

Cervical Cap

www.cervcap.com OR www.plannedparenthood.org ←

DESCRIPTION

Prentif Cavity Rim Cervical Cap is a thimble-shaped latex rubber device with a small groove in its inner surface, which creates suction to keep cap on cervix. Four sizes are available with internal diameters of 22, 25, 28, 31 mm. A small amount of spermicide is placed inside the cap before it is placed over the cervix. When used as a primary method, cervical cap should be coupled with advance prescription of emergency contraceptive pills (ECPs)

EFFECTIVENESS (Rates include use with spermicide cream or jelly)

	<i>Parous</i>	<i>Nulliparous</i>
<i>Perfect use failure rate in first year:</i>	26%	9%
<i>Typical use failure rate in first year:</i>	40%	20%

[Trussell J in *Contraceptive Technology, 1998*] (See Table 13.2, p. 36)



MECHANISM

Acts both as a mechanical barrier to sperm migration into the cervical canal and as a chemical agent by applying the spermicide directly to the cervix

COST in 1995

	<i>Managed-Care Setting</i>	<i>Public Provider Setting</i>
<i>Device</i>	\$31.00/3 years	\$19.00/3 years
<i>Office visit (device fitting)</i>	38.00	15.59
<i>Spermicidal jelly</i>	12.00	8.75

[Trussell, 1995; Smith, 1993]

ADVANTAGES

Menstrual: None

Sexual/psychological

- Intercourse may be more pleasurable because fear of pregnancy and STIs is reduced
- Controlled by the woman
- Can be inserted up to 6 hours prior to sexual intercourse to permit spontaneity in love making
- Can remain in place for multiple acts of sexual intercourse for up to 48 hours

Cancers, tumors, and masses: None

Other:

- May reduce risk of cervical infections
- Immediately active after placement

DISADVANTAGES

Menstrual: None

Sexual/psychological

- Requires placement prior to genital contact, which may reduce spontaneity
- Some women do not like placing fingers or foreign body into vagina

Cancers, tumors, and masses

- Labeling requires repeat Pap smear at 3 months after initiation because increased risk of cervical dysplasia at 3 months; no increase at 1 year

Other:

- Lack of protection against some STIs and HIV. Must use condoms if at risk
- Relatively high failure rate, especially in parous women
- Requires professional fitting and requires formal (although brief) training
- About 80% of women can be fitted
- Severe obesity may make it difficult for patient to place correctly
- Odor may develop if cap left in place too long, if not appropriately cleansed, or if used during bacterial vaginosis

COMPLICATIONS

- UTIs may increase as vaginal flora changes to include higher coliform counts
- Cervical erosion may occur causing vaginal spotting and/or cervical discomfort. Some women change size of cervix during cycle and need two different size caps
- No cases of toxic shock have been reported, but theoretically, the risk may be increased, particularly if cap were left in for longer than recommended or used during menses
- Allergic reactions to latex may be life threatening; 2-3% of Americans (men and women) have a latex allergy; up to 14% of latex workers are sensitized

CANDIDATES FOR USE

- Women willing and able to insert device prior to coitus and remove it later
- Women with smooth cervix which can be fit successfully
- Women with pelvic relaxation are better candidates for cap than diaphragm
- Women and partner(s) who have no allergies to latex/spermicides

Adolescents: appropriate option, but fitting and insertion may be difficult and offers no protection against certain STIs including HIV

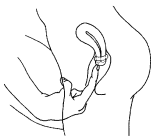
INITIATING METHOD

- The cervical cap must be professionally fit
- A speculum exam is required to judge the size and contour of the cervix, to evaluate for acute cervicitis and vaginitis, and to obtain a Pap smear
- If no nodules, lesions, cysts or other vaginal or cervical abnormalities preclude cap use, a rough estimate is made of the diameter of the cervix
- On bimanual exam, the uterine size and position, and the position, length and diameter of the cervix are determined
- Starting with the smallest likely size cap, squeeze the sides of the rim together and hold the cap with the dome pointing downward
- Apply a small amount of lubricant to the outside edge to facilitate insertion
- With the patient in the lithotomy position, separate her labia and gently insert the cap into the vagina. Guide it into place until the rim slides over the sides of the cervix
- Check for adequate cervical coverage, proper seal and position stability
- The dome of the cap should completely cover the cervix; the rim of the cap tucked snugly and evenly into the fornices; there should be no gap between rim and cervix
- The cap should adhere to the cervix firmly; it should not dislodge during the fitting exam
- To evaluate the fit, make a 360° sweep of the cap rim with the vaginal examining finger to search for gaps or exposed parts of the cervix
- If a gap is found, see if the rim can be pulled away with direct pressure
- After the cap has been in place for at least a minute, check the suction by pinching the excess rubber on the dome between the tips of two fingers and tugging
- The dome should dimple but should not collapse
- Cap should not be dislodged by manual manipulations such as gently pushing and tugging on it with one or two fingers from several angles

