



# Antibiotics & You

A guide on how to prevent infection and use antibiotics safely

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Presented by:

**MARR**

Michigan Antibiotic Resistance  
Reduction Coalition

# What you will learn today

- ✓ **What germs are** and how to prevent the spread of germs, including the virus that causes COVID-19
- ✓ Why **antibiotics treat infections only caused by bacteria, NOT viruses**
- ✓ **What antibiotic resistance is**, how it happens, and what you can do to help prevent it
- ✓ **How antibiotics work** and how to use antibiotics more safely

# Germs are **EVERYWHERE!**

Some germs are bad and can make you sick, but some are good!

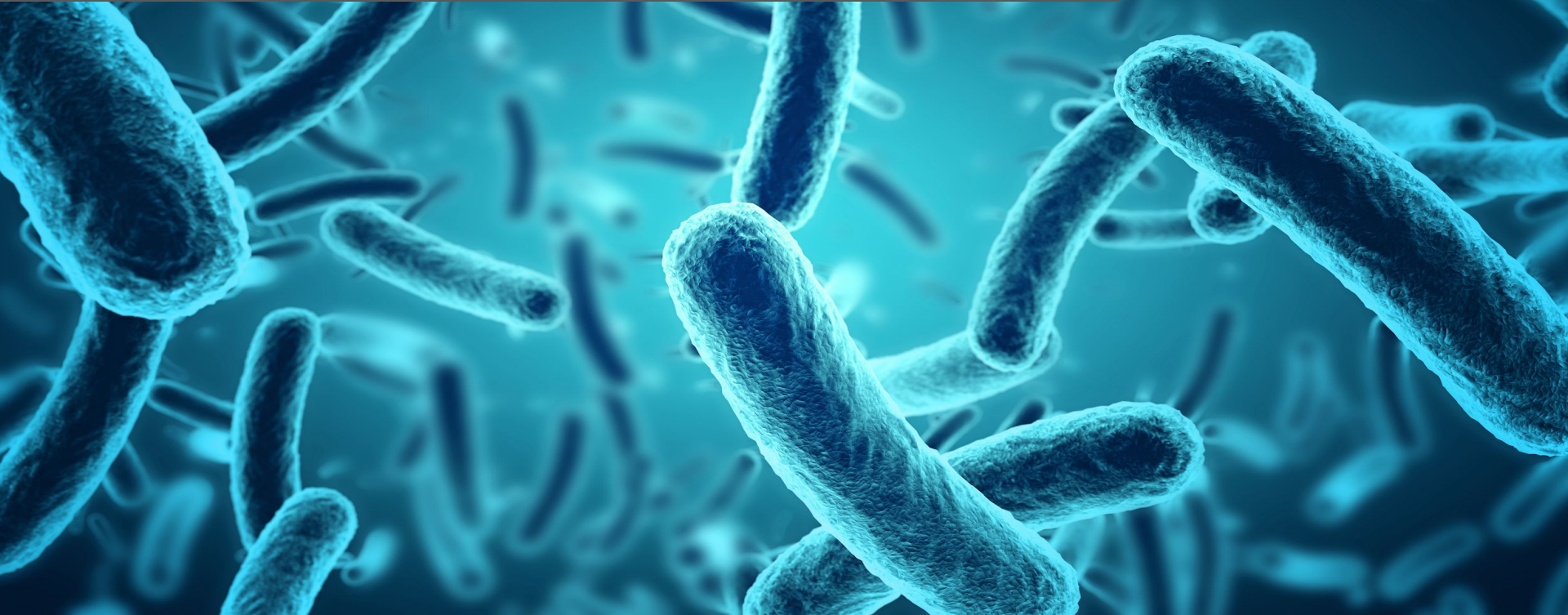


# Bacteria and Viruses

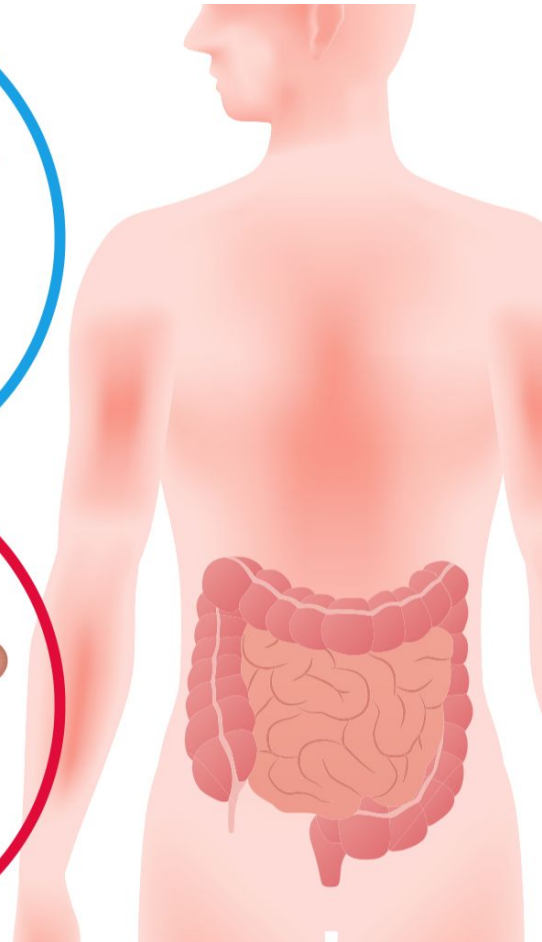
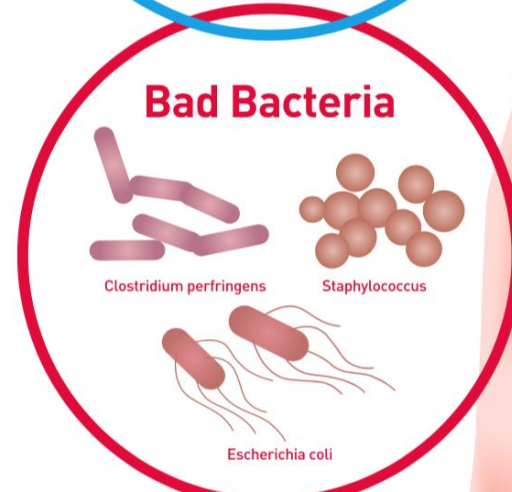
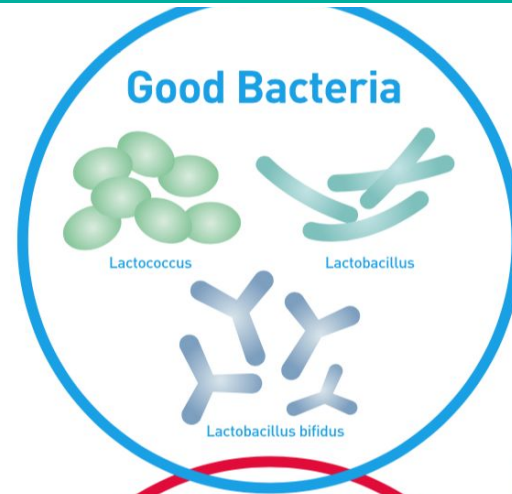




