Commentary: Condoms and HIV/STD Prevention—Clarifying the Message

ABSTRACT

In the United States and throughout the world, the majority of human immunodeficiency virus (HIV) infections are sexually transmitted. An estimated 12 million other sexually transmitted diseases occur annually in the United States. Avoiding sexual intercourse altogether or restricting sex to partners known to be uninfected will prevent infection; this needs to be promoted as the most effective strategy. Studies show that correct and consistent use of latex condoms is highly effective in preventing sexually transmitted HIV infection and other sexually transmitted diseases. The effectiveness of condoms depends on individual behavior leading to correct and consistent use. Further studies are needed to maximize the use and effectiveness of condoms for those who choose to be sexually active as well as to develop and evaluate other methods, particularly those more under the control of women. In the interim, our prevention message should be clear: When used correctly and consistently, condoms are highly effective; when used otherwise, they are not. (*Am J Public Health.* 1993;83:501–503)

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More than 1 million Americans have been infected with the human immunodeficiency virus (HIV), and more than 250 000 have already been reported with acquired immunodeficiency syndrome (AIDS). In the United States and throughout the world, the majority of HIV infections are sexually transmitted. Furthermore, an estimated 12 million other sexually transmitted diseases occur each year in the United States, resulting in mortality and serious morbidity for many thousands of adults and children.

How can we reduce the sexual transmission of HIV and other diseases? Avoiding sexual intercourse altogether or restricting sex to partners known to be uninfected will prevent infection, and this needs to be widely and consistently promoted as the most effective strategy. However, many people at risk for HIV infection and other sexually transmitted diseases do not adopt these behaviors. Studies of sexually active persons show that correct and consistent use of latex condoms is highly effective in preventing HIV infection and other sexually transmitted diseases, including gonorrhea, chlamydia, genital ulcers, and herpes simplex virus infection.[1]

Two issues generally surface in the debate over advocating condom use in the prevention of HIV infection: One concerns the concepts of efficacy and effectiveness, the other the fear that making condoms available will encourage early sexual activity among adolescents and extramarital sex among adults. We deal with each argument in turn.

Condoms are not 100% efficacious and a high degree of individual compliance is required for condoms to be effective in use. Critics of the role of condoms in prevention cite worst-case-scenario estimates of condom efficacy and focus on results from studies that include persons who are inconsistent condom users. The problems associated with insisting on providing information only about perfectly effective prevention techniques have been recently reviewed.[2] Assertions that minimize the potential efficacy of condoms may be self-fulfilling prophecies, because condoms may be used less consistently by those who do not believe them to be effective. However, Fineberg has developed a mathematical model that predicts that consistent condom use could prevent nearly half of the sexually transmitted HIV infections in persons with one sexual partner and over half of HIV infections in persons with multiple partners.[3] Such a reduction could help interrupt the propagation of the epidemic. Therefore, promoting more widespread understanding of condoms' efficacy and advocating their consistent use by those who choose to be sexually active is crucial to protecting people from HIV infection and to slowing the spread of the HIV and sexually transmitted disease epidemics.

The effectiveness of consistent condom use is evident from recent epidemiologic studies of couples in which one partner has HIV infection. In three such prospective studies, consistent condom use provided a 70% to 100% reduction in the risk of transmitting HIV infection.[4–6] One of these studies[6] makes the critical distinction between the benefits of consistent and inconsistent condom use. In that study, from the European Study Group on Heterosexual Transmission of HIV, 563 couples from nine European Community countries were evaluated. Overall, 12% of the male partners and 20% of the female partners of HIV-infected persons became infected. However, among the 24 couples who consistently used condoms, none of the partners became infected. By contrast, among the 44 couples who reported inconsistent use of condoms, six female partners became infected. For condoms to provide a high degree of protection against HIV infection, they must be used correctly and consistently; inconsistent condom use provides an unacceptably low rate of protection.

The importance of compliance is illuminated by an analogy with pregnancy

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prevention programs. Although typical pregnancy rates for couples who use condoms are as high as 10% to 15%,[7,8] rates are estimated to be as low as 2% for couples who use condoms correctly and consistently.[7] This discrepancy makes clear that any condom strategy must rely on the continuing behavior of the condom user. It is necessary, therefore, to integrate consistent condom use into our HIV prevention strategies.

