

AIDS*info* GLOSSARY

of HIV/AIDS-Related Terms

AUGUST 2015 • 8TH EDITION

AIDS*info* is a U.S. government source for information on HIV/AIDS treatment, prevention, and research.



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Introduction

This 8th Edition of the *AIDSinfo Glossary of HIV/AIDS-Related Terms* continues to provide people living with HIV, their families and their friends, health care professionals, and students a roadmap to understand HIV. Key features of the latest edition of the Glossary include the following:

- A new feature!—images to illustrate several terms, including each step in the HIV life cycle, the various types of viral tropism, and the stages of clinical research.
- Updated and new definitions for more than 700 terms used to describe HIV, the infection it causes, and strategies used to diagnose, treat, and prevent HIV/AIDS.

The terms included in the Glossary represent the vocabulary of HIV used in a variety of federal resources, including federally approved medical practice guidelines and published results from HIV-related research studies. Term definitions are based on information from government sources, including the National Institutes of Health (NIH), the National Library of Medicine (NLM), the Centers for Disease Control and Prevention (CDC), and the Food and Drug Administration (FDA). In general, terms and images in the Glossary are presented in the context of HIV/AIDS. For example, the definition and image for adherence refers to the use of antiretroviral HIV drugs. *AIDSinfo* consulted with HIV experts to ensure the accuracy of definitions and images presented in the Glossary.

The 8th Edition Glossary is also available on the *AIDSinfo* website and as a mobile app for iOS and Android devices.

About AIDSinfo

AIDSinfo, a service of the U.S. Department of Health and Human Services (HHS), offers health care providers, researchers, people affected by HIV/AIDS, and the public easy access to current federally approved medical practice guidelines, HIV treatment and prevention clinical trials, and other research information. Features of the *AIDSinfo* Web site include medical practice guidelines in both printer and Web friendly formats, easy-to-understand consumer health information based on the medical practice guidelines, a search capability to help users quickly find HIV/AIDS-related clinical trials, and a drug database offering comprehensive information on HIV-related medications. *AIDSinfo* has a number of mobile apps, including the *AIDSinfo* Drug App and the *AIDSinfo* Glossary App. Information is also available on *infoSIDA*, the *AIDSinfo* Spanish-language companion site. *AIDSinfo* sponsors include the Office of AIDS Research (OAR), the National Institute of Allergy and Infectious Diseases (NIAID), and the National Library of Medicine (NLM)—three entities within the National Institutes of Health (NIH); the Health Resources and Services Administration (HRSA); and the Centers for Disease Control and Prevention (CDC).

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Terms and Definitions

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Absolute Contraindication

When a particular treatment or procedure should not be used under any circumstance because of the severe and potentially life-threatening risks involved.

SEE RELATED TERM(S): AIDS Case Definition, AIDS Dementia Complex, Contraindication, Relative Contraindication

Acanthosis Nigricans

A skin disorder characterized by velvety, light brown-to-black markings that develop mainly in the folds of the body, such as in the armpits, groin, and creases of the neck. Acanthosis nigricans can be an inherited condition or can occur as the result of an endocrine disorder, cancer, or use of certain medications.

Acquired Immunity

Immunity that develops during a person's lifetime. There are two types of acquired immunity: active immunity and passive immunity.

SEE RELATED TERM(S): Active Immunity, Immunity, Passive Immunity

Acquired Immunodeficiency Syndrome (AIDS) (Fig. 1)

A disease of the immune system due to infection with HIV. HIV destroys the CD4 T lymphocytes (CD4 cells) of the immune system, leaving the body vulnerable to life-threatening infections and cancers. Acquired immunodeficiency syndrome (AIDS) is the most advanced stage of HIV infection. To be diagnosed with AIDS, a person with HIV must have an AIDS-defining condition or have a CD4 count less than 200 cells/mm³ (regardless of whether the person has an AIDS-defining condition).

SEE RELATED TERM(S): Acute HIV Infection, AIDS Case Definition, Chronic HIV Infection, HIV Progression, Human Immunodeficiency Virus

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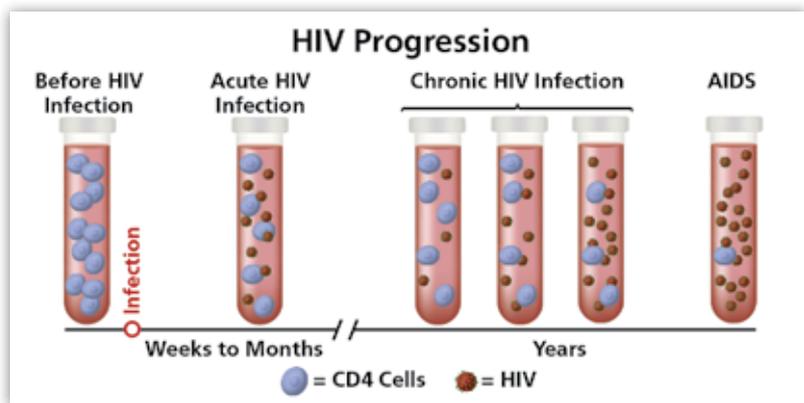


Figure 1

Acquired Resistance

SYNONYM(S): Secondary Resistance

When a drug-resistant strain of HIV emerges while a person is on antiretroviral therapy (ART) for the treatment of HIV infection.

SEE RELATED TERM(S): Drug Resistance, Transmitted Resistance

Active Immunity

Immunity that develops after exposure to a disease-causing infectious microorganism or other foreign substance, such as following infection or vaccination.

SEE RELATED TERM(S): Acquired Immunity, Passive Immunity

Acute HIV Infection (Fig. 1)

SYNONYM(S): Primary HIV Infection

Early stage of HIV infection that extends approximately 1 to 4 weeks from initial infection until the body produces enough HIV antibodies to be detected by an HIV antibody test. During acute HIV infection, HIV is highly infectious because the virus is multiplying rapidly. The rapid increase in HIV viral load can be detected before HIV antibodies are present.

SEE RELATED TERM(S): Acquired Immunodeficiency Syndrome, Acute Retroviral Syndrome, Chronic HIV Infection, HIV Progression, Viral Load

Acute Infection and Early Diseases Research Program (AIEDRP)

A federally funded research program that studies how HIV infects humans and how the disease progresses to AIDS.

Acute Inflammatory Demyelinating Polyneuropathy

SYNONYM(S): Guillain-Barré Syndrome

Acute Retroviral Syndrome

Flu-like symptoms of acute HIV infection that may appear approximately 1 to 4 weeks after infection. Symptoms such as fever, headache, fatigue, and swollen lymph nodes can last from 1 to 4 weeks, and then subside. During the acute stage of HIV infection, many, but not all, people will have symptoms of acute retroviral syndrome.

SEE RELATED TERM(S): Acute HIV Infection

Adenopathy

Large or swollen lymph glands.

SEE RELATED TERM(S): Lymph Nodes

Adenovirus

A group of viruses that use DNA as their genetic material and commonly cause respiratory and eye infections. People with weakened immune systems, including people with HIV, have a greater risk for serious complications from an adenovirus infection than people with healthy immune systems.

SEE RELATED TERM(S): Virus

Adherence (Fig. 2)

Taking medications (or other treatment) exactly as instructed by a health care provider. The benefits of strict adherence to an HIV regimen include sustained viral suppression, reduced risk of drug resistance, improved overall health and quality of life, and decreased risk of HIV transmission.

SEE RELATED TERM(S): Drug Resistance, Viral Suppression, Virologic Failure

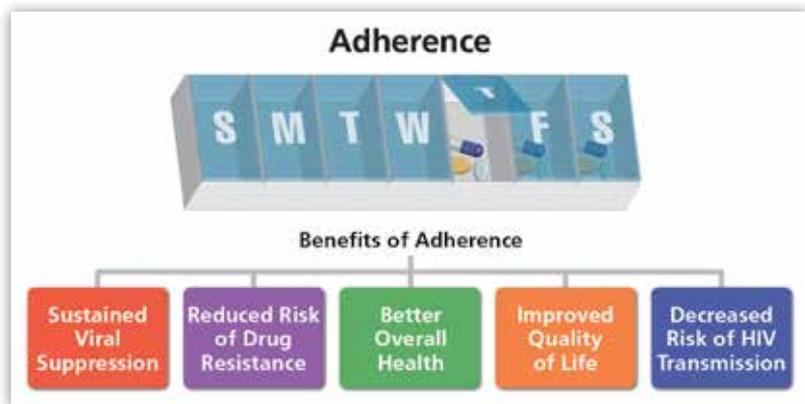
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Figure 2

Adjuvant

A substance added to a drug or vaccine to enhance its effectiveness. Also, an additional drug or other intervention that is used to bolster an initial treatment.

Adverse Drug Reaction (ADR)

Any unintended, undesirable response to a drug taken at a normal dose for normal use. Adverse drug reactions (ADRs) are classified by onset, severity, and type.

Adverse Event (AE)

Any undesirable experience associated with the use of a drug or other medical product.

SEE RELATED TERM(S): Adverse Drug Reaction

Agammaglobulinemia

Total or near-total absence of gamma globulins in the blood. Gamma globulins are a class of blood proteins that include most antibodies. Agammaglobulinemia may be due to certain genetic diseases or to acquired diseases such as HIV/AIDS.

SEE RELATED TERM(S): Gamma Globulin

Agency for Healthcare Research and Quality (AHRQ)

A federally funded agency that produces evidence to make health care safer, higher quality, more accessible, equitable, and affordable and that works with partners to ensure that the evidence is understood and used.

Agranulocytopenia

SYNONYM(S): Granulocytopenia

AIDS Case Definition (Fig. 3)

Diagnostic criteria for AIDS established by the Centers for Disease Control and Prevention (CDC). To be diagnosed with AIDS, a person with HIV must have an AIDS-defining condition or have a CD4 count less than 200 cells/mm³ (regardless of whether the person has an AIDS-defining condition).

SEE RELATED TERM(S): Acquired Immunodeficiency Syndrome, AIDS-Defining Condition, CD4 Count, Human Immunodeficiency Virus

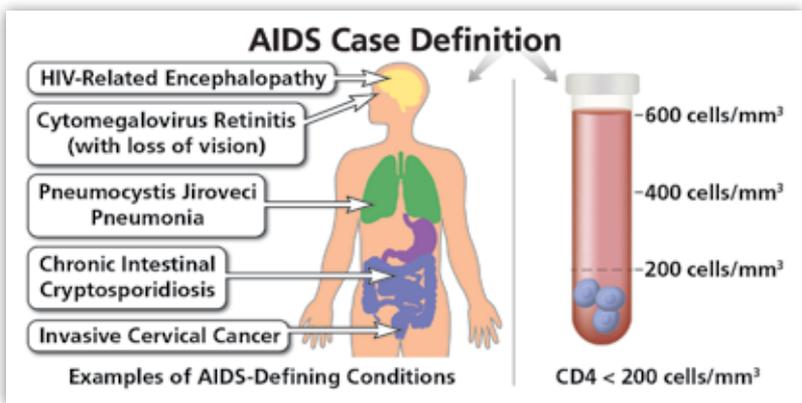


Figure 3

AIDS Clinical Trials Group (ACTG)

Formerly called Adult AIDS Clinical Trials Group (AACTG). Federally funded program that supports the largest network of HIV/AIDS researchers and clinical trial units in the world. AIDS Clinical Trials Group (ACTG) develops and conducts research related to HIV infection and its complications.

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AIDS Dementia Complex (ADC)

SYNONYM(S): AIDS Encephalopathy, HIV-Associated Dementia, HIV Encephalopathy

A progressive neurological condition associated with advanced HIV infection or AIDS. Symptoms include memory loss, slowed movements, and behavioral changes.

AIDS Drug Assistance Programs (ADAPs)

Federally funded programs that provide medications and other HIV-related services to low-income, uninsured, and underinsured people with HIV/AIDS. Services of AIDS Drug Assistance Programs (ADAPs) are available in all 50 states and U.S. territories.

AIDS Education and Training Centers (AETCs)

Regional centers that conduct education and training programs for health care providers who treat people living with HIV/AIDS. Training is targeted to providers who serve minority populations, the homeless, rural communities, prisoners, community and migrant health centers, and Ryan White HIV/AIDS Program-funded sites. AIDS Education and Training Centers (AETCs) serve all 50 states and many U.S. territories.

AIDS Encephalopathy

SYNONYM(S): AIDS Dementia Complex

AIDS Service Organization (ASO)

A non-governmental organization that provides services related to the prevention and treatment of HIV/AIDS.

AIDS-Defining Condition (Fig. 4)

Any HIV-related illness included in the Centers for Disease Control and Prevention's (CDC) list of diagnostic criteria for AIDS. AIDS-defining conditions include opportunistic infections and cancers that are life-threatening in a person with HIV.

SEE RELATED TERM(S): Acquired Immunodeficiency Syndrome, Centers for Disease Control and Prevention, Opportunistic Infection

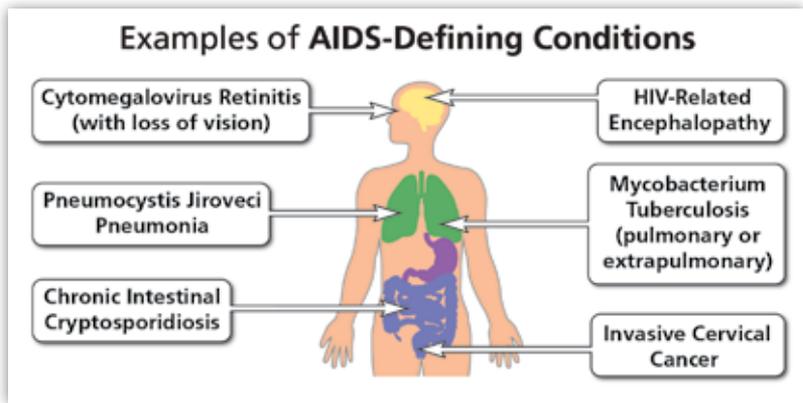


Figure 4

AIDSinfo

The federal website offering HIV/AIDS medical practice guidelines and information on HIV-related clinical trials and drugs for health care providers, researchers, people affected by HIV/AIDS, and the general public. Information is also available by phone, e-mail, and postal mail.

SEE RELATED TERM(S): *infoSIDA*

AIDS-Related Cancer

A type of cancer that is more likely to occur in people with HIV/AIDS than in people with healthy immune systems. AIDS-related cancers include lung cancer, anal cancer, and Hodgkin lymphoma. Some but not all AIDS-related cancers are AIDS-defining conditions.

SEE RELATED TERM(S): Acquired Immunodeficiency Syndrome, AIDS-Defining Condition

Alanine Aminotransferase (ALT)

SYNONYM(S): Alanine Transaminase, Serum Glutamate Pyruvate Transaminase, SGPT

An enzyme found primarily in the liver. Alanine aminotransferase may be measured as part of a liver function test.

SEE RELATED TERM(S): Liver Function Test

Alanine Transaminase

SYNONYM(S): Alanine Aminotransferase

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Albumin

A protein made by the liver and found in high concentrations in blood. This protein may be measured as part of a liver function test.

SEE RELATED TERM(S): Liver Function Test

Albuminuria

SYNONYM(S): Proteinuria

Alkaline Phosphatase (ALP)

An enzyme found throughout the body, especially in the liver and bone. Alkaline phosphatase may be measured as part of a liver function test.

SEE RELATED TERM(S): Liver Function Test

Alopecia

Loss of hair. Alopecia may be an adverse effect of some antiretroviral (ARV) drugs.

American Trypanosomiasis

SYNONYM(S): Chagas Disease

Amino Acids

The chemical building blocks of proteins.

SEE RELATED TERM(S): Peptide, Protein

Anemia

A blood disorder caused by reduced number or function of red blood cells. Symptoms may include shortness of breath, fatigue, and rapid heartbeat. HIV-associated causes of anemia include progression of HIV disease, opportunistic infections, and certain antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Red Blood Cell

Antenatal

SYNONYM(S): Prenatal

Antepartum (Fig. 5)

The time period before childbirth. Antepartum refers to the mother.

SEE RELATED TERM(S): Intrapartum, Postpartum



Figure 5

Antibiotic

A drug used to kill or suppress the growth of bacteria.

SEE RELATED TERM(S): Microorganism

Antibody

SYNONYM(S): Immunoglobulin

A protein produced by B lymphocytes (B cells) in response to an antigen. Antibodies bind to and help destroy antigens.

SEE RELATED TERM(S): B Lymphocyte, Humoral Immunity

Antibody Differentiation Test

A type of antibody test that can distinguish HIV-1 antibodies from HIV-2 antibodies. When an initial HIV antibody test result is positive, an antibody differentiation test is done to determine whether a person is infected with HIV-1 or HIV-2. The test is done using a sample of blood.

SEE RELATED TERM(S): Antibody, HIV-1, HIV-2

Anticoagulant

SYNONYM(S): Blood Thinner

A drug used to prevent the blood from clotting.

Antifungal

A drug used to kill or suppress the growth of fungi.

SEE RELATED TERM(S): Fungus

Antigen

Any substance that is foreign to the body and triggers an immune response. Antigens include bacteria, viruses, and allergens, such as pollen.

SEE RELATED TERM(S): Immune Response

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Antigen/Antibody Combination Test

A type of HIV test that can detect HIV-1 and HIV-2 antibodies and HIV-1 p24 antigen (a protein that forms the HIV core). Antigen/antibody combination tests can detect HIV earlier than tests that only detect HIV antibodies. The test is done using a sample of blood.

SEE RELATED TERM(S): Antibody, Antigen, HIV-1, HIV-2

Antigen-Antibody Complex

SYNONYM(S): Immune Complex

Antigen-Presenting Cell (APC)

A type of immune cell that enables a T lymphocyte (T cell) to recognize an antigen and mount an immune response against the antigen. Antigen-presenting cells (APCs) include macrophages, dendritic cells, and B lymphocytes (B cells).

SEE RELATED TERM(S): Antigen, Immune Response, T Lymphocyte

Antineoplastic

A drug used to inhibit the growth or spread of precancerous cells, cancer cells, or tumors.

Antiprotozoal

A drug used to kill or suppress the growth of protozoans.

SEE RELATED TERM(S): Protozoan

Antiretroviral (ARV)

A drug used to prevent a retrovirus, such as HIV, from replicating. The term primarily refers to antiretroviral (ARV) HIV drugs.

SEE RELATED TERM(S): Drug Class, Retrovirus

Antiretroviral Pregnancy Registry

A project established to monitor prenatal exposures to antiretroviral (ARV) drugs and to detect any potential increase in the risk of related birth defects. Pregnant women exposed to ARV drugs voluntarily enroll in the Registry through their health care providers. Information provided to the Registry includes no identifying patient information.

Antiretroviral Therapy (ART)

SYNONYM(S): Combination Therapy, Combined Antiretroviral Therapy, Highly Active Antiretroviral Therapy

The daily use of a combination of HIV medicines (called an HIV regimen) to treat HIV infection. A person's initial HIV regimen generally includes three antiretroviral (ARV) drugs from at least two different HIV drug classes.

SEE RELATED TERM(S): Drug Class

Antiretroviral Toxic Neuropathy

Nerve damage that is due to antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Neuropathy

Antisense Antiviral

A drug made of short segments of DNA or RNA that can bind to and alter or suppress the function of viral DNA or RNA. Antisense antivirals prevent viruses from replicating.

Antiviral

A drug used to prevent the growth or replication of viruses.

SEE RELATED TERM(S): Virus

Aphthous Ulcer

SYNONYM(S): Canker Sore

An open sore that develops on parts of the mouth (inner surface of the cheeks and lips, tongue, soft palate, or base of the gums). Although aphthous ulcers are non-contagious and non-life-threatening, they can be very painful. Aphthous ulcers are more common and more likely to reoccur in people with HIV than in people without HIV.

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Apoptosis

SYNONYM(S): Programmed Cell Death

The deliberate, programmed death of a cell. Apoptosis is a normal biological process that helps the body stay healthy by eliminating old or damaged cells. One of the ways that HIV infection gradually destroys the immune system is by causing apoptosis of CD4 T lymphocytes (CD4 cells).

SEE RELATED TERM(S): CD4 T Lymphocyte

Approved Drug (Fig. 6)

A drug approved by the Food and Drug Administration (FDA) for sale in the United States. The extensive FDA drug approval process includes many steps, including preclinical laboratory and animal studies, safety and efficacy clinical trials in humans, filing of a New Drug Application by the drug manufacturer, FDA review of the application, and FDA approval or rejection of the application.

SEE RELATED TERM(S): Clinical Trial, Food and Drug Administration, New Drug Application

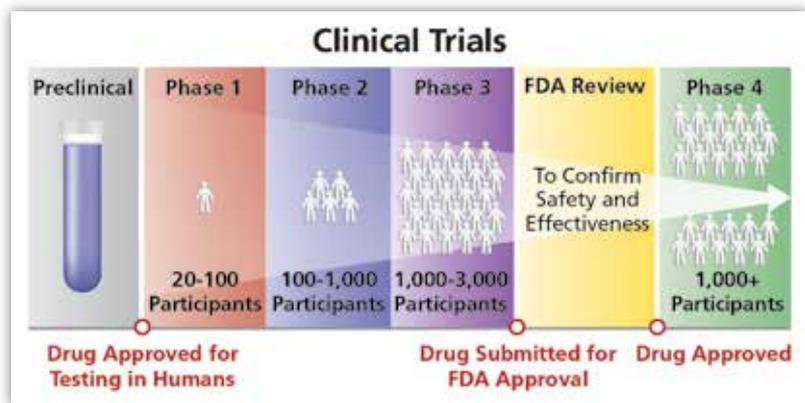


Figure 6

Area Under the Curve (AUC)

A measure of how much drug reaches a person's bloodstream in a given period of time after a dose is given. The information is useful for determining dosing and for identifying potential drug interactions.

SEE RELATED TERM(S): Drug Interaction

Arm

A group or subgroup of participants in a clinical trial that receives specific interventions, or no intervention, according to the study protocol.

SEE RELATED TERM(S): Clinical Trial, Intervention

Arrhythmia

Any irregularity in rhythm or rate of the heartbeat.

Arthralgia

Joint pain with additional symptoms such as redness, tenderness to touch, loss of motion, or swelling. Arthralgia is a common symptom of HIV infection and may be caused by drugs used to treat HIV and opportunistic infections.

Artificial Insemination

SYNONYM(S): Intrauterine Insemination

Aspartate Aminotransferase (AST)

SYNONYM(S): Serum Glutamic-Oxaloacetic Transaminase

An enzyme found especially in heart, muscle, and liver cells. Aspartate aminotransferase may be measured as part of a liver function test.

SEE RELATED TERM(S): Liver Function Test

Aspergillosis

An infection caused by the fungus *Aspergillus*. Invasive aspergillosis is a serious lung infection that can spread to other parts of the body. It occurs almost exclusively in people with low blood levels of neutrophils, a type of white blood cell, and weakened immune systems. Invasive aspergillosis in a person with HIV is rare.

SEE RELATED TERM(S): Opportunistic Infection

Assembly (Fig. 7)

The sixth of seven steps in the HIV life cycle. During assembly, new HIV RNA and HIV proteins made by the host CD4 cell move to the surface of the cell and assemble into immature (noninfectious) HIV.

SEE RELATED TERM(S): Life Cycle

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Asthenia

Weakness; lack or loss of energy or strength.

Asymptomatic HIV Infection

SYNONYM(S): Chronic HIV Infection

Ataxia

Impaired coordination of voluntary muscle movements. Ataxia may be an adverse effect of drugs used to treat either HIV or opportunistic infections or may be caused by neurological conditions associated with HIV.

Atherosclerosis

The gradual build-up of plaque inside of artery walls. (Plaque is made up of fat, cholesterol, calcium, and other substances found in blood.) Over time, the plaque hardens and narrows the arteries, decreasing the flow of oxygen-rich blood to organs and other parts of the body.

Attachment

SYNONYM(S): Binding

Attenuated

SYNONYM(S): Live Attenuated

Autoimmune Disorder

A condition that occurs when the immune system mistakenly attacks and destroys healthy body tissue. Autoimmune disorders may be caused by drugs used to treat opportunistic infections.

SEE RELATED TERM(S): Immune System

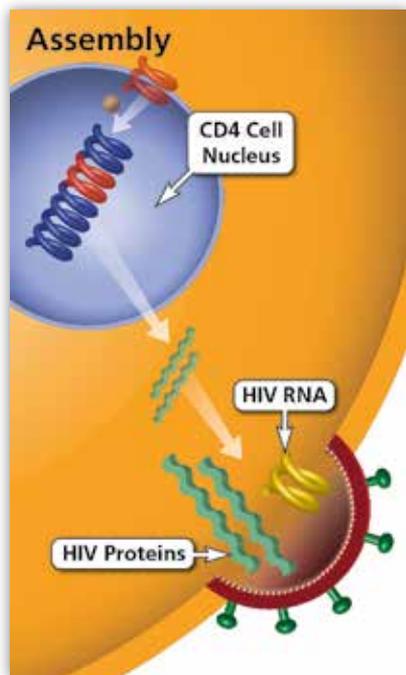


Figure 7

Avascular Necrosis (AVN)

Death of bone tissue (osteonecrosis) due to a lack of blood supply. Avascular necrosis (AVN) most commonly affects the hip. Symptoms include pain in the affected area of the body, limited range of motion, joint stiffness, muscle spasms, and limping. AVN is associated with several medical conditions, including cancer and HIV infection.

SEE RELATED TERM(S): Osteonecrosis

B Cell

SYNONYM(S): B Lymphocyte

B Lymphocyte

SYNONYM(S): B Cell

A type of lymphocyte. B lymphocytes (B cells) produce antibodies to help the body fight infection.

SEE RELATED TERM(S): Antibody, Lymphocyte

b.i.d.

SYNONYM(S): BID

Backbone (Fig. 8)

The two nucleoside reverse transcriptase inhibitors (NRTIs) upon which an initial HIV regimen is built. To complete the HIV regimen, the two NRTIs are combined with a third antiretroviral HIV drug from either the non-nucleoside reverse transcriptase inhibitor (NNRTI), protease inhibitor (PI), or integrase strand transfer inhibitor (INSTI) drug class.

SEE RELATED TERM(S): Integrase Strand Transfer Inhibitor (INSTI), Non-nucleoside Reverse Transcriptase Inhibitor (NNRTI), Nucleoside Reverse Transcriptase Inhibitor (NRTI), Protease Inhibitor (PI), Treatment Regimen

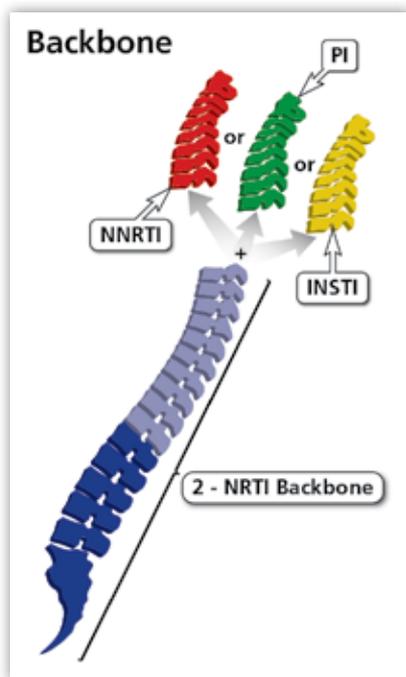


Figure 8

Bactericide

A drug used to kill bacteria.

SEE RELATED TERM(S): Bacterium

Bacteriostat

A drug used to prevent the growth of bacteria. Bacteriostats do not kill bacteria.

SEE RELATED TERM(S): Bactericide, Bacterium

Bacterium

A single-celled microorganism. Bacteria occur naturally almost everywhere on earth, including in humans. Some bacteria can cause disease in humans. People with weakened immune systems, including people with HIV, are at a higher risk for bacterial infections than people with healthy immune systems.

Bartonellosis

A group of infections caused by the bacteria *Bartonella*. Examples of the various infections include cat scratch disease, trench fever, bacillary angiomatosis (BA), and bacillary peliosis hepatis. BA and bacillary peliosis hepatis occur only in people with weakened immune systems, such as people with HIV.

SEE RELATED TERM(S): Opportunistic Infection

Baseline

An initial measurement used as the basis for future comparison. For people infected with HIV, baseline testing includes CD4 count, viral load (HIV RNA), and resistance testing. Baseline test results are used to guide HIV treatment choices and monitor effectiveness of antiretroviral therapy (ART).

Basic Chemistry Profile

SYNONYM(S): Comprehensive Metabolic Panel

Basophil

A type of white blood cell that helps the body fight infection by triggering an inflammatory response to an antigen.

SEE RELATED TERM(S): Antigen, White Blood Cell

B-Cell Lymphoma

A type of lymphoma (cancer of the lymphatic system) that starts in the B lymphocytes (B cells). People with weakened immune systems, including people with HIV, are at a higher risk for B-cell lymphomas than people with healthy immune systems. In people infected with HIV, certain B-cell lymphomas are considered AIDS-defining conditions.

SEE RELATED TERM(S): AIDS-Defining Condition, B Lymphocyte, Lymphoma

Best Practice

SYNONYM(S): Standard of Care

Beta-2 Microglobulin (B2M)

A protein found on the surface of many cells, including white blood cells. Beta-2 microglobulin (B2M) levels increase during infection with some viruses, including HIV.

BID

SYNONYM(S): bid, b.i.d.

An abbreviation meaning “two times a day.” The abbreviation is commonly used in drug dosing instructions.

bid

SYNONYM(S): BID

Bilirubin

A reddish-yellow substance produced during the normal breakdown of red blood cells. Bilirubin is normally processed through the liver and eventually excreted from the body. Excess bilirubin in the blood may indicate liver damage or disease.

SEE RELATED TERM(S): Jaundice, Liver, Liver Function Test

Binding (Fig. 9)

SYNONYM(S): Attachment

The first of seven steps in the HIV life cycle. When HIV attacks a CD4 cell, the virus binds (attaches itself) to molecules on the surface of the CD4 cell: first a CD4 receptor and then either a CCR5 or CXCR4 coreceptor.

SEE RELATED TERM(S): CCR5 Antagonist, Life Cycle

Bioavailability

A measure of the rate and extent to which a drug is absorbed and becomes available at the site of drug action in the body.

SEE RELATED TERM(S): Pharmacology

Biopsy

Removal of tissue, cells, or fluid from the body for examination under a microscope. Biopsies are used to diagnose disease.

Black Box Warning

SYNONYM(S): Boxed Warning

Black Label Warning

SYNONYM(S): Boxed Warning

Blip

A temporary, detectable increase in the amount of HIV in the blood (viral load) that occurs after antiretroviral therapy (ART) has effectively suppressed the virus to an undetectable level. Isolated blips are not considered a sign of virologic failure.

SEE RELATED TERM(S): Undetectable Viral Load, Viral Load, Virologic Failure

Blood Sugar

SYNONYM(S): Glucose

Blood Thinner

SYNONYM(S): Anticoagulant

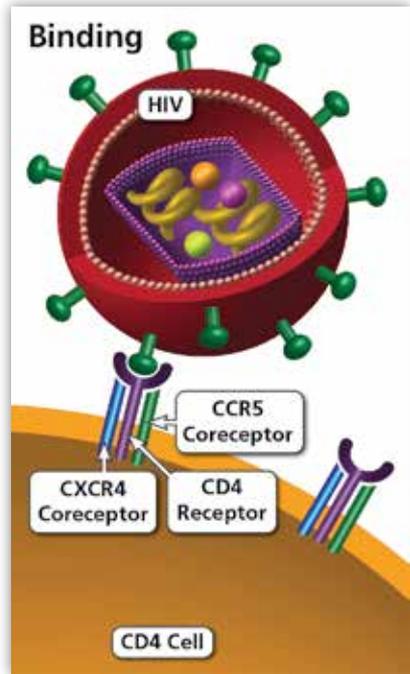


Figure 9

Blood-Brain Barrier

A semi-permeable layer of tightly joined cells that separate the brain from circulating blood. The blood-brain barrier prevents potentially dangerous substances in the blood, such as disease-causing organisms or chemical compounds, from entering the brain tissue. Certain antiretroviral (ARV) drugs can cross the blood-brain barrier and may help stop or slow HIV damage to the brain.

Body Habitus Changes

Noticeable physical changes in body shape or appearance. In people with HIV, these changes may be due to HIV infection, opportunistic infections, or antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Gynecomastia, Lipodystrophy Syndrome, Wasting Syndrome

Bone Density Test

SYNONYM(S): Dual Energy X-Ray Absorptiometry

Bone Marrow

The soft, sponge-like tissue in the center of bones. There are two types of bone marrow: yellow (made up of mostly fat cells) and red (the source of red blood cells, platelets, and most white blood cells).

Bone Marrow Suppression

SYNONYM(S): Myelosuppression

Boosting (Fig. 10)

Using an antiretroviral (ARV) drug (or other drug) to increase the effectiveness of another ARV drug. For example, drugs in the protease inhibitor ARV drug class (called PIs) are often boosted with the ARV drug ritonavir. Ritonavir interferes with the breakdown of the PI, which allows the PI to remain in the body longer at a higher concentration.

SEE RELATED TERM(S): Protease Inhibitor

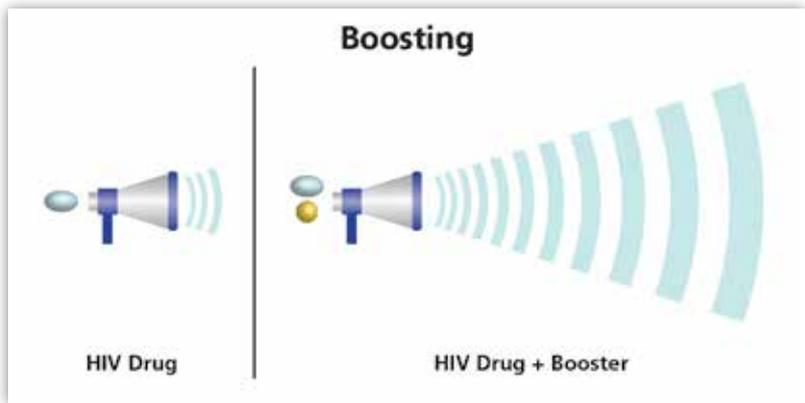


Figure 10

Boxed Warning

SYNONYM(S): Black Box Warning, Black Label Warning

The strongest form of warning required by the Food and Drug Administration (FDA) for prescription drug labeling. A boxed warning alerts health care providers and consumers to increased risk of serious adverse reactions associated with use of a drug or to restrictions on use of a drug. The boxed warning is presented in a box surrounded by a black border and is placed on the drug label and any package inserts or promotional materials intended for the prescriber or patient.

SEE RELATED TERM(S): Food and Drug Administration, Package Insert

Brain Attack

SYNONYM(S): Stroke

Bronchopneumonia

SYNONYM(S): Pneumonia

Bronchoscopy

A procedure used to look inside the airways of the lungs. The procedure is done using a bronchoscope, a flexible tube that has a camera on one end of it. A bronchoscopy may be used to diagnose HIV-related infections or cancer.

Bronchospasm

Sudden, involuntary contraction of the muscles of the bronchii (airways in the lungs).

Budding (Fig. 11)

The final step of seven steps in the HIV life cycle. During budding, immature (noninfectious) HIV pushes itself out of the host CD4 cell. (Noninfectious HIV can't infect another CD4 cell.) Once outside the CD4 cell, the new HIV releases protease, an HIV enzyme. Protease acts to break up the long protein chains that form the noninfectious virus. The smaller HIV proteins combine to form mature, infectious HIV.

SEE RELATED TERM(S): Life Cycle

Buffalo Hump

SYNONYM(S): Dorsocervical Fat Pad

Burkitt Lymphoma

SYNONYM(S): Burkitt's Lymphoma

A fast-growing type of B-cell non-Hodgkin lymphoma (cancer of the lymphatic system). In people with HIV, Burkitt lymphoma is considered an AIDS-defining cancer.

