CHAPTER 15

Spermicides and Diaphragms

Spermicides

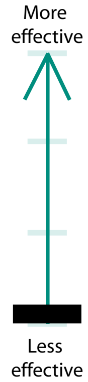
Key Points for Providers and Clients

- **Spermicides are placed deep in the vagina shortly before sex.**
- **Require correct use with every act of sex for greatest effectiveness.**
- **One of the least effective contraceptive methods.**
- **Can be used as a primary method or as a backup method.**

What Are Spermicides?

- Sperm-killing substances inserted deep in the vagina, near the cervix, before sex.
  - Nonoxynol-9 is most widely used.
  - Others include benzalkonium chloride, chlorhexidine, menfegol, octoxynol-9, and sodium docusate.
- Available in foaming tablets, melting or foaming suppositories, cans of pressurized foam, melting film, jelly, and cream.
  - Jellies, creams, and foam from cans can be used alone, with a diaphragm, or with condoms.
  - Films, suppositories, foaming tablets, or foaming suppositories can be used alone or with condoms.
- Work by causing the membrane of sperm cells to break, killing them or slowing their movement. This keeps sperm from meeting an egg.

How Effective?



Effectiveness depends on the user: Risk of pregnancy is greatest when spermicides are not used with every act of sex.

- One of the least effective family planning methods.
- As commonly used, about 29 pregnancies per 100 women using spermicides over the first year. This means that 71 of every 100 women using spermicides will not become pregnant.
- When used correctly with every act of sex, about 18 pregnancies per 100 women using spermicides over the first year.

Return of fertility after spermicides are stopped: No delay

Protection against sexually transmitted infections (STIs): None. Frequent use of nonoxynol-9 may increase risk of HIV infection (see Question 3, p. 235).

Side Effects, Health Benefits, and Health Risks

Side Effects (see Managing Any Problems, p. 233)

Some users report the following:

- Irritation in or around the vagina or penis

Other possible physical changes:

- Vaginal lesions

Known Health Benefits

Help protect against:

- Risks of pregnancy

Known Health Risks

Uncommon:

- Urinary tract infection, especially when using spermicides 2 or more times a day

Rare:

- Frequent use of nonoxynol-9 may increase risk of HIV infection (see Question 3, p. 235)

Correcting Misunderstandings (see also Questions and Answers, p. 235)

Spermicides:

- Do not reduce vaginal secretions or make women bleed during sex.
- Do not cause cervical cancer or birth defects.
- Do not protect against STIs.
- Do not change men's or women's sex drive or reduce sexual pleasure for most men.
- Do not stop women's monthly bleeding.

Why Some Women Say They Like Spermicides

- Are controlled by the woman
- Have no hormonal side effects
- Increase vaginal lubrication
- Can be used without seeing a health care provider
- Can be inserted ahead of time and so do not interrupt sex

Who Can and Cannot Use Spermicides

Safe and Suitable for Nearly All Women

Medical Eligibility Criteria for Spermicides

All women can safely use spermicides except those who:

- Are at high risk for HIV infection
- Have HIV infection
- Have AIDS

Providing Spermicides

When to Start

- Any time the client wants.

Explaining How to Use Spermicides

Give spermicide	• Give as much spermicide as possible—even as much as a year's supply, if available.
Explain how to insert spermicide into the vagina	1. Check the expiration date and avoid using spermicides past their expiration date. 2. Wash hands with mild soap and clean water, if possible. 3. Foam or cream: Shake cans of foam hard. Squeeze spermicide from the can or tube into a plastic applicator. Insert the applicator deep into the vagina, near the cervix, and push the plunger. 4. Tablets, suppositories, jellies: Insert the spermicide deep into the vagina, near the cervix, with an applicator or with fingers. Film: Fold film in half and insert with fingers that are dry (or else the film will stick to the fingers and not the cervix).
Explain when to insert spermicide into the vagina	• Foam or cream: Any time less than one hour before sex. • Tablets, suppositories, jellies, film: Between 10 minutes and one hour before sex, depending on type.
Explain about multiple acts of sex	• Insert additional spermicide before each act of vaginal sex.
Do not wash the vagina (douche) **after sex**	• Douching is not recommended because it will wash away the spermicide and also increase the risk of sexually transmitted infections. • If you must douche, wait for at least 6 hours after sex before doing so.

Supporting the Spermicide User

Ensure client understands correct use	• Ask the client to repeat how and when to insert her spermicide.
Describe the most common side effects	• Itching and irritation in or around the vagina or penis.
Explain about emergency contraceptive pills (ECPs)	• Explain ECP use in case the spermicide is not used at all or is not used properly (see Emergency Contraceptive Pills, p. 45). Give her ECPs, if available.

