



WHERE DO DISEASES COME FROM?

Dr. Siobhán Cully
Almost Dr. Peter Mattison
W/ Direction from Rhys M. Mattison

WHO HERE
HAS EVER
BEEN SICK?





WHAT HAPPENED?



WAS IT GOOD
FOR YOU?



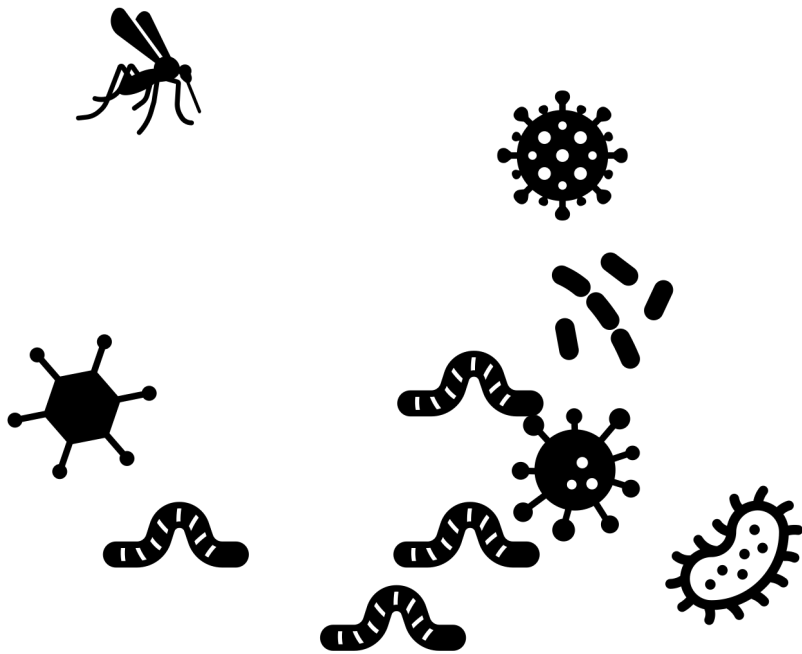
DISEASES ARE AS OLD
AS HUMANS ARE (AND
MUCH OLDER).

HowStuffWorks.Com

The background of the slide is a collage of medical imagery. It features several axial and sagittal MRI scans of a human brain, showing internal structures like the ventricles and gyri. There are also some blurred text elements, possibly patient information or scan parameters, in white and blue. The overall color palette is dominated by dark blues and purples, with some red and orange highlights on the right side.

What is a disease?

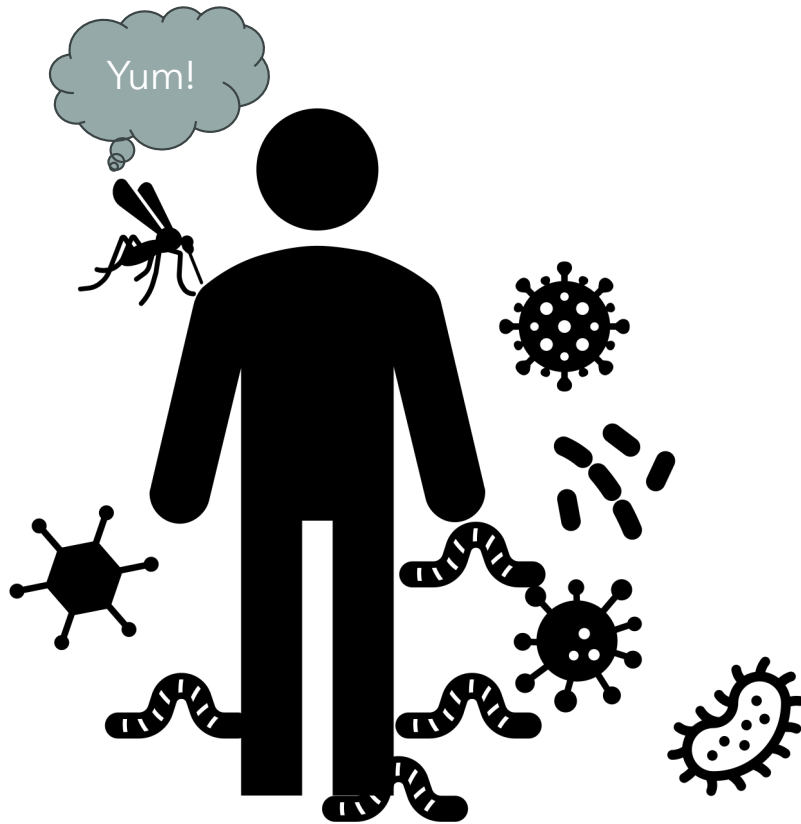
- Anything that makes us "sick" or "impairs normal function".



