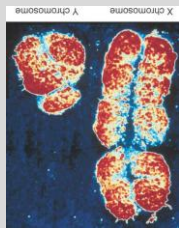


Objectives:

1. Contraception
2. STDs

For more information:

- [Planned Parenthood](#)
- [FMU Student Health Center](#)
- Your personal physician



1

FMU's Student Health Services**Monday - Friday****Hours: 8:30 a.m.- 12:30 p.m. & 1:30 p.m.- 4:30 p.m.****Students are strongly encouraged to make an appointment to be seen.****University Center, 2nd floor****Email: swalters@fmarion.edu****(843) 661-1844 – Office****Birth Control Options available:**

Birth Control Pills
 Ortho Evra Patch
 Nuva Ring
 Depo-Provera Injections
 Administration of Plan B (\$15) as indicated

Screening available:

Chlamydia and Gonorrhea screening \$60
 Pregnancy Tests are free
 Bacterial Vaginosis, Yeast Infections, and Trichomoniasis screening is free
 Pap Smear \$40

***** Please don't go to Pregnancy "Crisis Centers" for info. on pregnancy, birth control, Plan B, etc.... They give inaccurate info. Please see a REAL physician.***

2

6. Birth Control.

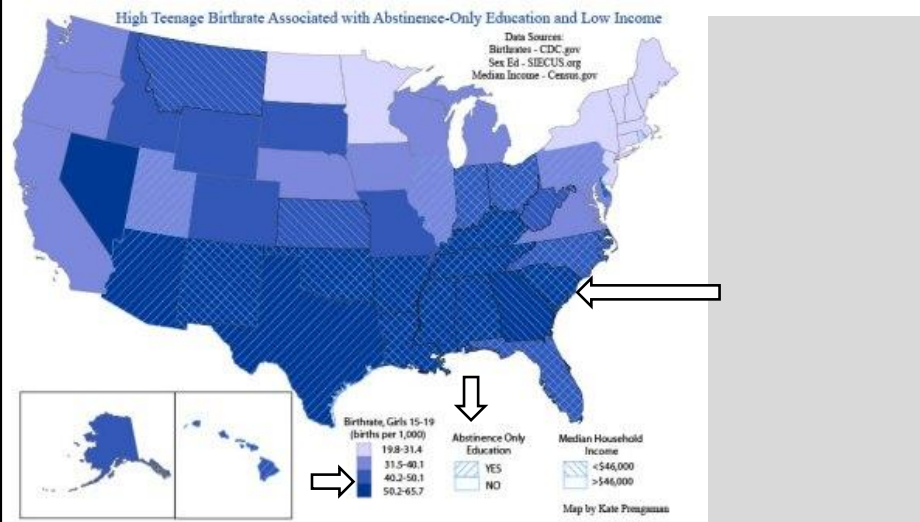
1. **Abstinence (includes "outercourse")** = no sex (100% effective, but takes willpower!)
2. **Avoidance methods**
3. **Breast feeding**
4. **Permanent methods**
5. **Spermicides**
6. **Barrier methods**
7. **Hormonal methods**
8. **"Other"**



3

6. Birth Control.

1. **Abstinence (includes "outercourse")** = no sex (100% effective, but takes willpower!)



4

2. Avoidance methods (76 – 88% effective)

a) Temperature method = track body temp daily. 96-98 ° F is typical temperature before ovulation. **After** you ovulate, it goes up to 97-99°F.

Temperature Chart



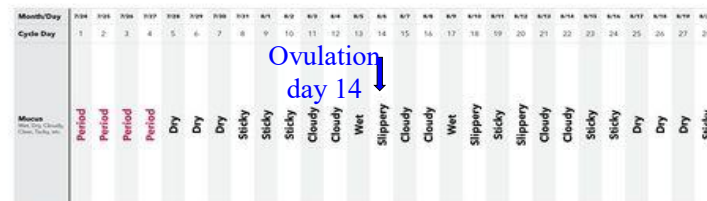
The temperature rise that signals an egg has been released is about about four-tenths of one degree. The rise may be sudden or gradual climb over several days. But the temperature shift cannot predict when the release will occur.

5

2. Avoidance methods (76 – 88% effective)

b) Cervical mucus method = track daily changes in cervical mucus.

