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HIV and Infections

Also called: AIDS-related opportunistic infections, OIs

What are opportunistic infections (OIs) in HIV?

Having HIV [<https://medlineplus.gov/hiv.html>] weakens your body's immune system. It destroys the white blood cells that fight infection. This puts you at risk for opportunistic infections (OIs). OIs are serious infections that take advantage of your weak immune system. These infections are less common and less severe in healthy people.

People who have AIDS, the most severe stage of HIV infection, have badly damaged immune systems. This puts them especially at risk for OIs. Getting certain OIs is one of the ways that people can get diagnosed with AIDS.

OIs are becoming less common in people with HIV because of effective HIV medicines

[<https://medlineplus.gov/hivmedicines.html>] . But some people with HIV still develop OIs for different reasons:

- They may not know they have HIV, so they aren't getting treatment for it
- They know that they have HIV but are not taking treatment
- Their HIV treatment may not be working properly

What are the different types of opportunistic infections (OIs)?

There are many types of OIs:

- Bacterial infections [<https://medlineplus.gov/bacterialinfections.html>] , including tuberculosis [<https://medlineplus.gov/tuberculosis.html>] , *Salmonella* infection [<https://medlineplus.gov/salmonellainfections.html>] , and *Mycobacterium avium* complex [<https://medlineplus.gov/mycobacterialinfections.html>] (MAC)
- Viral infections [<https://medlineplus.gov/viralinfections.html>] , such as cytomegalovirus [<https://medlineplus.gov/cytomegalovirusinfections.html>] (CMV) and herpes simplex virus 1 [<https://medlineplus.gov/herpes simplex.html>] (HSV-1)
- Fungal infections [<https://medlineplus.gov/fungalinfections.html>] , like yeast infections [<https://medlineplus.gov/yeastinfections.html>] , *Pneumocystis carinii* pneumonia [<https://medlineplus.gov/pneumocystisinfections.html>] (PCP), and histoplasmosis [<https://medlineplus.gov/histoplasmosis.html>]
- Parasitic infections [<https://medlineplus.gov/parasiticdiseases.html>] , such as cryptosporidiosis [<https://medlineplus.gov/cryptosporidiosis.html>] and toxoplasmosis [<https://medlineplus.gov/toxoplasmosis.html>]

Having HIV can make infections harder to treat. People with HIV are also more likely to have complications from common illnesses such as the flu.

What are the treatments for opportunistic infections (OIs)?

If you develop an OI, there are treatments available such as antiviral, antibiotic [<https://medlineplus.gov/antibiotics.html>] , and antifungal drugs. The type of medicine your health care provider prescribes will depend on which OI you have.

After the OI has been successfully treated, you may still need to take the same medicine or another medicine to prevent the OI from coming back.

Can opportunistic infections (OIs) be prevented?

The best way to prevent OIs infections is by taking your HIV medicines. Other steps you can take to help prevent OIs include:

- Avoiding exposure to contaminated food and water [<https://medlineplus.gov/foodsafety.html>] :
 - Don't undercooked eggs, unpasteurized dairy products or fruit juices, or raw seed sprouts
 - Don't drink water directly from a lake or river
- Talking to your provider about medicines and vaccines [<https://medlineplus.gov/vaccines.html>] that prevent certain OIs
- Preventing exposure to other sexually transmitted infections [<https://medlineplus.gov/sexuallytransmittedinfections.html>] (STIs) by using condoms every time you have sex
- Washing your hands thoroughly [<https://medlineplus.gov/germsandhygiene.html>] with warm, soapy water after any contact with human or animal feces (poop)
- Not sharing needles, syringes, or other drug injection equipment


Start Here

- Stages of HIV Infection [<https://hivinfo.nih.gov/understanding-hiv/fact-sheets/stages-hiv-infection>]


 (National Institutes of Health, Office of AIDS Research)

Also in Spanish [<https://hivinfo.nih.gov/es/understanding-hiv/fact-sheets/las-fases-de-la-infeccion-por-el-vih>]



Prevention and Risk Factors

- Food Safety for Older Adults and People with Cancer, Diabetes, HIV/AIDS, Organ Transplants, and Autoimmune Diseases [<https://www.fda.gov/food/people-risk-foodborne-illness/food-safety-older-adults-and-people-cancer-diabetes-hiv-aids-organ-transplants-and-autoimmune>] (Food and Drug Administration) - **PDF**
- HIV and Immunizations [<https://hivinfo.nih.gov/understanding-hiv/fact-sheets/hiv-and-immunizations>]
 (National Institutes of Health, Office of AIDS Research)
Also in Spanish [<https://hivinfo.nih.gov/es/understanding-hiv/fact-sheets/el-vih-y-las-inmunizaciones>]



