

HIV/AIDS and the Eye



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What is HIV?

HIV (human immunodeficiency virus) is the virus that can cause AIDS (acquired immunodeficiency syndrome) if not treated. HIV attacks the body's immune system, which helps fight off infections. Over time, HIV weakens the body's ability to fight off serious infections (opportunistic infections) and some cancers. When this happens, HIV infection becomes AIDS. Unlike some other viruses, the human body cannot get rid of HIV completely, even with treatment, so once a person gets HIV, he/she has it for life. With proper medical care, HIV can be controlled.

Approximately 36.7 million people worldwide are living with HIV (human immunodeficiency virus) according to the World Health Organization. The CDC estimates that there are 1.2 million people in the United States with HIV and one in eight are not aware they are infected.

How is HIV transmitted?

HIV is transmitted several ways:

- Sexual contact (male to male, male to female, female to female)
- Sharing intravenous (IV) drug needles
- Being born to a mother with HIV
- Receiving breastmilk from a mother with HIV

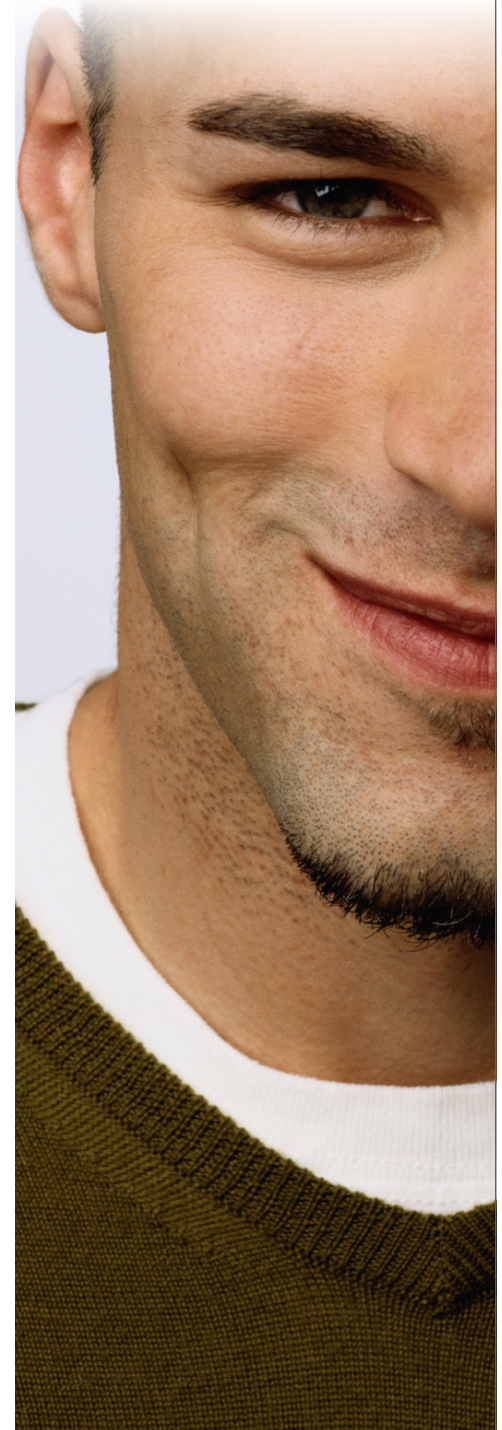
Note, HIV can be found in tears of infected people but no cases of HIV infection have ever been reported from contact with tears.

Who is at risk for HIV?

HIV can affect anyone – all ages, sexes, and races. Most new infections in the United States occur among gay or bisexual men, followed by African-American heterosexual women. Compared with other races and ethnicities, African Americans and Hispanic/Latinos represent a majority of new HIV diagnoses.

How does HIV affect the eye?

People with HIV can have problems in and around the eye that healthy people do not get. About 70% of those with HIV will have an eye problem. Sometimes these problems can be first sign that a person has an HIV infection. Those with very weak immune systems are at risk for serious eye diseases that may lead to blindness if not treated promptly. Below are a few of the common eye conditions that can occur with HIV, but note other eye problems, such as dry eyes, herpes virus, toxoplasmosis, and syphilis infections can occur as well.



HIV/AIDS and the Eye (Continued)

- **HIV retinopathy:** HIV retinopathy is the most common eye problem in people with HIV. This is a problem with the blood vessels in the retina, the lining at the back of the eye that senses light coming into the eye. The retina has tiny blood vessels that can get blocked or bleed and cause damage. Small hemorrhages (bleeding) and cotton wool spots (white spots because of blocked blood vessels) are seen in the retina.
- **Cytomegalovirus (CMV) retinitis:** CMV retinitis is the most commonly occurring opportunistic infection inside the eye of patients with HIV. CMV infects the retina when HIV has weakened the immune system of an infected person. If not treated, CMV retinitis may cause the retina to pull away from the back of the eye. This is called a retinal detachment which can lead to blindness.
- **Kaposi's sarcoma:** Kaposi's sarcoma is a rare tumor that occurs in the eyes of patients with HIV. It is a red or purple mass that forms on the white part of the eye or on the eyelid. Kaposi's sarcoma can also appear on other places of the body, most commonly on the skin or mouth.
- **Herpes zoster ophthalmicus (HZO):** HZO is a common infection caused by reactivation of the chickenpox virus. It can occur in older adults (60+) or in younger people who are living with HIV. HZO can occur anywhere in the body, most commonly on the face and eyes. HZO causes a blistering and crusty rash to defined areas of the body. It can damage the eyes, causing pain and loss of vision.

What are the symptoms?

A person with HIV related eye conditions may not have any symptoms until it gets worse. It is important to get yearly comprehensive eye exams or more often (like every three months) with weakened immune system with an eye care professional. See an eye care professional if vision changes occur. Keep a lookout for the following changes:

- Blurry vision
- Double vision
- Changes in color vision
- Seeing spots
- Floaters
- Flashing lights
- Eye pain
- Sensitivity to light
- Watery eyes

How is it diagnosed?

A person with HIV should have yearly comprehensive eye exams with an eye care professional. Because of increased risk of eye complications, people with compromised immune systems may need to see an eye care professional more often like every three months.

How is it treated?

Treatment for HIV-related eye problems depends on the specific vision problem.

- Medicines can help treat infections
- Tumors may be treated with radiation or surgery
- Retina damaged by bleeding and swelling inside the eye may need surgery or laser treatment

A person with HIV who maintains a healthy immune system by taking antiviral drug treatments as recommended are at lower risk of developing HIV-related eye diseases.