



Diaphragm

Description

The diaphragm is a latex or silicone barrier that prevents pregnancy by covering the cervix and part of the vaginal wall (see below for a list of brand names). The diaphragm is held in place by a flexible rim. To use it, a woman inserts the diaphragm with spermicide before intercourse and leaves it in place for six hours afterwards. Current recommendations are that the diaphragm should not be worn continuously and should not be kept in place for more than 24 hours. Ongoing research to increase adherence may affect this use guidance. The insertion of additional spermicide before further acts of intercourse is the standard recommendation for diaphragm use. Latex diaphragms are designed to be durable and reused, and must be washed and dried after removal. Diaphragms are made in different sizes (generally six to nine sizes depending on the brand), and a woman must be fitted for the correct size by a clinician.

As a female-controlled method, a woman does not need the cooperation of a male partner to use the diaphragm. Cervical barriers are appropriate for women who cannot or choose not to use hormonal or other long-term contraceptive methods. There are no age or parity restrictions on use, and a woman can use a diaphragm throughout her reproductive life (although the size may need to be checked). Return to fertility is immediate after use. Barrier methods are best suited for a woman who finds using a method near or at the time of intercourse acceptable, can learn the insertion technique, and feels she has sufficient privacy for insertion and removal. In addition, women who use the diaphragm must be able to wash and store the device.¹

Efficacy

Contraceptive effectiveness depends on correct and consistent use. The diaphragm used with spermicide is 84–94 percent effective in preventing pregnancy during the first year of use.² Use of a spermicide containing Nonoxynol 9 is not recommended for women at high risk of HIV infection.³ Definitive information on the contraceptive efficacy of the diaphragm without spermicide is not currently available.

Current program/sector use

There are a number of obstacles to expanded use of latex diaphragms. One is the requirement for a clinician fitting. A reanalysis of fitting data from previous barrier-method clinical trials suggests that many women could be correctly fitted with a one-size diaphragm.⁴ Two single-size products currently under evaluation are the SILCS (www.silcs.com) and Duet (www.reprotect.com) diaphragms. Effective use also is dependent upon a continued supply of spermicide.

Where women receive information from providers and support from their partners, they find diaphragms very acceptable and successful as a method of family planning. One report from India emphasized that women can use diaphragms successfully even when they do not have access to private bathrooms or running water in the house.⁵ Other studies in Zimbabwe, Kenya, and Madagascar⁶ as well as Thailand, South Africa, Dominican Republic, and the U.S. have found that diaphragms are well accepted even among women who have no previous experience.^{7,8,9}

A June 2008 online discussion about diaphragm programs worldwide is posted at the Implementing Best Practices in Reproductive Health Knowledge Gateway at: www.ibpinitiative.org. The Cervical Barrier Advancement Society (CBAS) serves as a portal for diaphragm research and information (www.cbas.org).

Manufacturers/suppliers

All-Flex[®] Arcing Spring and Coil Spring[®] (*Ortho-McNeil-Janssen Pharmaceuticals, Inc.*) are available in the United States and worldwide (see: www.orthowomenshealth.com/orthowomenshealth/pages/diaphragmsprods.jsp). Ortho-McNeil-Janssen is in the process of revising their manufacturing processes and the number of sizes available; please visit their website for further updates as they are announced.

Milex Wide Seal[®] (Milex Products, Inc.) is available from the manufacturer and is distributed in the United States, Canada, Europe, Asia, and the Middle East (see: www.milexproducts.com/products/other/diaphragms.asp).

Semina (Semina Industries and Commerce Ltd.) is available in Brazil (see: www.semina.com.br/).

Public-sector price agreements

None.

¹ Female Barrier Methods page. Reproductive Health Outlook website. Available at: www.rho.org/html/cont-female_barriers.htm. Accessed August 1, 2008.

² Trussell J. Contraceptive efficacy. In Hatcher RA, Trussell J, Nelson AL, Cates W, Stewart FH, Kowal D. *Contraceptive Technology: Nineteenth Revised Edition*. New York, NY: Ardent Media, 2007. See www.contraceptivetechnology.com/table.html.

³ WHO. (2002). *WHO/CONRAD Technical Consultation on Nonoxynol-9: Summary Report*. Geneva: WHO. Available at: www.who.int/reproductive-health/publications/nonoxynol9/

⁴ Mauck C, Lai JJ, Schwartz J, Weiner DH. Diaphragms in clinical trials: Is clinician fitting necessary? *Contraception*. 2004;24(4):263–266. Available at: www.rho.org/html/cont-b-03.html#mauck04.

⁵ PATH. Re-examining the Role of Cervical Barrier Devices. *Outlook*. 2003;20(2). Available at: www.path.org/files/eol20_2.pdf.

⁶ Cervical Barrier Advancement Society website. Available at: www.cervicalbarriers.org/information/recentResearch.cfm. Accessed August 1, 2008.

⁷ Coffey PS, Kilbourne-Brook M, Brache V, Cochón L. Comparative acceptability of the SILCS and Ortho ALL-FLEX diaphragms among couples in the Dominican Republic. *Contraception*. 2008;78(5):418–423.

⁸ Coffey PS, Kilbourne-Brook M, Beksinska M, Thongkrajai E. Short-term acceptability of a single-size diaphragm among couples in South Africa and Thailand. *Journal of Family Planning and Reproductive Health Care*. 2008;34(4):233–236.

⁹ Schwartz et al. SILCS diaphragm: postcoital testing of a new single-size contraceptive device. *Contraception*. 2008;78(3):237–244.

This publication forms part of a series of technical briefs, written by members of the Caucus on New and Underused Reproductive Health Technologies, a thematic group established under the auspices of the Reproductive Health Supplies Coalition. The Caucus' aim is to broaden the discussion within the Coalition of reproductive health technologies that are not well integrated into the public or commercial sectors. Responsibility for the selection and contents of the technical briefs rests solely with the Caucus and does not imply endorsement by the Coalition or its wider membership. For additional information, please contact secretariat@rhsupplies.org.