Treatments and Therapies

- HIV Medicines: MedlinePlus Health Topic [<https://medlineplus.gov/hivmedicines.html>]  (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/hivaidsmedicines.html>]

Related Issues

- HIV/AIDS & Oral Health [<https://www.nidcr.nih.gov/health-info/hiv-aids>]  (National Institute of Dental and Craniofacial Research)
Also in Spanish [<https://www.nidcr.nih.gov/espanol/temas-de-salud/vih-sida-y-la-salud-oral>]
- Neurological Complications of HIV [<https://www.ninds.nih.gov/health-information/disorders/neurological-complications-hiv>]
 (National Institute of Neurological Disorders and Stroke)
Also in Spanish [<https://www.ninds.nih.gov/es/health-information/disorders/complicaciones-neurológicas-del-vih>]

Specifics

- Flu and People Living with HIV [<https://www.cdc.gov/flu/highrisk/hiv.html>] (Centers for Disease Control and Prevention)
- Fungal Diseases and HIV/AIDs [<https://www.cdc.gov/fungal/risk-factors/hiv-aids.html>]
(Centers for Disease Control and Prevention)
- HIV and COVID-19 [<https://hivinfo.nih.gov/understanding-hiv/fact-sheets/hiv-and-covid-19>]
 (National Institutes of Health, Office of AIDS Research)
Also in Spanish [<https://hivinfo.nih.gov/es/understanding-hiv/fact-sheets/el-vih-y-el-covid-19>]
- HIV and Rheumatic Disease [<https://rheumatology.org/patients/hiv-and-rheumatic-disease>] (American College of Rheumatology)
Also in Spanish [<https://rheumatology.org/patients/el-vih-y-las-enfermedades-reumaticas>]
- How to Stay Healthy with HIV [https://www.nlm.gov/sites/default/files/2021-10/NLM_HIV_StayHealthy_508c.pdf]
 **Easy-to-Read** (National Library of Medicine) - **PDF**
Also in Spanish [https://www.nlm.gov/sites/default/files/2021-10/NLM_HIV_StayHealthy_SP_508c.pdf]

• Mpox and HIV [<https://www.cdc.gov/mpox/about/mpox-and-hiv.html>] (Centers for Disease Control and Prevention)

• Pneumocystis Infections: MedlinePlus Health Topic [<https://medlineplus.gov/pneumocystisinfections.html>]

 (National Library of Medicine)

Also in Spanish [<https://medlineplus.gov/spanish/pneumocystisinfections.html>]

• Progressive Multifocal Leukoencephalopathy [<https://www.ninds.nih.gov/health-information/disorders/progressive-multifocal-leukoencephalopathy>]  (National Institute of Neurological Disorders and Stroke)

Also in Spanish [<https://espanol.ninds.nih.gov/es/trastornos/leucoencefalopatia-multifocal-progresiva>]

• TB Risk and People with HIV [<https://www.cdc.gov/tb/risk-factors/hiv.html>] (Centers for Disease Control and Prevention)


• Valley Fever [<https://www.mayoclinic.org/diseases-conditions/valley-fever/symptoms-causes/syc-20378761?p=1>]

(Mayo Foundation for Medical Education and Research)

Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/valley-fever/symptoms-causes/syc-20378761?p=1>]

Clinical Trials

• ClinicalTrials.gov: AIDS-Related Opportunistic Infections [<https://clinicaltrials.gov/search?cond=opportunistic+infections+AIDS&aggFilters=status:not%20rec>]

 (National Institutes of Health)

Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

• Article: Recent Antiretroviral Therapy Initiation Is Associated With Increased Mortality Risk in... [<https://www.ncbi.nlm.nih.gov/pubmed/40608053>]

• Article: Disseminated Histoplasmosis in Persons Living with HIV, France and Overseas Territories, 1992-2021. [<https://www.ncbi.nlm.nih.gov/pubmed/40562731>]

• Article: Household economic impact of HIV-associated cryptococcal meningitis in five countries in... [<https://www.ncbi.nlm.nih.gov/pubmed/40474529>]

