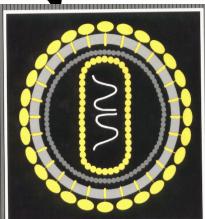
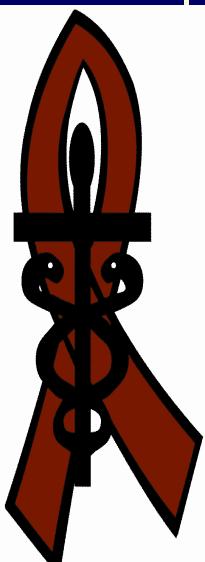


HIV/AIDS AND SIMILARLY TRANSMITTED DISEASES:

A MATTER OF PERSONAL RESPONSIBILITY FOR TEENS AND COLLEGE-AGE YOUTH



Updated February 2022

**Ronald P. Hattis, MD, MPH
Beyond AIDS Foundation**

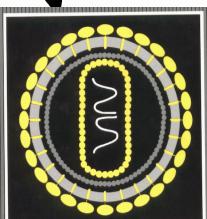
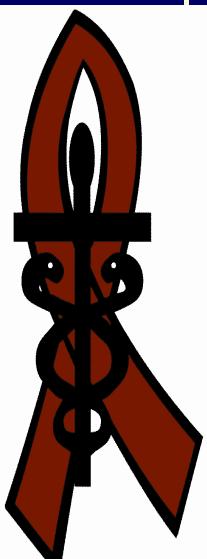


Warning!

■ **X-rated photos** of genital infections with sexually transmitted diseases are included toward the end of this presentation!

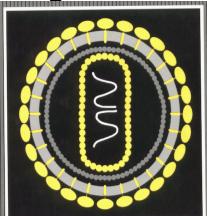
– Courtesy of Centers for Disease Control and Prevention

■ “Viewer discretion advised”²

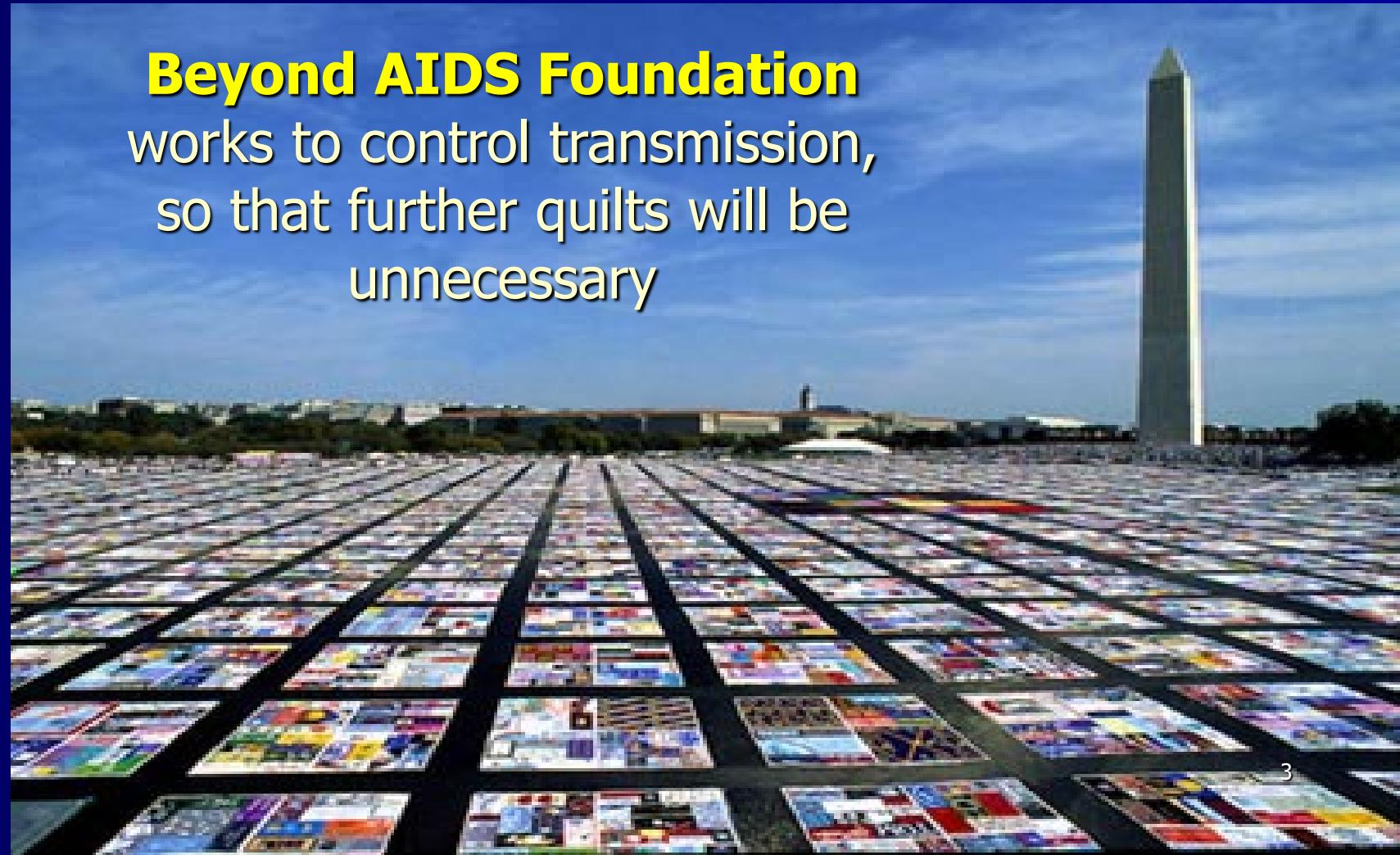


The AIDS Memorial Quilt

In 1987, the **Names Project Foundation** began a tradition of honoring persons who died of AIDS with hand-made quilts about their lives. Thousands of quilts are shown on display in 1992 in Washington.

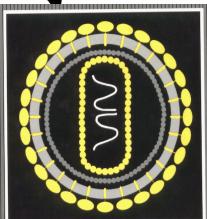
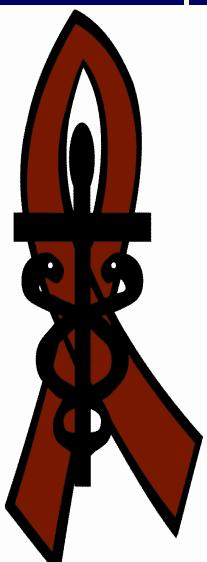


Beyond AIDS Foundation
works to control transmission,
so that further quilts will be
unnecessary



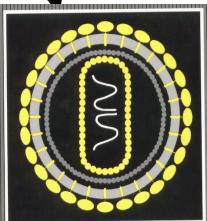
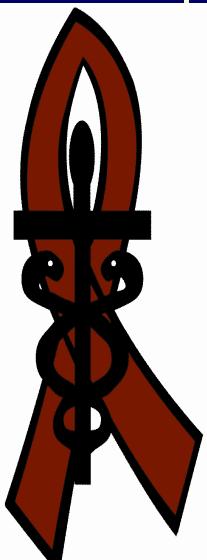
How bad can HIV/AIDS get?