SEE RELATED TERM(S): Lymphoma, Non-Hodgkin Lymphoma

Burkitt's Lymphoma

SYNONYM(S): Burkitt Lymphoma

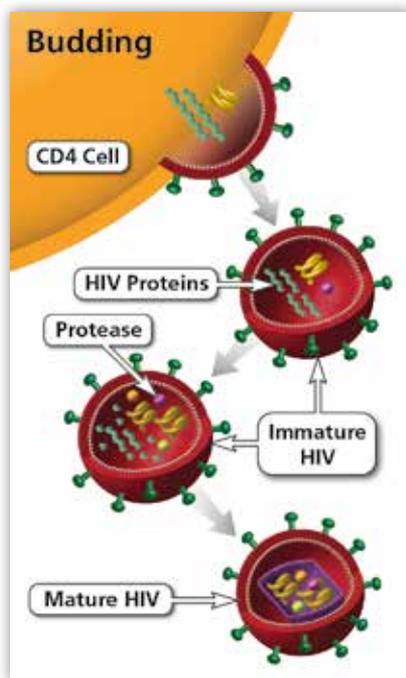


Figure 11

Cachexia

Physical wasting (loss of body weight and muscle mass) frequently associated with chronic disease, such as cancer or AIDS.

Campylobacteriosis

An enteric (intestinal) infection caused by the bacterium *Campylobacter*. Symptoms of campylobacteriosis, if any, include diarrhea (often bloody), abdominal cramping and pain, nausea and vomiting, fever, and fatigue. Some people with campylobacteriosis may develop Guillain-Barré syndrome. Certain bacterial enteric infections, including campylobacteriosis, occur at a much higher rate in people with HIV than in the general population.

SEE RELATED TERM(S): Guillain-Barré Syndrome

Candidiasis

SYNONYM(S): Yeast Infection

A fungal infection caused by overgrowth of the yeast *Candida* (usually *Candida albicans*) in moist areas of the body. Candidiasis can affect the mucous membranes of the mouth, vagina, and anus. In people with HIV, candidiasis of the bronchi, trachea, lungs, or esophagus is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Opportunistic Infection

Canker Sore

SYNONYM(S): Aphthous Ulcer

Capsid (Fig. 12)

SYNONYM(S): HIV Viral Core

The bullet-shaped center of HIV. The HIV capsid contains the genetic information (two single strands of RNA) and three enzymes needed for HIV to replicate.

SEE RELATED TERM(S): Envelope, Enzyme, Glycoprotein, Human Immunodeficiency Virus, p24, Ribonucleic Acid

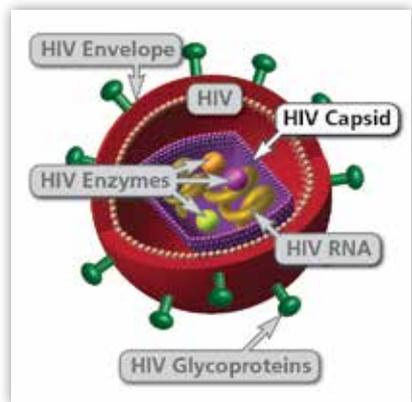


Figure 12

Cardiomyopathy

Disease of the heart muscle. Cardiomyopathy weakens the heart muscle, making it hard for the heart to pump blood to the rest of the body. HIV infection or use of some antiretroviral (ARV) drugs may cause cardiomyopathy.

Cardiovascular

Relating to or involving the heart and blood vessels. Use of some antiretroviral (ARV) drugs may increase the risk of cardiovascular disease.

CARE Act

SYNONYM(S): Ryan White HIV/AIDS Program

CCR5 (Fig. 13)

SYNONYM(S): Chemokine Receptor 5

A protein on the surface of certain immune system cells, including CD4 T lymphocytes (CD4 cells). CCR5 can act as a coreceptor (a second receptor binding site) for HIV when the virus enters a host cell.

SEE RELATED TERM(S): CCR5 Antagonist, Coreceptor, Fusion, Life Cycle

CCR5 Antagonist (Fig. 13)

SYNONYM(S): CCR5 Inhibitor, CCR5 Receptor Blocker

Antiretroviral (ARV) HIV drug class. CCR5 antagonists block the CCR5 coreceptor on the surface of certain immune cells, such as CD4 T lymphocytes (CD4 cells). This prevents HIV from entering the cell.

SEE RELATED TERM(S): CCR5, Drug Class

CCR5 Inhibitor

SYNONYM(S): CCR5 Antagonist

CCR5 Receptor Blocker

SYNONYM(S): CCR5 Antagonist

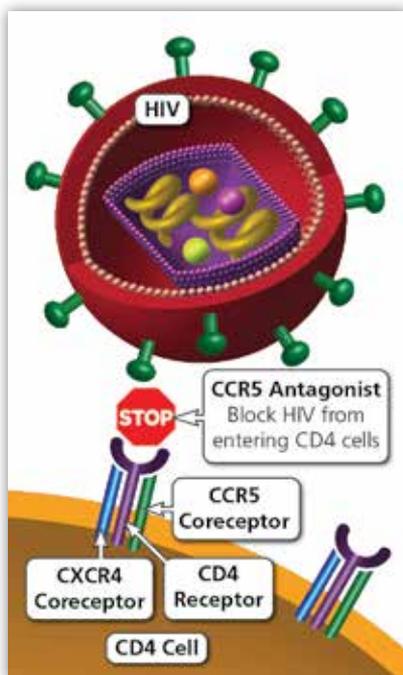


Figure 13

CD4 Cell

SYNONYM(S): CD4 T Lymphocyte

CD4 Cell Count

SYNONYM(S): CD4 Count

CD4 Cell Percentage

SYNONYM(S): CD4 Percentage

CD4 Count

SYNONYM(S): CD4 Cell Count, CD4 T Lymphocyte Count

A laboratory test that measures the number of CD4 T lymphocytes (CD4 cells) in a sample of blood. In people with HIV, the CD4 count is the most important laboratory indicator of immune function and the strongest predictor of HIV progression. The CD4 count is one of the factors used to determine when to start antiretroviral therapy (ART). The CD4 count is also used to monitor response to ART.

SEE RELATED TERM(S): CD4 Percentage, CD4 T Lymphocyte, HIV Progression

CD4 Percentage

SYNONYM(S): CD4 Cell Percentage, CD4 T Lymphocyte Percentage

Percentage of white blood cells that are CD4 T lymphocytes (CD4 cells). In certain cases, such as during acute HIV infection or HIV infection in children younger than 5 years of age, CD4 percentage is used rather than CD4 count to assess HIV progression or response to antiretroviral therapy (ART).

SEE RELATED TERM(S): CD4 Count, CD4 T Lymphocyte, HIV Progression

CD4 Receptor (Fig. 13)

A protein found primarily on the surface of CD4 T lymphocytes (CD4 cells). To enter a host cell, HIV binds to a CD4 receptor and a coreceptor (either CCR5 or CXCR4) on the host cell.

SEE RELATED TERM(S): CCR5, CD4 T Lymphocyte, CXCR4, Fusion, Life Cycle

CD4 T Lymphocyte

SYNONYM(S): CD4 Cell, Helper T Cell

A type of lymphocyte. CD4 T lymphocytes (CD4 cells) help coordinate the immune response by stimulating other immune cells, such as macrophages, B lymphocytes (B cells), and CD8 T lymphocytes (CD8 cells), to fight infection. HIV weakens the immune system by destroying CD4 cells.

SEE RELATED TERM(S): CD4 Count, CD4 Percentage, Lymphocyte, T Lymphocyte

CD4 T Lymphocyte Count

SYNONYM(S): CD4 Count

CD4 T Lymphocyte Percentage

SYNONYM(S): CD4 Percentage

CD8 Cell

SYNONYM(S): CD8 T Lymphocyte

CD8 T Lymphocyte

SYNONYM(S): CD8 Cell, Cytotoxic T Lymphocyte, Killer T Cell

A type of lymphocyte. CD8 T lymphocytes (CD8 cells) recognize and destroy cells infected with microorganisms, such as bacteria or viruses.

SEE RELATED TERM(S): Lymphocyte, T Lymphocyte

CDC-INFO

The Centers for Disease Control and Prevention's (CDC) national contact center. CDC-INFO provides science-based health information on more than 750 health topics to the public, health care providers, and public health professionals online and by phone, e-mail, and postal mail.

SEE RELATED TERM(S): Centers for Disease Control and Prevention

Cell-Mediated Immunity

SYNONYM(S): Cellular Immunity

Type of immune response that is produced by the direct action of immune cells, such as T lymphocytes (T cells), rather than by antibodies.

SEE RELATED TERM(S): Humoral Immunity, T Lymphocyte

Cellular Immunity

SYNONYM(S): Cell-Mediated Immunity

Centers for Disease Control and Prevention (CDC)

A federal agency that protects the health and safety of people at home and abroad through health promotion; prevention and control of disease, injury, and disability; public health workforce development and training; and preparedness for new health threats.

SEE RELATED TERM(S): CDC-INFO, Centers for Disease Control and Prevention-National Prevention Information Network

Centers for Disease Control and Prevention-National Prevention Information Network (CDC-NPIN)

SYNONYM(S): National Prevention Information Network

A service of the Centers for Disease Control and Prevention (CDC) that disseminates information on HIV/AIDS, viral hepatitis, other sexually transmitted diseases, and tuberculosis (TB). Information is available via the Web, phone, e-mail, and postal mail.

SEE RELATED TERM(S): Centers for Disease Control and Prevention

Centers for Medicare and Medicaid Services (CMS)

SYNONYM(S): Health Care Financing Administration

A federal agency that administers the Medicare program and monitors the Medicaid programs offered by each state, including the Children's Health Insurance Program.

Central Nervous System (CNS)

The part of the nervous system that is made up of the brain and spinal cord. The central nervous system (CNS) serves as the main processing center for the entire nervous system and coordinates all body functions. HIV infection or use of some antiretroviral (ARV) drugs can cause damage to the CNS.

Cerebrospinal Fluid (CSF)

A clear, nutrient-rich fluid that surrounds the brain and spinal cord. Cerebrospinal fluid (CSF) acts as a cushion, protecting the brain and spinal cord from injury.

Cervical Cancer

A type of cancer that develops in the cervix (the lower, narrow end of the uterus). Cervical cancer is almost always caused by the human papillomavirus (HPV), which is spread through sexual contact. Invasive cervical cancer is an AIDS-defining condition.

SEE RELATED TERM(S): Cervix, Human Papillomavirus

Cervix

The lower, narrow end of the uterus (womb), which forms a canal between the uterus and vagina.

Cesarean Delivery

Delivery of a baby by a surgical incision through the mother's abdominal wall and uterus. In some pregnant women infected with HIV, a scheduled Cesarean delivery may reduce the risk of mother-to-child transmission of HIV.

SEE RELATED TERM(S): Cesarean Section, Prevention of Perinatal Transmission

Cesarean Section

SYNONYM(S): C-Section

Surgical incision through the abdominal wall and uterus to deliver a baby.

SEE RELATED TERM(S): Cesarean Delivery

Chagas Disease

SYNONYM(S): American Trypanosomiasis, South American Trypanosomiasis

A disease caused by the parasite *Trypanosoma cruzi* (a type of protozoa). Chagas disease is most commonly transmitted when people come into contact with the feces of an infected reduviid bug, a blood-sucking insect that feeds on humans and animals. In the earliest stage of infection, Chagas disease usually has few signs or symptoms. However, if untreated, the disease becomes a lifelong infection. In people with HIV, reactivation of chronic Chagas disease infection can cause inflammation of the brain and meninges (meningoencephalitis).

SEE RELATED TERM(S): Opportunistic Infection

Chancroid

A sexually transmitted infection caused by the bacterium *Hemophilus ducreyi*. Chancroid causes genital ulcers (sores), which increase the risk of HIV transmission.

Chemokine Receptor 4

SYNONYM(S): CXCR4

Chemokine Receptor 5

SYNONYM(S): CCR5

Chemokines

Small proteins secreted by cells to mobilize and activate infection-fighting white blood cells. Chemokines are involved in many immune and inflammatory responses.

Chemoprevention

SYNONYM(S): Chemoprophylaxis

Use of specific drugs, vitamins, or other substances to reverse, suppress, or prevent a disease.

Chemoprophylaxis

SYNONYM(S): Chemoprevention

Chemotherapy

Use of chemical-based agents, such as drugs, to treat or control a disease. Similar to HIV infection, chemotherapy may result in immunosuppression.

Child-Pugh Score

SYNONYM(S): Child-Turcotte-Pugh Classification System

Child-Turcotte-Pugh Classification System

SYNONYM(S): Child-Pugh Score

A classification system used to measure liver function, especially in people with chronic liver disease. The system may be used to assess liver function in people who have HIV/hepatitis C viurs (HCV) coinfection.

Chlamydia

A common sexually transmitted infection caused by the bacterium *Chlamydia trachomatis*. Chlamydia often has mild or no symptoms, but if left untreated, it can lead to serious complications, including infertility. Chlamydia may increase the risk of HIV transmission.

SEE RELATED TERM(S): Sexually Transmitted Infection

Cholangiopathy

Bile duct disease. (Bile ducts are tubes that carry bile from the gallbladder to the small intestine, where the bile is used to digest fats.) Cholangiopathy may occur as a complication of AIDS or may be caused by certain opportunistic infections.

Cholesterol

A waxy, fat-like substance that is made by the liver or absorbed from animal food sources such as eggs, meat, and dairy products. The body uses cholesterol to insulate nerves, make cell tissues, and produce certain hormones. Excess cholesterol, however, can clog the arteries and lead to heart disease. Some antiretroviral (ARV) drugs may cause high cholesterol levels.

SEE RELATED TERM(S): Atherosclerosis

Chromosome

A thread-like structure found within a cell. Chromosomes, which are made of DNA coiled around proteins, carry all of the genetic information essential to the life of the cell.

Chronic HIV Infection (Fig. 14)

SYNONYM(S): Asymptomatic HIV Infection, Clinical Latency

The stage of HIV infection between acute HIV infection and the onset of AIDS. During chronic HIV infection, HIV levels gradually increase and the number of CD4 cells decrease. Declining CD4 cell levels indicate increasing damage to the immune system. Antiretroviral therapy (ART) can prevent HIV from destroying the immune system and advancing to AIDS.

SEE RELATED TERM(S): Acute HIV Infection, Acquired Immunodeficiency Syndrome, HIV Progression

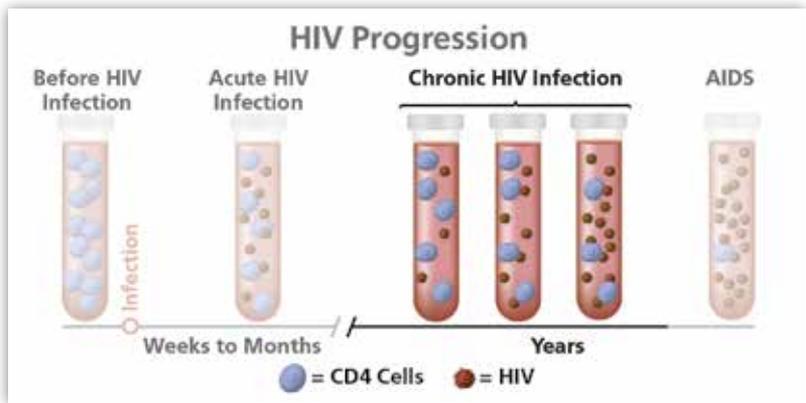


Figure 14

Chronic Inflammatory Demyelinating Polyneuropathy (CIDP)

A rare neurological disorder in which the immune system mistakenly attacks part of the peripheral nervous system. Chronic inflammatory demyelinating polyneuropathy (CIDP) primarily destroys the myelin that covers the peripheral nerves, causing the nerve signals to slow down. This damage can gradually weaken the legs and, to a lesser extent, the arms. CIDP has been associated with HIV infection.

SEE RELATED TERM(S): Myelin, Peripheral Nervous System

Chronic Maintenance Therapy

SYNONYM(S): Maintenance Therapy

Circumoral

Pertaining to the area of the face around the mouth.

Clade

SYNONYM(S): Subtype

Class-Sparing Regimen

An antiretroviral (ARV) drug regimen that purposefully excludes all ARV drugs from a specific drug class. Class-sparing regimens are used to save specific ARV drugs for future use in case a regimen needs to be changed because of toxicity or drug resistance. A class-sparing regimen may also be used to avoid adverse effects associated with a specific drug class.

SEE RELATED TERM(S): Drug Class

Clastogenic

Causing breaks in chromosomes, which results in sections of a chromosome being deleted or rearranged. Before being approved, drugs—including antiretroviral (ARV) drugs—are tested to assess their potential for clastogenic effects.

SEE RELATED TERM(S): Chromosome

Clinical Alert

An early notice of urgent findings from federally funded clinical trials. Clinical alerts are disseminated in a variety of ways, including online, to advise health care professionals and others of research findings that could affect patient care.

SEE RELATED TERM(S): Clinical Trial

Clinical Endpoint

SYNONYM(S): Endpoint, Outcome Measure

In a clinical trial, an outcome or event used to objectively measure the effect of a drug or other intervention being studied. Common endpoints include severe toxicity, disease progression, and death.

SEE RELATED TERM(S): Clinical Trial, Surrogate Endpoint

Clinical Failure

A type of HIV treatment failure. The occurrence or recurrence of an HIV-related complication (excluding IRIS) after more than 3 months of antiretroviral therapy (ART) is considered clinical failure.

SEE RELATED TERM(S): AIDS-Defining Condition, Antiretroviral Therapy, Immune Reconstitution Inflammatory Syndrome, Treatment Failure

Clinical Latency

SYNONYM(S): Chronic HIV Infection

Clinical Progression

Advance of disease that can be measured by observable and diagnosable signs or symptoms. For example, HIV progression can be measured by change in CD4 count.

SEE RELATED TERM(S): CD4 Count, HIV Progression

Clinical Trial (Fig. 15)

SYNONYM(S): Interventional Study

A research study that determines whether a new drug (or other intervention) is both safe and effective for humans. People volunteer to participate in clinical trials (also called interventional studies) to help find better ways to treat, prevent, diagnose, and understand human disease. Clinical trials are conducted in “phases.” Results from Phase 1, 2, and 3 trials are used to determine whether a new drug should be approved for sale in the United States. Once a new drug is approved, researchers continue to track its safety in Phase 4 trials.

SEE RELATED TERM(S): Interventional Trial, Observational Trial, Phase 1 Trial, Phase 2 Trial, Phase 3 Trial, Phase 4 Trial

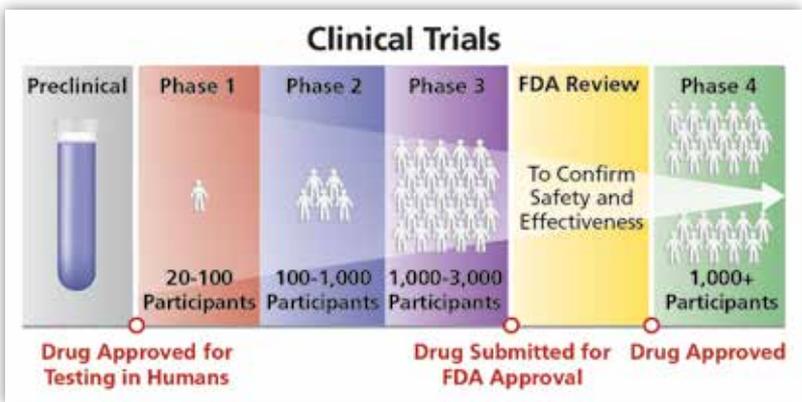


Figure 15

ClinicalTrials.gov

An online, searchable database of up-to-date information on thousands of federally and privately supported clinical trials for a wide range of diseases and conditions, including HIV infection. The site provides information about a trial's purpose, who may participate, study site locations, and contact information. *ClinicalTrials.gov* is managed by the federal government.

SEE RELATED TERM(S): Clinical Trial

Cmax

SYNONYM(S): Peak Concentration

A pharmacokinetic measure used to determine drug dosing. Cmax is the highest concentration of a drug in the blood, cerebrospinal fluid, or target organ after a dose is given.

SEE RELATED TERM(S): Cmin, Pharmacokinetics

Cmin

SYNONYM(S): Trough Concentration, Trough Level

A pharmacokinetic measure used to determine drug dosing. Cmin is the lowest concentration of a drug in the blood, cerebrospinal fluid, or target organ after a dose is given.

SEE RELATED TERM(S): Cmax, Pharmacokinetics

CMV Retinitis

SYNONYM(S): Cytomegalovirus Retinitis

Coagulopathy

A disease or condition that affects the blood's ability to coagulate (clot) normally.

Coccidioidomycosis

SYNONYM(S): Desert Fever, Desert Rheumatism, San Joaquin Valley Fever, Valley Fever

An infection caused by breathing in spores of the fungi *Coccidioides immitis* or *Coccidioides posadasii*. The infection starts in the lungs but can spread to other parts of the body, including the skin, brain, bones, and heart. In people with HIV, disseminated (extrapulmonary) coccidioidomycosis is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Opportunistic Infection

Cognitive Impairment

Difficulty thinking, reasoning, or remembering. Some people with HIV may have cognitive impairment.

Cohort (Fig. 16)

A group of people who share a particular characteristic, for example, age or a medical condition. Participants for a clinical trial may be recruited from a particular cohort, such as pregnant women, children under 5 years old, or men infected with HIV.

SEE RELATED TERM(S): Clinical Trial

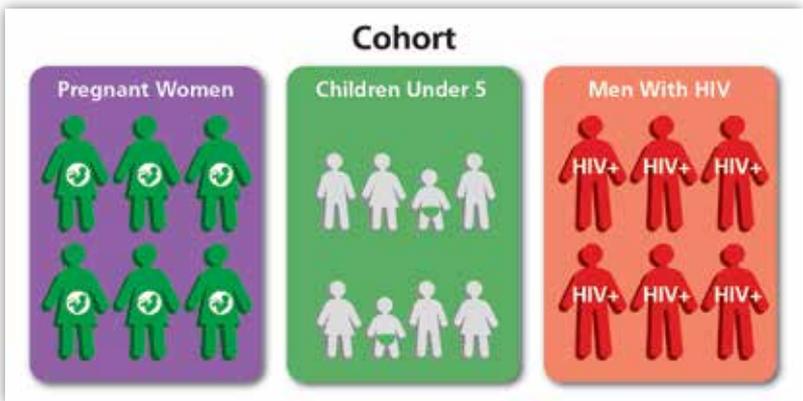


Figure 16

Coinfection

When a person has two or more infections at the same time. For example, a person infected with HIV may be coinfecting with hepatitis C (HCV) or tuberculosis (TB) or both.

SEE RELATED TERM(S): Monoinfection

Colitis

Inflammation of the colon (large intestine). Symptoms can include abdominal pain, nausea, and diarrhea. Colitis may be associated with HIV infection or related opportunistic infections.

Combination Therapy

SYNONYM(S): Antiretroviral Therapy

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Combined Antiretroviral Therapy

SYNONYM(S): Antiretroviral Therapy

Comfort Care

SYNONYM(S): Palliative Care

Common Logarithm

SYNONYM(S): Log10

Communicable Disease

An infectious disease that is contagious and that can be transmitted from one source to another by infectious bacteria or viral organisms.

SEE RELATED TERM(S): Contagious Disease, Infectious Disease

Community Programs for Clinical Research on AIDS (CPCRA)

A federally sponsored program that conducts HIV-related clinical research through a national network of community-based research units. A primary objective of Community Programs for Clinical Research on AIDS (CPCRA) is to involve community-based primary care providers and their patients in HIV/AIDS research.

Community-Based Organization (CBO)

A public or private nonprofit organization that is representative of a community or a significant segment of a community and works to meet community needs. Many community-based organizations provide services to people with HIV.

Comorbid Condition

SYNONYM(S): Comorbidity

Comorbidity

SYNONYM(S): Comorbid Condition

When a person has two or more diseases or conditions at the same time. For example, a person with high blood pressure may also have heart disease.

Compassionate Use

SYNONYM(S): Expanded Access

Complementary and Alternative Medicine (CAM)

Health care practices and products that are not considered part of conventional (Western) medicine. Complementary medicine refers to use of nonstandard treatments together with conventional treatments. Alternative medicine refers to use of nonstandard treatments in place of conventional treatments. Examples of complementary and alternative medicine (CAM) include use of herbal medicines, acupuncture, and massage therapy.

SEE RELATED TERM(S): National Center for Complementary and Integrative Health (NCCIH)

Complete Blood Count (CBC)

A blood test that measures the following components in a sample of blood: red blood cells, white blood cells, platelets, and hemoglobin. A complete blood count (CBC) with differential also measures the levels of the five types of white blood cells found in blood: neutrophils, lymphocytes, monocytes, eosinophils, and basophils. The CBC is used to assess overall health and to diagnose and guide treatment of numerous diseases.

Comprehensive International Program of Research on AIDS (CIPRA)

A federal program that provides long-term support to developing countries to conduct HIV/AIDS research relevant to their populations.

Comprehensive Metabolic Panel (CMP)

SYNONYM(S): Basic Chemistry Profile

A blood test that measures several parameters, including blood sugar (glucose), proteins, electrolytes (such as sodium and potassium), waste products (such as blood urea nitrogen [BUN] and creatinine), and enzymes. The comprehensive metabolic panel is used to assess overall health and to diagnose and guide treatment of numerous diseases.

Concentration

SYNONYM(S): Drug Concentration

Concordant Couple (Fig. 17)

A couple in which both partners are infected with the same sexually transmitted infection (STI), for example HIV.

SEE RELATED TERM(S): Discordant Couple

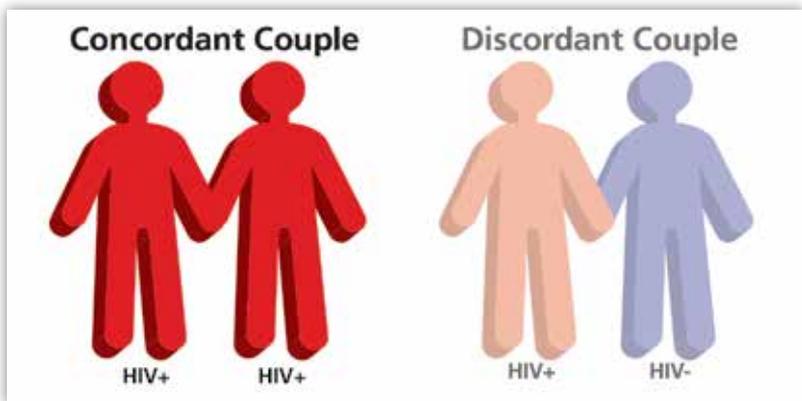


Figure 17

Condom

SYNONYM(S): Prophylactic

A product used during sex (including vaginal, anal, or oral sex) to prevent the transmission of sexually transmitted infections, such as HIV, and/or the likelihood of pregnancy. The male condom is a thin rubber cover that fits over a man's erect penis. The female condom is a polyurethane pouch that fits inside the vagina.

Condyloma Acuminatum

SYNONYM(S): Genital Warts

Conjunctivitis

SYNONYM(S): Pink Eye, Red Eye

Inflammation or infection of the conjunctiva, which is the mucous membrane that lines the inner surface of the eye. Conjunctivitis is commonly caused by a bacterial or viral infection, an allergic reaction, or a blocked tear duct (in babies). Conjunctivitis can also occur as part of a hypersensitivity reaction to certain antiretroviral (ARV) drugs.

Contagious

SYNONYM(S): Contagious Disease

Contagious Disease

SYNONYM(S): Contagious

A very communicable disease that can spread rapidly from person to person through direct contact (touching an infected person), indirect contact (touching a contaminated object), or droplet contact (inhaling droplets made when an infected person coughs, sneezes, or talks).

SEE RELATED TERM(S): Communicable Disease, Infectious Disease, Sexual Transmission

Contraindication

A symptom or condition that makes a particular treatment or procedure inadvisable because of potential for harm. There are two types of contraindications: relative and absolute.

SEE RELATED TERM(S): Absolute Contraindication, Relative Contraindication

Control Arm

In a clinical trial, the group of participants that is not given the experimental intervention being studied. The control arm can receive an intervention that is considered effective (the standard), a placebo, or no intervention. Outcomes in the control arm are compared with those in the experimental arm to determine any differences, for example, in safety and effectiveness.

SEE RELATED TERM(S): Clinical Trial, Placebo, Controlled Trial, Experimental Arm

Controlled Trial

A type of clinical trial that includes a control arm. Outcomes in the control arm are compared with those in the experimental arm to determine any differences, for example, in safety and effectiveness.

SEE RELATED TERM(S): Clinical Trial, Control Arm, Experimental Arm

Coreceptor (Fig. 18)

A protein on the surface of a cell that serves as a second binding site for a virus or other molecule. In order to enter a host cell, HIV must bind to two sites on the cell: the primary CD4 receptor and either the CCR5 or CXCR4 coreceptor.

SEE RELATED TERM(S): CCR5, CXCR4, Receptor

Coronary Risk Profile

SYNONYM(S): Lipid Profile

Cross Resistance

Resistance to one or more drugs that occurs as a result of previous exposure to a similar drug. For example, HIV resistance to one non-nucleoside reverse transcriptase inhibitor (NNRTI) drug may produce resistance to all drugs in the NNRTI drug class, including drugs never used. Excluding all drugs in a drug class from an HIV regimen (drug sparing) is a strategy used to prevent cross resistance.

SEE RELATED TERM(S): Class-Sparing Regimen, Drug Resistance

Cross Sensitivity

A sensitivity reaction to a drug that predisposes a person to react similarly to a different, but related, drug. For example, a person who has an allergic reaction to penicillin may also have an allergic reaction to amoxicillin, a related antibiotic.

Cryoablation

SYNONYM(S): Cryotherapy

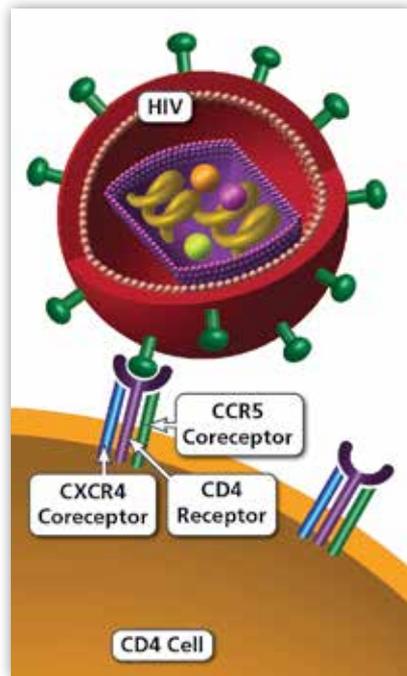


Figure 18

Cryotherapy

SYNONYM(S): Cryoablation

A minimally invasive treatment in which liquid nitrogen or argon gas is used to freeze and destroy tissue. Cryotherapy is used to remove warts and precancerous skin lesions.

Crypto

SYNONYM(S): Cryptosporidiosis

Cryptococcal Meningitis

A life-threatening infection caused by the fungi *Cryptococcus neoformans* and *Cryptococcus gattii*, which infect the membranes surrounding the brain and spinal cord. Symptoms include fever, malaise, and headache. Cryptococcal meningitis most often affects people with weakened immune systems, including people with HIV. In people with HIV, cryptococcal meningitis is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Opportunistic Infection

Cryptococcosis

SYNONYM(S): Torulosis

An infection caused by the fungus *Cryptococcus neoformans*. The fungus enters and infects the body through the lungs. Cryptococcosis may go away on its own, remain in the lungs, or spread throughout the body (disseminate). Most cases of cryptococcosis are in people with weakened immune systems, such as people with HIV. In people with HIV, extrapulmonary (outside the lungs) cryptococcosis is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Cryptococcal Meningitis, Opportunistic Infection

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Cryptosporidiosis

SYNONYM(S): Crypto

An infection caused by the protozoan *Cryptosporidium*. Symptoms of cryptosporidiosis include diarrhea, nausea, vomiting, and lower abdominal cramping. In people with weakened immune systems, such as people with HIV, cryptosporidiosis can lead to severe and life-threatening loss of muscle and body mass and malnutrition. In people with HIV, chronic cryptosporidiosis (lasting more than 1 month) is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, *Cryptosporidium*, Opportunistic Infection

Cryptosporidium

The protozoan parasite that causes the diarrheal disease cryptosporidiosis. *Cryptosporidium* lives in the intestines of infected animals and humans and may be found in soil, food, water, or surfaces that have been contaminated with the feces from infected humans or animals.

SEE RELATED TERM(S): Cryptosporidiosis, Protozoan

Crystalluria

Crystals in the urine. (Crystals are tiny stones composed of chemicals such as calcium.) Use of antiretroviral (ARV) drugs may cause crystalluria.

C-Section

SYNONYM(S): Cesarean Section

Cutaneous

Pertaining to the skin.

CXCR4

SYNONYM(S): Chemokine Receptor 4, Fusin

A protein on the surface of certain immune system cells, including CD4 T lymphocytes (CD4 cells). CXCR4 can act as a coreceptor (a second receptor binding site) for HIV when the virus enters a host cell.

SEE RELATED TERM(S): Coreceptor, Fusion, Life Cycle

CYP3A4

SYNONYM(S): Cytochrome P450 3A4

An enzyme that plays a key role in the metabolism of approximately half the drugs in use today. CYP3A4 is a member of the cytochrome P450 family of enzymes.

SEE RELATED TERM(S): Cytochrome P450

Cystoisosporiasis

SYNONYM(S): Isosporiasis

An intestinal infection caused by the protozoan parasite *Cystoisospora belli* (formerly called *Isoospora belli*). Isosporiasis can be spread by ingesting food or water contaminated with the parasite. Symptoms of isosporiasis include watery diarrhea, abdominal pain, anorexia, and low-grade fever. In people with HIV, chronic isosporiasis (lasting over 1 month) is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Opportunistic Infection

Cytochrome P450 (CYP450)

A group of enzymes involved in the breakdown of drugs in the liver. Many drugs can inhibit or enhance the activity of these enzymes, causing drug levels in the blood to increase or decrease. Cytochrome P450 (CYP450) enzymes metabolize all protease inhibitors (PIs) and non-nucleoside reverse transcriptase inhibitors (NNRTIs) and can cause drug interactions that may result in adverse effects.

SEE RELATED TERM(S): Drug Interaction

Cytochrome P450 3A4

SYNONYM(S): CYP3A4

Cytokine

A family of proteins produced by cells, especially by immune cells. Cytokines act as chemical messengers between cells to regulate immune responses.

SEE RELATED TERM(S): Interferon, Interleukin-2, Interleukin-7

Cytomegalovirus (CMV)

A herpesvirus that can cause infection in many parts of the body. Typically, only people with weakened immune systems become seriously ill from cytomegalovirus (CMV) infection. In people with HIV, CMV can cause serious illnesses, including pneumonia (infection of the lungs), gastroenteritis (infection of the gastrointestinal tract), encephalitis (inflammation of the brain), or retinitis (infection of the eye). CMV infection that begins more than one month after birth and affects a body part other than the liver, spleen, or lymph nodes is an AIDS-defining condition in people with HIV.

SEE RELATED TERM(S): Cytomegalovirus Retinitis, Herpesviruses

Cytomegalovirus Retinitis

SYNONYM(S): CMV Retinitis

Viral inflammation of the retina of the eye caused by cytomegalovirus (CMV). Symptoms, if any, include blurred vision, floaters, and blind spots. In people with HIV, CMV retinitis (with loss of vision) is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Cytomegalovirus, Opportunistic Infection, Retina

Cytopenia

A lower-than-normal number of blood cells, including red blood cells, white blood cells, or platelets.

Cytotoxic

Having the ability to kill cells.

Cytotoxic T Lymphocyte

SYNONYM(S): CD8 T Lymphocyte

Data and Safety Monitoring Board (DSMB)

SYNONYM(S): Data Monitoring Committee (DMC), Data and Safety Monitoring Committees (DSMCs)

A committee of clinical research experts, such as physicians and statisticians, and patient advocates who monitor the progress of a clinical trial and review safety and effectiveness data while the trial is ongoing. This committee is independent of the people, organizations, and institutions conducting the clinical trial. Data and Safety Monitoring Boards (DSMBs) can recommend that a trial be stopped early because of concerns about participant safety or because the main research question has been answered.

SEE RELATED TERM(S): Clinical Trial

Data and Safety Monitoring Committees

SYNONYM(S): Data and Safety Monitoring Board

Data Monitoring Committee

SYNONYM(S): Data and Safety Monitoring Board

Definitive

For certain; without a doubt. An initial positive HIV antibody test must be confirmed by a positive Western blot test for a person to have a definitive diagnosis of HIV infection.

