



Asking Questions about Sexually Transmitted Diseases (STDs)

Michelle Malizio, Yatsenko Laboratory



Introduction to Sex Education



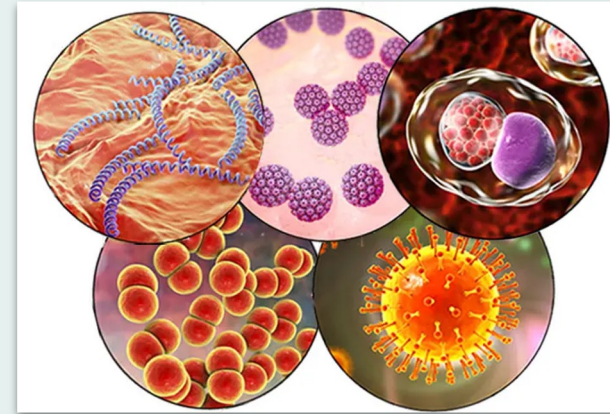
Sex education teaches individuals of all ages about a variety of topics related to sex and sexuality. Sex education is an important part of personal and public health for a number of reasons.

This includes...

- ★ Helping people make informed choices about their sexual health and behavior
- ★ Reducing the number of unintended pregnancies
- ★ Reducing STD contraction rates

Introduction to STDs

- ★ Sexually transmitted diseases (STDs) are infections that are spread from one person to another typically through sexual contact. This includes vaginal, anal, and/or oral sex.
- ★ These diseases can be caused by bacteria, viruses, or parasites and can be passed through blood, semen, vaginal, and bodily fluids.
- ★ Many people who have an STD do not show symptoms
- ★ Most STDs can be treated with antibiotic medication
- ★ Engaging in safe sex practices reduces the risk of contracting/transmitting infections.



Safe Sex Practices - STDs



- ★ Using condoms or dental dams reduces the risk of STDs by blocking transmission



- ★ Reducing your number of sexual partners decreases STD contraction and transmission rates



- ★ Get vaccinated against sexually transmitted infections. Vaccines are currently available to protect against HPV, hepatitis A, and hepatitis B.



- ★ Get regular STD testing to screen for the presence of infections. Testing may involve giving a blood, urine, tissue, and/or saliva sample.

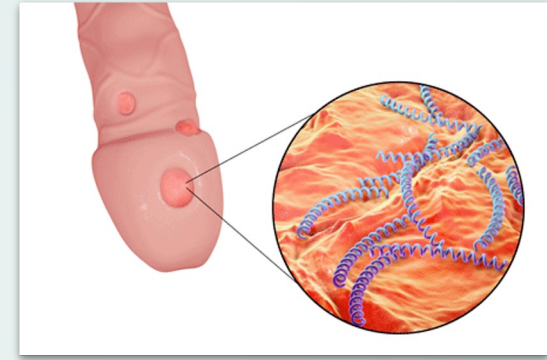


- ★ Abstinence or not engaging in sexual activity is the only 100% effective way to prevent STDs

Asking Questions about Syphilis

What is Syphilis?

- ★ Syphilis is a common STD caused by a bacteria called *Treponema pallidum*. This infection develops in several stages.
- ★ Syphilis can be identified by a single or multiple painless sore(s) on the location where syphilis entered the body
- ★ Once this sore goes away, the symptoms of the infection are less obvious, so it is important to get tested regularly!
 - Syphilis testing requires a blood test rather than a typical urine sample!



Potential Research Question

Do primary and secondary syphilis rates differ by region in the United States?

Syphilis Dataset to Explore

Visit the CDC's Website

Go to Data & Stats > STDs > [AtlasPlus](#)

AtlasPlus is an interactive web tool that gives you access to the CDC's National Center for HIV, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) Data, including information on syphilis.



Step 1: What data do you want to see? Select *STD*

Step 2: How do you want to see them? Select from *Maps, Charts, Table, or Download Data*

Step 3: Adjust settings based on *Indicator* (Primary and Secondary Syphilis) and *Geography* (Region); you will also need to select a year.

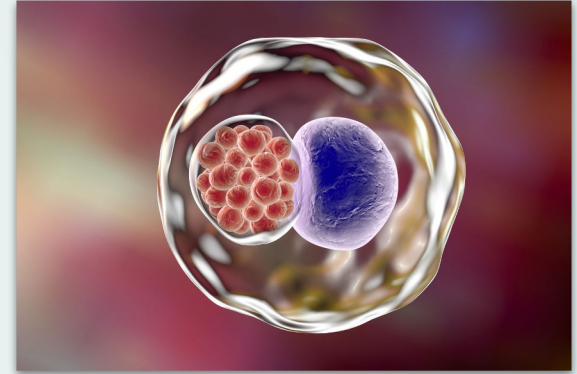
Step 4: Arrange by *Geography* and analyze dataset!

***Click on image to access dataset link!

Asking Questions about Chlamydia

What is Chlamydia?

- ★ Chlamydia is a common STD caused by a bacteria called *Chlamydia trachomatis*
- ★ Most people with chlamydia *do not* have symptoms, so it is important to regularly get tested!
- ★ If symptoms are present...
 - Women may experience abnormal vaginal discharge and a burning sensation while peeing.
 - Men may experience a discharge from their penis, a burning sensation while peeing, and pain and swelling in their testicles.



Potential Research Question

Do chlamydia rates differ based on demographic factors, such as age, gender, and/or race?

Chlamydia Datasets to Explore

The previous CDC's AtlasPlus tool (slide 6) can give you information on a national scale. To look for information for specific states, visit that state's department of health website. For example...

Visit the Pennsylvania Department of Health's Website

Go to Health > All Health Topics > Health Statistics > EDDIE

EDDIE is an interactive web tool that has information on various health statistics in Pennsylvania, including specific information on chlamydia.

Step 1: Select 1. *Disease*, 2. *Sexually Transmitted Diseases*

Step 2: Sort by *State*

Step 3: Select report type in the form of a *Map, Table, Chart*

Step 4: Filter results based on 1. *Sexually transmitted disease*, 2. *County/State*, 3. *Year*

Step 5: Adjust settings if needed > *Create* and analyze dataset!



pennsylvania
DEPARTMENT OF HEALTH

***Click on image to access dataset link!

Asking Questions about Gonorrhea

What is Gonorrhea?

- ★ Gonorrhea is a common STD caused by a bacteria called *Neisseria gonorrhoeae*.
- ★ Most people with gonorrhea *do not* have symptoms, so it is important to get tested regularly!
- ★ If symptoms are present...
 - Women may experience increased vaginal discharge and a painful or burning sensation while peeing, and vaginal bleeding between periods.
 - Men may experience a white, yellow, or green discharge from their penis, a burning sensation while peeing, and pain and swelling in their testicles.
 - Rectal soreness, bleeding, discharge, anal itching, and painful bowel movements may be present.



Potential Research Question

How have Chlamydia prevalence rates changed over time in California?



Gonorrhea Dataset to Explore



Visit the California Department of Public Health Website

Click “I am looking for” > Sexually Transmitted Diseases > Data & Statistics

The Sexually Transmitted Infection Data provides tables, powerpoints, and annual reports on data and statistics for STIs, including gonorrhea, in the state of California.

Step 1: Select the *Gonorrhea Tables* to view excel file with surveillance report

Step 2: Select tab *Table GC-5* and look at columns *G-K* to see gonorrhea rates from 2016-2020 in each California county listed

Step 3: Analyze dataset!



***Click on image to access dataset link!

Additional Datasets to Explore



**World Health
Organization**



TEXAS
Health and Human
Services



**Department of
Health**