- Several African countries have 22-27% of total population infected (last estimate)
 - Millions of young adults have died
 - Millions of AIDS orphans
- Globally, rates of new diagnoses have decreased, but increasing in some areas
 - An estimated 38 million people worldwide are infected
 - Treatment is increasingly available, so infected people living longer with HIV



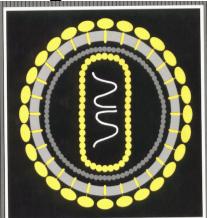
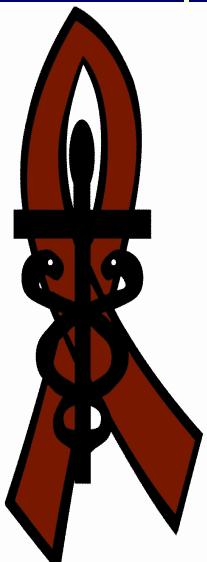
So what about the U.S.?

- Estimated 36,000 new diagnoses continue to be reported yearly
 - Slow progress in reducing rates (from 40k+)
 - Actually a combination of overlapping epidemics in different groups
 - Decreasing among males but not females
 - 60% of female cases are in **black women**
 - **Highest rates in young gay males**
 - Overall, higher rates in communities of color, especially African Americans



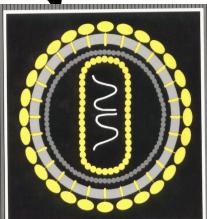
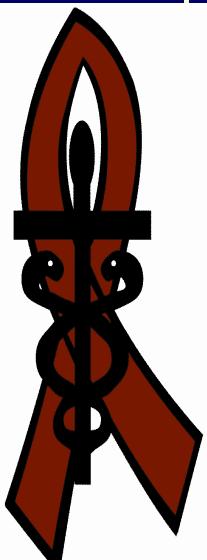
Facts about HIV

- HIV/AIDS does *not* have:
 - a vaccine
 - a cure
 - an environmental fix
- Once infected, a person carries the virus *lifelong*
 - Infection is generally symptom-free for years
 - Testing is necessary to detect it during the years before symptoms develop
 - **THE GOOD NEWS:** HIV can be successfully treated, though not cured

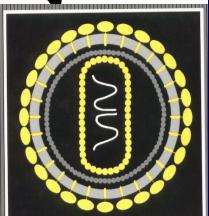
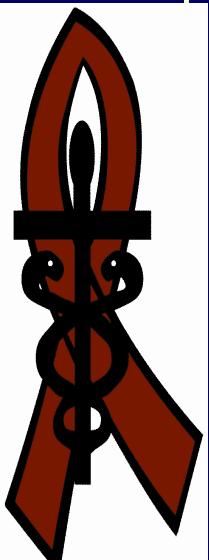


Can HIV infection be prevented?

- Transmission typically occurs *before* the transmitter is even aware of having been *exposed*, let alone *infected*
- Prevention therefore depends on reduction of high-risk behavior:
 - **by those at risk** (due to sex and needle practices) *before* they become infected
 - **by those known to already be infected** *before* they transmit the virus
 - **Treatment and condom use** prevent transmission by those already infected



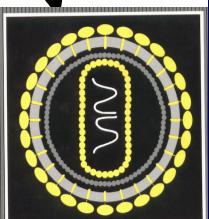
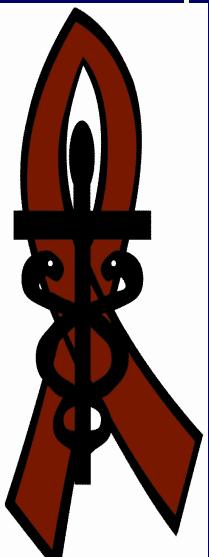
Can HIV infection be prevented? (contd.)



- Prevention of HIV/AIDS and similarly transmitted diseases is a matter of **personal responsibility**
- Identification of infection requires routine screening of adolescents and adults *even though no symptoms*
 - Rapid treatment for those testing positive
 - Safer behavior for those testing negative



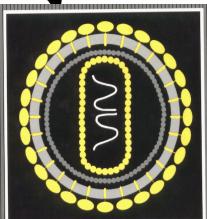
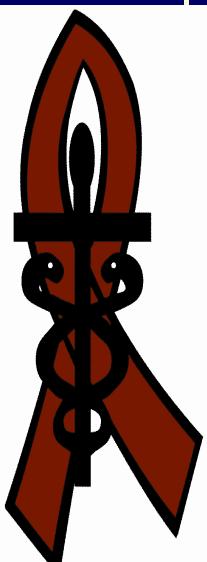
Can the HIV pandemic be reversed?



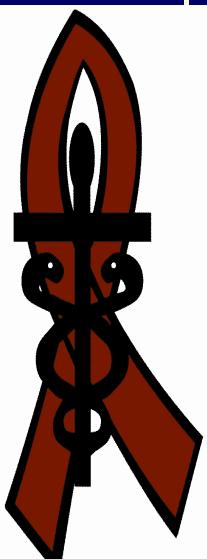
- A few countries have dramatically reduced HIV/AIDS incidence (new cases) and prevalence (proportion of population infected). How?
 - Through changing average sexual practices of the *entire* population at risk
 - **Personal responsibility** needs to spread to become cultural responsibility
 - Additional reductions may result from treatment

Can the HIV pandemic be reversed? (contd.)

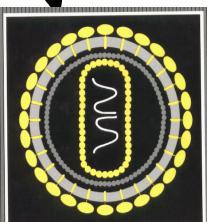
- Uganda reduced national prevalence through the “ABC” program:
 - **Abstinence** (delaying onset of sexual activity)
 - In a society like U.S. with illicit drugs, also means abstaining from injection drug abuse with needle sharing
 - **Be faithful** (avoiding external sexual partners)
 - In U.S., where testing is available, this means being monogamous with both partners HIV negative
 - **Condoms**, if A and B not possible



Can the HIV pandemic be reversed? (contd.)

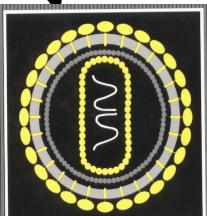
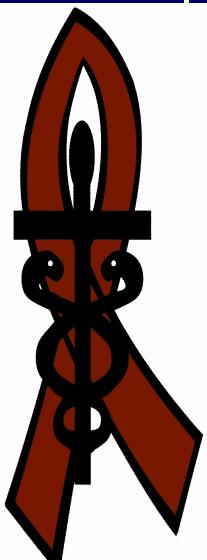


- “D” should be added:
 - Don’t do drugs (illicit, street, especially if any sharing of “works”)
 - Do consider PrEP (preventive daily pill for persons at high risk)
 - Prevents HIV but not other STDs, so use condoms too



On the personal responsibility level:

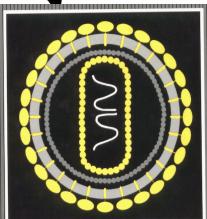
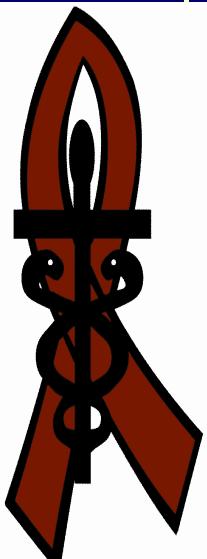
Decisions each young person needs to make



- What does sexuality mean to me?
 - Something with emotional meaning?
 - Something to be shared only with someone special, or in marriage?
 - Or something totally casual?
 - *Regardless, take the precautions suggested here*

On the personal responsibility level: (contd.)