Diaphragms

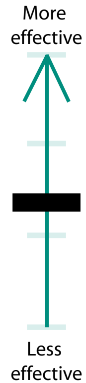
Key Points for Providers and Clients

- **The diaphragm is placed deep in the vagina before sex.** It covers the cervix. Spermicide provides additional contraceptive protection.
- **A pelvic examination is needed before starting use.** The provider must select a diaphragm that fits properly.
- **Require correct use with every act of sex for greatest effectiveness.**

What Is the Diaphragm?

- A soft latex cup that covers the cervix. Plastic diaphragms may also be available.
- The rim contains a firm, flexible spring that keeps the diaphragm in place.
- Used with spermicidal cream, jelly, or foam to improve effectiveness.
- Comes in different sizes and requires fitting by a specifically trained provider.
- Works by blocking sperm from entering the cervix; spermicide kills or disables sperm. Both keep sperm from meeting an egg.

How Effective?



Effectiveness depends on the user: Risk of pregnancy is greatest when the diaphragm with spermicide is not used with every act of sex.

- As commonly used, about 16 pregnancies per 100 women using the diaphragm with spermicide over the first year. This means that 84 of every 100 women using the diaphragm will not become pregnant.
- When used correctly with every act of sex, about 6 pregnancies per 100 women using the diaphragm with spermicide over the first year.

Return of fertility after use of the diaphragm is stopped: No delay

Protection against STIs: May provide some protection against certain STIs but should not be relied on for STI prevention (see Question 8, p. 236).

Side Effects, Health Benefits, and Health Risks

Side Effects (see Managing Any Problems, p. 233)

Some users report the following:

- Irritation in or around the vagina or penis

Other possible physical changes:

- Vaginal lesions

Known Health Benefits

Help protect against:

- Risks of pregnancy

May help protect against:

- Certain STIs (chlamydia, gonorrhea, pelvic inflammatory disease, trichomoniasis)
- Cervical precancer and cancer

Known Health Risks

Common to uncommon:

- Urinary tract infection

Uncommon:

- Bacterial vaginosis
- Candidiasis

Rare:

- Frequent use of nonoxynol-9 may increase risk of HIV infection (see Question 3, p. 235)

Extremely rare:

- Toxic shock syndrome

Correcting Misunderstandings (see also Questions and Answers, p. 235)

Diaphragms:

- Do not affect the feeling of sex. A few men report feeling the diaphragm during sex, but most do not.
- Cannot pass through the cervix. They cannot go into the uterus or otherwise get lost in the woman's body.
- Do not cause cervical cancer.

Why Some Women Say They Like the Diaphragm

- Is controlled by the woman
- Has no hormonal side effects
- Can be inserted ahead of time and so does not interrupt sex

Who Can and Cannot Use Diaphragms

Safe and Suitable for Nearly All Women

Nearly all women can use the diaphragm safely and effectively.

Medical Eligibility Criteria for

Diaphragms

Ask the client the questions below about known medical conditions. Examinations and tests are not necessary. If she answers "no" to all of the questions, then she can start using the diaphragm if she wants. If she answers "yes" to a question, follow the instructions. In some cases she can still start using the diaphragm. These questions also apply to the cervical cap (see p. 238).

1. Have you recently had a baby or second-trimester spontaneous or induced abortion? If so, when?

❑ NO ❑ **YES** The diaphragm should not be fitted until 6 weeks after childbirth or second-trimester abortion, when the uterus and cervix have returned to normal size. Give her a backup method* to use until then.

(Continued on next page)

* *Backup methods include abstinence, male and female condoms, spermicides, and withdrawal. Tell her that spermicides and withdrawal are the least effective contraceptive methods. If possible, give her condoms.*

Medical Eligibility Criteria for Diaphragms (continued)

2. Are you allergic to latex rubber?

❑ NO ❑ **YES** She should not use a latex diaphragm. She can use a diaphragm made of plastic.

3. Do you have HIV infection or AIDS? Do you think you are at high risk of HIV infection? (Discuss what places a woman at high risk for HIV [see Sexually Transmitted Infections, Including HIV, Who Is At Risk?, p. 276]. For example, her partner has HIV.)

❑ NO ❑ **YES** Do not provide a diaphragm. For HIV protection, recommend using condoms alone or with another method.

For complete classifications, see Medical Eligibility Criteria for Contraceptive Use, p. 324. Be sure to explain the health benefits and risks and the side effects of the method that the client will use. Also, point out any conditions that would make the method inadvisable, when relevant to the client.