- After successful fitting, remove the cap by pushing the rim away from the cervix with one or two fingers to break the suction and then gently pull the cap out of the vagina
- Have patient demonstrate her ability to insert and remove cervical cap
- Provide ECPs in advance to enable immediate use after cervical cap dislodgement

INSTRUCTIONS FOR PATIENT TO USE

- Fill the bottom 1/3 of the inner aspect of the cap with 2% spermicide jelly and put the cap in place prior to sexual intercourse
- Test the fit to insure cervix is covered, with no gaps between the cervix and the cap; after suction develops for about 1 minute, check that the device does not dislodge with pressure
- Keep the cap in place for 6 hours after last sexual intercourse
- If multiple acts of sexual intercourse occur, there is no need to add more spermicide but do verify correct placement of the device before sexual intercourse
- Do not use the cap for more than 48 hours at a time, at the time of an infection, or during menses
- Do not expose the cap to petroleum-based products such as vaseline, baby oil, fungicidal creams and petroleum-based antibiotic creams (Listed in figure 18.1, p. 53)
- If cap dislodges, have patient start ECPs ASAP. If woman has no ECPs, have her call 1-888-NOT-2-LATE or check www.not-2-late.com to locate a provider of ECPs in her area.
- Use a backup method for first few uses until you are confident in your use of the cap
- Combining the cervical cap and the male condom can increase pregnancy protection
- The FDA recommends a follow-up Pap smear after 3 months
- Remove cap at least 2 or 3 days prior to Pap smears



HOW TO REMOVE

- Cap should not be removed until 6 hours after last ejaculation, but prior to 48 hours of use
- Insert a finger into the vagina until the rim of the cap is felt
- Press the cap rim until the seal against the cervix is broken; then tilt the cap off the cervix
- Hook finger around the rim and pull it sideways out of the vagina
- The device must be washed, rinsed, dried and stored in a cool, dark and dry location. Rinsing in Listerine can prevent odors

FOLLOW-UP

- __Are you or your partner experiencing any tenderness or irritation?
- __Is the odor of the cap a problem?
- __Do you use the cap every single time you have sexual intercourse?
- __Do you have any problems with ECPs? Do you need more ECPs?
- __When do you plan to become pregnant?

PROBLEM MANAGEMENT

- Allergic reaction to latex: Stop use and switch to another method
- Spotting/cervical tenderness/erosion: Stop use to allow healing; refit with larger cap; rule out STI
- Malodor of device: Listerine soaks may help; shorten time left in place, or replace cap
- Failure to use correctly: Use emergency contraception. If not already available, call 1-888-NOT-2-LATE or check www.not-2-late.com

FERTILITY AFTER USE: Immediate return to baseline fertility

Diaphragms

www.plannedparenthood.org ←

DESCRIPTION

Rubber dome-shaped device filled with spermicide and placed to cover cervix; four types of diaphragms are available:

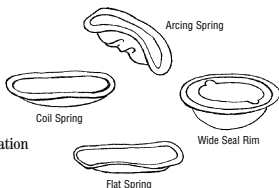
- Arcing spring: exerts pressure evenly around its rim to cover the cervix
- Coil spring: most appropriate for women with a deep pubic arch with average vaginal tone
- Flat spring: most appropriate with strong vaginal muscle tone or a shallow arch
- Wide seal: extends inward from the rim to contain the spermicide

EFFECTIVENESS (See Table 13.2, p. 36)

Perfect use failure rate in first year: 6%

Typical use failure rate in first year: 20%

[Trussell J in *Contraceptive Technology*, 1998]



MECHANISM

Acts both as a mechanical barrier to sperm migration into the cervical canal and as a spermicide.