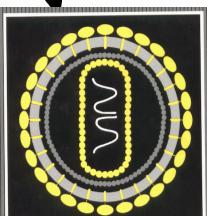
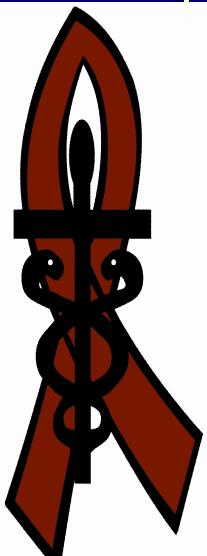
Decisions each young person needs to make



- What risks am I prepared to take?
 - Regarding sex?
 - Regarding experimenting with drugs?
- Like "Russian roulette": if bad luck, can cause lifelong illness



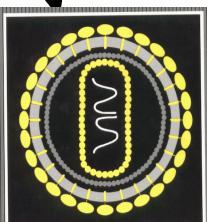
What is safest?



- Avoiding the possibility of exposure to disease is always safest
 - **Abstinence** = the “**A**” of “ABC”
 - Not having sex with anyone
 - Not sharing needles with anyone
- Safest, but not for everyone, right?*



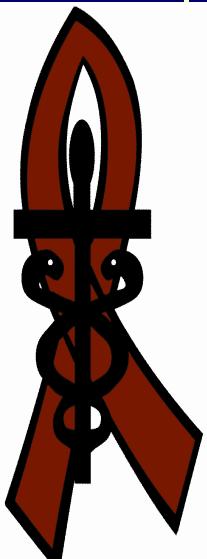
What is safest? (contd.)



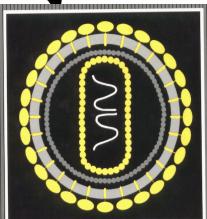
- *A little late for abstinence?*
- “Secondary abstinence” works for many
 - Who have had sex already
 - But who decide to discontinue sex at this time
- May be many reasons, including how you feel about yourself, your behavior, and your relationships



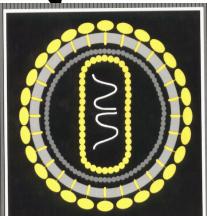
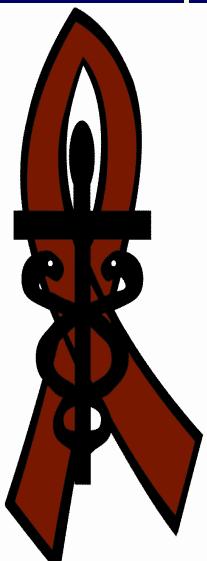
So what is next safest?



- *You can't catch a disease from someone who doesn't have it!*
- Unless you are both virgins: **Get tested for HIV and other STDs!**
- Insist that any partner be tested before having sex or doing anything that might share body fluids!

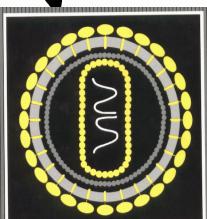


If you both test negative for HIV



- Still a slight risk for first 3 months
 - If *either* of you has had recent sex or shared a needle with someone else
 - Test takes up to a month turn positive
 - It might take time to test whether one or both partners might “play around” and if any other risk factors like drugs

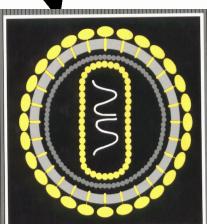
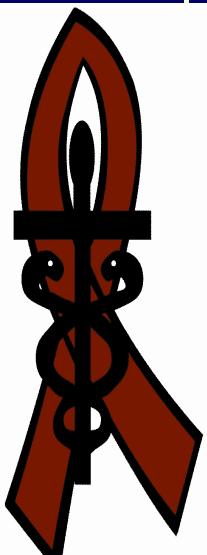
If you both test negative for HIV (contd.)



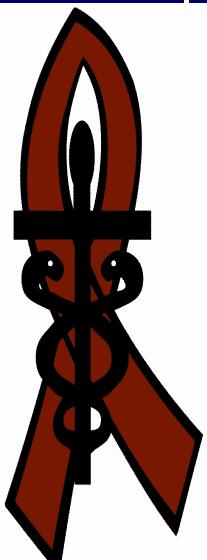
- Get retested in about 3 months
 - Unless both partners were virgins when relationship began and neither has had other partners
- Meanwhile use **Condoms**
 - For “harm reduction” – they reduce the chance of harm if you are being exposed
 - To prevent pregnancy and other STDs too!

If you both test negative for HIV (contd.)

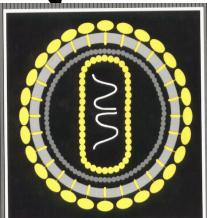
- Being faithful (the “B” in “ABC”), if you are both HIV negative, is the next most effective after abstinence



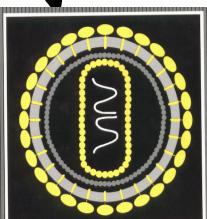
After the 3-month retest (Are condoms necessary forever?)



- *If* relationship seems mutually monogamous after 3-month retest
and
- *If* neither partner is using drugs
- Then may *not* need condoms after negative retest, unless it is the only method of contraception



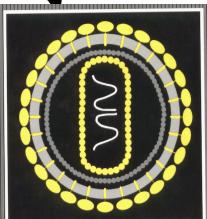
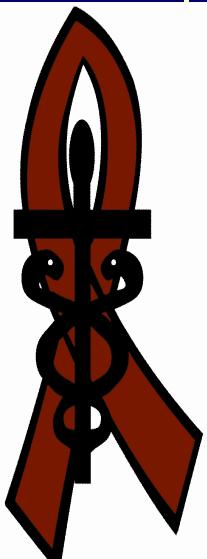
Is HIV the *only* thing I should be tested for?



- If you've EVER shared a needle, get tested for **hepatitis B and C**
- If you've EVER had unprotected sex, ask for tests for **other common STDs** too
- One of you might have one or these diseases and not know it
- With no symptoms and for which you were not tested
- All of these infections can be treated

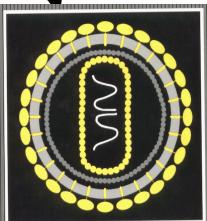
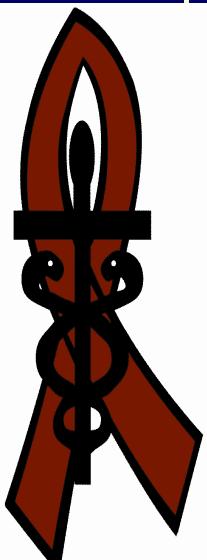
What if you test positive for HIV or another STD?

- Get medical care right away
 - If you have a curable STD, get treatment and avoid sex till cured
 - Even incurable STDs are treatable
 - HIV and herpes can be suppressed with treatment, which can prevent passing them on

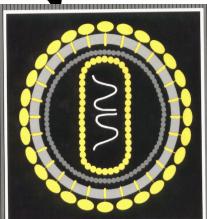
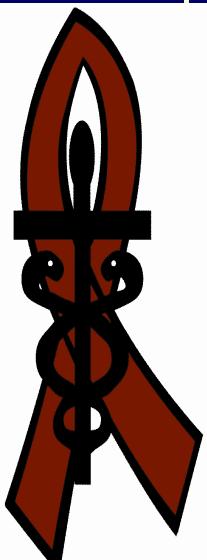


What if you test positive for HIV or another STD that can't be simply cured?

- If you have HIV, herpes, or high-risk HPV, always use **Condoms**
 - Not perfect protection, but essential for couples in which only one is infected
 - Especially effective against HIV
- Safest to select a partner who has the same condition
- Inform any partner of your infection *before* initiating sex
 - Difficult to discuss, but is ethically (and may be legally) necessary



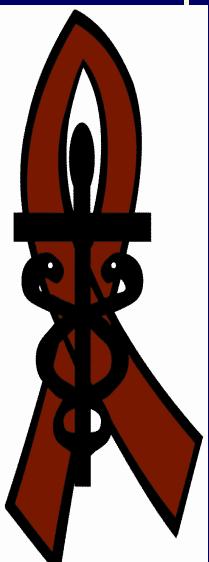
What if you test positive for HIV or another STD that can't be simply cured, contd.