Despite the widespread understanding that HIV infection is transmitted sexually, most sexually active Americans at risk for acquiring HIV infection have intercourse without using condoms. For example, in San Francisco, only 6% of heterosexual males with multiple sex partners reported always using condoms; a much higher proportion (48%) of gay and bisexual men reported always using condoms.[9] In another study, only about 20% of sexually active American women reported that their male partners used condoms.[10] But even among these couples, condom use was inconsistent; only one in five who reported condom use said that they were used at last intercourse.[10]

The factors that contribute to the low use of condoms and the ready acceptance of risk of HIV infection or other sexually transmitted diseases are complex and not completely understood. Among heterosexual men and women and gay and bisexual men in San Francisco,[9] sexual communication between partners and enjoyment of intercourse with condoms were the only statistically significant correlates of condom use. Although in that study Black and Hispanic women were less likely to report condom use by their partners than were White women,[9] national data suggest that there are no significant differences in reports of condom use by partners of Black women, non-Hispanic White women, and Hispanic women once social and demographic variables are accounted for.[10] This suggests that poverty and culture are important determinants of condom use.

After social and demographic factors are controlled for, women with multiple partners are less likely than those with one partner to report consistent condom use, perhaps because of the burden of negotiating condom use with many partners.[10] Also, decisions regarding condom use may be complicated by strategies for pregnancy prevention. In Philadelphia[11] and Baltimore,[12] women who had undergone surgical sterilization were less likely than nonsterilized women to report condom use. It is possible that if the woman is protected against pregnancy, the motivation of the woman or the man to use a condom may be reduced.

We turn now to the second issue often raised against advocacy of the condom. Many persons assert that those who promote condom use to prevent HIV infection appear to be condoning sexual intercourse outside of marriage among adolescents as well as among adults. Some information relevant to this possibility is now at hand. For example, recent data from Switzerland suggest that a public education campaign promoting condom use can be effective without increasing the proportion of adolescents who are sexually active.[13,14] From January 1987 to October 1991, self-reported consistent condom use among persons aged 17 to 30 years increased from 8% to 52% in association with the campaign.[13] By contrast, the proportion of adolescents (aged 16 to 19 years) who had sexual intercourse did not increase over that 3-year period.[14]

A clear message about condoms may in fact have been obscured by controversy over providing condoms for adolescents in schools while at the same time trying to discourage these same young people from initiating sexual activity. Sexual activity among adolescent women and men in the United States has increased steadily since the 1970s.[15–17] The AIDS epidemic has brought new dimensions of complexity and urgency to the debate over adolescent sexual activity. Some have urged abstinence as the only solution; others champion condom use as the most practical public health approach.

There must be a common ground. We should all be able to agree that premature initiation of sexual activity carries health risks. Therefore, we must exercise leadership in encouraging young people to postpone sexual activity. Adolescents are bombarded with messages encouraging them to "do it." We need to strive for a climate supportive of young people who are not having sex and so help to create a new health-oriented social norm for adolescents and teenagers about sexuality.

As we proceed toward this objective, we must be mindful that many will continue to engage in sexual activity. It is essential that these youngsters receive the message that they must practice safer sex and use condoms. The message that those who initiate or continue sexual activity must reduce their risk through correct and consistent condom use needs to be delivered as strongly and persuasively as the message "Don't do it." Protection of the individual and the public health will depend on our ability to effectively combine these messages.

Scientific studies are urgently needed to further understanding of how to maximize the use and effectiveness of condoms, to clarify the effectiveness of other barrier methods, and to develop and evaluate other preventive methods. In particular, studies should address the male, female, and couple determinants of consistent condom use, including the crucial role of peers and the need for a better understanding of economic and cultural variables. Because the male condom must be used by the man, a woman at risk must, in part, rely on her male partner(s) to protect her. Therefore, to enhance the ability of women to reduce their risks, further evaluation of mechanical and chemical barriers—including female condoms—is needed, as is the development of new methods over which women have greater control.[18–21] Finally, studies should evaluate how condom use is related to the use of other methods to prevent unintended pregnancy so as to address the overall reproductive health needs of both partners.

For adolescents and adults alike who have multiple sex partners, partners who engage in high-risk behaviors, or partners whose infection status is unknown, the risk of HIV infection or other sexually transmitted diseases can be dramatically reduced by correct and consistent condom use. Our prevention message should be clear on this point: When used correctly and consistently, condoms are highly effective; when used otherwise, they are not. □

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