

LETTERS TO THE EDITOR

Use and misuse of condoms

Prevention is currently the main weapon against the spread of human immuno-deficiency virus (HIV) infection and condom use is one of the major preventive measures recommended by public health services. It is useful to evaluate the rates and risks of condom breakage because of the repercussions regarding condom acceptability.

For this purpose, an anonymous self-administered questionnaire was distributed to condom buyers through pharmacies located in Paris, France. The questionnaire requested details on opinions about condoms, modes of use, the number of condoms used in the past 3 months, incidents and accidents during condom use, especially the number of condom breakages reported in the past 3 months. The following analysis was performed on 254 questionnaires from respondents having used at least 1 condom in the past 3 months. The study population used a total of 8230 condoms, the median number of condoms used per person being 20.

Of the 254 respondents, 57% (N = 145) were male heterosexual with a median age of 28 years (range: 16 to 61), 18% (N = 46) were homosexuals or bisexual males with a median age of 33 years (range: 18 to 57), and 25% were heterosexual women (N = 63) with a median age of 26 years (range: 17 to 56 years). The female respondents included seven prostitutes.

A quarter of the study population (N = 68) had experienced at least one condom breakage in the past 3 months. The overall rate of breakage per 100 condoms used was 4.5% (3.5-5.6) for homo/bisexuals compared with 1.5% (1.2-1.9) for non-prostitute heterosexuals ($p < 10^{-6}$). Prostitutes showed a significantly lower breakage rate than other heterosexuals (0.6% (0.3-1.0); $p = 0.006$).

Of the 254 respondents, 73% (N = 186) considered themselves as experienced condom users. Self report

of experience in condom use was highly correlated with the duration of use and the number of condoms used in the past 3 months. Among non prostitute heterosexuals, the breakage rate was 1.2% for experienced users compared with 2.5% for less experienced users ($p = 0.01$). Similarly, homo/bisexuals with good experience in condom use also broke fewer condoms than those with little experience with condom use (3.5% versus 9.8%; $p < 10^{-4}$). Our results suggest that a long experience in condom use significantly decreases misuse and thus the risk of breakage. Moreover, in this study as in another study of our group¹ in which questionnaires on condom use were available through a national newspaper, we observed that contraceptive use (as opposed to use for STD prevention) may help heterosexuals to gain experience in condom use (to use condoms more regularly and to find it easier to propose them to sexual partners).

Additional lubricants were used by 11% (N = 22) of the 208 heterosexuals, compared with 61% (N = 28) of the 46 homo/bisexuals. The lubricants were oil-based (known to deteriorate the latex of condoms²) for 35% of lubricant users. The rate of condom breakage did not vary with the addition of lubricant for heterosexuals using condoms for vaginal sex exclusively; but when extra lubricants were used for anal sex (irrespective of the sexual preference), the breakage rate increased significantly (OR = 3.7 (2.3-5.9); $p < 10^{-6}$). This result is difficult to interpret. It is possible that the effect of incorrect lubricants on latex becomes apparent mainly during anal intercourse due to the higher physical stress. However, we did not demonstrate any significant difference in condom rupture according to the type of lubricant used. This surprising result could be due to the respondents giving an incomplete list of substances they actually used as lubricants and also to their poor knowledge of the correct types of lubricants. In the study by Voeller,³ twenty-five men who experienced high rates of condom breakage mistakenly thought that the lubricants they used were water-based.

In conclusion, a high proportion of condom breakages are related to misuse and could be avoided. Despite repeated educational campaigns, there

seems to be a need for better information on types of lubricants to be used, and on the risk linked to misuse of oil-based products. Contraceptive properties of condoms should also not be neglected in order to promote condom use.

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- 1 Expert C, De Vincenzi I, Brunet JB. Preservatifs: C'est dans la tête que ça coince. *Libération* 1990;13 April 1990:34.
- 2 White N, Taylor K, Lyszowski A, Tullett J, Morris C. Dangers of lubricants used with condoms. *Nature* 1988;335:19.
- 3 Voeller B. Persistent condom breakage. Abstr WAP 99; Vth International Conference on AIDS. Montréal (1989).

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Moraxella urethritis mimicking gonorrhoea

A case of moraxella urethritis mimicking gonorrhoea is described in which the patient may have acquired the organism through occupational exposure.

A 36 year old heterosexual male presented to the department of Genito-Urinary Medicine with a 3 day history of urethral discharge and dysuria. Examination revealed a purulent urethral discharge. Microscopy of a gram-stained preparation of urethral discharge showed copious pus cells and typical gram negative intracellular diplococci. The presence of larger, more oval shaped gram negative bacteria was also noted on the slide. Routine screening tests for sex-