- “**Prevention with positives**” involves changing risk behavior that led to the disease, to avoid passing the disease to others
- If you are a carrier of hepatitis B, your partner can be immunized to protect against it
- If HIV is **completely** suppressed with medication, to the point where it cannot be detected by tests, it is not infectious by sex
 - Condoms provide extra insurance of that



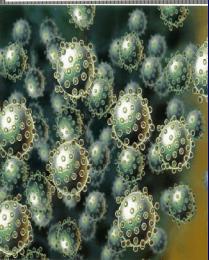
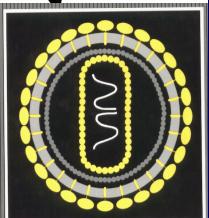
Treating HIV helps patients, as well as others



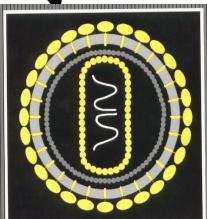
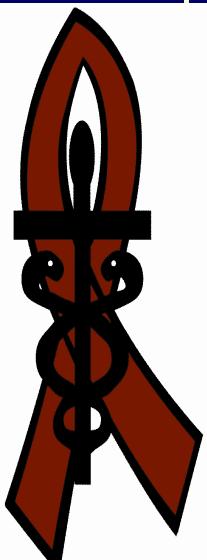
Treatment also can prevent the infection from progressing to AIDS

- Can prevent the infections and some other diseases that usually eventually occur with untreated HIV
- Allows a life expectancy close to normal

Therefore, everyone who tests positive for HIV should be treated ASAP with antiviral drugs, continued for life



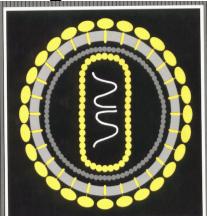
What if either my partner or I have not been tested?



- Testing for HIV and other STDs is a good idea for everyone, but if it has not been done
 - Especially if you are not **Abstaining...**
 - And not sure you are *both* **Being Faithful**
 - (In a relationship in which you were both virgins or extremely low risk)
- **What precautions are left?**



What if either my partner or I have not been tested? (contd.)



- Better use **Condoms** (the “**C**” in “ABC”), *every time!*
- **Don’t** do illicit drugs, but
 - If using injectable drugs, also use clean needles/syringes every time; never share
- Persons at high risk of HIV exposure can also take a daily anti-viral medication (**PrEP**); ask a physician

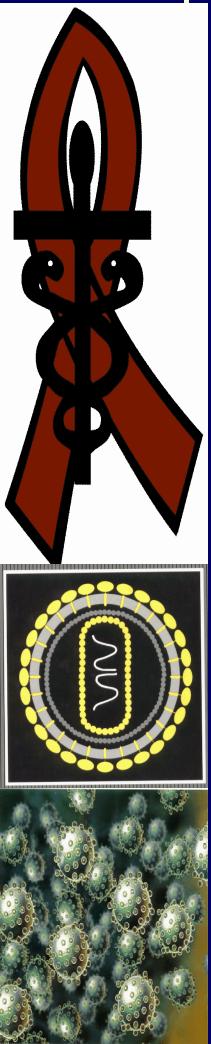


**Women as
well as men
should take
personal
responsibility
to carry
condoms**

(Actually,
however, only
one needs to
be worn at a
time!)

Dress made
entirely of
condoms

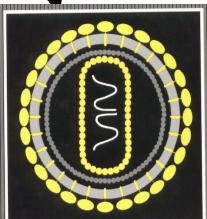
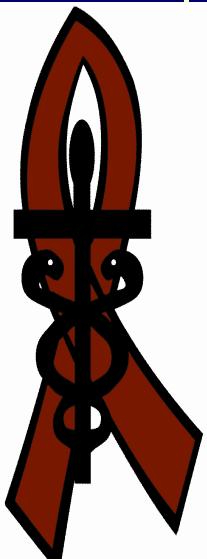




Isn't oral sex safer?

- Risk does appear quite low for HIV, but **not zero**
 - Higher risk if blood or sores in mouth
- **Can get other STDs**, including
 - Herpes, including genital
 - Gonorrhea
 - Chlamydia
 - Syphilis
 - **Human papillomavirus (HPV)**,
discussed below; can cause cancer

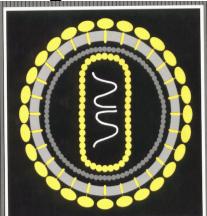
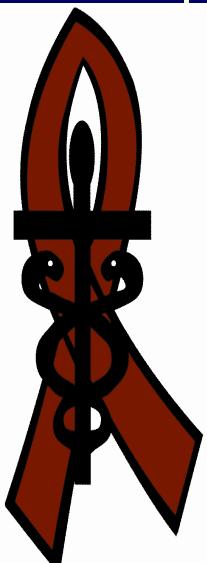
Isn't oral sex safer? (contd.)



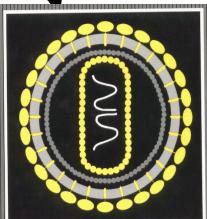
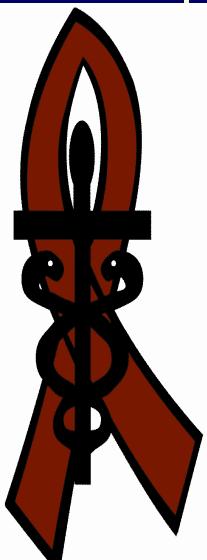
- Barriers can help
 - **Condoms** for fellatio
 - Flavored are available
 - Avoid bitter lubricants like nonoxynol-9
 - Latex sheets (dental dams)
 - Also can be purchased flavored
 - Plastic wrap
 - As close as your kitchen
 - But cut a square in advance



The “Zebra” latex panty with built-in female condom pouch: for much safer sex (proposed product, unfortunately never became commercially available)



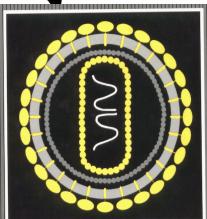
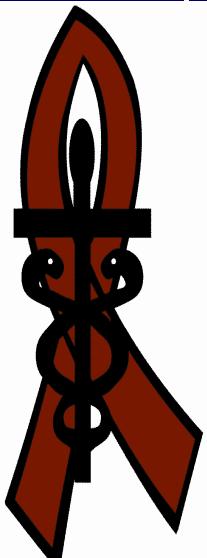
More info about those other STDs (sexually transmitted diseases)



- HIV tends to dominate attention
- But HIV is only one of more than 25 diseases spread mainly through sexual activity
 - A personal risk for every young person
- **All STDs are preventable, by similar precautions**
 - All are treatable, but not all are curable

Other STDs (contd.)

