THE GREAT BODY SHOP

Come in and learn about your body!



HIV/AIDS: What You Need To Know Now

"Hey, did you watch that TV show last night? This kid in high school had HIV. It was really sad."

"So, how did he get HIV?"

"He went to a party and some kids were using drugs. He picked up one of the needles and shot up, too."

"You mean, you can get HIV from drugs?"

"Well, not from drugs exactly, but you can get it from needles. If one person has it, he or she can pass that **virus** and others to people who use the same needle."

"Remember when we all found out that our favorite sports star had the HIV virus? I just couldn't believe it! He didn't use drugs, but Mrs. Appleby said there are other ways of getting it, too. She said that if we know how to protect ourselves, we can be pretty sure we won't get it."

"Wow. It looks like there is more we need to know about HIV."

Take this quiz now to find out how much you know about HIV/AIDS. After you finish this unit, take the quiz again to find out how much you've learned.

1. The letters A-I-D-S stand for

   A_____

   I_____

   D_____

   S_____

2. The name of the virus that causes AIDS is

   _____

3. Name the two ways to protect yourself from HIV.

   _____

   _____

4. The _____ system is composed of white blood cells and antibodies. It fights the viruses and bacteria that cause illness.

5. HIV and other microorganisms that cause disease and are found in the blood are called.

   _____

Name: _____

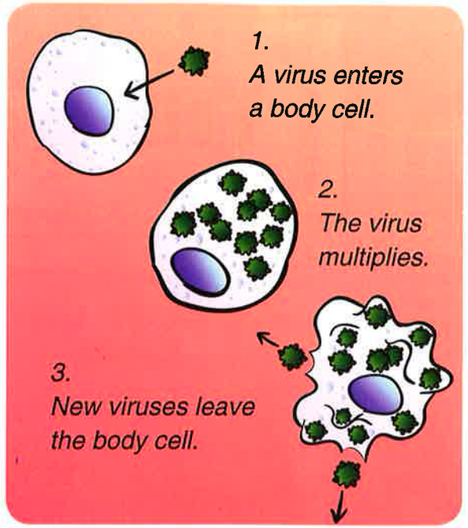
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Everything You Always Wanted To Know about Viruses

A **microorganism** is a plant, bacteria, virus, or animal that's too small to be seen without a microscope. Viruses are one type of microorganism that can cause disease. **AIDS** is caused by a virus.

Viruses can't live on their own. They need your body cells to grow. Once a virus invades your body, it attaches to other cells, feeds off of them, and multiplies. Eventually, the virus can kill the cells. Or they can stay in them and "rest" for months or years before becoming active again (see illustration at right).

Some viruses, such as the ones that cause colds, spread through the air or water. Of course, that makes these viruses very easy to catch. After all, you can't stop breathing air! Other viruses spread through body fluids, like blood. Hepatitis and HIV spread this way.

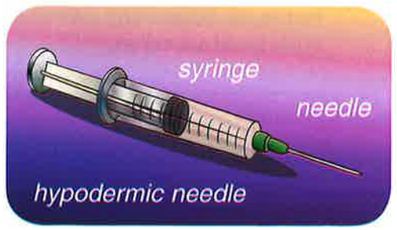


Once it gets inside the body, a virus uses body cells to make more viruses.

How the AIDS Virus Spreads

The virus that causes AIDS is called HIV (for **human immunodeficiency virus**). HIV can be found in several body fluids, including blood, tears, and saliva. However, saliva, sweat, and tears have never been shown to transmit HIV. Here are the most common ways HIV spreads between people:

1. Having sex with a person who is infected with HIV.
2. Sharing drug equipment (needles, syringes) with someone who is infected with HIV. If one drug user has HIV, he or she may pass the virus to the next person who uses the needle and syringe. This is because the needle was contaminated with infected blood.
3. Being born to a mother with HIV. The baby can be infected with HIV before or during birth or through breast feeding.
4. Contacting the blood of someone with HIV. This is why health care workers use gloves and other protective equipment. Years ago, many people were infected with HIV through **blood transfusions**. (A blood transfusion is the blood a sick or injured person may be given to replace blood he/she has lost.) Now, all blood in this country is tested before it is used in a transfusion. Blood infected with HIV is discarded.



