



E. COLI
Escherichia coli

MICROBE TYPE:
Bad Bacteria

POWERS:
Sneaks into poop, then onto your hands, and into your mouth! Gives you diarrhea.

MICROBE BUSTERS:



- ✓ Eat fully cooked meat
- ✓ Drink clean water
- ✓ Wash fruits and veggies
- ✓ Wash hands after using the bathroom and before eating
- ✗ Avoid unpasteurized milk



TERTIAN FEVER
Plasmodium Vivax

MICROBE TYPE:
Bad Protozoa

POWERS:
Sneaks in through dirty mosquito bites and gives you a fever, nausea, and bad headaches!

MICROBE BUSTERS:



- ✓ Use bug spray
- ✓ Use mosquito nets



BLASTO
Blastomyces dermatitidis

MICROBE TYPE:
Bad Fungus

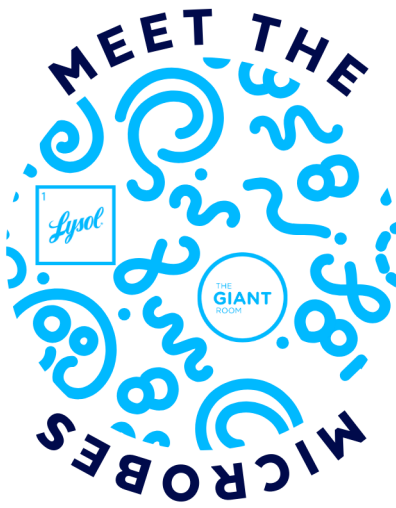
POWERS:
Sneaks in through your breathing and gives you a lung infection and chest pain.

MICROBE BUSTERS:



- ✓ Wear a mask if digging or playing in soil
- ✓ Wash hands
- ✓ Clean your clothes and shoes after playing outside

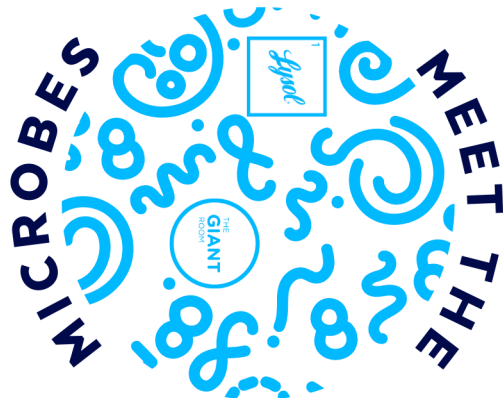
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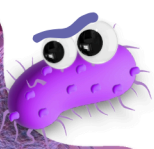
Courtesy: CDC* - Dr. Green



Courtesy: National Institute of Allergy & Infectious Diseases*



Courtesy: CDC* - Dr. Libero Ajello





THE RAGE
Rabies

MICROBE TYPE:
Bad Virus

POWERS:

Sneaks in through sick animal bites (bats, raccoons, skunks, foxes, and sometimes dogs and cats); can hide in your body before it makes you sick. Gives you pain and weakens your muscles.

MICROBE BUSTERS:





- ✓ Get your pets vaccinated
- ✓ Tell an adult if you get bitten
- ✗ Don't touch animals outside





STOMACH BUG
Norovirus

MICROBE TYPE:
Bad Virus

POWERS:

Sneaks in from dirty hands, food, and surfaces. Loves to travel through hugging or touching hands with a sick person! Gives you diarrhea and makes you vomit.

MICROBE BUSTERS:








- ✓ Wash hands
- ✓ Wash fruits and veggies
- ✓ Clean surfaces
- ✓ Wash dirty dishes
- ✗ Don't eat old food or street food
- ✗ Don't eat raw seafood





CORONAVIRUS
SARS-CoV-2

MICROBE TYPE:
Bad Virus

POWERS:

Travels through the air when a sick person talks, coughs, or sneezes! Gives you fever, shortness of breath, and hijacks your smell and taste senses!

MICROBE BUSTERS:






- ✓ Wash hands
- ✓ Get vaccinated
- ✓ Wear a mask in crowded places
- ✓ Distance from sick people

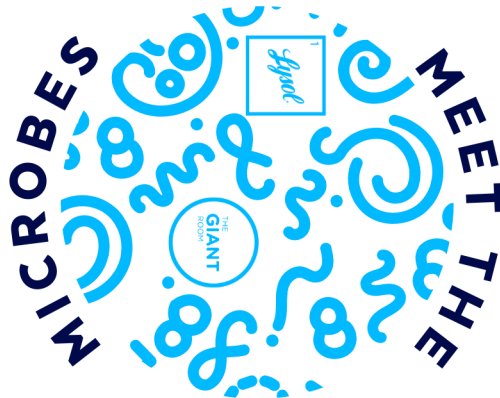
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Courtesy: CDC* - Jessica A. Allen;
Illustrator: Alissa Eckert, MS



Courtesy: CDC*



Courtesy: CDC* - Alissa Eckert, MSML;
Dan Higgins, MAMS



HA
Hepatitis A

MICROBE TYPE:
Bad Virus

POWERS:
Sneaks into poop, then onto your hands, and into your mouth!
Turns your skin and eyes yellow.