SEE RELATED TERM(S): Presumptive

Dendritic Cell

A type of antigen-presenting cell found in many tissues throughout the body. Dendritic cells capture antigens with their threadlike tentacles and present the antigens to T lymphocytes (T cells), stimulating an immune response.

SEE RELATED TERM(S): Antigen-Presenting Cell

Dendritic Cell Vaccine

An experimental vaccine that uses dendritic cells to boost the immune system. Dendritic cell vaccines are currently being studied as a possible way to treat people with HIV.

SEE RELATED TERM(S): Dendritic Cell

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Deoxyribonucleic Acid (DNA)

One of two types of genetic material found in all living cells and many viruses. (The other type of genetic material is RNA.) Deoxyribonucleic acid (DNA) carries the genetic instructions for the development and function of an organism. DNA allows for the transmission of genetic information from one generation to the next.

SEE RELATED TERM(S): Ribonucleic Acid

Department of Health and Human Services (HHS)

The primary federal agency for protecting the health of all Americans and providing essential human services. The Department of Health and Human Services (HHS) works closely with state and local governments, and many HHS-funded services are provided at the local level by state or county agencies, or through private sector grantees. The agency's 11 operating divisions, including the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), and the National Institutes of Health (NIH), collectively administer more than 300 HHS programs.

SEE RELATED TERM(S): Centers for Disease Control and Prevention, Food and Drug Administration, National Institutes of Health

Depression

A mood disorder characterized by sadness, inactivity, and inability to take pleasure or interest in usual activities. The changes in mood can interfere with daily life and normal functioning. Use of some antiretroviral (ARV) drugs may cause depression.

Desensitization

Preventing or reducing a hypersensitivity (allergic) reaction to a drug by administering a low dose of the drug and then gradually increasing the dose.

SEE RELATED TERM(S): Hypersensitivity, Rechallenge

Desert Fever

SYNONYM(S): Coccidioidomycosis

Desert Rheumantism

SYNONYM(S): Coccidioidomycosis

Diabetes

SYNONYM(S): Diabetes Mellitus

A group of diseases characterized by high levels of blood sugar (glucose). Type 1 diabetes occurs when the body fails to produce insulin, which is a hormone that regulates blood sugar. Type 2 diabetes occurs when the body either does not produce enough insulin or does not use insulin normally (insulin resistance). Common symptoms of diabetes include frequent urination, unusual thirst, and extreme hunger. Use of some antiretroviral (ARV) drugs may increase the risk of type 2 diabetes.

SEE RELATED TERM(S): Hyperglycemia, Insulin Resistance

Diabetes Mellitus

SYNONYM(S): Diabetes

Directly Observed Therapy (DOT)

A method of drug administration in which a health care professional watches as a person takes each dose of a medication. Directly observed therapy (DOT) is used to ensure the person receives and takes all medications as prescribed and to monitor response to treatment. DOT is widely used to manage tuberculosis (TB) disease. In HIV treatment, DOT is sometimes called directly administered antiretroviral therapy (DAART).

SEE RELATED TERM(S): Self-Administered Therapy

Discordant Couple (Fig. 19)

A couple in which one partner is infected with a sexually transmitted infection (STI), for example HIV, and the other partner is **not** infected with the same STI.

SEE RELATED TERM(S): Concordant Couple, Sexually Transmitted Infection

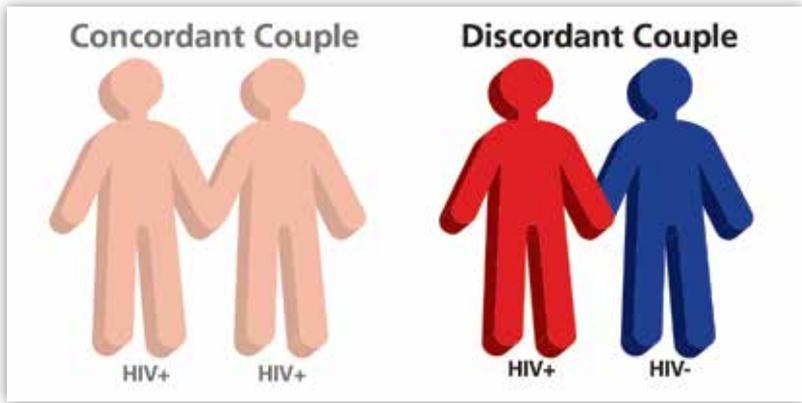


Figure 19

Disseminated

When an infection or disease has widely dispersed in a tissue, an organ, or the entire body.

Distal Sensory Polyneuropathy (DSP)

A type of peripheral neuropathy seen in people infected with HIV. Symptoms of distal sensory polyneuropathy (DSP) include tingling, numbness, or burning pain that normally begins in the legs and feet and may spread to the hands. There are two types of DSP: HIV-DSP, which is due to HIV infection itself and antiretroviral (ARV)-DSP, which is caused by certain ARV drugs.

SEE RELATED TERM(S): Peripheral Neuropathy

Division of Acquired Immunodeficiency Syndrome (DAIDS)

SYNONYM(S): Division of AIDS

A division of the National Institute of Allergy and Infectious Diseases (NIAID) that develops and supports global research to prevent and treat HIV/AIDS, its related co-infections, and co-morbidities.

SEE RELATED TERM(S): National Institute of Allergy and Infectious Diseases

Division of AIDS

SEE RELATED TERM(S): Division of Acquired Immunodeficiency Syndrome

D-M/Tropic Virus

SYNONYM(S): Dual/Mixed Tropic Virus

Dorsocervical Fat Pad

SYNONYM(S): Buffalo Hump

An accumulation of fat on the back of the neck between the shoulders. A dorsocervical fat pad may be due to use of some antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Lipodystrophy Syndrome

Dosage

The administration of individual doses of a medication as part of a medication regimen, usually expressed as quantity per unit of time. For example, a prescribed dosage might consist of 25 mg of a medication given 3 times a day for 6 days.

Dose

The quantity of a medication to be given at one time, or the total quantity of a medication administered during a specified period of time. For example, a patient might receive an initial medication dose of 50 mg, and, during the entire course of treatment, receive a total medication dose of 500 mg.

Dose-Ranging Trial

A type of clinical trial. In dose-ranging trials, different doses of a drug are tested. Trial results are compared to determine which dose is most safe and effective.

SEE RELATED TERM(S): Clinical Trial

Dose-Response Relationship

The association between the dose of a drug and the body's corresponding response to that dose.

Double-Blind Study

SYNONYM(S): Double-Masked Study

A type of clinical trial in which two or more parties involved with the trial (usually the participants and researchers) do not know which participants are receiving the experimental intervention and which participants are receiving the control (a standard intervention that is considered effective).

SEE RELATED TERM(S): Clinical Trial, Control Arm, Single-Blind Study

Double-Masked Study

SYNONYM(S): Double-Blind Study

DRESS

SYNONYM(S): Hypersensitivity Syndrome

Drug Antagonism

SYNONYM(S): Drug Opposition

An interaction between two or more drugs that have opposite effects on the body. Drug antagonism may block or reduce the effectiveness of one or more of the drugs.

SEE RELATED TERM(S): Drug Synergism

Drug Class

A group of drugs that share common properties, including a similar mechanism of action, chemical structure, or approved use. Antiretroviral (ARV) HIV drugs are classified into six drug classes based on how each drug interferes with the HIV life cycle. These six classes include the nucleoside reverse transcriptase inhibitors (NRTIs), non-nucleoside reverse transcriptase inhibitors (NNRTIs), protease inhibitors (PIs), fusion and entry inhibitors, pharmacokinetic enhancers, and integrase strand transfer inhibitors (INSTIs).

SEE RELATED TERM(S): CCR5 Antagonist, Fusion Inhibitor, Integrase Strand Transfer Inhibitor, Life Cycle, Non-Nucleoside Reverse Transcriptase Inhibitor, Nucleoside Reverse Transcriptase Inhibitor, Protease Inhibitor

Drug Concentration

SYNONYM(S): Concentration

The amount of a drug in a given volume of blood plasma, measured as the number of micrograms per milliliter.

Drug Formulation

SYNONYM(S): Formulation

Drug Holiday

SYNONYM(S): Structured Treatment Interruption

Drug Hypersensitivity Syndrome

SYNONYM(S): Hypersensitivity Syndrome

Drug Interaction (Fig. 20)

A reaction between two (or more) drugs or between a drug and a food or supplement. An existing medical condition can also cause a drug interaction. A drug interaction can decrease or increase the action of the drug(s) or cause adverse effects.

SEE RELATED TERM(S): Drug-Drug Interaction, Drug-Food Interaction

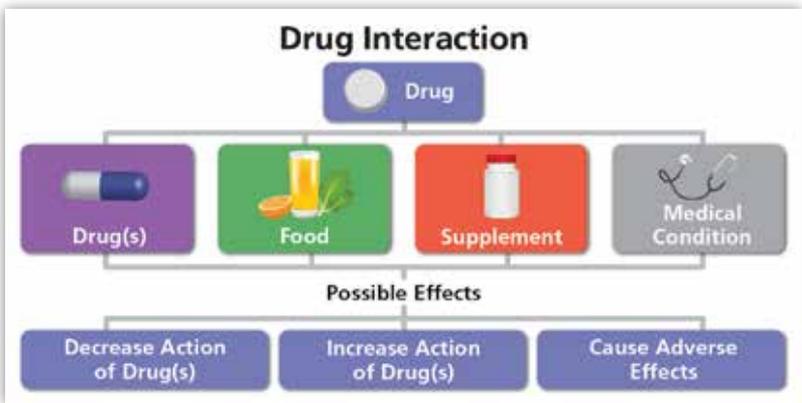


Figure 20

Drug Opposition

SYNONYM(S): Drug Antagonism

Drug Reaction with Eosinophilia and Systemic Symptoms

SYNONYM(S): Hypersensitivity Syndrome

Drug Resistance

SYNONYM(S): Resistance

When a bacteria, virus, or other microorganism mutates (changes form) and becomes insensitive to (resistant to) a drug that was previously effective. Drug resistance can be a cause of HIV treatment failure.

SEE RELATED TERM(S): Acquired Resistance, Drug-Susceptible, Transmitted Resistance, Treatment Failure

Drug Synergism

SYNONYM(S): Synergism, Synergy

An interaction between two or more drugs that causes the total effect of the drugs to be greater than the sum of the individual effects of each drug. A synergistic effect can be beneficial or harmful.

SEE RELATED TERM(S): Drug Antagonism

Drug Toxicity

SYNONYM(S): Toxicity

Drug-Drug Interaction (Fig. 21)

A change in a drug's effect on the body when the drug is taken together with a second drug. A drug-drug interaction can delay, decrease, or enhance absorption of either drug. This can decrease or increase the action of either or both drugs or cause adverse effects.

SEE RELATED TERM(S): Drug Antagonism, Drug Interaction, Drug Synergism

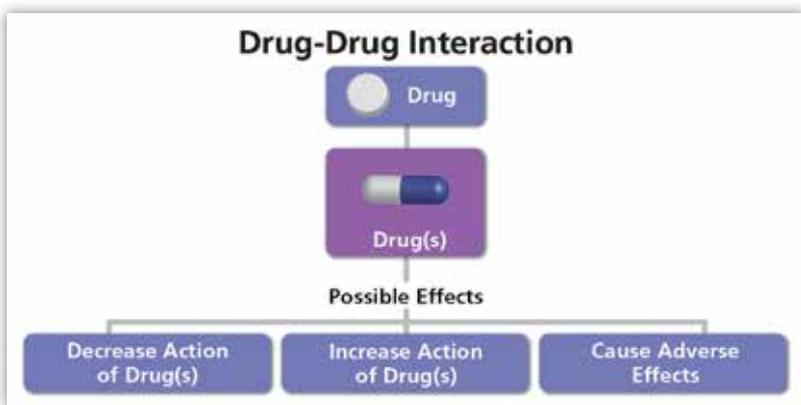


Figure 21

Drug-Food Interaction (Fig. 22)

A change in a drug's effect on the body when the drug is taken together with certain foods (or beverages). Not all drugs are affected by food, and some drugs are affected by only certain foods. A drug-food interaction can delay, decrease, or enhance absorption of a drug. This can decrease or increase the action of the drug or cause adverse effects.

SEE RELATED TERM(S): Drug Interaction

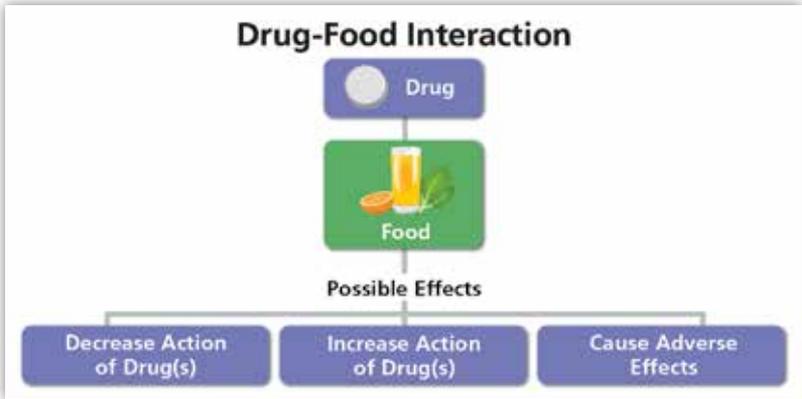


Figure 22

Drug-Susceptible

When a strain of HIV is sensitive to one or more antiretroviral (ARV) drugs. Antiretroviral therapy (ART) will likely be effective against a drug-susceptible strain of HIV.

SEE RELATED TERM(S): Drug Resistance

Dual Energy X-Ray Absorptiometry (DXA)

SYNONYM(S): Bone Density Test

A test that uses low-dose x-rays to measure bone mineral density, including calcium content, in a section of bone. Dual energy x-ray absorptiometry (DXA) scans are used to detect osteoporosis and predict the risk of bone fracture.

SEE RELATED TERM(S): Osteoporosis

Dual/Mixed Tropic Virus

SYNONYM(S): D/M-Tropic Virus

HIV that includes a combination of CCR5-tropic virus and CXCR4-tropic virus (mixed-tropic virus) and/or virus that uses either the CCR5 or the CXCR4 coreceptor (dual-tropic virus). To enter a host CD4 cell, HIV must first attach to a CD4 receptor, then attach to either a CCR5 or CXCR4 coreceptor, and finally fuse its membrane with the CD4 cell membrane.

SEE RELATED TERM(S): CCR5, CXCR4, Dual-Tropic Virus, Mixed-Tropic Virus, R5-Tropic Virus, X4-Tropic Virus

Dual-Tropic Virus (Fig. 23)

A strain of HIV that can enter and infect a host CD4 cell by attaching to either the CCR5 or CXCR4 coreceptor on the CD4 cell. To enter a CD4 cell, HIV must first attach to a CD4 receptor, then attach to either the CCR5 or CXCR4 coreceptor, and finally fuse its membrane with the CD4 cell membrane. HIV is usually R5-tropic (uses CCR5) during the early stages of infection, but the virus may later switch to using either only CXCR4 (X4-tropic) or both CCR5 and CXCR4 (dual-tropic).

SEE RELATED TERM(S): CCR5, CD4 T Lymphocyte, CXCR4, Dual/Mixed Tropic Virus, R5-Tropic Virus, X4-Tropic Virus

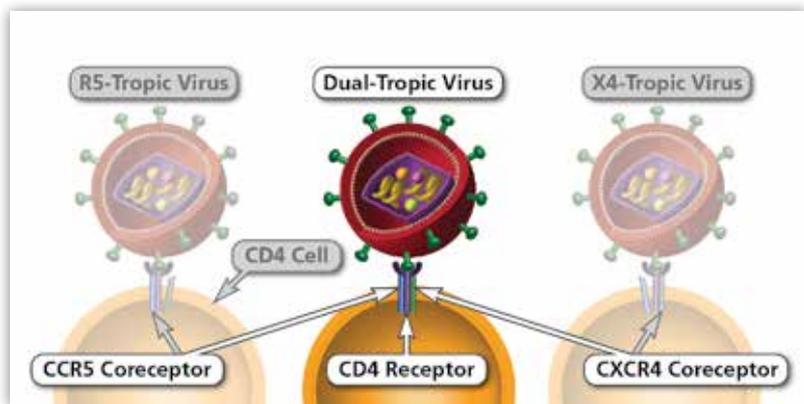


Figure 23

Dyslipidemia

Abnormal levels of lipids (fats), including cholesterol and triglycerides, in the blood. Dyslipidemia can refer to either decreased or elevated levels of lipids. Dyslipidemia may be an adverse effect of some antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Hyperlipidemia

Dysplasia

Abnormal growth or development of cells, tissues, or organs.

Dyspnea

Difficult or labored breathing or shortness of breath.

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Ecchymosis

A blue or purplish bruise that results from bleeding under the skin.

Edema

Abnormal swelling caused by excess accumulation of fluid in tissues or body cavities.

Efficacy

Effectiveness of a drug or other medical intervention. Drugs are tested for efficacy to ensure they produce the desired effect on the disease or condition being treated.

Eligibility Criteria

SYNONYM(S): Exclusion/Inclusion Criteria, Inclusion/Exclusion Criteria

Factors used to determine whether a person is eligible (inclusion criteria) or not eligible (exclusion criteria) to participate in a clinical trial. Eligibility criteria may include disease type and stage, other medical conditions, previous treatment history, age, and gender.

SEE RELATED TERM(S): Clinical Trial, Protocol

Elite Controllers

A very small subset of people infected with HIV who are able to maintain suppressed viral loads for years without antiretroviral therapy (ART). However, because HIV continues to replicate even in elite controllers, ART is recommended for those rare controllers who have declining CD4 counts or who develop HIV-related complications.

SEE RELATED TERM(S): Viral Load

Embryo

In humans, an infant developing in the uterus (womb) from conception until about two months after conception.

Encephalitis

Inflammation of the brain, usually caused by a viral infection. Encephalitis can also be caused by a bacterial infection, toxin, or autoimmune process. Symptoms of encephalitis range from mild, such as flu-like symptoms, to severe, such as seizures. In people with HIV, encephalitis may be due to HIV infection or opportunistic infections, such as *Toxoplasma gondii* infection.

Endemic

When a disease occurs frequently and at a predictable rate in a specific location or population. For example, HIV-2 is endemic to West Africa.

Endpoint

SYNONYM(S): Clinical Endpoint

End-Stage Liver Disease (ESLD)

The most severe stage of liver disease, at which point the liver is barely functioning, if at all. The treatment for end-stage liver disease (ESLD) is a liver transplant.

SEE RELATED TERM(S): Liver

End-Stage Renal Disease (ESRD)

The most severe stage of kidney (renal) disease, at which point the kidneys are barely functioning, if at all. The treatment for end-stage renal disease (ESRD) is dialysis or a kidney transplant.

SEE RELATED TERM(S): Kidneys

Enteric

Pertaining to the intestines. Certain bacterial enteric infections are more common or more severe in people with HIV than in people with healthy immune systems.

Enteric-Coated (EC)

When a tablet or capsule is coated with a substance that prevents the medication from being released until it reaches the small intestine, where it can then be absorbed.

Enteritis

Inflammation of the small intestine.

Entry Inhibitor

An antiretroviral (ARV) HIV drug class that includes both fusion inhibitors and CCR5 antagonists. Entry inhibitors block HIV from entering a host CD4 cell.

SEE RELATED TERM(S): CCR5 Antagonist, Fusion Inhibitor

Envelope (Fig. 24)

SYNONYM(S): HIV Viral Envelope

The outer coat of HIV, made up of two layers of lipids (fatty molecules). HIV uses protein "spikes" embedded in its envelope to enter host cells.

SEE RELATED TERM(S): Capsid, Enzyme, Glycoprotein, Human Immunodeficiency Virus, Ribonucleic Acid

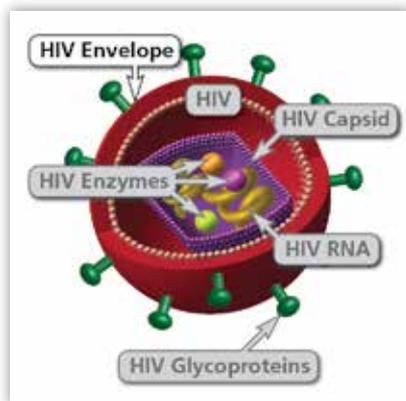


Figure 24

Enzyme

A molecule, usually a protein, that catalyzes (increases the rate of) chemical reactions in the body. Enzymes are essential to all body functions. HIV requires specific enzymes, such as reverse transcriptase or integrase, to replicate.

Enzyme Immunoassay

SYNONYM(S): Enzyme-Linked Immunosorbent Assay (ELISA)

Enzyme-Linked Immunosorbent Assay (ELISA)

SYNONYM(S): Enzyme Immunoassay

A laboratory test to detect the presence of HIV antibodies in the blood, oral fluid, or urine. The immune system responds to HIV infection by producing HIV antibodies. A positive result on an enzyme-linked immunosorbent assay (ELISA) must be confirmed by a second, different antibody test (a positive Western blot) for a person to be definitively diagnosed with HIV infection.

SEE RELATED TERM(S): Antibody, Western Blot

Eosinophilia

An abnormal increase of eosinophils (a type of white blood cell) in the blood, tissues, or organs. Eosinophilia is often a response to infection or allergens (substances that cause an allergic reaction).

Eosinophilic Folliculitis (EF)

A rare, severe type of folliculitis (inflammation of hair follicles) characterized by itchy bumps or pus-filled sores on the face, chest, back, or arms. Eosinophilic folliculitis (EF) is mainly associated with advanced HIV infection.

Epidemic

A widespread outbreak of a disease in a large number of individuals over a particular period of time either in a given area or among a specific group of people.

Epidemiology

The study of the distribution, causes, and clinical characteristics of disease or health status in a population.

Epithelium

A protective tissue consisting of one or more layers of cells that line the internal surface of organs and glands and cover the outer surface of the body. In addition to enclosing and protecting body surfaces, certain types of epithelial cells produce mucus or use tiny hairs called cilia to help remove foreign substances.

Epitope

A specific area on the surface of an antigen that interacts with and binds to specific antibodies. Generally, an antigen has several different epitopes.

SEE RELATED TERM(S): Antibody, Antigen

Epstein-Barr Virus (EBV)

A type of herpesvirus that infects B lymphocytes (B cells). Epstein-Barr virus (EBV) infection is usually asymptomatic but may cause mononucleosis (“mono”). In people with suppressed immune systems, EBV is strongly associated with certain cancers, including Burkitt lymphoma, oral hairy leukoplakia, and nasopharyngeal carcinoma.

SEE RELATED TERM(S): Herpesviruses

Eradication

The total elimination of a pathogen, such as a bacterium, from the body. Eradication can also refer to the complete elimination of a disease from the world, such as the global eradication of smallpox.

Erythema

Redness of the skin.

Erythema Multiforme

A type of rash usually triggered by viral infections, most often herpes simplex infection and sometimes HIV infection.

Erythrocyte

SYNONYM(S): Red Blood Cell

Etiology

The cause of a disease or condition. Etiology may also refer to the branch of medical science that studies the causes of diseases.

Excipient Hyperbilirubinemia

SYNONYM(S): Kernicterus

Exclusion/Inclusion Criteria

SYNONYM(S): Eligibility Criteria

Expanded Access

SYNONYM(S): Compassionate Use

Legal use of an investigational drug outside of a clinical trial to treat a person who has a serious or immediately life-threatening disease and who has no approved treatment options. The Food and Drug Administration (FDA) regulates expanded access to investigational drugs on a case-by-case basis for an individual patient or groups of patients who do not meet criteria to participate in a clinical trial. Drug companies must have permission from the FDA to make an investigational drug available for expanded access.

SEE RELATED TERM(S): Food and Drug Administration, Investigational Drug

Experimental Arm

In a clinical trial, the group of participants that is given the experimental intervention being studied. Outcomes in the experimental arm are compared with those in the control arm to determine any differences, for example, in safety and effectiveness.

SEE RELATED TERM(S): Clinical Trial, Control Arm

Experimental Drug

SYNONYM(S): Investigational Drug

Extensively Drug Resistant Tuberculosis (XDR-TB)

A relatively rare type of multiple drug resistant tuberculosis (MDR-TB). Extensively drug resistant tuberculosis (XDR-TB) occurs when a *Mycobacterium tuberculosis* strain becomes resistant to drugs used to treat TB, including the two most effective first-line antibiotics (isoniazid and rifampin) and most of the second-line drugs. XDR-TB progresses more rapidly and is more severe in people coinfecting with HIV than in people infected with XDR-TB alone.

SEE RELATED TERM(S): Multiple Drug Resistant Tuberculosis, *Mycobacterium Tuberculosis*, Tuberculosis

False Negative

A negative test result that incorrectly indicates that the condition being tested for is not present when, in fact, the condition is actually present. For example, a false negative HIV test indicates a person does not have HIV when, in fact, the person is infected with HIV.

SEE RELATED TERM(S): False Positive

False Positive

A positive test result that incorrectly indicates that the condition being tested for is present when, in fact, the condition is actually not present. For example, a false positive HIV test indicates a person has HIV when, in fact, the person is not infected with HIV.

SEE RELATED TERM(S): False Negative

Fanconi Syndrome

A hereditary or acquired kidney disorder that impairs the reabsorption of electrolytes, glucose, amino acids, and other nutrients into the bloodstream when blood passes through the kidneys. Acquired Fanconi syndrome may be caused by use of certain antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Kidneys

Fatty Liver

SYNONYM(S): Hepatic Steatosis

Fetus

In humans, an infant developing in the uterus (womb) from about the end of the second month of pregnancy until birth.

First-Line Therapy

A treatment that is accepted as best for the initial treatment of a condition or disease. The recommended first-line HIV treatment regimens include antiretroviral (ARV) drugs that are safe, effective, and convenient for most people with HIV who have never taken ARVs before.

SEE RELATED TERM(S): Treatment-Naïve

Fixed-Dose Combination (Fig. 25)

Two or more drugs contained in a single dosage form, such as a capsule or tablet. An example of a fixed-dose combination HIV drug is Atripla (a combination of efavirenz, emtricitabine, and tenofovir). By reducing the number of pills a person must take each day, fixed-dose combination drugs can help improve adherence to an HIV treatment regimen.

SEE RELATED TERM(S): Adherence, Drug Class, Regimen Simplification

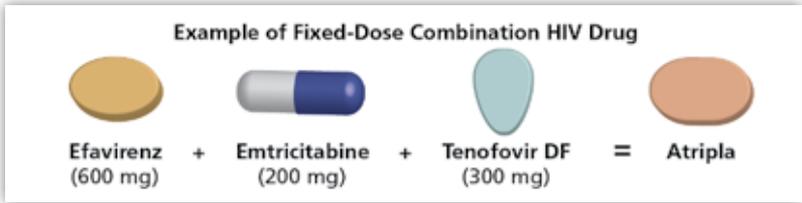


Figure 25

Food and Drug Administration (FDA)

The federal agency responsible for ensuring the safety, effectiveness, and security of human drugs (including vaccines and other biological products for human use), veterinary drugs, and medical devices. The agency also is responsible for the safety and security of our nation's food supply, cosmetics, dietary supplements, and products that give off electronic radiation, and for regulating tobacco products.

Formulation (Fig. 26)

SYNONYM(S): Drug Formulation

The physical form in which a drug is manufactured or administered. Examples of formulations include tablets, capsules, powders, and oral and injectable solutions. A drug may be available in multiple formulations.

Formulation

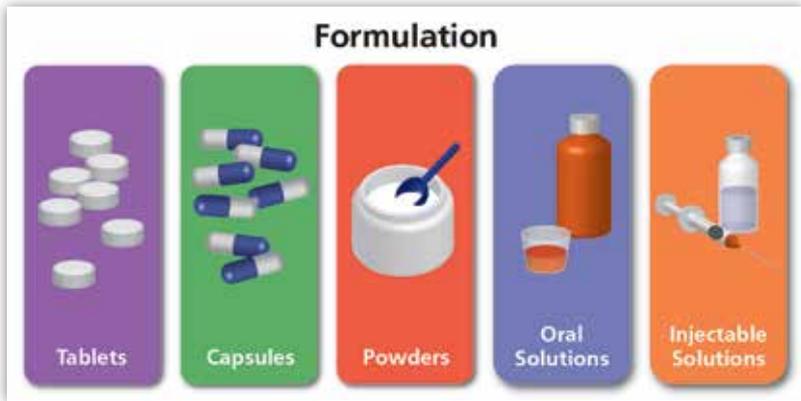


Figure 26

Fungus

A plant-like organism that feeds off a living host organism or dead or decaying material. Examples of fungi include mushrooms, yeast, and mold. People with weakened immune systems, including people with HIV, are at a higher risk for fungal infections than people with healthy immune systems.

Fusin

SYNONYM(S): CXCR4

Fusion (Fig. 27)

The second of seven steps in the HIV life cycle. After HIV attaches itself to a host CD4 cell, the HIV viral envelope fuses with the CD4 cell membrane. Fusion allows HIV to enter the CD4 cell. Once inside the CD4 cell, the virus releases HIV RNA and HIV enzymes, such as reverse transcriptase and integrase.

SEE RELATED TERM(S): Fusion Inhibitor, Life Cycle

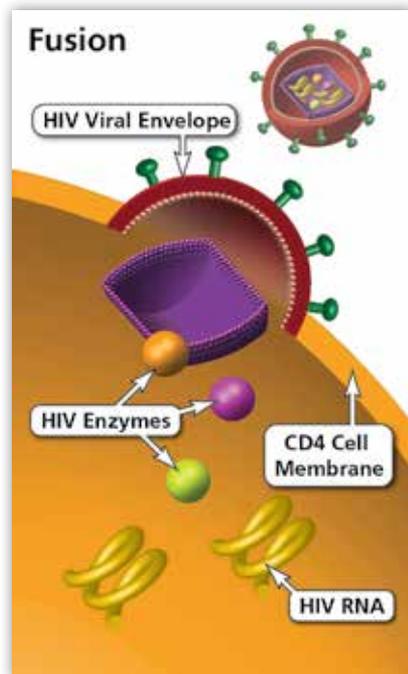


Figure 27

Fusion Inhibitor (Fig. 28)

Antiretroviral (ARV) HIV drug class. Fusion inhibitors block the HIV envelope from merging with the host CD4 cell membrane (fusion). This prevents HIV from entering the CD4 cell.

SEE RELATED TERM(S): Drug Class, Envelope, Fusion

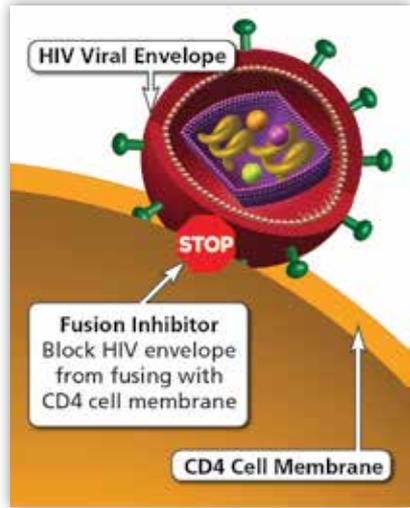


Figure 28

Gamma Globulin

A group of proteins found in blood plasma. Most antibodies are gamma globulins. Injections of gamma globulin, which contain high levels of antibodies, can be given to boost a person's immune system.

SEE RELATED TERM(S): Antibody

Gamma-Glutamyl Transpeptidase (GGT)

An enzyme found in many organs in the body, including the liver. Gamma-glutamyl transpeptidase may be measured as part of a liver function test.

SEE RELATED TERM(S): Liver Function Test

Gastroenteritis

Inflammation of the stomach and intestinal tract.

Gastrointestinal (GI)

Pertaining to the stomach and intestinal tract. Gastrointestinal (GI) symptoms, such as nausea, vomiting, and diarrhea, may be caused by HIV infection, opportunistic infections, or some antiretroviral (ARV) drugs.

Gene

The basic physical unit of inheritance. A gene is a short segment of DNA (or in the case of some viruses, RNA) that contains instructions for making proteins.

SEE RELATED TERM(S): Deoxyribonucleic Acid, Protein, Genome, Ribonucleic Acid

Gene Therapy

Manipulating genes to treat or prevent disease. Gene therapy techniques being researched include replacing a defective gene with a healthy copy of the gene, repairing an abnormal gene, inactivating an improperly functioning gene, and introducing a new disease-fighting gene.

SEE RELATED TERM(S): Gene

Generic Drug

A drug that has the same active ingredients, dosage, formulation, safety, strength, route of administration, quality, effectiveness, and intended use as a brand-name drug. For example, ibuprofen is a generic drug that has several manufacturers and brand names, including Advil and Motrin. Generic drugs are usually less expensive than brand-name drugs.

Genetic Engineering

Using biotechnological techniques to modify an organism by changing its genetic material (DNA or RNA). For example, bacteria can be genetically engineered to produce insulin, which can then be used to treat diabetes.

SEE RELATED TERM(S): Deoxyribonucleic Acid, Ribonucleic Acid

Genital Ulcer Disease

Any of several diseases that are characterized by genital sores. Genital ulcer diseases are usually sexually transmitted infections, including genital herpes, syphilis, and chancroid. Genital ulcer diseases increase the risk of sexual transmission of HIV.

SEE RELATED TERM(S): Sexually Transmitted Infection

Genital Warts

SYNONYM(S): Condyloma Acuminatum, Venereal Warts

A sexually transmitted infection caused by the human papillomavirus (HPV). Genital warts appear as raised pink or flesh-colored bumps on the surface of or the tissue surrounding the vagina, cervix, tip of the penis, or anus.

SEE RELATED TERM(S): Human Papillomavirus, Sexually Transmitted Infection

Genitourinary System

SYNONYM(S): Genitourinary Tract

Genitourinary Tract

SYNONYM(S): Genitourinary System, Urogenital System, Urogenital Tract

All organs involved in the production and excretion of urine plus all organs involved with reproduction. Organs of the genitourinary tract include the kidneys, bladder, fallopian tubes, and penis.

Genome

The complete genetic material of an organism, including all of its genes.

The genome is contained in a set of chromosomes in humans, a single chromosome in bacteria, and a DNA or RNA molecule in viruses. The HIV genome consists of an RNA molecule and includes nine genes.

SEE RELATED TERM(S): Deoxyribonucleic Acid, Gene, Ribonucleic Acid

Genotypic Antiretroviral Resistance Test (GART)

SYNONYM(S): Genotypic Assay

A type of resistance test that detects drug-resistant mutations in HIV genes. Resistance testing is used to guide selection of an HIV regimen when initiating or changing antiretroviral therapy (ART).

SEE RELATED TERM(S): Phenotypic Antiretroviral Resistance Test, Resistance Testing

Genotypic Assay

SYNONYM(S): Genotypic Antiretroviral Resistance Test

Glucose

SYNONYM(S): Blood Sugar, Sugar

Blood sugar. Glucose, the main source of fuel for the body, is formed when foods are broken down in the digestive system. After digestion, glucose is absorbed into the bloodstream and then used for cell growth and energy.

SEE RELATED TERM(S): Diabetes, Hyperglycemia, Insulin Resistance

Glycoprotein

A molecule that consists of a protein plus one or more carbohydrates.

Glycoprotein 120

SYNONYM(S): gp120

Glycoprotein 160

SYNONYM(S): gp160

Glycoprotein 41

SYNONYM(S): gp41

Gonorrhea

SYNONYM(S): The Clap

A sexually transmitted infection caused by the bacterium *Neisseria gonorrhoeae*. Gonorrhea can also be transmitted from an infected mother to her child during delivery. Gonorrhea often has mild or no symptoms. However, if left untreated, gonorrhea can lead to infertility, and it can spread into the bloodstream and affect the joints, heart valves, and brain. Gonorrhea increases the risk of sexual transmission of HIV.

SEE RELATED TERM(S): Sexually Transmitted Infection

gp120

SYNONYM(S): Glycoprotein 120

A glycoprotein on the HIV envelope. gp120 binds to a CD4 receptor on a host cell, such as a CD4 T lymphocyte (CD4 cell). This starts the process by which HIV fuses its viral membrane with the host cell membrane and enters the host cell.

SEE RELATED TERM(S): Envelope, Fusion, Glycoprotein, Life Cycle

gp160

SYNONYM(S): Glycoprotein 160

An HIV glycoprotein. gp160 is a precursor of the HIV envelope glycoproteins gp41 and gp120.

