

Sexually Transmitted Diseases:

> Facts you need to know





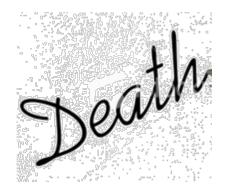
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#### FACTS About STDs

- STDs are one of the most common types of infections in the U.S. today
- You can get an STD the first time you have sex
- Some STDs have no cure







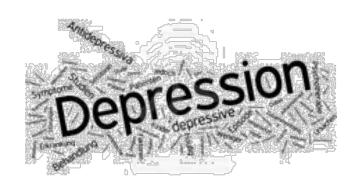
#### STDs can cause serious health problems:











## STDs can cause EMOTIONAL problems

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#### FACTS About STDs



- Teens are at greater risk of getting STDs
- It is easier to get HIV if you are already infected with another STD
- Many STDs can be transmitted to a baby during pregnancy or birth
- STDs cost billions of dollars



#### Most Common/Serious STDs

#### **VIRUS**

- Human Immunodeficiency Virus (HIV)
- Herpes Simplex Virus (HSV)
- Human Papillomavirus (HPV)

#### BACTERIA

- Gonorrhea
- Chlamydia
  - Syphilis

#### **PROTOZOA**

**Trichomonas** 

## STDs Caused by VIRUSES

### Human Immunodeficiency Virus (HIV)



#### HIV Infection/AIDS

- Virus that infects and attacks your immune system, specifically the CD4+ cells, causing AIDS
- Organism: Human Immunodeficiency Virus
- Location: blood, semen, vaginal fluid, and breast milk of those infected

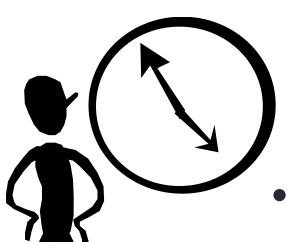


## What Is the Difference Between HIV and AIDS?

- HIV Infection
  - The virus is in the body
  - May not know it because you feel fine
  - Can give it to others during sex or IV drug use (sharing needles)
- AIDS
  - The virus has attacked the immune system and decreased the amount of CD4+ cells
  - Can become very sick with other infections and/or cancers
  - Can be fatal



## How Long Does It Take for HIV to Cause AIDS?



- Average of about 10 years after becoming infected with HIV
- Timeline varies greatly
- Intensive treatments slow down the virus but do not kill it



#### Kaposi's Sarcoma



A skin cancer commonly seen in AIDS patients



#### Is HIV/AIDS a Serious Problem?

#### **Worldwide Statistics - 2009**

- 2.6 million newly infected
- 33.3 million living with HIV
- 1.8 million deaths
- nearly 30 million have died



#### AIDS Diagnoses among Adolescents Aged 13–19 Years, by Sex, 1985–2010—United States and 6 U.S. Dependent Areas



Year of diagnosis

Note. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.





#### How is HIV Diagnosed?



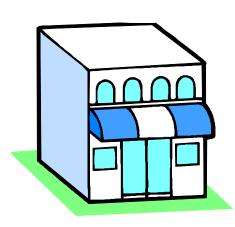
- Blood test
- Detects antibodies to HIV
- Measures amount of HIV

- Oral test
  - Detects antibodies to HIV





#### Where Can I Get Tested for HIV?



• Local health departments, private doctors, or home tests

- CDC Info can answer questions, 1-800-232-4636
  - It is CONFIDENTIAL!