MICROBE BUSTERS:



- ✓ Wash hands after using the bathroom and before eating
- ✓ Drink clean water
- ✗ Don't eat dirty food or raw food



CANDIDA
Candida albicans

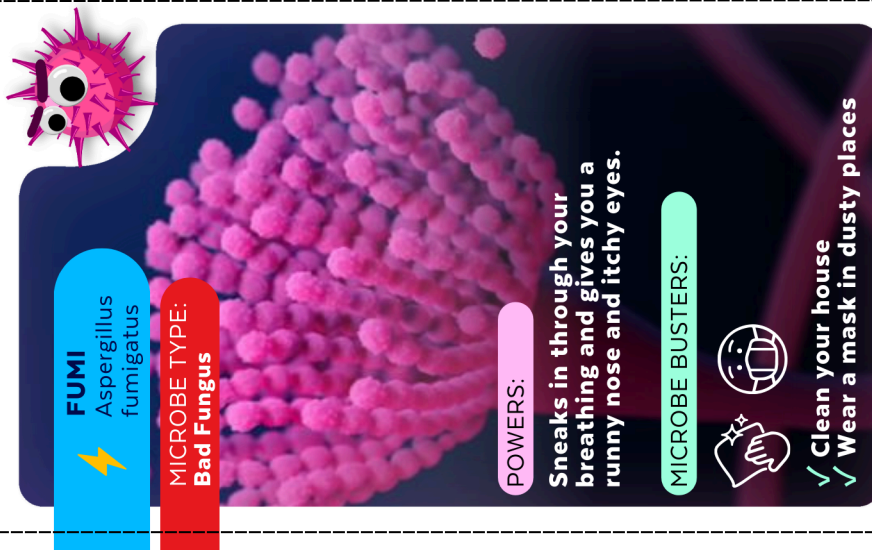
MICROBE TYPE:
Bad Fungus

POWERS:
If it grows too much, it makes your skin itchy and your mouth sore. Can sneak in from other people's dirty towels and dirty utensils, too!

MICROBE BUSTERS:



- ✓ Take showers and dry off
- ✓ Brush your teeth after eating
- ✗ Don't eat too much sugar



FUMI
Aspergillus fumigatus

MICROBE TYPE:
Bad Fungus

POWERS:
Sneaks in through your breathing and gives you a runny nose and itchy eyes.

MICROBE BUSTERS:



- ✓ Clean your house
- ✓ Wear a mask in dusty places

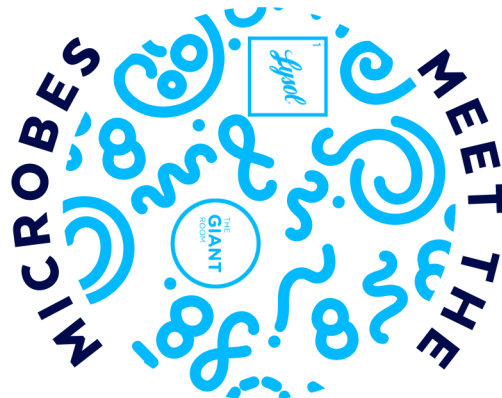
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Source: Getty Images*



Courtesy: U.S. Food and Drug
Administration*



Source: CDC* - Medical Illustrator:
Stephanie Rossow



THE FLU
Influenza virus

MICROBE TYPE:
Bad Virus

POWERS:
Travels through the air when a sick person talks, coughs, or sneezes! Loves to hang out on doorknobs and dirty toys, too. Gives you a fever, cough, sore throat, and runny nose!

MICROBE BUSTERS:



- ✓ Wash hands
- ✓ Cover your coughs and sneezes
- ✓ Get the flu shot
- ✓ Distance from sick people



TB
Mycobacterium tuberculosis

MICROBE TYPE:
Bad Bacteria

POWERS:
Travels through the air from person to person and gives you diarrhea.

MICROBE BUSTERS:



- ✓ Wash hands
- ✓ Get vaccinated
- ✓ Distance from sick people



SALMONELLA
Salmonella enterica

MICROBE TYPE:
Bad Bacteria

POWERS:
Sneaks into food and gives you diarrhea.