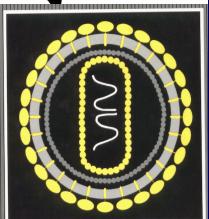
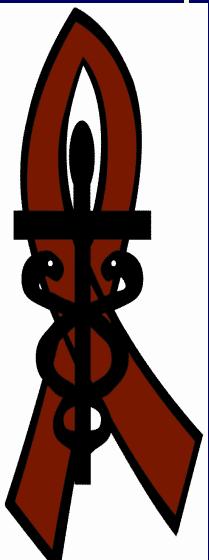
- About 20 million new STD infections each year in the U.S. according to CDC
 - Tens of millions have HPV, herpes
 - STDs often go unrecognized, especially in women, causing serious complications



Complications of STDs: There are a lot of them

- Pelvic inflammatory disease (PID)
 - If untreated, can lead to female infertility
- Infertility
- Ectopic pregnancy
- Preterm labor/premature infants
- Uterine infections before and after delivery
- Cervical cancer, penile cancer
- Anal cancer
- Cirrhosis and liver cancer from viral hepatitis
- Increased risk of HIV infection

STDs can be passed from mother to infant

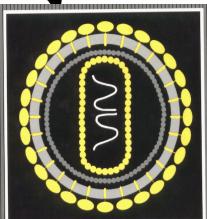
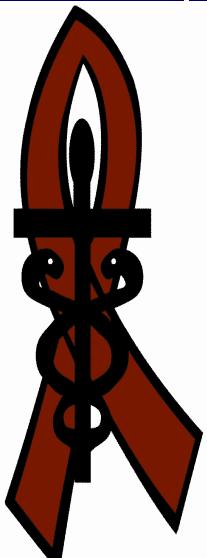


- Like HIV, several other STDs can be passed from mother to fetus in uterus, to newborn during birth, and/or to infant via breast milk.
 - Syphilis
 - Gonorrhea
 - Chlamydia
 - Genital herpes
 - Genital human papillomavirus (HPV)
 - Hepatitis B

Curable STDs

- Chlamydia
- Gonorrhea
- Syphilis
- Trichomoniasis
- Molluscum
contagiosum

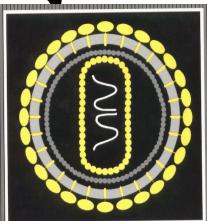
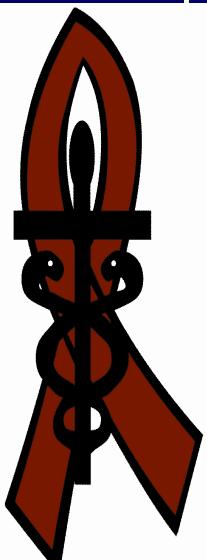
Chancroid
Scabies
Pediculosis pubis
(genital lice)
Bacterial vaginosis
(NOT an STD
but is associated
with sexual
activity)



HPV (human papilloma virus)

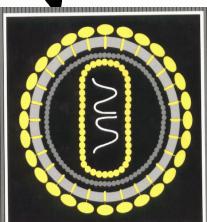
- Most common STD among young, sexually active people
 - Out of dozens of types, **7 cause almost all HPV-related cervical, vulvar, vaginal, penile, and anal cancers**
- Condoms help but do not cover all areas of contact
- Estimated prevalence of high-risk genital HPV types in US population 18-59
 - **22.7% in total** population in that age range
 - 25.1% among men
 - 20.4% among women

CDC data 2013-14
[https://www.cdc.gov/nchs³⁷/products/databriefs/db280.htm](https://www.cdc.gov/nchs/products/databriefs/db280.htm)



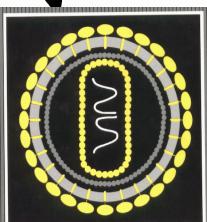
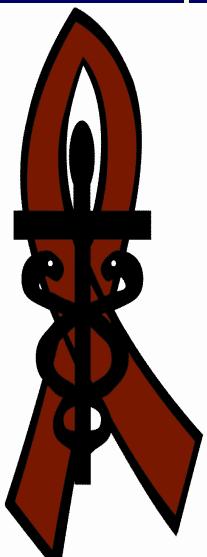
HPV (human papilloma virus) (contd.)

- All 7 types causing cancers are prevented by **Gardasil® -9 vaccine**; series of 3 doses
 - Vaccine recommended for **both sexes, ages 9-26**
 - Approved through age 45 but may not be covered >26
 - Tongue, head, and neck cancers caused by HPV can also be prevented (oral sex has grown in popularity)
 - Periodic Pap smears starting age 30 also help detect early cervical cancer in females
- 2 other types causing 90% of genital warts included in same vaccine
- **All junior high, high school, and college students should get immunized!**



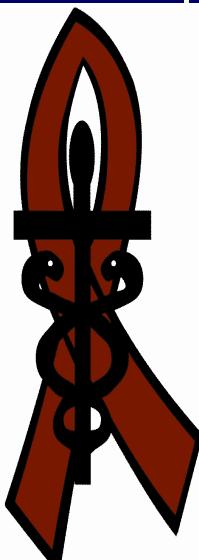
Viral hepatitis

- **Hepatitis B:** Preventable with **Vaccine**; Chronic Disease Treatable, but not Curable
 - 5-10% of infections acquired sexually or by blood or needles become chronic
 - 40% of babies born to women with hepatitis B acquire hepatitis; of these, 85-90% become chronic
 - May lead to cirrhosis, liver cancer, or liver failure after many years; treatment can help prevent
- **Hepatitis C:** No Vaccine, but **Curable**
 - Sexual transmission uncommon (15% of cases), not usually considered an STD, but 4-5 million Americans infected by sharing needles
 - 85% of infections become chronic
 - If not treated, may lead to cirrhosis, liver cancer, or liver failure after many years

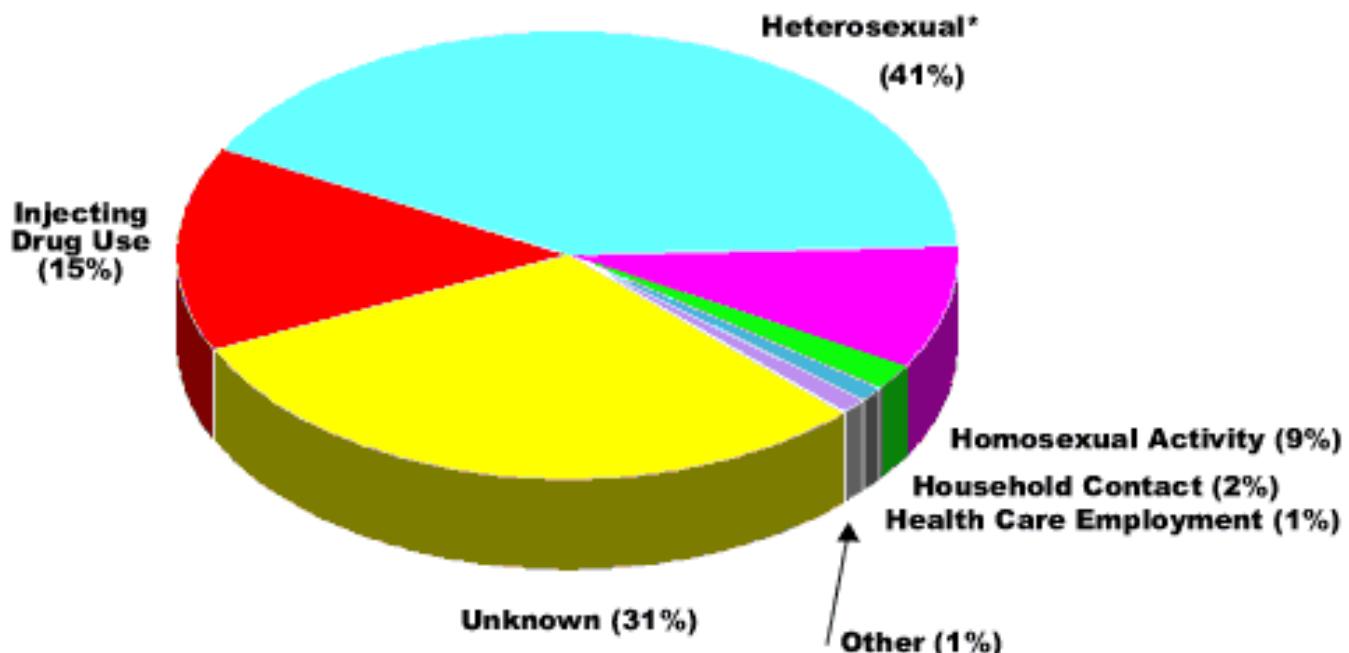


Hepatitis B

**Most infections from heterosexual contact,
many others by needles or unknown**



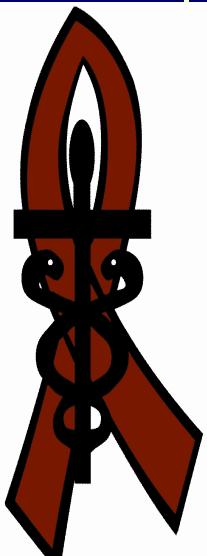
**Risk Factors for Acute Hepatitis B
United States, 1992-1993**