#### Who Should Get Tested?

#### CDC recommends:

- Anyone who thinks they may have been exposed to an infected person through blood contact
- Annual testing for those at high-risk
  - IV drug abusers
  - multiple sexual partners



#### Treatment of HIV/AIDS

- Medications can slow down the virus, but currently cannot eliminate it from the body
- There is no vaccine for HIV/AIDS
- HIV/AIDS patients must take their medications exactly as directed, for life
- These medications have many side effects





#### HIV/AIDS: Summary

- Primarily spread through sexual activity and IV drug use
- Leads to serious infections, cancer(s), and even death
- Only abstinence is 100% effective



# Genital Herpes



#### Genital Herpes

- STD caused by a virus
- Organism: herpes simplex virus (HSV)
  - Type I (HSV-1)
    - Usually mouth/lips;
       also in genital area
  - Type 2 (HSV-2)
    - Usually genital area; also in the mouth
- Location: lives in the nerves in these areas



# Symptoms of Genital Herpes

- Painful blisters on or around the genitals or anus in some people
- Blisters break, leaving tender ulcers (sores) that may take two-to-four weeks to heal the first time they occur
- But---MOST people with herpes don't know it!!

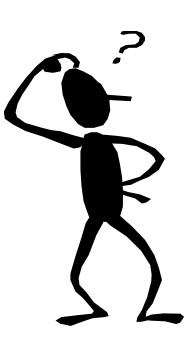


- Usually another outbreak of blisters/sores appears weeks or months after the first outbreak
- Almost always less severe and shorter than the first episode
- Many people don't realize that the sores that come and go on their genital area are caused by the herpes virus



# How Is Genital Herpes Spread?

- Skin-to-skin, usually through sexual activity
- Herpes can be present on skin in the genital area with or without sores/blisters
- Can get it from someone who does not have sores/blisters
- Most infected don't know it!!





#### Herpes Simplex Virus Type-2 (HSV-2)

- Usually lives in the genital area
- Most people who have herpes sores/blisters caused by HSV-2 will have them come back again and again
- HSV-2 is usually spread through genital sexual activity



# Herpes Simplex Virus Type-1 (HSV-1)

- HSV-1 commonly causes infection of the mouth and lips ("cold sores" or "fever blisters")
- Can get HSV-1 of the mouth by coming into contact with the saliva (spit) of an infected person (ex. kissing)
- HSV-1 in the mouth can be spread to the genitals



## Is Genital Herpes a Serious Problem?

- Can cause recurrent painful genital sores
- Frequently causes emotional distress
- Can be transmitted to a baby during pregnancy or birth
- If exposed to HIV, increased risk for acquiring HIV if you have genital herpes



#### Is Genital Herpes Common?

- One in six adolescents and adults are infected (positive blood test) with HSV-2
- Greater chance of having herpes if: multiple sex partners and sex before age 18
- Most people who are infected don't know it
- Virus can be spread even when there aren't any visible sores

MMWR April 23, 2010 (59)15.

Xu et al., JAMA, 2006;296:964-973.



## How is Genital Herpes Diagnosed?

- Physical exam of the genital area
- Culture of blisters/sores
- Blood test





#### Treatment for Genital Herpes

- Medications can:
  - Help the sores and blisters heal faster
  - Decrease number of outbreaks per year
- NO CURE!



## Can Genital Herpes Be Prevented?

#### Yes!

Condoms can reduce your risk of getting genital herpes if used correctly every single time you have sex. A condom only protects the area of the body that it covers. Areas the condom doesn't cover can become infected.

Abstinence is 100% effective

# Human Papillomavirus (HPV)

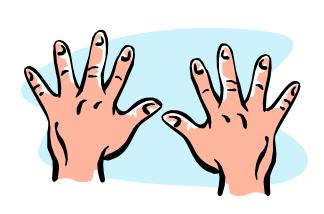


#### Symptoms of Genital HPV

- Usually no symptoms
- Most who have HPV don't know it
- Can cause:
  - genital warts
  - precancerous/cancerous cells on the genital area



#### Types of HPV



- There are over 100 types of HPV
- Some types occur only on genital areas and are spread by sexual activity
- Some types are on other body parts (i.e. hands, feet) and are <u>not</u> sexually transmitted



