



## HIV/AIDS Quick Facts

By Linda Klepacki and Kjersten Oligney  
March 2005

### What is it?

*HIV*: Human immunodeficiency virus (HIV) is the virus that can cause AIDS.<sup>1</sup> It slowly destroys certain blood cells that are critical to the immune system.<sup>2</sup> Most people have HIV for years before enough damage is done to their immune system for AIDS to develop.<sup>3</sup>

*AIDS*: Acquired immunodeficiency syndrome (AIDS) is that condition at the end stage of HIV infection in which the individual's immune system is so weakened that the door is opened for many different kinds of infections and cancers.<sup>4</sup> AIDS is not related to any of the genetically inherited immune deficiency syndromes.

The earliest known sample of blood later found to have evidence of HIV infection had been collected from a man in Congo in 1959.<sup>5</sup> AIDS has existed in the United States since at least the mid to late 1970s, though the term AIDS was not coined until 1982.<sup>6</sup> In 1983, scientists discovered the virus that causes AIDS and eventually called it HIV.<sup>7</sup> It is believed that HIV was introduced to humans when hunters in Africa came in contact with infected chimpanzee blood.<sup>8</sup>

### How do you get it?

HIV is found in the blood and virtually all other body tissues and fluids.<sup>9</sup> It can be sexually transmitted during vaginal, oral or anal sex.<sup>10</sup> Anal intercourse is especially risky because the rectal lining is more fragile and prone to injury during penetration than the mouth or vagina. STDs increase the likelihood of HIV transmission two- to fivefold,<sup>11</sup> primarily because many STDs, especially syphilis and herpes, create lesions (sores) that act as efficient portals of entry for HIV.

Male homosexuals make up the demographic group with the highest HIV infection rate.<sup>12</sup> Female-to-female transmission is rare.<sup>13</sup>

HIV can be contracted from a single sexual encounter with an infected person. The probability of this happening has been estimated at between 1/100 and 1/1,000. The risk multiplies with sequential encounters during a long-term relationship with an infected person, and also with the number of partners if the individual is not monogamous.<sup>14</sup> Helen Epstein, writing in *Discover Magazine*, has hypothesized that one reason the AIDS epidemic is worse in Africa than other parts of the world is because in Africa it is more common to maintain multiple long-term sexual partnerships simultaneously.<sup>15</sup>

It is virtually impossible to contract HIV from the environment because the virus does not survive well outside the body.<sup>16</sup> It is possible, though extremely rare, to contract HIV from a human bite,<sup>17</sup> but it is not possible to contract the virus from a non-human bite.<sup>18</sup> There is one case report in which investigators believe that transmission from an HIV-infected man with bleeding gums to his female partner through deep kissing was more likely than through vaginal intercourse during which the couple consistently used condoms.<sup>19</sup>

### **What are the symptoms?**

Some people with HIV experience an influenza-like illness lasting a few weeks at the time of initial infection. This illness goes away on its own. Next comes a period of time during which the individual is well and may not manifest symptoms for many years.<sup>20</sup> Eventually, HIV overcomes the body's immune defenses and symptoms occur that may include rapid weight loss, a dry cough, recurring fever, night sweats, extreme fatigue, swollen lymph glands, prolonged diarrhea, white spots in the mouth, pneumonia, blotches on or under the skin, memory loss and depression.<sup>21</sup>

### **What are the long-term effects?**

When the body's immune system is no longer able to defend against HIV, the individual may contract any of a number of infections, such as tuberculosis, *Pneumocystis carinii* pneumonia, fungal and yeast infections and intestinal infections.<sup>22</sup> Several types of lymphoma as well as an otherwise unusual malignancy known as Kaposi's sarcoma can occur at this stage.<sup>23</sup> Any of these conditions meet the definition for AIDS.

### **How is it treated?**

There is no treatment that can eradicate HIV infection or cure AIDS. Beginning in the mid-1980s, antiviral medications have been introduced which can reduce the amount of HIV in a person's system and postpone the onset of AIDS.<sup>24</sup> Before 1996, it was estimated that half of all people with HIV would develop AIDS within 10 years of infection.<sup>25</sup> Since then, the new combination medication regimens have allowed clinicians to revise this estimate,<sup>26</sup> but no regimen can yet postpone AIDS long enough to allow a person an otherwise normal life expectancy.<sup>27</sup> The antiviral medications used to treat HIV are very expensive, and some strains of HIV have become resistant to them.<sup>28</sup>

## **How many people have it?**

### **Worldwide**

In 2004, almost 5 million people contracted HIV, bringing the total number of HIV-infected people up to nearly 40 million.<sup>29</sup> In 2004 alone, 3 million people died from AIDS<sup>30</sup> — one person every 10 seconds.<sup>31</sup> It is estimated that 15 million children age 17 and under have lost one or both parents to AIDS; 12 million of this number live in sub-Saharan Africa.<sup>32</sup>