As you can see, HIV isn't spread by casual contact. Casual contact includes hugging, shaking hands, and using public toilets. This is why it is perfectly safe to be around someone who is HIV positive. If you don't share needles and don't have sex, there's very little chance you'll ever be infected with HIV.



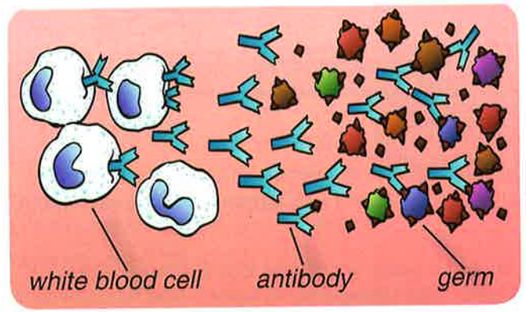
Blood-borne Pathogens

Blood-borne pathogens are microorganisms like hepatitis B and C, Ebola, and HIV that are found in and spread by infected blood. Be on the safe side and don't touch other people's blood. Use protective gloves when giving first aid.

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HIV Destroys the Immune System

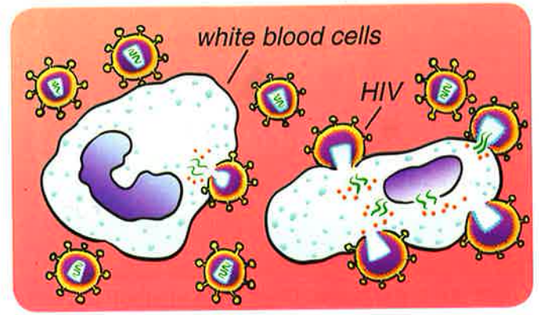
Blood may look red, but there are quite a few white blood cells floating around it, too. There are several types of white blood cells. Together, they are important parts of your **immune system**. Your immune system battles the viruses, bacteria, and other microorganisms that get in your body every day. It does this partly by creating **antibodies**. Antibodies bond with the germs and inactivate them. Then, white blood cells destroy them so that the germs don't make you sick.



In a healthy body:

Some white blood cells make antibodies. Antibodies lock up the germs, so other types of white blood cells can destroy the germs.

In a body with HIV, it's a whole different story. **Helper T-cells** are one type of white blood cell. HIV hides in the T-cell, duplicates itself, and destroys the T-cell. Since the helper T-cell can't signal other white blood cells to come kill the microorganism, the body has no defense against many germs with which it comes in contact.

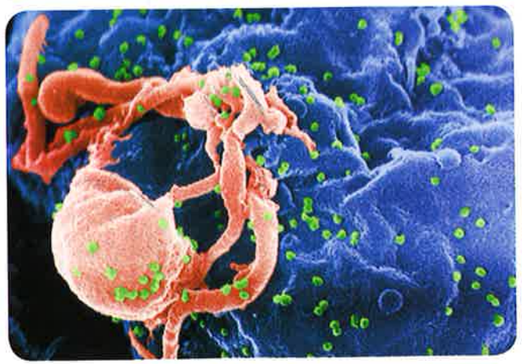


In the body of a person with HIV:

HIV uses the white blood cells to make more HIV. HIV destroys helper T-cells. Thus, they don't signal other white blood cells to fight the invaders.

When a Body Has HIV

As the HIV virus multiplies, it will destroy more and more T-cells. Then, the person with HIV will get colds and infections more often. Eventually, most people with HIV get rare forms of cancer or pneumonia, tuberculosis, or other unusual infections. When the T-cell count goes below a certain level and these diseases appear, we say the person has AIDS. Other signs of AIDS could be chronic swollen glands, diarrhea, fevers, and night sweats.



HIV budding from lymphocyte

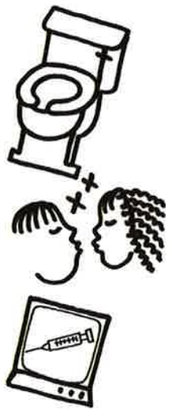
People with HIV are infected for life. That is, there is no cure for the virus. Some medicines can help them live longer. Surgery and radiation can help those who develop certain cancers. However, these treatments are not cures.