# How is Genital HPV Spread?

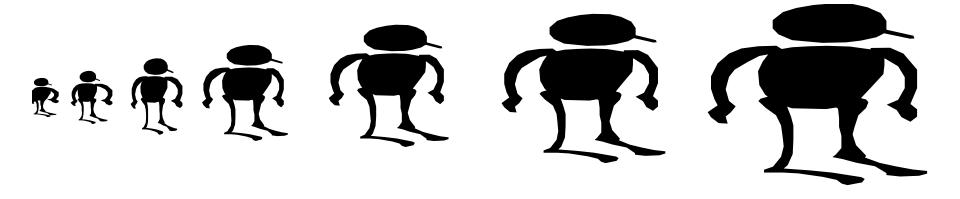
Sexual activity, skin-to-skin contact

 Usually get it from someone who does not have warts and does not know they are infected



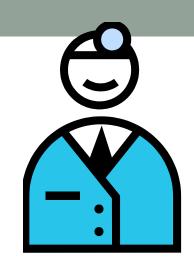
#### Is Genital HPV Common?

- 6,200,000 new cases per year in the U.S.
- 20,000,000 in U.S. currently infected
- 75% of sexually active men and women will be infected





# How is Genital HPV Diagnosed?



- Physical exam to look for warts, but most infected look normal
- Pap smear of cervix to look for pre-cancerous cells
- Biopsy (removal of a piece of tissue) of warts, cervix, or other genital areas to look for HPV induced changes



#### **Treatment of Genital HPV**

 Warts and precancerous cells are treated with chemicals, freezing, burning, laser, and surgical removal

 Cancer treated with surgery, radiation, and/or chemotherapy



## Is There a Cure for Genital HPV?

Most people will clear (get rid of) the virus

 Some people remain infected for years, possibly their entire life

 Treatments are available to manage the problems caused by HPV



#### **HPV Vaccines**

- Two vaccines available for use in females for prevention of certain types of HPV
- One of these is also approved for use in males for the prevention of genital warts and is now approved to prevent anal precancer and cancer in males and females.
- Vaccines most effective when received before you have sex



#### **HPV: Summary**

- Can cause warts, precancerous cells, and cancer
- Millions in the United States are infected
- Most infected look normal and don't know they have HPV
- Vaccines available that prevent some types of genital HPV

# STDs Caused by BACTERIA



# Gonorrhea & Chlamydia



#### Gonorrhea & Chlamydia

- STDs caused by bacteria
- Organisms
  - Neisseria gonorrhoeae
  - Chlamydia trachomatis
- Location: vagina and cervix in women and the urethra (urine canal) in women and men



# Symptoms of Gonorrhea & Chlamydia

- Many females have no symptoms
- Some females have a vaginal discharge and/or pelvic/abdominal pain
- Males may have pain with urinating and may have a discharge from the penis



# How are Gonorrhea & Chlamydia Spread?

- Contact with the infected secretions during sexual activity (vaginal, oral, or anal sex)
- Mother-to-child during childbirth