MICROBE BUSTERS:



- ✗ Don't eat raw eggs
- ✗ Don't eat old food or street food
- ✓ Wash hands
- ✓ Wash fruits and veggies
- ✓ Wash dirty dishes

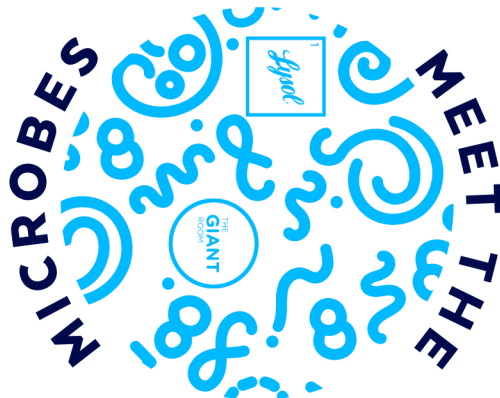
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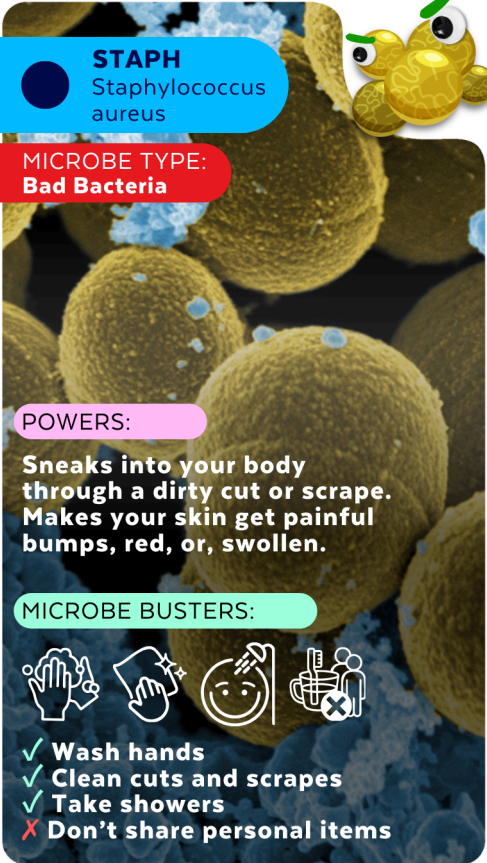
Courtesy: National Institute of Allergy & Infectious Diseases*



Source: CDC* - Douglas Jordan;
Illustrator: Dan Higgins



Courtesy: National Institute of Allergy & Infectious Diseases*



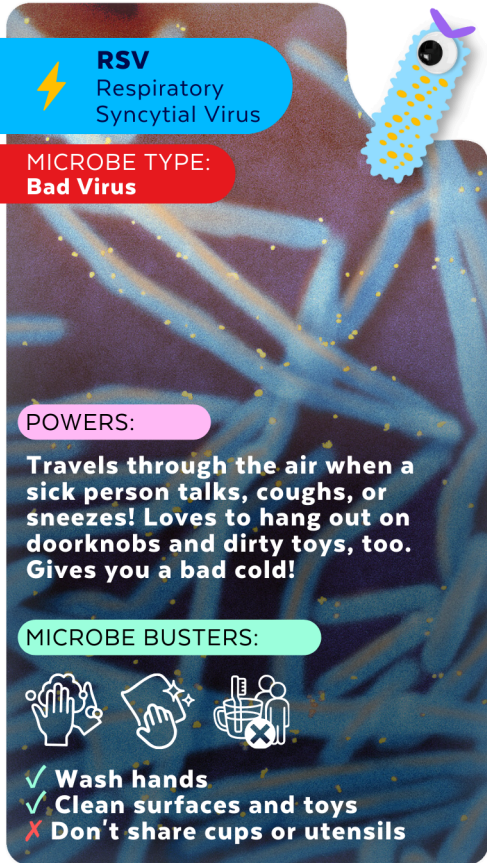
STAPH
Staphylococcus aureus

MICROBE TYPE:
Bad Bacteria

POWERS:
Sneaks into your body through a dirty cut or scrape. Makes your skin get painful bumps, red, or, swollen.

MICROBE BUSTERS:

- ✓ Wash hands
- ✓ Clean cuts and scrapes
- ✓ Take showers
- ✗ Don't share personal items