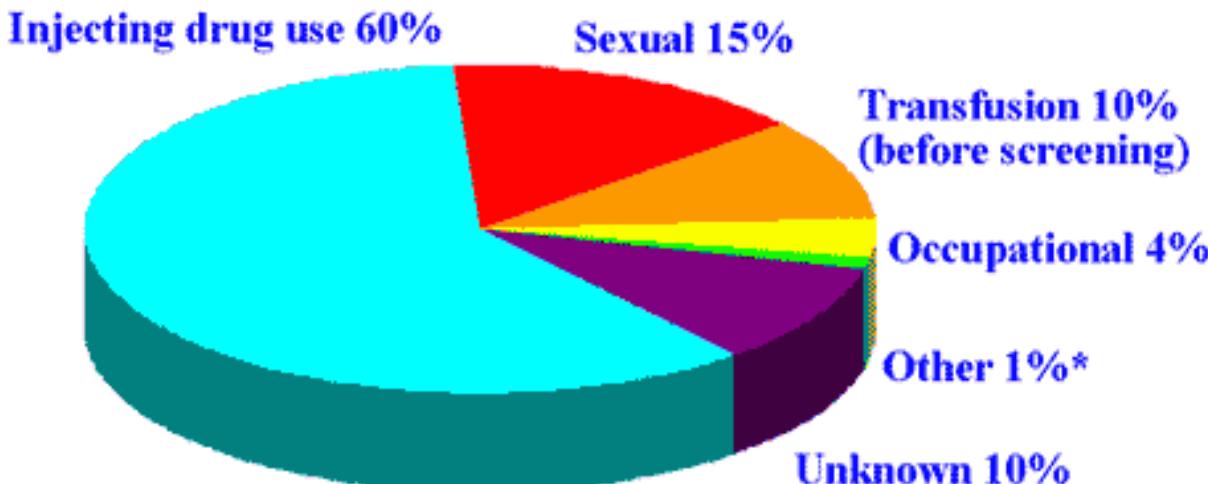
* Includes sexual contact with acute cases, carriers, and multiple partners.
Source: CDC Sentinel Counties Study of Viral Hepatitis

Hepatitis C

Most infections from needles sharing, fewer from sexual contact



Sources of Infection for
Persons With Hepatitis C



* Nosocomial; iatrogenic; perinatal

Source: Centers for Disease Control and Prevention

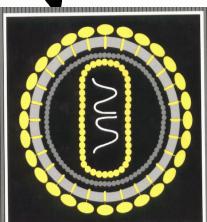
Herpes

■ Herpes Simplex Virus (HSV)

- Can cause lifelong recurrent infections
- Recurrences usually less severe than primary infection
- A daily pill can reduce recurrences, and reduce infectiousness
- No cure

■ Two main types

- **Type 1** (HSV-1) mostly causes recurrent cold sores in and around lips and mouth, but can spread to genitals by oral sex

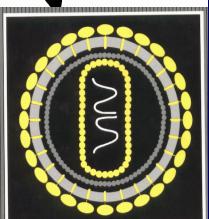
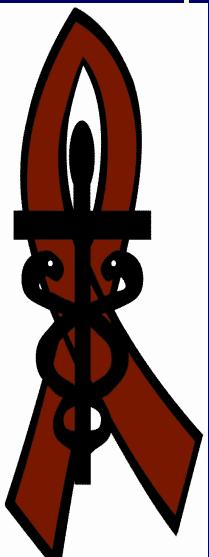


Herpes simplex, type 2

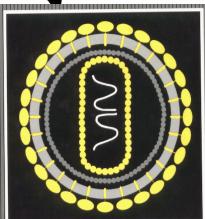
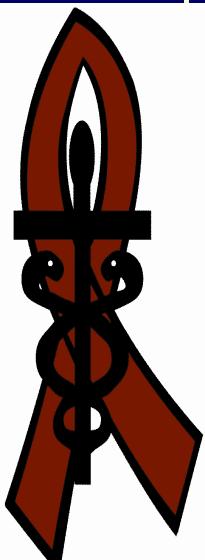
- Prevalence > 20% in U.S.
- Probably second commonest STD
- HSV-2 infection may increase risk of HIV
- Condoms help but do not cover all areas of contact; virus may shed even without visible sores

(READY FOR THOSE X-RATED BUT NOT SEXY PICS?)

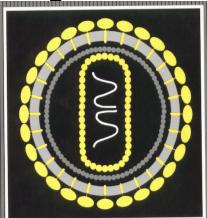
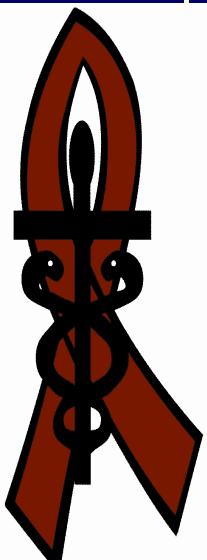
Gonorrhea in male



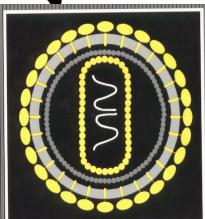
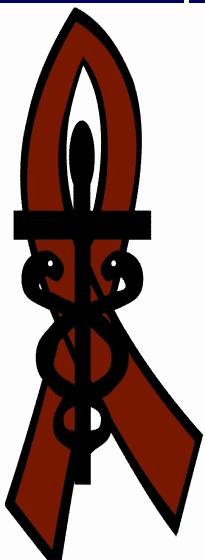
Gonorrhea in female (view of cervix showing pus in center)



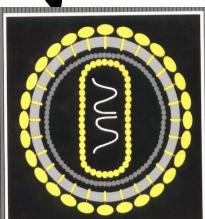
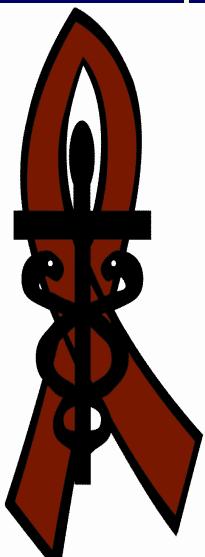
Gonorrhea causing Bartholin abscess in female