• HIV and Infections -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22AIDS-Related+Opportunistic+Infections%22%5Bmajr%3Anoexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+2+Years%22+%5Bedat%5D+NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

Reference Desk

• Glossary [<https://clinicalinfo.hiv.gov/en/glossary>]  (HIV.gov; National Institutes of Health, Office of AIDS Research)

• HIV.gov Clinical Info: Clinical Guidelines [<https://clinicalinfo.hiv.gov/en/guidelines>]  (HIV.gov)


Also in Spanish [<https://clinicalinfo.hiv.gov/es/guidelines>]

Find an Expert

• Centers for Disease Control and Prevention [<https://www.cdc.gov/>]

Also in Spanish [<https://www.cdc.gov/spanish/>]

• Clinicalinfo: Information on HIV/AIDS Treatment, Prevention, and Research [<https://clinicalinfo.hiv.gov/en>]

 (HIV.gov; National Institutes of Health, Office of AIDS Research)

Also in Spanish [<https://clinicalinfo.hiv.gov/es>]

• HIV.gov [<https://www.hiv.gov/>]  (National Institutes of Health, Office of AIDS Research)

• HIVinfo [<https://hivinfo.nih.gov/>]  (National Institutes of Health, Office of AIDS Research)

Patient Handouts

• Cryptococcosis [<https://medlineplus.gov/ency/article/001328.htm>] (Medical Encyclopedia)

Also in Spanish [<https://medlineplus.gov/spanish/ency/article/001328.htm>]

• Molluscum contagiosum [<https://medlineplus.gov/ency/article/000826.htm>] (Medical Encyclopedia)

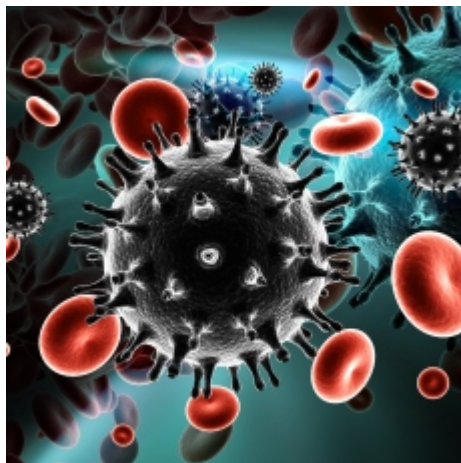
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000826.htm>]

Pneumocystis jiroveci pneumonia [<https://medlineplus.gov/ency/article/000671.htm>] (Medical Encyclopedia)

Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000671.htm>]

- **Progressive multifocal leukoencephalopathy** [<https://medlineplus.gov/ency/article/000674.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000674.htm>]

- **Toxoplasmosis** [<https://medlineplus.gov/ency/article/000637.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000637.htm>]



MEDICAL ENCYCLOPEDIA

Cryptococcosis [<https://medlineplus.gov/ency/article/001328.htm>]

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Progressive multifocal leukoencephalopathy [<https://medlineplus.gov/ency/article/000674.htm>]

Toxoplasmosis [<https://medlineplus.gov/ency/article/000637.htm>]

Related Health Topics

Cryptosporidiosis [<https://medlineplus.gov/cryptosporidiosis.html>]

Fungal Infections [<https://medlineplus.gov/fungalinfections.html>]

Genital Herpes [<https://medlineplus.gov/genitalherpes.html>]

Hepatitis C [<https://medlineplus.gov/hepatitisc.html>]

Herpes Simplex [<https://medlineplus.gov/herpessimplex.html>]

Histoplasmosis [<https://medlineplus.gov/histoplasmosis.html>]

HIV [<https://medlineplus.gov/hiv.html>]

HIV Medicines [<https://medlineplus.gov/hivmedicines.html>]

HIV: PrEP and PEP [<https://medlineplus.gov/hivprepandpep.html>]

Living with HIV [<https://medlineplus.gov/livingwithhiv.html>]

Pneumocystis Infections [<https://medlineplus.gov/pneumocystisinfections.html>]

Toxoplasmosis [<https://medlineplus.gov/toxoplasmosis.html>]

Tuberculosis [<https://medlineplus.gov/tuberculosis.html>]

The primary NIH organization for research on *HIV and Infections* is the National Institute of Allergy and Infectious Diseases [<http://www.niaid.nih.gov/>]

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