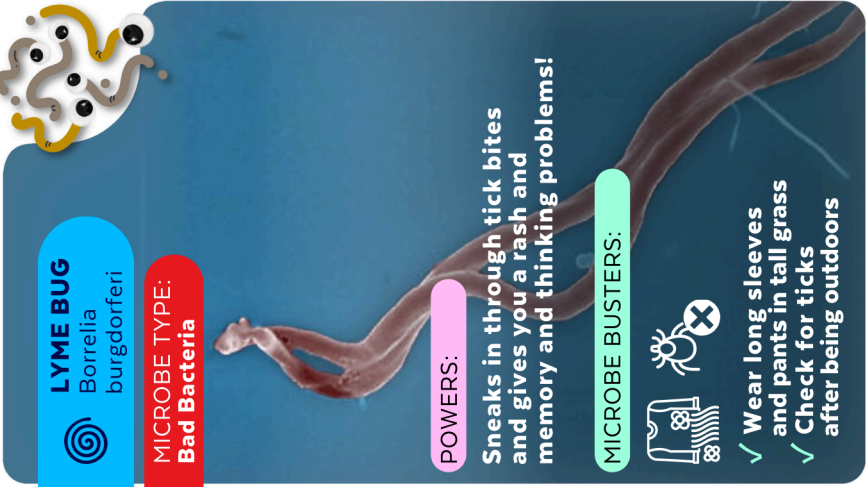
RSV
Respiratory Syncytial Virus

MICROBE TYPE:
Bad Virus

POWERS:
Travels through the air when a sick person talks, coughs, or sneezes! Loves to hang out on doorknobs and dirty toys, too. Gives you a bad cold!

MICROBE BUSTERS:

- ✓ Wash hands
- ✓ Clean surfaces and toys
- ✗ Don't share cups or utensils



LYME BUG
Borrelia burgdorferi

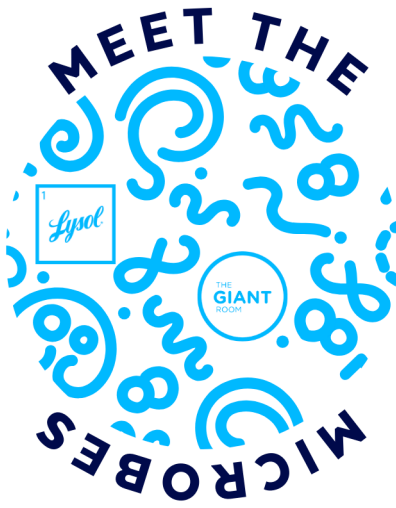
MICROBE TYPE:
Bad Bacteria

POWERS:
Sneaks in through tick bites and gives you a rash and memory and thinking problems!

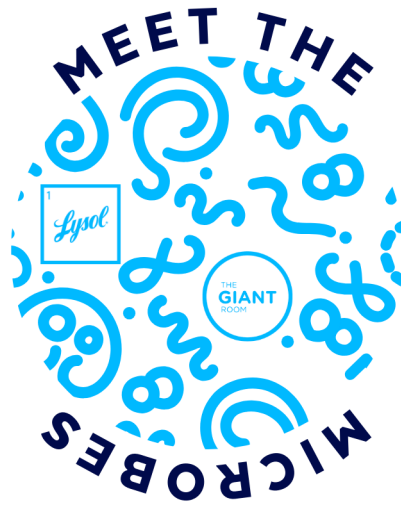
MICROBE BUSTERS:

- ✓ Wear long sleeves and pants in tall grass
- ✓ Check for ticks after being outdoors

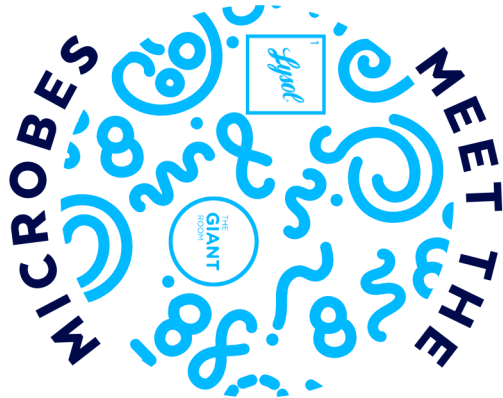
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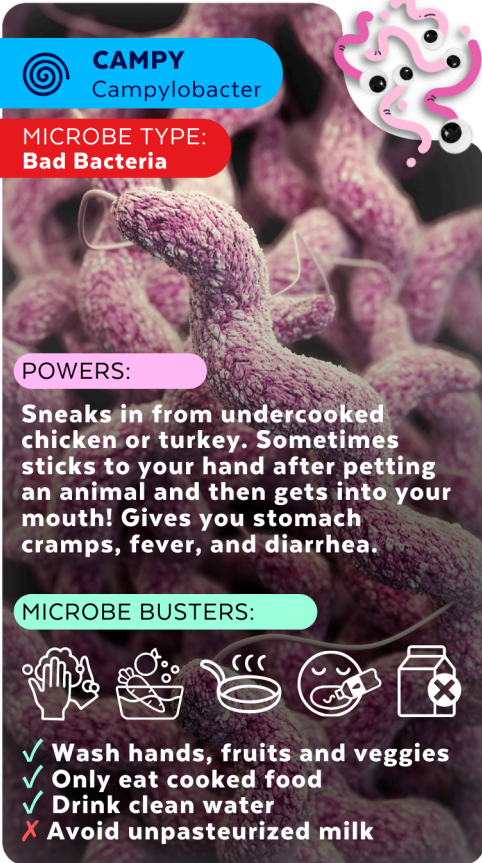
Courtesy: National Institute of Allergy & Infectious Diseases*



