

Getting to the Core

HS Biology Unit of Study
HIV/STD Prevention Education



Revised Version: March 2014

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SAUSD Common Core High School Biology Unit - HIV Prevention Education

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Day 1/Day 12 Extended Anticipatory Guide

Statement	Day 1 Opinion		Day 12 Finding		Evidence	
	Agree	Disagree	Agree	Disagree	Explain using your own words	Page # Video Clip Title
1. You can usually tell if someone has HIV.						
2. HIV causes AIDS by destroying the lymph nodes.						
3. A good way to avoid getting HIV is to get a vaccination.						
4. One way that people can protect themselves from becoming infected with HIV is by abstaining from sex.						
5. All people are at risk of getting HIV.						
6. Symptoms of STD's can be bumps, drips or blister; however, symptoms do not always appear.						
7. About half of sexually active teens and young adults will have an STD by age 25 and many will not even know they do.						
8. Once a person identifies a risky situation, there is no way to avoid or control the risk of getting HIV.						
9. Sex is used by the media to sell products.						
10. You can get a free HIV test at several places in Santa Ana.						

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Jigsaw Matrix - Busting the Myth

	Chupacabra the Real Deal	The Dangers of Brain Freeze	Aquatic Ape Theory: Mermaids are Real	Drinking Too Much Water Can Kill You
Describe the myth or fact that is presented in the article.				
What evidence is provided in the article as support for the myth or fact?				
Do you believe that this is a myth or is it fact?				

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Chupacabra – the Real Deal!

Picture the scene: a lush forest full of dense vegetation, laced with dangerous beasts and wild, tropical fauna. An adventurer braves the danger to search for an elusive creature which has been known to drain its victim's blood. Sound like a movie script? No, it is the real life saga of Chemo "Jones" Soto, Mayor of Canóvanas and part-time adventurer. Chemo has undertaken a quest to capture the Chupacabra before it sucks the entire animal population dry. He is the last hope of a desperate citizenry who have given up hope.



Chemo has assembled a crack anti-Chupacabra team and hopes to apprehend the beast sometime this year. He has devised a state of the art "cone-trap" which will no doubt trap the blood-sucking monster within the month. The Mayor's pleas to government agencies for help with the hunting efforts have been largely ignored but Governor Pedro Rosselló has wished him luck. Chemo, who happens to be up for re-election, is running on the anti-Chupacabra ticket and hopes to ride it to victory during the November elections.



In another report, an eye-witness stated “We were driving through the park in an open top jeep, and something strange pokes its head out of a bush to our astonishment, so we stop and continue to observe it. At that point we weren't too far away from it, and it looked like a dog or something similar, but it proceeded to rise onto two feet and move forward a bit. It startled us and we shot it. Long story short, we contacted the park ranger, and he came and retrieved it and while talking about it, called it Chupacabra multiple times.” (March 2012, www.chupacabrasightings.com)

Stories like this seem to be more and more common all the time. Park Rangers have seen a definite rise in Chupacabra sightings over the last few decades. It has been reported that most Chupacabras live for less than four years and have a movement pattern that seems to focus on the South-West of North America.

We interviewed Chupacabra expert from UCLA, D. Tena and found the following: “They travel in packs that include 2 alpha males and a gathering of about 14-18 females,” Tena concluded that it is the females that are most often spotted in suburban areas due to the fact that they are generally the hunters of the pack. “The males are much more subdued and only hunt when they are desperate.” (Continued next page...)



In order for us to get a better idea of how many sightings were happening D. Tena and colleagues took a trip to Southern Arizona and went door to door to see if residents had spotted a Chupacabra.

Question: *Have you ever seen a Chupacabra?*

A: (resident 1) *"I have never seen anything that looks like it."*

A: (resident 2) *"I have seen two of them hunting through our chicken coops for food. They are ugly looking mutated dogs with large fangs."*

A: (resident 3) *"I think I saw La Llarona walking with it down by the stream."*



D. Tena insisted that most sightings are not really Chupacabras. "Sometimes we get reports from people who are drunk and have dialed our hotline by mistake. I think most feel they really did see a Chupacabra but there is no proof to confirm or deny this."

Most scientists believe that there are a number of species yet to be discovered and are testing skeletons of potential Chupacabras to confirm its identity. After the results of identification are released, they can conclude whether these are truly Chupacabras or some other alien beast. Tena believes that once we start to display the skeleton for the public, many people will want them as pets and worries about public safety.



Whether you want one as a pet or fear the safety of your chickens, the Chupacabra is the real deal.

The information above was base on the following websites:

<http://www.chupacabrasightings.com/>

<http://www.princeton.edu/~accion/chupa3.html>

The Dangers of Brain Freeze

If it hasn't happened to you, count yourself as lucky. For many people, eating ice cream or drinking an icy drink too fast can produce a really painful headache. It usually hits in the front of the brain, behind the forehead.

From the website Urban Dictionary, you can find the following definition: *A sharp headache-like pain caused by eating or drinking something cold too quickly.*

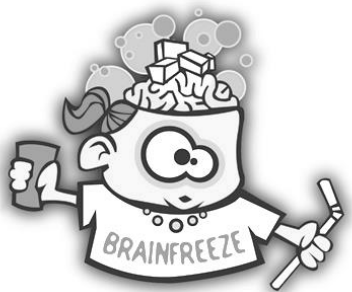


A brain freeze begins with a suddenly high-pitched ache in the upper part of the throat (nearly in the head) because of too quickly consuming a cold drink or food. The pain stays for about 30 seconds, but it's intense. Cold makes you feel like your brain is going into hypothermia and will die.

The technical name for this phenomenon is Cold-Stimulus Headache, but people also refer to it as "ice cream headache" or "brain freeze."

The good news is that brain freeze is easy to prevent — just eat more slowly. The other bit of news, very disturbing news, is that these headaches can cause permanent brain damage.

A recent test at an elementary school by researcher J. Morris where 35 children were tested found the following results. Eighteen male children and seventeen females were used for the experiment. "We had them memorize the preamble to the Constitution of the United States before we gave each of them a frozen (*slurpee* style) drink." Each student experienced pain as they recklessly slurped up their drinks. "We allowed the pain to dissipate and then asked them to recite the preamble once again." The number of students that were able to recite the complete preamble went down by 20%.



Jorge Serrador, from the War Related Illness and Injury Study Center which is part of the Department of Veterans Affairs in East Orange, New Jersey, studies brain freeze headaches, not just because he wants to make the world a safer place for ice cream eaters, but also for what they can tell him about how and why the headaches occur. He's hoping that will lead to better ways to treat or prevent them. Serrador is the associate director of research at the War Related Illness and Injury Study Center. He says many veterans suffer from severe headaches after their deployments.

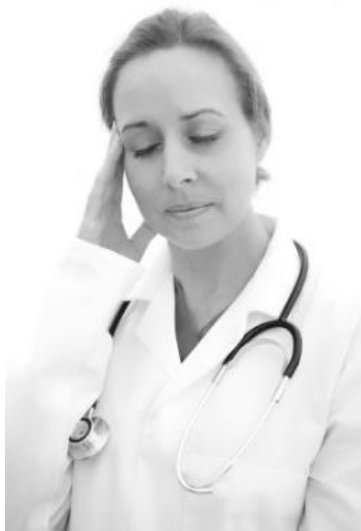
It turns out it's hard to study headaches, and a brain freeze headache is one of the few types that can be conjured up on demand. "The cold decreases the volume of the brain, therefore reducing brainpower," he says. "The brain may be interpreting that decrease brain volume as pain."



"Another theory that's been put out there is that the cold actually stimulates a nerve in the roof of the mouth," says Serrador. That stimulated nerve in the mouth goes into overdrive. It sends off a barrage of signals to the brain that once again the brain interprets as "ouch."

Why the brain gets "Ouch!" from the cold and not "Brrrrr" is a mystery.

Harvard Medical School headache researcher Elizabeth Loder says "It's not all that surprising to think scientists may learn something important from studying ice cream headaches."



"Some of these things that people think of as silly or whimsical, they're actually really fascinating," says Loder, who is also president of the American Headache Society.

The far reaching effects of the brain freeze have even been implemented into video games to warn young people of the dangers. Those people familiar with World of Warcraft now have the ability to call upon a level 77 Mage to use the special ability of Brain Freeze. It produces all kinds of detrimental affects upon those within range. "I believe that the video game makers are trying to get an important message out to the youths who don't fully understand the damage they are doing to their brain." says J. Morris.

This article is based on information from the following websites:

<http://www.npr.org/2012/07/03/156155297/when-ice-cream-attacks-the-mystery-of-brain-freeze>

<http://www.urbandictionary.com/define.php?term=brain%20freeze>

<http://www.warrelatedillness.va.gov/WARRELATEDILLNESS/nj/about-us/who-we-are.asp>

http://physiciandirectory.brighamandwomens.org/directory/profile.asp?dbase=main&setsize=30&last_name=loder&pict_id=0010951

Aquatic Ape Theory: Mermaids are Real

Was man more aquatic in the past? Sir Alister Hardy sure thought so. Hardy was the first to propose this idea in 1960 in a *New Scientist* article, “Was Man More Aquatic in the Past?” His idea became known as the highly controversial ***Aquatic Ape Theory***.

The *Aquatic Ape Theory* is the idea that during the transition from the last common ancestor we shared with apes to hominid (human), humans went through an aquatic stage. This stage is believed to have resulted in “aquatic ape-like” creatures, known more commonly as mermaids.



While it’s easy to discredit and scoff at the belief of mermaids, or “Merbeings” as they are often referred, here are some interesting points that may make you reconsider your beliefs:

Merbeings are simply underwater Humanoids, a species that have long been identified by the government but continue to be classified as “extra-terrestrial.” One of the story-lines of *Mermaids: The Body Found* was that hundreds of aquatic mammals were killed following a sonic weaponry experiment by the US Navy. Surprisingly, numerous Merbeings (some of which were still alive) washed ashore along with hundreds of aquatic mammals. It’s important to note that Merbeings are not at all like *Disney’s Ariel* or the other beautiful mermaids depicted in Hollywood. In contrast, Merbeings are very much like humans as we know them, except they have noticeably webbed feet and hands and very little, if any hair. Hollywood’s depiction of Mermaids is just a clever distraction to 1) make humans believe Merbeings are attractive and friendly, and 2) to portray Merbeings as fictional cartoons, therefore qualifying anyone who believes in their existence as childish, immature, and easily fooled.



Merbeings interact with dolphins much like humans interact with dogs. Have you ever wondered why dolphins interact so well with humans? The truth behind this interaction is that dolphins often mistake humans for Merbeings, whom they often interact with and protect much like a dog would a human. Interestingly, humans share many more similarities with dolphins and whales than they do with chimpanzees and apes, a fact which makes the existence of underwater humanoids easier to accept.

“Humans have subcutaneous fat that helps warm our bodies (similar to dolphins and whales). We can hold our breath for a long period of time. We don’t have hair over our body like our ancestors or ape cousins and we have partial webbing between our fingers and toes (perhaps to help us swim?). We have an instinctual ability to survive in water,” states Emily Sutherlin, NowPublic.com.

“The only ocean mammals that have fur are those who get out of the water to spend time on land in cold climates such as seals or otters. It’s interesting that humans have most of the hair on their heads, which is the part of the body that is above water while swimming. The aquatic ape theory suggests that humans kept the hair on their heads for protection and to give their offspring something to hang onto while the parent spent time wallowing in the water... Having no hair on the body makes human skin

very sensitive and pleasurable to touch. Lack of body hair, sensitive skin, and sensuality is a common trait humans share with dolphins and other cetaceans. There is a fatty layer beneath the skin of all humans that makes us different than all other apes, which have no such fatty layer. Human infants' extra fatty tissue gives them natural buoyancy. This fatty layer is found in dolphins and all ocean dwelling mammals. Although most apes have a fear of water, humans are highly attracted to water and will swim for pleasure. In fact, human infants can swim before they can walk. These traits are uncommon among the apes.



Humans are also equipped with a diving reflex. This is not found among apes. When a human dips his face in water, the heart rate immediately slows down. This kind of reflex is found in dolphins, whales and all animals that dive.

It's interesting, too, that Jacques Cousteau - legendary ocean explorer - wrote that the original sin was gravity and that we will only achieve redemption when we return to the water - as cetaceans did long ago.

Article based on information found at:

<http://www.examiner.com/video/compelling-evidence-that-supports-the-existence-of-mermaids.com>

http://www.Paula_Peterson.com

Drinking Too Much Water Can Kill You!

In a hydration-obsessed culture, people can and do drink themselves to death.

By Coco Ballantyne

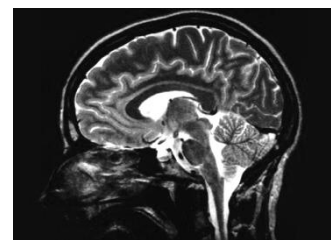


Liquid H₂O is the sine qua non of life. Making up about 66 percent of the human body, water runs through the blood, inhabits the cells, and lurks in the spaces between. At every moment water escapes the body through sweat, urination, defecation or exhaled breath, among other routes. Replacing these lost stores is essential but rehydration can be overdone. There is such a thing as a fatal water overdose.

Earlier this year, a 28-year-old California woman died after competing in a radio station's on-air water-drinking contest. After downing some six liters of water in three hours in the "Hold Your Wee for a Wii" (Nintendo game console) contest, Jennifer Strange vomited, went home with a splitting headache, and died from so-called water intoxication caused by hyponatremia. Hyponatremia, a word cobbled together from Latin and Greek roots, translates as "insufficient salt in the blood." Quantitatively speaking, it means having a blood sodium concentration below 135 millimoles per liter, or approximately 0.4 ounces per gallon, the normal concentration lying somewhere between 135 and 145 millimoles per liter. Severe cases of hyponatremia (aka water intoxication) symptoms include headache, fatigue, nausea, vomiting, frequent urination and mental disorientation.

In humans, the kidneys control the amount of water, salts and other solutes leaving the body by sieving blood through their millions of twisted tubules. When a person drinks too much water in a short period of time, the kidneys cannot flush it out fast enough and the blood becomes waterlogged. Drawn to regions where the concentration of salt and other dissolved substances is higher, excess water leaves the blood and ultimately enters the cells, which swell like balloons to accommodate it.

Most cells have room to stretch because they are embedded in flexible tissues such as fat and muscle, but this is not the case for neurons. Brain cells are tightly packaged inside a rigid boney cage, the skull, and they have to share this space with blood and cerebrospinal fluid, explains Wolfgang Liedtke, a clinical neuroscientist at Duke University Medical Center. "Inside the skull there is almost zero room to expand and swell," he says.



Thus, brain edema, or swelling, can be disastrous. "Rapid and severe hyponatremia causes entry of water into brain cells leading to brain swelling, which manifests as seizures, coma, respiratory arrest, brain stem herniation and death," explains M. Amin Arnaout, chief of nephrology at Massachusetts General Hospital and Harvard Medical School.

Where did people get the idea that guzzling enormous quantities of water is healthful? A few years ago Heinz Valtin, a kidney specialist from Dartmouth Medical School, decided to determine if the common advice to drink eight, eight-ounce glasses of water per day could hold up to scientific scrutiny. After scouring the peer-reviewed literature, Valtin concluded that no scientific studies support the "eight x eight" dictum (for healthy adults living in temperate climates and doing mild exercise). In fact, drinking this much or more "could be harmful, both in precipitating potentially dangerous hyponatremia and exposure to pollutants, and also in making

many people feel guilty for not drinking enough," he wrote in his 2002 review for the *American Journal of Physiology—Regulatory, Integrative and Comparative Physiology*. And since he published his findings, Valtin says, "Not a single scientific report published in a peer-reviewed publication has proven the contrary."

Most cases of water poisoning do not result from simply drinking too much water, says Joseph Verbalis, chairman of medicine at Georgetown University Medical Center. It is usually a combination of excessive fluid intake and increased secretion of vasopressin (also called antidiuretic hormone), he explains. Produced by the hypothalamus and secreted into the bloodstream by the posterior pituitary gland, vasopressin instructs the kidneys to conserve water. Its secretion increases in periods of physical a marathon, for example—and may cause the body to conserve water even if a person is drinking excessive quantities.