This is an example of **bacteria**

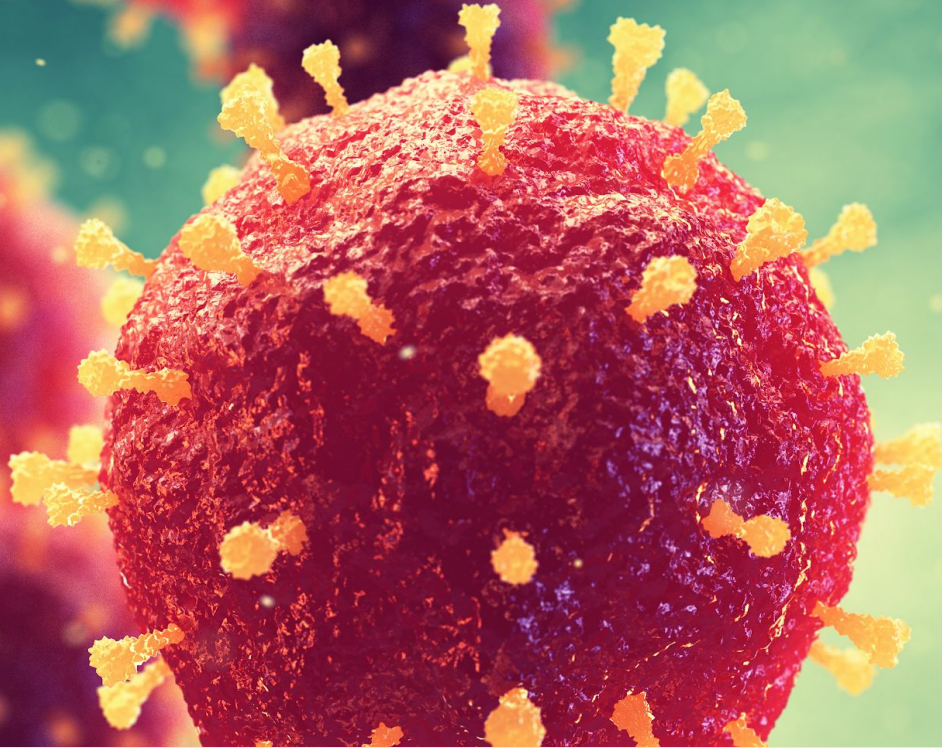


Some germs, like **bacteria**, live inside your body.



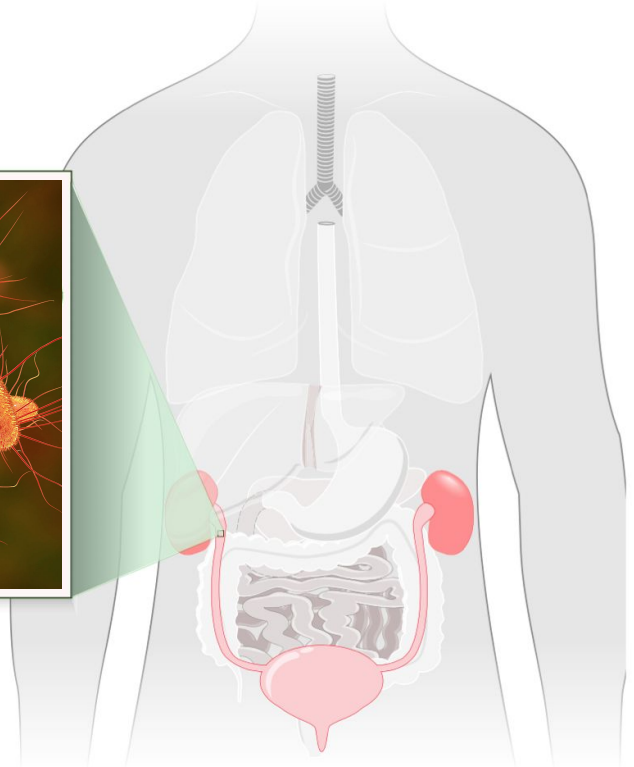


This is an example of a **virus**



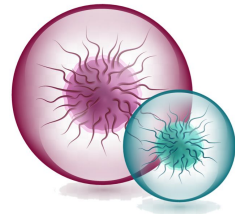
Germs can make  
you sick if they get  
inside your body

(Escherichia coli)