Primary syphilis in male

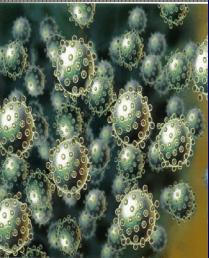
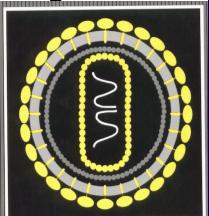
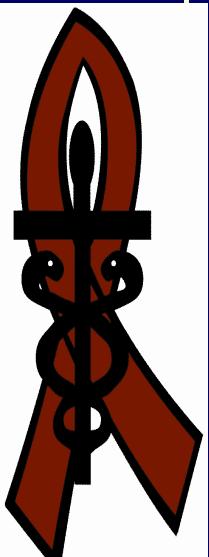


Primary syphilis in female



Primary syphilis of lip

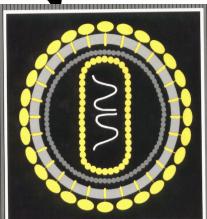
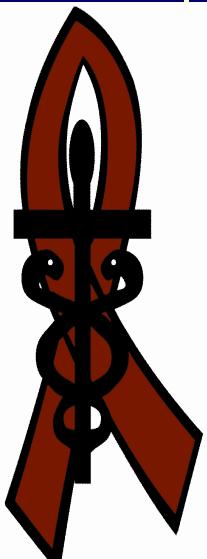
(unprotected oral sex is not “safe” sex)



Secondary syphilis

(Develops after 6-12 weeks without treatment, spreads throughout body)

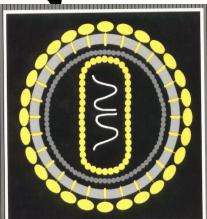
In this photo, condyloma lata wartlike lesions



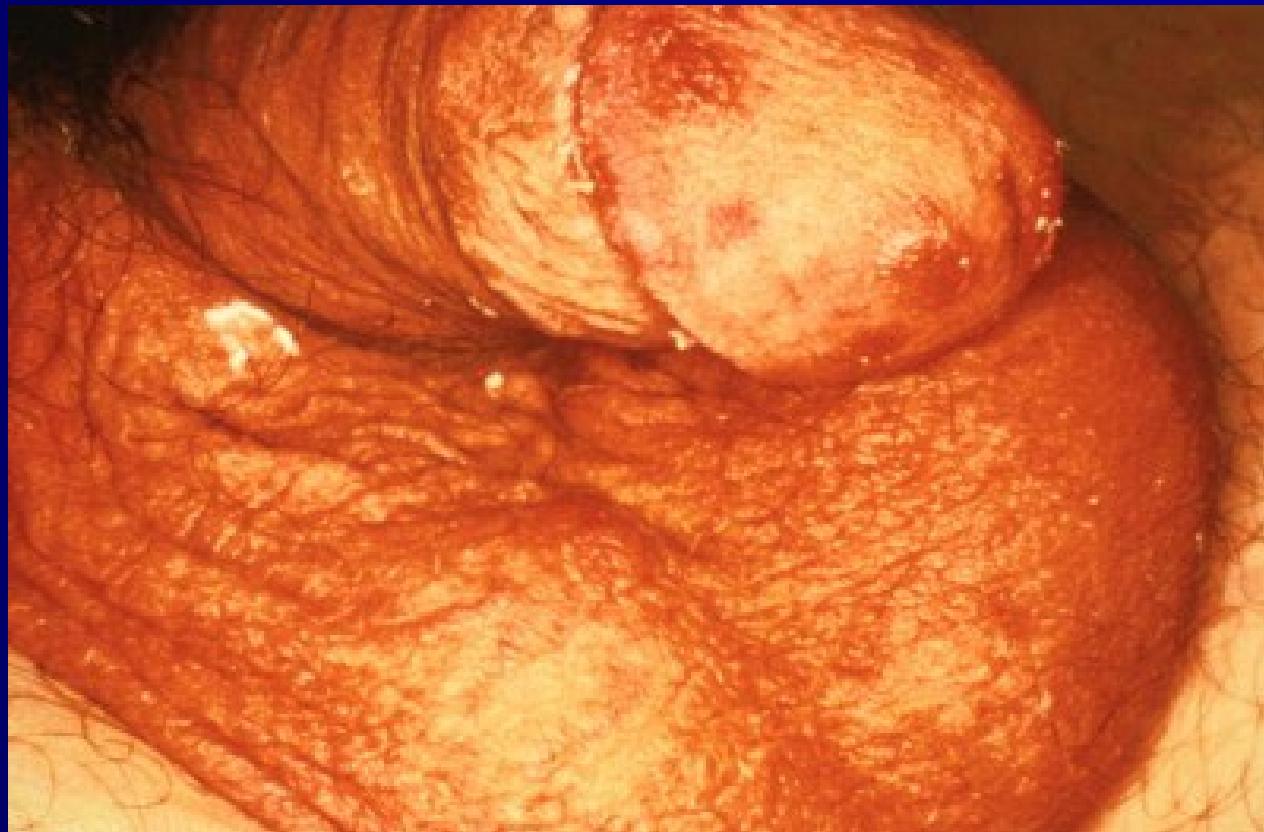
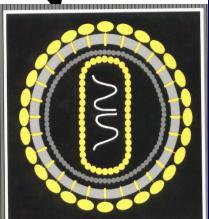
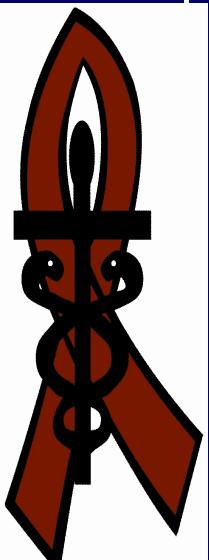
Tertiary syphilis

(Develops after many years without treatment, spreads throughout body)

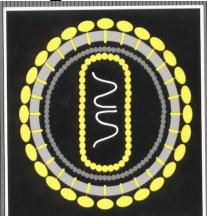
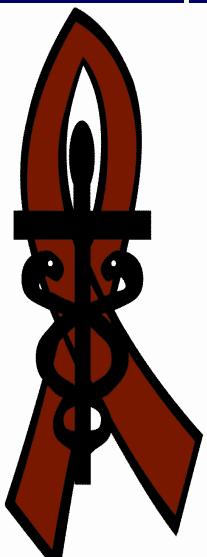
In this photo, ulcerating gumma



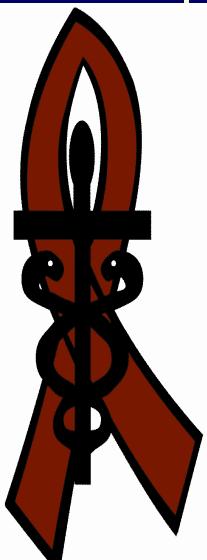
Genital scabies in male



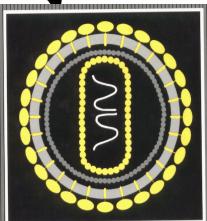
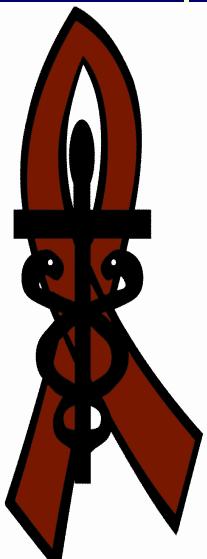
Severe genital warts in male (caused by HPV)



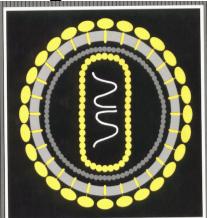
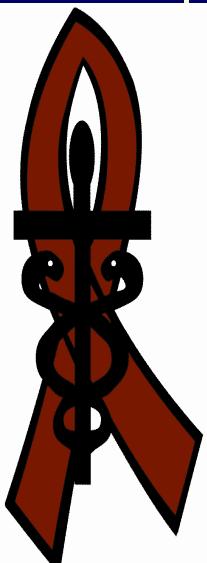
Very severe genital warts in female (caused by HPV)