While exercising, "you should balance what you're drinking with what you're sweating," and that includes sports drinks, which can also cause hyponatremia when consumed in excess, Verbalis advises. "If you're sweating 500 milliliters per hour, that is what you should be drinking."

But measuring sweat output is not easy. How can a marathon runner, or any person, determine how much water to consume? As long as you are healthy and equipped with a thirst barometer unimpaired by old age or mind-altering drugs, follow Verbalis's advice, "drink to your thirst. It's the best indicator."



Based on the following information from Scientific American

<http://www.scientificamerican.com/article.cfm?id=strange-but-true-drinking-too-much-water-can-kill>

<http://www.scientificamerican.com/topic.cfm?id=stress>



Lesson 1 - Student Viewing Guide for posornot.com

Name and age (of person shown)	What' your guess? + (positive) or (negative)	Rationale for your guess (What piece of information led to your guess?)	In fact, this person is HIV + or -
<i>Example: Jose 34</i>	<i>Example: +</i>	<i>Example: He is a male from Puerto Rico and an artist.</i>	<i>Example: Positive +</i>

How many did you guess correctly? _____ (compare your answers with your elbow partner)

True or False: You can always tell if a person has HIV by looking at him/her. Explain. _____

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It's All Relative Activity

Name _____

1. You will receive 1 card from your teacher. It will have the name of a family member written on the front (ie. husband, wife, child, brother, sister, niece, baby, grandfather, grandmother) and details about that person on the back.
2. You will walk around the room looking for other students to form a family with.

- First, find people who have the "same coat of arms."



- Second, divide into a family unit made up of people with the same coat of arms. Your family may have 2, 3, 4, 5, or 6 people.
 - Third, when your family is formed, sit down together and get to know each other by taking turns reading the details on the back of each card.
 - Fourth, make plans for how your family will celebrate an upcoming birthday for the oldest member of your family.
3. Your teacher will give you information about the symbol on your card.
 4. Once you have received the symbol information from your teacher, answer the questions that follow:

Reflection Questions:

1. **If someone in your family is infected with HIV**, how does that make you feel? Did your attitude about that person change when you found out they had HIV? How does this change any family plans you may have made?

2. **If no one in your family is infected with HIV**, how does that make you feel? How do you feel about other people whose families/friends have been affected by HIV? If you are friends with someone who has HIV, would you want to invite them to your families' birthday celebration?

3. Would your response differ if the disease wasn't AIDS but rather cancer, heart disease, etc.?

4. What is important to remember in helping friends and family members with any serious illnesses? How can non-infected families help their neighbors?

5. Think back to the video we watched earlier in class about the two people who were HIV positive.

- What surprised you about living with HIV?

Day 3 Lesson 2 Jigsaw Matrix

HIV & AIDS Reference Sheets

Directions: When you listen to your partners share about their articles, paraphrase (write in your own words) the essential pieces of information. Do not copy your partner's paper or give your paper to another teammate to copy from.

	1. What are HIV & AIDS and how do they act on the human body?	2. Where did HIV come from?	3. How is HIV spread?	4. How can HIV infection be prevented?
<p>In 40 words or less, answer the question for your article.</p>				
<p>Cite an interesting or surprising fact from your article and explain what made it worthy to select.</p>				

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HIV & AIDS Reference Sheet 1

What are HIV & AIDS and how do they act in the human body?

HIV is a virus carried in blood, semen, vaginal fluid and breast milk. HIV stands for **Human Immunodeficiency Virus**. HIV causes **Acquired Immune Deficiency Syndrome** or **AIDS**. AIDS is the last stage of **HIV Disease**.

Three out of four people with HIV have flulike symptoms (sore throat, fever, fatigue) one to six weeks after catching it. One out of four people have no symptoms at all.

They can still pass the virus to others if they have sex, share needles or get pregnant, even though they don't feel sick.

Once HIV gets into the blood, it invades the white blood cells, especially the "T-Helper cells," which are the coaches of the immune system. HIV turns a T-Helper cell into a little virus factory, producing more and more copies of the virus. Eventually, the infected T-Helper cell dies, and the new copies of HIV go off to infect other T-Helper cells in the person's body. HIV stays in the body. It can't be completely killed by drugs. There is no cure. For the rest of his or her life the person with HIV can transmit it to others.

At first, the person won't have enough antibodies in their blood to show up on a test. It might take weeks for their body to build up enough antibodies. After three months, though, a test will show that they are **HIV positive**.

With T-Helper cells sick and declining in number, the immune system can't work as

well. This can take ten or more years, especially with treatment, but eventually most people reach the stage of AIDS. A medical provider determines when a person has AIDS. It takes two things for the doctor to call it that. First, the person must have HIV. Second, their T-Helper cells must have dropped to a very low number, or they must have gotten a rare infection which only occurs when HIV has nearly destroyed the body's immune system.

These infections are called "opportunistic" because they take the opportunity of a person's weak immune system to make the person sick. They're diseases that a healthy immune system could control.

AIDS doesn't directly cause death. It allows these other diseases to cause the person's death. One such disease is *Kaposi's sarcoma*, caused by an ordinarily harmless virus. It is a rare kind of cancer that causes skin sores and tumors. Another one of these diseases is *Pneumocystis Pneumonia*, a rare infection of the lungs.

These days there are better drugs to prevent and treat these infections, so that people are living longer. These drugs can help eliminate or control an opportunistic infection, or help increase the number of T-Helper cells so that their immune system begins to function better. Even so, they will always be considered to have AIDS.

HIV & AIDS Reference Sheet 2

Where did HIV come from?

Today HIV is found all over the world on every continent. People with HIV traveled from place to place, taking the virus with them to new places. It was long suspected that the virus passed from animals to humans in the beginning, changing (mutating) just enough to become deadly in its new host. However, many animals carry HIV-like viruses that do not harm humans. After years of research, we now know that the virus began in a chimpanzee species from West Africa. It's likely that the chimpanzee passed the virus to a hunter when he killed the animal for food. If someone was cleaning the meat and got a cut, the chimp's infected blood could have passed the virus to the human.

In Africa and elsewhere, HIV infected the heterosexual population first. It passed from men to women and from women to men like other STDs. Today, most of the world's HIV burden is in sub-Saharan Africa. Meanwhile, in North America, during the early years of the HIV epidemic, it mainly infected the gay male population, so it passed mostly from men to other men. In other words, it's clear that HIV can infect *anyone*. It's what you do, not who you are, that puts you at risk for HIV. This is why testing is so important, whether people are gay or straight.

Why do people in sub-Saharan Africa and Western gay men have the highest rates of HIV disease?

Scientists have found a gene that evolved to protect Africans from malaria, but it

actually makes them *more* susceptible to HIV. This gene partially explains why the epidemic is centered there.

What about gay men? Well, people tend to have sex within their own communities. Once HIV infected some gay men in Europe and North America, it stayed largely in that population for many years, partly because gay men were more likely to be *exposed* to HIV. That is, the odds were higher if a guy was gay that the person he liked had HIV. That's still true today for men who have sex with men (whether or not they think of themselves as gay).

Another factor is access to resources. In the US, gay men and people of color have high rates of HIV infection when compared to white people in straight or lesbian relationships. The Centers for Disease Control (also called the CDC) says that this is partly due to prejudice and fear -- homophobia and racism. Prejudice has created unequal access to jobs and therefore less access to health insurance. Prejudice makes healthy relationships harder to maintain. And some people have avoided getting tested due to past experiences of discrimination in health care settings. They feared being judged or mistreated. All of these conditions have allowed HIV to continue to spread.

HIV & AIDS Reference Sheet 3

How is HIV spread today?

For HIV to be transmitted, it has to get directly into the blood. There are three ways that ordinarily happens.

(1) The most common way is **during sex**. Infected blood, semen or vaginal fluid can pass from one person to another through a mucous membrane. Mucous membranes are the thin-skinned, wet parts of the body. They line certain openings -- the mouth, anus, vagina, and the opening to the urethra at the tip of the penis. These membranes are very delicate, almost skinless, to allow fluids in and out of the body.

Anal sex is riskiest because the membrane that lines the rectum can easily get microscopic tears. Also, blood vessels are close to the surface of the skin there. For women, vaginal sex can be especially risky if infected semen is ejaculated into the vagina. Oral sex can also transmit HIV, especially to the person's mouth or throat. In contrast, the skin on your arm could only be penetrated by the virus if you had a cut, scrape, or skin disease. HIV cannot travel through unbroken skin, only cuts and mucous membranes.

(2) HIV infection can also happen when an infected person **injects drugs into a vein** ("shoots up"), and then **shares the syringe**. There's some amount of blood inside the syringe after the first person uses it, even if it isn't visible. If that blood is infected with HIV, the second user is putting it right into his or her bloodstream.

HIV could be transmitted by sharing needles for tattoos and piercings, as well.

(3) HIV infection can also be passed from an HIV-positive **mother to the fetus** when the mother is pregnant. It can travel from her blood to the fetus through the placenta. Transmission can also occur during delivery or by breast feeding.

Today, medication can *greatly* reduce the chance of a mother passing HIV to her baby. In the US, about one in four women with HIV (25%) pass the infection to their fetuses if they don't get treatment during the pregnancy. But among those who **DO** get medication while they're pregnant, fewer than one in 50 (2%) give it to the fetus. Also, a doctor can deliver a baby by C-section instead of through the vagina.

However, drugs and C-sections are not available in all parts of the world. And in some places breast feeding is a mother's only option if she doesn't have access to clean water or baby formula.

Before 1985, donated blood wasn't tested for HIV. Therefore, some people became infected with HIV by transfusions. Others were infected by medicine made with clotting factor from blood. It wasn't routinely heated to kill HIV until 1985. But since 1985, all donated blood in the US (and other developed countries) is tested for HIV. Transfusions are *extremely* unlikely to transmit the virus (one chance in 1½ million) and there's no risk at all of catching HIV by donating blood.

HIV & AIDS Reference Sheet 4

How can HIV infection be prevented?

ABSTAINING FROM SEX

People don't have to abstain for their whole lives. The safest thing is to wait to have sex until they find someone they want to stay with for years, someone who's shown they can be trusted in other ways and who they're confident will have sex only with them. Some people decide not ever to have sex if they've been drinking or using drugs; they know they'd be less careful about protection. Some people decide not to have sex with new partners for a certain amount of time (for example, three months or two years or until they're married) to make sure they know a person really well.

When people *do* have sex, they can reduce the risk of getting or giving HIV by using a **condom** or a dental dam. These barriers, when people use them correctly every single time, greatly reduce the risk of transmitting HIV and other STDs. People can also reduce the risk of catching HIV by limiting the **number of people** they have sex with in their lives.

The problem is you can't tell if people have HIV or another STD by just looking at them; often *they* don't even know if they're infected.

What difference would having another STD make in terms of catching HIV? There are two reasons another STD increases the risk. Infections like herpes leave sores; chlamydia can make mucous membranes raw. That offers easy pathways for HIV. And all STDs draw a lot of white blood cells to the infected area to fight the

infection. Those are the very cells HIV can infect. So **getting tested** and treated for *other* STDs lowers a couple's HIV risk. It's also recommended that people wait for sex until they both get tested for HIV and retest in three months. Then they should get tested yearly or before they get with someone new.

ABSTAINING FROM DRUGS

The safest thing is to never inject drugs into the body with a needle or use *any* kind of mind-altering drugs. Even using alcohol can mess up people's ability to make the best decisions. After drinking, people are less likely to have safer sex because they stop thinking clearly.

People who are *already* addicted to injection drugs (drugs that they put into their body with a needle) can protect themselves and others, until they're able to quit, by never **sharing** needles – by using a new needle every time. New needles are free at needle exchange programs in some areas.

PREVENTING MOTHER-TO-CHILD TRANSMISSION

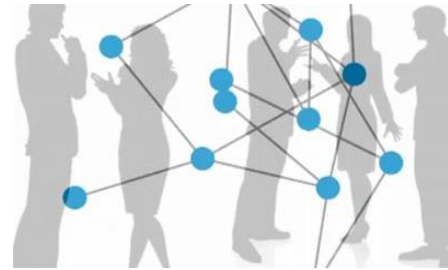
Men and women who want to have a child should get tested for HIV before starting a pregnancy. If a woman learns she's HIV-positive, she can take medicine during the pregnancy to *greatly* reduce the chance of passing HIV to the fetus.

HIV is one of the few entirely preventable diseases. You can decide not to risk getting it!

Body Fluid Activity

Objective: Describe how an HIV infection can spread through a population.

Background: The first cases of AIDS were identified in the United States in 1981, but AIDS most likely existed here and in other parts of the world for many years before that time. In 1984 scientists proved that HIV causes AIDS. Anyone can get HIV. The most important thing to know is how you can get the virus so that you can prevent it.



You can get HIV:

- By having unprotected sex- sex without a condom- with someone who has HIV. The virus can be in an infected person’s blood, semen, or vaginal secretions and can enter your body through tiny cuts or sores in your skin, or in the lining of your vagina, penis, rectum, or mouth.
- By sharing a needle and syringe to inject drugs or sharing drug equipment used to prepare drugs for injection with someone who has HIV.
- From a blood transfusion or blood clotting factor that you got before 1985. (Today it is unlikely you could get infected that way because all blood in the United States has been tested for HIV since 1985.)
- Babies born to women with HIV also can become infected during pregnancy, birth, or breast-feeding.

You cannot get HIV:

- By working with or being around someone who has HIV.
- From sweat, spit, tears, clothes, drinking fountains, phones, toilet seats, or through everyday things like sharing a meal.
- From insect bites or stings.
- From donating blood.
- From a closed-mouth kiss (but there is a *very* small chance of getting it from open-mouthed or "French" kissing with an infected person because of possible blood contact due to a cut in the mouth or throat).

Materials:

- | | |
|--|--|
| <input type="checkbox"/> Small Plastic cups (1 per students) | <input type="checkbox"/> Water |
| <input type="checkbox"/> Rubber bands | <input type="checkbox"/> 1 cup weak sodium hydroxide (NaOH) solution |
| <input type="checkbox"/> 1 dropper bottle of phenolphthalein (teacher) | <input type="checkbox"/> Clear plastic wrap |

Procedure:

1. Each of you will get a cup filled with a clear liquid; this liquid will be used to simulate the body fluids that can transmit HIV. Do not drink the liquid.
2. Circulate around the room and mix/exchange your fluids by pouring a small portion into another person’s cup and vice versa. You may do this with no one, one, two, or three other people.
Write the number of partners you exchanged fluid with _____
3. Your teacher will then test your “fluids” for an infection.
4. Once a drop of phenolphthalein is placed in your cup, gently swirl the solution. A pink reaction indicates an infection, if your cup stays clear then you are not infected.

Data: Record the **class data** for the spread of this infectious disease

	Abstinent (NO fluid exchanges)	Condom (NO fluid exchanges)	1 partner	2 Partners	3 Partners
Number of infected cups					
Number of non infected cups					
Number of students in ENTIRE class					
Percentage of infected cups					

Conclusion: ANSWER IN COMPLETE SENTENCES

1. How many people did you “exchange fluids with”?

2. Were you infected or not infected?

a. If you were infected can you with 100% accuracy identify who infected you? Why/why not?

b. If you were not infected, can you explain why you were not infected with 100% accuracy?

3. Look at the data of your classmate’s infectious disease cups; some cups have clear plastic over the lid to represent condom usage and other cups have an A for abstinence. Do any of these cups show infection? Why might this be? Cite data from the class data table to support your answer.

4. Some students only shared liquid with one partner. This is known as monogamy. How might having fewer partners lower your chance of being infected with an infectious disease?

5. How is this infectious disease simulation similar to the HIV/AIDS pandemic? (A **pandemic** (from Greek *pan* "all" + *demos* "people") is an epidemic of infectious disease that has spread through human populations across a large region; for instance multiple continents, or even worldwide.)