Charting your Mucus Pattern Chart



6

2. Avoidance methods (76 – 88% effective)

c) Calendar method = track your menstrual cycle for fertile days, and avoid sex during those days.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Safe	2	3	4 Period Starts	5	6	7
8	9	10	11 Unsafe	12	13	14
15	16	17	18	19	20	21
22	23 Safe	24	25	26	27	28
29	30	1	2 Period Starts	3	4	5

Ovulation
day 14

7

2. Avoidance methods

d) Coitus interruptus (withdrawal) – pull out penis before ejaculation.
Depends on self control. (78% effective)

8

3. Breast feeding

Lactational amenorrhea method (LAM) = breast feeding

"Lactational" refers to breastfeeding, and

"amenorrhea" means not having your period. (98% effective)

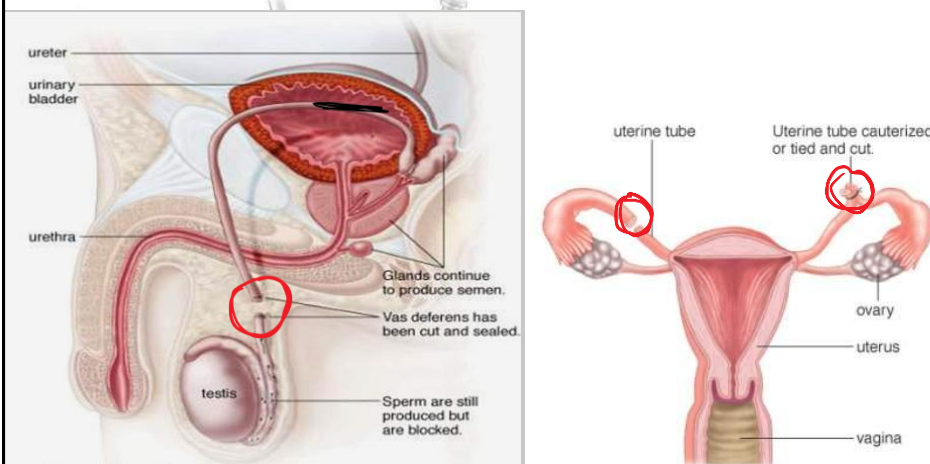
- Only effective during first 6 months, and if nurse every 4 hrs during day, and 6 times during night.
- Using breast pump doesn't seem to work.

9

4. Permanent methods = irreversible (99% effective)

Vasectomy = cut vas deferens

Tubal ligation = cut fallopian tubes



10

- 5. Spermicides (71% effective)** > NOT reliable as sole form of contraception.
> Does NOT protect against STDs.

Foams, creams, contraceptive films, gels, suppositories

The Sponge = barrier with spermicide (76 – 88% effective).

> Placed into vagina 10 – 15 min before sex.

> Contains spermicidal agent (ex. Nonoxynol-9) that kills sperm or inhibits their movement. (Try “test spot” first!)

> Need to apply fresh each time before sex.

> Best when used in combination with another form of BC.

> Can be irritating to some men and women (try different brands).

Birth control sponge
Also called: The sponge



Availability
No prescription needed

Effectiveness
76-88% effective with typical use

Effort
Insert up to 24 hours prior

11

Vaginal Contraceptive Film (“Strip”) = Thin spermicide-embedded sheet place into vagina before sex, dissolves w/vaginal fluids.

> New strip applied with each sexual encounter.



Contraceptive Spermicidal Suppositories

(tablet or pellet inserted into vagina before sex)



12

6. Barrier Methods

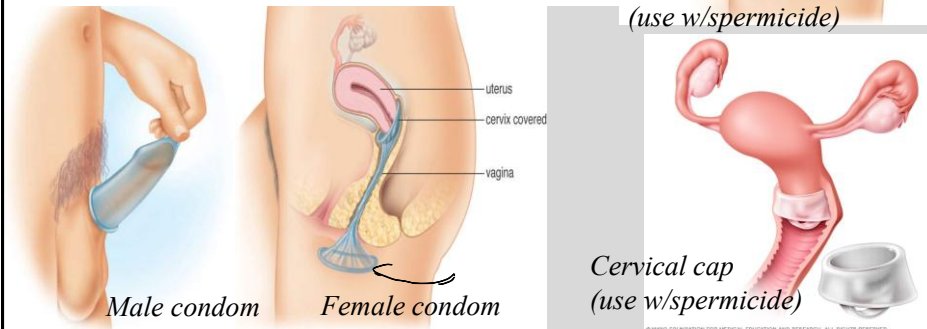
Male condom (85% effective)

Female condom (79% effective)

Cervical cap (71 - 86% effective)

Diaphragm (88% effective)

Only form of BC that
protects genitals
against STDs



13

6. Barrier Methods that isn't contraceptive, but protects from STDs.

Dental Dam – rectangular latex sheet that can be used as a barrier to STDs for oral sex - protecting against direct contact between the mouth and the vagina or anus



14

7. Hormonal

The Pill (99% effective – if used correctly)

PREVENTS OVULATION!

It does NOT cause abortion.

[There are many people that confuse (ignorantly, or purposefully) contraceptives with abortion. As nurses, you will have to be the voice of **biologically & medically accurate** info.]



