For Anal Sex, Condoms With Lube Slip or Break Less Than 1% of the Time

The authors of the largest study to date to analyze condoms' failure rate are pushing the FDA to finally approve them for anal sex use.

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The largest study to date to analyze the failure rate of condoms—defined as slippage, breakage or both—has found that they fail less than 1% of the time during anal sex. The authors of the resulting paper, published in EClinical Medicine, are calling on the Food and Drug Administration (FDA) to finally approve condoms for anal sex use, just as the agency has done for vaginal sex.

In 2015, the Centers for Disease Control and Prevention (CDC) released a paper estimating that even when condoms are used consistently and correctly for anal sex between men, they reduce the risk of HIV transmission by only 70%. At the time, POZ published an analysis that sharply criticized that paper's methodology.

Then, in 2018, the federal health agency revised its estimate of condoms' efficacy for anal sex, putting the figure at 91%. This figure came from a meta-analysis of four studies that included men who have sex with men (MSM).

This new paper provides no direct estimate of how effective condoms are at reducing the risk of HIV transmission through anal sex. Rather, the authors chose to focus on rates of slippage and breakage.

Incorrect use of condoms, including putting them on in the middle of intercourse or taking them off before intercourse is finished, also factor into their ability to mitigate HIV risk.

Previous research has found that condoms have a 6% to 7% failure rate for anal sex.

Aaron J. Siegler, PhD, of the department of behavioral sciences and health education at the Rollins School of Public Health at Emory University in Atlanta, led the research team. Between May 2016 and May 2017, the investigators enrolled 252 MSM and 252 men who have sex with women (MSW).

Aaron J. Siegler at the 2018 Conference on Retroviruses and Opportunistic Infections in Boston.Benjamin Ryan

The study provided the participants with latex condoms of three different varieties, including fitted, thin and standard. The participants were randomized to receive five of each condom type in different sequences. They were given up to four weeks to use all five condoms of a particular variety before being transitioned to the next condom type and then to the next. If they used all five condoms in a set within two weeks, they were given the next set. This meant they were enrolled for between six and 12 weeks.

Every two weeks, the men made study visits during which they completed surveys. They were also given an electronic daily diary to keep track of their sexual activity between visits.

A total of 87.3% of the participants were single. Of the MSM, 90.5% identified as gay while 97.2% of MSW identified as heterosexual. A total of 47.8% of the participants were white, 26.0% were Black and 12.3% were Latino.

Seventy-four percent of participants in both study arms rated themselves as very experienced at using condoms. Nevertheless, 36.3% of MSM and 38.1% of MSW reported condom slippage, breakage or both—in other words, condom failure—during the previous six months.

Two hundred of the MSM and 209 of the MSW were retained in the study through its conclusion.

For all the sex acts in the study, condom failure occurred in 1.3% of cases (64 of 4,884). Across a broad range of variables, the rates of failure ranged between 0.6% and 2.3%, including when the results were broken down by age, race, education, income, marital status, circumcision status, erectile dysfunction status, penis width and length, and condom-use experience.

For all sex during which oil-based lubricant—which is not compatible with condoms because it degrades the latex—was used, 12.5% of the condoms (2 of 16) failed.

For anal sex, condoms failed 0.7% of the time (16 of 2,351 sex acts), with failure levels ranging between 0.62% and 0.76% depending on the type of condom.

For vaginal sex, the failure rate was 1.9% (48 of 2,533 sex acts), ranging between 0.95% and 2.72% depending on the condom type.

“Based on these low failure levels,” the study authors wrote, “the study supports the a priori hypothesis that condoms fail less than an acceptable threshold for anal sex.” Specifically, they note that the FDA has previously cleared condoms for use for vaginal sex when they had a failure rate below 5%.

Anal sex was associated with a 60% lower condom failure rate compared with vaginal sex. The researchers theorized this difference was driven by the much higher use of lubricant for acts of anal sex (98.3%) compared with vaginal sex acts (41.6%). Indeed, when they controlled for use of lube, the investigators found effectively no difference in the condom failure rate depending on the type of sex.

Among those vaginal sex acts during which lube was used, the condom failure rate was only 1.1% (12 of 1,053 cases), while for those vaginal sex acts during which lube was not used or condom-incompatible lube was used, the failure rate was 2.5% (36 of 1,467 cases).

Compared with standard condoms, fitted condoms had a comparable failure rate, while thin condoms had a 2.17-fold higher failure rate.

Higher levels of condom failure were associated with the men reporting the following upon entering the study: having experienced condom failure during the previous six months, not having used condoms for the past 30 days and having a larger self-measured penis width. Using lube incorrectly was associated with a higher rate of condom failure.

The FDA, the study authors note, indicates on its website that condoms may fail more frequently during anal sex than during vaginal sex due to increased friction.

Lubricant, the investigators offer, is the solution.

The study’s findings, the authors write, “raise the question of whether the billions of condoms distributed as part of HIV and STD prevention efforts should be accompanied by lubricant to minimize potential failure.”

“It is essential,” Siegler said in a press release, “for clinicians and public health agencies to offer patients the full range of prevention options, including condoms and pre-exposure prophylaxis (PrEP). Our study demonstrates that confidence in condoms is merited. When condoms are used with condom-compatible lubricant, performance is excellent for all users.”

To read the study, click here.