Using Clinical Judgment in Special Cases of Diaphragm Use

Usually, a woman with any of the conditions listed below should not use the diaphragm. In special circumstances, however, when other, more appropriate methods are not available or acceptable to her, a qualified provider who can carefully assess a specific woman's condition and situation may decide that she can use the diaphragm with spermicide. The provider needs to consider the severity of her condition and, for most conditions, whether she will have access to follow-up.

- History of toxic shock syndrome
- Allergy to latex, especially if the allergic reaction is mild (see Mild irritation in or around the vagina or penis or mild allergic reaction to condom, p. 207)
- High risk of HIV infection, HIV infection, or AIDS

Providing Diaphragms

When to Start

Woman's situation	When to start
Any time	**At any time** • If she has had a full-term delivery or second-trimester spontaneous or induced abortion less than 6 weeks ago, give her a backup method to use, if needed, until 6 weeks have passed.
Special advice for women switching from another method	• Suggest that she try the diaphragm for a time while still using her other method. This way she can safely gain confidence that she can use the diaphragm correctly.

Explaining the Fitting Procedure

Learning to fit women for a diaphragm requires training and practice. Therefore, this is a summary and not detailed instructions.

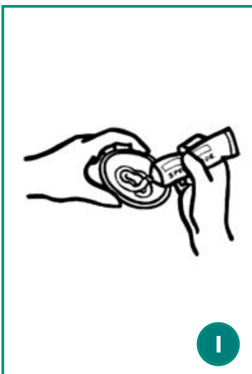
1. The provider uses proper infection-prevention procedures (see Infection Prevention in the Clinic, p. 312).
2. The woman lies down as for a pelvic examination.
3. The provider checks for conditions that may make it impossible to use the diaphragm, such as uterine prolapse.
4. The provider inserts the index and middle fingers into the vagina to determine the correct diaphragm size.
5. The provider inserts a special fitting diaphragm into the client's vagina so that it covers the cervix. The provider then checks the location of the cervix and makes sure that the diaphragm fits properly and does not come out easily.
6. The provider gives the woman a properly fitting diaphragm and plenty of spermicide to use with it, and teaches her to use it properly (see Explaining How to Use a Diaphragm, p. 230).

With a properly fitted diaphragm in place, the client should not be able to feel anything inside her vagina, even when she walks or during sex.

Explaining How to Use the Diaphragm

IMPORTANT: Whenever possible, show the woman the location of the pubic bone and cervix with a model or a picture. Explain that the diaphragm is inserted behind the pubic bone and covers the cervix.

Explain the 5 Basic Steps to Using a Diaphragm	
Basic Steps	**Important Details**
1. Squeeze a spoonful of spermicidal cream, jelly, or foam into the diaphragm and around the rim	• Wash hands with mild soap and clean water, if possible. • Check the diaphragm for holes, cracks, or tears by holding it up to the light. • Check the expiration date of the spermicide and avoid using any beyond its expiration date. • Insert the diaphragm less than 6 hours before having sex.
2. Press the rim together; push into the vagina as far as it goes	• Choose a position that is comfortable for insertion—squatting, raising one leg, sitting, or lying down.
3. Feel diaphragm to make sure it covers the cervix	• Through the dome of the diaphragm, the cervix feels like the tip of the nose. • If the diaphragm feels uncomfortable, take it out and insert it again.



Basic Steps	Important Details
4. Keep in place for at least 6 hours after sex	• Keep the diaphragm in place at least 6 hours after having sex but no longer than 24 hours. • *Leaving the diaphragm in place for more than one day may increase the risk of toxic shock syndrome.* It can also cause a bad odor and vaginal discharge. (Odor and discharge go away on their own after the diaphragm is removed.) • For multiple acts of sex, make sure that the diaphragm is in the correct position and also insert additional spermicide in front of the diaphragm before each act of sex.
5. To remove, slide a finger under the rim of the diaphragm to pull it down and out	• Wash hands with mild soap and clean water, if possible. • Insert a finger into the vagina until the rim of the diaphragm is felt. • Gently slide a finger under the rim and pull the diaphragm down and out. Use care not to tear the diaphragm with a fingernail. • Wash the diaphragm with mild soap and clean water and dry it after each use.