Medical Update

Within the past decade, medical discoveries have been made to help people who are living with HIV. Scientists around the world have been working on a cure. Certain prescription drugs can help people live longer. Even with these medical advances in the treatment of HIV, there is no cure.

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What Do You Think?



1. You and a couple of friends are at the beach. You use the public bathroom, which is not very clean. Can you be infected with HIV?
2. You hear your older sister Susan tell her friend that she has been kissing some guy named Michael. You happen to know Michael has been seen kissing quite a few other girls, too. Is Susan at risk for being infected with HIV?
3. While changing channels on TV, you see a show in which two guys are shooting up drugs. Are they at risk for being infected with HIV?
4. You hear that it's impossible to be infected with HIV if you have sex with someone only once. It that true? *(Answers are on page 7)*

What Drugs Have To Do with It

A person can have the best intentions in the world, but when he or she is drunk or high, those intentions fly right out the window. Drugs and alcohol "fog up" the ability to think and use judgment. They can make a person do things that he or she wouldn't usually do.

Last week, Maria found herself in a tricky situation. She was at a party and some kids began drinking beer and smoking pot. "No, thanks," she said when her friend Tyler offered her a beer.

Of course, Maria knew that underage drinking was illegal. It made her uncomfortable just to hang around at a party like this. Maria told her friends that she didn't feel well and had to leave. She was surprised when two of her friends left with her—they didn't want to be around drugs, either. It wasn't safe and it definitely wasn't worth the risk.

If you are with friends who want to do something you think is wrong, find an excuse to walk away. Never get into a car with a driver who is under the influence of alcohol, marijuana, or other drugs. Use the Saying "No" steps (on the next page) when you are offered a drink or a drug.



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The Saying "No" Steps



Do you know the difference between a healthy and a harmful relationship? Let's use this story to figure it out.

Yesterday, Kayla had a decision to make. Her boyfriend Ian asked her to come over after school, before his mother got home from work.

"I can't," Kayla told him. "I'm not allowed over to anyone's house unless a parent is there."

"That's a stupid rule!" said Ian. "Come on, we can hang out in my room and stuff. Besides, who's going to find out?" Ian pleaded.

"Well, I don't know . . .," Kayla hesitated. She didn't want Ian to get mad at her.

"Don't be such a baby. Let's go," said Ian, putting his arm around her.

Kayla shrugged. "Well, OK, I guess."

Have you ever been pressured to do something that you didn't want to do? Kayla knew what her family rules were. She knew what she should do. But Kayla, like a lot of other kids, found it hard to say "No" when Ian began teasing and pleading. It's not always easy to stick to your values and do what you think is right. Remembering the Saying "No!" Steps will help.

1. **Identify the risky situation. Avoid it!**
2. **Say "No!" with words and body. Be assertive.**
3. **Give a reason if you want. Excuses work.**
4. **Leave the situation. Don't stick around.**
5. **Report to a trusted adult, if necessary.**

Figure it out. Is this a healthy or harmful relationship?

Protecting Yourself

Remember, people with HIV don't smell funny or appear dirty. They won't look or feel sick for a long time after they've been infected with the virus. Some people with HIV may not even know that they are infected. However, they can pass the virus to others at this time. So, how do you protect yourself?

1. Don't share needles. That means needles used for drugs, of course. But it also means needles used for tattooing or piercing ears.
2. Don't have sex. Avoiding sex is called **abstinence**. Wait to have sex until you're an adult and you're in a long-term relationship, such as marriage. If neither partner has HIV, and if neither person has sex with anyone else or uses drugs, there's very little chance they will ever get the virus.

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Where To Find Help

"I'd be too embarrassed to ask about that!"

How many times have you thought that to yourself while reading this issue? Sure, talking about HIV, sex, peer pressure, and other things can be embarrassing. But getting over the embarrassment is important because these issues are so important. If you find it tough to talk to your parents, these suggestions might help you:

- Bring home this copy of THE GREAT BODY SHOP. Ask them a question about something you've read.
- If something about HIV/AIDS comes up when you're watching TV, start talking about it during the program.
- Bring up the subject while you're doing something together, such as washing dishes or doing yard work.
- Ask them to help you find more information on the subject. The library is a good place to start. There are also a number of reputable websites to visit.
- Your school nurse and guidance counselor are good sources for information, too. So is your doctor. Remember, you can always speak to your doctor privately, if you want to.