6. How is this infectious disease simulation different from the actual HIV/AIDS pandemic?

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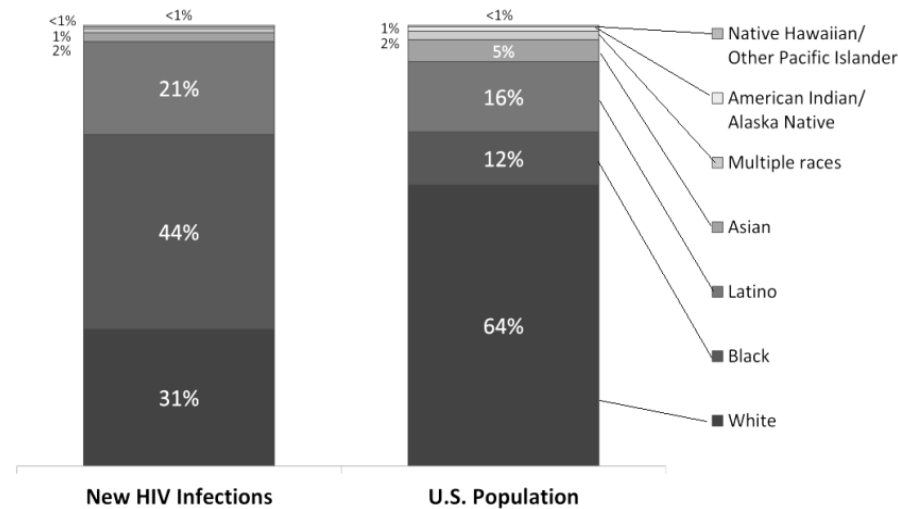
HIV Infection Rates Data Analysis

Table 1. Diagnoses of HIV Infection among adult and adolescent males, by race/ethnicity and metropolitan statistical area of residence, 2001—United States and Puerto Rico. (CDC, HIV Surveillance Report, Vol. 18, No. 8, 2011)

Area of Residence	American Indian/Alaska Native			Asian			Black/African American			Hispanic/Latino			White		
	Estimated			Estimated			Estimated			Estimated			Estimated		
	No.	No.	Rate	No.	No.	Rate	No.	No.	Rate	No.	No.	Rate	No.	No.	Rate
Los Angeles, CA	4	5	49.2	100	130	16.8	383	499	145.6	909	1,163	51.9	530	679	37.7
Los Angeles Division	4	5	66.1	75	99	18	376	491	152.5	770	968	53.6	429	553	45.2
Santa Ana Division	0	0	0	25	31	14	7	8	40	139	175	44	101	126	21.8

****Columns Explained Left to Right:** No. (Official Reported Numbers of Infected), No. (Actual Estimated Number of Infected Individuals), Rate (Infection Rate out of 100,000 people).

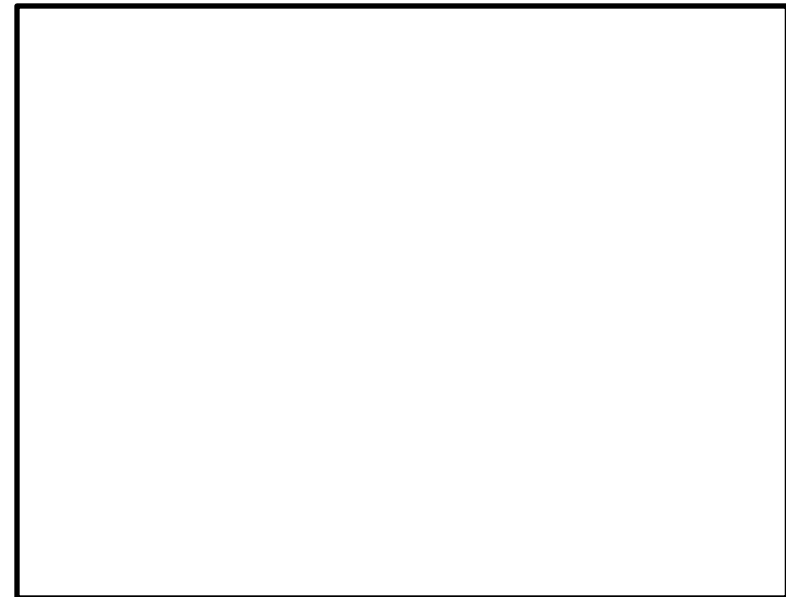
New HIV Infections & U.S. Population, by Race/Ethnicity, 2010



NOTE: HIV data are estimates and do not include U.S. dependent areas.
 SOURCES: CDC, HIV Surveillance Report, Vol. 23; February 2013. CDC, Fact Sheet: New HIV Infections in the United States; December 2012. U.S. Census Bureau, 2010 Population Estimates.



1. Spend two minutes looking at the graph and data table. Record your observations and/or inferences in a circle map below.



1. Looking at this information with a partner, what can you determine about infection rates in different ethnic populations in the U.S.?

2. In Table 1 there are two columns labeled “No.” for each ethnicity. However, each column reports a different number. Explain why there are two duplicate categories and make a prediction about why the values of each are different.

3. Read the three facts below from the CDC. How does this data help you better understand the graph and data table with regards to the HIV infection rates in the Latino/Hispanic population? Use complete sentences to explain.

- Hispanics/Latinos represented 16% of the population in the U.S. but accounted for 21% of new HIV infections in 2010. Hispanics/Latinos accounted for 19% of people living with HIV infection in 2009.
- In 2010, Hispanic/Latino men accounted for 87% (8,500) of all estimated new HIV infections in the United States. Most (79% or 6,700) of the estimated new HIV infections among Hispanic/Latino men were attributed to male-to-male sexual contact.
- In 2010, the rate of new HIV infections for Latino males was 2.9 times that for white males, and the rate of new infections for Latinas was 4.2 times that for white females.

4. Go back to the graph, data table, and the facts and highlight/circle where you found the information to answer Question 3.

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STD 101 For Teens

STDs - What you need to know to stay healthy

1. Complete the **Opinion** column BEFORE viewing the STD 101 PowerPoint presentation.
2. While watching the presentation make any necessary corrections in the **Findings** column.

Questions	Pre PowerPoint Opinion		Post PowerPoint Findings		Evidence Explain using your own words:
1. What STDs have you heard about?					
2. What are the odds that a sexually active teen with get an STD this year?	a. 1 out of 4 b. 1 out of 2 c. 1 out of 5				
Statements	True	False	True	False	
3. STDs usually happen to people who aren't "clean."					
4. One out of every four sexually active teens will get an STD this year.					
5. Herpes and HIV are incurable life-long infections.					
6. Several STDs increase the chances for HIV transmission and HIV infection.					

<p>7. Infections, birth defects, and stillbirths can result from STDs.</p>					
<p>8. "SEX" occurs only when there is penis-in-vagina contact.</p>					
<p>9. The birth control pill and patch help lower the chances of getting an STD.</p>					
<p>10. Correct use of condoms reduces, but does not eliminate, the chance for STD transmission.</p>					

3. Use the following sentence frames to support your discussion if needed:

Student 1: *I will read question number 3. It says _____. This statement was true/false because _____. So I am going to mark it true/false. What do you think?*

Student 2: *I agree/disagree with you because _____. So, for statement 3, I will mark true/false. Now let me read statement 4. It says _____. This statement was true/false....*

Describe one of your conversations: _____

Student Directions: Common Types of STDs in Teens

Background

In the United States, more than 65 million people are currently living with an incurable sexually transmitted disease (STD). An additional 15 million people become infected with one or more STDs each year, roughly half of whom contract lifelong infections (Cates, 1999). Yet, STDs are one of the most under-recognized health problems in the country today. Despite the fact that STDs are extremely widespread, have severe and sometimes deadly consequences, and add billions of dollars to the nation's healthcare costs each year, most people in the United States remain unaware of the risks and consequences of all but the most prominent STD—the human immunodeficiency virus or HIV. It is vital for public health that every sexually active person be tested and treated to prevent pandemic spread of these diseases.



Part 1 – Your part of the STD Matrix

You will complete this assignment in your base group of 4. Your group is responsible for getting the information about a STD from one of 10 different CDC STD fact sheets that is distributed to their base table group.

Part 2 – Project requirements

1. Think up a mode to deliver your information:

Your group will be given 20 minutes to complete and prepare for your presentation. One option is to create a hand-made “PowerPoint slide” slide or, if you have access to computers, a real PowerPoint Slide. Also consider presenting the information through a skit, song, poem, video, or news article. Your information must be audible for all students to hear.

If you choose to present with something other than a PowerPoint slide, you must write down your script/what you will say for the teacher to read.

The following information must be included in your presentation

- a. Name of STD with a picture
- b. How you get the STD
- c. Symptoms
- d. Treatment
- e. Prevalence of disease in population (how many people have it, specifically teens in the US)

Include only the essential information on any presentation materials so it can be easily shared with the class as a whole.

2. Oral presentation

The presentation should be 2-3 minutes long. You should not just read the slide, but use your own words to explain the information. All students in the group should take turns speaking.

3. STD Matrix

You should be completing your own STD matrix during each of the presentations.

Review the rubric that your teacher will use for evaluation BEFORE beginning!

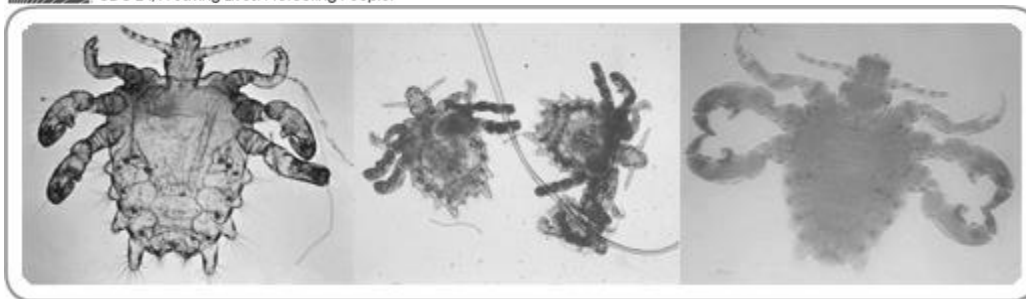
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Common Types of STDs Found in Teens

STD	Causes by bacteria, virus, protozoa or?	How do you get it?	Symptoms	Prevention	Treatment
Pubic Lice					
Bacterial Vaginosis					
Syphilis					
Pelvic Inflammatory Disease (PID)					
Genital Herpes					
Chlamydia					

STD	Causes by bacteria, virus, protozoa or?	How do you get it?	Symptoms	Prevention	Treatment
Genital HPV					
Trichomoniasis “Trich”					
Hepatitis B					

WRAP UP: Look at the “How do you get it” column for these common STDs. What do they all have in common? Write a catchy slogan to help someone less knowledge avoid becoming infected with an STD. Illustrate your slogan if you think that would help other teenagers remember how to be safe. Ask your teacher if you want to make this slogan on printer or poster paper.



Parasites - Lice - Pubic "Crab" Lice

What are pubic lice? Also called crab lice or "crabs," pubic lice are parasitic insects found primarily in the pubic or genital area of humans. Pubic lice infestation is found worldwide and occurs in all races, ethnic groups, and levels of society.

What do pubic lice look like? Pubic lice have forms: the egg (also called a nit), the nymph, and the adult.

Nit: Nits are lice eggs. They can be hard to see and are found firmly attached to the hair shaft. They are oval and usually yellow to white. Pubic lice nits take about 6-10 days to hatch.

Nymph: The nymph is an immature louse that hatches from the nit (egg). A nymph looks like an adult pubic louse but it is smaller. Pubic lice nymphs take about 2-3 weeks after hatching to mature into adults capable of reproducing. To live, a nymph must feed on blood.

Adult: The adult pubic louse resembles a miniature crab when viewed through a strong magnifying glass. Pubic lice have six legs; their two front legs are very large and look like the pincher claws of a crab. This is how they got the nickname "crabs." Pubic lice are tan to grayish-white in color. Females lay nits and are usually larger than males. To live, lice must feed on blood. If the louse falls off a person, it dies within 1-2 days.

Where are pubic lice found? Pubic lice usually are found in the genital area on pubic hair; but they may occasionally be found on other coarse body hair, such as hair on the legs, armpits, mustache, beard, eyebrows, or eyelashes. Pubic lice on the eyebrows or eyelashes of children may be a sign of sexual exposure or abuse. Lice found on the head generally are head lice, not pubic lice. Animals do not get or spread pubic lice.

What are the signs and symptoms of pubic lice? Signs and symptoms of pubic lice include

- Itching in the genital area
- Visible nits (lice eggs) or crawling lice

How did I get pubic lice? Pubic lice usually are spread through sexual contact and are most common in adults. Pubic lice found on children may be a sign of sexual exposure or abuse. Occasionally, pubic lice may be spread by close personal contact or contact with articles such as clothing, bed linens, or towels that have been used by an infested person. A common misconception is that pubic lice are spread easily by sitting on a toilet seat. This would be extremely rare because lice cannot live long away from a warm human body and they do not have feet designed to hold onto or walk on smooth surfaces such as toilet seats.

Persons infested with pubic lice should be examined for the presence of other sexually transmitted diseases.



How is a pubic lice infestation diagnosed? A pubic lice infestation is diagnosed by finding a "crab" louse or egg (nit) on hair in the pubic region or, less commonly, elsewhere on the body (eyebrows, eyelashes, beard, mustache, armpit, perianal area, groin, trunk, scalp). Pubic lice may be difficult to find because there may be only a few. Pubic lice often attach themselves to more than one hair and generally do not crawl as quickly as head and body lice. If crawling lice are not seen, finding nits in the pubic area strongly suggests that a person is infested and should be treated. If you are unsure about infestation or if treatment is not successful, see a health care provider for a diagnosis. Persons infested with pubic lice should be investigated for the presence of other sexually transmitted diseases.

Treatment A lice-killing lotion containing 1% permethrin or a mousse containing pyrethrins and piperonyl butoxide can be used to treat pubic ("crab") lice. These products are available over-the-counter without a prescription at a local drug store or pharmacy. These medications are safe and effective when used exactly according to the instructions in the package or on the label.

Lindane shampoo is a prescription medication that can kill lice and lice eggs. However, lindane is not recommended as a first-line therapy. Lindane can be toxic to the brain and other parts of the nervous system; its use should be restricted to patients who have failed treatment with or cannot tolerate other medications that pose less risk. Lindane should not be used to treat premature infants, persons with a seizure disorder, women who are pregnant or breast-feeding, persons who have very irritated skin or sores where the lindane will be applied, infants, children, the elderly, and persons who weigh less than 110 pounds.

Malathion* lotion 0.5% (Ovide*) is a prescription medication that can kill lice and some lice eggs; however, malathion lotion (Ovide*) currently has not been approved by the U.S. Food and Drug Administration (FDA) for treatment of pubic ("crab") lice.

Ivermectin has been used successfully to treat lice; however, ivermectin currently has not been approved by the U.S. Food and Drug Administration (FDA) for treatment of lice.

How to treat pubic lice infestations: (Warning: See special instructions for treatment of lice and nits on eyebrows or eyelashes. The lice medications described in this section should not be used near the eyes.)

1. Wash the infested area; towel dry.
2. Carefully follow the instructions in the package or on the label. Thoroughly saturate the pubic hair and other infested areas with lice medication. Leave medication on hair for the time recommended in the instructions. After waiting the recommended time, remove the medication by following carefully the instructions on the label or in the box.
3. Following treatment, most nits will still be attached to hair shafts. Nits may be removed with fingernails or by using a fine-toothed comb.
4. Put on clean underwear and clothing after treatment.
5. To kill any lice or nits remaining on clothing, towels, or bedding, machine-wash and machine-dry those items that the infested person used during the 2-3 days before treatment. Use hot water (at least 130°F) and the hot dryer cycle.
6. Items that cannot be laundered can be dry-cleaned or stored in a sealed plastic bag for 2 weeks.
7. All sex partners from within the previous month should be informed that they are at risk for infestation and should be treated.
8. Persons should avoid sexual contact with their sex partner(s) until both they and their partners have been successfully treated and reevaluated to rule out persistent infestation.
9. Repeat treatment in 9-10 days if live lice are still found.
10. Persons with pubic lice should be evaluated for other sexually transmitted diseases (STDs).