TIME GEORGE FLOYD PROTESTS AMERICA'S OVERDUE AWAKENING MINNEAPOLIS BREONNA TAYLOR NEWSLETTER

U.S. • POLITICS

Was elected to the US Supreme Court in 2018. Will have a say in making, and overturning, laws that can last for generations. Click [HERE](#) for link.

Brett Kavanaugh Referred to Contraception as 'Abortion-Inducing Drugs' During Confirmation Hearing

Me, after hearing that...



15

7. Hormonal

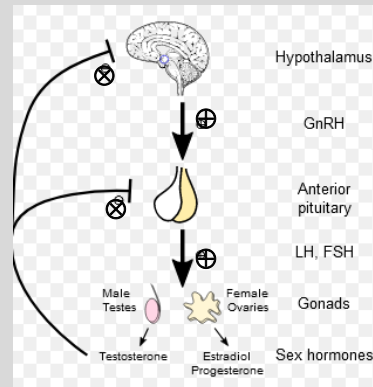
The Pill (99% effective – if used correctly)

PREVENTS OVULATION!

It does not cause abortion.

[There are many [people](#) that confuse (ignorantly, or purposefully) contraceptives with abortion.]

- The pill delivers synthetic **estrogen & progesterone**



16

7. Hormonal

The Pill (99% effective – if used correctly)



PREVENTS OVULATION!

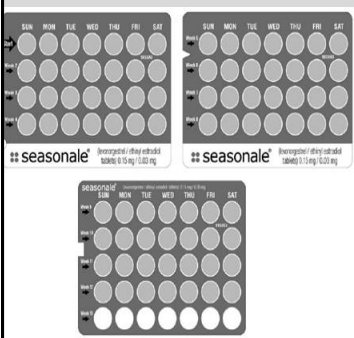
It does not cause abortion.

[There are many people that confuse (ignorantly, or purposefully) contraceptives with abortion.]

- The pill delivers synthetic **estrogen & progesterone**
- Rising blood estrogen & progesterone inhibit (by negative feedback) hypothalamic **GnRH** & pituitary **LH & FSH**
- Low pituitary LH & FSH inhibits egg development and prevents ovulation.
- Also reduces endometrial growth (good for people w/endometriosis)
- Also thickens cervical mucus (barrier to sperm)

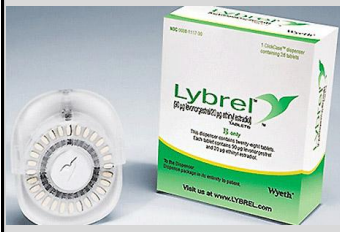
Typical hormonal pill has 21 days of “active” (contains hormones) pill where endometrium thickens slightly but no egg ovulated, and 7 days of “placebo” (hormone-free) pill, when menstruation occurs.

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Seasonale = low dose estrogen & progesterone. Take 84 days active pill followed by 7 days placebo. Repeat.

Result = have only 4 periods / year. Good for people w/endometriosis or ovarian polycystic ovarian syndrome or immediate family history of ovarian cancer..



Lybrel (Anya) Discontinued in US = take active pill 365 days/year (no placebo = no periods)

Great for people w/endometriosis, polycystic ovarian syndrome, or immediate family history of ovarian cancer.

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Medications known to interfere with birth control pill:



- **Certain antibiotics:**

rifampin (Rifadin®), and to a lesser extent:

penicillin, amoxicillin, ampicillin, sulfamethoxazole/trimethoprim (Bactrim®), tetracycline, minocycline, metronidazole (Flagyl®) and nitrofurantoin (Macrobid® or Macrodantin®).

- **The antifungal Griseofulvin**

- **Certain HIV medicines**

- **Certain anti-seizure medicines (these are sometimes also used to treat psychiatric disorders like bipolar disorder)**

- **The herb St. John's Wort**

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7. Hormonal

Hormone Injections: (94% effective)

[Depo-Provera](#) – injection of progesterone (**progestin**) once every 3 months.



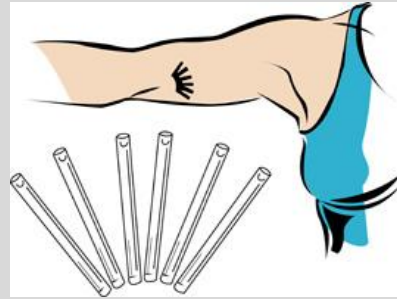
20

7. Hormonal

Hormone Implants: (99% effective)

Implanon, Nexplanon

– contains hormone **progestin**.
Implants last 3 - 5 years.



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7. Hormonal

Hormonal Patch: ~~Ortho-Evra (discontinued in US)~~

Xulane patch & Twirla patch

(91% effective)

Contains estrogen & progestin.

New patch put on every week for 3 weeks,
go patch-less for 1 week.