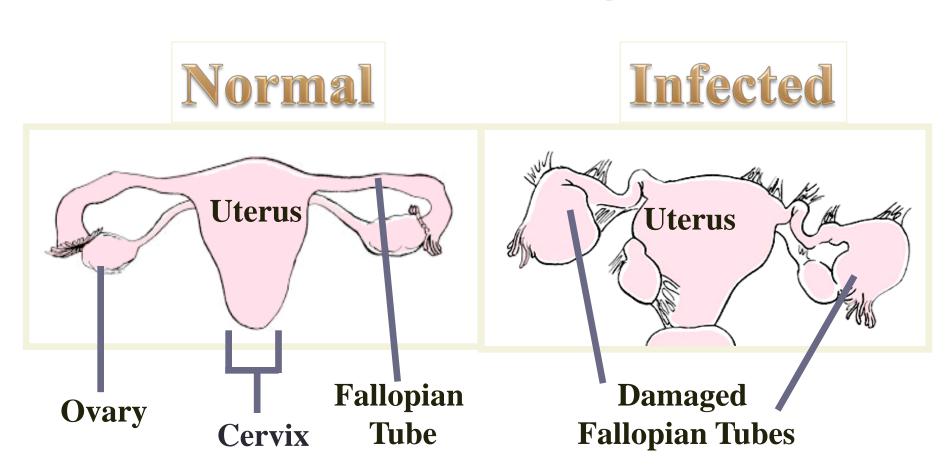


### Are Gonorrhea & Chlamydia Serious Problems?

- Can cause pelvic inflammatory disease (PID)
   a severe infection of the uterus, fallopian tubes, and ovaries
- PID can lead to:
  - infertility (can't get pregnant)
  - pregnancy in the fallopian tubes
  - pelvic pain
- Easier to get HIV if infected with gonorrhea &/or chlamydia



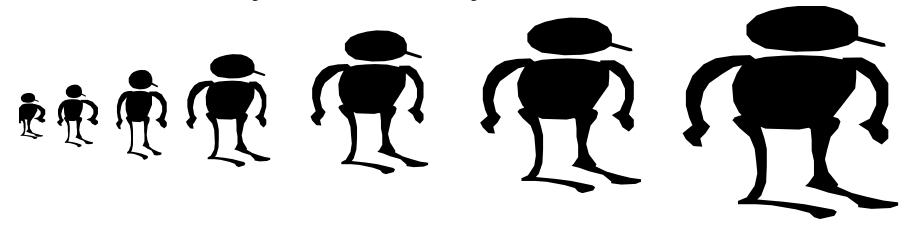
#### Pelvic Inflammatory Disease





### Are Gonorrhea & Chlamydia Common?

- •700,000 estimated new cases of gonorrhea each year in the U.S.
- 2,800,000 estimated new cases of chlamydia each year





# How are Gonorrhea & Chlamydia Diagnosed?

- Lab tests of the secretions from the infected area (cervix, urethra, rectum, throat)
- Urine specimen



# Treatment of Gonorrhea & Chlamydia

- Antibiotics by mouth or injection
- Sexual partners must also be treated
- If PID has developed, antibiotics cannot reverse the tissue damage caused by PID







### Can Gonorrhea & Chlamydia Be Prevented?

#### Yes!

Condoms can reduce but do not entirely eliminate the risk of gonorrhea or chlamydia

Abstinence is 100% effective



### Syphilis



#### Syphilis

- STD caused by a bacteria
- Organism: Treponema pallidum
- Location:
  - chancre (painless sore) usually on the genital area
  - rash on the hands/feet and other areas of the body

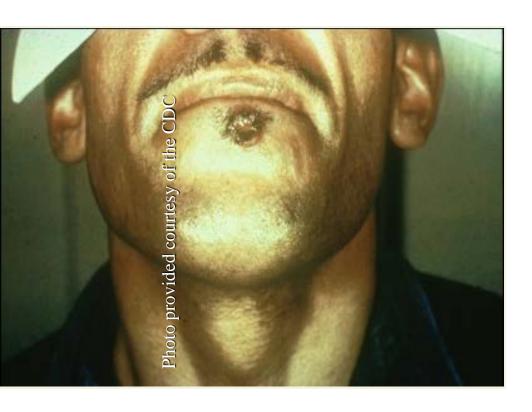


#### Symptoms of Syphilis

- Primary Stage: Painless sore on the genital area, mouth, or lips
- Secondary Stage: Rash on hands, feet, and other areas of body
- Latent (Late) Stage: Paralysis, numbness, blindness, dementia, death



#### **Primary Syphilis**





#### Secondary Syphilis





#### How is Syphilis Spread?

- Skin-to-skin contact with syphilis sores during sexual activity
- Because syphilis sores can be hidden in the vagina, rectum, or mouth, it may not be obvious that a sex partner has syphilis



#### Is Syphilis a Serious Problem?

 If not treated, infection can spread to brain, heart, spinal cord, eyes, and other areas



 Can be spread to the baby during pregnancy causing severe brain and growth abnormalities