### **United States**

Somewhere between 850,000 and 950,000 people live with HIV infection, though about a fourth of these are unaware of their infection.<sup>33</sup> Approximately 40,000 new infections occur each year.<sup>34</sup> Seventy percent of new infections are among men and 30 percent among women.<sup>35</sup>

In the United States, about 450,000 people have died from AIDS.<sup>36</sup> In 2003, the estimated number of new AIDS diagnoses was 43,171.<sup>37</sup> Fifty-nine of the cases were in children age 12 and under.<sup>38</sup> The cumulative number of diagnoses through 2003 was 929,985.<sup>39</sup>

### **Botswana**

In 1984, almost no one was HIV-positive.<sup>40</sup> By 2004, close to 40 percent of sexually active adults were infected. In Francistown, Botswana's second largest city, almost half of pregnant women in the main hospital have HIV.<sup>41</sup>

### **Cameroon**

Between 5 and 9 percent of the population is infected with HIV, and the number continues to rise.<sup>42</sup> Cameroon's 99 percent male circumcision rate causes the HIV infection rate to be far lower than it otherwise would be.<sup>43</sup>

### **India**

An estimated 5.1 million people are infected.<sup>44</sup> Though this is only 1 percent of the population, it is the second highest number of infected inhabitants in the world.<sup>45</sup> Approximately 90 percent of those infected are unaware of their infection.<sup>46</sup>

### **Kenya**

Approximately 15 percent of the population is infected with HIV, and the number continues to rise.<sup>47</sup>

### **Romania**

Since the late 1980s, Romania has had more infected children than any other European country, due to using contaminated blood in blood transfusions.<sup>48</sup>

### **Russia**

The infection rate is approximately 1 percent.<sup>49</sup>

## **Swaziland**

The infection rate is approximately 39 percent.<sup>50</sup>

## **Uganda**

Primarily because Uganda implemented an early start against the epidemic by promoting sexual abstinence and marital fidelity, this country has become the world's most often-cited success story in fighting AIDS. In the late 1980s, Uganda was considered the worst HIV-infected country in the world,<sup>51</sup> but infection rates fell from 21 percent in 1991 to the present level of 6 percent largely because of its aggressive "zero grazing" government program.<sup>52</sup> And the numbers continue to shrink.<sup>53</sup> Both President Yoweri Museveni and Janet, his First Lady, insist that abstinence played a key role in the reduction of the infection rate and that it is the best way to combat HIV.<sup>54</sup>

## **Vietnam**

Between 2000 and 2004, the HIV infection rate has doubled, and the outbreak is spreading from high-risk groups to the general population.<sup>55</sup> Vietnam is likely headed toward a generalized epidemic.<sup>56</sup>

## **Zambia**

Approximately 16 percent of all sexually active men and women between the ages of 15 and 49 have contracted HIV.<sup>57</sup> In border towns like Livingstone, up to 31 percent of inhabitants are infected.<sup>58</sup> Between 10 and 27 percent of the population is infected with HIV.<sup>59</sup>

## **Zimbabwe**

Approximately 33 percent of adults are infected,<sup>60</sup> and the number continues to climb.<sup>61</sup>

## **Can anything slow the epidemic?**

The world's success in combating AIDS depends almost entirely on whether most of the people at the highest risk of infection are able and willing to make the behavior changes necessary to protect themselves. Sexual abstinence before and outside of marriage, and mutual faithfulness within marriage are the only behavioral strategies capable of containing AIDS. There is much debate as to how much value condom use adds to the strategy, but it has been clearly demonstrated that programs centered around condom-use are generally ineffective.<sup>62</sup>

The two countries that have been successful in significantly reducing their HIV/AIDS rate, Uganda and Zambia, have focused on behavior change rather than condom use. The Uganda policy hinged on "communication, behavior change and care," and resulted in a reduction of sexual partners.<sup>63</sup> Zambia's success is attributed to the fact that the people there changed their behaviors: reducing the number of sexual partners, increasing the numbers of youth who abstain and raising the average age of the onset of sexual activity.<sup>64</sup> Condom user rates in these two countries appear to be average.<sup>65</sup>