COST in 1995

	<i>Managed-Care Setting</i>	<i>Public Provider Setting</i>
Device	\$18.00/3 yrs	\$15.00/3 yrs
Office Visit (device fitting)	38.00	15.59
Spermicidal Jelly	12.00	8.75 [Trussell, 1995; Smith, 1993]

ADVANTAGES

Menstrual: None

Sexual/psychological:

- Controlled by the woman
- May be placed by the woman in anticipation of intercourse (within 6 hrs)
- May make sexual intercourse more enjoyable by reducing risk of pregnancy

Cancers, tumors, and masses: None

Other:

- Reduces risk for cervical STIs, including gonorrhea, chlamydia, cervical dysplasia, and PID
- Is used only with sexual intercourse
- May be used during lactation after vagina and cervix have achieved non-pregnant shape

DISADVANTAGES

Menstrual: None

Sexual/psychological:

- Requires placement prior to genital contact which can interrupt spontaneity of sexual intercourse
- Taste of spermicide may discourage certain foreplay activities
- May become messy with multiple acts of intercourse
- Some women dislike placing fingers or foreign bodies into vagina

Cancer, tumors, and masses: None

Other:

- Requires professional fitting; severe obesity may make fitting difficult
- May not be feasible for women with pelvic relaxation
- Requires brief, formal training in use and some dexterity to place and remove device
- May develop odor if not properly cleansed

COMPLICATIONS

- May increase risk of UTI, as result of increase in coliform count in vaginal flora
- May increase risk of TSS, especially if used for prolonged periods or during menses
- Large, poorly fitted diaphragm may cause vaginal erosions

CANDIDATES FOR USE

- Women who can predict when intercourse will occur
- Couples willing to interrupt sex to insert if not done beforehand ←
- Highly motivated women willing to use with every coital act

Adolescents: Appropriate, if taught to use consistently and correctly; requires discipline

INITIATING METHOD

- Needs to be professionally fitted
- Examination with speculum will rule out any vaginal/cervical abnormalities
- On bimanual exam, introduce your third finger into the posterior fornix and tilt your wrist upward to mark where on your index finger/hand contacts the symphysis. Use that measurement as a guide to select the size diaphragm to use and place a fitting diaphragm in the vagina
- Check to ensure diaphragm is lodged behind symphysis and completely covers the cervix. Have patient bear down and visually check to ensure that diaphragm does not move from behind pubic arch
- Have woman walk around for a while in your office to test its long-term comfort
- Have woman demonstrate her ability to insert and remove diaphragm
- Encourage use of a backup method for first few uses to ensure correct use before relying exclusively on diaphragm for protection
- Suggest patient wear diaphragm for 6 hours before using it for contraception to ensure that it is comfortable and can be worn for 6 hours after intercourse
- Provide ECPs in advance!

INSTRUCTIONS FOR USE

- Fill inner surface of device 2/3's full with 2 teaspoons of spermicide prior to insertion. It can remain in place for up to 24 hours. Place in before genital contact but no longer than 6 hours before coitus

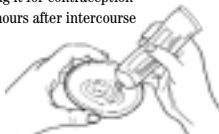


Figure 21.1 Risk of pregnancy increases when a spermicide is not used. Put spermicide on rim and on inside

- Prior to each act of coitus, reconfirm correct placement. For the second and each subsequent act, add additional spermicide vaginally but do not remove the device
- Leave in place for 6 hours after the last act of sexual intercourse
- Avoid using any petroleum-based vaginal products such as Vaseline, antifungal creams or some antibiotic creams. (See list of products UNSAFE to use with latex condoms on Figure 18.1, p. 53)
- After removal, clean with soap and water, rinse, dry, and store in the case in a cool, clean, dry, dark area
- Inspect periodically for any stiffness, holes, cracks, or other defects
- Have it checked each year by a professional. Replace at least every 2 years. Recheck for correct fit whenever there is a 20% weight change and after each pregnancy
- Combine diaphragm with male condoms to reduce pregnancy and STI risk
- If diaphragm dislodges or is not used properly, use EC

Figure 21.2
Reconfirm correct placement of the diaphragm by feeling the cervix through the diaphragm



FOLLOW-UP

- __Is the diaphragm comfortable? Do you feel excessive pressure?
- __Do you get bladder infections often?
- __Have you or your partner had an allergic reaction, i.e., burning or itching?
- __Do you use the diaphragm consistently?
- __Do you always apply a spermicide prior to insertion?
- __Do you have any problems with ECPs? Do you need more ECPs?
- __When do you plan to become pregnant?

