

organs, lung transplantation never will be a panacea for pulmonary ills, but it will be available for selected patients when other treatments have failed.

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### CORRESPONDENCE

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### SEX, LIES, AND HIV

*To the Editor:* Reducing the risk of human immunodeficiency virus (HIV) transmission among sexually active teenagers and young adults is a major public health concern.<sup>1</sup> Young people are advised to select potential sexual partners from groups at lower risk for HIV,<sup>2</sup> in part by asking about partners' risk histories.<sup>3</sup> Unfortunately, this advice overlooks the possibility that people may lie about their risk history.<sup>4</sup>

In a sample of 18-to-25-year-old students attending colleges in southern California (n = 665), we found strong evidence that un-

determines faith in questioning partners as an effective primary strategy of risk reduction. The young adults, of whom 422 were sexually active, completed anonymous 18-page questionnaires assessing sexual behavior, HIV-related risk reduction, and their experiences with deception when dating.

We found that sizable percentages of the 196 men and 226 women who were sexually experienced reported having told a lie in order to have sex. Men reported telling lies significantly more frequently than women (Table 1). Women more often reported that they had been lied to by a dating partner. When asked what they would do in

Table 1. Dishonesty in Dating.

VARIABLE	Men (N = 196)	Women (N = 226)
	percent	
<b>History of disclosure</b>		
Has told a lie in order to have sex	34	10*
Lied about ejaculatory control or likelihood of pregnancy	38	14
Sexually involved with more than one person	32	23†
Partner did not know	68	59
<b>Experiences of being lied to</b>		
Has been lied to for purposes of sex	47	60‡
Partner lied about ejaculatory control or likelihood of pregnancy	34	46
<b>Willingness to deceive</b>		
Would lie about having negative HIV-antibody test	20	4*
Would lie about ejaculatory control or likelihood of pregnancy	29	2*
Would understate number of previous partners	47	42
Would disclose existence of other partner to new partner		
Never	22	10
After a while, when safe to do so	34	28
Only if asked	31	33
Yes	13	29
Would disclose a single episode of sexual infidelity		
Never	43	34
After a while, when safe to do so	21	20
Only if asked	14	11
Yes	22	35

\*P<0.001 by chi-square test.

†P<0.05 by chi-square test.

‡P<0.01 by chi-square test.

Hypothetical scenarios were described in which honesty would threaten either the opportunity to have sex or the continuation of a sexually active relationship.

hypothetical situations, both men and women frequently reported that they would actively or passively deceive a dating partner, although again, men were significantly more likely than women to indicate a willingness to do so.

Although we cannot be certain that our subjects were fully forthcoming in their responses (e.g., they reported more frequent dishonesty from others than they admitted to themselves), one can probably assume that their reports of their own dishonesty underestimate rather than overestimate the problem. The implications of our findings are clear. In counseling patients, particularly young adults, physicians need to consider realistically the patients' capacity for assessing the risk of HIV in sexual partners through questioning them.<sup>5</sup> Patients should be cautioned that safe-sex strategies are always advisable,<sup>6,7</sup> despite arguments to the contrary from partners. This is particularly important for heterosexuals in urban centers where distinctions between people at low risk and those at high risk may be less obvious because of higher rates of experimentation with sex and the use of intravenous drugs and undisclosed histories of high-risk behavior.

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### TRANSFUSION-ASSOCIATED HIV INFECTION

*To the Editor:* In their article on the natural history of transfusion-associated infection with HIV, Ward et al. (Oct. 5 issue)<sup>1</sup> found that the majority of recipients of HIV-infected blood become seropositive. Their paper includes an analysis of factors influencing the risk and rate of development of the acquired immunodeficiency syndrome (AIDS) in the seropositive recipients. However, data on the 85 transfusion recipients who were seronegative were not given but are also of interest. Did their donors differ from those who donated to recipients who later seroconverted, and if so, in what way? Alternatively, if blood products from one donor led to HIV infection in some recipients but not in others, what were the characteristics of the seronegative recipients or the circumstances of the transfusion that may have prevented the transmission of HIV?

Answers to these questions may provide additional valuable insights into transfusion-associated HIV infection and its prevention.

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<sup>1</sup>Ward JW, Bush TJ, Perkins HA, et al. The natural history of transfusion-associated infection with human immunodeficiency virus: factors influencing the rate of progression to disease. *N Engl J Med* 1989; 321:947-52.