- 
- <sup>1</sup> CDC, "Where Did HIV Come From?" <http://www.cdc.gov/hiv/pubs/faq/faq3.htm> , (28 February 2005).
- <sup>2</sup> CDC, "How Does HIV Cause AIDS?" <http://www.cdc.gov/hiv/pubs/faq/hiv aids.htm> , (28 February 2005).
- <sup>3</sup> CDC, "How Does HIV Cause AIDS?"
- <sup>4</sup> CDC, "What is AIDS?" <http://www.cdc.gov/hiv/pubs/faq/faq2.htm> , (28 February 2005).
- <sup>5</sup> CDC, "Where Did HIV Come From?"
- <sup>6</sup> CDC, "Where Did HIV Come From?"
- <sup>7</sup> CDC, "Where Did HIV Come From?"
- <sup>8</sup> CDC, "Where Did HIV Come From?"
- <sup>9</sup> National Institute of Allergy and Infectious Diseases, National Institutes of Health, Department of Health and Human Services, "Workshop Summary: Scientific Evidence on Condom Effectiveness for Sexually Transmitted Disease (STD) Prevention," (Herndon, VA: Hyatt Dulles Airport, June 12-13, 2000), p. 13, <http://www.niaid.nih.gov/dmid/stds/condomreport.pdf> , (24 January 2005).
- <sup>10</sup> "Workshop Summary: Scientific Evidence on Condom Effectiveness for Sexually Transmitted Disease (STD) Prevention," 2000, p. 13, <http://www.niaid.nih.gov/dmid/stds/condomreport.pdf> , accessed 1/24/05.
- <sup>11</sup> Fleming and Wasserheit, "From epidemiological synergy to public health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV infection." *Sexually Transmitted Infections*, 1999 Feb; 75(1):3-17.
- <sup>12</sup> CDC, "Need for Sustained HIV Prevention Among Men Who Have Sex with Men," <http://www.cdc.gov/hiv/pubs/facts/msm.htm> , (28 February 2005).
- <sup>13</sup> CDC, "Are "Lesbians" or other women who have sex with women at risk for HIV?" <http://www.cdc.gov/hiv/pubs/faq/faq34.htm> , (28 February 2005).
- <sup>14</sup> Helen Epstein, "Why is Aids Worse in Africa?" *Discover*, Vol. 25, No 02, February 2004.
- <sup>15</sup> Epstein, 2004.
- <sup>16</sup> CDC, "How Well Does HIV Survive Outside the Body?" <http://www.cdc.gov/hiv/pubs/faq/faq35.htm> , (28 February 2005).
- <sup>17</sup> CDC, "Can I Get HIV From a Bite?" <http://www.cdc.gov/hiv/pubs/faq/faq33.htm> , (28 February 2005).
- <sup>18</sup> CDC, "Can I Get HIV From a Bite?"
- <sup>19</sup> CDC, "Transmission of HIV Possibly Associated with Exposure Of Mucous Membrane to Contaminated Blood," *MMWR* 1997; 46:620-23.
- <sup>20</sup> CDC, "How Can I Tell If I'm Infected with HIV? What Are the Symptoms?" <http://www.cdc.gov/hiv/pubs/faq/faq5.htm> , (28 February 2005).
- <sup>21</sup> CDC, "How Can I Tell If I'm Infected with HIV? What Are the Symptoms?"
- <sup>22</sup> The Medical Institute, "The Facts About HIV and AIDS," <http://www.medinstitute.org> , (28 February 2005).
- <sup>23</sup> The Medical Institute, "The Facts About HIV and AIDS."
- <sup>24</sup> CDC, "How Does HIV Cause AIDS?" <http://www.cdc.gov/hiv/pubs/faq/hiv aids.htm> , (28 February 2005).
- <sup>25</sup> CDC, "How Long Does it Take HIV to Cause AIDS?" <http://www.cdc.gov/hiv/pubs/faq/faq4.htm> , (28 February 2005).
- <sup>26</sup> CDC, "How Long Does it Take HIV to Cause AIDS?"
- <sup>27</sup> The Medical Institute, "The Facts About HIV and AIDS."
- <sup>28</sup> "NYC Health Officials Find New, Virulent HIV Strain," *Bloomberg News*, [http://www.bloomberg.com/apps/news?pid=email\\_us&refer=&sid=azBO\\_AumTJhs](http://www.bloomberg.com/apps/news?pid=email_us&refer=&sid=azBO_AumTJhs) , (28 February 2005).
- <sup>29</sup> UNAIDS, Resources, <http://www.unaids.org/en/resources/epidemiology.asp> , (28 February 2005); The Medical Institute, "The Facts About HIV and AIDS," <http://www.medinstitute.org> , (28 February 2005).
- <sup>30</sup> UNAIDS, Resources, <http://www.unaids.org/en/resources/epidemiology.asp> , (28 February 2005).
- <sup>31</sup> Amy Black, "HIV/AIDS," *State Magazine*, October 2004, p. 23.
- <sup>32</sup> Amy Black, 2004, p. 24.
- <sup>33</sup> "Workshop Summary: Scientific Evidence on Condom Effectiveness for Sexually Transmitted Disease (STD) Prevention," 2000, p. 1; Fleming , Byers, Sweeney, et al, "HIV prevalence in the United States," 2000, Presented at the Ninth Conference on Retroviruses and Opportunistic Infections," Seattle, WA; February 24-28, 2002.