# Germs get in your body through...

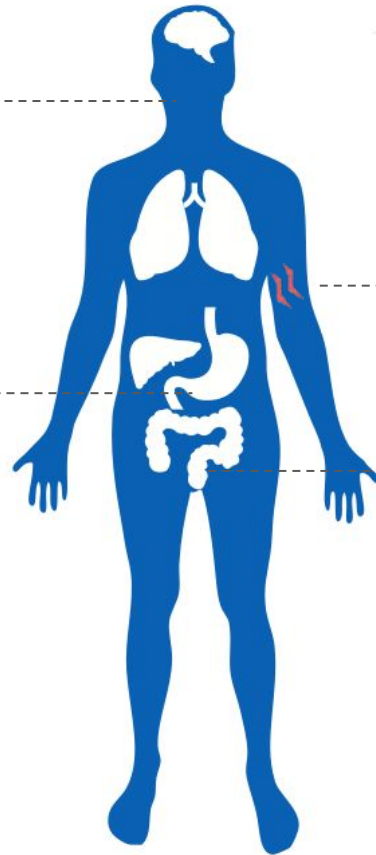


The nose and mouth



Cuts or breaks in the skin

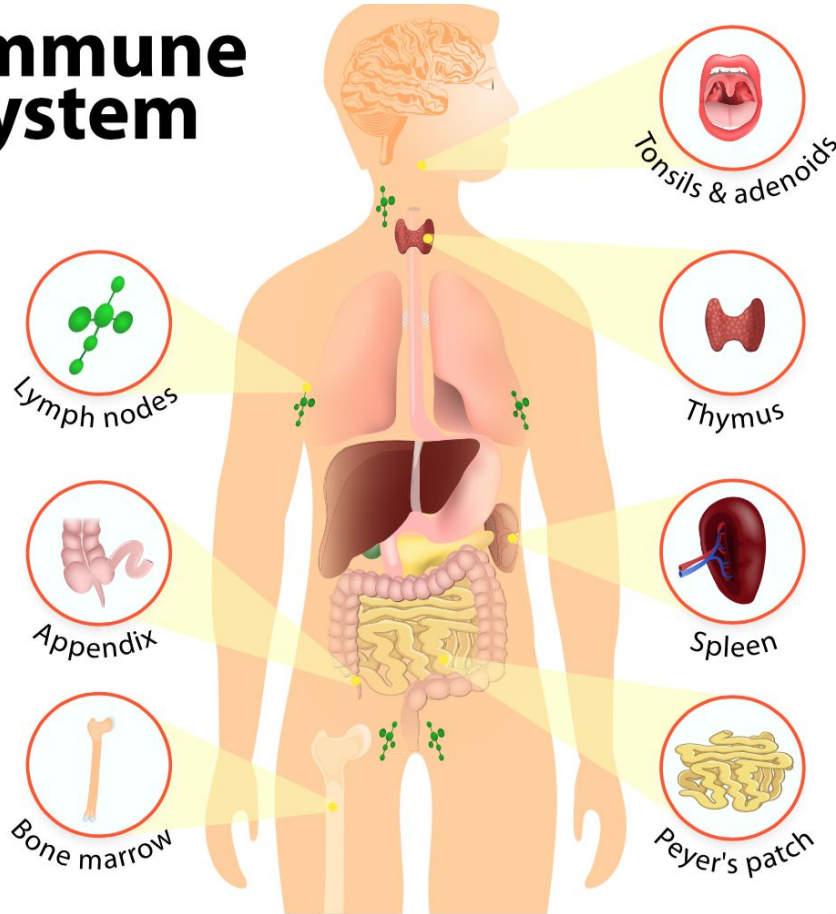
The digestive tract (gut)



The urinary tract or genitals



# Immune system



Your immune system can attack these germs and prevent infection

# Preventing the Spread of Germs

- Social distance from anyone who has symptoms
- Wear a facemask in public areas if you have symptoms of illness
- Stay home when you are sick
- Don't touch your face
- Wash your hands often



# Preventing the Spread of Germs



**Clean and disinfect surfaces**

Cell phones have more bacteria than toilets!



