

# Tobacco Smoke & HIV/AIDS

## In Summary

Second hand smoke is a health hazard for all of us. Each year, approximately 3,000 Americans die from cancer caused by second-hand smoke. Studies suggest that second hand smoke may also be a key factor in as many as 62,000 deaths from coronary heart disease annually.<sup>1</sup>

This second hand smoke is particularly dangerous for our more vulnerable populations including children, the elderly, and those living with HIV/AIDS, many of whom are at greater risk for both heart disease and certain types of cancer.

While there is little research specific to second hand smoke and people living with HIV/AIDS, there is a significant body of research showing the impact smoking has on people living with HIV/AIDS when it comes to heart disease, cancer, and other common diseases and conditions people living with HIV/AIDS face.

HIV positive individuals are living longer and more productive lives due largely to the introduction of antiretroviral therapies. Supporting smoke-free workplaces is an important step to protect their health and their future.

## The Facts: HIV, Smoking, and Cancer

- HIV infection is associated with an increased risk of many types of cancer. As the survival time of HIV/AIDS patients has increased, the risk of several types of cancer has also increased.<sup>2</sup>
- HIV-associated malignancies, such as anal and cervical cancer are observed more frequently among HIV/AIDS patients who smoke.<sup>3,4</sup>
- Other cancers commonly associated with cigarette smoking, such as lung and head and neck, are observed more frequently among HIV-infected smokers compared with non-infected smokers<sup>5</sup>

---

<sup>1</sup> American Cancer Society.

<sup>2</sup> Goedert, J. (2000) The epidemiology of acquired immunodeficiency syndrome malignancies. *Seminars in Oncology*, 27, 390-401

<sup>3</sup> Palefsky, J. M., Minkoff, H., Klish, L.A., Levine, A., Sacks, H.S., Garcia, P., Young, M., Melnick, S., Miotti, P., & Burk, R. (1999) Cervicovaginal human papillomavirus infection in human immunodeficiency virus-1 (HIV)-positive and high-risk HIV negative women. *Journal of the National Cancer Institute*, 91, 226-236.

<sup>4</sup> Palefsky, J.M., Shiboski, S., & Moss, A. (1994) Risk factors for anal human papillomavirus infection and anal cytologic abnormalities in HIV-positive and HIV-negative homosexual men. *Journal of Acquired Immune Deficiency Syndromes*, 7, 599-606.

<sup>5</sup> Tirreli, U., Spina, M., Sandri, S., Serraino, D., Gobitti, C., Fasan, M., Sinicco, A., Garavelli, P., Ridolfo, A.L., & Vaccher, E. (2000). Lung carcinoma in 36 patients with human immunodeficiency virus infection. The Italian Cooperative Group on AIDS and Tumors. *Cancer*, 88, 563-569.

## The Facts: HIV, Smoking, and Heart Disease.

- HIV/AIDS patients who experience lipodystrophy, a common side effect of antiretroviral treatment, have significantly elevated risk factors for heart disease.<sup>6</sup>
- Cigarette Smoking, an established risk factor for cardiovascular disease, may be particularly harmful to HIV/AIDS patients receiving prolonged antiretroviral treatment.<sup>7</sup>
- One recent study showed an increased risk of heart disease for non-smokers of as much as 60 percent, when regularly exposed to secondhand smoke.<sup>8</sup>

## Additional Health Risks

- Oral Diseases including hairy leukoplakia<sup>9</sup> and candidiasis<sup>10</sup> are more common among HIV positive smokers.
- AIDS Dementia Complex is more common among HIV positive smokers.<sup>11</sup>
- Pulmonary Diseases including cryptococcus<sup>12</sup> and bacterial pneumonia<sup>13</sup> are more common among HIV positive smokers.

---

<sup>6</sup> Hadigan, C., Meigs, J.B., Corcoran, C., Rietschel, P., Piecuch, S., D'Agostino, R.B. & Grinspoon, S. (2001) Metabolic abnormalities and cardiovascular disease risk factors in adults with human immunodeficiency virus infection and lipodystrophy. *Clinical Infectious Diseases*, 32, 130-139

<sup>7</sup> Gritz, E., Vidrine, D., Lazev, A., Amick III, B., Arduino, R. (2003) Smoking behavior in a low-income multiethnic HIV/AIDS population. *Nicotine & Tobacco Research* 6, 71-77.

<sup>8</sup> Whincup, P.G., Gilg, J.A., Emberson, J.R., Feyerabend, C., Bryant, A., Walker, M., Cook, D., (2004) Passive smoking and risk of coronary heart disease and stroke: prospective study with cotinine measurement.

<sup>9</sup> Shiboski, C.H., Neuhaus, J.M., Greenspan, D., & Greenspan, J.S. (1999) Effect of receptive oral sex and smoking on the incidence of hairy leukoplakia in HIV-positive gay men. *Journal of Acquired Immune Deficiency Syndrome*, 21, 236-242.

<sup>10</sup> Conley, L.J., Bush, T.J., Buchbinder, S.P., Penley, K.A., Judson, F.N., & Holmberg S.D. (1996). The association between cigarette smoking and selected HIV-related medical conditions. *AIDS*, 10, 1121-1126.

<sup>11</sup> Burns, D.N., Hillman, D., Nearton, J.D., et al. (1996) Cigarette smoking, bacterial pneumonia, and other clinical outcomes in HIV-1 infection. Terry Bein Community Programs for Clinical Research on AIDS. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology*, 13, 374-383

<sup>12</sup> Hajjeh, R. A., Conn, L.A., Stephens, S.S., Baughman, W., Hamill, R., Graviss, E., Pappas, P.G., Thomas, C., Reingold, A., Rothrock, G., Hutwagner, L.C., Schuchat, A., Brandt, M.E., & Pinner, R.W. (1999). Cryptococcosis: Population-based multistate active surveillance and risk factors in human immunodeficiency virus-infected persons. *Cryptococcal Active Surveillance Group, The Journal of Infectious Diseases*, 179, 449-454.

<sup>13</sup> Burns, D.N., Hillman, D., Nearton, J.D., et al. (1996) Cigarette smoking, bacterial pneumonia, and other clinical outcomes in HIV-1 infection. Terry Bein Community Programs for Clinical Research on AIDS. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology*, 13, 374-383