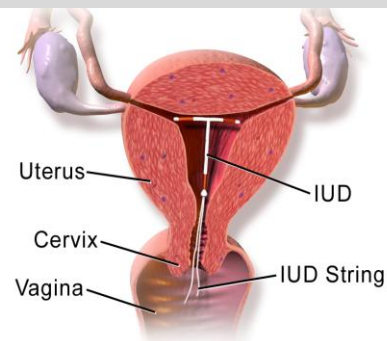
*The patch isn't for everyone — **high levels of hormones in patch (higher than other methods)**, because it's transdermal. People w/ history of blood clots, stroke, or estrogen-sensitive cancers (breast, ovarian, uterine) should avoid this form BC. This*

22

7. Hormonal and/or copper-based

Intrauterine device (IUD): (99% effective)

- > Small T-shaped device inserted into uterus by doctor.
- > More expensive than other forms
- > Must be inserted by physician,
- > Can sometimes shift out of place,
- > BUT can last 10 -12 yrs!



Intrauterine Device (IUD)

- > **Mirena, Kyleena, Liletta, and Skyla** contains progesterone (good 3 – 7 yrs)
- > **ParaGard** contains small amt. copper. (good 12 years!)

> Progesterone works by negative feedback to inhibit GnRH, LH, & FSH preventing ovulation, thickening cervical mucus. Copper disrupts sperm movement.

It does NOT cause abortion!

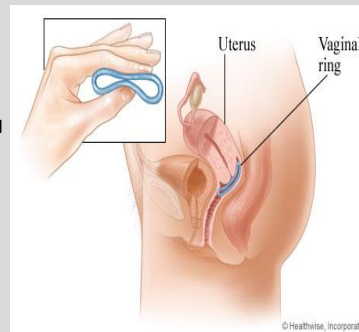
23

7. Hormonal

Cervical Ring

NuvaRing (brand name) & EluRyng (generic form)
for month protection, and
Annovera good for 1 year:
(91% effective)

- > small ring containing estrogen ~~and progestin~~ placed over the cervix.
- > Put fresh ring in, stays in place 3 weeks
- > Go without ring for 1 week (no hormone, IF you want to have period).
- > If not want period, keep ring in place **For 4 weeks.**
- > depends on proper placement.



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Emergency Contraception: 3 Types

1. Paragard IUD - within 5 days after having unprotected sex.
The most effective type of emergency contraception.

2. Emergency contraceptive pill

Ella (ulipristal acetate) – also effective, but need prescription. Take within 5 days unprotected sex. (It can take up to 6 days for sperm to meet an egg.)

or

Plan B (Levonorgestrel) – No prescription. Over-the-counter.

> Take 3 days after unprotected sex.

- If a woman hasn't ovulated yet, emergency contraception prevents her from ovulating by delivering high dose of progesterone.

> If already ovulated at time of sex, can still get pregnant.

-Plan B does not cause an abortion!

> If you are already pregnant it won't stop it.



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RU486 (Mifepristone) – THIS causes an abortion.

- Mifepristone can be used in lower doses as emergency contraception.

- At higher doses is abortifacient (97% effective), has been used for decades, and is shown to be safe (safer than Viagra! Click [HERE](#) to read about safety.

- Taken after pregnant, causes abortion during first 2 months of pregnancy (< 8wks) by blocking progesterone receptors.

- Causes loss of placental attachment to uterine wall.

- 2 days after taking mifepristone, need injection of **misoprostol (cytotec)** – pronounced “misoprawstawl”
= labor inducer to expel embryo & placenta within 4 – 5 hours.
(If retained can become septic)



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Male Hormonal Birth Control:

Pill – combo of testosterone and progestin to inhibit sperm development (by inhibiting pituitary LH & FSH).

Injection (2003) – 100% effective in clinical trials in Australia (55 men, for 1 year). Hormone injection of progestin turns off normal production of sperm (by inhibiting pituitary LH & FSH).

Implant – testosterone implant inhibits sperm production by inhibiting pituitary LH & FSH.

Gel - testosterone & progestin gel that inhibits sperm production by inhibiting pituitary LH & FSH.

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Male Birth Control – NOT hormonal:

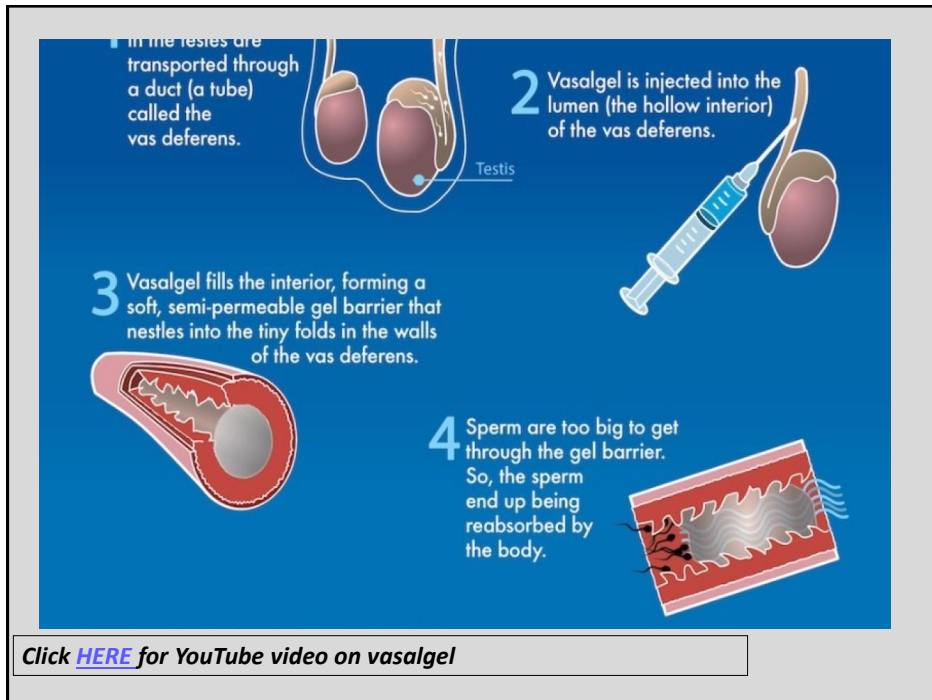
Reversible Inhibition of Sperm Under Guidance (RISUG) or simply

Vasalgel

- Reversible and non-hormonal
- QUICK (10 – 15 min procedure in office)
- Cheap.
- Long-term effectiveness (10 yrs)
- Inject gel into vas deferens (blocks sperm transport)
- Remove when want be getting injection that dissolves gel.
- Studies show quick return to normal fertility.
- In USA, clinical trials began in 2014, for possible introduction to market in 2018.
- (*2020 update: Clinical trials have still not been completed.)
- Newest estimate at availability is 2026

Click [HERE](#) to read more about Vas occlusive contraception.

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Review:

Contraceptive methods:

- Abstinence
- Avoidance
- Breast feeding
- Permanent (vasectomy or tubaligation)
- Spermicides
- Barrier (male/female condoms, cervical cap, diaphragm)
- Hormonal (pill, injections, implants, patches, IUD, cervical ring, emergency contraception)
- Abortion drugs: RU-486 (mifepristone) followed by cytotec
- Male birth control: Vasalgel

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30

7. Sexually Transmitted Diseases (STDs)

- 2/3 of the people in the US infected with STDs are <25 years old
- Can result in mild disease, infertility, severe disease, and death
- Many have few or no symptoms, so are passed unknowingly to partners
- Some STDs can also be passed to infants during birth

31

Sexual Behavior in College Students

- Approximately 80% of college students are sexually active
 <30% of those surveyed reported consistent use of condoms
- 35% have had 6 or more partners

<http://www.cdc.gov/mmwr/preview/mmwrhtml/00049859.htm>

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"But I have only had unprotected sex with a few different people - my risk is low....."

- unprotected sex exposes you to every person your partner has had unprotected sex with as well
- if you assume that every person you have had sex with had the same number of previous partners as you did - for example:
 - you were the first partner of your first partner: exposure = 1
 - you were the second partner for your second partner: exposure = $2^2 - 1 = (4 - 1) = 3$
 - you were the fourth partner for your 4th partner: exposure = $2^4 - 1 = (16 - 1) = 15$
 - You were the 5th partner for your 5th partner: exposure = $2^5 - 1 = (32 - 1) = 31$
 - you were the 10th partner for your 10th partner: exposure = $2^{10} - 1 = 1,024 - 1 = 1,023$

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Some common STDs:

Bacterial STDs

1. **Chlamydia** – caused by *Chlamydia trachomatis*, the most frequently reported infectious disease in the U.S. highly contagious and often without noticeable symptoms
2. **Gonorrhea** -caused by the bacterium *Neisseria gonorrhoeae*. See painful urination, discharge, or no symptoms at all. Is becoming resistant to most antibiotics!
3. **Syphilis** – caused by *Treponema pallidum*.

Viral STDs

- 1. herpes simplex virus** *simplex 1 – causes cold sores*
 simplex 2 – causes genital herpes
- 2. HIV** (human immunodeficiency virus) – can be latent for many years, may lead to AIDS (acquired immunodeficiency syndrome).
- 3. HPV** (human papilloma virus) – over 40 strains!

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Bacterial STDs

1. **Chlamydia** – caused by *Chlamydia trachomatis*, is the most frequently reported infectious disease in the U.S.. Highly contagious and often without noticeable symptoms. may cause discharge, pelvic pain, or no symptoms at all.

Rates of chlamydia infection in USA are INCREASING!