Bacterial Vaginosis



What is bacterial vaginosis?

Bacterial Vaginosis (BV) is the name of a condition in women where the normal balance of bacteria in the vagina is disrupted and replaced by an overgrowth of certain bacteria. It is sometimes accompanied by discharge, odor, pain, itching, or burning.

g How common is bacterial vaginosis?

Bacterial Vaginosis (BV) is the most common vaginal infection in women of childbearing age. In the United States, BV is common in pregnant women.

g How do people get bacterial vaginosis?

The cause of BV is not fully understood. BV is associated with an imbalance in the bacteria that are normally found in a woman's vagina. The vagina normally contains mostly "good" bacteria, and fewer "harmful" bacteria. BV develops when there is an increase in harmful bacteria.

Not much is known about how women get BV. There are many unanswered questions about the role that harmful bacteria play in causing BV. Any woman can get BV. However, some activities or behaviors can upset the normal balance of bacteria in the vagina and put women at increased risk including:

- Having a new sex partner or multiple sex partners,
- Douching

It is not clear what role sexual activity plays in the development of BV. Women do not get BV from toilet seats, bedding, swimming pools, or from touching objects around them. Women who have never had sexual intercourse may also be affected.

SAUSD Common Core Unit

g What are the signs and symptoms of bacterial vaginosis?

Women with BV may have an abnormal vaginal discharge with an unpleasant odor. Some women report a strong fish-like odor, especially after intercourse. Discharge, if present, is usually white or gray; it can be thin. Women with BV may also have burning during urination or itching around the outside of the vagina, or both. However, most women with BV report no signs or symptoms at all.

g What are the complications of bacterial vaginosis?

In most cases, BV causes no complications. But there are some serious risks from BV including:

- Having BV can increase a woman's susceptibility to HIV infection if she is exposed to the HIV virus.
- Having BV increases the chances that an HIV-infected woman can pass HIV to her sex partner.
- Having BV has been associated with an increase in the development of an infection following surgical procedures such as a hysterectomy or an abortion.
- Having BV while pregnant may put a woman at increased risk for some complications of pregnancy, such as a preterm delivery.
- BV can increase a woman's susceptibility to other STDs, such as herpes simplex virus (HSV), chlamydia and gonorrhea.

g How does bacterial vaginosis affect a pregnant woman and her baby?

Pregnant women with BV more often have babies who are born premature or with low birth weight (low birth weight is less than 5.5 pounds).

The bacteria that cause BV can sometimes infect the uterus (womb) and fallopian tubes (tubes that carry eggs from the ovaries to the uterus). This type of infection is called pelvic inflammatory disease (PID). PID can cause infertility or damage the fallopian tubes enough to increase the future risk of ectopic pregnancy and infertility. Ectopic pregnancy is a life-threatening condition in which a fertilized egg grows outside the uterus, usually in a fallopian tube which can rupture.

g How is bacterial vaginosis diagnosed?

A health care provider must examine the vagina for signs of BV and perform laboratory tests on a sample of vaginal fluid to look for bacteria associated with BV.

g What is the treatment for bacterial vaginosis?

Although BV will sometimes clear up without treatment, all women with symptoms of BV should be treated to avoid complications. Male partners generally do not need to be treated. However, BV may spread between female sex partners.

Treatment is especially important for pregnant women. All pregnant women who have ever had a premature delivery or low birth weight baby should be considered for a BV examination, regardless of symptoms, and should be treated if they have BV. All pregnant women who have symptoms of BV should be checked and treated.

Some physicians recommend that all women undergoing a hysterectomy or abortion be treated for BV prior to the procedure, regardless of symptoms, to reduce their risk of developing an infection.

BV is treatable with antibiotics prescribed by a health care provider. Two different antibiotics are recommended as treatment for BV: metronidazole or clindamycin. Either can be used with non-pregnant or pregnant women, but the recommended dosages differ. Women with BV who are HIV-positive should receive the same treatment as those who are HIV-negative.

BV can recur after treatment.



g How can bacterial vaginosis be prevented?

BV is not completely understood by scientists, and the best ways to prevent it are unknown. However, it is known that BV is associated with having a new sex partner or having multiple sex partners.

The following basic prevention steps can help reduce the risk of upsetting the natural balance of bacteria in the vagina and developing BV:

- Be abstinent.
- Limit the number of sex partners.
- Do not douche.
- Use all of the medicine prescribed for treatment of BV, even if the signs and symptoms go away.

g FOR MORE INFORMATION:

Division of STD Prevention (DSTDP)
Centers for Disease Control and Prevention
www.cdc.gov/std

Order Publication Online at www.cdc.gov/std/pub
CDC-INFO Contact Center

1-800-CDC-INFO (1-800-232-4636)

Email: cdcinfo@cdc.gov

Website: www.cdc.gov

CDC National Prevention Information Network (NPIN)

P.O. Box 6003

Rockville, MD 20849-6003

1-800-458-5231

1-888-282-7681 Fax

1-800-243-7012 TTY

E-mail: info@cdcnpin.org

www.cdcnpin.org

Syphilis - CDC Fact Sheet



What is syphilis?

Syphilis is a sexually transmitted disease (STD) caused by a bacterium. Syphilis can cause long-term complications and/or death if not adequately treated.

How common is syphilis?

CDC estimates that, annually, 55,400 people in the United States get new syphilis infections. There were 46,042 reported new cases of syphilis in 2011, compared to 48,298 estimated new diagnoses of HIV infection and 321,849 cases of gonorrhea in 2011. Of new cases of syphilis, 13,970 cases were of primary and secondary (P&S) syphilis, the earliest and most infectious stages of syphilis. In 2011, 72% of P&S syphilis occurred among men who have sex with men. There were also 360 reports of children with congenital syphilis in 2011.

How do people get syphilis?

Syphilis is transmitted from person to person by direct contact with syphilis sores. Sores occur mainly on the external genitals, vagina, anus, or in the rectum. Sores also can occur on the lips and in the mouth. Syphilis can be transmitted during vaginal, anal, or oral sexual contact. Pregnant women with the disease can pass it to their unborn children.

How quickly do symptoms appear after infection?

The average time between infection with syphilis and appearance of the first symptom is 21 days, but it can range from 10 to 90 days.

What are the symptoms in adults?

Primary Stage

The appearance of a single sore marks the first (primary) stage of syphilis symptoms, but there may be multiple sores. The sore appears at the location where syphilis entered the body. The sore is usually firm, round, and painless. Because the sore is painless, it can easily go unnoticed. The sore lasts 3 to 6 weeks and heals regardless of whether or not a person is treated. However, if the infected person does not receive adequate treatment the infection progresses to the secondary stage.

Secondary Stage

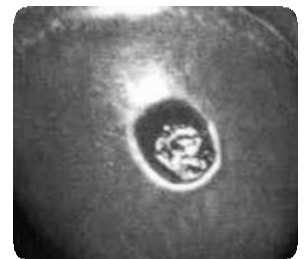
Skin rashes and/or sores in the mouth, vagina, or anus (also called mucous membrane lesions) mark the secondary stage of symptoms. This stage usually starts with a rash on one or more areas of the body. Rashes associated with secondary syphilis can appear from the time when the primary sore is healing to several weeks after the sore has healed. The rash usually does not cause itching. This rash may appear as rough, red, or reddish brown spots both on the palms of the hands and/or the bottoms of the feet. However, this rash may look different on other parts of the body and can look like rashes caused by other diseases.

Large, raised, gray or white lesions may develop in warm, moist areas such as the mouth, underarm or groin region. Sometimes rashes associated with secondary syphilis are so faint that they are not noticed. Other symptoms of secondary syphilis include fever, swollen lymph glands, sore throat, patchy hair loss, headaches, weight loss, muscle aches, and fatigue. The symptoms of secondary syphilis will go away with or without treatment. Without appropriate treatment, the infection will progress to the latent and possibly late stages of disease.

Late and Latent Stages

The latent (hidden) stage of syphilis begins when primary and secondary symptoms disappear. Without treatment, the infected person can continue to have syphilis in their body even though there are no signs or symptoms. This latent stage can last for years.

About 15% of people who have not been treated for syphilis develop late stage syphilis, which can appear 10-30 years after infection began. Symptoms of the late stage of syphilis include difficulty coordinating muscle movements, paralysis, numbness, gradual blindness, and dementia. In the late stages of syphilis, the disease damages the internal organs, including the brain, nerves, eyes, heart, blood vessels, liver, bones, and joints. This damage can result in death.



Example of a primary syphilis sore.



Examples of a secondary palmar rash (above) and a generalized body rash (below)





How does syphilis affect a pregnant woman and her baby?

A pregnant woman with syphilis can pass the disease to her unborn baby. Babies born with syphilis can have many health problems. This may lead to low birth weight, premature delivery or even having a stillbirth (a baby born dead). To protect their babies, **pregnant women should be tested for syphilis regularly during the pregnancy and at delivery and receive immediate treatment, if positive.**

An infected baby may be born without signs or symptoms of disease. However, if not treated immediately, the baby may develop serious problems within a few weeks. Untreated babies can have many health problems (such as cataracts, deafness, or seizures), and they can die.

How is syphilis diagnosed?

A blood test is the most common way to determine if someone has syphilis. Shortly after infection, the body produces syphilis antibodies that can be detected by an accurate, safe, and inexpensive blood test.

Some health care providers can diagnose syphilis by examining material from a syphilis sore using a special microscope called a dark-field microscope. If syphilis bacteria are present in the sore, they will show up when observed through the microscope.

Special note: *Because untreated syphilis in a pregnant woman can infect and kill her developing baby, every pregnant woman should receive prenatal care and be tested for syphilis during pregnancy and at delivery.*

What is the link between syphilis and HIV?

Oral, anal, vaginal, or penile syphilis sores make it easier to transmit and acquire HIV infection. A person is 2 to 5 times more likely to get HIV if exposed when syphilis sores are present.

How is syphilis treated?

No home remedies or over-the-counter drugs will cure syphilis, but syphilis is simple to cure with appropriate antibiotics with treatment will kill the syphilis bacterium and prevent further damage, but it will not repair damage already done.

Persons treated for syphilis must abstain from sexual contact with new partners until the syphilis sores are completely healed. Persons with syphilis must notify their sex partners so that they also can be tested and treated if necessary.

Who should be tested for syphilis?

Providers should routinely test persons who:

- are pregnant
- are men who have sex with men
- have HIV infection
- have partner(s) who have tested positive for syphilis

Will syphilis recur or “come back?”

Follow-up testing is recommended to be sure that treatment is successful. Having syphilis once does not protect a person from getting it again. Even following successful treatment, people can still be re-infected. Only laboratory tests can confirm whether someone has syphilis.

Because syphilis sores can be hidden in the vagina, anus, under the foreskin, or mouth, it may not be obvious that a sex partner has syphilis. Unless a person knows that their sex partners have been tested and treated, they may be at risk of getting syphilis again from an untreated sex partner.

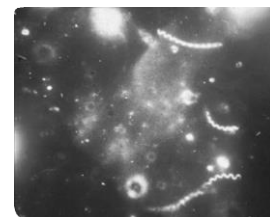
How can syphilis be prevented?

Correct and consistent use of latex condoms can reduce the risk of syphilis when the sore or site of potential exposure is covered, but it is best to abstain from sex while any sore is present in the genital, anal, or oral area. Contact with a sore outside of the area covered by a latex condom can still cause infection.

The surest way to avoid transmission of sexually transmitted diseases, including syphilis, is to abstain from sexual contact or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected.

Transmission of an STD, including syphilis, cannot be prevented by washing the genitals, urinating, and/or douching after sex. Any unusual discharge, sore, or rash, particularly in the groin area, should be a signal to abstain from having sex and to see a doctor immediately.

Avoiding alcohol and drug use may also help prevent transmission of syphilis because these activities may lead to risky sexual behavior. It is important that sex partners talk to each other about their HIV status and history of other STDs so that preventive action can be taken.



Darkfield micrograph of *Treponema pallidum*.

Where can I get more information?

Sexually Transmitted Diseases - <http://www.cdc.gov/std/>

Syphilis - <http://www.cdc.gov/std/syphilis/>

Syphilis and MSM Fact Sheet - <http://www.cdc.gov/stdsyphilis/STDFact-MSM-Syphilis.htm>

STDs and Pregnancy Fact Sheet - <http://www.cdc.gov/std/pregnancy/STDFact-Pregnancy.htm>

STD information and referrals to STD Clinics
 CDC-INFO
 1-800-CDC-INFO (800-232-4636)
 TTY: 1-888-232-6348
 In English, en Español

Pelvic Inflammatory Disease (PID) - CDC Fact Sheet



What is PID?

Pelvic inflammatory disease (PID) refers to infection of the uterus (womb), fallopian tubes (tubes that carry eggs from the ovaries to the uterus) and other reproductive organs that causes symptoms such as lower abdominal pain. It is a serious complication of some sexually transmitted diseases (STDs), especially chlamydia and gonorrhea. PID can damage the fallopian tubes and tissues in and near the uterus and ovaries. PID can lead to serious consequences including infertility, ectopic pregnancy (a pregnancy in the fallopian tube or elsewhere outside of the womb), abscess formation, and chronic pelvic pain.

How common is PID?

Each year in the United States, it is estimated that more than 750,000 women experience an episode of acute PID. Up to 10-15% of these women may become infertile as a result of PID. A large proportion of the ectopic pregnancies occurring every year are due to the consequences of PID.

The more sex partners a woman has, the greater her risk of developing PID. Also, a woman whose partner has more than one sex partner is at greater risk of developing PID, because of the potential for more exposure to infectious agents.

How do women get PID?

PID occurs when bacteria move upward from a woman's vagina or cervix (opening to the uterus) into her reproductive organs. Many different organisms can cause PID, but many cases are associated with gonorrhea and chlamydia, two very common bacterial STDs. A prior episode of PID increases the risk of another episode because the reproductive organs may be damaged during the initial bout of infection.

Sexually active women in their childbearing years are most at risk, and those under age 25 are more likely to develop PID than those older than 25. This is partly because the cervix of teenage girls and young women is not fully matured, increasing their susceptibility to the STDs that are linked to PID.

The more sex partners a woman has, the greater her risk of developing PID. Also, a woman whose partner has more than one sex partner is at greater risk of developing PID, because of the potential for more exposure to infectious agents.

Women who douche may have a higher risk of developing PID compared with women who do not douche. Research has shown that douching changes the vaginal flora (organisms that live in the vagina) in harmful ways, and can force bacteria into the upper reproductive organs from the vagina.

Women who have an intrauterine device (IUD) inserted may have a slightly increased risk of PID near the time of insertion compared with women using other contraceptives or no contraceptive at all. However, this risk is greatly reduced if a woman is tested and, if necessary, treated for STDs before an IUD is inserted.

What are the signs and symptoms of PID?

Symptoms of PID vary from mild to severe. When PID is caused by chlamydial infection, a woman may be more likely to experience only mild symptoms even when serious damage is being done to her reproductive organs. Chlamydia can also cause fallopian tube infection without any symptoms. Because of vague symptoms, PID often goes unrecognized by women and their health care providers. Women who have symptoms of PID most commonly have lower abdominal pain. Other signs and symptoms include fever, unusual vaginal discharge that may have a foul odor, painful intercourse, painful urination, irregular menstrual bleeding, and pain in the right upper abdomen (rare).

What are the complications of PID?

Prompt and appropriate treatment can help prevent complications of PID, including permanent damage to the female reproductive organs. Infection-causing bacteria can silently invade the fallopian tubes, causing normal tissue to turn into scar tissue. This scar tissue blocks or interrupts the normal movement of eggs into the uterus. If the fallopian tubes are totally blocked by scar tissue, sperm cannot fertilize an egg, and the woman becomes infertile. Infertility also can occur if the fallopian tubes are partially blocked or even slightly damaged. Up to 10-15% of women with PID may become infertile, and if a woman has multiple episodes of PID, her chances of becoming infertile increase.