Help Is within Your Grasp

Who's there to help when you've got a problem that you need to talk about? You might think of your parents, teachers, or the school guidance counselor, but there are others, too. Think about the people in your personal "support group." Then, write their names here.

_____

_____

_____

_____

_____

_____



Helping Others Who Are Sick

People who are sick with serious chronic diseases such as HIV, heart disease, uncontrolled diabetes, cancer and certain respiratory diseases, often need a little help and encouragement to manage their daily lives. Some days they may feel pretty good, but other days they may be quite physically ill and also feel sad. HIV can make people feel very weak and unable to perform many of the tasks that had always been easy before. Many people go through cancer treatments and make a good recovery, but the medicines they need to take have side effects, meaning that the medicine itself makes the person feel sick from time to time.

Here is a story about a boy, David, who wanted to help his grown-up friend, Tony, who had AIDS. Tony had bought him his first basketball and had taught him how to play the drums. And now Tony was very sick. He wanted to go to see Tony. . He thought of lots of things he could do for Tony. His mom reminded him that there was no way he could get HIV by spending time with a person who has HIV or AIDS. She told David that he couldn't get the virus by hugging or shaking hands or sharing a meal with Tony. Together he and his mother came up with a list of things they could do to show Tony that they cared about him.

Can you think of other ways you can help people you know who are sick? Can you think of ways to cheer them up?

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Read All About It

Immune System (The Amazing Human Body)

By Lorrie Klosterman

Introduction to types of white blood cells and the organs of the immune system.

Outbreak: Disease Detectives at Work *(Discovery) by Mark P. Friedlander Jr.*

Great information on many diseases and the scientific efforts to cure them. Includes updates on AIDS and more current threats.

Brain Bender

The Marble Boxes

Three closed boxes have either white marbles, black marbles or both, and they are labeled white, black and both.

However, you're told that each of the labels are wrong. You may reach into one of the boxes and pull out only one marble. Which box should you remove a marble from to determine the contents of all three boxes?

My Daughter

My daughter has many sisters. She has as many sisters as she has brothers. Each of her brothers has twice as many sisters as brothers. How many sons and daughters do I have?

Word Wise

AIDS—Acquired Immune Deficiency Syndrome

Human Immunodeficiency Virus (HIV)—the name of the virus that causes AIDS

microorganism—any plant, virus, or animal too small to be seen without a microscope

virus—a microorganism that can grow only by feeding off body cells

blood transfusion—the blood a person is given during surgery or after an accident to replace blood that was lost

immune system—the white blood cells and antibodies that fight disease

helper T-cells—white blood cells that act as "scouts," signaling other white blood cells that a dangerous microorganism has invaded the body

antibodies—chemicals made by white blood cells in response to the invasion of a microorganism

abstinence—to avoid, or refrain from, something; many people abstain from having sex until they are adults and are in a long-term relationship, such as marriage

Read All About It

The World Health Organization estimates that better use of existing preventive measures could reduce the global burden of disease by as much as 70%! Read more about global illness and disease at www.who.int.

Answers:

AIDS Quiz (front page):

1. the letters A-I-D-S stand for "Acquired Immune Deficiency Syndrome."
2. HIV
3. remain sexually abstinent, avoid drugs
4. immune system
5. blood-borne pathogens

What Do You Think?

1. No, you can't be infected with HIV from a bathroom.
2. No, Susan can't be infected with HIV by kissing someone.
3. Yes, IV drug use is one method in which HIV is transmitted.
4. No, that's absolutely false. While having sex with more than one person increases the risk, the virus can be passed the first time.

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HIV/aids: What You Need To Know Now

This month in THE GREAT BODY SHOP, your son or daughter will be learning about HIV and how to avoid it. But school can only do so much. A solid foundation in values and the avoidance of risky behaviors begins with you. Please make the time to discuss this subject at home. The material will be taught in four lessons:

Lesson 1: Transmission
Lesson 2: The Immune System
Lesson 3: Prevention
Lesson 4: Helping Hands in the Community

Talking about HIV and AIDS

You might find it easier to begin the discussion around a newspaper article or TV show about HIV. Or ask your son/daughter what he/she has learned in school about HIV, using the Student Issue.