Courtesy: National Institute of Allergy & Infectious Diseases*



Courtesy: National Institute of Allergy & Infectious Diseases*





CAMPY
Campylobacter

MICROBE TYPE:
Bad Bacteria

POWERS:

Sneaks in from undercooked chicken or turkey. Sometimes sticks to your hand after petting an animal and then gets into your mouth! Gives you stomach cramps, fever, and diarrhea.

MICROBE BUSTERS:



- ✓ Wash hands, fruits and veggies
- ✓ Only eat cooked food
- ✓ Drink clean water
- ✗ Avoid unpasteurized milk





ORAL STREP
Streptococcus salivarius

MICROBE TYPE:
Good Bacteria

POWERS:

One of the first microbes to show in your mouth after being born. Prevents cavities and stops bad bacteria from overgrowing in your mouth.

MICROBE BOOSTERS:



- ✓ Brush your teeth twice a day
- ✓ Eat fruits and veggies
- ✗ Don't eat lots of sugar





B. SUBTILIS
Bacillus subtilis

MICROBE TYPE:
Good Bacteria

POWERS:

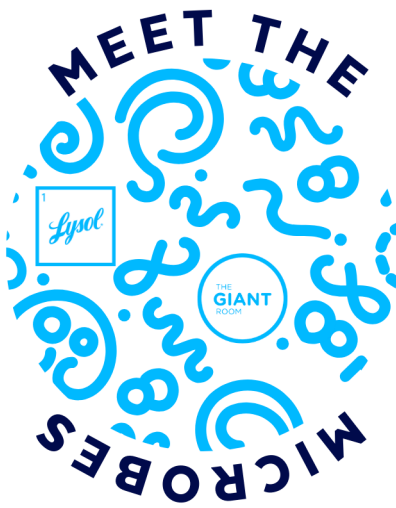
Enters your body when you eat fermented food. Helps you digest food, gives power to your immune system, and fights bad germs.

MICROBE BOOSTERS:



- ✓ Eat fermented foods like natto, miso, and sauerkraut

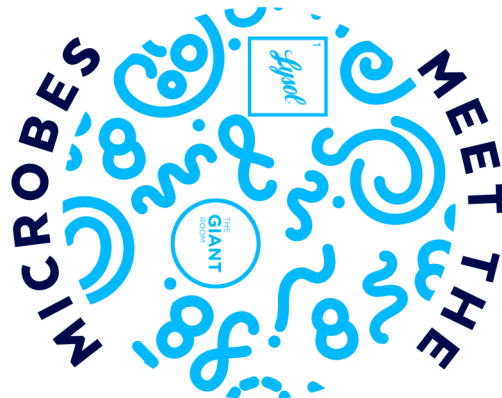
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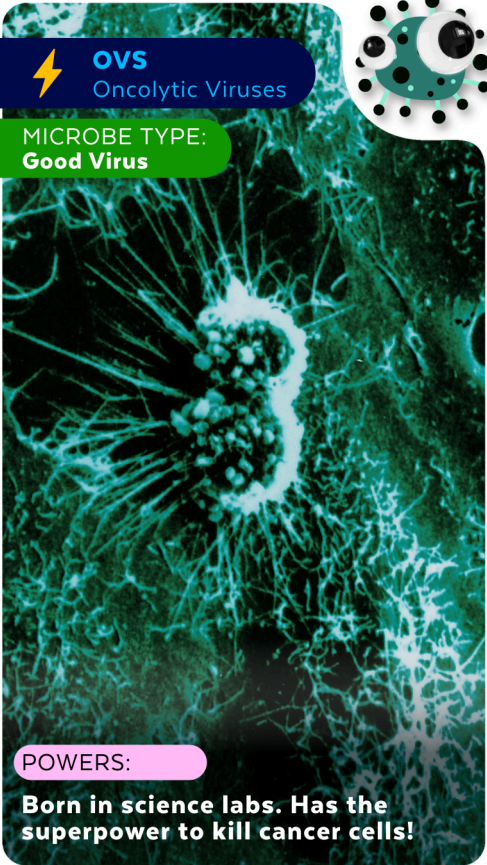
Source: FDA* - GRAS Notice (GRN) No. 591