SEE RELATED TERM(S): Glycoprotein, gp120, gp41, Life Cycle

gp41

SYNONYM(S): Glycoprotein 41

A glycoprotein on the HIV envelope. HIV enters a host cell by using gp41 to fuse the HIV envelope with the host cell membrane.

SEE RELATED TERM(S): Fusion, Glycoprotein, Life Cycle

Granulocyte

A type of white blood cell that includes neutrophils, eosinophils, and basophils. Granulocytes help the body fight infection.

SEE RELATED TERM(S): White Blood Cell

Granulocyte Macrophage-Colony Stimulating Factor (GM-CSF)

A protein that stimulates white blood cells, especially granulocytes, macrophages, and cells that become platelets, to multiply and mature. A laboratory-produced version of this protein is often used to boost a low white blood cell count.

SEE RELATED TERM(S): Granulocyte, White Blood Cell

Granulocyte-Colony Stimulating Factor (G-CSF)

A protein that stimulates neutrophils, which are a type of white blood cell, to multiply and mature. A laboratory-produced version of this protein is used to boost a low neutrophil count.

SEE RELATED TERM(S): Granulocyte, White Blood Cell

Granulocytopenia

SYNONYM(S): Agranulocytopenia

A deficiency or abnormal decrease in the number of granulocytes, a type of white blood cell. Granulocytopenia may be caused by certain bone marrow diseases, chemotherapy, or certain drugs used to treat HIV and opportunistic infections.

SEE RELATED TERM(S): Granulocyte

Guillain-Barré Syndrome (GBS)

SYNONYM(S): Acute Inflammatory Demyelinating Polyneuropathy

A rare acute neurological disorder in which the immune system mistakenly attacks part of the peripheral nervous system. Guillain-Barré syndrome (GBS) primarily destroys the myelin that covers the peripheral nerves, causing the nerve signals to slow down. This damage can result in weakness and sometimes paralysis of the legs, arms, face, and breathing muscles. GBS is often preceded by a bacterial or viral infection and can occur early in the course of HIV infection.

SEE RELATED TERM(S): Myelin, Peripheral Nervous System

Gynecomastia

Development of larger-than-normal breasts in males. Gynecomastia is due to excess growth of breast tissue, not fat tissue. Gynecomastia is sometimes caused by natural hormonal changes, but it can also be due to use of certain medications, including antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Body Habitus Changes

Half-Life

The time it takes a drug to lose half its original concentration or activity after being introduced into the body. Drug half-life is considered when determining drug dosing.

Health Care Financing Administration

SYNONYM(S): Centers for Medicare and Medicaid Services

Health Resources and Services Administration (HRSA)

The primary federal agency for improving access to health care services for people who are uninsured, isolated, or medically vulnerable. Through its HIV/AIDS bureau, the Health Resources and Services Administration (HRSA) administers the Ryan White HIV/AIDS Program, the largest federal program focused exclusively on HIV/AIDS care.

SEE RELATED TERM(S): Ryan White HIV/AIDS Program

HELLP Syndrome

A rare but life-threatening complication of pregnancy that is characterized by **H**emolysis (breakdown of red blood cells), **E**levated **L**iver enzyme levels, and a **L**ow **P**latelet count. HELLP develops late in pregnancy, or sometimes after birth.

Helper T Cell

SYNONYM(S): CD4 T Lymphocyte

Hematocrit

A laboratory test that measures the percentage of the volume of red blood cells in whole blood. Hematocrit is normally ordered as part of a complete blood count.

SEE RELATED TERM(S): Complete Blood Count

Hematotoxic

Poisonous to the blood and to the organs and tissues involved in the production of blood, such as the bone marrow.

Hematuria

Blood in the urine.

Hemoglobin

A protein in red blood cells that carries oxygen from the lungs to the tissues of the body. Hemoglobin also refers to the hemoglobin test, which is normally ordered as part of a complete blood count.

SEE RELATED TERM(S): Complete Blood Count

Hemolysis

Destruction of red blood cells. Hemolysis occurs as part of the natural life cycle of red blood cells, or it may be caused by certain conditions or drugs.

SEE RELATED TERM(S): Red Blood Cell

Hemophilia

A rare blood clotting disorder that is usually inherited and most often affects males. The main symptom of hemophilia is prolonged bleeding either spontaneously or after an injury or accident.

Hemorrhage

Excessive or uncontrollable bleeding from one or more blood vessels. A hemorrhage, which may be internal or external, is often caused by injury or surgical complications or from advanced disease. The use of certain antiretroviral (ARV) drugs may cause internal hemorrhage.

Hepatic

Pertaining to the liver.

SEE RELATED TERM(S): Liver

Hepatic Necrosis

Death of liver cells. Hepatic necrosis may be caused by certain antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Liver

Hepatic Steatosis

SYNONYM(S): Fatty Liver

Excessive accumulation of triglycerides and other fats in liver cells. Use of certain antiretroviral (ARV) drugs may cause hepatic steatosis.

SEE RELATED TERM(S): Liver

Hepatitis

Inflammation of the liver, usually from a viral infection. The most common hepatitis infections are hepatitis A, hepatitis B, and hepatitis C. Hepatitis may also be due to autoimmune disease, alcohol, medications, or toxic agents. Symptoms of hepatitis, if any, can include loss of appetite, nausea and vomiting, and jaundice. Hepatitis can lead to liver damage, liver failure, or cancer. Hepatitis is also often used to refer to the group of viral infections that affect the liver (hepatitis A, B, C, D, and E).

SEE RELATED TERM(S): Hepatitis B Virus (HBV) Infection, Hepatitis C Virus (HCV) Infection, Jaundice, Liver

Hepatitis B Virus (HBV) Infection

Infection with the hepatitis B virus (HBV). HBV can be transmitted through blood, semen, or other body fluids during sex or injection-drug use. Because HIV and HBV share the same modes of transmission, people infected with HIV are often also coinfecting with HBV. HBV infection progresses more rapidly in people coinfecting with HIV than in people infected with HBV alone.

SEE RELATED TERM(S): Hepatitis, Opportunistic Infection

Hepatitis C Virus (HCV) Infection

Infection with the hepatitis C virus (HCV). HCV is usually transmitted through blood and rarely through other body fluids, such as semen. HCV infection progresses more rapidly in people coinfecting with HIV than in people infected with HCV alone.

SEE RELATED TERM(S): Hepatitis

Hepatomegaly

Abnormal enlargement of the liver.

SEE RELATED TERM(S): Liver

Hepatotoxicity

Toxic damage to the liver. Drugs, including antiretroviral (ARV) drugs, can cause hepatotoxicity.

SEE RELATED TERM(S): Liver

Herpes Simplex Virus 1 (HSV-1) Infection

An infection caused by herpes simplex virus 1 (HSV-1) and usually associated with lesions on the lips, mouth, and face. HSV-1 is very contagious and is transmitted by direct contact including sexual contact with someone who is infected (even if lesions are not visible). Treatment cannot completely clear HSV-1 from the body, but antiviral therapy can shorten and prevent outbreaks and reduce the risk of transmission. People with weakened immune systems, such as people with HIV, are more likely to have lesions that spread to other parts of the body than people with healthy immune systems.

SEE RELATED TERM(S): Herpesviruses, Opportunistic Infection

Herpes Simplex Virus 2 (HSV-2) Infection

An infection caused by herpes simplex virus 2 (HSV-2) and usually associated with lesions in the genital or anal area. HSV-2 is very contagious and is transmitted by direct contact including sexual contact with someone who is infected (even if lesions are not visible). Treatment cannot eradicate HSV-2 from the body, but antiviral therapy can shorten and prevent outbreaks and reduce the risk of transmission. People with weakened immune systems, such as people with HIV, are more likely to have lesions that spread to other parts of the body than people with healthy immune systems.

SEE RELATED TERM(S): Herpesviruses, Opportunistic Infection

Herpes Zoster

SYNONYM(S): Varicella Zoster Virus

Herpesviruses

SYNONYM(S): Human Herpesviruses

A group of viruses that use DNA as their genetic material. Herpesviruses include herpes simplex viruses 1 and 2 (HSV-1 and -2), varicella zoster virus (VZV or HHV-3), Epstein-Barr virus (EBV or HHV-4), cytomegalovirus (CMV or HHV-5), herpes simplex viruses 6 and 7 (HSV-6 and -7), and Kaposi sarcoma herpesvirus (KSHV or HHV-8).

High Blood Pressure

SYNONYM(S): Hypertension

Highly Active Antiretroviral Therapy

SYNONYM(S): Antiretroviral Therapy

Histiocyte

SYNONYM(S): Macrophage

Histoplasmosis

A lung infection caused by the fungus *Histoplasma capsulatum*. Symptoms include fever, chest pain, and dry cough. In people with weakened immune systems, such as people with HIV, histoplasmosis may spread to other parts of the body, including the brain or gastrointestinal tract. Histoplasmosis (disseminated or extrapulmonary) is an AIDS-defining condition in people with HIV.

SEE RELATED TERM(S): AIDS-Defining Condition, Opportunistic Infection

HIV Encephalopathy

SYNONYM(S): AIDS Dementia Complex

HIV Gingivitis

SYNONYM(S): Linear Gingival Erythema

HIV Prevention Trials Network (HPTN)

A federally funded, worldwide clinical trials network that develops and tests the safety and efficacy of primarily non-vaccine interventions designed to prevent the transmission of HIV.

SEE RELATED TERM(S): Clinical Trial

HIV Preventive Vaccine

SYNONYM(S): Preventive HIV Vaccine

HIV Progression (Fig. 29)

The course of HIV infection. HIV is an infection that progresses in three stages: acute HIV infection, chronic HIV infection, and AIDS. During acute infection, HIV multiplies rapidly. As acute HIV infection progresses to chronic HIV infection, HIV multiplies less rapidly and HIV levels drop. However, as chronic HIV infection advances, HIV levels increase and the number of CD4 cells decreases. Declining CD4 cell levels indicate increasing damage to the immune system. Antiretroviral therapy (ART) can prevent HIV from destroying the immune system and advancing to AIDS.

SEE RELATED TERM(S): Antiretroviral Therapy, Acquired Immunodeficiency Syndrome, Acute HIV Infection, Chronic HIV Infection

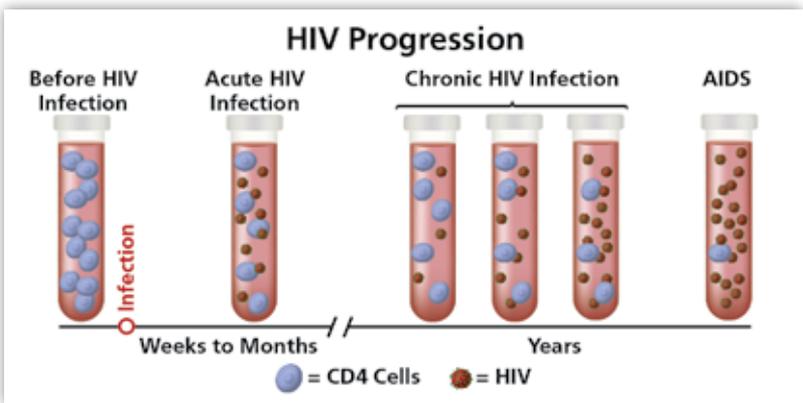


Figure 29

HIV Therapeutic Vaccine

SYNONYM(S): Therapeutic HIV Vaccine

HIV Vaccine Trials Network (HVTN)

A federally funded international clinical trials network that works towards finding an effective and safe HIV vaccine. HIV Vaccine Trials Network (HVTN) conducts clinical trials on preventive HIV vaccines and educates community members on the general science of HIV/AIDS vaccines and associated research methods.

SEE RELATED TERM(S): Clinical Trial, Preventive HIV Vaccine

HIV Viral Core

SYNONYM(S): Capsid

HIV Viral Envelope

SYNONYM(S): Envelope

HIV Viral Envelope Glycoprotein 120

SYNONYM(S): gp120

HIV Viral Envelope Glycoprotein 160

SYNONYM(S): gp160

HIV Viral Envelope Glycoprotein 41

SYNONYM(S): gp41

HIV-1

One of the two types of HIV, the virus that causes AIDS. AIDS is the most advanced stage of HIV infection. HIV-1 is transmitted through direct contact with HIV-infected body fluids, such as blood, semen, and genital secretions, or from an HIV-infected mother to her child during pregnancy, delivery, or breastfeeding (through breast milk). HIV-1 is responsible for the majority of HIV infections worldwide. In the United States, unless otherwise noted, the term "HIV" primarily refers to HIV-1.

SEE RELATED TERM(S): Acquired Immunodeficiency Syndrome, HIV-2

HIV-2

One of the two types of HIV, the virus that causes AIDS. AIDS is the most advanced stage of HIV infection. HIV-2 infection is endemic to West Africa. Like HIV-1, HIV-2 is transmitted through direct contact with HIV-infected body fluids, such as blood, semen, and genital secretions, or from an HIV-infected mother to her child during pregnancy, delivery, or breastfeeding (through breast milk). HIV-2 infection generally takes longer to progress to symptomatic HIV/AIDS and has a lower mortality rate than HIV-1 infection.

SEE RELATED TERM(S): Acquired Immunodeficiency Syndrome, HIV-1

HIV-Associated Adult-Onset Nemaline Myopathy

SYNONYM(S): Nemaline Rod Myopathy

HIV-Associated Dementia

SYNONYM(S): AIDS Dementia Complex

HIV-Associated Nephropathy (HIVAN)

Kidney disease associated with HIV infection. HIV-associated nephropathy (HIVAN) usually begins with large amounts of protein in the urine (proteinuria) and progresses rapidly to total kidney failure. HIVAN is very uncommon in people whose HIV is effectively controlled by antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Kidneys

HIV-Associated Neurocognitive Disorders (HAND)

A range of increasingly severe central nervous system complications associated with HIV infection. HIV-associated neurocognitive disorders (HAND) range from mild problems with memory, language, and reasoning to the more severe HIV-associated dementia (HAD).

SEE RELATED TERM(S): AIDS Dementia Complex

Hives

SYNONYM(S): Urticaria

HLA-B*5701 Test

SYNONYM(S): HLA-B*5701 Testing

A test that detects the presence of HLA-B*5701. The HLA-B*5701 molecule is linked to hypersensitivity to the antiretroviral (ARV) drug abacavir. A person who tests positive for HLA-B*5701 should not use abacavir or any other abacavir-containing medicine again.

SEE RELATED TERM(S): Human Leukocyte Antigen

HLA-B*5701 Testing

SYNONYM(S): HLA-B*5701 Test

HMG-CoA Reductase Inhibitor

SYNONYM(S): Statin

Hodgkin Disease

SYNONYM(S): Hodgkin Lymphoma

Hodgkin Lymphoma

SYNONYM(S): Hodgkin Disease

A type of lymphoma (cancer of the lymphatic system). Hodgkin lymphoma is characterized by progressive enlargement of the lymph nodes, spleen, and general lymphoid tissue and by the presence of large, usually multinucleate cells of unknown origin called Reed-Sternberg cells. In people with HIV, Hodgkin lymphoma is an AIDS-related cancer.

SEE RELATED TERM(S): AIDS-Related Cancer, Lymphoma

Horizontal Transmission

SYNONYM(S): Secondary Transmission

Hormone

A chemical messenger produced by the body and carried by the blood to tissues and organs. Hormones regulate many different body processes, including growth and development, metabolism, sexual function, reproduction, and mood. HIV can affect the production of hormones, such as estrogen and testosterone.

Host

The animal or plant (or specific part of an animal or plant) in which another organism or microorganism lives. For example, CD4 cells infected with HIV are called host cells.

Human Growth Hormone (hGH)

A hormone that is produced by the pituitary gland and stimulates the growth of bones, muscles, and other organs. A synthetic version of human growth hormone (hGH) is approved by the Food and Drug Administration (FDA) for the treatment of AIDS-related wasting syndrome.

SEE RELATED TERM(S): Wasting Syndrome

Human Herpesvirus 3

SYNONYM(S): Varicella Zoster Virus

Human Herpesvirus 6 (HHV-6) Infection

An infection caused by human herpesvirus 6 (HHV-6). HHV-6 is primarily transmitted through saliva and usually causes disease only in children or people with weakened immune systems. HHV-6 can cause neurological diseases, such as encephalitis and febrile seizures. HHV-6 can also cause fever and rash (roseola), which mostly affects children between 6 months and 2 years old.

SEE RELATED TERM(S): Herpesviruses, Opportunistic Infection

Human Herpesvirus 7 (HHV-7)

A type of herpesvirus found in saliva of people infected with human herpesvirus 7 (HHV-7). HHV-7 has not been definitively documented to cause a specific disease.

SEE RELATED TERM(S): Herpesviruses

Human Herpesvirus 8

SYNONYM(S): Kaposi Sarcoma Associated Herpesvirus

Human Herpesviruses

SYNONYM(S): Herpesviruses

Human Immunodeficiency Virus (HIV) (Fig. 30)

The virus that causes AIDS, which is the most advanced stage of HIV infection. HIV is a retrovirus that occurs as two types: HIV-1 and HIV-2. Both types are transmitted through direct contact with HIV-infected body fluids, such as blood, semen, and genital secretions, or from an HIV-infected mother to her child during pregnancy, birth, or breastfeeding (through breast milk).

SEE RELATED TERM(S): Acquired Immunodeficiency Syndrome, HIV-1, HIV-2, Retrovirus

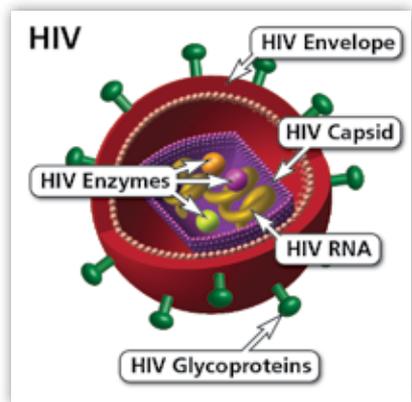


Figure 30

Human Leukocyte Antigen (HLA)

A group of molecules found on the surface of almost every cell in the body. Human leukocyte antigens (HLAs) present protein fragments (peptides) to immune cells. If the cells recognize the peptides as foreign, the body mounts an immune response. Some diseases and drug reactions are linked to certain types of HLAs.

SEE RELATED TERM(S): Major Histocompatibility Complex

Human Papillomavirus (HPV)

The virus that causes human papillomavirus (HPV) infection, the most common sexually transmitted infection. There are many kinds of HPV, including some that can cause genital warts and cancer. HPV is the most frequent cause of cervical cancer. In women with HIV, invasive cervical cancer is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Cervical Cancer, Opportunistic Infection, Sexually Transmitted Infection

Human T-Cell Lymphotropic Virus Type I (HTLV-I)

A retrovirus that infects only T lymphocytes (T cells). Human T cell lymphotropic virus type 1 (HTLV-1) is transmitted through exposure to contaminated blood, through sexual contact, and from an infected mother to her child at birth or through breastfeeding via breast milk. HTLV-1 is prevalent mostly in Japan, Africa, the Caribbean Islands, and South America. HTLV-1 can cause adult T-cell leukemia/lymphoma, a rare and aggressive cancer of the white blood cells.

SEE RELATED TERM(S): Retrovirus

Humoral Immune Response

SYNONYM(S): Humoral Immunity

Humoral Immunity

SYNONYM(S): Humoral Immune Response

Type of immune response that is mediated by antibodies.

SEE RELATED TERM(S): Antibody, Cell-Mediated Immunity

Hyperadiposity

SYNONYM(S): Lipohypertrophy

Hypergammaglobulinemia

A higher-than-normal level of gamma globulin in the blood. Gamma globulins are a group of blood proteins that include most antibodies. Hypergammaglobulinemia may occur with chronic infections, including HIV infection.

Hyperglycemia

Abnormally high blood sugar (glucose) level. Use of some antiretroviral (ARV) drugs may cause hyperglycemia.

Hyperlipidemia

Excess lipids (cholesterol, triglycerides, or both) in the blood. Hyperlipidemia increases the risk of high blood pressure, heart disease, and stroke. Hyperlipidemia may be caused by HIV infection or use of some antiretroviral (ARV) drugs.

Hyperplasia

An increase in the number of cells in a tissue or organ. Hyperplasia may be due to a normal, increased demand for cells or may be a sign of precancerous changes.

Hypersensitivity

SYNONYM(S): Hypersensitivity Reaction

An exaggerated immune response to a specific antigen or drug. Hypersensitivity reactions, including allergic reactions, can be life-threatening. Use of some antiretroviral (ARV) drugs may cause a hypersensitivity reaction.

Hypersensitivity Reaction

SYNONYM(S): Hypersensitivity

Hypersensitivity Syndrome

SYNONYM(S): DRESS, Drug Hypersensitivity Syndrome, Drug Reaction with Eosinophilia and Systemic Symptoms

A life-threatening allergic reaction to a drug. Hypersensitivity syndrome is characterized by fever, rash, organ involvement (most frequently the liver), and high blood levels of eosinophils (a type of white blood cell). Use of certain antiretroviral (ARV) drugs may cause hypersensitivity syndrome.

Hypertension

SYNONYM(S): High Blood Pressure

Persistently elevated blood pressure. Blood pressure is the force of blood pushing against the walls of the arteries. Hypertension can harm the arteries and increase the risk of stroke, heart attack, and kidney failure.

Hypertriglyceridemia

Excessive accumulation of triglycerides (a type of fat) in the blood. Hypertriglyceridemia increases the risk of high blood pressure, heart disease, and stroke. Use of some antiretroviral (ARV) drugs can cause hypertriglyceridemia.

Hyperuricemia

Much higher-than-normal levels of uric acid in the blood. Hyperuricemia may be an adverse effect of some antiretroviral (ARV) drugs.

Hypogammaglobulinemia

Abnormally low levels of gamma globulin in the blood. Gamma globulins are a group of blood proteins that include most antibodies. People with hypogammaglobulinemia are at high risk for infections. Hypogammaglobulinemia may be due to certain genetic diseases or to acquired diseases such as HIV.

Hypogonadism

Condition in which the sex glands produce little or no hormones. Hypogonadism commonly occurs during HIV infection.

SEE RELATED TERM(S): Hormone

Hypoxia

An insufficient supply of oxygen to the cells and tissues of the body.

Idiopathic

Occurring spontaneously or from an unknown cause.

Idiopathic Thrombocytopenia Purpura (ITP)

SYNONYM(S): Immune Thrombocytopenic Purpura

An autoimmune disorder in which the immune system destroys platelets. The destruction of platelets leads to abnormal blood clotting and easy or excessive bruising and bleeding. The exact cause of idiopathic thrombocytopenia purpura is unknown; however, the disorder may develop with a viral infection, including HIV.

SEE RELATED TERM(S): Platelet

Immune Complex

SYNONYM(S): Antigen-Antibody Complex

An antibody bound to an antigen. Immune complexes are part of a normal immune response. However, when immune complexes accumulate in the blood, they can cause autoimmune disorders, infections, and malignancies.

SEE RELATED TERM(S): Antigen

Immune Reconstitution Inflammatory Syndrome (IRIS)

SYNONYM(S): Immune Reconstitution Syndrome, Immune Restoration Disease

In HIV infection, an exaggerated inflammatory reaction to a disease-causing microorganism that sometimes occurs when the immune system begins to recover following treatment with antiretroviral (ARV) drugs. Immune reconstitution inflammatory syndrome (IRIS) occurs in two forms: “unmasking” IRIS refers to the flare-up of an underlying, previously undiagnosed infection soon after antiretroviral therapy (ART) is started; “paradoxical” IRIS refers to the worsening of a previously treated infection after ART is started. IRIS can be mild or life-threatening.

Immune Reconstitution Syndrome

SYNONYM(S): Immune Reconstitution Inflammatory Syndrome

Immune Response

Actions of the immune system to defend the body against bacteria, viruses, or other substances that the body recognizes as foreign and harmful.

SEE RELATED TERM(S): Immune System

Immune Restoration Disease

SYNONYM(S): Immune Reconstitution Inflammatory Syndrome

Immune Serum Globulin

SYNONYM(S): Intravenous Immunoglobulin

Immune System (Fig. 31)

A complex network of specialized cells, tissues, and organs that recognize and defend the body from foreign substances, primarily disease-causing microorganisms such as bacteria, viruses, parasites, and fungi. Organs and tissues of the immune system include the bone marrow, spleen, thymus, and tonsils. Granulocytes, macrophages, and T lymphocytes are examples of specialized cells.

The lymphatic vessels of the immune system carry immune cells, which converge in lymph nodes found throughout the body. A swollen lymph node often indicates an active immune response to a foreign substance. HIV infection gradually destroys the immune system.

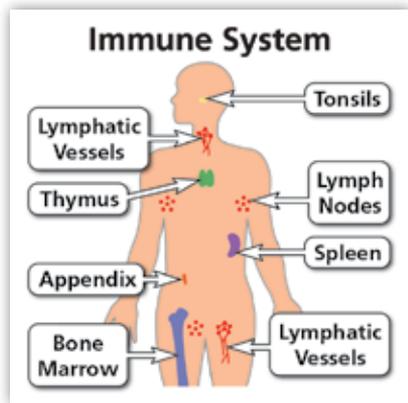


Figure 31

Immune Thrombocytopenic Purpura

SYNONYM(S): Idiopathic Thrombocytopenia Purpura

Immunity

Protection against disease caused by infectious microorganisms or by other foreign substances. Immunity can be acquired through vaccination, by contracting the disease, or by transfer of antibodies produced by another person or animal.

SEE RELATED TERM(S): Acquired Immunity, Innate Immunity

Immunization

SYNONYM(S): Vaccination

Immunocompetent

When the body is able to produce a normal immune response.

SEE RELATED TERM(S): Immune Response

Immunocompromised

When the body is unable to produce an adequate immune response. A person may be immunocompromised because of a disease or an infection, such as HIV, or as the result of treatment with drugs or radiation.

SEE RELATED TERM(S): Immune Response

Immunodeficiency

Inability to produce an adequate immune response because of an insufficiency or absence of antibodies, immune cells, or both. Immunodeficiency disorders can be inherited, such as severe combined immunodeficiency; they can be acquired through infection, such as with HIV; or they can result from chemotherapy.

SEE RELATED TERM(S): Acquired Immunodeficiency Syndrome, Immune Response

Immunogenicity

The ability or the extent to which a substance is able to stimulate an immune response.

SEE RELATED TERM(S): Immune Response

Immunoglobulin

SYNONYM(S): Antibody

A
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Immunologic

Pertaining to the immune system.

SEE RELATED TERM(S): Immune System

Immunologic Failure

SYNONYM(S): Suboptimal Immunologic Response

Immunomodulator

A natural or synthetic substance that modifies (activates, enhances, or suppresses) the immune response or the functioning of the immune system.

SEE RELATED TERM(S): Immune Response, Immune System

Immunomodulatory Therapy

SYNONYM(S): Immunotherapy

Immunosuppression

When the body's ability to mount an immune response to fight infections or disease is reduced. Immunosuppression may result from certain diseases, such as HIV/AIDS, or as a result of radiotherapy or chemotherapy. Immunosuppression may also be deliberately induced by drugs used to prevent rejection of transplanted organs.

SEE RELATED TERM(S): Immune Response

Immunotherapy

SYNONYM(S): Immunomodulatory Therapy

Use of immunologic agents such as antibodies, growth factors, and vaccines to modify (activate, enhance, or suppress) the immune system in order to treat disease. Immunotherapy is also used to diminish adverse effects caused by some cancer treatments or to prevent rejection of a transplanted organ or tissue.

SEE RELATED TERM(S): Immune System

In Utero

In the uterus (womb). In utero also refers to the length of time that a fetus is in the uterus of the pregnant female.

In Vitro (Fig. 32)

In an artificial environment outside the body, such as in a test tube or petri dish in a laboratory.

SEE RELATED TERM(S): In Vivo

In Vitro Fertilization (IVF)

A medical procedure used to help a woman become pregnant. *In vitro* fertilization (IVF) involves removing mature eggs from a woman's ovary, fertilizing the eggs with sperm in a laboratory, and then introducing the resulting embryo into a woman's uterus.



Figure 32

In Vivo (Fig. 32)

In the living body of a plant, animal, or human.

SEE RELATED TERM(S): In Vitro

Incidence

The number of new cases of a condition, symptom, death, or injury that develops in a specific area during a specific time period.

SEE RELATED TERM(S): Prevalence

Inclusion/Exclusion Criteria

SYNONYM(S): Eligibility Criteria

Incubation Period

The time between infection with a pathogen and the onset of disease symptoms.

SEE RELATED TERM(S): Pathogen

Indian Health Service (IHS)

A federal agency responsible for providing federal health services to American Indians and Alaska Natives. The Indian Health Service (IHS) delivers preventive, curative, and community health care to American Indians and Alaska Natives in hospitals, clinics, and other settings throughout the United States.

Infection

Invasion and growth of an infectious microorganism, such as a bacterium or virus, in the body. Infection can also refer to the disease caused by the infectious microorganism. For example, HIV infection is caused by the human immunodeficiency virus (HIV).

Infectious

Capable of causing infection.

Infectious Disease

A disease that is caused by a microorganism, such as a bacterium, virus, or protozoan, that is not normally found in the body and is capable of causing infection. Some, but not all, infectious diseases are contagious, meaning they can spread from person to person. Other infectious diseases can spread from animals or insects to humans, but not from person to person. HIV is both infectious and contagious.

SEE RELATED TERM(S): Contagious Disease

Informed Consent

A communication process between a person and a health care provider or researcher to ensure that the person understands all relevant facts associated with a medical procedure or clinical trial. Before undergoing the procedure or participating in the trial, the person must sign an informed consent form that indicates understanding of the risks and benefits involved and of the risks and benefits of other options.

infoSIDA

The Spanish-language companion website to *AIDSinfo*. Information in Spanish is also available by phone, e-mail, and postal mail.

SEE RELATED TERM(S): *AIDSinfo*

Infusion

Administration of a substance, such as a drug or glucose in solution, typically into a vein (intravenous). Infusions can also be administered into bone (intraosseous), muscle (intramuscular), and the space that surrounds the spinal cord (epidural).

Injection Drug Use

A method of illicit drug use. The drugs are injected directly into the body—into a vein, into a muscle, or under the skin—with a needle and syringe. Blood-borne viruses, including HIV and hepatitis, can be transmitted via shared needles or other drug injection equipment.

Injection Site Reaction

An adverse reaction, such as rash or redness, at the site of an injection.

Innate Immunity

Immunity that a person is born with. Innate immunity includes certain physical barriers, such as skin and mucous membranes, and fast-acting immune cells, such as natural killer cells.

SEE RELATED TERM(S): Immunity

Inoculation

SYNONYM(S): Vaccine

Institutional Review Board (IRB)

An independent committee of medical, scientific, and non-scientific members established to review, approve, and monitor research involving human participants. An institutional review board (IRB) protects the rights and welfare of human participants by assuring that a clinical trial is well designed, does not involve undue risks, and includes safeguards for participants. Most, but not all, clinical trials in the United States are approved and monitored by an IRB.

SEE RELATED TERM(S): Clinical Trial

Insulin

A hormone that is secreted by the pancreas and controls the amount of glucose in the blood. Glucose is the body's main source of energy. Insulin stimulates cells to absorb and use glucose for energy. Without insulin, cells starve for energy and glucose builds up in the blood (hyperglycemia). Insulin also refers to the laboratory-made drug.

SEE RELATED TERM(S): Diabetes, Glucose, Pancreas

Insulin Resistance

The body's decreasing ability to respond to and use the insulin it produces. As a result, excess glucose builds up in the blood (hyperglycemia). Insulin resistance increases the risk of developing prediabetes and type 2 diabetes. Use of certain antiretroviral (ARV) drugs may cause insulin resistance.

SEE RELATED TERM(S): Diabetes, Insulin

Insulin Sensitivity

The degree to which the body's cells respond to insulin and take up glucose from the blood.

SEE RELATED TERM(S): Insulin

Integrase (Fig. 33)

An enzyme found in HIV (and other retroviruses). HIV uses integrase to insert (integrate) its viral DNA into the DNA of the host CD4 cell. Integration is a crucial step in the HIV life cycle and is targeted by a class of antiretroviral (ARV) HIV drugs called integrase strand transfer inhibitors (INSTIs).

SEE RELATED TERM(S): Integrase Strand Transfer Inhibitor, Integration, Life Cycle, Provirus

Integrase Inhibitor

SYNONYM(S): Integrase Strand Transfer Inhibitor

Integrase Strand Transfer Inhibitor (INSTI)

(Fig. 33)

SYNONYM(S): Integrase Inhibitor

Antiretroviral (ARV) HIV drug class. Integrase strand transfer inhibitors (INSTIs) block integrase (an HIV enzyme). HIV uses integrase to insert (integrate) its viral DNA into the DNA of the host CD4 cell. Blocking integrase prevents HIV from replicating.

SEE RELATED TERM(S): Drug Class, Integrase

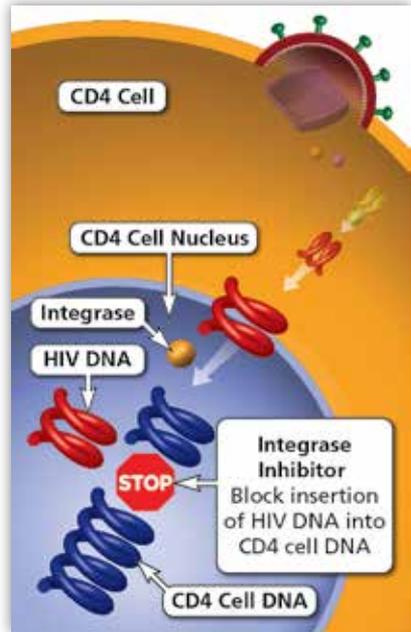


Figure 33

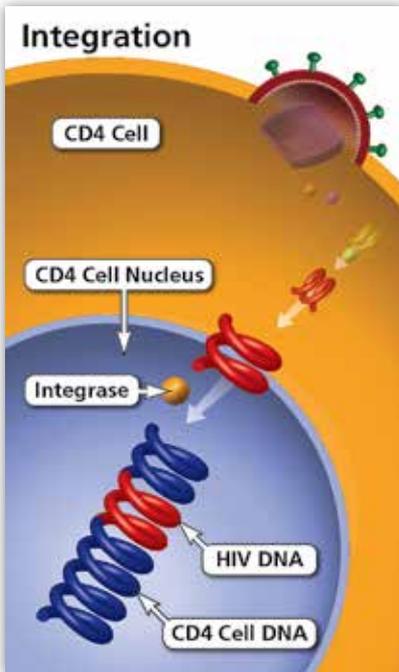


Figure 34

Integration (Fig. 34)

The fourth of seven steps in the HIV life cycle. Once inside the host CD4 cell nucleus, HIV releases integrase, an HIV enzyme. HIV uses integrase to insert (integrate) its viral DNA into the DNA of the host cell.

SEE RELATED TERM(S): Integrase, Integrase Strand Transfer Inhibitor, Life Cycle, Provirus

Interferon (IFN)

Cytokines secreted by certain cells in response to an antigen, usually a virus. Interferon signals neighboring cells into action and inhibits the growth of malignant cells. There are three types of interferons: alpha, beta, and gamma. Laboratory-made interferons are used to treat certain cancers and opportunistic infections.

SEE RELATED TERM(S): Antigen, Cytokine

Interleukin-2 (IL-2)

A cytokine that stimulates the growth and replication of immune cells, specifically B lymphocytes (B cells) and T lymphocytes (T cells). Laboratory-made interleukin-2 (IL-2) is used to treat certain cancers.

SEE RELATED TERM(S): Cytokine

Interleukin-7 (IL-7)

A cytokine that prompts the immune system to make more B lymphocytes (B cells) and T lymphocytes (T cells). Laboratory-made interleukin-7 (IL-7) coupled with antiretroviral therapy (ART) is being studied as a potential treatment for HIV.

SEE RELATED TERM(S): Cytokine

International Maternal Pediatric Adolescent AIDS Clinical Trials (IMPAACT) Group

A global collaboration of institutions, investigators, and other partners that conduct clinical trials on interventions to treat and prevent HIV infection and its consequences in infants, children, adolescents, and pregnant/postpartum women.

SEE RELATED TERM(S): Clinical Trial, Pediatric AIDS Clinical Trials Group

International Network for Strategic Initiatives in Global HIV Trials (INSIGHT)

A clinical trials network that conducts studies worldwide in order to define optimal strategies for the management of HIV and other infectious diseases.