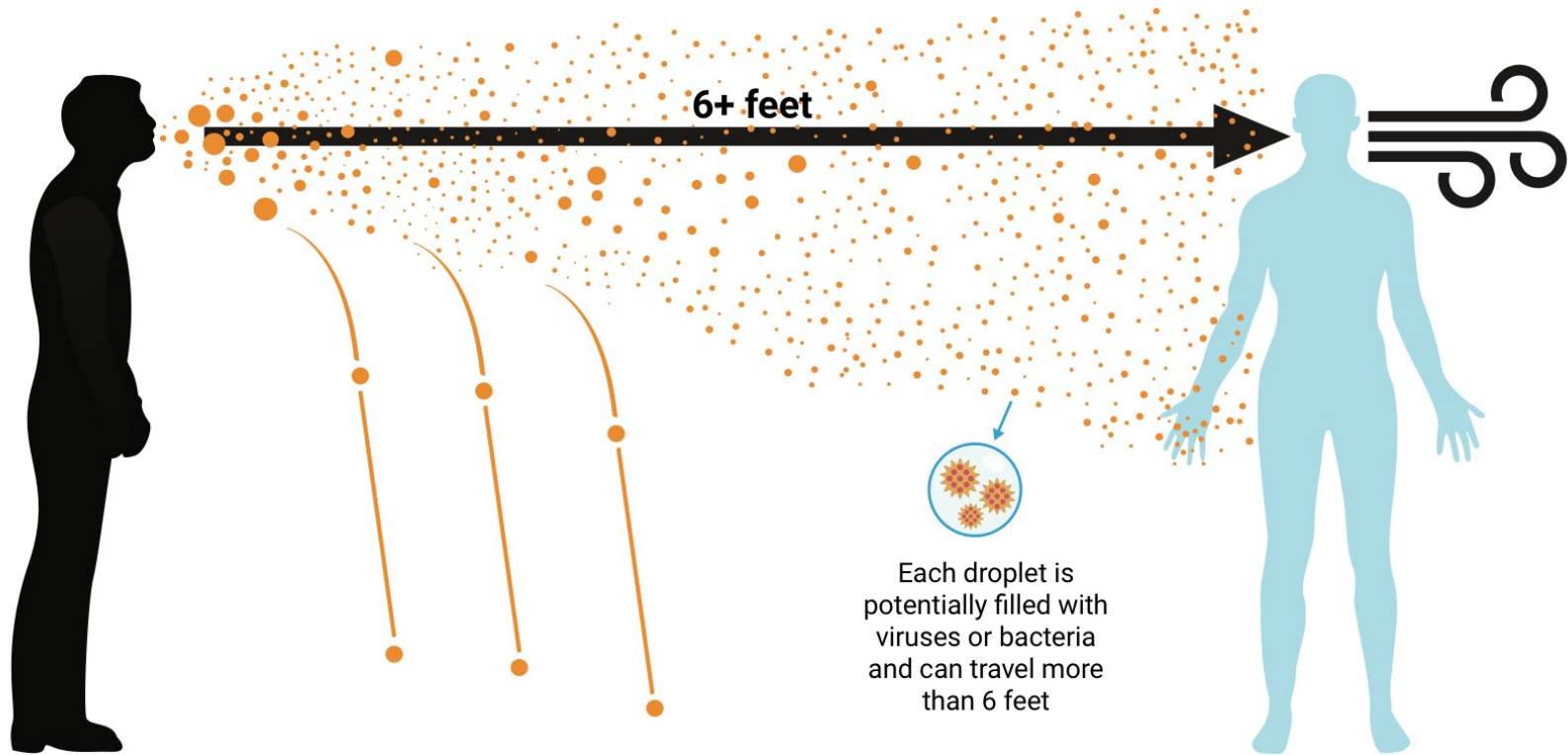
# Preventing the Spread of Germs

## When you cough or sneeze:

- Cover your mouth and nose with a tissue, then throw it away
- OR cough or sneeze into your elbow, not your hands!
- Always clean your hands after you cough or sneeze



## Coughing or sneezing and air spreading germs



## Sneezing into a tissue traps more droplets than sneezing into your elbow or hands



**Hand washing is the single most effective way to prevent the spread of infections**

**Your hands carry germs you can't see**



**Wash your hands**

[www.cdc.gov/handwashing](http://www.cdc.gov/handwashing)





**Wet hands** with water

**Add soap**

**Scrub** for at least 20  
seconds (sing the ABC song)

**Rinse** with water

**Dry**



# No soap and water?

Hand sanitizer (at least 60% alcohol) kills most germs.