Supporting the Diaphragm User

Ensure client understands correct use	• Ask the client to repeat how and when to insert and remove the diaphragm.
Explain that use becomes easier with time	• The more practice she has with inserting and removing the diaphragm, the easier it will get.
Describe the most common side effects	• Itching and irritation in or around the vagina or penis.
Explain about emergency contraceptive pills (ECPs)	• Explain ECP use in case the diaphragm moves out of place or is not used properly (see Emergency Contraceptive Pills, p. 45). Give her ECPs, if available.
Explain about replacement	• When a diaphragm gets thin, develops holes, or becomes stiff, it should not be used and needs to be replaced. She should obtain a new diaphragm about every 2 years.

Tips for Users of Spermicides or the Diaphragm With Spermicide

- Spermicides should be stored in a cool, dry place, if possible, out of the sun. Suppositories may melt in hot weather. If kept dry, foaming tablets are not as likely to melt in hot weather.
- The diaphragm should be stored in a cool, dry place, if possible.
- She needs a new diaphragm fitted if she has had a baby or a second-trimester miscarriage or abortion.

"Come Back Any Time": Reasons to Return

Assure every client that she is welcome to come back any time—for example, if she has problems, questions, or wants another method; she has any major change in health status; or she thinks she might be pregnant.

General health advice: Anyone who suddenly feels that something is seriously wrong with her health should immediately seek medical care from a nurse or doctor. Her contraceptive method is most likely not the cause of the condition, but she should tell the nurse or doctor what method she is using.

Helping Continuing Users

1. Ask how the client is doing with the method and whether she is satisfied. Ask if she has any questions or anything to discuss.
2. Ask especially if she has any problems using the method correctly and every time she has sex. Give her any information or help she needs (see Managing Any Problems, next page).
3. Give her more supplies and encourage her to come back for more before she runs out. Remind her where else she can obtain more spermicides if needed.
4. Ask a long-term client if she has had any new health problems since her last visit. Address problems as appropriate. For new health problems that may require switching methods, see p. 234.
5. Ask a long-term client about major life changes that may affect her needs—particularly plans for having children and STI/HIV risk. Follow up as needed.

Managing Any Problems

Problems Reported as Side Effects or Problems With Use

May or may not be due to the method.

- Side effects or problems with spermicides or diaphragms affect women's satisfaction and use of the method. They deserve the provider's attention. If the client reports side effects or problems, listen to her concerns, give her advice, and, if appropriate, treat.
- Offer to help the client choose another method—now, if she wishes, or if problems cannot be overcome.

Difficulty inserting or removing diaphragm

- Give advice on insertion and removal. Ask her to insert and remove the diaphragm in the clinic. Check its placement after she inserts it. Correct any errors.

Discomfort or pain with diaphragm use

- A diaphragm that is too large can cause discomfort. Check if it fits well.
  - Fit her with a smaller diaphragm if it is too large.
  - If fit appears proper and different kinds of diaphragms are available, try a different diaphragm.
- Ask her to insert and remove the diaphragm in the clinic. Check the diaphragm's placement after she inserts it. Give further advice as needed.
- Check for vaginal lesions:
  - If vaginal lesions or sores exist, suggest she use another method temporarily (condoms or oral contraceptives) and give her supplies.
  - Assess for vaginal infection or sexually transmitted infection (STI). Treat or refer for treatment as appropriate.
  - Lesions will go away on their own if she switches to another method.

Irritation in or around the vagina or penis (she or her partner has itching, rash, or irritation that lasts for a day or more)

- Check for vaginal infection or STI and treat or refer for treatment as appropriate.
- If no infection, suggest trying a different type or brand of spermicides.

Urinary tract infection (burning or pain with urination, frequent urination in small amounts, blood in the urine, back pain)

- Treat with cotrimoxazole 240 mg orally once a day for 3 days, or trimethoprim 100 mg orally once a day for 3 days, or nitrofurantoin 50 mg orally twice a day for 3 days.
- If infection recurs, consider refitting the client with a smaller diaphragm.

Bacterial vaginosis (abnormal white or grey vaginal discharge with unpleasant odor; may also have burning during urination and/or itching around the vagina)

- Treat with metronidazole 2 g orally in a single dose or metronidazole 400–500 mg orally twice daily for 7 days.

Candidiasis (abnormal white vaginal discharge that can be watery or thick and chunky; may also have burning during urination and/or redness and itching around the vagina)

- Treat with fluconazole 150 mg orally in a single dose, miconazole 200 mg vaginal suppository, once a day for 3 days, or clotrimazole 100 mg vaginal tablets, twice a day for 3 days.
- Miconazole suppositories are oil-based and can weaken a latex diaphragm. Women using miconazole vaginally should not use latex diaphragms or condoms during treatment. They can use a plastic female or male condom or another method until all medication is taken. (Oral treatment will not harm latex.)