- If the topic embarrasses you, say so. Don't let your embarrassment keep you from talking about the subject. An easy way to begin is to read and discuss the articles found in the Student Issue.
- Review the basics, but don't feel you need to be an expert. You can look up anything you don't know. The important thing is to let your child know you are open to talking.
- In spite of current medical advances, make sure your son/daughter knows that there is no vaccine to protect against HIV. HIV will break down the immune system. There are medicines that will slow the advancement of the disease. Once a person with HIV begins to have certain illnesses, he or she is said to have AIDS.
- Let your child know your views and values on drugs, dating, and other important topics. You might say something like "I believe _____ because _____." Be careful to avoid speaking in a critical tone, or you'll discourage your child from asking questions. Take time to listen to your child's opinion

Centers for Disease Control and Prevention Info Line
(800)CDC-INFO
(800)232-4636

What about Youth and HIV?

According to the Centers for Disease Control and Prevention, HIV continues to be a public health concern for adolescents.

In 2009, persons aged 13–29 accounted for 39% of all new HIV infections in the US.

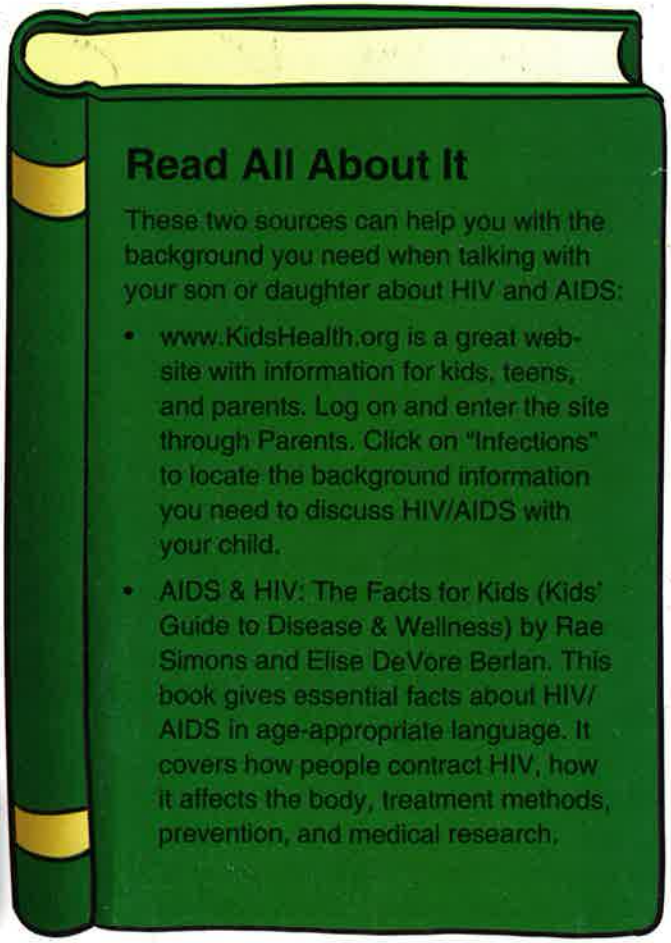
In 2010, persons aged 15–29 comprised 21% of all new HIV infections in the US.

Vocabulary for Parents:

immune system—the white blood cells and antibodies which defend the body from illness. HIV destroys the immune system.

AIDS—Acquired Immune Deficiency Syndrome, the collection of illnesses caused by the breakdown of the immune system

HIV—Human Immunodeficiency Virus, the virus that causes AIDS



Read All About It

These two sources can help you with the background you need when talking with your son or daughter about HIV and AIDS:

- www.KidsHealth.org is a great website with information for kids, teens, and parents. Log on and enter the site through Parents. Click on "Infections" to locate the background information you need to discuss HIV/AIDS with your child.
- AIDS & HIV: The Facts for Kids (Kids' Guide to Disease & Wellness) by Rae Simons and Elise DeVore Berlan. This book gives essential facts about HIV/AIDS in age-appropriate language. It covers how people contract HIV, how it affects the body, treatment methods, prevention, and medical research.

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