Courtesy: CDC*



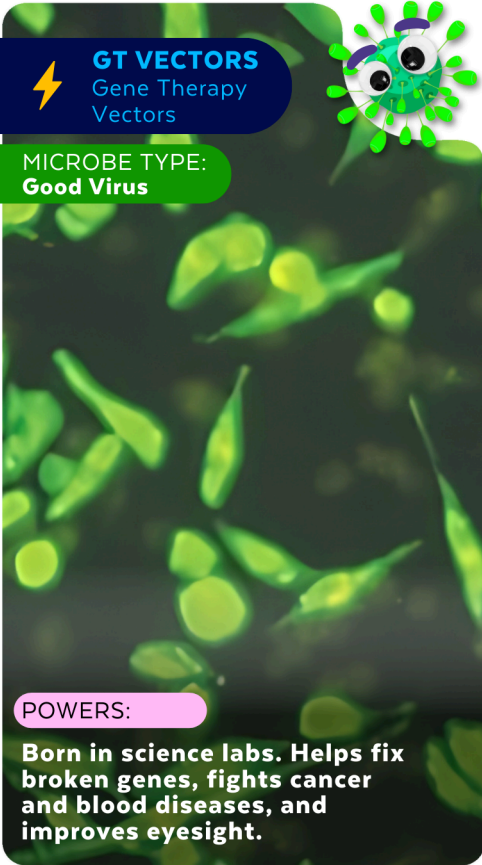
Source: CDC* - Larry Stauffer, OSPHL



OVS
Oncolytic Viruses

MICROBE TYPE:
Good Virus

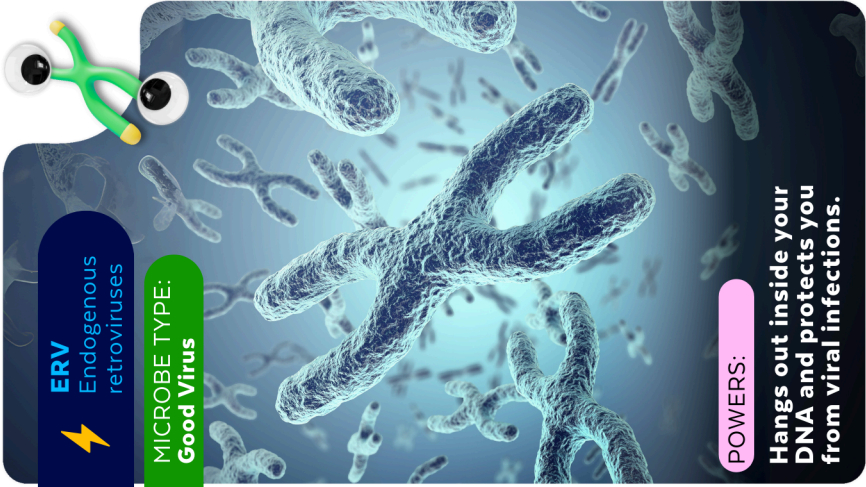
POWERS:
Born in science labs. Has the superpower to kill cancer cells!



GT VECTORS
Gene Therapy Vectors

MICROBE TYPE:
Good Virus

POWERS:
Born in science labs. Helps fix broken genes, fights cancer and blood diseases, and improves eyesight.

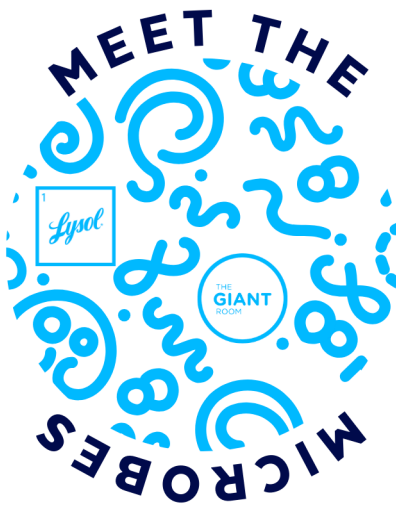


ERV
Endogenous retroviruses

MICROBE TYPE:
Good Virus

POWERS:
Hangs out inside your DNA and protects you from viral infections.