Suspected pregnancy

- Assess for pregnancy.
- There are no known risks to a fetus conceived while using spermicides.

New Problems That May Require Switching Methods

May or may not be due to the method.

Recurring urinary tract infections or vaginal infections (such as bacterial vaginosis or candidiasis)

- Consider refitting the client with a smaller diaphragm.

Latex allergy (redness, itching, rash, and/or swelling of genitals, groin, or thighs [mild reaction]; or hives or rash over much of the body, dizziness, difficulty breathing, loss of consciousness [severe reaction])

- Tell the client to stop using a latex diaphragm. Give her a plastic diaphragm, if available, or help her choose another method, but not latex condoms.

Toxic shock syndrome (sudden high fever, body rash, vomiting, diarrhea, dizziness, sore throat, and muscle aches). See Signs and Symptoms of Serious Health Conditions, p. 320.

- Treat or refer for immediate diagnosis and care. Toxic shock syndrome can be life-threatening.
- Tell the client to stop using the diaphragm. Help her choose another method but not the cervical cap.

Questions and Answers About Spermicides and Diaphragms

1. Do spermicides cause birth defects? Will the fetus be harmed if a woman accidentally uses spermicides while she is pregnant?

No. Good evidence shows that spermicides will not cause birth defects or otherwise harm the fetus if a woman becomes pregnant while using spermicides or accidentally uses spermicides when she is already pregnant.

2. Do spermicides cause cancer?

No, spermicides do not cause cancer.

3. Do spermicides increase the risk of becoming infected with HIV?

Women who use nonoxynol-9 several times a day may face an increased risk of becoming infected with HIV. Spermicides can cause vaginal irritation, which may cause small lesions to form on the lining of the vagina or on the external genitals. These lesions may make it easier for a woman to become infected with HIV. Studies that suggest spermicide use increases HIV risk have involved women who used spermicides several times a day. Women who have multiple daily acts of sex should use another contraceptive method. A study among women using nonoxynol-9 an average of 3 times a week, however, found no increased risk of HIV infection for spermicide users compared with women not using spermicides.

4. Is the diaphragm uncomfortable for the woman?

No, not if it is fitted and inserted correctly. The woman and her partner usually cannot feel the diaphragm during sex. The provider selects the properly sized diaphragm for each woman so that it fits her and does not hurt. If it is uncomfortable, she should come back to have the fit checked and to make sure that she is inserting and removing the diaphragm properly.

5. If a woman uses the diaphragm without spermicides, will it still prevent pregnancy?

There is not enough evidence to be certain. A few studies find that diaphragm users have higher pregnancy rates when they do not use a spermicide with it. Thus, using a diaphragm without spermicide is not recommended.

6. Could a woman leave a diaphragm in all day?

Yes, although doing so is usually not recommended. A woman could leave a diaphragm in all day if she cannot put it in shortly before having sex. She should not leave the diaphragm in for more than 24 hours, however. This can increase the risk of toxic shock syndrome.

7. Can a woman use lubricants with a diaphragm?

Yes, but only water- or silicone-based lubricants if the diaphragm is made of latex. Products made with oil cannot be used as lubricants because they damage latex. Materials that should not be used with latex diaphragms include any oils (cooking, baby, coconut, mineral), petroleum jelly, lotions, cold creams, butter, cocoa butter, and margarine. Oil-based lubricants will not harm a plastic diaphragm. Spermicides usually provide enough lubrication for diaphragm users.

8. Do diaphragms help protect women from STIs, including HIV?

Research suggests that the diaphragm may help protect somewhat against infections of the cervix such as gonorrhea and chlamydia. Some studies have also found that it also may help protect against pelvic inflammatory disease and trichomoniasis. Studies are underway to assess protection from HIV. Currently, only male and female condoms are recommended for protection from HIV and other STIs.

9. What is the vaginal sponge, and how effective is it?

The vaginal sponge is made of plastic and contains spermicides. It is moistened with water and inserted into the vagina so that it rests against the cervix. Each sponge can be used only once. It is not widely available.

Effectiveness depends on the user: Risk of pregnancy is greatest when a woman does not use the sponge with every act of sex.

Women who have given birth:

- One of the least effective methods, as commonly used.
- As commonly used, about 32 pregnancies per 100 women using the sponge over the first year.
- When used correctly with every act of sex, about 20 pregnancies per 100 women over the first year.

More effective among women who have not given birth:

- As commonly used, about 16 pregnancies per 100 women using the sponge over the first year.
- When used correctly with every act of sex, about 9 pregnancies per 100 women over the first year.