Barrier Methods of Birth Control: Diaphragm, Sponge, Cervical Cap, and Condom

- What are barrier methods?
- What are the types of barrier methods and how effective are they in preventing pregnancy?
- What are spermicides and how are they used?
- What are the benefits, risks, and side effects of using spermicides?
- What are condoms and how are they used?
- What are the benefits, risks, and side effects of using condoms?
- What is the sponge and how is it used?
- What are the benefits, risks, and side effects of using the sponge?
- What is the diaphragm and how is it used?
- What are the benefits, risks, and side effects of using the diaphragm?
- What is the cervical cap and how is it used?
- What are the benefits, risks, and side effects of using the cervical cap?
- Glossary

What are barrier methods?
Barrier methods of birth control are physical or chemical barriers that prevent sperm from passing through the woman’s cervix into the uterus and fallopian tubes to fertilize an egg. Some methods also protect against sexually transmitted disease (STDs).

What are the types of barrier methods and how effective are they in preventing pregnancy?
The following table lists the barrier methods and their effectiveness in preventing pregnancy:

<table>
<thead>
<tr>
<th>Method</th>
<th>Number of women out of 100 who will become pregnant during the first year of typical use (when a method is used by the average person who does not always use the method correctly or consistently)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diaphragm</td>
<td>12</td>
</tr>
<tr>
<td>Sponge</td>
<td></td>
</tr>
<tr>
<td>Women who have not given birth</td>
<td>12</td>
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<tr>
<td>Cervical cap</td>
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<tr>
<td>Women who have not given birth</td>
<td>13</td>
</tr>
<tr>
<td>Cervical cap</td>
<td></td>
</tr>
<tr>
<td>Women who have given birth</td>
<td>23</td>
</tr>
<tr>
<td>Male condom</td>
<td>18</td>
</tr>
<tr>
<td>Female condom</td>
<td>21</td>
</tr>
<tr>
<td>Spermicide</td>
<td>28</td>
</tr>
</tbody>
</table>
What are spermicides and how are they used?
A spermicide is a foam, cream, jelly, suppository (an insert that melts after it is inserted in the **vagina**), or film (thin sheets). Spermicide can be used with all other barrier methods except the sponge, which already contains a spermicide. A spermicide should be inserted into the vagina close to the cervix no more than 30 minutes before intercourse. It should remain in place for 6–8 hours after sex. A spermicide should be reapplied with each act of sex.

What are the benefits, risks, and side effects of using spermicides?
- **Benefits:**
  - Spermicides are easy to use.
  - They do not cost very much and can be bought over-the-counter.
  - They have no effect on a woman’s natural hormones.
  - They can be used while breastfeeding.
- **Risks:**
  - When used alone, spermicides do not protect against STDs, including infection with [human immunodeficiency virus (HIV)](https://www.cdc.gov/std/hiv/).
  - Frequent use of spermicides can increase the risk of getting HIV from an infected partner. Spermicides should only be used if you are at low risk of HIV infection.
- **Possible side effects:** allergic reaction to the spermicide and [vaginitis](https://www.nlm.nih.gov/medlineplus/vaginitis.html)

What are condoms and how are they used?
Two types of condoms are available: male and female. The male condom is a thin sheath made of latex (rubber), polyurethane (plastic), or natural (animal) membrane that is worn by the man over his erect **penis**. Latex and polyurethane condoms provide the best available protection against many STDs, including HIV.

The female condom is a thin plastic pouch that lines the vagina. It is held in place by a closed inner ring at the cervix and an outer ring at the opening of the vagina. It can be inserted up to 8 hours before sex and provides some protection against STDs.

Both types of condoms should be used with a lubricant to prevent the condom from tearing or breaking and to reduce irritation. Latex condoms should only be used with water-based or silicone lubricants. Oil-based lubricants can weaken the latex and increase the risk that the condom will break.

What are the benefits, risks, and side effects of using condoms?
- **Benefits:**
  - Condoms do not cost very much and can be bought over-the-counter.
  - They can be carried in a pocket or purse.
  - They have no effect on a woman’s natural hormones.
  - They can be used while breastfeeding.
  - Latex and polyurethane condoms provide the best available protection against STDs.
  - The female condom can be inserted up to 8 hours before sex.
- **Risks:** none
- **Possible side effects:** allergic reaction to latex or polyurethane

What is the sponge and how is it used?
The sponge is a doughnut-shaped device made of soft foam coated with spermicide. It is inserted into the vagina to cover the cervix. It is available without a prescription. The sponge does not protect against STDs, including HIV. A male or female condom should be used with the sponge to provide STD protection if you are at risk of getting an STD.