35

Bacterial STDs

2. **Gonorrhea** -caused by the bacterium *Neisseria gonorrhoeae*. Painful urination, discharge, genital puss, or no symptoms at all. Is becoming resistant to most antibiotics!



Penile discharge in male w/ gonorrhea



Cervical discharge in female w/ gonorrhea



Ocular discharge in baby w/ gonorrhea

36

Bacterial STDs

3. Syphilis – caused by *Treponema pallidum*. Infection has 3 stages:



Stage 1: Chancres
("shankers")
= hard, painless
bumps at site of entry,
last 1 – 5 weeks.



**Stage 2: Reddish,
brown rash over
entire body.**



Stage 3: Gummas
("gum-ah")
= lesions on exterior
and interior of body.



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Viral STDs

1. Herpes Simplex Virus (HSV) – simplex 1 (cold sores)



HSV can be latent, and then reactivate
into painful blisters, which show up at
sites of infection.

→ no cure; treatment is to minimize
outbreak severity

38

Viral STDs

1. Herpes Simplex Virus (HSV) – simplex 2 (genital)



CDC says 1 in 6 Americans infected with Herpes simplex 2 virus.

HSV can be latent, and then reactivate into painful blisters, which show up at sites of infection.



→ no cure; treatment is to minimize outbreak severity

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Viral STDs

2. HPV – over 40 strains!

Present in 50% of sexually active adult population. Can cause polyps and warts at site of contact. Can lead to increased risk for cancer.

Vaccine! (Gardasil)

Cervical polyps



As viewed through a speculum



Sagittal view

ADAM



Cervical warts

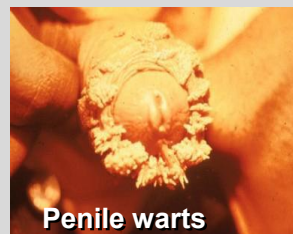
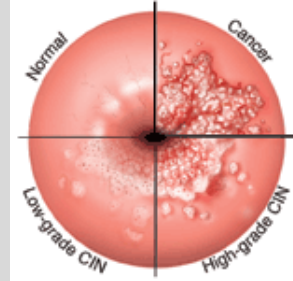


Vaginal warts



Throat cancer?

Cervical cancer stages



Penile warts

40

Viral STDs

3. HIV:

- Nearly 35 million people worldwide are infected.
- Approximately 1.4 million people in North America are infected.
- Virus attacks immune system (T-cells). Your body is supposed to produce millions of T-cells daily. T-cell counts is a method to track progression of HIV infection.

-4 stages of HIV:

- 1. Acute primary infection** (some people's immune system defeats virus)
Flu-like symptoms, soreness, fever.
- 2. Latent infection** - virus can lie dormant in body for 10 years, but still infectious.
- 3. Symptomatic infection** - viral load increases, drop in T-cells, opportunistic infections, weight loss.
- 4. AIDS** - immune system compromised, T-cell counts < 200 cells/cubic ml blood.

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Other common STDs (non bacterial or viral):

STD caused by protozoan:

Trichomoniasis (*Trichomonas vaginalis*)

70% of infected people do not show symptoms.

Symptoms range from mild irritation to severe inflammation within 5 to 28 days after infection, but might develop symptoms much later.

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

Women 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.



**Penile inflammation
trichomoniasis**



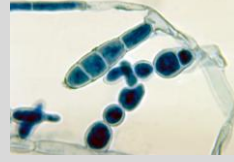
**Cervix inflammation
trichomoniasis**

42

STD's* caused by fungi

A) Jock itch (*Tenia cruris*)

itching or a burning sensation in the groin area, thigh skin folds, or anus. It may involve the inner thighs and genital areas



Inner thigh inflammation with *T. cruris*



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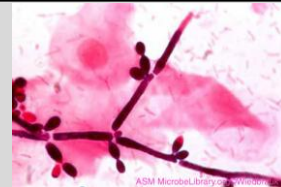
STD's* caused by fungi

B) Yeast infections (*Candida albicans*)

Can occur in men or women.

C. albicans lives in 80% of the human population without causing harmful effects, although overgrowth of the fungus results in **candidiasis**.

Common as vaginal yeast infection or in mouth as "thrush"



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Other common STDs:

STD's caused by parasites:

Pubic lice or crabs (*Pediculosis pubis*)

Pubic lice is a parasitic insect that feeds exclusively on blood.

Can be spread by intimate contact with an infected person. Can live in any body area covered by hair, even eyelashes!