PROBLEM MANAGEMENT

Prone to cystitis: Urinate postcoitally to reduce bladder colonization with vaginal bacteria

Allergy to latex: Discontinue use and discuss alternatives. Mylex makes a silicone diaphragm ←

FERTILITY AFTER USE: No adverse effects on fertility; may reduce risk of PID

CHAPTER 22

Spermicides

www.fhi.org OR www.avsc.org/contraception/cspel.html

DESCRIPTION

In the USA, nonoxynol-9 is available over the counter. In addition to N-9, patients around the world use menfegol, benzalkonium chloride, sodium docusate, and chlorhexidine. Spermicides are detergents that are available as vaginal creams, films, foams, gels, suppositories, sponges and tablets. When used as a primary method, spermicides should be coupled with advance prescription of emergency contraceptive pills (ECs). The search for an effective vaginal microbicide that would also kill sperm remains an important research priority in reproductive health. Just under 50% of HIV infections world wide are now in women

EFFECTIVENESS (See Table 13.2, p. 36)

Perfect use failure rate in first year: 6%

Typical use failure rate in first year: 26% [Trussell J in *Contraceptive Technology*, 1998]

- Note: recent study shows 6 month failure rates of 21-24%
- Combined with other methods, contraceptive and antimicrobial benefits increase

MECHANISM

As barriers, the vehicles prevent sperm from entering the cervical os. As detergents, the chemicals attack the sperm flagella and body, reducing mobility, and disrupting their fructolytic activity, jeopardizing nourishment

COST: Varies from state to state; 1995 national averages are:

Creams/Gels	\$10.08 for 8 oz
Film (VCF) (see figure)	\$12.26 for 12
Foam	\$11.23 for 0.6 oz
Suppositories/Tabs	\$12.79 for 18 inserts



ADVANTAGES

Menstrual: None

Sexual/psychological:

- Intercourse may be more pleasurable because fear of pregnancy is reduced
- Lubrication, in the case of foam, heightens satisfaction in both partners
- Ease in application (for some women) prior to sexual intercourse
- Either partner can purchase and apply; requires minimal negotiation
- May be used by woman without partner knowing

Cancers, tumors, and masses:

- Possible decrease in HPV transmission may reduce risk of cervical dysplasia and cancer

Other:

- May decrease risk of some vaginal and cervical STIs. Does not decrease risk of HIV
- Available over the counter; requires no medical visit
- Inexpensive for each individual use
- Easy to use
- Foam is immediately active with placement

DISADVANTAGES

Menstrual: None

Sexual/psychological

- Films and suppository spermicides require 10-15 minutes for activation, which may interrupt lovemaking
- Either partner must feel comfortable inserting fingers into vagina
- Insertion is not easy for some couples due to embarrassment or reluctance to touch genitalia
- Some forms, e.g., foam, become “messy” during intercourse
- Possible vaginal, oral, and anal irritation can disrupt or preclude sex
- Taste may be unpleasant

Cancers, tumors, and masses: None

Other:

- Not protective against transmission of HIV (see p. 140 - statement from CDC STI Treatment Guidelines); data are inconsistent as to whether N-9 prevents or increases transmission of HIV; may, in women having frequent intercourse with multiple partners, enhance transmission of HIV [*Van Dame, Durban, 2000 found 1.7 RR of HIV transmission in users of spermicidal vaginal gel with 52.5 mg N-9*] [*Kreiss - 1992*]
- Allergic reactions and dermatitis in women and men that could decrease compliance
- Might increase likelihood of STIs (including HIV) and UTIs by irritation of vaginal mucosa and by destroying vaginal flora, e.g., lactobacilli, in nonoxynol-9 concentrations as low as 0.1%

COMPLICATIONS

- Women and men have confused fruit jelly, e.g., grape jelly, for spermicidal “jelly”
- Women and men have attempted to use cosmetics or hair products containing non-spermicidal octoxynols and nonoxynols (nonoxynol 4, 10, 12, and 14) in lieu of nonoxynol-9

CANDIDATES FOR USE

- Any woman who presents with no prior allergy or reaction to spermicides

Adolescents:

- Readily available and not contraindicated for teens
- High failure rate may discourage long-term use as primary method

INITIATING METHOD

- Except in cases where the patient, or partner, presents with pregnancy, allergy, or irritation, women can begin these methods at any time following product instructions
- Provide ECPs in advance

INSTRUCTIONS FOR PATIENT

- Before and after applying spermicide, inserting person should wash and dry hands
- Spermicide container must have active date and no defects
- Spermicide has its greatest efficacy near the cervical os
- Encourage more spermicide for each act of sexual intercourse
- Water exposure, e.g. bathing or douching, within 6 hours after insertion or post-coitally can minimize effectiveness; reapply before next penetrative act
- Keep spermicides in cool, dry places; tablets or foam can tolerate heat, film melts at 98.6° F



Creams/foams/gels

- Apply less than 1 hour prior to sexual intercourse. May drip out of vagina if inserted more than 1 hour in advance. With foam, shake canister vigorously. Fill plastic applicator with spermicide. Insert applicator deeply into vagina and depress plunger. Immediately active. Finish sexual intercourse within 60 minutes of application