- 
- <sup>34</sup> “Workshop Summary: Scientific Evidence on Condom Effectiveness for Sexually Transmitted Disease (STD) Prevention,” 2000, p. 13.
- <sup>35</sup> “Workshop Summary: Scientific Evidence on Condom Effectiveness for Sexually Transmitted Disease (STD) Prevention,” 2000, p. 13.
- <sup>36</sup> “Workshop Summary: Scientific Evidence on Condom Effectiveness for Sexually Transmitted Disease (STD) Prevention,” 2000, p. 1; Fleming , Byers, Sweeney, et al, “HIV prevalence in the United States,” 2000, Presented at the Ninth Conference on Retroviruses and Opportunistic Infections,” Seattle, WA; February 24-28, 2002.
- <sup>37</sup> CDC, Divisions of HIV/AIDS Prevention, “Basic Statistics,” <http://www.cdc.gov/hiv/stats.htm#hivest>, (28 February 2005).
- <sup>38</sup> CDC, “Basic Statistics.”
- <sup>39</sup> CDC, “Basic Statistics.”
- <sup>40</sup> Epstein, 2004.
- <sup>41</sup> Epstein, 2004.
- <sup>42</sup> Edward C. Green et al, “Literature review and preliminary analysis of 'ABC' factors in six developing countries,” Harvard Center for Population and Development Studies, p. 3.
- <sup>43</sup> Green, “Literature review,” p. 4.
- <sup>44</sup> Epstein, 2004.
- <sup>45</sup> Epstein, 2004; Black, 2004, pg. 31.
- <sup>46</sup> Black, 2004, p. 31.
- <sup>47</sup> Green, “Literature review,” p. 3.
- <sup>48</sup> Black, 2004, p. 32.
- <sup>49</sup> Epstein, 2004.
- <sup>50</sup> Epstein, 2004.
- <sup>51</sup> Tim Allen and Suzette Heald, “HIV/AIDS Policy in Africa: What has worked in Uganda and what has failed in Botswana?” *Journal of International Development* 16, 1141-1154 (2004), p. 1141.
- <sup>52</sup> Epstein, 2004; Daniel Low-Beer et al, “Behavior and communication change in reducing HIV: is Uganda unique?” *African Journal of AIDS Research*, 2003, 2(1): 9-21.
- <sup>53</sup> Green, “Literature review,” p. 3.
- <sup>54</sup> Janet K. Museveni, “The AIDS Pandemic: Saving the Next Generation,” World Congress of Families, New York, May 3, 2002; Patrick Goodenough, “Ugandan AIDS Model Again Highlighted, But Opponents Disagree,” July 13, 2004, CNSNews.com, <http://www.cnsnews.com/ViewForeignBureaus.asp?Page=\ForeignBureaus\archive\200407\FOR20040713a.html>, (5 January 2005); Darren Schuettler, “Abstinence, Condom Controversy Erupts at AIDS Meeting,” July 12, 2004, *Reuters Limited*.
- <sup>55</sup> Mary Kamb and Luong Thi San, “America Brings Lifesaving Medicine to a Remote Province,” *State Magazine*, October 2004, p. 30.
- <sup>56</sup> Kamb and Thi San, 2004, p. 30.
- <sup>57</sup> Joseph Kamaga and Karen Doll Manda, “Corridors of Hope Expand,” *State Magazine*, October 2004, p. 27.
- <sup>58</sup> Kamaga and Manda, 2004, p. 27.
- <sup>59</sup> Green, “Literature review,” p. 3.
- <sup>60</sup> Epstein, 2004.
- <sup>61</sup> Green, “Literature review,” p. 3.
- <sup>62</sup> Norman Hearst and Susan Chen, “Condoms for AIDS Prevention In The Developing World: a Review Of The Scientific Literature,” Geneva: UNAIDS; Epstein, 2004.
- <sup>63</sup> Daniel Low-Beer et al, “Behavior and communication change in reducing HIV: is Uganda unique?” *African Journal of AIDS Research*, 2003, 2(1): 9-21, 9.
- <sup>64</sup> Green, “Literature review,” p. 6.
- <sup>65</sup> Rand Stoneburner and Daniel Low-Beer, “Is condom use or decrease in sexual partners behind HIV declines and behavior change in Uganda: Yet another look at the evidence.” Paper presented at the “ABC” Experts Technical Meeting, USAID, Washington, DC (July 2000).