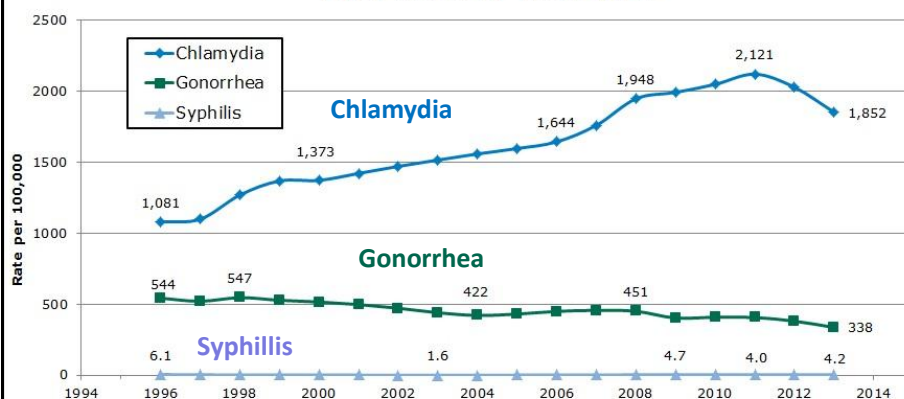


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STDs – the long term picture, nation-wide.

Figure 1

Chlamydia, Gonorrhea, and Syphilis Rates (per 100,000), Ages 15 to 19, 1996-2013



Sources: Data for 1996–2000: Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance, 2000. Atlanta, GA: U.S. Department of Health and Human Services, September 2001. Available at <http://www.cdc.gov/std/stats00/default.htm>. Data for 2001–2005: Centers for Disease Control and Prevention. Trends in Reportable Sexually Transmitted Diseases in the United States, Atlanta, GA. Department of Health and Human Services, November 2007. Available at <http://www.cdc.gov/std/stats/toc2006.htm>. Data for 2006–2009: Centers for Disease Control and Prevention. (2011). Sexually transmitted disease surveillance, 2010. Atlanta, GA: U.S. Department of Health and Human Services. Available at: <http://www.cdc.gov/std/stats10/toc.htm>. Data for 2009–2013: Centers for Disease Control and Prevention. (2014) Sexually transmitted disease surveillance, 2013. Atlanta, GA. Department of Health and Human Services. Available at: <http://www.cdc.gov/std/stats13/default.htm>.

Child Trends
DATA BANK

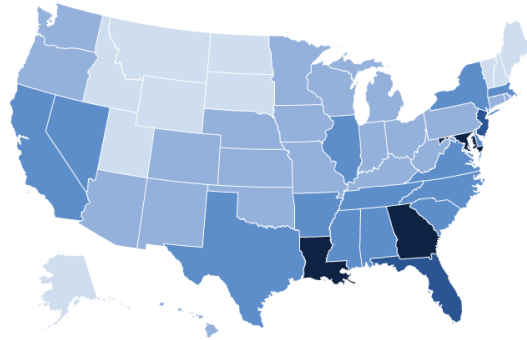
46

**STDs – the
long term
picture,
nation-wide.**

**South Carolina and
Louisiana rank #1 for
new HIV cases compared
with other states!**

SOUTH IS HOME TO MOST NEW HIV/AIDS CASES

At the end of 2010, the South accounted for 45 percent of new AIDS diagnoses in the United States. The map below shows the rate of diagnoses in 2013.



**Estimated rates of HIV diagnoses, adults and adolescents
(per 100,000)**



SOURCES

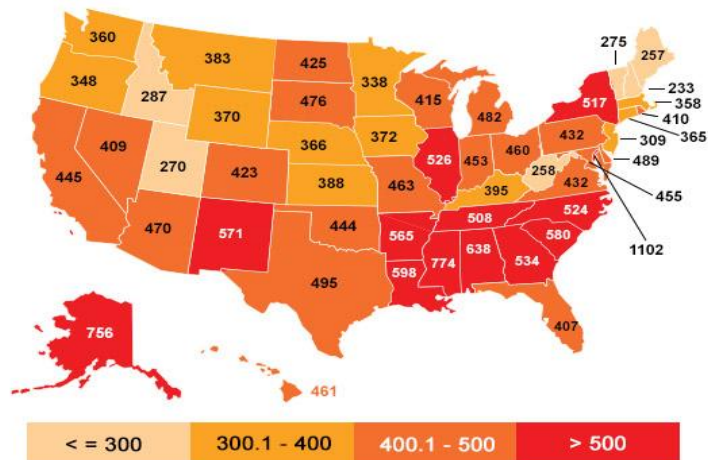
The Henry J. Kaiser Family Foundation, Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) Atlas



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<http://www.livescience.com/48100-sexually-transmitted-infections-50-states-map.html>