The above letter was referred to the authors of the article in question, who offer the following reply:

*To the Editor:* The recipients in our study<sup>1</sup> were identified retrospectively after a donor was found to be seropositive for HIV or to have AIDS. The recipients who then were HIV-seronegative did not differ from those who were seropositive when compared according to the type of blood component received from the implicated donor (packed red cells, 61 percent vs. 54 percent) or whether AIDS later developed in the donor (72 percent vs. 61 percent). However, among the 61 seronegative recipients who had received blood from donors in whom AIDS later developed, the blood was transfused a median of 50 months before the diagnosis in the donor, whereas among the 78 seropositive recipients who had received blood from donors in whom AIDS did not develop, the blood was received a median of 27 months before the diagnosis in the donor ( $P = 0.0001$  by the Wilcoxon rank-sum test). This epidemiologic evidence suggested that almost all the 85 seronegative recipients listed in Table 1 of our article<sup>1</sup> received blood before their donors became infected.<sup>2</sup> Accordingly, we determined the risk of HIV transmission for the recipients who were most likely to have been exposed to the virus. Of the 38 recipients of blood from a donor who had earlier donated to recipients who became infected with HIV, 36 (95 percent) were seropositive for HIV.

This finding implies that two seronegative recipients should have been infected with HIV but were not — an issue of interest to both Dr. Keidan and ourselves. One, a two-day-old infant, had received packed red cells collected from a donor who had also donated to nine other HIV-seropositive recipients, including four recipients of earlier donations. For comparison, another two-day-old child received packed red cells from the same donation, was found to be positive for HIV antibody 63 months after transfusion, and was subsequently positive for HIV antigen and had a positive HIV culture. The HIV-seronegative infant in our study was tested 57

months after transfusion and had no clinical evidence of HIV infection. The second HIV-seronegative recipient in our study, an eight-year-old child, had received fresh-frozen plasma from a donor in whom AIDS later developed; this child was seronegative for HIV 63 months after transfusion. (Two other recipients of units derived from the same donation died before they could be evaluated.)

It is not known why these two recipients apparently did not become infected with HIV. Others have reported that not all recipients of HIV-antibody-positive blood become HIV-antibody-positive themselves.<sup>3</sup> Whether these recipients did not receive the blood from the implicated donor as recorded in the medical record, had received blood components processed in such a manner as to diminish or eliminate viral infectivity, had immunologic or other host factors that decrease the likelihood of HIV infection, or were infected with HIV but did not have detectable levels of antibody many months after exposure<sup>4</sup> is not known. We are currently attempting to locate and reevaluate these two recipients to explore further the reasons for their HIV-seronegative status.

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### USE OF ANABOLIC-ANDROGENIC STEROIDS BY ATHLETES

*To the Editor:* We read the Sounding Board article by Hallagan et al. (Oct. 12 issue),<sup>1</sup> on the use of anabolic-androgenic steroids by athletes, with considerable dismay. The authors' assertion that dissemination of "information on the adverse health consequences" of these drugs will be an "effective means of curbing the abuse" is not justified.

Over the past three years we have prospectively evaluated educational materials, lectures, and discussions on the adverse and potential performance-enhancing effects of anabolic steroids among high school varsity football players.<sup>2,3</sup> Despite improvement in the knowledge of the untoward consequences of these drugs, there was no alteration in attitudes toward steroid use. Little change in attitude or behavior has been found after the use of educational approaches emphasizing the detrimental impact of illicit drugs and alcohol on adolescents and young adults.<sup>4,5</sup> In fact, the potential for a negative impact of such an approach is substantial.<sup>4,6</sup>

Athletes who are college age or younger do not necessarily respond to information about long-term adverse consequences. Designing effective educational programs requires considerably more attention than the authors suggest, including the provision of alternatives to performance-enhancing drugs.

Also, the testing programs advanced as "models" are seriously flawed. Under the current system of the National Football League, the date for drug testing is announced months ahead, thus allowing an athlete to stop using the agent in time to avoid testing positive. The National Collegiate Athletic Association has abandoned random testing and tests football players only once a year, before bowl games.

We agree that the use of anabolic-androgenic steroids is a serious problem, but the recommendations for education and testing — the most critical portions of the article — are inadequate. Colleges and professional organizations must exert strong sanctions if the use of these drugs is to be curtailed. Before educational interventions