In addition, a partially blocked or slightly damaged fallopian tube may cause a fertilized egg to remain in the fallopian tube. If this fertilized egg begins to grow in the tube as if it were in the uterus, it is called an ectopic pregnancy. As it grows, an ectopic pregnancy can rupture the fallopian tube causing severe pain, internal bleeding, and even death.

Scarring in the fallopian tubes and other pelvic structures can also cause chronic pelvic pain (pain that lasts for months or even years). Women with repeated episodes of PID are more likely to suffer infertility, ectopic pregnancy, or chronic pelvic pain.

How is PID diagnosed?

PID is difficult to diagnose because the symptoms are often subtle and mild. Many episodes of PID go undetected because the woman or her health care provider fails to recognize the implications of mild or nonspecific symptoms. Because there are no precise tests for PID, a diagnosis is usually based on clinical findings. If symptoms such as lower abdominal pain are present, a health care provider should perform a physical examination to determine the nature and location of the pain and check for fever, abnormal vaginal or cervical discharge, and for evidence of gonorrheal or chlamydial infection. If the findings suggest PID, treatment is necessary.

The health care provider may also order tests to identify the infection-causing organism (e.g., chlamydial or gonorrheal infection) or to distinguish between PID and other problems with similar symptoms. A pelvic ultrasound is a helpful procedure for diagnosing PID. An ultrasound can view the pelvic area to see whether the fallopian tubes are enlarged or whether an abscess is present. In some cases, a laparoscopy may be necessary to confirm the diagnosis. A laparoscopy is a surgical procedure in which a thin, rigid tube with a lighted end and camera (laparoscope) is inserted through a small incision in the abdomen. This procedure enables the doctor to view the internal pelvic organs and to take specimens for laboratory studies, if needed.

What is the treatment for PID?

PID can be cured with several types of antibiotics. A health care provider will determine and prescribe the best therapy. However, antibiotic treatment does not reverse any damage that has already occurred to the reproductive organs. If a woman has pelvic pain and other symptoms of PID, it is critical that she seek care immediately. Prompt antibiotic treatment can prevent severe damage to reproductive organs. The longer a woman delays treatment for PID, the more likely she is to become infertile or to have a future ectopic pregnancy because of damage to the fallopian tubes.

Because of the difficulty in identifying organisms infecting the internal reproductive organs and because more than one organism may be responsible for an episode of PID, PID is usually treated with at least two antibiotics that are effective against a wide range of infectious agents. These antibiotics can be given by mouth or by injection. The symptoms may go away before the infection is cured. Even if symptoms go away, the woman should finish taking all of the prescribed medicine. This will help prevent the infection from returning. Women being treated for PID should be re-evaluated by their health care provider three days after starting treatment to be sure the antibiotics are working to cure the infection. In addition, a woman's sex partner(s) should be treated to decrease the risk of re-infection, even if the partner(s) has no symptoms. Although sex partners may have no symptoms, they may still be infected with the organisms that can cause PID.

Hospitalization to treat PID may be recommended if the woman (1) is severely ill (e.g., nausea, vomiting, and high fever); (2) is pregnant; (3) does not respond to or cannot take oral medication and needs intravenous antibiotics; (4) has an abscess in the fallopian tube or ovary (tubo-ovarian abscess); or (5) needs to be monitored to be sure that her symptoms are not due to another condition that would require emergency surgery (e.g., appendicitis). If symptoms continue or if an abscess does not go away, surgery may be needed. Complications of PID, such as chronic pelvic pain and scarring are difficult to treat, but sometimes they improve with surgery.

How can PID be prevented?

Women can protect themselves from PID by taking action to prevent STDs or by getting early treatment if they do get an STD.

The surest way to avoid transmission of STDs is to abstain from sexual intercourse, or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected.

Latex male condoms, when used consistently and correctly, can reduce the risk of transmission of chlamydia and gonorrhea.

CDC recommends yearly chlamydia testing of all sexually active women age 25 or younger, older women with risk factors for chlamydial infections (those who have a new sex partner or multiple sex partners), and all pregnant women. An appropriate sexual risk assessment by a health care provider should always be conducted and may indicate more frequent screening for some women.

Any genital symptoms such as an unusual sore, discharge with odor, burning during urination, or bleeding between menstrual cycles could mean an STD infection. If a woman has any of these symptoms, she should stop having sex and consult a health care provider immediately. Treating STDs early can prevent PID. Women who are told they have an STD and are treated for it should notify all of their recent sex partners so they can see a health care provider and be evaluated for STDs. Sexual activity should not resume until all sex partners have been examined and, if necessary, treated.



For More Information:

Division of STD Prevention (DSTDP)
Centers for Disease Control and
Prevention

www.cdc.gov/std

CDC-INFO Contact Center
1-800-CDC-INFO (1-800-232-4636)
Email: cdcinfo@cdc.gov

Genital Herpes - CDC Fact Sheet



You can get genital herpes even if your partner has no symptoms



What is genital herpes?

Genital herpes is a sexually transmitted disease (STD) caused by the herpes simplex viruses type 1 (HSV-1) or type 2 (HSV-2).

How common is genital herpes?

CDC estimates that, annually, 776,000 people in the United States get new herpes infections. Genital herpes infection is common in the United States. Nationwide, 16.2%, or about one out of six, people aged 14 to 49 years have genital HSV-2 infection. Over the past decade, the percentage of persons with genital herpes infection in the United States has remained stable.

Transmission from an infected male to his female partner is more likely than from an infected female to her male partner. Because of this, genital HSV-2 infection is more

common in women (approximately one out of five women aged 14 to 49 years) than in men (about one out of nine men aged 14 to 49 years).

What are the symptoms of genital herpes?

Most individuals infected with HSV-1 or HSV-2 experience either no symptoms or have very mild symptoms that go unnoticed or are mistaken for another skin condition. Because of this, most people infected with HSV-2 are not aware of their infection. When symptoms do occur, they typically appear as one or more blisters on or around the genitals, rectum or mouth. The blisters break and leave painful sores that may take two to four weeks to heal. Experiencing these symptoms is sometimes referred to as having an “outbreak.” The first time someone has an outbreak they may also experience flu-like symptoms such as fever, body aches and swollen glands.

Repeat outbreaks of genital herpes are common, in particular during the first year of infection. Symptoms of repeat outbreaks are typically shorter in duration and less severe than the first outbreak of genital herpes. Although the infection can stay in the body indefinitely, the number of outbreaks tends to decrease over a period of years.

How do people get genital herpes?

People get herpes by having sex with someone who has the disease. “Having sex” means anal, vaginal, or oral sex. HSV-1 and HSV-2 can be found in and released from the sores that the viruses cause. The viruses can also be released from skin that does not appear to have a sore. Generally, a person can only get HSV-2 infection during sexual contact with someone who has a genital HSV-2 infection. Transmission can occur from an infected partner who does not have a visible sore and may not know that he or she is infected.

HSV-1 can cause sores in the genital area and infections of the mouth and lips, so-called “fever blisters.” HSV-1 infection of the genitals is caused by mouth to genital or genital to genital contact with a person who has HSV-1 infection.

What are the complications of genital herpes?

Genital herpes can cause painful genital sores in many adults and can be severe in people with suppressed immune systems. If a person with genital herpes touches their sores or the fluids from the sores, they may transfer herpes to another part of the body. This is particularly problematic if it is a sensitive location such as the eyes. This can be avoided by not touching the sores or fluids. If they are touched, immediate and thorough hand-washing make the transfer less likely.

Some people who contract genital herpes have concerns about how it will impact their overall health, sex life, and relationships. It is best to talk to a health care provider about those concerns, but it also is important to recognize that while herpes is not curable, it is a manageable condition. Since a genital herpes diagnosis may affect perceptions about existing or future sexual relationships, it is important to understand how to talk to sexual partners about STDs. One resource, GYT Campaign, can be found here: <http://www.cdcnpin.org/stdawareness/GYT.aspx>.

There are also potential complications for a pregnant woman and her unborn child. See “How does herpes infection affect a pregnant woman and her baby?” below for information about this.

What is the link between genital herpes and HIV?

Genital herpes can cause sores or breaks in the skin or mucous membranes (lining of the mouth, vagina, and rectum). The genital sores caused by herpes can bleed easily. When the sores come into contact with the mouth, vagina, or rectum during sex, they increase the risk of HIV transmission if either partner is HIV-infected.

How does genital herpes affect a pregnant woman and her baby?

It is crucial that pregnant women infected with HSV-1 or HSV-2 go to prenatal care visits and tell their doctor if they have ever experienced any symptoms of, been exposed to, or been diagnosed with genital herpes. Sometimes genital herpes infection can lead to miscarriage or premature birth. Herpes infection can be passed from mother to child resulting in a potentially fatal infection (neonatal herpes). It is important that women avoid contracting herpes during pregnancy.

A woman with genital herpes may be offered antiviral medication from 36 weeks gestation through delivery to reduce the risk of an outbreak. At the time of delivery a woman with genital herpes should undergo careful examination. If herpes symptoms are present at delivery, a cesarean delivery (also called a 'C-section') is usually performed.

How is genital herpes diagnosed?

Health care providers can diagnose genital herpes by visual inspection if the outbreak is typical. Providers can also take a sample from the sore(s) and test it. Sometimes, HSV infections can be diagnosed between outbreaks with a blood test. A person should discuss such testing options with their health care provider.

Is there a cure or treatment for genital herpes?

There is no treatment that can cure herpes. Antiviral medications can, however, prevent or shorten outbreaks during the period of time the person takes the medication. In addition, daily suppressive therapy (i.e., daily use of antiviral medication) for herpes can reduce the likelihood of transmission to partners.

How can genital herpes be prevented?

Correct and consistent use of latex condoms can reduce the risk of genital herpes, because herpes symptoms can occur in both male and female genital areas that are covered or protected by a latex condom. However, outbreaks can occur in areas that are not covered by a condom.

The surest way to avoid transmission of sexually transmitted diseases, including genital herpes, is to abstain from sexual contact, or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected.

Persons with herpes should abstain from sexual activity with partners when sores or other symptoms of herpes are present. It is important to know that even if a person does not have any symptoms, he or she can still infect sex partners. Sex partners of infected persons should be advised that they may become infected and they should use condoms to reduce the risk. Sex partners can seek testing to determine if they are infected with HSV.



Where can I get more information?

Division of STD Prevention (DSTDP)
<http://www.cdc.gov/std/>
 Centers for Disease Control and Prevention

Personal health inquiries and information about STDs:

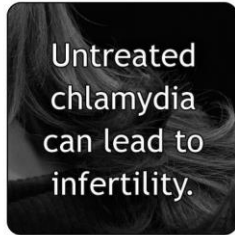
CDC-INFO Contact Center
 1-800-CDC-INFO (1-800-232-4636)
 Email: cdcinfo@cdc.gov

Resources:

CDC National Prevention Information Network (NPIN)
<http://www.cdcnpin.org/scripts/index.asp>
 P.O. Box 6003
 Rockville, MD 20849-6003
 1-800-458-5231
 1-888-282-7681 Fax
 1-800-243-7012 TTY
 Email: info@cdcnpin.org

American Sexual Health Association (ASHA)
<http://www.ashastd.org/>
 P. O. Box 13827
 Research Triangle Park, NC 27709-3827 1-800-783-9877

Chlamydia – CDC Fact Sheet



What is chlamydia?

Chlamydia is a common sexually transmitted disease (STD) caused by a bacterium. Chlamydia can infect both men and women and can cause serious, permanent damage to a woman's reproductive organs.

How common is chlamydia?

Chlamydia is the most frequently reported bacterial sexually transmitted infection in the United States. In 2011, 1,412,791 cases of chlamydia were reported to CDC from 50 states and the District of Columbia, but an estimated 2.86 million infections occur annually. A large number of cases are not reported because most people with chlamydia do not have symptoms and do not seek testing. Chlamydia is most common among young people. It is estimated that 1 in 15 sexually active females aged 14-19 years has chlamydia.

How do people get chlamydia?

People get chlamydia by having sex with someone who has the infection. "Having sex" means anal, vaginal, or oral sex. Chlamydia can still be transmitted even if a man does not ejaculate. People who have had chlamydia and have been treated can get infected again if they have sex with an infected person.

Chlamydia can also be spread from an infected woman to her baby during childbirth.

Who is at risk for chlamydia?

Any sexually active person can be infected with chlamydia. It is a very common STD, especially among young people. It is estimated that 1 in 15 sexually active females aged 14-19 years has chlamydia.

Sexually active young people are at high risk of acquiring chlamydia for a combination of behavioral and biological reasons. Men who have sex with men (MSM) are also at risk for chlamydial infection since chlamydia can be transmitted by oral or anal sex.

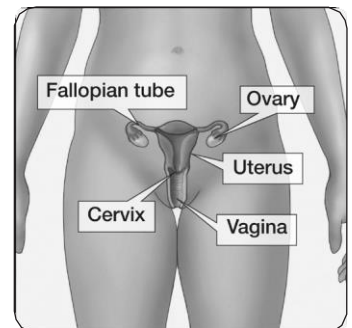
What are the symptoms of chlamydia?

Chlamydia is known as a 'silent' infection because most infected people have no symptoms. If symptoms do occur, they may not appear until several weeks after exposure. Even when it causes no symptoms, chlamydia can damage a woman's reproductive organs.

In women, the bacteria first infect the cervix (structure that connects the vagina or birth canal to the uterus or womb) and/or the urethra (urine canal). Some infected women have an abnormal vaginal discharge or a burning sensation when urinating. Untreated infections can spread upward to the uterus and fallopian tubes (tubes that carry fertilized eggs from the ovaries to the uterus), causing pelvic inflammatory disease (PID). PID can be silent, or can cause symptoms such as abdominal and pelvic pain. Even if PID causes no symptoms initially, it can lead to infertility (not being able to get pregnant) and other complications later on.

Some infected men have discharge from their penis or a burning sensation when urinating. Pain and swelling in one or both testicles (known as "epididymitis") may also occur, but is less common.

Chlamydia can also infect the rectum in men and women, either through receptive anal sex, or possibly via spread from the cervix and vagina. While these infections often cause no symptoms, they can cause rectal pain, discharge, and/or bleeding (known as "proctitis").



What complications can result from chlamydial infection?

The initial damage that chlamydia causes often goes unnoticed. However, chlamydial infections can lead to serious health problems.

In women, untreated infection can spread upward to the uterus and fallopian tubes (tubes that carry fertilized eggs from the ovaries to the uterus), causing pelvic inflammatory disease (PID). PID can be silent, or can cause symptoms such as abdominal and pelvic pain. Both symptomatic and silent PID can cause permanent damage to a woman's reproductive tract and lead to long-term pelvic pain, inability to get pregnant, and potentially deadly ectopic pregnancy (pregnancy outside the uterus).

In pregnant women, untreated chlamydia has been associated with pre-term delivery, and can spread to the newborn, causing an eye infection or pneumonia.

Complications are rare in men. Infection sometimes spreads to the tube that carries sperm from the testis, causing pain, fever, and, rarely, preventing a man from being able to father children.

What about chlamydia and HIV?

Untreated chlamydia may increase a person's chances of acquiring or transmitting HIV – the virus that causes AIDS.

How does chlamydia affect a pregnant woman and her baby?

In pregnant women, untreated chlamydia has been associated with pre-term delivery, and can spread to the newborn, causing an eye infection or pneumonia. Screening and treatment of chlamydia during pregnancy is the best way to prevent these complications. All pregnant women should be screened for chlamydia at their first prenatal visit.

Who should be tested for chlamydia?

Any sexually active person can be infected with chlamydia. Anyone with genital symptoms such as discharge, burning during urination, unusual sores, or rash should avoid having sex until they are able to see a health care provider about their symptoms.

Also, anyone with an oral, anal, or vaginal sex partner who has been recently diagnosed with an STD should see a health care provider for evaluation.

CDC recommends yearly chlamydia testing for all sexually active women age 25 or younger and older women with risk factors for chlamydial infections (e.g., women who have a new or more than one sex partner), and all pregnant women. Any woman who is sexually active should discuss her risk factors with a health care provider who can then determine if more frequent testing is necessary.

