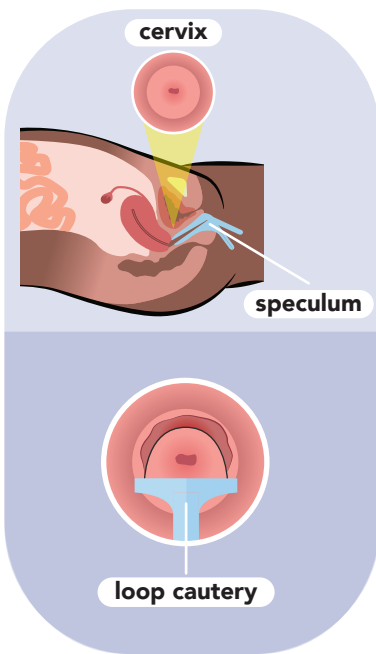
### Tell your doctor if:

You are or might be **pregnant**. A blood or urine pregnancy test may be done

You have your **period**

You are taking **blood thinner** medication

## What happens?



- (1) Your doctor will use a **speculum** (a similar instrument to that used during a Pap test) to look inside the vagina and visualize the cervix. A **colposcope** will be used to provide a more magnified view of the cervix.
- (2) **Local anesthetic** will be used to numb the cervix. A vinegar solution, called **acetic acid**, will be used to help identify the abnormal areas. You may feel a mild burning sensation.
- (3) The **loop cautery** is inserted through the speculum and is used to **remove cervical tissue from the outer surface of the cervix** (which includes the abnormal cells). You may feel touch and movement, but should not feel pain. After the tissue is removed, the base of the cervix may be cauterized with a small rollerball to stop any bleeding and destroy any microscopic abnormal cells that may remain.
- (4) A **medicated paste** will be applied to the area to prevent bleeding. You can often experience brown or black clumpy discharge when this paste is used.
- (5) The abnormal tissue will then be sent to **pathology** to be assessed carefully under the microscope.

### References

1. Casper RF. Clinical manifestations and diagnosis of menopause. Up to Date. 2021 Sept.
2. Casper RF. Patient education: Menopause (beyond the basics). Up to Date. 2021 Apr.

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## RISKS

A LEEP is generally a safe procedure, but there are some risks:

**Bleeding** – Heavy bleeding is rare and should prompt you to seek medical attention. Light spotting is normal after the procedure.

**Infection** – May present as pelvic pain, fever, discharge with pus, or abnormal bleeding or spotting that is persistent. This occurs in 0-2% of cases and can typically be managed with antibiotics.

**Cervical stenosis** – There is a small risk of scar tissue forming over the opening of the cervix, causing your cervix to narrow. It is more likely to occur in post-menopausal women, women with multiple LEEP procedures, or situations where a larger amount of tissue is removed.

## RECOVERY

After the procedure, **you can go home** but full recovery can take approximately **4 weeks**.

**Excessive activity should be avoided for 48 hours**, and exercise should be restricted for at least one week.

To allow the cervix to heal, **avoid intercourse for at least four weeks**. Similarly, **avoid placing anything in the vagina** (tampons or douches). You can shower normally.

If there is bleeding after the procedure, you may wear a **sanitary pad**. It is normal to experience mild cramping, spotting, and dark or black-colored discharge for a few days.

If there is cramping or soreness, over-the-counter painkillers like **Tylenol and Advil** can be used.

## Signs to watch for

Contact a healthcare provider if you have:

Heavy bleeding

Bleeding with clots

Foul-smelling vaginal discharge

Fever or chills

Severe pelvic (lower abdominal) pain

## IMPLICATIONS FOR FUTURE PREGNANCY

A LEEP is highly effective in the identification and management of abnormal cells of the cervix. Having a LEEP procedure can result in a small increase in risks in a subsequent pregnancy. These include:

- Pre-term delivery – delivery of the baby before 37 weeks
- Second-trimester pregnancy loss – a miscarriage during the 14th-28th week of pregnancy
- If there is severe narrowing of the cervix, dilation of the cervix during labour may be affected.

Overall, **these risks remain very low**, especially when only a small amount of tissue is removed.

## Follow-up

After the procedure is completed, there will be a **follow-up visit** with your healthcare provider to discuss your results. **Follow up Pap tests and colposcopy** will be done to confirm that the abnormal cells have been completely removed. The length of follow up ranges based on location, but is generally 1-2 years.

### References

1. Hoffman MS, Mann WJ. Cervical intraepithelial neoplasia: Diagnostic excisional procedures. In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA. (Accessed on August 15, 2022)
2. Santesso N, Mustafa RA, Wiercioch W, Kehar R, Gandhi S, Chen Y, Cheung A, Hopkins J, Khatib R, Ma B, Mustafa AA. Systematic reviews and meta-analyses of benefits and harms of cryotherapy, LEEP, and cold knife conization to treat cervical intraepithelial neoplasia. International Journal of Gynecology & Obstetrics. 2016 Mar 1;132(3):266-71.
3. Jin G, LanLan Z, Li C, Dan Z. Pregnancy outcome following loop electrosurgical excision procedure (LEEP) a systematic review and meta-analysis. Archives of gynecology and obstetrics. 2014 Jan;289(1):85-99.

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