Effectiveness for Preventing Pregnancy and Sexually Transmitted Infections

Pregnancy prevention

The female condom is an effective contraceptive if used consistently and correctly. Within the first year of consistent and correct use, about 5 percent of women relying on the female condom will have an unintended pregnancy, compared to 3 percent for male condoms and 6 percent for both spermicides and the diaphragm. When use is not always correct or consistent, the unintended pregnancy rate has been estimated at 21 percent for the female condom, compared to 14 percent for the male condom.1

These rates are based on the largest and most comprehensive study of effectiveness of the female condom, which was initiated in 1990. The study involved 328 participants in the United States, Mexico and the Dominican Republic and measured six-month gross cumulative pregnancy rates.2 To adjust the findings to 12-month pregnancy rates, researchers used the relationship of pregnancy rates at six and 12 months for the diaphragm, cervical cap and sponge.3 Calculating 12-month pregnancy rates is more complicated than simply doubling six-month rates.

Other smaller and single-country studies have found somewhat better effectiveness rates. A 1992 study from the United Kingdom involving 106 women for various lengths of time (a total of 441 months of observation) reported a 12-month pregnancy probability of 15 percent with typical use.4 A 1998 study from Japan found a six-month pregnancy rate of 1 percent when used consistently and correctly and 3 percent under typical use.5 In Japan, the male condom is the predominant method of family planning. The familiarity of using male condoms may have contributed to higher effectiveness rates with the female condom.

STI prevention

Laboratory studies have found the device impermeable to various sexually transmitted infections (STIs), including HIV.6 In theory, the female condom should protect against STIs in human contact as well, but more research is needed to confirm its effectiveness. Because the outer ring partially covers the external genitalia, the female condom may provide more protection against genital ulcer infections, such as herpes and chancroid, than the male condom. Using female condom contraceptive effectiveness data and mathematical modeling, a study estimated that perfect use of the female condom might reduce the annual risk of acquiring HIV by more than 90 percent among women who have intercourse twice weekly with an infected male.7
One human study has found that the female condom protects against trichomoniasis, the most common curable STI in the world. One hundred and four women who had been previously diagnosed and treated for trichomoniasis were offered a female condom. Those who said they would use the device consistently were put in the “user” group; the others were put in the control group. None of the 20 women who used the female condom consistently for 45 days became reinfected, compared to 15 percent reinfected among those in the user group who used it inconsistently (5 of 34) and 14 percent reinfected among those who used no protection (7 of 50).8

A study in Thailand suggests that the availability of the female condom lowers STI rates. Those with access to both male and female condoms (249 sex workers) had an incidence of 2.8 STIs per 100 women per week. Those with access only to male condoms (255 sex workers) had 3.7 STIs per 100 women per week. The study measured gonorrhea, chlamydial infections, trichomoniasis and genital ulcers over 24 weeks. While the difference between 2.8 and 3.7 suggests that the availability of the female condom lowers STI infection rates, the results were not statistically significant. Low overall rates of STIs already existed at these sites, due to their participation in the 100 percent male condom program in Thailand.10

In contrast, a study among 1,600 women in a community intervention trial in rural Kenya suggests that the availability of the female condom, along with the male condom, does not affect STI rates, compared to the availability of only the male condom. At both control and intervention sites, about 24 percent of the women had gonorrhea, chlamydia or trichomoniasis at baseline. After 12 months, the rates of these STIs had declined to 18 percent in both intervention and control sites.11 (For more information, see Female Condom Research Brief Number 7.)

7 Trussell, Sturgen, Strickler.

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