What are the benefits, risks, and side effects of using the sponge?
- **Benefits:**
  - It can be bought over-the-counter.
  - It can be carried in a purse or pocket.
  - It has no effect on a woman’s natural hormones.
  - Each sponge contains enough spermicide for repeated acts of intercourse during a 24-hour period.
  - It can be used while breastfeeding beginning 6 weeks after childbirth.
- **Risks:**
  - Cases of [toxic shock syndrome](https://www.cdc.gov/std/tss/tss/default.htm) have occurred in a few women using the sponge.
— The sponge should only be used if you are at low risk of HIV infection. Frequent use of spermicides can increase the risk of getting HIV from an infected partner.

• Possible side effects: vaginal irritation and allergic reactions to polyurethane, spermicides, or sulfites (all of which are found in the sponge)

**What is the diaphragm and how is it used?**
The diaphragm is a small dome-shaped device that fits inside the vagina and covers the cervix. It is used with spermicide. Diaphragms are made of latex or silicone. They require a prescription and need to be fitted by a health care provider. Use water-based lubricants only if you use a latex diaphragm.

The diaphragm does not protect against STDs, including HIV. A male or female condom should be used with the diaphragm to provide STD protection if you are at risk of getting an STD.

**What are the benefits, risks, and side effects of using the diaphragm?**

• Benefits:
  — It has no effect on a woman's natural hormones.
  — It can be used while breastfeeding beginning 6 weeks after childbirth.
  — It can be inserted up to 2 hours before sex. If it is inserted more than 2 hours beforehand, the spermicide must be reapplied.

• Risks:
  — Birth control methods that need spermicides to be effective should only be used if you are at low risk of HIV infection. Frequent use of spermicides can increase the risk of getting HIV from an infected partner.
  — There is an increased risk of toxic shock syndrome if the diaphragm is left in for more than 24 hours.
  — Use of a diaphragm and spermicide may increase the risk of urinary tract infection.

• Possible side effects: allergic reaction to latex or to the spermicide

**What is the cervical cap and how is it used?**
The cervical cap is a small plastic dome that fits tightly over the cervix and stays in place by suction. The cervical cap is used with a spermicide. It has a strap over the dome that is used for removal. A cervical cap must be fitted and prescribed by a health care provider.

The cervical cap does not protect against STDs, including HIV. A male or female condom should be used with the cervical cap to provide STD protection if you are at risk of getting an STD.

**What are the benefits, risks, and side effects of using the cervical cap?**

• Benefits:
  — It has no effect on a woman's natural hormones.
  — It can be used while breastfeeding beginning 6 weeks after childbirth.
  — It can be inserted up to 6 hours before sex.

• Risks:
  — Birth control methods that need spermicides to be effective should only be used if you are at low risk of HIV infection. Frequent use of spermicides can increase the risk of getting HIV from an infected partner.
  — To avoid an increased risk of infection, including toxic shock syndrome, the cervical cap should not be used during your menstrual period.
  — Use of a cervical cap and spermicide may increase the risk of urinary tract infection.

• Possible side effects: allergic reaction to the spermicide and vaginal irritation or odor

**Glossary**

*Cervix:* The opening of the uterus at the top of the vagina.

*Fallopian Tubes:* Tubes through which an egg travels from the ovary to the uterus.

*Human Immunodeficiency Virus (HIV):* A virus that attacks certain cells of the body’s immune system and causes acquired immunodeficiency syndrome (AIDS).

*Penis:* An external male sex organ.

*Sexually Transmitted Disease (STD):* A disease that is spread by sexual contact, including chlamydia, gonorrhea, genital warts, herpes, syphilis, and infection with human immunodeficiency virus (HIV, the cause of acquired immunodeficiency syndrome [AIDS]).

*Toxic Shock Syndrome:* A severe illness caused by a bacterial infection.
Uterus: A muscular organ located in the female pelvis that contains and nourishes the developing fetus during pregnancy.

Vagina: A tube-like structure surrounded by muscles leading from the uterus to the outside of the body.

Vaginitis: Infection or inflammation of the vagina.

If you have further questions, contact your obstetrician–gynecologist.

FAQ022: Designed as an aid to patients, this document sets forth current information and opinions related to women's health. The information does not dictate an exclusive course of treatment or procedure to be followed and should not be construed as excluding other acceptable methods of practice. Variations, taking into account the needs of the individual patient, resources, and limitations unique to institution or type of practice, may be appropriate.

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