CHLAMYDIA BY STATE 2012 – source CDC Rate per 100,000 people



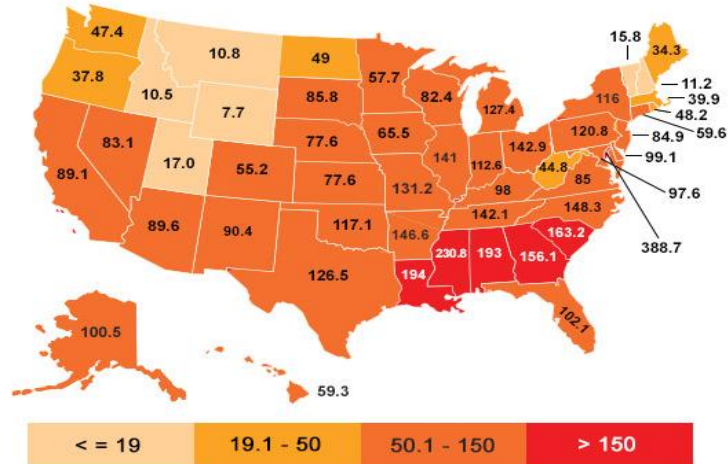
Source: CDC | ANITA RAHMAN / © LiveScience.com

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<http://www.livescience.com/48100-sexually-transmitted-infections-50-states-map.html>

GONORRHEA BY STATE 2012 – source CDC

Rate per 100,000 people



Source: CDC | ANITA RAHMAN / © LiveScience.com

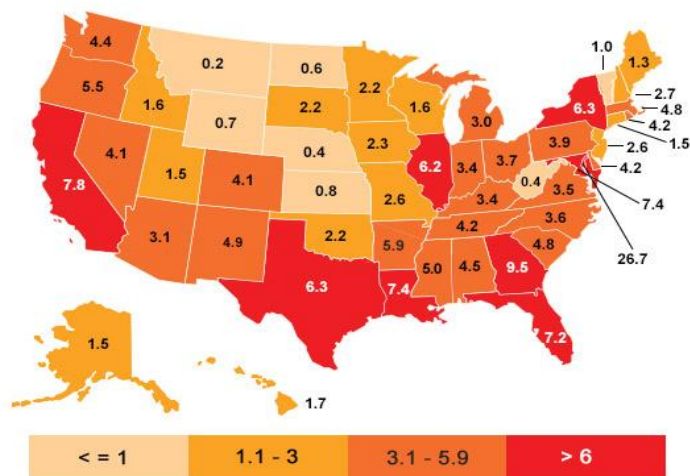
49

<http://www.livescience.com/48100-sexually-transmitted-infections-50-states-map.html>

PRIMARY AND SECONDARY SYPHILIS BY STATE

Rate per 100,000 people

2012 – source CDC

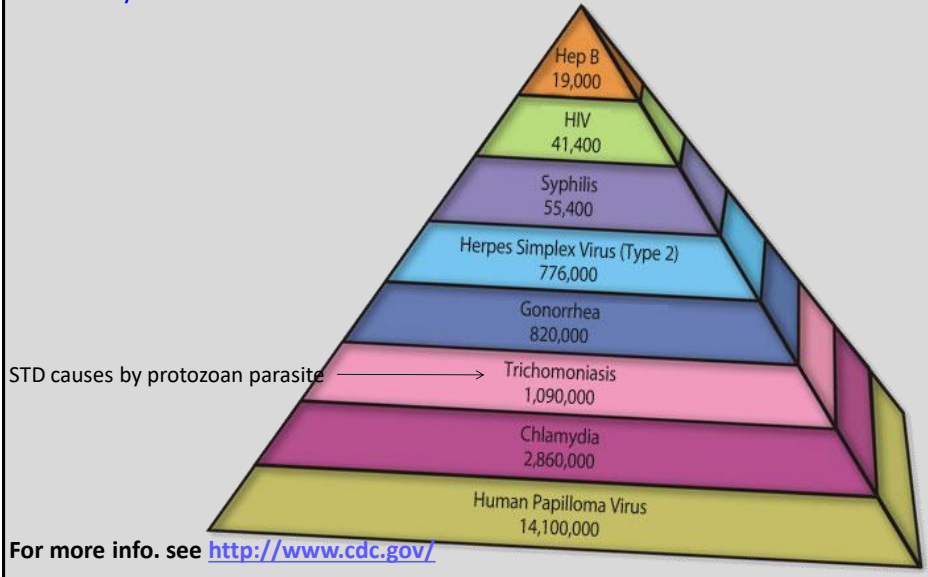


Source: CDC | ANITA RAHMAN / © LiveScience.com

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Infection Rates of Diseases in the U.S. (per year) – Most are STDs

American Sexual Health Association. Sexually Transmitted Diseases in America: How Many Cases and at What Cost? December 1998.



51

Review:

STDs

- Bacterial (Chlamydia, Syphilis, Gonorrhea)
- Viral (HIV, HPV, Herpes)
- Protozoan (Trichomoniasis)
- Fungal (Jock itch, yeast infections)
- Parasites (Pubic lice)
- Infection rates in US/year (most to least common)

52

52