Women smokers on HAART had higher morbidity and mortality than nonsmokers

Women infected with HIV in the United States are often from a lower socioeconomic strata in which smoking is common. Smoking adds to the burdens of HIV infection and may modify CD4+ lymphocyte counts. However, research findings have not consistently established a relationship between smoking and the course of HIV/AIDS. Further, no studies have been reported that assessed the relationship between smoking and patient response to HAART.

This study assessed the association of cigarette smoking with the effectiveness of highly active antiretroviral therapy (HAART) among low-income women.

Methodology
Data were analyzed from the Women's Interagency HIV Study (WIHS), a multisite longitudinal study up to 7.9 years for 924 women representing 72% of all women who initiated HAART between July 1, 1995, and September 30, 2003.

This data set of HIV-infected women permitted the documentation of smoking status, immune status, and antiretroviral use. For the analysis, any participant reporting smoking since the last visit (i.e., past 6 months) was considered a smoker. Participants who reported taking HAART at least 95% of the times were classified as compliant.

Outcomes of the Study
Major findings include:
- 56% of WIHS women currently smoked and 16% had smoked previously.
- The study eligible women on HAART, 70% were relatively consistent with their smoking behavior up to 9 years after enrollment.
- More smokers were African American, used illicit drugs, were infected with hepatitis C virus, and had previously been diagnosed with AIDS.
- CD4+ lymphocyte counts and CD4 percentages were higher among smokers than nonsmokers but viral loads did not differ. Also, over time the initial higher CD4+ lymphocyte counts of smokers became lower than the mean CD4+ lymphocyte counts of non-smokers.
- Adherence to HAART was lower among smokers than the non-smokers.
- Smokers on HAART had poorer viral responses, poorer immunologic response, greater immunologic failure, and more frequent immunologic failure.
- Smokers had a high risk of death and a higher risk of developing AIDS, but no difference was found between smokers and nonsmokers in the risk of death due to AIDS.

Implications for Prevention
In this study HIV-infected women who smoke, smokers on HAART were found to experience significantly higher morbidity and mortality rates than nonsmokers. Some of the medical benefits provided by HAART were negated in cigarette smokers.

The study findings suggest that the treatment of HIV-positive women with HAART may be less effective in those who smoke cigarettes and that smoking cessation programs for HIV-positive women who smoke are needed.

**Sexual networks promoted HIV transmission in Blacks**

HIV/AIDS is becoming an increasing problem in the southern U.S., marked by racial disparities among African Americans, especially black women. This study examined empiric data concerning network patterns and HIV transmission among African Americans in the rural South.

In rural South areas having high STI rates, there is extensive concurrency with evidence of dense sexual networks and bridging among the general population, core group members, and other high-risk populations. Studies indicate socioeconomic factors supporting these network patterns: low ratio of men to women, economic oppression, racial discrimination, and high incarceration rates among black men.

Sexual networks, concurrency and bridging between the general population and high-risk, high-prevalence groups likely promoted an increased heterosexual HIV transmission among blacks in the South.


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**Higher STI among female youth related to partner selection**

STIs impact African American adolescents, particularly females, disproportionately compared to white and Latino youth. This study determined whether the demographic and behavioral traits of adolescents’ sexual partners mediate the sex differences in rates of STIs.

Study participants were 99 sexually active females and 67 sexually males of mean age of 18 and 17 years, respectively. All were African American.

The study found that female participants were more likely than male participants to have a partner who was older or had been incarcerated and less likely to have a non-African American partner. This finding supported the study hypothesis that the higher rate of STI among adolescent females relative to adolescent males, despite male's greater sexual risk behaviors, is related to partner selection.

The gender differences found provide clues to interventions designed to assist African American youth avoid STIs.


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**HPV acquisition is relatively common in adolescent women**

3262 women ages 18 to 25 in the National Longitudinal Study of Adolescent Health were tested for HPV. Overall HPV prevalence was 26.9% and 14.3% among women with 1 lifetime partner. HPV-16 was the most common type. HPV infection was independently related to mixing sex with alcohol, a black partner, < 3 lifetime sex partners, and illegal drug use.


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**HIV testing is related to insurance type**

Prevalence of HIV testing was 18.8% for representative data from the Add Health study of youth. Those with no or private health insurance reported less testing than those having public health insurance, particularly in the South.