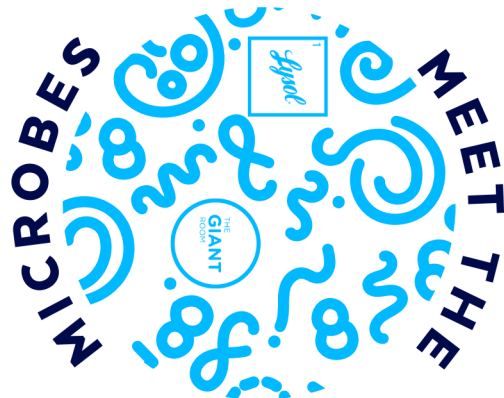
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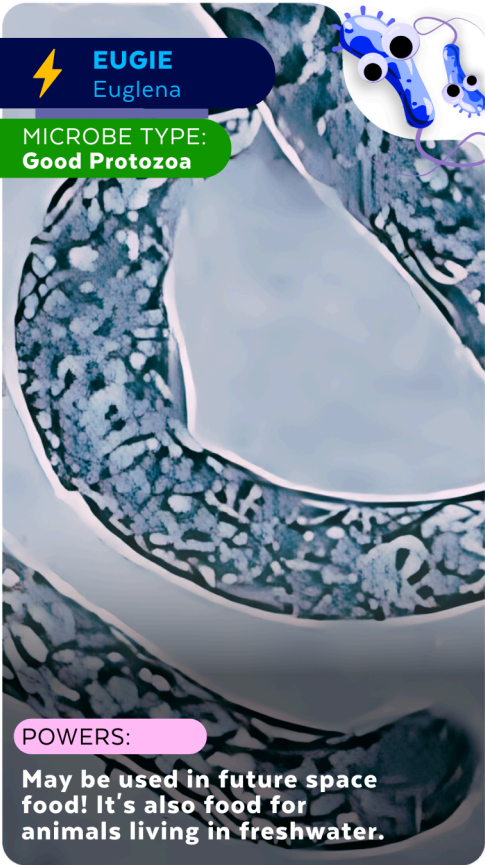
Source: CDC*



Source: Dr. Timothy Triche /
National Cancer Institute*



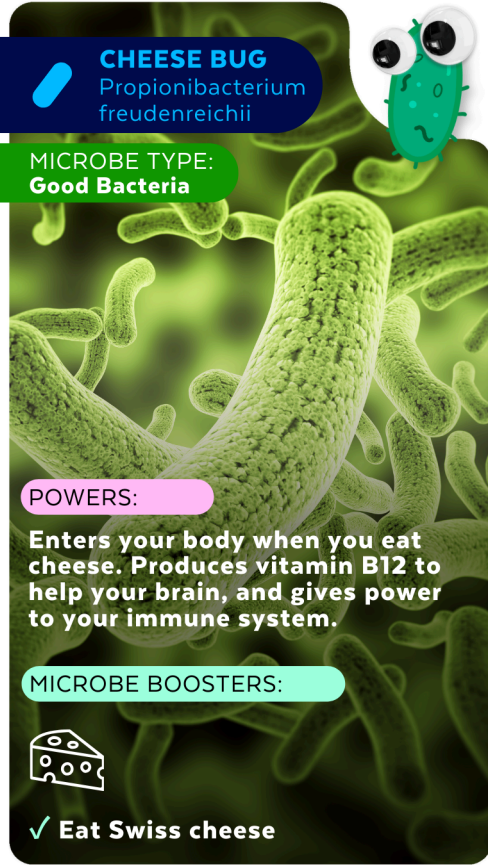
Source: Getty Images*



EUGIE
Euglena

MICROBE TYPE:
Good Protozoa

POWERS:
May be used in future space food! It's also food for animals living in freshwater.

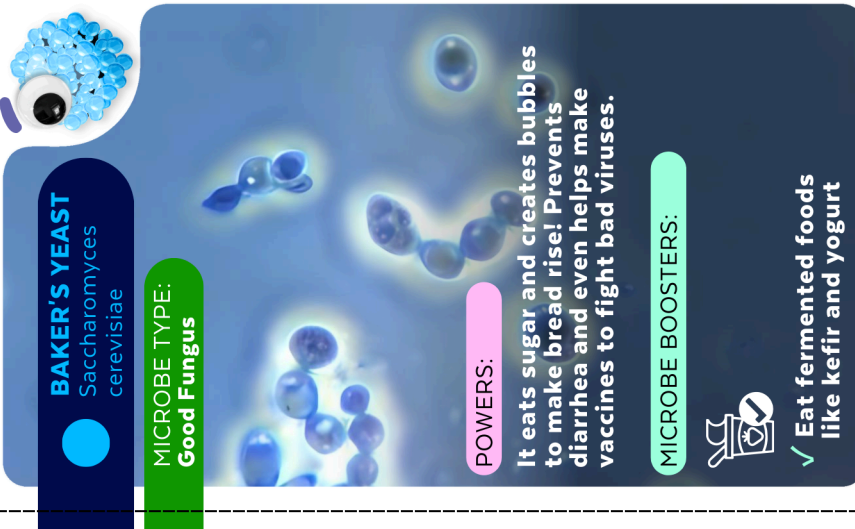


CHEESE BUG
Propionibacterium freudenreichii

MICROBE TYPE:
Good Bacteria

POWERS:
Enters your body when you eat cheese. Produces vitamin B12 to help your brain, and gives power to your immune system.

MICROBE BOOSTERS:
✓ Eat Swiss cheese



BAKER'S YEAST
Saccharomyces cerevisiae

MICROBE TYPE:
Good Fungus

POWERS:
It eats sugar and creates bubbles to make bread rise! Prevents diarrhea and even helps make vaccines to fight bad viruses.