SEE RELATED TERM(S): Clinical Trial

Interstitial Nephritis

A kidney disorder in which the spaces between the kidney tubules (tiny urine-collecting tubes) become swollen. Interstitial nephritis can impair kidney function, including a kidney's ability to filter waste and extra fluid from the body.

SEE RELATED TERM(S): Kidneys

Intervention

A measure taken to prevent or treat disease or to improve health in other ways. The term is used to describe the process or action that is the focus of a clinical trial. Examples of interventions include vaccines, drugs, medical devices, and palliative care.

Interventional Study

SYNONYM(S): Clinical Trial

Interventional Trial

A type of clinical trial. In interventional trials, participants are assigned to receive one or more interventions (or a placebo or no intervention) so that researchers can evaluate the effects of the interventions on biomedical or health-related outcomes.

SEE RELATED TERM(S): Clinical Trial

Intra-Abdominal Fat

SYNONYM(S): Visceral Adipose Tissue

Intracytoplasmic Sperm Injection (ICSI)

A type of in vitro (outside the body) fertilization that is used to overcome male infertility. Intracytoplasmic sperm injection (ICSI) involves injecting a single sperm into an egg that has been removed from a woman's ovary. The fertilized egg can then be returned to the woman's uterus. ICSI, which is always combined with sperm washing, can be considered as a reproductive option for an HIV discordant couple. ICSI is considered when the man is the HIV-infected partner and insemination with donor sperm from an HIV-uninfected male is not an option.

SEE RELATED TERM(S): Discordant Couple, Sperm Washing

Intradermal

Within or between the layers of the skin. Some drugs are given as intradermal injections.

Intraepithelial Neoplasia

SYNONYM(S): Dysplasia

Intramuscular (IM)

Situated or occurring inside a muscle. An intramuscular (IM) injection is an injection given directly into a muscle.

Intrapartum (Fig. 35)

The time period spanning childbirth, from the onset of labor through delivery of the placenta. Intrapartum can refer to both the woman and the fetus.

SEE RELATED TERM(S): Antepartum, Postpartum



Figure 35

Intrauterine Insemination (IUI)

SYNONYM(S): Artificial Insemination

A medical procedure used to help a woman become pregnant. Intrauterine insemination (IUI) involves placing sperm directly in a woman's uterus the day after ovulation. For a discordant couple in which the HIV-infected partner is female, IUI is the most effective way to reduce the risk of HIV transmission when trying to conceive.

SEE RELATED TERM(S): Discordant Couple

Intravaginal

Within or introduced into the vagina.

Intravenous (IV)

Situated or occurring inside a vein. An intravenous (IV) injection is an injection given directly into a vein.

Intravenous Immunoglobulin (IVIG)

SYNONYM(S): Immune Serum Globulin

A solution of antibodies prepared for injection into a person's vein. Intravenous immunoglobulin (IVIG) is composed of antibodies removed from the blood of healthy donors and then pooled together and purified. IVIG is approved for use in children infected with HIV to reduce the risk of serious bacterial infections.

SEE RELATED TERM(S): Antibody

Invasive

Pertaining to an infection or disease that spreads to surrounding tissues or to other parts of the body. Invasive can also refer to a medical procedure that involves entering a part of the body, such as through an incision.

Investigational Drug

SYNONYM(S): Experimental Drug

A drug that is approved by the Food and Drug Administration (FDA) for testing in humans for a specified condition but not approved for commercial marketing and sale.

SEE RELATED TERM(S): Food and Drug Administration

Investigational New Drug (IND) Application (Fig. 36)

A drug sponsor's request to the Food and Drug Administration (FDA) for approval to test an investigational drug in humans (Phase 1-4 clinical trials). FDA review of an investigational new drug (IND) application ensures that the drug is safe for testing in humans and that testing will not put study participants at unreasonable risk.

SEE RELATED TERM(S): Food and Drug Administration, Investigational Drug

Clinical Trials

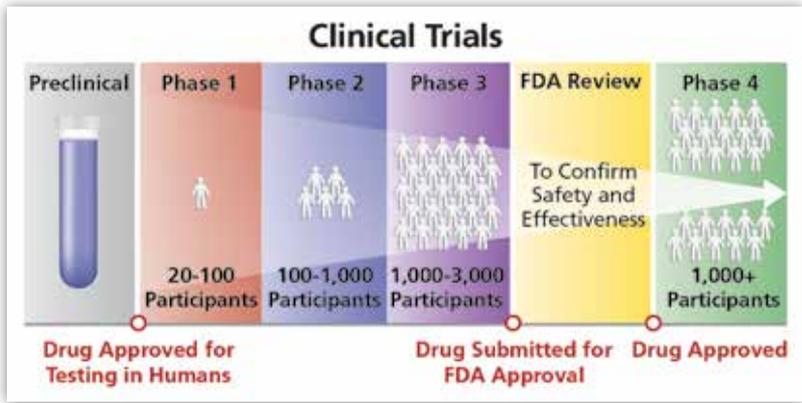


Figure 36

I Ischemia

A decrease in blood flow to an organ or tissue of the body, usually due to a blocked artery.

I Isosporiasis

SYNONYM(S): Cystoisosporiasis

Jaundice

Yellowing of the skin, whites of the eyes, or mucous membranes. Jaundice is a sign that the blood contains too much bilirubin, a substance produced when the liver breaks down red blood cells. It usually indicates liver dysfunction. Jaundice may be caused by liver diseases, such as hepatitis and cirrhosis; blood diseases; infections; or blocked bile ducts (gallbladder disease). Jaundice may also be caused by certain antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Bilirubin, Liver

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Kaposi Sarcoma (KS)

A rare type of cancer characterized by the abnormal growth of cells that line lymph and blood vessels. Kaposi sarcoma (KS) causes red or purple patches of tissue (lesions) to grow under the skin and in the lining of the mouth, nose, and throat. Lesions may also develop in the digestive tract, liver, or lungs. KS generally occurs in people with weakened immune systems. In people with HIV, KS is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Kaposi Sarcoma Associated Herpesvirus

Kaposi Sarcoma Associated Herpesvirus (KSHV)

SYNONYM(S): Human Herpesvirus 8

A type of herpesvirus that causes Kaposi sarcoma. Kaposi sarcoma herpesvirus (KSHV) is primarily transmitted through genital fluids and saliva. Most people infected with KSHV do not develop Kaposi sarcoma. In people with weakened immune systems, including people with HIV, the viral infection is much more likely to advance to Kaposi sarcoma than in people with healthy immune systems.

SEE RELATED TERM(S): Herpesviruses, Kaposi Sarcoma

Karnofsky Performance Status

SYNONYM(S): Karnofsky Score

A way to rate a person's ability to perform activities of daily living. The Karnofsky performance status is used to evaluate whether a person should receive a therapy, whether a therapy should be adjusted or discontinued, and whether a person may participate in a clinical trial. The scores range from 0 to 100, with a higher score indicating that a person is better able to perform daily activities.

Karnofsky Score

SYNONYM(S): Karnofsky Performance Status

Kernicterus

SYNONYM(S): Exciipient Hyperbilirubinemia

A rare type of brain damage associated with high levels of bilirubin. Kernicterus is usually seen only in infants with untreated jaundice, and it very rarely occurs in adults. Some antiretroviral (ARV) drugs are not approved for use in infants because of the risk of kernicterus.

SEE RELATED TERM(S): Bilirubin, Jaundice

Kidneys

A pair of bean-shaped organs located in the abdomen, near the middle of the back. The kidneys filter the blood to remove waste products and extra water. The wastes and water become urine, which is eliminated from the body. The kidneys also release hormones, which help with regulating blood pressure, stimulating the body to produce red blood cells, and maintaining a normal chemical balance in the body.

Killer T Cell

SYNONYM(S): CD8 T Lymphocyte

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Lactic Acid

Acid formed by the breakdown of glucose when oxygen levels in the body are low. The body uses lactic acid for energy.

SEE RELATED TERM(S): Lactic Acidosis

Lactic Acidosis

A condition in which lactic acid builds up in the blood. If left untreated, lactic acidosis can be fatal. Symptoms, if any, can include nausea, abdominal pain, muscle ache and weakness, and unintentional weight loss. Lactic acidosis may be caused by advanced HIV infection or antiretroviral (ARV) drugs.

Latent HIV Reservoir

SYNONYM(S): Reservoir

Resting CD4 cells (or other cells) that are infected with HIV but not actively producing HIV. Latent HIV reservoirs are established during the earliest stage of HIV infection. Although antiretroviral therapy (ART) can reduce the level of HIV in the blood to an undetectable level, latent reservoirs of HIV continue to survive. When a latently infected cell is reactivated, the cell begins to produce HIV again. For this reason, ART cannot cure HIV infection.

SEE RELATED TERM(S): Viral Latency

Latent Tuberculosis Infection

When a person is infected with *Mycobacterium tuberculosis*, but the immune system prevents the bacteria from growing. Because the bacteria are inactive, the person does not feel sick and does not have any symptoms of tuberculosis (TB). A person with latent TB infection cannot spread TB to others. Without treatment, latent TB infection can advance to TB disease, especially in people with weakened immune systems.

SEE RELATED TERM(S): Tuberculosis, Tuberculosis Disease

Leishmaniasis

A disease caused by the protozoan *Leishmania*, which is usually transmitted by the bites of infected sand flies. There are three major types of leishmaniasis: cutaneous, mucocutaneous, and visceral. Visceral leishmaniasis affects internal organs and is characterized by fever, weight loss, enlargement of the spleen and liver, and a drop in blood cell production with possible anemia. In people with AIDS, visceral leishmaniasis is the most common type, and, if left untreated, it is nearly always fatal.

SEE RELATED TERM(S): Opportunistic Infection

Lentivirus

A subgroup of retroviruses, which includes HIV.

SEE RELATED TERM(S): Retrovirus

Lesion

Damage or an abnormal structural change to a tissue, organ, or body part because of injury or disease. Examples of a lesion include a wound or an infected or diseased patch of skin.

Leukocyte

SYNONYM(S): White Blood Cell

Leukocytosis

An increase in the number of white blood cells. Leukocytosis often occurs during acute infection or inflammation.

SEE RELATED TERM(S): White Blood Cell

Leukopenia

A low or reduced number of white blood cells.

SEE RELATED TERM(S): White Blood Cell

LGBTQ

Acronym for lesbian, gay, bisexual, transgender, and questioning.

Life Cycle (Fig. 37)

SYNONYM(S): Replication Cycle

The series of steps that HIV follows to multiply in the body. The process begins when HIV encounters a CD4 cell. The seven steps in the HIV life cycle are: 1) binding; 2) fusion; 3) reverse transcription; 4) integration; 5) replication; 6) assembly; and 7) budding.

SEE RELATED TERM(S): Assembly, Binding, Budding, Fusion, Integration, Replication, Reverse Transcription

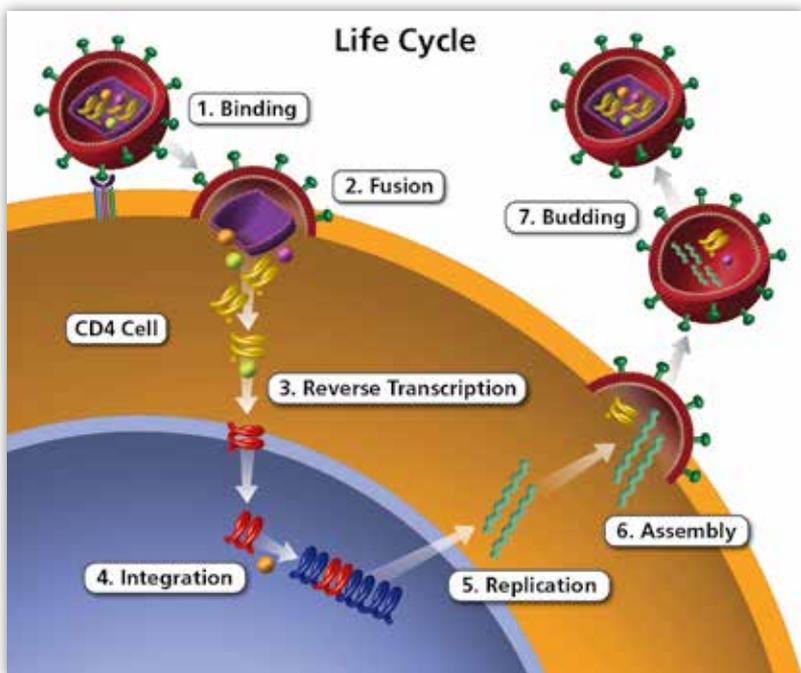


Figure 37

Linear Gingival Erythema

SYNONYM(S): HIV Gingivitis, Red-Band Gingivitis

A condition in which the edge of the gums near the teeth become red and inflamed. Linear gingival erythema is common with HIV infection.

Lipid

Fat or fat-like substances found in the blood and body tissues. Lipids serve as building blocks for cells and as a source of energy for the body. Cholesterol and triglycerides are types of lipids.

Lipid Profile

SYNONYM(S): Coronary Risk Profile

A group of blood tests that measure cholesterol and triglyceride levels. Test results are used to determine a person's risk for heart disease or stroke. High lipid levels may be associated with use of some antiretroviral (ARV) drugs.

Lipid-Lowering Agent

SYNONYM(S): Statin

Lipoatrophy

Loss of fat from specific areas of the body, especially from the face, arms, legs, and buttocks. Use of some antiretroviral (ARV) drugs may cause lipoatrophy.

SEE RELATED TERM(S): Lipodystrophy Syndrome

Lipodystrophy Syndrome

The changes in body fat (loss and/or gain of body fat) and associated metabolic disturbances seen in some people with HIV. Lipodystrophy syndrome may be linked to use of some antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Dorsocervical Fat Pad, Lipoatrophy, Lipohypertrophy, Lipoma, Wasting Syndrome

Lipohypertrophy

SYNONYM(S): Hyperadiposity

Abnormal accumulation of fat, particularly within the abdominal cavity, the upper back (buffalo hump), and subcutaneous tissue (peripheral lipomatosis). Use of some antiretroviral (ARV) drugs may cause lipohypertrophy.

SEE RELATED TERM(S): Lipodystrophy Syndrome

Lipoma

Benign (not cancerous) lumps of fat that develop under the skin. Lipomas can develop as a result of lipodystrophy, which may be caused by certain antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Lipodystrophy Syndrome

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Live Attenuated

SYNONYM(S): Attenuated

A disease-causing virus or bacterium that is weakened in a laboratory so it cannot cause disease (or only mild disease). Live attenuated viruses are often used as vaccines because, although weakened, they can stimulate a strong immune response. However, because of remote possibility that a live attenuated virus could cause disease, people infected with HIV should not receive most live attenuated vaccines.

SEE RELATED TERM(S): Vaccine

Liver

An organ of the digestive system that is located in the upper abdomen on the right side. Major functions of the liver include converting food into energy, producing bile (a liquid that helps with digestion), processing drugs and alcohol, removing toxins from the body, filtering blood, and producing blood cells and blood-clotting components.

SEE RELATED TERM(S): Hepatitis

Liver Function Test

A group of blood tests used to detect, evaluate, and monitor liver disease or damage. A liver function test measures enzymes, proteins, and other substances that are produced or excreted by the liver, such as alanine aminotransferase (ALT), alkaline phosphatase (ALP), aspartate aminotransferase (AST), gamma-glutamyl transpeptidase (GGT), bilirubin, and albumin.

SEE RELATED TERM(S): Alanine Aminotransferase, Albumin, Aspartate Aminotransferase, Bilirubin, Gamma-Glutamyl Transpeptidase, Hepatotoxicity, Liver

Localized

Affecting only a specific or limited part of the body rather than the entire body.

SEE RELATED TERM(S): Systemic

Log

SYNONYM(S): Log₁₀

Log10

SYNONYM(S): Common Logarithm, Log, Logarithm

A mathematical term used to describe changes in viral load (HIV RNA). For example, if the viral load is 20,000 copies/mL, then a 1-log increase equals a 10-fold (10 times) increase, or 200,000 copies/mL. A 2-log increase equals a 100-fold increase, or 2,000,000 copies/mL.

SEE RELATED TERM(S): Viral Load, Viral Load Test

Logarithm

SYNONYM(S): Log10

Long-Term Nonprogressors (Fig.38)

A small group of people infected with HIV who do not take antiretroviral therapy (ART) and still maintain CD4 counts in the normal range indefinitely. The CD4 count is the strongest predictor of HIV progression. A CD4 count less than 200 cells/mm³ indicates that a person has AIDS. In general, the time from infection with HIV to the development of AIDS is approximately 10 to 12 years.

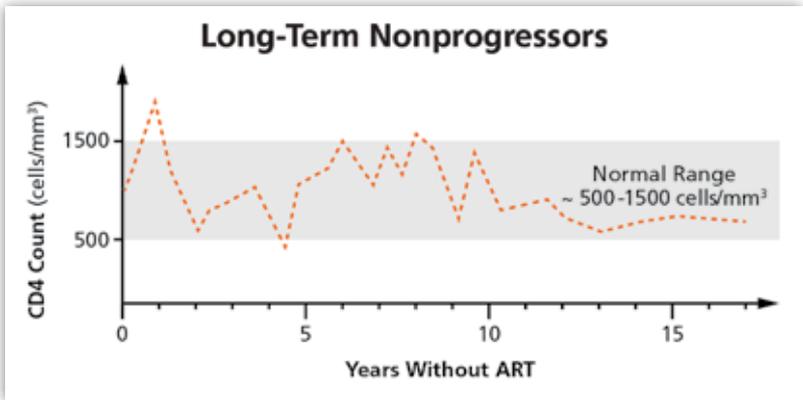


Figure 38

Lumbar Puncture

SYNONYM(S): Spinal Tap

Lymph

A clear-to-yellowish fluid that circulates throughout the body. In addition to its fluid component, lymph consists of white blood cells (especially lymphocytes) and a small concentration of red blood cells and proteins. As lymph circulates, it picks up unwanted materials, such as bacteria and dead cells, which are then filtered through the lymph nodes. Lymph also supplies mature lymphocytes to the blood.

SEE RELATED TERM(S): Lymph Nodes

Lymph Nodes

Very small organs of the lymphatic system. Lymph nodes are located in many areas of the body, mainly in the neck, under the arms, and in the groin. Lymph nodes play a crucial role in the immune system. When lymph is filtered through the lymph nodes, foreign substances are trapped and destroyed by the lymphocytes that line the walls of the lymph nodes.

SEE RELATED TERM(S): Lymph, Lymphatic System, Lymphocyte

Lymphadenopathy

Abnormal enlargement of lymph nodes, usually associated with an infection or disease. Lymphadenopathy may also occur as part of a hypersensitivity reaction to certain antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Lymph Nodes

Lymphatic System

A network of organs, nodes, ducts, and vessels that produce and transport lymph from the body's tissues to the bloodstream. The lymphatic system helps to maintain fluid balance in the tissues and blood; to supply nutrients, oxygen, and hormones to cells; to transport fats, proteins, and white blood cells to the blood; and to fight infection and filter out foreign organisms and waste products.

Lymphocyte

A type of white blood cell. Most lymphocytes can be classified as T lymphocytes (T cells), B lymphocytes (B cells), or natural killer cells. Lymphocytes are found in the blood, lymph, and lymphoid tissue and help the body fight infection.

SEE RELATED TERM(S): White Blood Cell

Lymphocyte Proliferation Assay

A laboratory test that measures the ability of lymphocytes to replicate (proliferate) when exposed to an antigen.

SEE RELATED TERM(S): Antigen

Lymphogranuloma Venereum (LGV)

A chronic infection of the lymphatic system caused by three strains of the bacterium *Chlamydia trachomatis*. Lymphogranuloma venereum (LGV) is a sexually transmitted infection. Symptoms include genital or rectal ulcers. LGV may increase the risk for sexual transmission of HIV.

SEE RELATED TERM(S): Sexually Transmitted Infection

Lymphoid Interstitial Pneumonitis (LIP)

Inflammation and possible scarring of the tissue that surrounds the air sacs of the lungs (lung interstitium). Symptoms of lymphoid interstitial pneumonitis (LIP) include fever, cough, and difficult breathing (dyspnea). LIP is associated with autoimmune diseases, lymphoproliferative disorders, and certain viral infections, such as HIV or Epstein-Barr virus. LIP is an AIDS-defining condition in children infected with HIV who are 13 years or younger.

SEE RELATED TERM(S): AIDS-Defining Condition

Lymphoma

A type of cancer that starts in the tissues of the lymphatic system, including the lymph nodes, spleen, and bone marrow. In people infected with HIV, certain lymphomas, such as Burkitt lymphoma, are AIDS-defining conditions.

SEE RELATED TERM(S): AIDS-Defining Condition, Lymphatic System

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Lymphopenia

Lower-than-normal number of lymphocytes (a type of white blood cell) in the blood.

Lymphoproliferative Response

An immune system response that stimulates lymphocytes (a type of white blood cell) to multiply rapidly.

SEE RELATED TERM(S): Lymphocyte

Lysis

The breakdown or destruction of cells. Lysis may be caused by chemical or physical damage, such as by drugs or injury, or infection.

Macrophage

SYNONYM(S): Histiocyte

A type of white blood cell that fights infection by ingesting foreign substances, such as microorganisms and dead cells. Macrophages also act as antigen-presenting cells to stimulate other immune cells to fight infection.

SEE RELATED TERM(S): Antigen-Presenting Cell, White Blood Cell

Macrophage-Tropic Virus

SYNONYM(S): R5-Tropic Virus

Magnetic Resonance Imaging (MRI)

SYNONYM(S): Nuclear Magnetic Resonance (NMR)

A noninvasive procedure that uses magnetic fields and radio waves to produce three-dimensional computerized images of areas inside the body.

Maintenance Therapy

SYNONYM(S): Chronic Maintenance Therapy, Secondary Prophylaxis

Ongoing use of or addition of a drug(s) or other treatment to help a primary treatment succeed or to prevent a reoccurrence of a prior, successfully controlled disease or infection. For example, lifelong maintenance therapy with antiretroviral drugs (ARVs) can prevent HIV infection from advancing to AIDS.

SEE RELATED TERM(S): Primary Prophylaxis

Major Histocompatibility Complex (MHC)

A group of molecules found on the surface of almost every cell in the body. Major histocompatibility complex (MHC) molecules present protein fragments (peptides) to immune cells. If the cells recognize the peptides as foreign, the body mounts an immune response. In humans, MHC molecules are called human leukocyte antigens (HLAs).

Malabsorption Syndrome

A group of symptoms that occur when the small intestine cannot absorb nutrients properly. Symptoms include abdominal pain, bloating, gas, and diarrhea. Malabsorption syndrome may be caused by certain diseases, infections, or drugs.

Malaise

A general feeling of discomfort, illness, or lack of well-being. Malaise can occur as part of a hypersensitivity reaction to certain antiretroviral (ARV) drugs.

Malaria

A potentially life-threatening disease caused by four strains of protozoa called *Plasmodium*. Malaria is spread by the bite of a mosquito infected with the protozoa. Malaria is endemic in parts of Asia, Africa, Central and South America, Oceania, and certain Caribbean islands. Symptoms of malaria can include extreme exhaustion, chills, profuse sweating, fever, vomiting, diarrhea, other flu-like symptoms, and jaundice. Both malaria and HIV cause substantial morbidity and mortality worldwide, particularly in sub-Saharan Africa. Recent evidence shows important interactions between the two diseases.

SEE RELATED TERM(S): Opportunistic Infection

Malignant

Threatening to health or life, such as a malignant disease. Malignant may also refer to the uncontrolled, invasive growth of cells, such as in a malignant tumor.

Mantoux Tuberculin Skin Test

SYNONYM(S): Tuberculin Skin Test

Mast Cell

SYNONYM(S): Mastocyte

A type of white blood cell found in almost all tissues, particularly in the skin. Mast cells help the body fight infection by triggering an inflammatory response to an antigen.

SEE RELATED TERM(S): Antigen, White Blood Cell

Mastocyte

SYNONYM(S): Mast Cell

Maternal-Child Transmission

SYNONYM(S): Mother-to-Child Transmission

Medication Event Monitoring System (MEMS)

A device used to monitor medication adherence. A medication event monitoring system (MEMS) monitor consists of a conventional medicine container fitted with a special closure that records the time and date each time the container is opened and closed.

SEE RELATED TERM(S): Adherence

MEDLINE

A federal database that contains references and summaries for biomedical and life science publications from around the world. Most of the publications are scholarly journals. Some of the listings include a link to the free full text of the article. MEDLINE is a service of the U.S. National Library of Medicine.

SEE RELATED TERM(S): National Library of Medicine

MedlinePlus

A health website produced by the U.S. National Library of Medicine. The website offers patients and their families and friends reliable, up-to-date information about diseases, conditions, and wellness issues. The information is written in easy-to-understand language and includes videos and illustrations.

SEE RELATED TERM(S): National Library of Medicine

Memory Cell

SYNONYM(S): Memory Lymphocyte

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Memory Lymphocyte

SYNONYM(S): Memory Cell

A type of lymphocyte. Memory lymphocytes can recognize an antigen introduced into the body during a prior infection or vaccination. Memory lymphocytes mount a rapid and strong immune response when exposed to an antigen for a second time. Both T lymphocytes (T cells) and B lymphocytes (B cells) can become memory cells.

SEE RELATED TERM(S): Antigen, B Lymphocyte, Lymphocyte, T Lymphocyte

Meningitis

Inflammation of the meninges, which are three layers of tissue that cover and protect the brain and spinal cord. Meningitis may be caused by a bacterial, fungal, or viral infection; drug allergies; cancer; or other diseases. Symptoms may include fever, headache, vomiting, malaise, and stiff neck. If left untreated, meningitis can lead to convulsions, coma, and death.

Messenger RNA (mRNA)

A type of RNA that carries the genetic information needed to make a protein.

SEE RELATED TERM(S): Protein, Ribonucleic Acid

Metabolic

Pertaining to metabolism.

SEE RELATED TERM(S): Metabolism

Metabolic Syndrome

SYNONYM(S): Syndrome X

A combination of risk factors that increase the risk for heart disease, diabetes, and stroke. To be diagnosed with metabolic syndrome, a person must have at least three of the following metabolic risk factors: high blood pressure, abdominal obesity, high triglyceride levels, low levels of high-density lipoprotein (HDL) cholesterol, or high fasting blood sugar levels. Use of some antiretroviral (ARV) drugs may cause or worsen risk factors associated with metabolic syndrome.

Metabolism

All of the physical and chemical processes that produce or use energy within the body. Drug metabolism refers to the breakdown of drugs in the body.

Microbe

SYNONYM(S): Microorganism

Microbicide

A drug, chemical, or other substance used to kill microorganisms. The term is used specifically for substances that prevent or reduce the transmission of sexually transmitted infections, such as HIV.

SEE RELATED TERM(S): Microbicide, Microbicide Trials Network

Microbicide Trials Network (MTN)

A federally funded clinical trials network. Many Microbicide Trials Network (MTN) trials focus on evaluating microbicides and other promising HIV prevention approaches.

SEE RELATED TERM(S): Clinical Trial, Microbicide

Microorganism

SYNONYM(S): Microbe

An organism that can be seen only through a microscope. Microorganisms include bacteria, protozoans, and fungi. Although viruses are not considered living organisms, they are sometimes classified as microorganisms.

Microsporidiosis

An infection caused by several species of the protozoan parasite microsporidia. Microsporidia usually infect the gastrointestinal tract but may also infect other parts of the body, such as the eyes, respiratory tract, or brain. The most common symptoms are chronic diarrhea and wasting, but symptoms vary greatly depending on the site of infection. Microsporidiosis occurs primarily in people with weakened immune systems, especially people with HIV or people who have undergone organ transplants.

SEE RELATED TERM(S): Opportunistic Infection

Mitochondria

A structural unit within cells that produces energy through a process called cellular respiration.

SEE RELATED TERM(S): Mitochondrial Toxicity

Mitochondrial Toxicity

Damage to mitochondria. Mitochondrial toxicity may affect different parts of the body, including the heart, nerves, muscles, pancreas, kidneys, and liver. Conditions resulting from mitochondrial toxicity can include muscle weakness, inflammation of the pancreas (pancreatitis), high levels of lactic acid in the blood (lactic acidosis), changes in distribution and amount of body fat (lipodystrophy), and fatty liver (hepatic steatosis). Use of certain antiretroviral (ARV) drugs may cause mitochondrial toxicity.

SEE RELATED TERM(S): Mitochondria

Mixed-Tropic HIV

HIV that includes both CCR5-tropic and CXCR4-tropic virus. To enter a host CD4 cell, HIV must first attach to a CD4 receptor, then attach to either a CCR5 or CXCR4 coreceptor, and finally fuse its membrane with the CD4 cell membrane.

SEE RELATED TERM(S): CCR5, CXCR4, R5-Tropic Virus, X4-Tropic Virus

Modified Directly Observed Therapy (m-DOT)

A variation of directly observed therapy (DOT). Modified-DOT (m-DOT) is when a health care professional watches a person take some, but not all, medication doses.

Molluscum Contagiosum

A common, usually mild skin disease caused by the virus *Molluscum contagiosum*. The disease causes small bumps that can appear anywhere on the body. Molluscum contagiosum can spread from one part of the body to another or from an infected person to another person (including via sexual contact). In people with weakened immune systems, such as people with HIV, the bumps of molluscum contagiosum may grow very large, spread rapidly, and be harder to treat.

Monoinfection

When a person has only one infection.

SEE RELATED TERM(S): Coinfection

Mononeuropathy

Neuropathy that damages only one nerve, resulting in symptoms that are linked specifically to the affected nerve.

SEE RELATED TERM(S): Neuropathy

Monotherapy

Using only one drug to treat an infection or disease. Monotherapy for the treatment of HIV is not recommended outside of a clinical trial. The optimal regimen for initial treatment of HIV includes three antiretroviral (ARV) drugs from at least two different HIV drug classes..

SEE RELATED TERM(S): Antiretroviral Therapy

Morbidity

Disease state or symptom. Morbidity rate is a measure of the frequency of occurrence of disease among a defined population during a specified time period.

Mortality

The state of being mortal (subject to death). Mortality rate is a measure of the frequency of occurrence of death among a defined population during a specified time period.

Mother-to-Child Transmission (MTCT) (Fig. 39)

SYNONYM(S): Maternal-Child Transmission, Perinatal Transmission

When an HIV-infected mother passes HIV to her infant during pregnancy, labor and delivery, or breastfeeding (through breast milk). Antiretroviral (ARV) drugs are given to HIV-infected women during pregnancy and to their infants after birth to reduce the risk of mother-to-child transmission (MTCT) of HIV. ARV drugs also protect the health of HIV-infected women during pregnancy and after delivery.

SEE RELATED TERM(S): Prevention of Perinatal Transmission

Mother-to-Child-Transmission

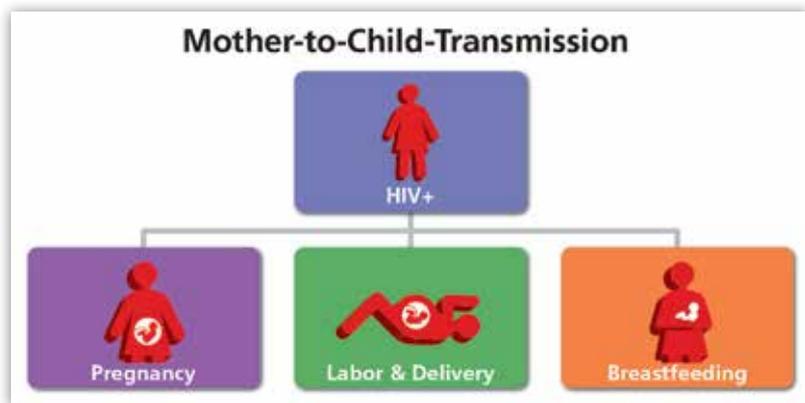


Figure 39

MSM

Acronym for men who have sex with men.

MSMW

Acronym for men who have sex with men and women.

M-Tropic Virus

SYNONYM(S): R5-Tropic Virus

Mucocutaneous

Pertaining to the mucous membranes and skin. Mucocutaneous areas of the body include the mouth, eyes, vagina, and anus.

Multicenter AIDS Cohort Study (MACS)

Started in 1984, the study involves collection of biological specimens and medical and behavioral data on MSM (men who have sex with men) in order to study the natural and treated history of HIV. The Multicenter AIDS Cohort Study (MACS) has significantly contributed to the understanding of HIV, AIDS, and the effects of antiretroviral therapy (ART).

Multiple Drug Resistant Tuberculosis (MDR-TB)

A form of tuberculosis (TB) that is resistant to at least the two most effective antibiotics commonly used to cure TB infection (isoniazid and rifampin). People infected with multiple drug resistant-TB (MDR-TB) are at high risk for treatment failure. They are also at risk for further drug resistance, which can lead to life-threatening disease—extensively drug resistant tuberculosis (XDR-TB).

SEE RELATED TERM(S): Drug Resistance, Extensively Drug Resistant Tuberculosis, Tuberculosis

Multivalent Vaccine

SYNONYM(S): Polyvalent Vaccine

Mutagenic

Causing a mutation, which is a permanent change in the genetic material of a cell or microorganism. A mutation may alter a trait or characteristic of a person or may cause disease. Mutations can be inherited or can occur spontaneously. Before being approved, drugs—including antiretroviral (ARV) drugs—are tested to assess their potential for mutagenic effects.

SEE RELATED TERM(S): Mutation

Mutation

A permanent change in the genetic material of a cell or microorganism. Some mutations can be transmitted when the cell or microorganism replicates. Some HIV mutations cause the virus to become resistant to certain antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Drug Resistance

Myalgia

SYNONYM(S): Myodynia, Myoneuroalgia

Muscle pain.

Mycobacterium Avium Complex (MAC) Infection

An infection caused by a group of bacteria called *Mycobacterium avium* complex (MAC). MAC include *Mycobacterium avium*, *Mycobacterium intracellulare*, and other similar *Mycobacteria*. MAC bacteria can be found in drinking water, dirt, and household dust. MAC infection usually starts in the lungs and intestines, but can spread throughout the body (disseminated). Symptoms of disseminated MAC infection include fever, night sweats, weight loss, abdominal pain, fatigue, and diarrhea. Most people with healthy immune systems are not affected by the bacteria. In people infected with HIV, MAC infection that is outside of the lungs (extrapulmonary) or that has disseminated is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Mycobacterium Avium-Intracellulare (MAI) Infection, Opportunistic Infection

Mycobacterium Avium-Intracellulare (MAI) Infection

An infection caused by two closely related and hard-to-distinguish bacteria, *Mycobacterium avium* and *Mycobacterium intracellulare*. These two bacteria can be found in drinking water, dirt, and household dust. Most people are not affected by the bacteria, but for people with severely weakened immune systems, the bacteria can cause infection. *M. intracellulare* tends to cause lung disease, and *M. avium* tends to spread throughout the body (disseminated). Symptoms of disseminated *Mycobacterium avium-intracellulare* (MAI) infection include fever, night sweats, weight loss, abdominal pain, fatigue, and diarrhea. In people infected with HIV, MAI infection that is outside of the lungs (extrapulmonary) or that has disseminated is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Mycobacterium Avium Complex (MAC) Infection, Opportunistic Infection

Mycobacterium Kansasii Infection

An infection caused by the bacteria *Mycobacterium kansasii*. The bacteria can be found in water, dirt, and food. *M. kansasii* usually infects the lungs, but can also infect other organs and/or can spread throughout the body (disseminated). Most people with healthy immune systems are not affected by the bacteria. In people infected with HIV, *M. kansasii* infection that is outside of the lungs (extrapulmonary) or that has disseminated is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition

Mycobacterium Tuberculosis

The bacterium that causes tuberculosis (TB). *Mycobacterium tuberculosis* usually infects the lungs, but it can also infect other parts of the body, such as the kidneys, spine, and brain. *M. tuberculosis* is spread when a person with active TB (called TB disease) coughs, sneezes, speaks, or sings, and then a person nearby breathes in the bacteria.

SEE RELATED TERM(S): Tuberculosis

Mycosis

An infection with or disease caused by a fungus.

SEE RELATED TERM(S): Fungus

Myelin

A whitish, fatty substance that forms an insulating layer around nerves. Myelin helps nerve signals transmit quickly and efficiently along nerve cells.