Film, suppositories and tablets

- Insert at least 15 minutes before sexual intercourse: with film, fold the sheet in half and then half again (this aids insertion). Using fingers or an applicator, the inserting partner places the spermicide applicator or film deeply in the vagina, hopefully near cervix. Finish sexual intercourse within 60 minutes of application

FOLLOW-UP

- _Have you or your partner(s) experienced any rash or discomfort after using spermicides?
- _Have you changed partners since beginning spermicides?
- _Have you had sex—even once—without using spermicides?
- _Did you have problems with ECPs?
- _Do you need more ECPs?
- _When do you plan to become pregnant?

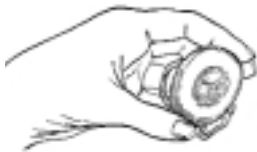
PROBLEM MANAGEMENT

Dermatitis: Discontinue spermicides and offer another method. If vehicle served as lubricant, recommend a water-based or silicone-based lubricant without nonoxynol-9 or octoxynol-9

Changed partners: Explain STI prevention and check for STIs

FERTILITY AFTER USE: Immediate return to baseline fertility

LATE BREAKING NEWS: For thousands of years, women have placed sponges with a variety of spermicides into the vagina. As this book was going to press, we learned that the Today Contraceptive Sponge is likely to be back on US pharmacy shelves by the end of 2001. The newer low estimates of spermicidal effectiveness need to be discussed with interested women. Clinicians may be able to help women learn how to insert and remove the sponge. Call (201) 934-4449 for further information, to order Today Sponges, and to request educational materials.



DESCRIPTION

Man withdraws penis completely from the vagina before ejaculation

EFFECTIVENESS

Perfect use failure rate in first year: 4% (See Table 13.2, p. 36)

Typical use failure rate in first year: 19%

[Trussell J in *Contraceptive Technology*, 1998]

MECHANISM

Withdrawal prior to ejaculation reduces or eliminates sperm introduced into vagina.

Preejaculatory fluid is not generally a problem unless two acts of sexual intercourse are close together.

COST: None

ADVANTAGES

Menstrual: None

Sexual/psychological:

- No barriers
- Readily available method which encourages male involvement
- May introduce variety into sexual relationship

Cancers, tumors, and masses: None

Other: Surprisingly effective if used correctly

DISADVANTAGES

Menstrual: None

Sexual/psychological

- May not be applicable for couples with sexual dysfunction such as premature ejaculation or unpredictable ejaculation
- Requires man's cooperation and instruction
- May reduce sexual pleasure of woman and intensity of orgasm of man
- Encourages "spectatoring" or thinking about what is happening during sexual intercourse

Cancers, tumors, and masses: None

Other: Relatively high failure rate among typical users and does not protect against STIs

COMPLICATIONS: None

MEDICAL ELIGIBILITY CHECKLIST

- Man must be able to predict ejaculation in time to withdraw penis completely from vagina and introitus
- Premature ejaculation makes method less effective
- Appropriate for couples not at risk for STIs

CANDIDATES FOR USE

- Couples who are able to communicate during sexual intercourse
- Disciplined men who can ignore the powerful instinct, urging them to continue thrusting
- Couples in stable, mutually monogamous relationship
- Couples without religious or cultural prohibitions against withdrawal
- Women willing to accept higher risk of unintended pregnancy

Adolescents: Compliance may be a problem (as it is for couples of all ages); teens may have less control over ejaculation; advise use of condoms for better protection against pregnancy and STIs. While withdrawal is a relatively poor contraceptive option, especially if ← pregnancy prevention and infection control are very important, withdrawal is definitely better than using no contraceptive at all

INITIATING METHOD: Can begin at any time; provide ECPs in advance

INSTRUCTIONS FOR PATIENT

- Practice withdrawal using backup method until both partners master withdrawal
- Wipe penis clean of the pre-ejaculation fluid prior to vaginal penetration
- Use coital positions that reduce deep vaginal penetration: 1) male partial penetration in the male superior position, 2) the female superior position, and 3) side-by-side or spooning
- Use emergency contraception if withdrawal fails

FOLLOW-UP

_Do your partner(s) ever ejaculate/begin to ejaculate before withdrawing?

_Did you have any problems with ECPs? Do you need more ECPs?

_When do you want to become pregnant?

PROBLEM MANAGEMENT

Failure to withdraw: Use ECPs if withdrawal does not occur every time

FERTILITY AFTER USE: No adverse effects on fertility