Men who have sex with men (MSM) who have receptive anal sex should be tested for chlamydia each year. MSM who have multiple and/or anonymous sex partners should be tested more frequently.

HIV-infected sexually active women who are age 25 or younger or have other risk factors, and all HIV-infected patients who report having receptive anal sex should be tested for chlamydia at their first HIV care visit and then at least annually. A patient's health care provider might determine more frequent testing is necessary, based on the patient's risk factors.

How is chlamydia diagnosed?

There are laboratory tests to diagnose chlamydia. Specimens commonly used for testing include a cotton swab of the vagina (collected by the woman herself or her health care provider) or a urine sample.

What is the treatment for chlamydia?

Chlamydia can be easily treated and cured with antibiotics. HIV-positive persons with chlamydia should receive the same treatment as those who are HIV-negative.

Persons with chlamydia should abstain from having sex for seven days after single dose antibiotics, or until completion of a seven-day course of antibiotics, to prevent spreading the infection to partners.

Repeat infection with chlamydia is common. Persons whose sex partners have not been appropriately treated are at high risk for re-infection. Having multiple chlamydial infections increases a woman's risk of serious reproductive health complications, including pelvic inflammatory disease and ectopic pregnancy. Women and men with chlamydia should be retested about three months after treatment of an initial infection, regardless of whether they believe that their sex partners were successfully treated.

Infants infected with chlamydia may develop conjunctivitis (infection of the membrane lining the eyelids) and/or pneumonia. Chlamydial infection in infants can be treated with antibiotics.

What about partners?

If a person has been diagnosed and treated for chlamydia, he or she should tell all anal, vaginal, or oral sex partners from the past 2 months so that they can see a healthcare provider and be treated. This will reduce the risk that the sex partners will develop serious complications from chlamydia and will also reduce the person's risk of becoming re-infected. A person with chlamydia and all of his or her sex partners must avoid having sex until they have completed their treatment for chlamydia (i.e., seven days after a single dose of antibiotics or until completion of a seven-day course of antibiotics) and until they no longer have symptoms. For tips on talking to partners about sex and STD testing, visit www.gytnow.org/talking-to-your-partner/

To help get partners treated quickly, healthcare providers may give patients extra medicine or prescriptions to give to their sex partners. This is called expedited partner therapy or EPT. EPT is only available in some parts of the country. Consult a healthcare provider to find out if it is available in a specific area. Sex partners should still be encouraged to see a healthcare provider, regardless of whether they receive EPT.

How can chlamydia be prevented?

Latex male condoms, when used consistently and correctly, can reduce the risk of getting or giving chlamydia. The surest way to avoid chlamydia is to abstain from vaginal, anal, and oral sex or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected.

Where can I get more information?

Division of STD Prevention (DSTDP)

Centers for Disease Control and Prevention
www.cdc.gov/std

CDC-INFO Contact Center

1-800-CDC-INFO (1-800-232-4636)

Email: cdcinfo@cdc.gov

CDC National Prevention Information Network (NPIN)

<http://www.cdcnpin.org/scripts/index.asp>
P.O. Box 6003
Rockville, MD 20849-6003
1-800-458-5231

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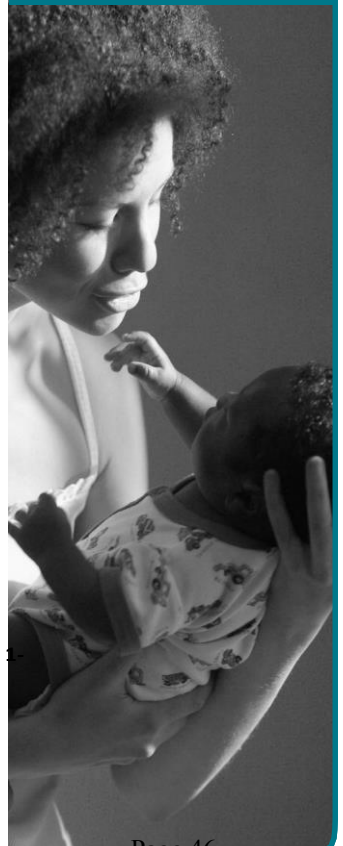
E-mail: info@cdcnpin.org

American Sexual Health Association (ASHA)

<http://www.ashastd.org/>
P.O. Box 13827

Research Triangle Park, NC 27709-3827
800-783-9877

Chlamydia is known as a 'silent' infection because most infected people have no symptoms. If symptoms do occur, they may not appear until several weeks after exposure. Even when it causes no symptoms, chlamydia can damage a woman's reproductive organs.



Gonorrhea - CDC Fact Sheet



What is gonorrhea?

Gonorrhea is a sexually transmitted disease (STD) caused by a bacterium. Gonorrhea can grow easily in the warm, moist areas of the reproductive tract, including the cervix (opening to the womb), uterus (womb), and fallopian tubes (egg canals) in women, and in the urethra (urine canal) in women and men. The bacterium can also grow in the mouth, throat, eyes, and anus.



How common is gonorrhea?

Gonorrhea is a very common infectious disease. CDC estimates that, annually, more than 820,000 people in the United States get new gonorrhea infections and less than half of these infections are detected and reported to CDC. CDC estimates that 570,000 of them were among young people 15-24 years of age. In 2011, 321,849 cases of gonorrhea were reported to CDC.

How do people get gonorrhea?

People get gonorrhea by having sex with someone who has the disease. "Having sex" means anal, vaginal, or oral sex. Gonorrhea can still be transmitted via fluids even if a man does not ejaculate. Gonorrhea can also be spread from an untreated mother to her baby during childbirth.

People who have had gonorrhea and have been treated may get infected again if they have sexual contact with a person infected with gonorrhea.

Who is at risk for gonorrhea?

Any sexually active person can be infected with gonorrhea. It is a very common STD. In the United States, the highest reported rates of infection are among sexually active teenagers, young adults, and African Americans.

What are the symptoms of gonorrhea?

Some men with gonorrhea may have no symptoms at all. However, common symptoms in men include a burning sensation when urinating, or a white, yellow, or green discharge from the penis that usually appears 1 to 14 days after infection. Sometimes men with gonorrhea get painful or swollen testicles.

Most women with gonorrhea do not have any symptoms. Even when a woman has symptoms, they are often mild and can be mistaken for a bladder or vaginal infection. The initial symptoms in women can include a painful or burning sensation when urinating, increased vaginal discharge, or vaginal bleeding between periods. Women with gonorrhea are at risk of developing serious complications from the infection, even if symptoms are not present or are mild.

Symptoms of rectal infection in both men and women may include discharge, anal itching, soreness, bleeding, or painful bowel movements. Rectal infections may also cause no symptoms. Infections in the throat may cause a sore throat, but usually cause no symptoms.

What are the complications of gonorrhea?

Untreated gonorrhea can cause serious and permanent health problems in both women and men.

In women, gonorrhea can spread into the uterus (womb) or fallopian tubes (egg canals) and cause pelvic inflammatory disease (PID). The symptoms may be mild or can be very severe and can include abdominal pain and fever. PID can lead to internal abscesses (pus-filled pockets that are hard to cure) and chronic (long-lasting) pelvic pain. PID can damage the fallopian tubes enough that a woman will be unable to have children. It also can increase her risk of ectopic pregnancy. Ectopic pregnancy is a life-threatening condition in which a fertilized egg grows outside the uterus, usually in a fallopian tube.

In men, gonorrhea can cause a painful condition called epididymitis in the tubes attached to the testicles. In rare cases, this may prevent a man from being able to father children.

If not treated, gonorrhea can also spread to the blood or joints. This condition can be life-threatening.

What about gonorrhea and HIV?

Untreated gonorrhea can increase a person's risk of acquiring or transmitting HIV—the virus that causes AIDS.

How does gonorrhea affect a pregnant woman and her baby?

If a pregnant woman has gonorrhea, she may give the infection to her baby as the baby passes through the birth canal during delivery. This can cause serious health problems for the baby. Treating gonorrhea as soon as it is detected in pregnant women will make these health outcomes less likely. Pregnant women should consult a health care provider for appropriate examination, testing, and treatment, as necessary.

Who should be tested for gonorrhea?

Any sexually active person can be infected with gonorrhea. Anyone with genital symptoms such as discharge, burning during urination, unusual sores, or rash should stop having sex and see a health care provider immediately.

Also, anyone with an oral, anal, or vaginal sex partner who has been recently diagnosed with an STD should see a health care provider for evaluation.

Some people should be tested for gonorrhea even if they do not have symptoms or know of a sex partner who has gonorrhea. Anyone who is sexually active should discuss his or her risk factors with a health care provider and ask whether he or she should be tested for gonorrhea or other STDs.

People who have gonorrhea should also be tested for other STDs.

How is gonorrhea diagnosed?

Most of the time, a urine test can be used to test for gonorrhea. However, if a person has had oral and/or anal sex, swabs may be used to collect samples from the throat and/or rectum. In some cases, a swab may be used to collect a sample from a man's urethra (urine canal) or a woman's cervix (opening to the womb).

Find an STD testing facility near you

What is the treatment for gonorrhea?

Gonorrhea can be cured with the right treatment. It is important to take all of the medication prescribed to cure gonorrhea. Medication for gonorrhea should not be shared with anyone. Although medication will stop the infection, it will not repair any permanent damage done by the disease. Drug-resistant strains of gonorrhea are increasing, and successful treatment of gonorrhea is becoming more difficult. If a person's symptoms continue for more than a few days after receiving treatment, he or she should return to a health care provider to be reevaluated.

What about partners?

If a person has been diagnosed and treated for gonorrhea, he or she should tell all recent anal, vaginal, or oral sex partners so they can see a health care provider and be treated. This will reduce the risk that the sex partners will develop serious complications from gonorrhea and will also reduce the person's risk of becoming re-infected. A person with gonorrhea and all of his or her sex partners must avoid having sex until they have completed their treatment for gonorrhea and until they no longer have symptoms. For tips on talking to partners about sex and STD testing, visit www.gytnow.org/talking-to-your-partner/.

How can gonorrhea be prevented?

Latex condoms, when used consistently and correctly, can reduce the risk of getting or giving gonorrhea. The most certain way to avoid gonorrhea is to not have sex or to be in a long-term, mutually monogamous relationship with a partner who has been tested and is known to be uninfected.

“The highest reported rates of infection are among sexually active teenagers, young adults, and African Americans.”



Where can I get more information?

Division of STD Prevention (DSTDP)
Centers for Disease Control and Prevention
www.cdc.gov/std

CDC-INFO Contact Center
1-800-CDC-INFO (1-800-232-4636)
Email: cdcinfo@cdc.gov

Genital HPV Infection - Fact Sheet



What is genital HPV infection?

Genital human papillomavirus (also called HPV) is the most common sexually transmitted infection (STI). There are more than 40 types of HPV that can infect the genital areas of males and females. These HPV types can also infect the mouth and throat.

HPV can cause serious health problems, including genital warts and certain cancers. There is no certain way to tell who will develop health problems from HPV and who will not. In most cases HPV goes away by itself before it causes any health problems, and most people who become infected with HPV do not even know they have it.

HPV is not the same as herpes or HIV (the virus that causes AIDS). Both viruses can be passed on during sex, but they have different symptoms and cause different health problems.

Who is at risk for HPV?

Anyone who is having (or has ever had) sex can get HPV. HPV is so common that nearly all sexually-active men and women get it at some point in their lives. This is true even for people who only have sex with one person in their lifetime.

How do people get HPV?

HPV is passed on through genital contact, most often during vaginal and anal sex. HPV may also be passed on during oral sex and genital-to-genital contact. HPV can be passed on between straight and same-sex partners—even when the infected person has no signs or symptoms.

Most infected persons do not realize they are infected, or that they are passing HPV on to a sex partner. A person can still have HPV, even if years have passed since he or she has had sexual contact with an infected person. It is also possible to get more than one type of HPV.

In rare circumstances, a pregnant woman with genital HPV can pass the HPV on to her baby during delivery.

What are the potential health problems caused by HPV?

Most people with HPV never develop symptoms or health problems. Most HPV infections (90%) go away by themselves within two years. But, sometimes, HPV infections will persist and can cause a variety of serious health problems. Health problems that can be caused by HPV include

- Genital warts (warts on the genital areas);
- Recurrent respiratory papillomatosis (RRP), a rare condition in which warts grow in the throat;
- Cervical cancer, cancer on a woman's cervix; and
- Other, less common, but serious cancers, including genital cancers (cancer of the vulva, vagina, penis, or anus), and a type of head and neck cancer called oropharyngeal cancer (cancer in the back of throat, including the base of the tongue and tonsils).

All cases of genital warts and RRP, and nearly all cases of cervical cancer, are caused by HPV. A subset of cancers of the vagina, vulva, anus, penis, and oropharynx, are caused by HPV.

The types of HPV that can cause genital warts are not the same as the types of HPV that can cause cancers.

Signs and symptoms of health problems caused by HPV:

Genital warts usually appear as a small bump or group of bumps in the genital area. They can be small or large, raised or flat, or shaped like a cauliflower. Healthcare providers can usually diagnose warts by looking at the genital area. Warts can appear within weeks or months after sexual contact with an infected partner—even if the infected partner has no signs of genital warts. If left untreated, genital warts might go away, remain unchanged, or increase in size or number. The types of HPV that can cause genital warts are not the same as the types of HPV that can cause cancers.

Cervical cancer usually does not cause symptoms until it is quite advanced. For this reason, it is important for women to get regular screening for cervical cancer. Screening tests can find early signs of disease so that problems can be treated early, before they ever turn into cancer.

Other cancers caused by HPV might not have signs or symptoms until they are advanced and hard to treat. Other HPV-associated cancers include some cancers of the vulva, vagina, penis, anus, and oropharynx.

RRP is a condition in which warts grow in the throat. RRP can occur in children (juvenile-onset) and adults (adult-onset). These growths can sometimes block the airway, causing a hoarse voice or trouble breathing.

How does HPV lead to health problems?

In most cases the virus goes away and it does not lead to any health problems. However, when the virus persists, or does not go away, HPV can cause normal cells to become abnormal and, most of the time you cannot see or feel these cell changes.

- Warts can appear within months after getting HPV.
- Cancer often takes years—even decades—to develop after a person gets HPV.

There is no certain way to know which people infected with HPV will go on to develop cancer or other health problems. However, persons with weak immune systems (including persons with HIV) may be less able to fight off HPV and more likely to develop health problems from it.

How common are HPV and health problems caused by HPV?

HPV (the virus): Approximately 79 million Americans are currently infected with HPV. About 14 million people become newly infected each year. HPV is so common that nearly all sexually-active men and women will get at least one type of HPV at some point in their lives.

Genital warts: About 360,000 persons in the U.S. get genital warts each year.

Cervical cancer: About 12,000 women in the U.S. get cervical cancer each year.

Other cancers that can be caused by HPV, including some vaginal, vulvar, penile, anal, and oropharyngeal cancers: Each year in the U.S., HPV is thought to cause an estimated

– 2,100 vulvar cancers,	– 1,500 anal cancers in men,
– 500 vaginal cancers,	– 1,700 oropharyngeal cancers in women,*
– 600 penile cancers,	and
– 2,800 anal cancers in women,	– 6,700 oropharyngeal cancers in men.*

***Note:** Other factors, notably tobacco and alcohol use, may also play a role with HPV to cause these cancers. About 21,000 of these cancers are potentially preventable by HPV vaccines.

Recurrent respiratory papillomatosis (RRP) is very rare. It is estimated that about 820 children get juvenile-onset RRP every year in the U.S.

What is the difference between HPV and HIV?

HPV is a different virus than HIV, and causes different health problems. HPV does not live in the blood cells, but rather lives on the skin. Also, whereas HIV can lead to AIDS, genital HPV can lead to genital warts and certain types of cancer. However, persons with HIV are more likely to get HPV and to develop health problems from HPV. This is especially true for anal cancer.

Does HPV affect a pregnant woman and her baby?