Myelosuppression

SYNONYM(S): Bone Marrow Suppression

Impaired bone marrow function. Myelosuppression reduces bone marrow production of red blood cells, white blood cells, and platelets. Use of certain antiretroviral (ARV) drugs may cause myelosuppression.

SEE RELATED TERM(S): Bone Marrow

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Myocardial Infarction

A heart attack. Heart attacks occur when blood flow to the heart is reduced or interrupted, causing severe damage or death to the heart muscle (myocardium). Use of some antiretroviral (ARV) drugs may increase the risk for a myocardial infarction.

Myodynia

SYNONYM(S): Myalgia

Myoneuroalgia

SYNONYM(S): Myalgia

Myopathy

A disease of muscle tissue. Use of certain antiretroviral (ARV) drugs may cause myopathy.

Nadir

The lowest point. For example, a person's nadir CD4 count is the person's lowest CD4 count.

SEE RELATED TERM(S): CD4 Count

National Cancer Institute (NCI)

The lead federal agency responsible for cancer-related research and training. The National Cancer Institute (NCI) is also responsible for disseminating cancer-related information and evaluating the incorporation of state-of-the-art cancer treatments into clinical practice. Programs at NCI focus on the cause, diagnosis, prevention, and treatment of cancer; rehabilitation from cancer; and continuing care of people with cancer and their families.

National Center for Complementary and Integrative Health (NCCIH)

SEE RELATED TERM(S): Complementary and Alternative Medicine

The primary federal agency for scientific research on the diverse medical and health care systems, practices, and products that are not generally considered part of conventional (Western) medicine.

National Institute of Allergy and Infectious Diseases (NIAID)

A federal agency that supports basic and applied research to prevent, diagnose, and treat infectious and immune-mediated illnesses, including HIV/AIDS and other sexually transmitted infections. The Institute also supports medical research studies on tuberculosis (TB), malaria, autoimmune disorders, asthma, allergies, and illnesses from potential bioterrorism agents.

National Institutes of Health (NIH)

A federal agency that is the largest source of funding for medical research in the world. The National Institutes of Health (NIH) is made up of several institutions, each with a specific research focus, such as a particular disease or body system.

National Library of Medicine (NLM)

A federal institute that serves as the world's largest medical library and is the creator of PubMed, MEDLINE, and MedlinePlus. The National Library of Medicine (NLM) collects materials in all areas of biomedicine and health care. NLM makes its resources available around the world, primarily through its electronic information services.

National Prevention Information Network

SYNONYM(S): Centers for Disease Control and Prevention-National Prevention Information Network

Natural History Study

A type of medical research study. In natural history studies, researchers examine how a disease or medical condition develops over time. Researchers follow participants who are at risk for or have a specific disease or condition to determine how specific factors, such as family history, age, and occupational exposure, affect the development or progression of the disease or condition. Data collected during a natural history study also provide information on how best to treat a condition or disease.

Natural Killer (NK) Cell

A type of lymphocyte. Natural killer (NK) cells contain enzymes that can kill other cells, especially tumor cells and cells infected by viruses.

SEE RELATED TERM(S): Lymphocyte, White Blood Cell

Nemaline Rod Myopathy (NM)

SYNONYM(S): HIV-Associated Adult-Onset Nemaline Myopathy, Rod Body Disease

A rare neuromuscular disorder characterized by the presence of rod-like structures (nemaline bodies) in the muscle fibers and by muscle weakness. Muscle weakness can occur throughout the body, but is typically most severe in the neck, face, and limbs. Nemaline rod myopathy (NM) in its most severe form can be life-threatening. NM can occur as a complication of HIV infection.

Neonatal

Pertaining to an infant during the first 28 days after birth.

Neoplasm

New abnormal growth of tissue. Neoplasms may be benign (not cancerous) or malignant (cancerous). Neoplasms are commonly called tumors.

Nephritis

Inflammation of the kidney.

SEE RELATED TERM(S): Kidneys

Nephrolithiasis

Calculi (stones) in the kidney. Use of some antiretroviral (ARV) drugs may cause nephrolithiasis.

SEE RELATED TERM(S): Kidneys

Nephrotoxic

Toxic or destructive to the kidneys. Certain antiretroviral (ARV) drugs can have nephrotoxic effects.

SEE RELATED TERM(S): Kidneys

Neuralgia

Sharp, shooting pain along a nerve or group of nerves.

NeuroAIDS

A group of neurological disorders caused primarily by HIV damage to the central and peripheral nervous systems. Examples of neuroAIDS disorders include myelopathy, sensory neuropathy, and AIDS dementia.

SEE RELATED TERM(S): Central Nervous System, Peripheral Nervous System

Neuropathy

Damage or degeneration of the nerves, especially the peripheral nerves. Symptoms of neuropathy depend on which nerves are affected and can include pain, tingling, numbness, or weakness. HIV-related neuropathy may be due to HIV infection or use of certain antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Peripheral Nervous System

Neutropenia

Lower-than-normal number of neutrophils (a type of white blood cell) in the blood. Moderate to severe neutropenia can increase the risk of bacterial and fungal infections. Neutropenia may occur as a result of HIV infection or use of some antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Neutrophil

Neutrophil

A type of white blood cell that fights infection by engulfing and killing foreign substances, such as bacteria.

SEE RELATED TERM(S): White Blood Cell

New Drug Application (NDA) (Fig. 40)

A drug sponsor's request to the Food and Drug Administration (FDA) for approval to sell and market a new drug in the United States. A new drug application (NDA) includes enough information for the FDA to determine whether the new drug is safe and effective; whether the drug's benefits outweigh its risks; whether the proposed drug label (package insert) is appropriate; and whether the drug manufacturing standards are adequate. Information included in a NDA is based on laboratory and animal preclinical studies and testing in humans (Phase 1-4 clinical trials).

SEE RELATED TERM(S): Food and Drug Administration

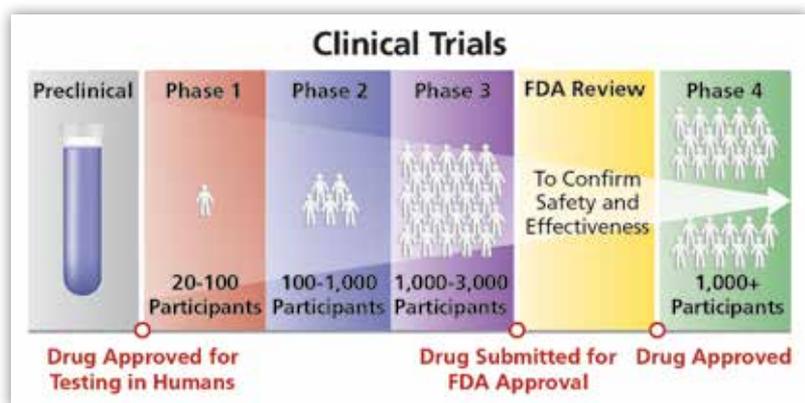


Figure 40

NNRTI-Sparing Regimen

Combination antiretroviral therapy (ART) that does not include antiretroviral (ARV) drugs from the non-nucleoside reverse transcriptase inhibitor (NNRTI) drug class. Excluding NNRTIs from an HIV treatment regimen saves drugs in the NNRTI class for future use.

SEE RELATED TERM(S): Non-Nucleoside Reverse Transcriptase Inhibitor

Non-Hodgkin Lymphoma (NHL)

A large group of lymphomas (cancers of the lymphatic system). The many types of non-Hodgkin lymphoma (NHL) are classified according to how fast the cancer spreads. Although the symptoms of NHLs vary, they often include swollen lymph nodes, fever, and weight loss. Certain types of NHLs, such as Burkitt lymphoma and immunoblastic lymphoma, are AIDS-defining cancers in people with HIV.

SEE RELATED TERM(S): AIDS-Defining Condition, Lymphoma

Non-Inferiority Trial

A clinical trial designed to show that a new drug (or other intervention) is at least as effective as the drug to which it is compared.

SEE RELATED TERM(S): Superiority Trial

Non-Nucleoside Analogue Reverse Transcriptase Inhibitor

SYNONYM(S): Non-Nucleoside Reverse Transcriptase Inhibitor

Non-Nucleoside Reverse Transcriptase Inhibitor (NNRTI) (Fig. 41)

SYNONYM(S): Non-Nucleoside Analogue Reverse Transcriptase Inhibitor

Antiretroviral (ARV) HIV drug class. Non-nucleoside reverse transcriptase inhibitors (NNRTIs) bind to and block HIV reverse transcriptase (an HIV enzyme). HIV uses reverse transcriptase to convert its RNA into DNA (reverse transcription). Blocking reverse transcriptase and reverse transcription prevents HIV from replicating.

SEE RELATED TERM(S): Drug Class, Reverse Transcriptase, Reverse Transcription

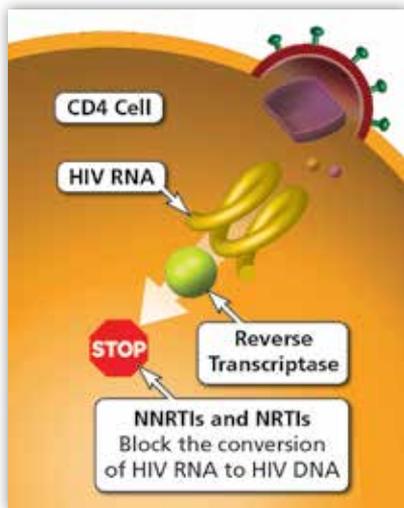


Figure 41

Non-Occupational Post-Exposure Prophylaxis (nPEP)

Short-term treatment started as soon as possible after high-risk non-occupational exposure to an infectious agent, such as HIV, hepatitis B virus (HBV), or hepatitis C virus (HCV). Non-occupational exposure refers to exposure to an infectious agent that occurs outside of one's work, for example during sex or when needle sharing to inject street drugs. The purpose of non-occupational post-exposure prophylaxis (nPEP) is to reduce the risk of infection.

Non-Steroidal Anti-Inflammatory Drug (NSAID)

A drug used to control pain and inflammation. Common non-steroidal anti-inflammatory drugs (NSAIDs) include aspirin and ibuprofen.

NRTI-Sparing Regimen

Combination antiretroviral therapy (ART) that does not include antiretroviral (ARV) drugs from the nucleoside reverse transcriptase inhibitor (NRTI) drug class. Excluding NRTIs from an HIV treatment regimen saves drugs in the NRTI class for future use.

SEE RELATED TERM(S): Nucleoside Reverse Transcriptase Inhibitor

Nuclear Magnetic Resonance

SYNONYM(S): Magnetic Resonance Imaging

Nucleic Acid

A family of molecules found in all living cells and viruses. Nucleic acids, which include DNA and RNA, control cellular function and heredity.

SEE RELATED TERM(S): Deoxyribonucleic Acid, Ribonucleic Acid

Nucleic Acid Amplification Test

SYNONYM(S): Nucleic Acid Test

Nucleic Acid Test (NAT)

SYNONYM(S): Nucleic Acid Amplification Test

Any of various laboratory tests used to detect the genetic material of a microorganism, such as HIV, in blood, plasma, or other tissue. The viral load (HIV RNA) test is a type of nucleic acid test (NAT).

SEE RELATED TERM(S): Viral Load Test

Nucleoside

Precursor to a nucleotide. The body converts nucleosides into nucleotides, which are then used to make nucleic acids.

SEE RELATED TERM(S): Nucleic Acid, Nucleotide

Nucleoside Analogue Reverse Transcriptase Inhibitor

SYNONYM(S): Nucleoside Reverse Transcriptase Inhibitor

Nucleoside Reverse Transcriptase Inhibitor (NRTI)

(Fig. 41)

SYNONYM(S): Nucleoside Analogue Reverse Transcriptase Inhibitor

Antiretroviral (ARV) HIV drug class. Nucleoside reverse transcriptase inhibitors (NRTIs) block reverse transcriptase (an HIV enzyme). HIV uses reverse transcriptase to convert its RNA into DNA (reverse transcription). Blocking reverse transcriptase and reverse transcription prevents HIV from replicating.

SEE RELATED TERM(S): Drug Class, Nucleotide Reverse Transcriptase Inhibitor, Reverse Transcriptase, Reverse Transcription

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Nucleotide

A building block of nucleic acids. DNA and RNA are nucleic acids.

SEE RELATED TERM(S): Deoxyribonucleic Acid, Ribonucleic Acid

Nucleotide Analogue Reverse Transcriptase Inhibitor

SYNONYM(S): Nucleotide Reverse Transcriptase Inhibitor

Nucleotide Reverse Transcriptase Inhibitor (NtRTI)

SYNONYM(S): Nucleotide Analogue Reverse Transcriptase Inhibitor

A type of antiretroviral (ARV) HIV drug. Nucleotide reverse transcriptase inhibitors (NtRTIs) interfere with the HIV life cycle in the same way as NRTIs. Both block reverse transcription. NtRTIs are included in the NRTI drug class.

SEE RELATED TERM(S): Drug Class, Nucleoside Reverse Transcriptase Inhibitor, Reverse Transcriptase, Reverse Transcription

Nucleus

A membrane-bound structure containing a cell's chromosomes. All eukaryotes (all organisms except bacteria and viruses) have a nucleus.

SEE RELATED TERM(S): Chromosome

Observational Trial

A type of clinical trial. In observational trials, researchers do not assign participants to a treatment or other intervention. Instead, the researchers observe participants or measure certain outcomes to determine health outcomes.

SEE RELATED TERM(S): Clinical Trial

Occupational Exposure

Contact with a potentially harmful physical, chemical, or biological agent as a result of one's work. For example, a health care professional may be exposed to HIV or another infectious agent through a needlestick injury.

Occupational Post-Exposure Prophylaxis (oPEP)

Short-term treatment started as soon as possible after high-risk occupational exposure to an infectious agent, such as HIV, hepatitis B virus (HBV), or hepatitis C virus (HCV). The purpose of occupational post-exposure prophylaxis (oPEP) is to reduce the risk of infection. An example of a high-risk occupational exposure is exposure to an infectious agent as the result of a needlestick injury.

SEE RELATED TERM(S): Occupational Exposure

Office of AIDS Research (OAR)

The office of the National Institutes of Health (NIH) that coordinates the scientific, budgetary, legislative, and policy elements of the NIH AIDS research program.

SEE RELATED TERM(S): National Institutes of Health

Office of Minority Health (OMH)

A federal office whose primary responsibility is to improve the health of racial and ethnic minority populations, including African Americans, Hispanic Americans, American Indians, Alaskan Natives, and Pacific Islanders. The Office of Minority Health (OMH) develops or advances policies, programs, and practices that address health, social, economic, environmental, and other factors that impact the health of minority populations, including those specifically affected by HIV/AIDS.

Off-Label Use

The legal, prescribed use of a drug in a manner different from that described on the Food and Drug Administration (FDA)-approved drug label. Off-label use can include using a drug for a different disease or medical condition or giving a drug at a different dose or via a different route of administration than approved by FDA.

SEE RELATED TERM(S): Food and Drug Administration

Open-Label Trial

A type of clinical trial. In open-label trials, both the researchers and participants know which drug (or other intervention) is being given to participants.

SEE RELATED TERM(S): Clinical Trial, Double-Blind Study

Opportunistic Infection (OI)

An infection that occurs more frequently or is more severe in people with weakened immune systems, such as people with HIV or people receiving chemotherapy, than in people with healthy immune systems.

Optimized Background Therapy (OBT)

When a new drug is added to a failing HIV regimen, the other drugs in the regimen (the “background therapy”) may also be changed. Any changes are made on the basis of a person’s resistance test results and treatment history. Optimized background therapy gives a new HIV regimen (or an experimental HIV drug being studied in a clinical trial) the best chance of succeeding.

Oral Hairy Leukoplaki (OHL)

A disease of the mucous membranes that occurs mostly in people with HIV. Oral hairy leukoplakia (OHL) is characterized by white or gray lesions that usually develop on the tongue or the inside of the cheek. The lesions have a ribbed, fuzzy appearance. OHL is caused by the Epstein-Barr virus (EBV), a type of herpesvirus.

SEE RELATED TERM(S): Epstein-Barr Virus

Osteonecrosis

Death of bone tissue.

Osteopenia

Lower-than-normal bone mass and bone mineral density. Osteopenia often precedes more severe bone loss (osteoporosis). Osteopenia frequently develops in people taking antiretroviral (ARV) drugs; however, the association between ARV drugs and osteopenia is unclear.

SEE RELATED TERM(S): Osteoporosis

Osteoporosis

Progressive loss of bone mass and bone mineral density, resulting in an increased risk of fractures. Osteoporosis frequently develops in people taking antiretroviral (ARV) drugs; however, the association between ARV drugs and osteoporosis is unclear.

SEE RELATED TERM(S): Osteopenia

Outcome Measure

SYNONYM(S): Clinical Endpoint

p24

A major protein contained in HIV's viral core.

SEE RELATED TERM(S): Capsid

Package Insert

SYNONYM(S): Prescribing Information, Prescription Drug Labeling, Product Label

Drug prescribing information prepared by the drug manufacturer and approved by the Food and Drug Administration (FDA). The package insert includes details and directions that health care providers need to prescribe a drug properly, including approved uses for the drug, contraindications, potential adverse reactions, available formulations and dosage, and how to administer the drug. The package insert is included with drug packaging and is used to develop any promotional or labeling materials.

SEE RELATED TERM(S): Food and Drug Administration

Palliative Care

SYNONYM(S): Comfort Care, Supportive Care, Symptom Management

Care to alleviate the physical and psychological symptoms of disease or the undesirable effects of treatment. The goal of palliative care is not to cure disease but to make the person more comfortable and improve the person's quality of life. Palliative care may be given at any stage of a disease.

Pancreas

A gland located behind the stomach. The pancreas secretes enzymes that aid in digestion and produces several hormones, including insulin and glucagon, which regulate blood sugar levels.

SEE RELATED TERM(S): Insulin

Pancreatitis

Inflammation of the pancreas. Symptoms of acute and chronic pancreatitis are similar and can include pain, nausea and vomiting, and a swollen abdomen. Gallstones are the most common cause of acute pancreatitis. Chronic, heavy alcohol use is a common cause of both acute and chronic pancreatitis. Pancreatitis may also be caused by use of certain antiretroviral (ARV) drugs or an opportunistic infection.

SEE RELATED TERM(S): Pancreas

Pancytopenia

Lower-than-normal levels of blood cells (red blood cells and white blood cells) and platelets.

Pandemic

An epidemic of disease, or other health condition, that occurs over a widespread area (multiple countries or continents) and usually affects a sizeable part of the population.

SEE RELATED TERM(S): Epidemic

Pap Smear

SYNONYM(S): Pap Test, Papanicolaou Test

A procedure in which cells and secretions are collected from inside and around the cervix for examination under a microscope. Pap smear also refers to the laboratory test used to detect any infected, potentially pre-cancerous, or cancerous cells in the cervical cells obtained from a Pap smear.

SEE RELATED TERM(S): Cervix

Pap Test

SYNONYM(S): Pap Smear

Papanicolaou Test

SYNONYM(S): Pap Smear

Papilloma

A benign (not cancerous) growth, such as a wart, on the skin or mucous membrane.

Parasite

Any organism that lives on or in another living organism (the host) and gets its food from or at the expense of the host. Many parasites cause disease in humans. People with weakened immune systems, including people with HIV, are at a higher risk for parasitic infections than people with healthy immune systems.

Parenteral

When a substance, such as a drug or solution, is introduced into the body through a route other than the gastrointestinal (GI) tract. (The GI tract extends from the mouth to the anus.) For example, a parenteral drug may be given through the veins (intravenous), into the muscles (intramuscular), or through the skin (subcutaneous). Parenteral nutrition refers to feeding a person intravenously.

Paresthesia

Abnormal touch sensations, such as burning, prickling, or tingling, that occur spontaneously. Paresthesia usually occurs in the hands, arms, legs, or feet, but it can occur in other parts of the body, too. Chronic paresthesia may be due to underlying neurological disease, traumatic nerve damage, or peripheral neuropathy. Paresthesia may also be caused by use of certain antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Peripheral Neuropathy

Passive Immunity

Immunity that develops after a person receives immune system components, most commonly antibodies, donated from another person. Passive immunity can occur naturally, such as when an infant receives a mother's antibodies through the placenta or breast milk, or artificially, such as when a person receives antibodies in the form of an injection (gamma globulin injection). Passive immunity provides immediate protection against an antigen, but does not provide long-lasting protection.

SEE RELATED TERM(S): Acquired Immunity, Active Immunity, Antibody

Passive Immunotherapy

A type of immunotherapy in which donated or laboratory-made immune system components or cellular proteins are given to a person to help the person fight an infection or disease. Passive immunotherapy using antibodies is often used in cancer treatment.

SEE RELATED TERM(S): Immunotherapy

Pathogen

Any disease-causing microorganism, such as a bacterium or virus.

Pathogenesis

The origin and development of a disease. Pathogenesis includes the specific processes that occur during the development of a disease.

Peak Concentration

SYNONYM(S): C_{max}

Pediatric AIDS Clinical Trials Group (PACTG)

A large clinical trials network that evaluates treatments for HIV-infected children and adolescents and that develops new therapeutic approaches for preventing mother-to-child transmission of HIV. Originally an independent network, Pediatric AIDS Clinical Trials Group (PACTG) investigators are now merged with the International Maternal Pediatric Adolescent AIDS Clinical Trials (IMPAACT) Group.

SEE RELATED TERM(S): International Maternal Pediatric Adolescent AIDS Clinical Trials (IMPAACT) Group

Pediatric AIDS Clinical Trials Group 076 (PACTG 076)

A federally funded study that determined that the risk of mother-to-child transmission (MTCT) of HIV could be reduced by nearly 70% if the antiretroviral (ARV) drug zidovudine was given to a woman during pregnancy and labor and delivery and to the newborn. The Pediatric AIDS Clinical Trials Group 076 (PACTG 076) study contributed greatly to preventing MTCT of HIV.

Pelvic Inflammatory Disease (PID)

Infection and inflammation of the female upper genital tract, including the uterus and fallopian tubes. Pelvic inflammatory disease (PID) is usually due to bacterial infection, including some sexually transmitted infections, such as chlamydia and gonorrhea. Symptoms, if any, include pain in the lower abdomen, fever, smelly vaginal discharge, irregular bleeding, or pain during intercourse. PID can lead to serious complications, including infertility, ectopic pregnancy (a pregnancy in the fallopian tube or elsewhere outside of the womb), and chronic pelvic pain.

Penicilliosis

SYNONYM(S): *Penicillium Marneffeii* Infection

Penicillium Marneffeii Infection

SYNONYM(S): Penicilliosis

A disease caused by the fungus *Penicillium marneffeii*, which is endemic in Southeast Asia (especially Northern Thailand). Symptoms include fever, anemia, weight loss, and skin lesions. *Penicillium marneffeii* infection occurs mostly in people with weakened immune systems, such as people with HIV. Without timely antifungal treatment, the disease can be fatal.

SEE RELATED TERM(S): Opportunistic Infection

People Living with AIDS

SYNONYM(S): People Living with HIV/AIDS

People Living with HIV

SYNONYM(S): People Living with HIV/AIDS

People Living with HIV/AIDS (PLWHA)

SYNONYM(S): People Living with AIDS, People Living with HIV

Infants, children, adolescents, and adults infected with HIV/AIDS.

Peptide

Amino acids that are chemically linked to one another. Proteins are made of peptides.

SEE RELATED TERM(S): Amino Acids, Protein

Perianal

Pertaining to the area around the anus.

Perinatal

The time period that extends approximately from mid-way before birth to 4 weeks after birth. Perinatal transmission of HIV refers to the passage of HIV from an infected mother to her child during pregnancy, labor and delivery, or breastfeeding (through breast milk).

SEE RELATED TERM(S): Mother-to-Child Transmission

Perinatal Transmission

SYNONYM(S): Mother-to-Child Transmission

Peripheral Blood Mononuclear Cell (PBMC)

A type of white blood cell that contains one nucleus, such as a lymphocyte or macrophage.

SEE RELATED TERM(S): White Blood Cell

Peripheral Nervous System (PNS)

The part of the nervous system that is made up of the nerves outside of the brain and spinal cord. The peripheral nervous system (PNS) transmits information from the brain and spinal cord to the rest of the body; it also transmits sensory information back to the brain and spinal cord. HIV infection or use of certain antiretroviral (ARV) drugs can cause damage to the PNS.

SEE RELATED TERM(S): Peripheral Neuropathy

Peripheral Neuropathy

Damage to the peripheral nervous system, which includes the nerves outside of the brain and spinal cord. Symptoms include pain, numbness, tingling, swelling, and muscle weakness. Peripheral neuropathy may be due to injury, infection, disease (such as diabetes), autoimmune diseases (such as chronic inflammatory demyelinating polyneuropathy), or certain antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Neuropathy, Peripheral Nervous System

Persistent Generalized Lymphadenopathy (PGL)

Enlarged lymph nodes (lymphadenopathy) in at least two areas of the body for at least 3 months. In people with HIV, persistent generalized lymphadenopathy (PGL) is associated with early stages of HIV infection and with certain opportunistic infections.

SEE RELATED TERM(S): Lymph Nodes

Pharmacokinetic Enhancers (CYP3A Inhibitors) (Fig. 42)

A drug class. A pharmacokinetic enhancer is used to boost the effectiveness of another drug. When the two drugs are given together, the pharmacokinetic enhancer interferes with the breakdown of the other drug, which allows the drug to remain in the body longer at a higher concentration. Pharmacokinetic enhancers are included in some HIV treatment regimens.

SEE RELATED TERM(S): Boosting, Drug Class

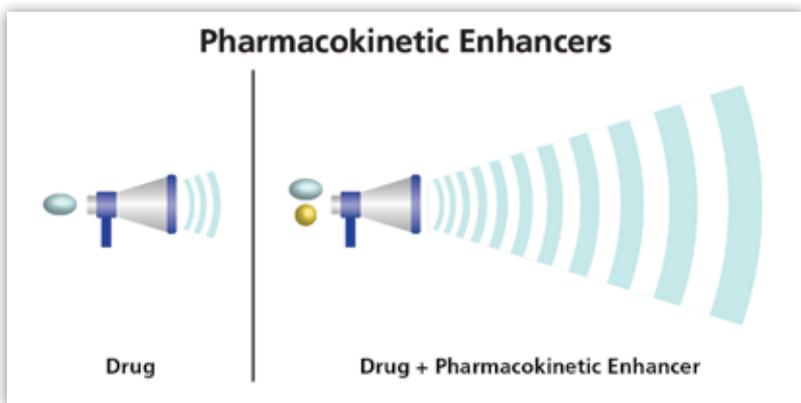


Figure 42

Pharmacokinetics

The processes by which a drug is absorbed, distributed, metabolized, and eliminated by the body.

SEE RELATED TERM(S): Pharmacology

Pharmacology

The study of drugs. Pharmacology includes the study of a drug's composition, pharmacokinetics, therapeutic use, and toxicity.

SEE RELATED TERM(S): Pharmacokinetics

Phase 1 Trial (Fig. 43)

The first step in testing an experimental drug (or other treatment) in humans. Phase 1 trials evaluate the drug's safety and toxicity at different dose levels and determine drug pharmacokinetics. Because little is known about the possible risks and benefits of the drug being tested, Phase 1 trials usually include only a small number of participants (approximately 20 to 100). Testing of other biomedical interventions, such as diagnostic tests or medical devices, also begins with Phase 1 trials.

SEE RELATED TERM(S): Clinical Trial, Pharmacokinetics, Phase 2 Trial, Phase 3 Trial, Phase 4 Trial, Preclinical

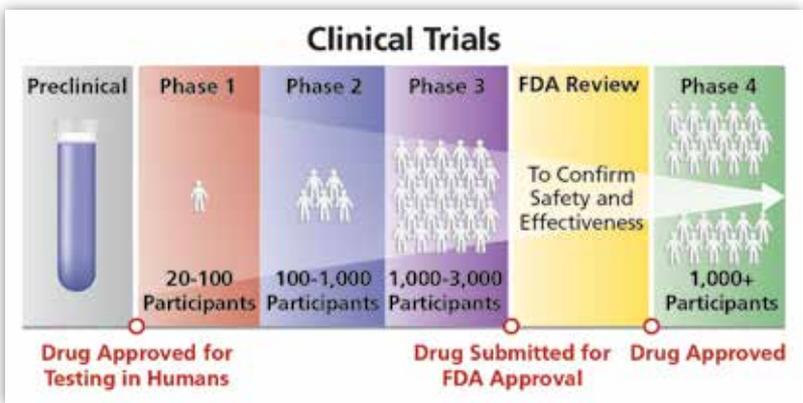


Figure 43

Phase 2 Trial (Fig. 43)

The second step in testing an experimental drug (or other treatment) in humans. Typically, Phase 2 trials are done only if Phase 1 trials have shown that the drug is safe, but sometimes Phase 1 and Phase 2 trials are combined. Phase 2 trials are designed to evaluate the drug's effectiveness in people with the disease or condition being studied and to determine the common short-term adverse effects and risks associated with the drug. Phase 2 trials involve more participants (often several hundred) and typically last longer than Phase 1 trials.

SEE RELATED TERM(S): Clinical Trial, Phase 1 Trial, Phase 3 Trial, Phase 4 Trial, Preclinical

Phase 3 Trial (Fig. 43)

The third step in testing an experimental drug (or other treatment) in humans. Phase 3 trials are conducted to confirm and expand on safety and effectiveness results from Phase 1 and 2 trials, to compare the drug to standard therapies for the disease or condition being studied, and to evaluate the overall risks and benefits of the drug. This trial phase recruits a large group of people with the disease or condition, usually ranging from 1,000 to 3,000 participants. The Food and Drug Administration (FDA) reviews results from Phase 3 trials when considering a drug for approval.

SEE RELATED TERM(S): Clinical Trial, Food and Drug Administration, Phase 1 Trial, Phase 2 Trial, Phase 4 Trial, Preclinical

Phase 4 Trial (Fig. 43)

Testing in humans that occurs after a drug (or other treatment) has already been approved by the Food and Drug Administration (FDA) and is being marketed for sale. Phase 4 trials are conducted to determine long-term safety and effectiveness and to identify adverse effects that may not have been apparent in prior trials. Thousands of participants are usually recruited to volunteer for this phase of clinical testing.

SEE RELATED TERM(S): Clinical Trial, Food and Drug Administration, Phase 1 Trial, Phase 2 Trial, Phase 3 Trial, Preclinical

Phenotypic Antiretroviral Resistance Test

SYNONYM(S): Phenotypic Assay

A type of resistance test that measures the extent to which a person's strain of HIV will multiply in different concentrations of antiretroviral (ARV) drugs. Resistance testing is used to guide selection of an HIV regimen when initiating or changing antiretroviral therapy (ART).

SEE RELATED TERM(S): Genotypic Antiretroviral Resistance Test, Resistance Testing

Phenotypic Assay

SYNONYM(S): Phenotypic Antiretroviral Resistance Test

Photosensitivity

Abnormal sensitivity to light. Symptoms may include reddening and blistering of the skin. Use of some antiretroviral (ARV) drugs may cause photosensitivity reactions.

Pill Burden

The number of tablets, capsules, or other dosage forms that a person takes on a regular basis. A high pill burden can make it difficult to adhere to an HIV treatment regimen.

SEE RELATED TERM(S): Adherence

Pink Eye

SYNONYM(S): Conjunctivitis

PI-Sparing Regimen

Combination antiretroviral therapy (ART) that does not include antiretroviral (ARV) drugs from the protease inhibitor (PI) drug class. Excluding PIs from an HIV treatment regimen saves drugs in the PI class for future use.

SEE RELATED TERM(S): Protease Inhibitor

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Placebo

SYNONYM(S): Sham, Sugar Pill

An inactive drug (or other intervention) that is identical in appearance to a therapeutically active drug. In some clinical trials, researchers compare the effects of a placebo with those of an active drug under investigation to determine if the active investigational drug is effective.

SEE RELATED TERM(S): Placebo-Controlled Trial, Placebo Effect

Placebo Effect

An effect (usually, but not necessarily, beneficial) that arises from an expectation that the given drug (or other intervention) will have an effect. In a clinical trial, placebo effect can refer to an effect experienced by either a participant or a researcher.

SEE RELATED TERM(S): Placebo

Placebo-Controlled Trial

A type of clinical trial. In placebo-controlled trials, one group of participants (the control arm) receives an inactive drug (or other intervention), called a placebo, while another group of participants (the experimental arm) receives the active drug being tested. The two groups are compared to see if the drug is more effective than the placebo.

SEE RELATED TERM(S): Placebo

Placenta

The sac-shaped organ that develops in the uterus of a pregnant woman. The placenta provides the fetus with oxygen and nutrients and takes away wastes, such as carbon dioxide, via the umbilical cord.

Plasma

The clear, yellowish liquid part of blood. Plasma carries red blood cells, white blood cells, and platelets throughout the body.

Platelet

An irregularly shaped cell-like particle found in the blood. Platelets cause blood clots to form, which helps prevent bleeding.

Pneumocystis Jiroveci Pneumonia (PCP)

SYNONYM(S): Pneumocystosis, Pneumocystis Carinii Pneumonia, Pneumocystis Pneumonia
Formerly known as *Pneumocystis carinii* pneumonia. A lung infection caused by the fungus *Pneumocystis jiroveci*. Symptoms include a cough (often mild and dry), fever, and shortness of breath. The fungus is common in the environment and does not cause illness in healthy people. Most people who get *Pneumocystis jiroveci* pneumonia have weakened immune systems due to HIV/AIDS, cancer treatments, or organ transplants. In people with HIV, *Pneumocystis jiroveci* pneumonia is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Opportunistic Infection

Pneumocystis Pneumonia

SYNONYM(S): Pneumocystis Jiroveci Pneumonia

Pneumocystis Carinii Pneumonia

SYNONYM(S): Pneumocystis Jiroveci Pneumonia

Pneumocystosis

SYNONYM(S): Pneumocystis Jiroveci Pneumonia

Pneumonia

SYNONYM(S): Bronchopneumonia

Inflammation of the lungs, which is usually caused by a bacterial, viral, or fungal infection. People older than 65 years of age or younger than 2 years of age and people with weakened immune systems are more at risk for pneumonia. Symptoms include cough, shortness of breath, fevers, chills, chest pain, and weakness. In people with HIV, recurrent pneumonia (pneumonia that returns again and again) is considered an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition

Polymerase Chain Reaction (PCR)

A laboratory technique used to produce large amounts of specific DNA fragments. PCR is used for genetic testing and to diagnose disease.

Polyneuritis

Inflammation of several peripheral nerves at the same time.

SEE RELATED TERM(S): Peripheral Nervous System

Polyneuropathy

Damage or degeneration of several nerves.

SEE RELATED TERM(S): Neuropathy

Polyvalent Vaccine

SYNONYM(S): Multivalent Vaccine

A vaccine that immunizes against more than one strain of an antigen. For example, the polyvalent pneumococcal vaccine protects against several strains of the pneumococcal bacteria.

SEE RELATED TERM(S): Antigen, Vaccine

Post-Exposure Prophylaxis (PEP)

Short-term treatment started as soon as possible after high-risk exposure to an infectious agent, such as HIV, hepatitis B virus (HBV), or hepatitis C virus (HCV). The purpose of post-exposure prophylaxis (PEP) is to reduce the risk of infection. An example of a high-risk exposure is exposure to an infectious agent as the result of unprotected sex.

SEE RELATED TERM(S): Non-Occupational Post-Exposure Prophylaxis, Occupational Post-Exposure Prophylaxis, Pre-Exposure Prophylaxis

Postnatal

The time period after birth. Postnatal refers to the newborn.

Postpartum (Fig. 44)

The time period after childbirth. Postpartum refers to the mother.

SEE RELATED TERM(S): Antepartum, Intrapartum, Postnatal



Figure 44

Preclinical (Fig. 45)

Preliminary testing of an investigational drug (or other intervention) in laboratory (in a test tube, for example) and animal studies. Preclinical studies take place before any testing in humans is done.

SEE RELATED TERM(S): Clinical Trial, Phase 1 Trial, Phase 2 Trial, Phase 3 Trial, Phase 4 Trial



Figure 45

Preconception Counseling and Care

Ongoing education, care, and treatment to improve the health of a woman before pregnancy. Preconception counseling and care involves identifying and managing conditions and behaviors that could put the woman or her baby at risk. For women with HIV, this includes counseling on the risks and benefits of antiretroviral (ARV) drugs to prevent mother-to-child transmission (MTCT) of HIV and to protect the women's health. Preconception counseling may include advising an HIV-infected male on how to prevent HIV transmission to a female partner before and during pregnancy.