BUT, they **do not kill**  
Norovirus (stomach flu) or  
C. diff (dangerous diarrhea)



# Preventing illness with vaccinations

## Michigan Campaign - “Facing the Flu Together”



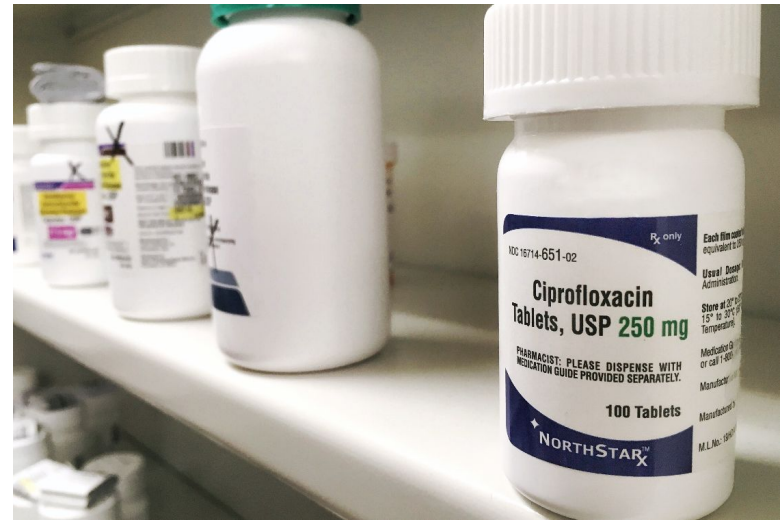
- Everyone 6 months and older should get a flu vaccine every year, with rare exceptions
- Patients over the age of 65 are at highest risk for flu- related complications and death

# Antibiotics

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An **antibiotic** is a **type of medicine** used for treating infections caused by **bacteria**



# Antibiotics do not work on viruses

**An antibiotic will not make you feel better if you have a virus, like a cold, flu, or runny nose – even if your mucus is thick, yellow or green**



# Antibiotics to prevent and treat dental infections



- You may no longer need an antibiotic before your dental appointment
- Antibiotics are not always necessary for oral infections

# Antibiotics are life-saving drugs, but...



## Common side-effects

- Nausea
- Vomiting
- Diarrhea
- Yeast infection



## Allergic reactions

- Full body rash
- Difficulty breathing
- Swelling of mouth, lips, and/or tongue



A “**broad spectrum**” antibiotic kills a wider range of bacteria than a “**narrow spectrum**” antibiotic.



# Antibiotics are life-saving drugs, but...



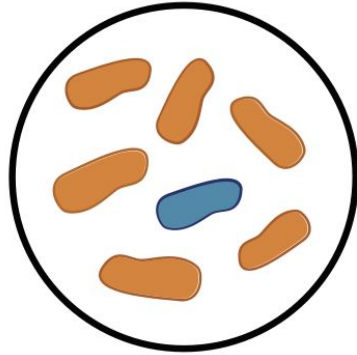
One dose of an antibiotic can cause Serious/life threatening side effect (diarrhea)!



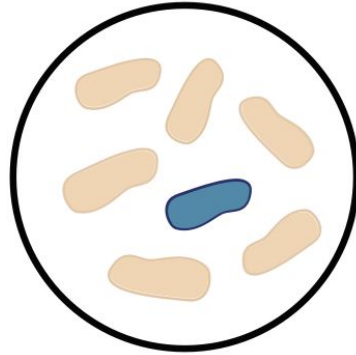
# Antibiotic Resistance

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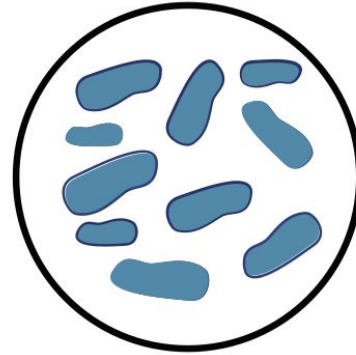
# Taking antibiotics may lead to antibiotic resistance



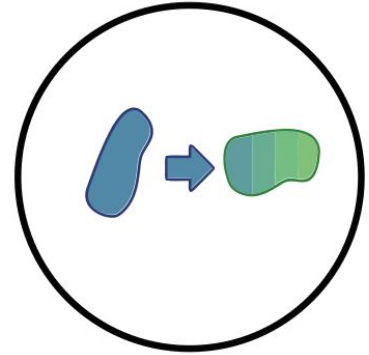
Some bacteria living in our body may be antibiotic resistant