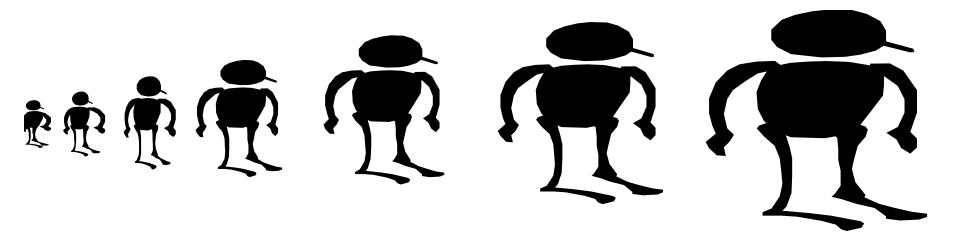
• Genital sores of syphilis make it easier to get HIV infection





#### Is Syphilis Common?

Estimated 70,000 cases each year in the U.S.

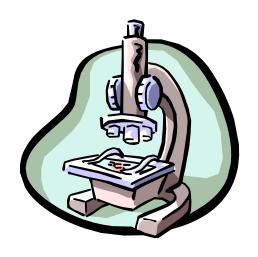




#### How is Syphilis Diagnosed?

- Blood tests
- Examine material from infectious sores with a special microscope







#### Treatment of Syphilis

- Antibiotics by injection
- Persons who receive syphilis treatment must abstain from sexual contact until the syphilis sores are completely healed



#### Can Syphilis be Prevented?



Condoms may reduce your risk of syphilis but they do not cover all the areas infected

Abstinence is 100% effective

## STDs Caused by PROTOZOA



#### Trichomonas

- STD caused by a Protozoa
- Organism: Trichomonas vaginalis
- Location:
  - -vagina and cervix in women
  - -urethra in men and women



#### Symptoms of Trichomonas

- Most men and some women have no symptoms. They are infected and don't know it.
- Many infected women have a frothy, yellow-green vaginal discharge with a strong odor.



# How is Trichomonas Spread?

Contact with infected secretions during sexual activity



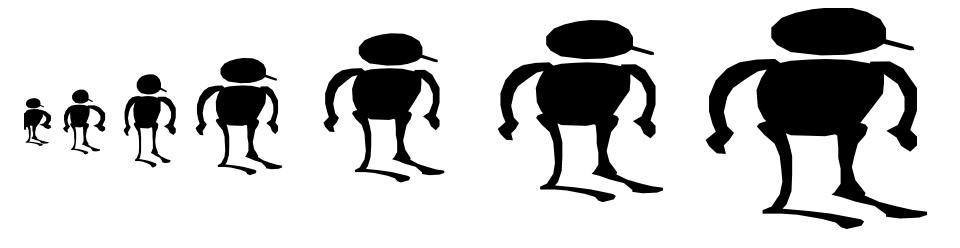
### Is Trichomonas Infection a Serious Problem?

- In pregnant women, it can cause premature (early) delivery
- Increases the risk of getting HIV infection



#### Is Trichomonas Common?

7,400,000 new cases each year in the U.S.





### How is Trichomonas Infection Diagnosed?

- Pelvic exam
- Laboratory tests on the secretions in vagina or penis





#### Trichomonas Protozoa





#### **Treatment of Trichomoniasis**

- Antibiotics by mouth
- Treat sexual partners
- If sexual partner not treated, you can become reinfected



# Can Trichomonas Infection be Prevented?

Condoms can reduce but do not entirely eliminate the risk of trichomonas

Abstinence is 100% effective



#### STDs: No symptoms

- Chlamydia: 75% of girls & 50% of boys
- HSV Type 2: 90%
- HPV: over 90%
- HIV: approx. 25% do not know they are infected; most are asymptomatic for years before developing symptoms



### SAKE SEX

- Abstinence is 100% effective in preventing STDs and pregnancy
- Abstinence is "safe" and it will "protect" you from STDs and pregnancy
- Abstinence is the healthiest choice for teens