SEE RELATED TERM(S): Mother-to-Child Transmission

Pre-Exposure Prophylaxis (PrEP)

An HIV prevention method for people who are HIV negative and at high risk of HIV infection. Pre-exposure prophylaxis (PrEP) involves taking a specific combination of HIV medicines daily. PrEP is even more effective when it is combined with condoms and other prevention tools.

Prenatal

SYNONYM(S): Antenatal

The time period from conception up to birth. Prenatal can refer to both the woman and the fetus.

Prescribing Information

SYNONYM(S): Package Insert

Prescription Drug Labeling

SYNONYM(S): Package Insert

President's Emergency Plan for AIDS Relief (PEPFAR)

The U.S. government global initiative to combat the HIV/AIDS epidemic. The President's Emergency Plan for AIDS Relief (PEPFAR) works with governmental and non-governmental partners worldwide to support integrated HIV prevention, treatment, and care programs. PEPFAR places emphasis on improving health outcomes, increasing program sustainability and integration, and strengthening health systems.

Presumptive

Based on a reasonable assumption. In non-breastfed infants born to HIV-infected mothers, presumptive exclusion of HIV infection is based on two or more negative HIV tests, one at age 14 days or older and the other at age 1 month or older. Additional testing is necessary to definitively exclude HIV infection.

SEE RELATED TERM(S): Definitive

Prevalence

The number or proportion of people with a particular disease or condition in a given population and at a specific time.

SEE RELATED TERM(S): Incidence

Prevention of Mother-to-Child Transmission

SYNONYM(S): Prevention of Perinatal Transmission

Prevention of Perinatal Transmission

SYNONYM(S): Prevention of Mother-to-Child Transmission (PMTCT)

Strategies used to prevent the spread (transmission) of HIV from an HIV-infected mother to her child during pregnancy, during labor and delivery, or by breastfeeding (through breast milk). Strategies include antiretroviral (ARV) prophylaxis for the mother during pregnancy and labor and delivery, scheduled cesarean delivery, ARV prophylaxis for the newborn infant, and avoidance of breastfeeding.

Preventive HIV Vaccine

SYNONYM(S): HIV Preventive Vaccine

A vaccine to prevent HIV infection in people who do not have HIV. To date, no preventive HIV vaccine exists, but research is underway.

SEE RELATED TERM(S): Therapeutic HIV Vaccine, Vaccine

Primary HIV Infection

SYNONYM(S): Acute HIV Infection

Primary Immune Complex Reaction

A type of hypersensitivity reaction that results from interactions between a drug and the immune system. During a primary immune complex reaction, antigens and antibodies clump together to form immune complexes. These immune complexes then damage body tissue. This rare but serious drug reaction can occur with use of certain antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Hypersensitivity

Primary Prevention

SYNONYM(S): Primary Prophylaxis

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Primary Prophylaxis

SYNONYM(S): Primary Prevention

Drugs or other forms of treatment used to prevent the development of a disease in a person who is at risk for but with no prior history of the disease. For example, primary prophylaxis is used to prevent people with advanced HIV infection from developing opportunistic infections, such as toxoplasmosis.

SEE RELATED TERM(S): Maintenance Therapy

Primary Resistance

SYNONYM(S): Transmitted Resistance

Proctitis

Inflammation of the anus and rectum.

Prodrome

An early symptom that indicates the onset of a disease.

Product Label

SYNONYM(S): Package Insert

Programmed Cell Death

SYNONYM(S): Apoptosis

Progressive Multifocal Leukoencephalopathy (PML)

A rare disorder of the central nervous system caused by the John Cunningham virus (JCV). Most people are infected with JCV by 10 years of age; however, only people with weakened immune systems develop progressive multifocal leukoencephalopathy (PML). PML is primarily characterized by damage to myelin in the brain. Symptoms of PML vary and can include headache, loss of coordination, loss of speech, vision problems, and progressive weakness in the arms and legs. In people with HIV, PML is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Central Nervous System, Myelin, Opportunistic Infection

Prophylactic

SYNONYM(S): Condom

Prophylaxis

Prevention or protection against disease.

SEE RELATED TERM(S): Maintenance Therapy, Primary Prophylaxis

Protease (Fig. 46)

A type of enzyme that breaks down proteins into smaller proteins or smaller protein units, such as peptides or amino acids. HIV protease cuts up large precursor proteins into smaller proteins. These smaller proteins combine with HIV's genetic material to form a new HIV virus. Protease inhibitors (PIs) prevent HIV from replicating by blocking protease.

SEE RELATED TERM(S): Budding, Life Cycle, Protease Inhibitor

Protease Inhibitor (PI)

(Fig. 46)

Antiretroviral (ARV) HIV drug class. Protease inhibitors (PIs) block protease (an HIV enzyme). By blocking protease, PIs prevent new (immature) HIV from becoming a mature virus that can infect other CD4 cells.

SEE RELATED TERM(S): Drug Class, Protease

Protein

A large molecule made up of a series of peptides—one or more long chains of amino acids. The specific sequence of the amino acids determines the protein's structure and function. Proteins are essential to all living organisms.

SEE RELATED TERM(S): Amino Acids

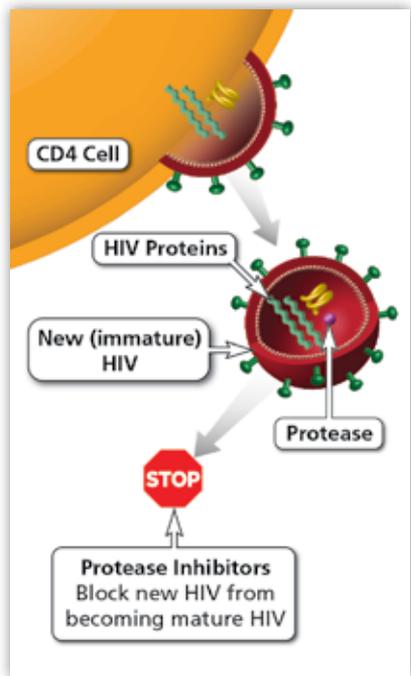


Figure 46

Proteinuria

SYNONYM(S): Albuminuria, Urine Albumin

Excess protein in the urine. Proteinuria is a sign of chronic kidney disease, which can result from diabetes, high blood pressure, and diseases that cause inflammation in the kidneys. Proteinuria can also occur if antiretroviral (ARV) drugs damage the kidneys.

Protocol

The detailed plan for conducting a clinical trial. The protocol is carefully designed to safeguard the health of participants and to answer specific research questions. The protocol describes what the trial will do, how it will be carried out, and why each part of the trial is necessary. Each person participating in a clinical trial must agree to the rules set out by the protocol.

SEE RELATED TERM(S): Clinical Trial, Eligibility Criteria

Protozoan

A single-celled microorganism. Some protozoans can cause disease in humans, including *Toxoplasma gondii* (causes toxoplasmosis), the group *Plasmodium* (causes malaria), and the group *Cryptosporidium* (causes cryptosporidiosis). People with weakened immune systems, including people with HIV, are at a higher risk for protozoan infections than people with healthy immune systems.

Proviral DNA

SYNONYM(S): Provirus

Provirus

SYNONYM(S): Proviral DNA

An inactive viral form that has been integrated into the genes of a host cell. For example, when HIV enters a host CD4 cell, HIV RNA is first changed to HIV DNA (provirus). The HIV provirus then gets inserted into the DNA of the CD4 cell. When the CD4 cell replicates, the HIV provirus is passed from one cell generation to the next, ensuring ongoing replication of HIV.

SEE RELATED TERM(S): Integration

Pruritus

An intense itching sensation that produces the urge to rub or scratch the skin to obtain relief. Common causes of pruritus include allergic reactions, insect bites, and reactions to medications.

PubMed

A service of the U.S. National Library of Medicine that provides free access to an extensive database of citations and abstracts for biomedical literature, life science journals, and online books. Citations may include links to full-text content and to related resources.

SEE RELATED TERM(S): National Library of Medicine

Pulmonary

Pertaining to the lungs.

Purified Protein Derivative Test

SYNONYM(S): Tuberculin Skin Test

q.d.

SYNONYM(S): QD

QD

SYNONYM(S): qd, q.d.

An abbreviation meaning “once a day.” The abbreviation is commonly used in drug dosing instructions.

qd

SYNONYM(S): QD

QID

SYNONYM(S): q.i.d., qid

An abbreviation meaning “four times a day.” The abbreviation is commonly used in drug dosing instructions.

Qualitative Transcription-Mediated Amplification Assay

A type of viral load test. Viral load tests are used to diagnose acute HIV infection, guide treatment choices, and monitor response to antiretroviral therapy (ART).

SEE RELATED TERM(S): Viral Load Test

Quantitative Branched DNA Assay (bDNA)

A type of viral load test. Viral load tests are used to diagnose acute HIV infection, guide treatment choices, and monitor response to antiretroviral therapy (ART).

SEE RELATED TERM(S): Viral Load Test

Quasispecies

A group of viruses found in the same host. The viruses in the group develop similar genetic mutations over time. During HIV infection, HIV can mutate into multiple quasispecies, which may reduce the immune system’s ability to control HIV infection. Antiretroviral therapy (ART) started in the early stages of HIV infection can control HIV replication and development of quasispecies.

R5-Tropic Virus (Fig. 47)

SYNONYM(S): M-Tropic Virus, Macrophage-Tropic Virus

A strain of HIV that enters and infects a host CD4 cell by attaching to the CCR5 coreceptor on the CD4 cell. To enter a CD4 cell, HIV must first attach to a CD4 receptor, then attach to either the CCR5 or CXCR4 coreceptor, and finally fuse its membrane with the CD4 cell membrane. HIV is usually R5-tropic (uses CCR5) during the early stages of infection, but the virus may later switch to using either only CXCR4 (X4-tropic) or both CCR5 and CXCR4 (dual-tropic). Antiretroviral (ARV) drugs in the CCR5 inhibitor drug class block HIV from attaching to the CCR5 coreceptor, preventing HIV entry into the CD4 cell.

SEE RELATED TERM(S): CCR5, CCR5 Antagonist, CD4 Receptor, CD4 T Lymphocyte, CXCR4, Dual-Tropic Virus, X4-Tropic Virus

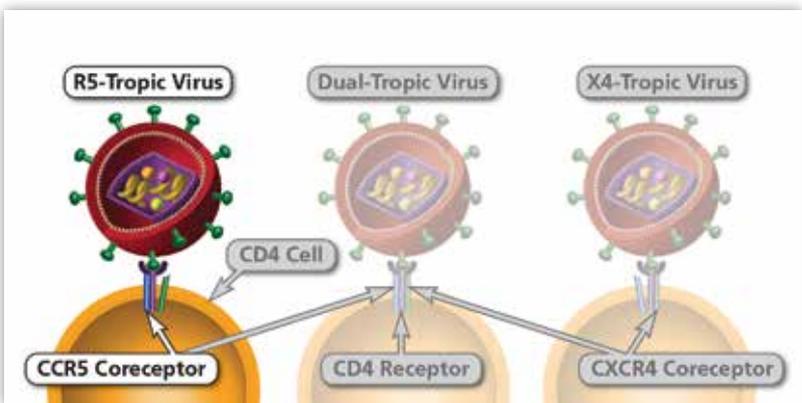


Figure 47

Randomized Trial

A type of clinical trial in which participants are assigned by chance (randomized) to the arms of the trial (experimental or control arms). Randomization eliminates any potential preference in assigning participants to the arms of the trial and increases the likelihood that the trial arms are comparable overall in terms of general characteristics, such as age or gender, and other factors that might affect the disease or condition being studied. Having arms that are as similar as possible at the start of a clinical trial allows researchers to conclude with a certain level of confidence whether one intervention is better than another at the end of the trial.

SEE RELATED TERM(S): Clinical Trial, Control Arm

Rapid Test

A type of HIV antibody test used to screen for HIV infection. A rapid HIV antibody test can detect HIV antibodies in blood or oral fluid in less than 30 minutes. A positive rapid HIV antibody test must be confirmed by a second, different antibody test (a positive Western blot) for a person to be definitively diagnosed with HIV infection.

SEE RELATED TERM(S): Antibody, Enzyme-Linked Immunosorbent Assay, Western Blot

Rebound

SYNONYM(S): Viral Rebound

Receptor

A protein that is located inside or on the surface of a cell and that binds to a specific substance, such as a hormone, antigen, virus, or neurotransmitter. The binding of the substance to the cell receptor causes a change in the activity of the cell. In order to enter a host cell, HIV must first bind to receptors on the host cell.

SEE RELATED TERM(S): CD4 Receptor

Rechallenge

Restarting a drug that was stopped because it was considered the likely cause of an adverse effect. When the drug is restarted, the person is closely monitored for any signs of the adverse effect.

Recombinant

DNA produced in a laboratory by joining segments of DNA from different sources. Recombinant can also describe proteins, cells, or organisms made by genetic engineering.

SEE RELATED TERM(S): Genetic Engineering

Red Blood Cell

SYNONYM(S): Erythrocyte, Red Blood Corpuscle

Blood cells that carry oxygen to all parts of the body. Red blood cells have a high concentration of hemoglobin, a protein that binds to oxygen from the lungs and that gives blood its red color.

Red Blood Corpuscle

SYNONYM(S): Red Blood Cell

Red Eye

SYNONYM(S): Conjunctivitis

Red-Band Gingivitis

SYNONYM(S): Linear Gingival Erythema

Refractory

Resistant to treatment. For example, a refractory disease or condition is one that is not responding to treatment.

Regimen

SYNONYM(S): Treatment Regimen

Regimen Simplification (Fig. 48)

SYNONYM(S): Treatment Simplification

Making changes to an HIV treatment regimen to make medication adherence easier. Simplifying an HIV regimen can include reducing the number of antiretroviral (ARV) drugs in the regimen or changing to a combination ARV drug that provides a one-pill, once-daily complete regimen. Other changes can include switching to ARV drugs that cause fewer adverse effects or to ARV drugs that can be taken without food. Benefits of regimen simplification include long-term medication adherence, reduced risk of treatment failure, and improved quality of life.

SEE RELATED TERM(S): Adherence

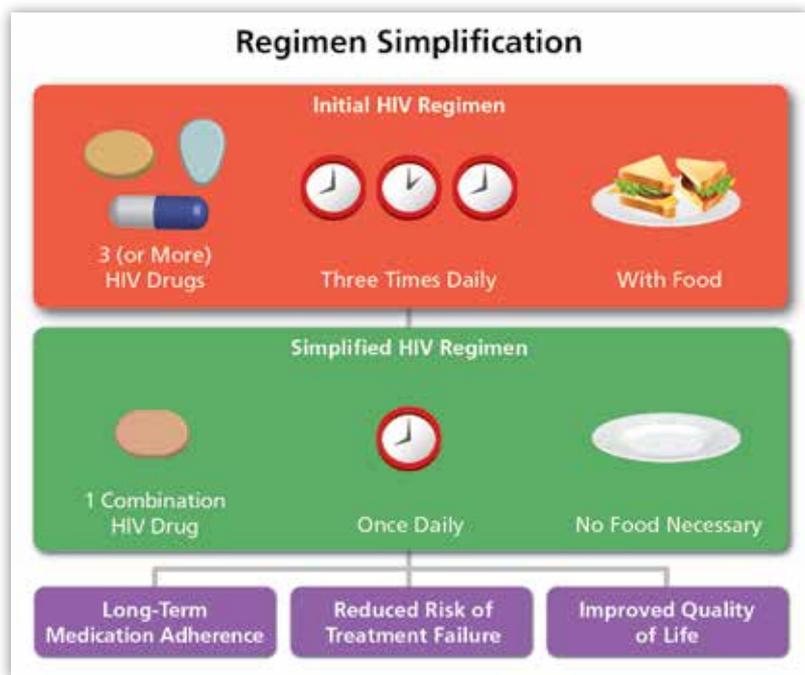


Figure 48

Regulatory T Cell

SYNONYM(S): Regulatory T Lymphocyte

Regulatory T Lymphocyte

SYNONYM(S): Regulatory T Cell, Suppressor T Cell, Suppressor T Lymphocyte

A type of lymphocyte. Regulatory T lymphocytes (regulatory T cells) prevent the immune system from becoming over-active during an immune response and from attacking normal cells.

SEE RELATED TERM(S): T Lymphocyte

Relapse

The recurrence of a disease after a period of remission or apparent recovery.

SEE RELATED TERM(S): Remission

Relative Contraindication

When a particular treatment or procedure should be used with caution. The risk of using the treatment or procedure is acceptable because the benefits outweigh the risks.

SEE RELATED TERM(S): Contraindication

Remission

The period during which symptoms of a disease diminish or disappear.

SEE RELATED TERM(S): Relapse

Renal

Pertaining to the kidneys.

Replicate

To produce a copy or duplicate. The HIV life cycle describes the 7-step process by which HIV replicates.

SEE RELATED TERM(S): Life Cycle

Replication (Fig. 49)

SYNONYM(S): Transcription and Translation

The fifth of seven steps in the HIV life cycle. Once HIV is integrated into the host CD4 cell DNA, the virus begins to use the machinery of the CD4 cell to create long chains of HIV proteins. The protein chains are the building blocks for more HIV.

SEE RELATED TERM(S): Life Cycle

Replication Cycle

SYNONYM(S): Life Cycle

Rescue Therapy

SYNONYM(S): Salvage Therapy

Reservoir

SYNONYM(S): Latent HIV Reservoir

Resistance

SYNONYM(S): Drug Resistance

Resistance Assay

SYNONYM(S): Resistance Testing

Resistance Testing

SYNONYM(S): Resistance Assay

Laboratory testing to identify which, if any, antiretroviral (ARV) drugs will not be effective against a person's specific strain of HIV.

Resistance testing is done using a sample of blood. There are two types of resistance testing: genotypic and phenotypic. Resistance testing is used to guide selection of an HIV regimen when initiating or changing antiretroviral therapy (ART).

SEE RELATED TERM(S): Drug Resistance, Genotypic Antiretroviral Resistance Test, Phenotypic Antiretroviral Resistance Test

Retina

The light-sensitive membrane that lines the inside of the eye and sends visual messages through the optic nerve to the brain.

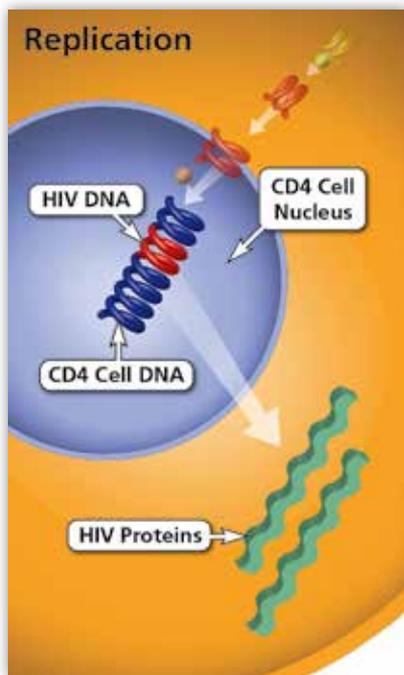


Figure 49

Retinal Detachment

Separation of the retina from its supporting tissue. Retinal detachment must be treated promptly to avoid permanent vision loss. Retinal detachment can be a complication of cytomegalovirus (CMV) retinitis, which is a viral infection that can occur in people with weakened immune systems, including people with HIV.

SEE RELATED TERM(S): Retina

Retinitis

Inflammation of the retina.

SEE RELATED TERM(S): Retina

Retrospective Study

A type of medical research study. Retrospective studies look back in time to compare a group of people with a particular disease or condition to a group of people who do not have the disease or condition. Researchers study the medical and lifestyle histories of the people in each group to learn what factors may be associated with the disease or condition.

Retrovirus

A type of virus that uses RNA as its genetic material. After infecting a cell, a retrovirus uses an enzyme called reverse transcriptase to convert its RNA into DNA. The retrovirus then integrates its viral DNA into the DNA of the host cell, which allows the retrovirus to replicate. HIV, the virus that causes AIDS, is a retrovirus.

SEE RELATED TERM(S): Life Cycle

Reverse Transcriptase (RT) (Fig. 50)

An enzyme found in HIV (and other retroviruses). HIV uses reverse transcriptase (RT) to convert its RNA into viral DNA, a process called reverse transcription. Non-nucleoside reverse transcriptase inhibitors (NNRTIs) prevent HIV from replicating by blocking RT.

SEE RELATED TERM(S): Life Cycle, Non-Nucleoside Reverse Transcriptase Inhibitor, Reverse Transcription

Reverse Transcriptase-Polymerase Chain Reaction-Based Assay (RT-PCR)

A type of viral load test. Viral load tests are used to diagnose acute HIV infection, guide treatment choices, and monitor response to antiretroviral therapy (ART).

SEE RELATED TERM(S): Viral Load Test

Reverse Transcription

(Fig. 50)

The third of seven steps in the HIV life cycle. Once inside a CD4 cell, HIV releases and uses reverse transcriptase (an HIV enzyme) to convert its genetic material—HIV RNA—into HIV DNA. The conversion of HIV RNA to HIV DNA allows HIV to enter the CD4 cell nucleus and combine with the cell's genetic material—cell DNA.

SEE RELATED TERM(S): Life Cycle, Non-Nucleoside Reverse Transcriptase Inhibitor, Nucleoside Reverse Transcriptase Inhibitor, Reverse Transcriptase

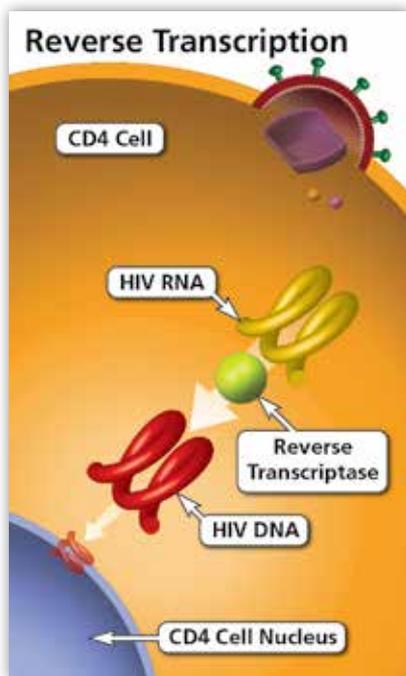


Figure 50

Rhabdomyolysis

Breakdown or death of muscle

tissue, often with release of muscle fiber contents into the bloodstream and sometimes leading to acute renal failure. Rhabdomyolysis may be caused by HIV infection, opportunistic infections, or some antiretroviral (ARV) drugs.

Ribonucleic Acid (RNA)

One of two types of genetic material found in all living cells and many viruses. (The other type of genetic material is DNA.) There are several types of ribonucleic acid (RNA). RNA plays important roles in protein synthesis and other cell activities.

SEE RELATED TERM(S): Deoxyribonucleic Acid, Messenger RNA

Rigors

Shivering that is caused by a chill.

Rod Body Disease

SYNONYM(S): NemaLine Rod Myopathy

Ryan White HIV/AIDS Program

SYNONYM(S): CARE Act

The largest federally funded program providing HIV-related services to low-income, uninsured, and underinsured people with HIV/AIDS. The program's services are available in all 50 states and U.S. territories.

SEE RELATED TERM(S): Health Resources and Services Administration

Salmonella

A group of bacteria. *Salmonella* is the most common cause of foodborne illnesses in the United States. Infection with *Salmonella* can cause diarrhea, nausea, fever, and headache. In people with weakened immune systems, including people with HIV, the symptoms of *Salmonella* infection are more severe than in people with healthy immune systems.

Salmonella Septicemia

A life-threatening *Salmonella* infection that has spread to the bloodstream. *Salmonella* septicemia can be caused by any of the *Salmonella* bacteria, which are found in contaminated food and water. The infection is systemic and affects virtually every organ system. The most common symptom is a fever that comes and goes. In people with HIV, recurrent *Salmonella* septicemia is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Salmonella

Salvage Therapy

SYNONYM(S): Rescue Therapy

Therapy given when the standard treatment for a disease or condition is no longer effective and when treatment options are limited. People with HIV who have experienced toxicity and/or developed resistance to many HIV drugs receive salvage therapy.

SEE RELATED TERM(S): Drug Resistance, Treatment Failure

San Joaquin Valley Fever

SYNONYM(S): Coccidioidomycosis

Seborrheic Dermatitis

A non-contagious inflammatory skin condition characterized by flaky, white to yellowish scales on various areas of the body, including the scalp, eyebrows, eyelids, ears, and trunk. Seborrheic dermatitis can occur with or without redness. The exact cause of seborrheic dermatitis is unknown, but it may be due to an overproduction of skin oil combined with irritation from a yeast. Factors that might increase the risk of seborrheic dermatitis include family history, stress, fatigue, use of alcohol-containing lotions, skin disorders, obesity, HIV infection, and certain neurologic conditions.

Secondary Prophylaxis

SYNONYM(S): Maintenance Therapy

Secondary Resistance

SYNONYM(S): Acquired Resistance

Secondary Transmission

(Fig. 51)

SYNONYM(S): Horizontal Transmission

The transfer (spread) of HIV that mainly occurs during sex or needle sharing as the result of contact with the semen, vaginal fluid, or blood of an HIV-infected partner. (HIV transmission from mother to child during pregnancy, labor and delivery, or breastfeeding is called vertical transmission.)

SEE RELATED TERM(S): Sexual Transmission, Vertical Transmission

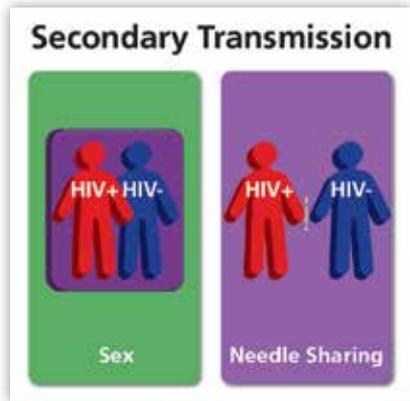


Figure 51

Self-Administered Therapy (SAT)

A method of drug administration in which a person takes medication without being observed by a health care professional.

SEE RELATED TERM(S): Directly Observed Therapy

Semen

SYNONYM(S): Seminal Fluid

A thick, whitish fluid that is discharged from the male penis during ejaculation. Semen contains sperms and various secretions. HIV can be transmitted through the semen of a man with HIV.

Semen-Derived Enhancer of Virus Infection (SEVI)

Protein fibers found in semen that can trap HIV and help HIV attach to cells. Semen-derived enhancer of virus infection (SEVI) increases the risk of sexual transmission of HIV.

Seminal Fluid

SYNONYM(S): Semen

Sensitivity

The probability that a medical test will detect the condition being tested for in people who actually have the condition. In other words, a sensitive test is one that produces true positive results. For example, the enzyme-linked immunosorbent assay (ELISA) HIV antibody test is highly sensitive, which means the test can detect HIV in most people infected with HIV. However, because the ELISA can sometimes mistakenly recognize antibodies to other diseases as antibodies to HIV (a false positive result), a Western Blot or other HIV test is used to confirm a positive ELISA HIV antibody test.

SEE RELATED TERM(S): Specificity, True Positive

Sepsis

An overwhelming, life-threatening immune response to infection. Sepsis causes a systemic reaction that includes fever, chills, rapid heart rate, increased breathing rate, and possibly shock. Sepsis can also cause body organs, such as the kidneys or lungs, to fail. Sepsis is more likely to occur in people with weakened immune systems, including people with HIV, than in people with healthy immune systems.

Seroconversion

The transition from infection with HIV to the detectable presence of HIV antibodies in the blood. When seroconversion occurs (usually within a few weeks of infection), the result of an HIV antibody test changes from HIV negative to HIV positive.

SEE RELATED TERM(S): Window Period

Serologic Test

A blood test to detect the presence of antibodies against a microorganism. A serologic test can determine whether a person has been exposed to a particular microorganism.

Seroprevalence

The overall occurrence of a disease or condition within a defined population at one time, as measured by blood tests (serologic tests).

Serostatus

The state of either having or not having detectable antibodies against a specific antigen, as measured by a blood test (serologic test). For example, HIV seropositive means that a person has detectable antibodies to HIV; seronegative means that a person does not have detectable HIV antibodies.

Serum

The clear, yellowish liquid part of blood that remains after clotting. Serum is used for various laboratory tests.

Serum Glutamate Pyruvate Transaminase

SYNONYM(S): Alanine Aminotransferase

Serum Glutamic-Oxaloacetic Transaminase

SYNONYM(S): Aspartate Aminotransferase

Set Point

SYNONYM(S): Viral Set Point

The viral load (HIV RNA) that the body settles at within a few weeks to months after infection with HIV. Immediately after infection, HIV multiplies rapidly and a person's viral load is typically very high. After a few weeks to months, this rapid replication of HIV declines and the person's viral load drops to its set point.

SEE RELATED TERM(S): Viral Load

Sexual Transmission

Transmission of HIV, or other sexually transmitted infection, from one individual to another as the result of sexual contact.

SEE RELATED TERM(S): Vertical Transmission

Sexually Transmitted Disease

SYNONYM(S): Sexually Transmitted Infection

Sexually Transmitted Infection (STI)

SYNONYM(S): Sexually Transmitted Disease

An infectious disease that spreads from person to person during sexual contact. Sexually transmitted infections, such as syphilis, HIV infection, and gonorrhea, are caused by bacteria, parasites, and viruses.

SGPT

SYNONYM(S): Alanine Aminotransferase

Sham

SYNONYM(S): Placebo

Shigellosis

An enteric (intestinal) infection caused by the bacterium *Shigella*, which is typically transmitted through contact with contaminated human feces. Symptoms usually include watery or bloody diarrhea, abdominal pain, nausea, and fever. Certain bacterial enteric infections, including shigellosis, occur at a much higher rate in people with HIV than in people with healthy immune systems.

SEE RELATED TERM(S): Opportunistic Infection

Shingles

A non-contagious disease caused by the varicella zoster virus (VZV or HHV-3). VZV is the same virus that causes chickenpox. The virus remains in the nervous system of people who have had chickenpox, and it can become active years later to cause shingles. Symptoms of shingles can include numbness, itching, and severe pain that is followed by a rash of blister-like lesions along one side of the body. The pain can persist for weeks, months, or years after the rash heals. People with HIV are more at risk for shingles than people with healthy immune systems.

SEE RELATED TERM(S): Herpesviruses, Varicella Zoster Virus

Simian Immunodeficiency Virus (SIV)

An HIV-like virus that can infect monkeys and apes and can cause a disease similar to AIDS. Because HIV and simian immunodeficiency virus (SIV) are closely related viruses, researchers study SIV as a way to learn more about HIV. However, SIV cannot infect humans, and HIV cannot infect monkeys.

SEE RELATED TERM(S): Human Immunodeficiency Virus

Single-Blind Study

SYNONYM(S): Single-Masked Study

A type of clinical trial in which either the investigators or the participants are unaware of the treatment (or other intervention) that the participants are receiving.

SEE RELATED TERM(S): Clinical Trial, Double-Blind Study

Single-Masked Study

SYNONYM(S): Single-Blind Study

South American Trypanosomiasis

SYNONYM(S): Chagas Disease

Specificity

The probability that a medical test will correctly produce a negative test result for a person who does not have the condition being tested. In other words, a specific test is one that produces true negative results. For example, the specificity of the Western Blot is very high; the test seldom mistakes antibodies to other diseases as antibodies to HIV. For that reason, the Western Blot is used to confirm a positive enzyme-linked immunosorbent assay (ELISA) or other HIV antibody test.

SEE RELATED TERM(S): Sensitivity, True Negative

Sperm Washing

A laboratory procedure used to separate semen (the fluid part of ejaculate) from sperm. Sperm washing can be considered as a reproductive option for an HIV discordant couple in which the man is the HIV-infected partner. Because the seminal fluid contains the highest concentration of HIV, the “washed” sperm contains little if any HIV. However, because sperm washing has not been proven completely effective, couples using the procedure should be counseled regarding the potential risks for transmission of HIV.

SEE RELATED TERM(S): Discordant Couple

Spermicide

A topical preparation or substance used during sexual intercourse to kill sperm. Although spermicides may prevent pregnancy, they do not protect against HIV infection or other sexually transmitted infections. Irritation of the vagina and rectum that sometimes occurs with use of spermicides may increase the risk of sexual transmission of HIV.

Spinal Tap

SYNONYM(S): Lumbar Puncture

A procedure in which a needle is inserted into the lower region of the spinal cord to collect cerebrospinal fluid (CSF). The CSF is examined in a laboratory to diagnose and monitor certain infections. A spinal tap may also be performed to inject drugs or to reduce spinal fluid pressure.

SEE RELATED TERM(S): Cerebrospinal Fluid

Spleen

An organ of the lymphatic system. The spleen is located on the left side of the body, above the stomach. The spleen helps fight infection, keeps body fluids in balance, stores blood, and destroys old and damaged cells.

SEE RELATED TERM(S): Lymphatic System

Splenomegaly

Abnormal enlargement of the spleen.

SEE RELATED TERM(S): Spleen

Sputum Analysis

Laboratory evaluation of sputum to detect certain infections, such as bacterial pneumonia and tuberculosis (TB). Sputum is the mucus-containing material produced by the cells lining the lungs and airways (bronchial tubes). The sputum used for analysis is collected when a person coughs or spits.

Standard Medical Care

SYNONYM(S): Standard of Care

Standard of Care

SYNONYM(S): Best Practice, Standard Medical Care, Standard Therapy

Treatment that experts agree is appropriate, accepted, and widely used for a given disease or condition.

Standard Therapy

SYNONYM(S): Standard of Care

Statin

SYNONYM(S): HMG-CoA Reductase Inhibitor, Lipid-Lowering Agent

Any of a group of drugs used to lower the amount of cholesterol in the blood. Statins block a key liver enzyme involved in making cholesterol.

SEE RELATED TERM(S): Cholesterol

Stem Cells

Unspecialized cells from which other types of cells develop. When a stem cell divides, each new cell has the potential either to remain a stem cell or to become a specialized cell with a distinct function, such as a muscle cell or blood cell. Stem cells serve as a repair system for the body, replacing old and damaged cells. Research on using stem cells to treat various diseases is currently under way.

Stevens-Johnson Syndrome (SJS)

A severe and sometimes fatal form of skin rash characterized by red, blistered spots on the skin; blisters in the mouth, eyes, genitals, or other moist areas of the body; peeling skin that results in painful sores; and fever, headache, and other flu-like symptoms. Internal organs may also be affected. Stevens-Johnson syndrome (SJS) may occur as a severe reaction to certain drugs, including some antiretroviral (ARV) HIV drugs.

Stomatitis

Inflammation of the mucous membranes of the mouth, such as the gums or lips. The causes of stomatitis vary and can include injury to the mouth, allergy, and infection.

Strain

A group of organisms, such as bacteria or viruses, that belong to the same species and share certain characteristics not found in other members of the species. For example, HIV can mutate into different strains, with each strain having a different type of resistance to antiretroviral (ARV) drugs.

Streptococcus Pneumonia Infection

Infection caused by the bacterium *Streptococcus pneumoniae*, which is spread through contact with respiratory droplets from a person who is infected with or carrying the bacteria. The bacteria are a major cause of common illnesses, such as inflammation of the sinuses (sinusitis), but can also result in life-threatening infections, including meningitis and pneumonia. People with weakened immune systems, including people with HIV, are at higher risk for bacterial pneumonia, including *Streptococcus pneumoniae* infection, than people with healthy immune systems.

SEE RELATED TERM(S): Opportunistic Infection, Pneumonia

Stroke

SYNONYM(S): Brain Attack

An interruption of blood flow to the brain, caused by a broken or blocked blood vessel. A stroke results in sudden loss of brain function, such as loss of consciousness, paralysis, or changes in speech. Stroke is a medical emergency and can be life-threatening.

Structured Treatment Interruption (STI)

SYNONYM(S): Drug Holiday

A planned break from treatment, during which a person stops taking medications. Structured treatment interruptions (STIs) may be used to reduce toxic effects of medications, to enhance a medication's effectiveness when restarted, or as a step towards stopping treatment all together. Structured interruption of HIV treatment is not recommended outside of controlled clinical trials.

Subclinical Infection

An infection that has no symptoms or noticeable signs. A subclinical infection may be an early stage of an infection or a very mild infection.