Antibiotics kill the bacteria causing the infection as well as our good bacteria



The antibiotic resistant bacteria are now able to take over



Some bacteria may pass on their antibiotic resistance to other bacteria

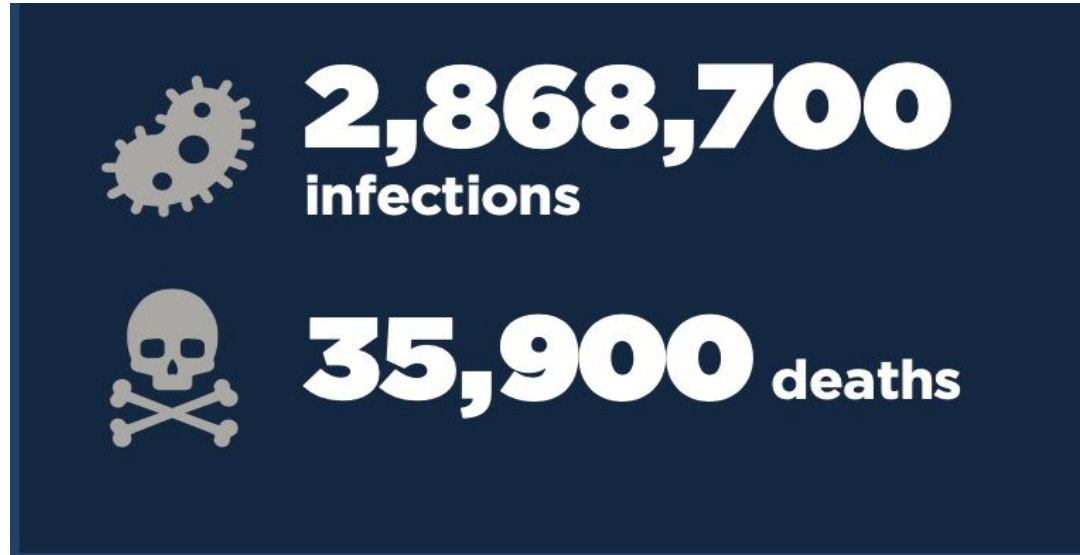
 - Normal bacterium

 - Dead bacterium

 - Resistant bacterium

# Antibiotic resistance is one of the greatest global health challenges of modern time

**Each year  
in the US:**



**The use of antibiotics is the single most important factor leading to antibiotic resistance around the world.**





# Using Antibiotics More Safely

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# Inappropriate antibiotic use

Out of all the antibiotics prescribed in the US:



# How to be an antibiotic steward

- **Do not pressure your doctor to prescribe an antibiotic**
- Ask about the best way to treat your symptoms such as coughs, congestion, runny nose & fever





# How to be an antibiotic steward

**Tell your doctor that you are concerned about antibiotic resistance and ask:**

- Can your doctor prescribe a “narrow spectrum” antibiotic for your infection?
- Can your infection be treated with fewer doses?
- Would it be OK for you to call the office if you feel better to discuss stopping antibiotics early?

# What's got you sick?

<u>Bacteria</u>	<u>Can be either</u>	<u>Virus</u>
Strep throat Skin infection Urinary tract infection (UTI)	Ear infection Bronchitis Pneumonia Sinus infection	Common cold Most coughs Sore throat Coronavirus Flu
		
Antibiotics? <b>YES</b>	Antibiotics? <b>MAYBE</b>	Antibiotics? <b>NO</b>



# If you are prescribed an antibiotic, make sure you take it correctly!

- ✓ Make sure directions are understood
- ✓ Take at the same time(s) each day
- ✓ Do not skip doses
- ✓ Never share antibiotics
- ✓ Do not save antibiotics for next time



# Remember:

1. Taking antibiotics can have dangerous side effects and leads to antibiotic resistance
2. Antibiotics do not work for viruses that cause colds, sore throats, flu, and most coughs
3. Do not pressure your doctor to prescribe an antibiotic
4. Stop the spread of germs by washing your hands, covering your cough or sneeze, and staying home when you are sick. To prevent the spread of COVID-19, you should wear a face mask when you are outside your home.



[Stop the spread of COVID-19](#)

# Thank you!



For more information, visit:

**[www.mi-marr.org](http://www.mi-marr.org)**