MICROBE BOOSTERS:
✓ Eat fermented foods like kefir and yogurt

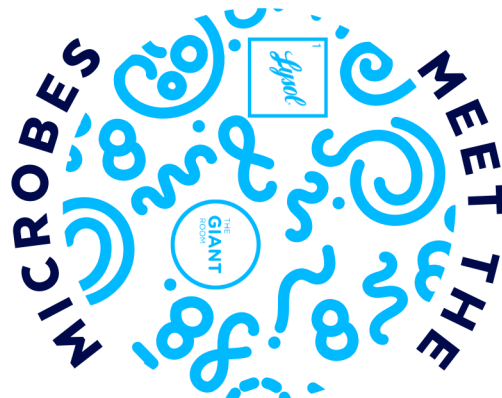
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Source: Getty Images*



Source: FDA* - GRAS Notice (GRN) No. 697



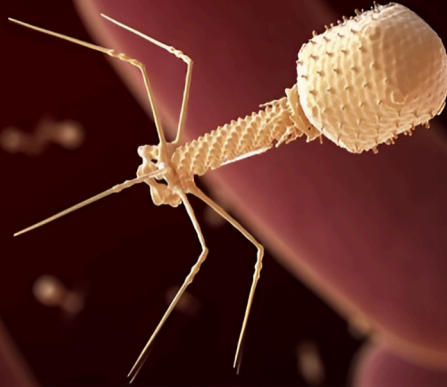
Source: CDC* - Dr. Hardin



PHAGE

Bacteriophage

MICROBE TYPE:
Good Virus



POWERS:

Lives in your gut, mouth, and on your skin! Fights bad bacteria and infections.



CY PHAGE

Cyanophages

MICROBE TYPE:
Good Virus



POWERS:

Great friend to Earth! Helps Earth's oxygen and carbon cycles and fights harmful blue-green algae in water.



LACTO

Lactobacillus
acidophilus

MICROBE TYPE:
Good Bacteria

POWERS:

Enters your body when you eat yogurt. Helps you digest food.

MICROBE BOOSTERS:



✓ Eat yogurt, cheese, and pickles

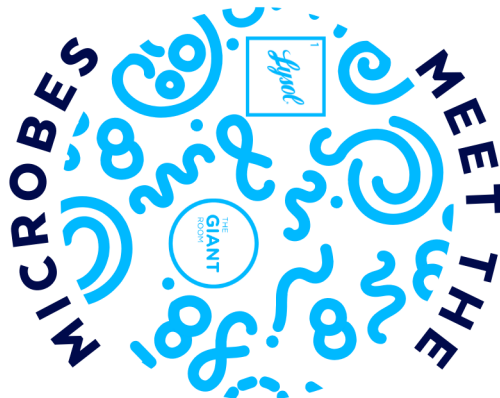
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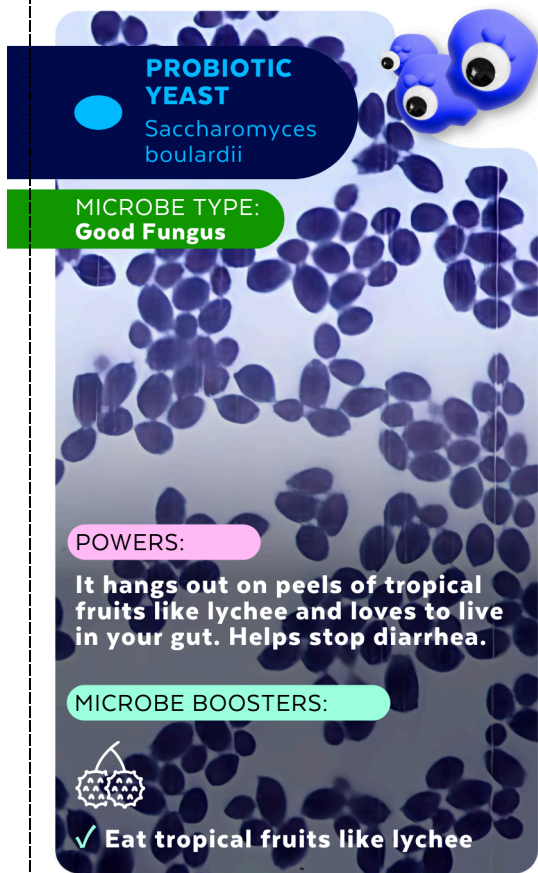
Source: Getty Images*



Courtesy: National Institute of Allergy & Infectious Diseases*



Source: Mogana Das Murthy & Patchamuthu Ramasamy*



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dotted lines**



Source: Wikimedia* - Karolina.lokkaj