Subcutaneous (SC)

Pertaining to the area beneath the layers of the skin. Some drugs are given by subcutaneous injection.

Subcutaneous Adipose Tissue (SAT)

Fat tissue located right under the skin. HIV-associated lipodystrophy can include changes in subcutaneous adipose tissue (SAT) and may be related to use of certain antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Lipodystrophy Syndrome, Visceral Adipose Tissue

Suboptimal Immunologic Response

SYNONYM(S): Immunologic Failure

After antiretroviral therapy (ART) is initiated, the failure to achieve and maintain adequate CD4 counts despite viral suppression.

SEE RELATED TERM(S): Treatment Failure, Viral Suppression

Substance Abuse and Mental Health Services Administration (SAMHSA)

The lead federal agency for reducing the impact of substance abuse and mental illness in the United States. The Substance Abuse and Mental Health Services Administration (SAMHSA) provides grant funding to address issues of HIV, AIDS, and viral hepatitis.

Subtype

SYNONYM(S): Clade

A subgroup of genetically related HIV-1 viruses. HIV-1 can be classified into four groups: M Group, N Group, O Group, and P Group. Viruses within each group can then be further classified by subtype. For example, the HIV-1 M group includes at least nine subtypes: A1, A2, B, C, D, F1, F2, G, H, J, and K.

Sugar

SYNONYM(S): Glucose

Sugar Pill

SYNONYM(S): Placebo

Superinfection

When a person who is already infected with HIV becomes infected with a second, different strain of HIV. Superinfection may cause HIV to advance more rapidly. Superinfection can also complicate treatment if the newly acquired strain of HIV is resistant to antiretroviral (ARV) drugs in the person's current HIV treatment regimen.

SEE RELATED TERM(S): Drug Resistance

Superiority Trial

A clinical trial designed to show that a new drug (or other intervention) is more effective than the drug to which it is compared.

SEE RELATED TERM(S): Non-Inferiority Trial

Suppressor T Cell

SYNONYM(S): Regulatory T Lymphocyte

Suppressor T Lymphocyte

SYNONYM(S): Regulatory T Lymphocyte

Supportive Care

SYNONYM(S): Palliative Care

Surrogate Endpoint

SYNONYM(S): Surrogate Marker

Substitute measure for a clinical endpoint. Because it can be difficult to measure clinical endpoints in studies running for several years, researchers often use surrogate endpoints as substitute measures for clinical endpoints. For example, in HIV-related clinical trials, rising CD4 count is used as a surrogate endpoint for progression of HIV infection.

SEE RELATED TERM(S): Clinical Endpoint, Clinical Trial

Surrogate Marker

SYNONYM(S): Surrogate Endpoint

Sustained Viral Suppression

SYNONYM(S): Sustained Virologic Response

Sustained Virologic Response

SYNONYM(S): Sustained Viral Suppression

The continuous, long-term suppression of a person's viral load (HIV RNA)—generally to undetectable levels—as the result of treatment with antiretroviral (ARV) drugs.

Symptom Management

SYNONYM(S): Palliative Care

Syncytium

A large cell-like structure that forms when many cells fuse together. Syncytia can form during viral infection. In some people with HIV, syncytia formation has been linked to more rapid progression of HIV infection.

Syndrome

A group of symptoms or conditions that occur together and are collectively associated with a specific disease or with the risk of developing a specific disease.

Syndrome X

SYNONYM(S): Metabolic Syndrome

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Synergism

SYNONYM(S): Drug Synergism

Synergy

SYNONYM(S): Drug Synergism

Syphilis

An infectious disease caused by the bacterium *Treponema pallidum*, which is typically transmitted through direct contact with a syphilis sore, usually during vaginal, anal, or oral sex. Syphilis can also be transmitted from an infected mother to her child during pregnancy. Syphilis sores occur mainly on the genitals, anus, and rectum, but also on the lips and mouth. Genital sores (chancres) caused by syphilis increase the risk of sexual transmission of HIV.

SEE RELATED TERM(S): Opportunistic Infection, Sexually Transmitted Infection

Systemic

Pertaining to the entire body. A systemic infection affects the whole body. Systemic drug therapy involves giving a drug that travels through the bloodstream and affects cells throughout the body.

T Cell

SYNONYM(S): T Lymphocyte

T Lymphocyte

SYNONYM(S): T Cell

A type of lymphocyte. There are two major types of T lymphocytes: CD8 cells (cytotoxic T lymphocytes) and CD4 cells (helper T lymphocytes); both T cell types are essential for a healthy immune system. HIV infects and destroys CD4 cells, gradually destroying the immune system.

SEE RELATED TERM(S): CD4 T Lymphocyte, CD8 T Lymphocyte, Lymphocyte

t.i.d.

SYNONYM(S): TID

Tachycardia

Abnormal rapid heartbeat. In adults, a rate over 100 beats per minute is usually considered tachycardia. Tachycardia can occur as part of lactic acidosis, which may be caused by advanced HIV infection or some antiretroviral (ARV) drugs.

Tachypnea

Abnormal increased rate of breathing. Tachypnea can occur as part of lactic acidosis, which may be caused by advanced HIV infection or antiretroviral (ARV) drugs.

Tanner Staging

A scale used to classify the onset and progression of puberty in children and adolescents. The scale describes five stages of physical development on the basis of sex characteristics, such as pubic hair growth, development of genitalia in boys, and development of breasts in girls. Because children mature at different rates, health care providers use Tanner staging (in addition to age) to determine appropriate dosing of drugs to treat HIV infection and opportunistic infections.

T-Cell Depletion

SYNONYM(S): T-Cell Exhaustion

T-Cell Exhaustion

SYNONYM(S): T-Cell Depletion

The gradual decrease in T-cell function that can occur with chronic infections and cancers. T-cell exhaustion weakens the immune system, making it difficult for the body to fight off infections or kill cancer-causing cells.

Teratogenic

Pertaining to birth defects and developmental malformations. Some antiretroviral (ARV) drugs should be avoided during pregnancy because they can potentially have teratogenic effects on the developing fetus.

Testosterone

A type of sex hormone. Testosterone is necessary for developing and maintaining certain male sex characteristics, and it helps maintain muscle mass and bone density. Testosterone deficiency is common with HIV and may result in a decrease in muscle mass, an increase in body fat, or erectile dysfunction.

The Clap

SYNONYM(S): Gonorrhea

Therapeutic Drug Monitoring (TDM)

Measuring the concentration of a drug in the blood at scheduled intervals. Therapeutic drug monitoring (TDM) is used to determine the dose at which a drug will be most safe and effective. Although TDM is not generally recommended for routine use in HIV treatment, it may be considered in some situations.

SEE RELATED TERM(S): Therapeutic Index

Therapeutic HIV Vaccine

SYNONYM(S): HIV Therapeutic Vaccine

A vaccine to slow the progression of HIV infection or delay the onset of AIDS. To date, no therapeutic HIV vaccine exists, but research is underway.

SEE RELATED TERM(S): Preventive HIV Vaccine, Vaccine

Therapeutic Index (TI)

A ratio that compares the blood concentration at which a drug becomes toxic and the concentration at which the drug is effective. The larger the therapeutic index (TI), the safer the drug is. If the TI is small (the difference between the two concentrations is very small), the drug must be dosed carefully and the person receiving the drug should be monitored closely for any signs of drug toxicity.

SEE RELATED TERM(S): Therapeutic Drug Monitoring

Thrombocytopenia

A lower-than-normal number of blood platelets.

SEE RELATED TERM(S): Platelet

Thymus

An organ of the lymph system where T lymphocytes (T cells) develop and mature. The thymus is important for normal immune system development early in life and is at its largest size at puberty. The thymus declines in size and function during adult life, eventually being replaced by fat.

SEE RELATED TERM(S): Lymphatic System, T Lymphocyte

TID

SYNONYM(S): tid, t.i.d.

An abbreviation for “three times a day.” The abbreviation is commonly used in drug dosing instructions.

tid

SYNONYM(S): TID

Titer

A laboratory measurement of the concentration of a substance in a solution. For example, an antibody titer measures the presence and amount of antibodies in the blood.

Tolerance

The ability to tolerate a drug when given as prescribed. In other words, tolerance means benefiting from the drug without having any adverse effects that would make it impossible to continue taking the drug.

Topical

Pertaining to a drug or treatment applied to the outer surface of the body, such as the skin or mucous membranes.

Torulosis

SYNONYM(S): Cryptococcosis

Toxic Epidermal Necrolysis (TEN)

A severe form of Stevens-Johnson syndrome involving at least 30% of the total body skin area.

SEE RELATED TERM(S): Stevens-Johnson Syndrome

Toxicity

SYNONYM(S): Drug Toxicity

The extent to which a drug causes adverse effects. Drug toxicity is one of the factors considered when selecting antiretroviral (ARV) drugs to include in an HIV treatment regimen.

SEE RELATED TERM(S): Adverse Event

Toxoplasmosis

An infection caused by the parasite *Toxoplasma gondii*. Toxoplasmosis is most commonly transmitted by contact with infected cat feces, eating contaminated meat, or drinking contaminated water. Toxoplasmosis can also be transmitted from an infected mother to her child during pregnancy. Symptoms, if any, include swollen lymph nodes and muscles aches that last for a month or more. Severe toxoplasmosis can cause damage to the brain, eyes, or other organs. In people with HIV, toxoplasmosis of the brain is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Opportunistic Infection

Transcription and Translation

SYNONYM(S): Replication

Transmission

The transfer (spread) of a disease or infection from person to person. HIV is spread mainly by having sex or sharing injection drug equipment such as needles with someone who has HIV. HIV can also be passed from mother to child during pregnancy, labor or delivery, or breastfeeding (through breast milk). HIV medicines reduce the risk of HIV transmission.

SEE RELATED TERM(S): Mother-to-Child Transmission (MTCT), Secondary Transmission

Transmitted Resistance

SYNONYM(S): Primary Resistance

When a person becomes infected with a strain of HIV that is already resistant to certain antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Acquired Resistance, Drug Resistance

Transplacental

Passage through or across the placenta. Transplacental usually refers to the exchange of nutrients, waste products, drugs, infectious organisms, or other substances between the mother and the fetus.

Treatment Failure

When an antiretroviral (ARV) regimen is unable to control HIV infection. Treatment failure can be clinical failure, immunologic failure, virologic failure, or any combination of the three. Factors that can contribute to treatment failure include drug resistance, drug toxicity, or poor treatment adherence.

SEE RELATED TERM(S): Clinical Failure, Suboptimal Immunologic Response, Virologic Failure

Treatment Regimen

SYNONYM(S): Regimen

A structured treatment plan designed to improve and maintain health. Recommended regimens for the initial treatment of HIV include a combination of three or more antiretroviral (ARV) drugs from at least two different HIV drug classes.

SEE RELATED TERM(S): Drug Class

Treatment Simplification

SYNONYM(S): Regimen Simplification

Treatment-Experienced

(Fig. 52)

When a person with HIV is currently taking or has previously taken antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Treatment-Naïve

Treatment-Naïve (Fig. 52)

When a person with HIV has never taken antiretroviral (ARV) drugs.

SEE RELATED TERM(S): Treatment-Experienced

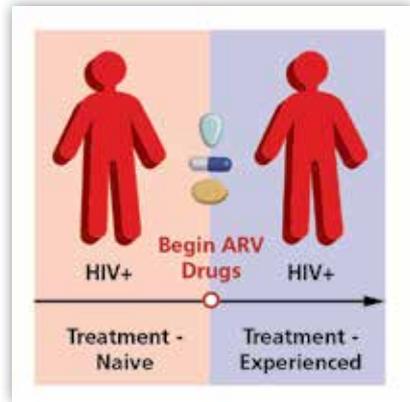


Figure 52

Triglycerides

A type of fat in blood and adipose (fat) tissue.

Triple-Class Experienced

When an HIV-infected person has received antiretroviral (ARV) drugs from three drug classes.

Tropism

SYNONYM(S): Viral Tropism

Trough Concentration

SYNONYM(S): Cmin

Trough Level

SYNONYM(S): Cmin

True Negative

A negative test result that correctly indicates that the condition being tested for is not present. For example, a true negative HIV test correctly indicates that a person is not infected with HIV.

True Positive

A positive test result that correctly indicates that the condition being tested for is present. For example, a true positive HIV test correctly indicates that a person is infected with HIV.

T-Tropic Virus

SYNONYM(S): X4-Tropic Virus

Tuberculin Skin Test

SYNONYM(S): Mantoux Tuberculin Skin Test, Purified Protein Derivative Test

A screening test for tuberculosis (TB) performed by injecting a small amount of fluid (called tuberculin) just below the skin. A positive reaction 48 to 72 hours after the injection indicates that the person has been infected with TB bacteria. Additional tests are needed to determine whether the person has latent TB infection or TB disease. People with HIV infection or another medical problem that weakens the immune system should be tested for TB.

SEE RELATED TERM(S): Latent Tuberculosis Infection, Tuberculosis, Tuberculosis Disease

Tuberculosis (TB)

An infection caused by the bacteria *Mycobacterium tuberculosis* and *Mycobacterium bovis*. Tuberculosis (TB) is spread when a person with an active infection (TB disease) coughs, sneezes, speaks, or sings, and then a person nearby breathes in the bacteria. TB usually affects the lungs, but it can also affect other parts of the body, such as the kidneys, spine, and brain. There are two forms of TB: latent TB infection and TB disease. In people with HIV, TB is considered an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Tuberculosis Disease, Tuberculosis Skin Test

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Tuberculosis Disease

The active form of tuberculosis (TB) infection. During TB disease, the bacteria multiply, become active, and make the person sick. A person with TB disease of the lungs can spread TB to others. TB disease primarily affects the lungs, but it can also affect other parts of the body, such as the kidneys, spine, and brain, and it can be fatal. Symptoms include a bad cough that lasts 3 weeks or longer, chest pain, coughing up blood or sputum, weakness, fatigue, loss of appetite, weight loss, fever, chills, and sweating at night. In people with HIV, TB disease is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition, Opportunistic Infection

Undetectable Viral Load

(Fig. 53)

When the amount of HIV in the blood is too low to be detected with a viral load (HIV RNA) test. Antiretroviral (ARV) drugs may reduce a person's viral load to an undetectable level; however, that does not mean the person is cured. Some HIV, in the form of latent HIV reservoirs, remain inside cells and in body tissues.

SEE RELATED TERM(S): Latent HIV Reservoir, Viral Load Test

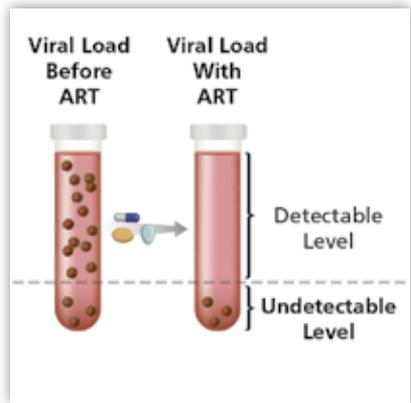


Figure 53

Urinalysis

Physical, chemical, and microscopic examination of urine. Urinalysis can detect a specific substance, such as glucose or blood, in the urine—this can be helpful in diagnosing a disease or monitoring the body's response to treatment.

Urine Albumin

SYNONYM(S): Proteinuria

Urogenital System

SYNONYM(S): Genitourinary Tract

Urogenital Tract

SYNONYM(S): Genitourinary Tract

Urolithiasis

Calculi (stones) in the urinary tract. Use of some antiretroviral (ARV) drugs may cause urolithiasis.

Urticaria

SYNONYM(S): Hives

Raised, swollen, itchy areas on the skin or mucous membranes, usually caused by an allergic reaction to a drug or food.

Vaccination

SYNONYM(S): Immunization

Giving a vaccine to stimulate a person's immune response. Vaccination can be intended either to prevent a disease (a preventive vaccine) or to treat a disease (a therapeutic vaccine).

SEE RELATED TERM(S): Vaccine

Vaccine

SYNONYM(S): Inoculation

A substance administered to trigger an immune response against a particular disease. Most vaccines are designed to prevent a person from ever having a particular disease or to only have a mild case of the disease. However, therapeutic vaccines are intended to treat specific diseases. Although researchers are testing vaccines both to prevent and treat HIV/AIDS, no HIV vaccine is currently approved for use outside of clinical trials.

SEE RELATED TERM(S): Preventive HIV Vaccine, Therapeutic HIV Vaccine

Vaccinia

The pox-type virus used in the vaccine that eradicated smallpox. Researchers are studying the possibility of using a modified, milder version of the vaccinia virus to develop a vaccine against HIV infection.

SEE RELATED TERM(S): Vaccine

Vacuolar Myelopathy

A neurological disorder associated with advanced HIV infection. Vacuolar myelopathy causes the protective myelin sheath to pull away from nerve cells of the spinal cord, forming small holes (vacuoles) in nerve fibers. Symptoms of vacuolar myelopathy include weak and stiff legs and unsteadiness when walking.

SEE RELATED TERM(S): Myelin

Valley Fever

SYNONYM(S): Coccidioidomycosis

Varicella Zoster Virus (VZV)

SYNONYM(S): Herpes Zoster, Human Herpesvirus 3

A type of herpesvirus that causes chicken pox. After initial infection with varicella zoster virus (VZV), the inactive (latent) form of the virus can remain in the body. If the latent virus becomes active again, it can cause shingles.

SEE RELATED TERM(S): Herpesviruses, Opportunistic Infection, Shingles

Vector

In genetically engineered vaccines, a vector is a bacterium or virus that transports antigen-coding genes into the body to provoke an immune response. (The vector itself does not provoke an immune response or cause disease.) A vector may also refer to an organism, especially an insect, that transmits disease-causing agents.

SEE RELATED TERM(S): Genetic Engineering

Venereal Warts

SYNONYM(S): Genital Warts

Vertical Transmission (Fig. 54)

Vertical transmission of HIV refers to HIV transmission from an HIV-infected mother to her child during pregnancy, labor and delivery, or breastfeeding (through breast milk).

SEE RELATED TERM(S): Sexual Transmission

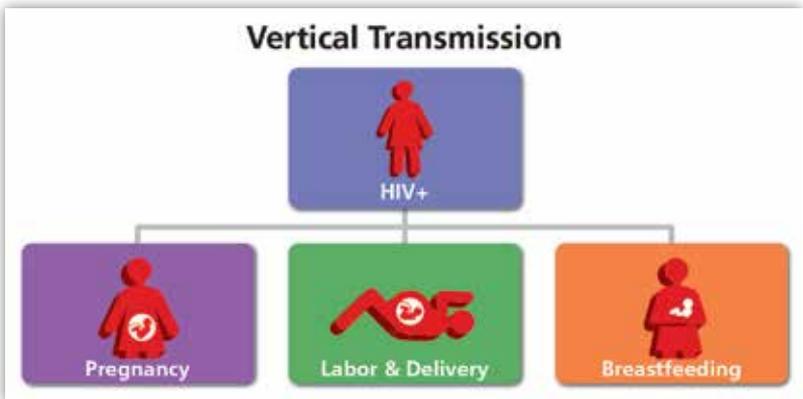


Figure 54

Viral Evolution

The change in the genetic makeup of a virus population as the viruses mutate and multiply over time. HIV evolves rapidly because of its high mutation and replication rates. Antiretroviral therapy (ART) and the body's immune response can also influence HIV evolution.

Viral Latency

When a virus is present in the body but exists in a resting (latent) state without producing more virus. A latent viral infection usually does not cause any noticeable symptoms and can last a long period of time before becoming active and causing symptoms. HIV is capable of viral latency, as seen in the reservoirs of latent HIV-infected cells that persist in a person's body despite antiretroviral therapy (ART).

SEE RELATED TERM(S): Latent HIV Reservoir

Viral Load (VL)

The amount of HIV in a sample of blood. Viral load (VL) is reported as the number of HIV RNA copies per milliliter of blood. An important goal of antiretroviral therapy (ART) is to suppress a person's VL to an undetectable level—a level too low for the virus to be detected by a VL test.

SEE RELATED TERM(S): Viral Load Test

Viral Load Test

A laboratory test that measures the amount of HIV in a blood sample. Results are reported as the number of copies of HIV RNA per milliliter of blood. Examples of viral load tests include quantitative branched DNA (bDNA), reverse transcriptase-polymerase chain reaction (RT-PCR), and qualitative transcription-mediated amplification. Viral load tests are used to diagnose acute HIV infection, guide treatment choices, and monitor response to antiretroviral therapy (ART).

SEE RELATED TERM(S): Reverse Transcriptase-Polymerase Chain Reaction-Based Assay, Quantitative Branched DNA Assay, Qualitative Transcription-Mediated Amplification Assay

Viral Rebound (Fig. 55)

SYNONYM(S): Rebound

When a person on antiretroviral therapy (ART) has persistent, detectable levels of HIV in the blood after a period of undetectable levels. Causes of viral rebound can include drug resistance or poor adherence to an HIV treatment regimen.

SEE RELATED TERM(S): Undetectable Viral Load

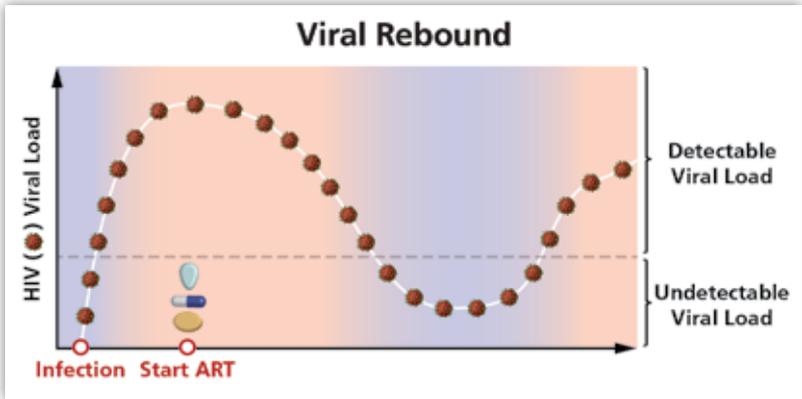


Figure 55

Viral Set Point

SYNONYM(S): Set Point

Viral Suppression (Fig. 56)

SYNONYM(S): Virologic Control

When antiretroviral therapy (ART) reduces a person's viral load (HIV RNA) to an undetectable level. Viral suppression does not mean a person is cured; HIV still remains in the body. If ART is discontinued, the person's viral load will likely return to a detectable level.

SEE RELATED TERM(S): Undetectable Viral Load

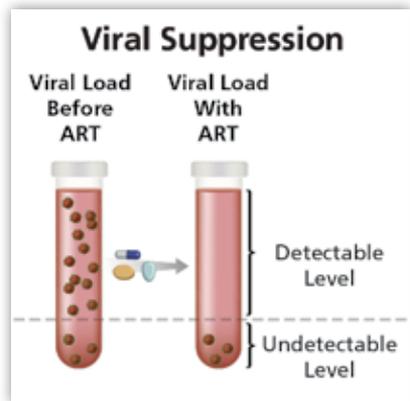


Figure 56

Viral Tropism (Fig. 57)

SYNONYM(S): Tropism

When HIV selectively attaches to a particular coreceptor on the surface of a host CD4 cell. HIV can attach to either the CCR5 coreceptor (R5-tropic) or the CXCR4 coreceptor (X4-tropic) or both (dual-tropic).

SEE RELATED TERM(S): Dual-Tropic Virus, R5-Tropic Virus, X4-Tropic Virus

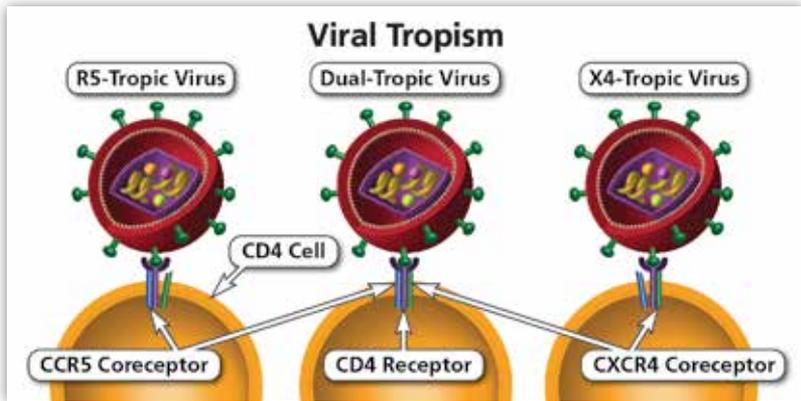


Figure 57

Viremia

The presence of viruses in the blood.

Viricide

SYNONYM(S): Virucide

A substance that can destroy or inactivate a virus.

Virologic Control

SYNONYM(S): Viral Suppression

Virologic Failure

A type of HIV treatment failure. Virologic failure occurs when antiretroviral therapy (ART) fails to suppress and sustain a person's viral load to less than 200 copies/mL. Factors that can contribute to virologic failure include drug resistance, drug toxicity, and poor treatment adherence.

SEE RELATED TERM(S): Treatment Failure

Virology

The study of viruses and viral diseases.

Virucide

SYNONYM(S): Viricide

Virus

A microscopic infectious agent that requires a living host cell in order to replicate. Viruses often cause disease in humans, including measles, mumps, rubella, polio, influenza, and the common cold. HIV is the virus that causes AIDS.

Visceral Adipose Tissue (VAT)

SYNONYM(S): Intra-Abdominal Fat, Visceral Fat

Fat tissue located deep in the abdomen and around internal organs. Use of certain antiretroviral (ARV) drugs can cause excessive accumulation of visceral adipose tissue (VAT), which increases the risk of heart attack, stroke, and diabetes.

SEE RELATED TERM(S): Lipodystrophy Syndrome

Visceral Fat

SYNONYM(S): Visceral Adipose Tissue

Wasting Syndrome

An involuntary loss of more than 10% of body weight (especially muscle mass), plus at least 30 days of either diarrhea or weakness and fever. HIV-associated wasting syndrome is an AIDS-defining condition.

SEE RELATED TERM(S): AIDS-Defining Condition

Western Blot

A type of antibody test used to confirm a positive result on an HIV screening test. (The initial screening test is usually a different type of antibody test or, less often, a viral load test). The immune system responds to HIV infection by producing HIV antibodies. A Western blot for confirmatory HIV testing is done using a blood sample.

SEE RELATED TERM(S): Antibody, Viral Load Test

White Blood Cell

SYNONYM(S): Leukocyte

A type of cell found in blood and lymph. White blood cells are key components of the immune system and help fight infection and disease. Examples of white blood cells include lymphocytes, neutrophils, eosinophils, macrophages, and mast cells.

Wild-Type Virus

The naturally occurring, non-mutated strain of a virus. When exposed to antiretroviral (ARV) drugs, wild-type HIV can develop mutations that make the virus resistant to specific HIV drugs. Most people with HIV are initially infected with wild-type virus; however, some people become infected with mutated, drug-resistant strains of HIV.

SEE RELATED TERM(S): Drug Resistance

Window Period

The time period from infection with HIV until the body produces enough HIV antibodies to be detected by standard HIV antibody tests. The length of the window period varies depending on the antibody test used. During the window period, a person can have a negative result on an HIV antibody test despite being infected with HIV.

SEE RELATED TERM(S): Seroconversion

Women’s Interagency HIV Study (WIHS)

Started in 1993, the Women’s Interagency HIV Study (WIHS) is an ongoing federally funded study on women who have HIV or who are at risk for HIV. Analysis of biological specimens and medical and behavioral data collected on WIHS participants has contributed to the understanding of HIV, AIDS, and the effects of antiretroviral therapy (ART) in women.

World Health Organization (WHO)

The agency of the United Nations that provides global leadership on health-related matters. Responsibilities of the World Health Organization (WHO) include shaping the global health research agenda, setting health standards, promoting evidence-based policy options, providing technical support to countries, and monitoring and assessing health trends.

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X4-Tropic Virus (Fig. 58)

SYNONYM(S): T-Tropic Virus

A strain of HIV that enters and infects a host CD4 cell by attaching to the CXCR4 coreceptor on the CD4 cell. To enter a CD4 cell, HIV must first attach to a CD4 receptor, then attach to either the CCR5 or CXCR4 coreceptor, and finally fuse its membrane with the CD4 cell membrane. HIV is usually R5-tropic (uses CCR5) during the early stages of infection, but the virus may later switch to using either only CXCR4 (X4-tropic) or both CCR5 and CXCR4 (dual-tropic).

SEE RELATED TERM(S): CCR5, CD4 Receptor, CD4 T Lymphocyte, CXCR4, Dual-Tropic Virus, R5-Tropic Virus

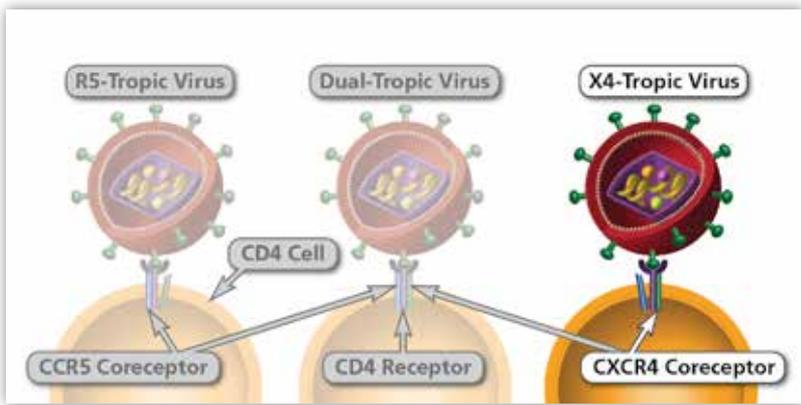


Figure 58

Yeast Infection

SYNONYM(S): Candidiasis

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Abbreviations and Acronyms

ACTG	AIDS Clinical Trials Group
ADAPs	AIDS Drug Assistance Programs
ADC	AIDS Dementia Complex
ADR	Adverse Drug Reaction
AE	Adverse Event
AETCs	AIDS Education and Training Centers
AHRQ	Agency for Healthcare Research and Quality
AIDS	Acquired Immunodeficiency Syndrome
AIEDRP	Acute Infection and Early Diseases Research Program
ALP	Alkaline Phosphatase
ALT	Alanine Aminotransferase
APC	Antigen-Presenting Cell
ART	Antiretroviral Therapy
ARV	Antiretroviral
ASO	AIDS Service Organization
AST	Aspartate Aminotransferase
AUC	Area Under the Curve
AVN	Avascular Necrosis
B2M	Beta-2 Microglobulin
bDNA	Quantitative Branched DNA Assay
CAM	Complementary and Alternative Medicine
CBC	Complete Blood Count
CBO	Community-Based Organization
CDC	Centers for Disease Control and Prevention

CDC-NPIN	Centers for Disease Control and Prevention-National Prevention Information Network
CIDP	Chronic Inflammatory Demyelinating Polyneuropathy
CIPRA	Comprehensive International Program of Research on AIDS
CMP	Comprehensive Metabolic Panel
CMS	Centers for Medicare and Medicaid Services
CMV	Cytomegalovirus
CNS	Central Nervous System
CPCRA	Community Programs for Clinical Research on AIDS
CSF	Cerebrospinal Fluid
CYP3A Inhibitors	Pharmacokinetic Enhancers
CYP450	Cytochrome P450
DAIDS	Division of Acquired Immunodeficiency Syndrome
DNA	Deoxyribonucleic Acid
DOT	Directly Observed Therapy
DSMB	Data and Safety Monitoring Board
DSP	Distal Sensory Polyneuropathy
DXA	Dual Energy X-Ray Absorptiometry
EBV	Epstein-Barr Virus
EC	Enteric-Coated
EF	Eosinophilic Folliculitis
ELISA	Enzyme-Linked Immunosorbent Assay
ESLD	End-Stage Liver Disease
ESRD	End-Stage Renal Disease
FDA	Food and Drug Administration
GART	Genotypic Antiretroviral Resistance Test

GBS	Guillain-Barré Syndrome
G-CSF	Granulocyte-Colony Stimulating Factor
GGT	Gamma-Glutamyl Transpeptidase
GI	Gastrointestinal
GM-CSF	Granulocyte Macrophage-Colony Stimulating Factor
HAND	HIV-Associated Neurocognitive Disorders
hGH	Human Growth Hormone
HHS	Department of Health and Human Services
HHV-7	Human Herpesvirus 7
HIV	Human Immunodeficiency Virus
HIVAN	HIV-Associated Nephropathy
HLA	Human Leukocyte Antigen
HPTN	HIV Prevention Trials Network
HPV	Human Papillomavirus
HRSA	Health Resources and Services Administration
HTLV-I	Human T-Cell Lymphotropic Virus Type I
HVTN	HIV Vaccine Trials Network
ICSI	Intracytoplasmic Sperm Injection
IFN	Interferon
IHS	Indian Health Service
IL-2	Interleukin-2
IL-7	Interleukin-7
IM	Intramuscular
INSIGHT	International Network for Strategic Initiatives in Global HIV Trials
INSTI	Integrase Strand Transfer Inhibitor
IRB	Institutional Review Board

IRIS	Immune Reconstitution Inflammatory Syndrome
ITP	Idiopathic Thrombocytopenia Purpura
IUI	Intrauterine Insemination
IV	Intravenous
IVF	In Vitro Fertilization
IVIG	Intravenous Immunoglobulin
KS	Kaposi Sarcoma
KSHV	Kaposi Sarcoma Associated Herpesvirus
LGV	Lymphogranuloma Venereum
LIP	Lymphoid Interstitial Pneumonitis
MACS	Multicenter AIDS Cohort Study
m-DOT	Modified Directly Observed Therapy
MDR-TB	Multiple Drug Resistant Tuberculosis
MEMS	Medication Event Monitoring System
MHC	Major Histocompatibility Complex
MRI	Magnetic Resonance Imaging
mRNA	Messenger RNA
MTCT	Mother-to-Child Transmission
MTN	Microbicide Trials Network
NAT	Nucleic Acid Test
NCCIH	National Center for Complementary and Integrative Health
NCI	National Cancer Institute
NDA	New Drug Application
NHL	Non-Hodgkin Lymphoma
NIAID	National Institute of Allergy and Infectious Diseases
NIH	National Institutes of Health

NLM	National Library of Medicine
NM	Nemaline Rod Myopathy
NNRTI	Non-Nucleoside Reverse Transcriptase Inhibitor
nPEP	Non-Occupational Post-Exposure Prophylaxis
NRTI	Nucleoside Reverse Transcriptase Inhibitor
NSAID	Non-Steroidal Anti-Inflammatory Drug
NtRTI	Nucleotide Reverse Transcriptase Inhibitor
OAR	Office of AIDS Research
OBT	Optimized Background Therapy
OHL	Oral Hairy Leukoplakia
OI	Opportunistic Infection
OMH	Office of Minority Health
oPEP	Occupational Post-Exposure Prophylaxis
PACTG	Pediatric AIDS Clinical Trials Group
PACTG 076	Pediatric AIDS Clinical Trials Group 076
PBMC	Peripheral Blood Mononuclear Cell
PCR	Polymerase Chain Reaction
PEP	Post-Exposure Prophylaxis
PEPFAR	President's Emergency Plan for AIDS Relief
PGL	Persistent Generalized Lymphadenopathy
PI	Protease Inhibitor
PID	Pelvic Inflammatory Disease
PLWHA	People Living with HIV/AIDS
PML	Progressive Multifocal Leukoencephalopathy
PNS	Peripheral Nervous System
PrEP	Pre-Exposure Prophylaxis
RNA	Ribonucleic Acid
RT	Reverse Transcriptase

RT-PCR	Reverse Transcriptase-Polymerase Chain Reaction-Based Assay
SAMHSA	Substance Abuse and Mental Health Services Administration
SAT	Self-Administered Therapy
SAT	Subcutaneous Adipose Tissue
SC	Subcutaneous
SEVI	Semen-Derived Enhancer of Virus Infection
SIV	Simian Immunodeficiency Virus
SJS	Stevens-Johnson Syndrome
STI	Sexually Transmitted Infection
STI	Structured Treatment Interruption
TB	Tuberculosis
TDM	Therapeutic Drug Monitoring
TEN	Toxic Epidermal Necrolysis
TI	Therapeutic Index
VAT	Visceral Adipose Tissue
VL	Viral Load
VZV	Varicella Zoster Virus
WHO	World Health Organization
WIHS	Women's Interagency HIV Study
XDR-TB	Extensively Drug Resistant Tuberculosis

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