Women who are pregnant can get infected with HPV. Usually these infections do not cause any problems. But sometimes

- HPV leads to genital warts, which can grow during pregnancy. Women with genital warts during the late stages of pregnancy are more likely to have children with warts in the throat, a condition called recurrent respiratory papillomatosis; however, this is a very rare condition.
- Pregnant women can develop cervical cell changes due to HPV. These changes can be detected through routine cervical cancer screening. Women should get routine cervical cancer screening, even during pregnancy.

Is there a test for HPV?

HPV tests are available to help screen women aged 30 years and older for cervical cancer. These HPV tests are not recommended to screen men, adolescents, or women under the age of 30 years. There is no general HPV test for men or women to check one's overall "HPV status." Also, there is not an approved HPV test to find HPV in the mouth or throat.

How can HPV be prevented?

There are several ways that people can lower their chances of getting HPV:

- HPV vaccines are recommended for 11- or 12-year-old boys and girls. HPV vaccines are safe and effective, and can protect males and females against some of the most common types of HPV that can lead to disease and cancer. HPV vaccines are given in three shots over six months; it is important to get all three doses to get the best protection. Boys and girls at ages 11 or 12 are most likely to have the best protection provided by HPV vaccines, and their immune response to vaccine is better than older women and men.
 - **Girls and women:** Two vaccines (Cervarix and Gardasil) are available to protect females against the types of HPV that cause most cervical cancers. One of these vaccines (Gardasil) also protects against most genital warts, and has been shown to protect against anal, vaginal, and vulvar cancers. Either vaccine is recommended for 11- and 12-year-old girls, and for females 13 through 26 years of age who did not get any or all of the shots when they were younger. These vaccines can also be given to girls beginning at 9 years of age.
 - **Boys and men:** One vaccine (Gardasil) is available to protect males against most genital warts and anal cancers. Gardasil is recommended for 11- and 12-year-old boys, and for males 13 through 21 years of age who did not get any or all of the shots when they were younger. Gay, bisexual, and other men who have sex with men should receive the vaccine through age 26 years. Males 22–26 years of age may also get the vaccine.
- For those who choose to be sexually active, condoms may lower the risk of HPV. Condoms may also lower the risk of developing HPV-related diseases, such as genital warts and cervical cancer. To be most effective, condoms should be used with every sex act, from start to finish. HPV can infect areas that are not covered by a condom – so condoms may not fully protect against HPV.
- People can also lower their chances of getting HPV by being in a faithful relationship with one partner; limiting their number of sex partners; and choosing a partner who has had no or few prior sex partners. But even people with only one lifetime sex partner can get HPV, and it may not be possible to determine if a person who has been sexually active in the past is currently infected. Because HPV is so common, and almost every sexually-active person will get HPV at some time in their lives, it is important to protect against the possible health effects of HPV.

Can people prevent health problems caused by HPV?

Yes, there are different prevention strategies for different health problems caused by HPV. HPV vaccines can prevent many diseases and cancers caused by HPV. In addition to vaccination, there are other ways to lower the risk of health problems caused by HPV.

A person can lower their risk of

- Cervical cancer by getting routine screening if they are a woman aged 21–65 years (and following up on any abnormal results);
- Oropharyngeal cancers by avoiding tobacco and limiting alcohol intake; and
- Genital warts by using condoms all the time and the right way.

Is there a treatment for HPV or health problems caused by HPV?

There is no treatment for the virus itself, but there are treatments for the health problems that HPV can cause:

- **Genital warts** can be removed with treatments applied by the provider or the person himself/herself. No one treatment is better than another. Some people choose not to treat warts, but to see if they disappear on their own. If left untreated, genital warts may go away, stay the same, or grow in size or number.
- **Cervical cancer** is most treatable when it is diagnosed and treated early. Women who get routine Pap tests and follow up as needed can identify problems before cancer develops. Prevention is always better than treatment. For more information visit www.cancer.org.
- **Other HPV-related cancers** are also more treatable when diagnosed and treated early. For more information visit www.cancer.org.
- **Recurrent respiratory papillomatosis (RRP)** can be treated with surgery or medicines. Curing RRP can sometimes require many treatments or surgeries over a period of years.



Where can I get more information?

STD information

<http://www.cdc.gov/std/>

HPV Information

<http://www.cdc.gov/hpv/>

HPV Vaccination

<http://www.cdc.gov/vaccines/vpd-vac/hpv/>

Cancer Information

<http://www.cdc.gov/cancer/>

Cervical Cancer Screening

<http://www.cdc.gov/cancer/cervical/basicinfo/screening.htm>

CDC's National Breast and Cervical Cancer Early Detection Program

<http://www.cdc.gov/cancer/nbccedp/>

CDC-INFO Contact Center

1-800-CDC-INFO (1-800-232-4636)

TTY: (888) 232-6348

CDC National Prevention Information Network (NPIN)

<http://www.cdcnpin.org/scripts/index.asp>

P.O. Box 6003

Rockville, MD 20849-6003

1-800-458-5231

1-888-282-7681 Fax

1-800-243-7012 TTY

E-mail: info@cdcnpin.org

National HPV and Cervical Cancer Prevention Resource Center American Sexual Health Association (ASHA)

<http://www.ashastd.org/std-sti/hpv.html>

P. O. Box 13827

Research Triangle Park, NC 27709-3827

1-800-783-9877

Trichomoniasis - CDC Fact Sheet



What is trichomoniasis?

Trichomoniasis (or “trich”) is a very common sexually transmitted disease (STD) that is caused by infection with a protozoan parasite called *Trichomonas vaginalis*. Although symptoms of the disease vary, most women and men who have the parasite cannot tell they are infected.



How common is trichomoniasis?

Trichomoniasis is considered the most common curable STD. In the United States, an estimated 3.7 million people have the infection, but only about 30% develop any symptoms of trichomoniasis. Infection is more common in women than in men, and older women are more likely than younger women to have been infected.

How do people get trichomoniasis?

The parasite is passed from an infected person to an uninfected person during sex. In women, the most commonly infected part of the body is the lower genital tract (vulva, vagina, or urethra), and in men, the most commonly infected body part is the inside of the penis (urethra). During sex, the parasite is usually transmitted from a penis to a vagina, or from a vagina to a penis, but it can also be passed from a vagina to another vagina. It is not common for the parasite to infect other body parts, like the hands, mouth, or anus. It is unclear why some people with the infection get symptoms while others do not, but it probably depends on factors like the person’s age and overall health. Infected people without symptoms can still pass the infection on to others.

What are the signs and symptoms of trichomoniasis?

About 70% of infected people do not have any signs or symptoms. When trichomoniasis does cause symptoms, they can range from mild irritation to severe inflammation. Some people with symptoms get them within 5 to 28 days after being infected, but others do not develop symptoms until much later. Symptoms can come and go.

Men with trichomoniasis may feel itching or irritation inside the penis, burning after urination or ejaculation, or some discharge from the penis.

Women with trichomoniasis may notice itching, burning, redness or soreness of the genitals, discomfort with urination, or a thin discharge with an unusual smell that can be clear, white, yellowish, or greenish.

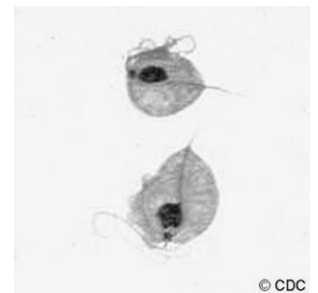
Having trichomoniasis can make it feel unpleasant to have sex. Without treatment, the infection can last for months or even years.

What are the complications of trichomoniasis?

Trichomoniasis can increase the risk of getting or spreading other sexually transmitted infections. For example, trichomoniasis can cause genital inflammation that makes it easier to get infected with the HIV virus, or to pass the HIV virus on to a sex partner.

How does trichomoniasis affect a pregnant woman and her baby?

Pregnant women with trichomoniasis are more likely to have their babies too early (preterm delivery). Also, babies born to infected mothers are more likely to have an officially low birth weight (less than 5.5 pounds).



Two *Trichomonas vaginalis* parasites, magnified (seen under a microscope)

How is trichomoniasis diagnosed?

It is not possible to diagnose trichomoniasis based on symptoms alone. For both men and women, your primary care doctor or another trusted health care provider must do a check and a laboratory test to diagnose trichomoniasis.

What is the treatment for trichomoniasis?

Trichomoniasis can be cured with a single dose of prescription antibiotic medication (either metronidazole or tinidazole), pills which can be taken by mouth. It is okay for pregnant women to take this medication. Some people who drink alcohol within 24 hours after taking this kind of antibiotic can have uncomfortable side effects.

People who have been treated for trichomoniasis can get it again. About 1 in 5 people get infected again within 3 months after treatment. To avoid getting reinfected, make sure that all of your sex partners get treated too, and wait to have sex again until all of your symptoms go away (about a week). Get checked again if your symptoms come back.

How can trichomoniasis be prevented?

Using latex condoms correctly every time you have sex will help reduce the risk of getting or spreading trichomoniasis. However, condoms don't cover everything, and it is possible to get or spread this infection even when using a condom.

The only sure way to prevent sexually transmitted infections is to avoid having sex entirely. Another approach is to talk about these kinds of infections before you have sex with a new partner, so that you can make informed choices about the level of risk you are comfortable taking with your sex life.

If you or someone you know has questions about trichomoniasis or any other STD, especially with symptoms like unusual discharge, burning during urination, or a sore in the genital area, check in with a health care provider and get some answers.

Where can I get more information?

Division of STD Prevention (DSTDP)
Centers for Disease Control and Prevention
www.cdc.gov/std

CDC-INFO Contact Center
1-800-CDC-INFO (1-800-232-4636)
Email: cdcinfo@cdc.gov



Resources

CDC National Prevention Information (NPIN)
P.O. Box 6003
Rockville, MD 20849-6003
1-800-458-5231
1-888-282-7681 Fax
1-800-243-7012 TTY
E-mail: info@cdcnpin.org
www.cdcnpin.org

American Sexual Health Association (ASHA)
P. O. Box 13827
Research Triangle Park, NC 27709-3827
1-800-783-9877
www.ashastd.org

HEPATITIS B and Sexual Health



Can Hepatitis B be spread through sex?

Yes. Hepatitis B is 50–100 times more infectious than HIV and easily transmitted through sexual activity. In fact, sexual contact is the most common way Hepatitis B is spread in the United States.

If you are sexually active, talk to your health professional about your risk for STDs and HIV and get vaccinated against Hepatitis B.

What is hepatitis?

“Hepatitis” means inflammation of the liver. The liver is a vital organ that processes nutrients, filters the blood, and fights infections. When the liver is inflamed or damaged, its function can be affected.

Hepatitis is most often caused by a virus. In the United States, the most common types of viral hepatitis are Hepatitis A, Hepatitis B, and Hepatitis C. Heavy alcohol use, toxins, some medications, and certain medical conditions can also cause hepatitis.

What is Hepatitis B?

Hepatitis B is a contagious liver disease that results from infection with the Hepatitis B virus. When first infected, a person can develop an “acute” infection, which can range in severity from a very mild illness with few or no symptoms to a serious condition requiring hospitalization. **Acute** Hepatitis B refers to the first 6 months after someone is exposed to the Hepatitis B virus. Some people are able to fight the infection and clear the virus. For others, the infection remains and leads to a “chronic,” or lifelong, illness. **Chronic** Hepatitis B refers to the illness that occurs when the Hepatitis B virus remains in a person’s body. Over time, the infection can cause serious health problems.

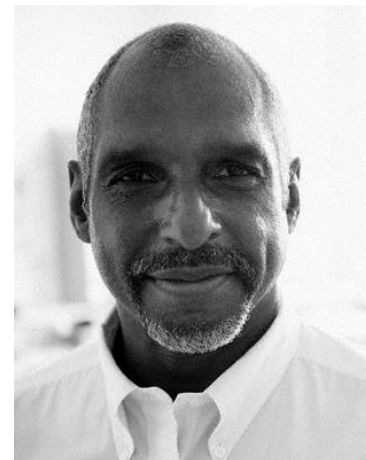
The best way to prevent Hepatitis B is to get vaccinated.

How serious is Hepatitis B?

Over time, approximately 15%–25% of people with chronic Hepatitis B develop serious liver problems, including liver damage, cirrhosis, liver failure, and even liver cancer. Every year, approximately 3,000 people in the United States and more than 600,000 people worldwide die from Hepatitis B-related liver disease.

How common is Hepatitis B?

In the United States, an estimated 40,000 new infections occur each year. About 1.2 million people are living with chronic Hepatitis B, and many do not know they are infected.



How is Hepatitis B spread?

Hepatitis B is usually spread when blood, semen, or other body fluids from a person infected with the Hepatitis B virus enter the body of someone who is not infected. This can happen through sexual contact with an infected person; sharing needles, syringes, or other injection drug equipment; or from an infected mother to her baby at birth.



Who should be vaccinated against Hepatitis B?

The vaccine is safe and effective and recommended for sexually active adults, especially:

- People with multiple sex partners
- Anyone with a sexually transmitted disease
- Men who have sexual encounters with other men
- Anyone having sex with an infected partner

What are the symptoms of Hepatitis B?

Many people with Hepatitis B do not have symptoms and do not know they are infected. Even though a person has no symptoms, the virus can still be detected in the blood.

If symptoms occur with acute infection, they usually appear within 3 months of exposure and can last anywhere from 2–12 weeks. Symptoms of chronic Hepatitis B can take up to 30 years to develop. Damage to the liver can silently occur during this time. When symptoms do appear, they often are a sign of advanced liver disease. Symptoms for both acute and chronic Hepatitis B can include:

- Fever
- Vomiting
- Dark urine
- Fatigue
- Abdominal pain
- Joint pain
- Loss of appetite
- Grey-colored stools
- Jaundice
- Nausea

How is Hepatitis B diagnosed and treated?

Hepatitis B is diagnosed with specific blood tests that are not part of blood work typically done during regular physical exams. For acute Hepatitis B, doctors usually recommend rest, adequate nutrition, fluids, and close medical monitoring. Some people may need to be hospitalized. Those living with chronic Hepatitis B are evaluated for liver problems and monitored on a regular basis. Even though a person may not have symptoms or feel sick, damage to the liver can still occur. Several new treatments are available that can significantly improve health and delay or reverse the effects of liver disease.

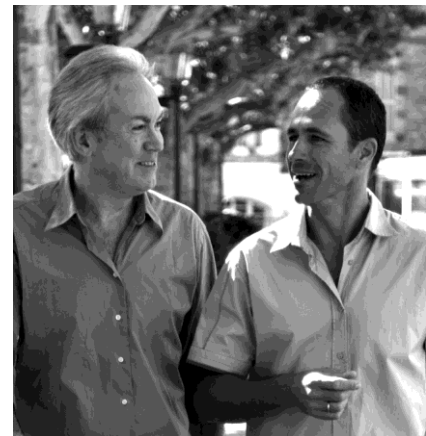
Can Hepatitis B be prevented with a vaccine?

Yes. The best way to prevent Hepatitis B is by getting vaccinated. For adults, the vaccine is usually given as a series of 3 shots over a period of 6 months. The entire series of shots is needed for long-term protection. Booster doses are not currently recommended.

There is also a combination vaccine that protects against both Hepatitis A and Hepatitis B. People should talk to their health professional about which vaccine is best for them.

For more information

Talk to your health professional, call your health department, or visit www.cdc.gov/hepatitis.



DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Disease Control and Prevention

Division of Viral Hepatitis



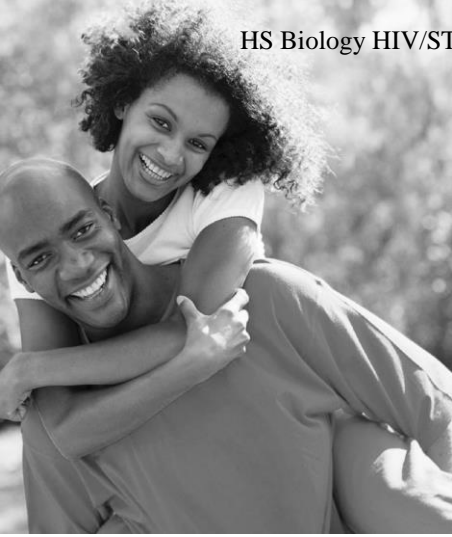
SAFER • HEALTHIER • PEOPLE

Condom Show PowerPoint Extended Anticipatory Guide

	Before		After PowerPoint		
	Opinion		Findings		
	Agree	Disagree	Agree	Disagree	Evidence: Explain using your own words
1. In the 1500's the purpose of the condom was to protect a man from getting syphilis.					
2. In the 1920's, condoms were sold in vending machines.					
3. Men purchase 40-70% of condoms.					
4. A condom can hold about 2 quarts of milk.					
5. Condoms have no expiration date.					
6. A condom that has been exposed to heat is likely to break.					
7. You should completely unroll a condom before putting it on the penis.					
8. Vaseline is a safe lubricant to use with a condom.					
9. Used condoms should be flushed down the toilet.					
10. It is a good idea to carry a condom in your wallet so you always have one with you.					

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Condom Fact Sheet In Brief



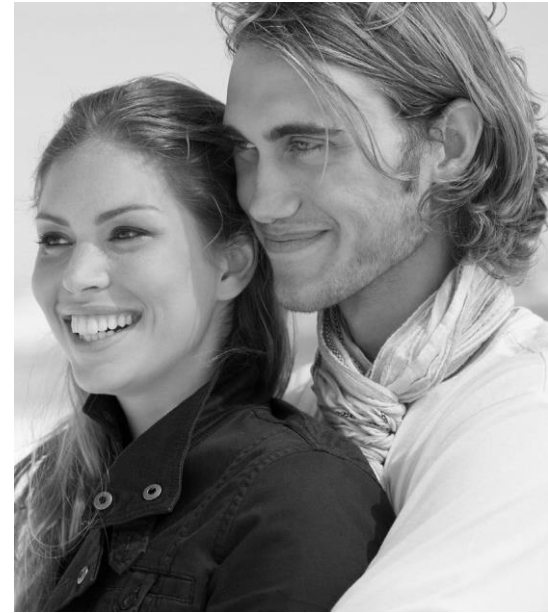
Consistent and correct use of the male latex condom reduces the risk of sexually transmitted disease (STD) and human immunodeficiency virus (HIV) transmission. However, condom use cannot provide absolute protection against any STD. The most reliable ways to avoid transmission of STDs are to abstain from sexual activity, or to be in a long-term mutually monogamous relationship with an uninfected partner. However, many infected persons may be unaware of their infection because STDs often are asymptomatic and unrecognized.

Condom effectiveness for STD and HIV prevention has been demonstrated by both laboratory and epidemiologic studies. Evidence of condom effectiveness is also based on theoretical and empirical data regarding the transmission of different STDs, the physical properties of condoms, and the anatomic coverage or protection provided by condoms.

Laboratory studies have shown that latex condoms provide an effective barrier against even the smallest STD pathogens.

Epidemiologic studies that compare rates of HIV infection between condom users and nonusers who have HIV-infected sex partners demonstrate that consistent condom use is highly effective in preventing transmission of HIV. Similarly, epidemiologic studies have shown that condom use reduces the risk of many other STDs. However, the exact magnitude of protection has been difficult to quantify because of numerous methodological challenges inherent in studying private behaviors that cannot be directly observed or measured.

Theoretical and empirical basis for protection: Condoms can be expected to provide different levels of protection for various STDs, depending on differences in how the diseases or infections are transmitted. Male condoms may not cover all infected areas or areas that could become infected. Thus, they are likely to provide greater protection against STDs that are transmitted only by genital fluids (STDs such as gonorrhea, chlamydia, trichomoniasis, and HIV infection) than against infections that are transmitted primarily by skin-to-skin contact, which may or may not infect areas covered by a condom (STDs such as genital herpes, human papillomavirus [HPV] infection, syphilis, and chancroid).



HIV Infection

Consistent and correct use of latex condoms is highly effective in preventing sexual transmission of HIV, the virus that causes AIDS.

Other STDs and Associated Conditions

Consistent and correct use of latex condoms reduces the risk for many STDs that are transmitted by genital fluids (STDs such as chlamydia, gonorrhea, and trichomoniasis).

Consistent and correct use of latex condoms reduces the risk for genital ulcer diseases, such as genital herpes, syphilis, and chancroid, only when the infected area or site of potential exposure is protected.

Consistent and correct use of latex condoms may reduce the risk for genital human papillomavirus (HPV) infection and HPV-associated diseases (e.g., genital warts and cervical cancer).



Consistent and Correct Condom Use

4.2

To achieve maximum protection by using condoms, they must be used consistently and correctly.

The failure of condoms to protect against STD/HIV transmission usually results from inconsistent or incorrect use, rather than product failure.

- **Inconsistent or nonuse** can lead to STD acquisition because transmission can occur with a single sex act with an infected partner.
- **Incorrect use** diminishes the protective effect of condoms by leading to condom breakage, slippage, or leakage. Incorrect use more commonly entails a failure to use condoms throughout the entire sex act, from start (of sexual contact) to finish (after ejaculation).



How to Use a Condom Consistently and Correctly:



- Use a new condom for every act of vaginal, anal and oral sex—throughout the entire sex act (from start to finish). Before any genital contact, put the condom on the tip of the erect penis with the rolled side out.
- If the condom does not have a reservoir tip, pinch the tip enough to leave a half-inch space for semen to collect. Holding the tip, unroll the condom all the way to the base of the erect penis.
- After ejaculation and before the penis gets soft, grip the rim of the condom and carefully withdraw. Then gently pull the condom off the penis, making sure that semen doesn't spill out.
- Wrap the condom in a tissue and throw it in the trash where others won't handle it.
- If you feel the condom break at any point during sexual activity, stop immediately, withdraw, remove the broken condom, and put on a new condom.
- Ensure that adequate lubrication is used during vaginal and anal sex, which might require water-based lubricants. Oil-based lubricants (e.g., petroleum jelly, shortening, mineral oil, massage oils, body lotions, and cooking oil) should not be used because they can weaken latex, causing breakage.



Sources are available at: www.cdc.gov/condomeffectiveness/brief.html

Sandra’s Boyfriend wants to have Sex

You and your elbow partner have a friend named Sandra. You have all gone to school together since Kindergarten. You and your elbow partner are concerned about the following situation: This year, Sandra has a boyfriend named Brandon. Brandon appears to care for Sandra and wants to meet with her on Saturday night to have sex. Sandra is going to meet with you and your elbow partner after school for some advice. After viewing the PowerPoint slide presentation and reading the CDC Condom Fact Sheet In Brief and the prior information you’ve learned about STDs. In your own words, what are 5 pieces of advice you can give to Sandra?

- 1. _____

- 2. _____

- 3. _____

- 4. _____

- 5. _____

Remember to tell Sandra, you really care about her.

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Media Analysis Sheet

- 1. Work with your partner to analyze the advertisement you selected.**
- 2. Write your analysis in the spaces provided below.**
- 3. You will be sharing your information with the other two students in your base group.**

	You and your partner’s Advertisement	Advertisement from the other pair in your Base Group
1. What product is being advertised?		
2. What specific information about the product is provided?		
3. Describe the people and/or images used in the advertisement.		
4. What does the appearance of the people and/or images imply (suggest) about the product?		
5. What is the advertiser trying to get you to do?		
6. Create your own caption for your advertisement.		

Youth Risk Behaviors: National Survey Results from Healthy Kids Survey, 2009

Behavior	% Who do	% who don't
Fighting ²	31.5	68.5
Consume 5+ drinks at once ¹	24.2	75.8
Used Marijuana	20.8	79.2
Ever had sex ³	46.0	54.0
Now use condoms ⁴	61.1	39.9
1-during the last 30 days 2-during last 12 months	3-ever 4- of those who have sex	

Record one thing you notice after looking at the chart above for one minute:

Our world of television, movies, music, and advertising is heavily reliant on the use of sex to attract the attention of teenagers and young adults. Why do you think the media uses sex to sell so many different kinds of products, even when reliable statistics tell us that the majority of teenagers are not having sex?

Quick Write: My Thoughts

With your partner, construct a 3-4 sentence statement expressing your opinion about the use of sex in the media.

Student Responses to Sample Pressure Lines

Pressure Line A: Come with me to this great party. There are not going to be any adults and one of the guys is bringing a couple of six packs.

Response Line A:

Pressure Line B: If you were really my friend, you would go with me.

Response Line B:

Pressure Line C: I won't be your friend anymore.

Response Line C:

Pressure Line D: You will be totally safe with me. I'll watch out for you.

Response Line D:

Pressure Line E: No one will know.

Response Line E:

Pressure Line F: Come on, don't be scared.

Response Line F:

Pressure Line G: Come on, just this once!

Response Line G:

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Assertiveness Skills Score Sheet

Name of Speaker _____ Name of Grader _____

Steps in Assertiveness: <i>Did they...</i>	How well they did			
	no	poor	fair	good
Make eye contact?	1	2	3	4
Use the person's name?	1	2	3	4
State their limits or expectations?	1	2	3	4
Repeat themselves?	1	2	3	4
Suggest an alternate activity?	1	2	3	4
End the conversation if necessary?	1	2	3	4
Total Score				
Comments and Recommendations:				

Assertiveness Skills Score Sheet

Steps in Assertiveness: <i>Did they...</i>	How well they did			
	no	poor	fair	good
Make eye contact?	1	2	3	4
Use the person's name?	1	2	3	4
State their limits or expectations?	1	2	3	4
Repeat themselves?	1	2	3	4
Suggest an alternate activity?	1	2	3	4
End the conversation if necessary?	1	2	3	4
Total Score				
Comments and Recommendations:				

Assertiveness Skills Score Sheet

Steps in Assertiveness: <i>Did they...</i>	How well they did			
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Make eye contact?	1	2	3	4
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State their limits or expectations?	1	2	3	4
Repeat themselves?	1	2	3	4
Suggest an alternate activity?	1	2	3	4
End the conversation if necessary?	1	2	3	4
Total Score				
Comments and Recommendations:				

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Base Group Member 1:

Before you go....

- You may call your local public health department for the location and business hours of a nearby clinic.
- You may or may not need to make an appointment (check with the clinic).
- National Prevention Information Network number to find a clinic near you:
1-800-458-5231



Base Group Member 3:

Before you leave...

- At a test site you may be given the results immediately, or you may be given a slip of paper with your code number on it. (You will need this slip to obtain your results, so don't lose it.)
- They may ask you to return in one or two weeks for the results of your antibody test. During that time, they will also ask you to refrain from any behaviors that might infect you with HIV/STDs, such as sharing injection drug equipment or having unprotected sex.



Base Group Member 4:

If you need to return.....

- Report back to the front desk, and show them your code number. Someone will call you into the private counseling area.
- You will be told the result of HIV/STD test.
- **If the HIV antibody test results are negative**, this may mean that (1) you do not have HIV, or (2) you are still in the "window period" of HIV infection when antibodies are not yet detectable.



Base Group Member 2:

When you arrive....



- Upon arrival at the clinic, you will notice that there are many people there for a variety of reasons. No one will know why you are at the clinic.
- Check in at the counter, and tell them you are there for an HIV/STD Test. They will probably give you a number, and ask you to be seated.
- After waiting a while, someone will call you, and take you to a private room.
- A counselor will talk to you about why you think you are at risk for HIV/STDs, and give you information on protecting yourself from HIV/STDs. If you decide to proceed with the testing, the counselor may draw a small amount of blood from your arm using a sterile needle and syringe, request a urine sample, make a visual examination of your genitals or take a sample of cells from the lining of your mouth.

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Jigsaw Matrix for Visiting STD/HIV Testing Clinic/Center

	Before you go:	When you arrive:	Before you leave:	If you need to return:
What to expect when going to a clinic to be tested for HIV or STD:				

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Final Assessment Instructions: Brochure or Flyer

Overview: You will make either a brochure or a flyer.

Target Audience: 12-16 year old high school freshman and sophomores

Details: What do you want your brochure or flyer to be about? You can choose any of the topics we have learned about in this unit. Ideas include:

- Compassion for people with HIV
- Effects of HIV on the body
- STD's
- Preventing someone from getting an STD
- Peer and media pressure to engage in high risk behavior
- Community resources

Double check with your teacher about your selected topic before beginning



Brochure: You can make a brochure by hand by folding a piece of paper into 3 even thirds. The front panel would have the title. The other panels would contain organized information about the topic you chose. You can also make your brochure electronically, with google docs, or an app. Check the rubric to see what you need to have in your brochure.

CITE YOUR SOURCES!

Flyer: A flyer is a one sided page that communicates information to people in a visually appealing way. You could choose to make your flyer two sided if you are having trouble fitting all of your information on one page. You can make a flyer using paper, pen, pencil, markers, etc. You can also make your brochure with an app or word processing program. Check the rubric to see what you need to have in your brochure. **CITE YOUR SOURCES!**



Relevant Details

1. My topic is: _____
2. To appeal to 12-16 year olds, I should include _____

 and I should avoid _____

3. This is due _____

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How to get 100 points for your Public Service Announcement

1. You will be graded on how effective your public service announcement is.

You can earn up to 60 points.

Does your PSA:	Did not Attempt	Somewhat Effective	Effective	Very Effective
Create Awareness	0 points	5 points	10 points	15 points
Influence Attitudes and Behavior	0 points	5 points	10 points	15 points
Call young people to action	0 points	5 points	10 points	15 points
Grab the listeners attention	0 points	5 points	10 points	15 points

2. You will be graded on how effectively you can fit your message into a 20-30 second time frame.

You can earn up to 30 points.

9 seconds or less	0 points
10 seconds	5 points
11-19 seconds	15 points
20-30 seconds	30 points
31-40 seconds	15 points
41-45 seconds	5 points
46 seconds +	0 points

3. You can earn up to 10 points for being prepared, having animation in your voice, and enthusiastically presenting your PSA.

Advice 😊

- Choose your topic wisely—select something you feel strongly about.
- What about this topic is important for people to know?
- How can you communicate this information to people in a way that is interesting and memorable?
- Practice with a timer to make sure your PSA is between 20-30 seconds.
- Make sure your language is appropriate for the classroom and engaging.
- You will be sharing your PSA with your classmates. Your teacher will be timing you.

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Name _____ Period _____

4 Parts of the Final Assessment= 200 points

_____ 1. Personal Oath (20 points): I wrote a carefully considered oath to myself which I intend to keep in regards to protecting myself from HIV/STD's.

_____ 2. Lesson 1 and Final Assessment Extended Anticipatory Guide (up to 40 points possible)

For each of the 10 statements:

-Is the finding correct? (1 point)

-Is evidence cited for the finding? (up to 3 points)

_____ 3. Brochure or Flyer (up to 40 points possible)

-Is the information accurate? (up to 10 points)

-Is the information organized? (up to 10 points)

-Is the brochure or flyer complete? (up to 10 points)

-Is the brochure or flyer visually appealing and colorful? (up to 10 points)

_____ 4. 20 second Public Service Announcement (up to 100 points possible) See grading rubric.

- Please evaluate your own work using the information above.
- If you are not sure how many points you earned, give your best estimate.
- You will turn this completed paper in after you read your 20 -30 second Public Service Announcement to the class.
- Good Luck!

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HIV Affects Everyone

Risk for HIV

- not knowing the fact or personal risk
- having sex
- alcohol or drug use with sex
- sex with older partners who may be more likely to be infected
- injecting drugs
- no condoms
- not tested
- not treated

Where can I tell my friend to get tested for HIV/STDs?

Orange County Health Care Agency

1725 W. 17th Street
Santa Ana, CA 92706 (714)834-8787

AIDS Services Foundation

17982 Sky Park Circle, Ste. K
Irvine, CA 92614 (949)809-8775

APAIT Health Center

12900-A Garden Grove Blvd., Ste. 220
Garden Grove, CA 92843 (714)636-9115

Put your ZIP code in this web site and it will give you a list of places for HIV/STDs testing in your area:

<http://hivtest.cdc.gov>