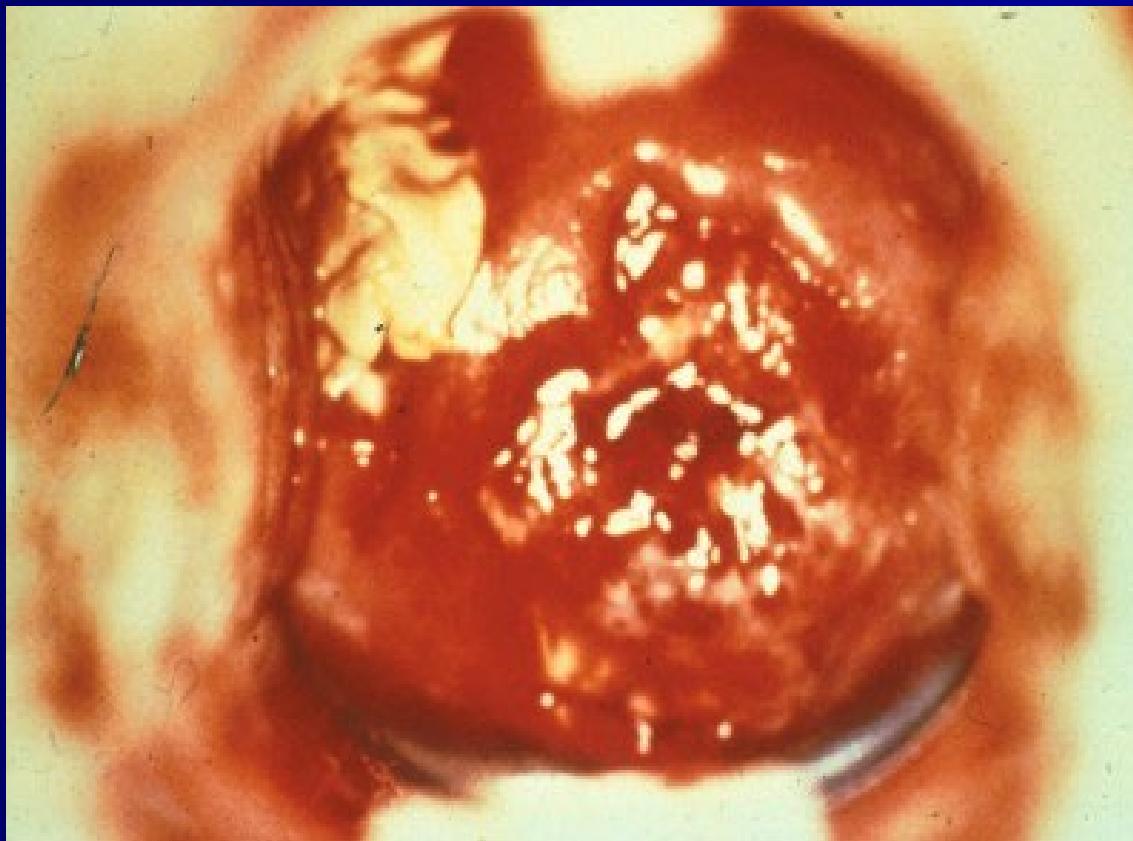
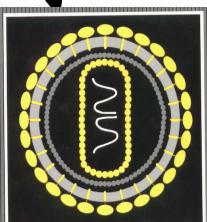
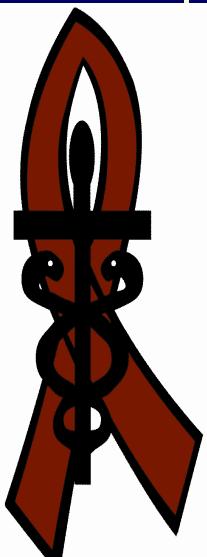
Primary genital herpes in male



Primary genital herpes in female

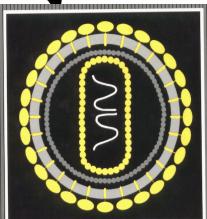
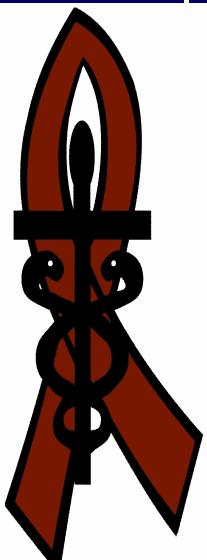


Primary herpes in female (view of cervix)

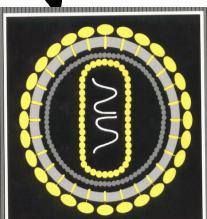
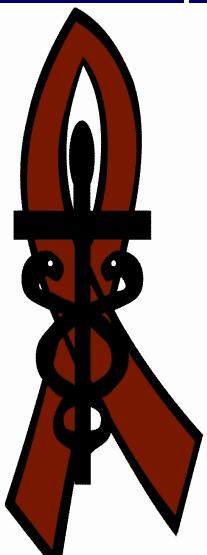


Points to remember

- The same safer behavior that can prevent HIV also reduces the risk of many other sexually transmitted and bloodborne diseases
- STDs cause serious consequences, and not all of them are curable
- **Personal decisions**, e.g., to engage in safe behavior, to be screened, and to adhere to treatment if necessary, can determine whether you get or transmit HIV, other sexually transmitted diseases, and viral hepatitis

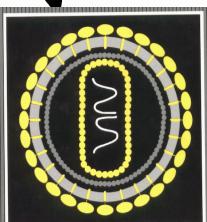


Points to remember (contd.)



- Preventing all STDs and viral hepatitis can be as simple as “ABC”:
 - **Abstinence** lowers risk to zero (with a few minor exceptions)
 - **Being faithful** within a monogamous, uninfected couple avoids exposure
 - **Condoms** greatly reduce risk of most STDs, including the incurable, potentially deadly ones (HIV, Hepatitis B & C, HPV)

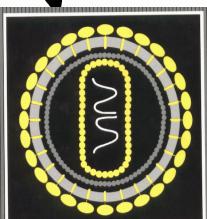
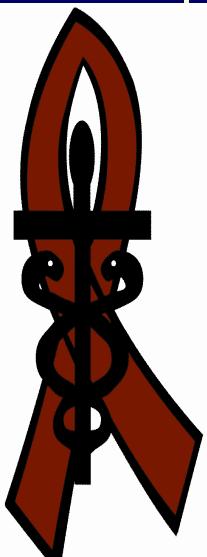
Points to remember (contd.)



- Remember “D” too:
 - Don’t do drugs (illicit, street, especially if any sharing of “works”)
 - Do consider PrEP (preventive daily pill for persons at high risk)
 - Does not prevent other STDs, so use condoms too

It's a matter of personal responsibility

- You can take **personal responsibility** to avoid becoming infected
- If you already have HIV or another STD or hepatitis, not giving it to others is also a matter of **personal responsibility**
 - **Prompt treatment may benefit you and may make you less infectious to others**
- You can help control the HIV epidemic by joining an organization like Beyond AIDS Foundation (www.beyondaids.org)



Sources

- Statistics on HIV diagnoses and prevalence from CDC and UNAIDS; most recent in some cases are from 2019
- List of countries and adult HIV prevalence, Wikipedia:
http://en.wikipedia.org/wiki/List_of_countries_by_HIV/AIDS_adult_prevalence_rate
- Photos of STDs from CDC
- Other charts and statistics from various CDC sites