The world is full
of hazards...

"Bugs" are things like
worms, viruses, and bacteria

That need the same things
we do to survive and
reproduce

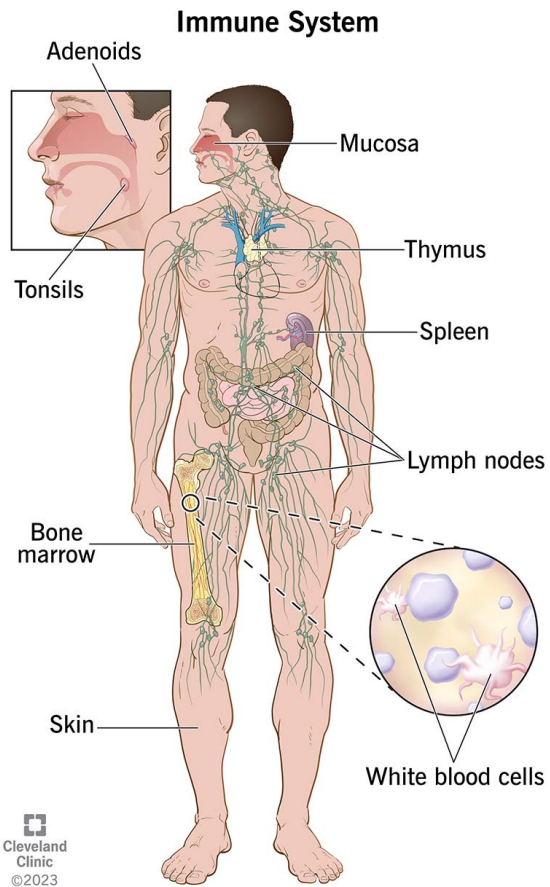


The world is full
of hazards...

"Bugs" are things like
worms, viruses, and bacteria

That need the same things
we do to survive and
reproduce

We are a nice "snack" or
"house" for them



Your “immune system”
works hard to keep bugs
at bay

- And it’s bigger than you think!
- Your skin...
- Enzymes in your mouth and throat...
- Cells in your blood (white blood cells)...
- Even behaviors (“disgust”, washing hands)...

Fever

Headache

Sneezing

Lethargy
(being tired)

Vomiting

Abdominal
cramping



Weakness



What makes us
feel "sick"?



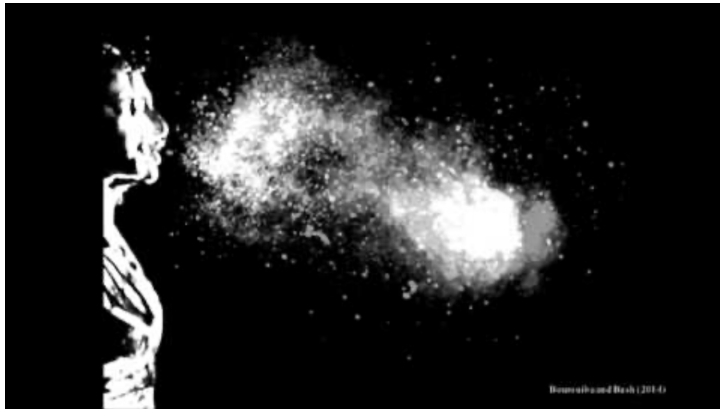
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Why do we have fevers?

Fevers make you feel bad

But they also kill many bacteria and viruses

They can be helpful when you are sick!



Why do we sneeze?

Irritation of nose hairs stimulates **histamines**

Make you feel itchy and then make you sneeze

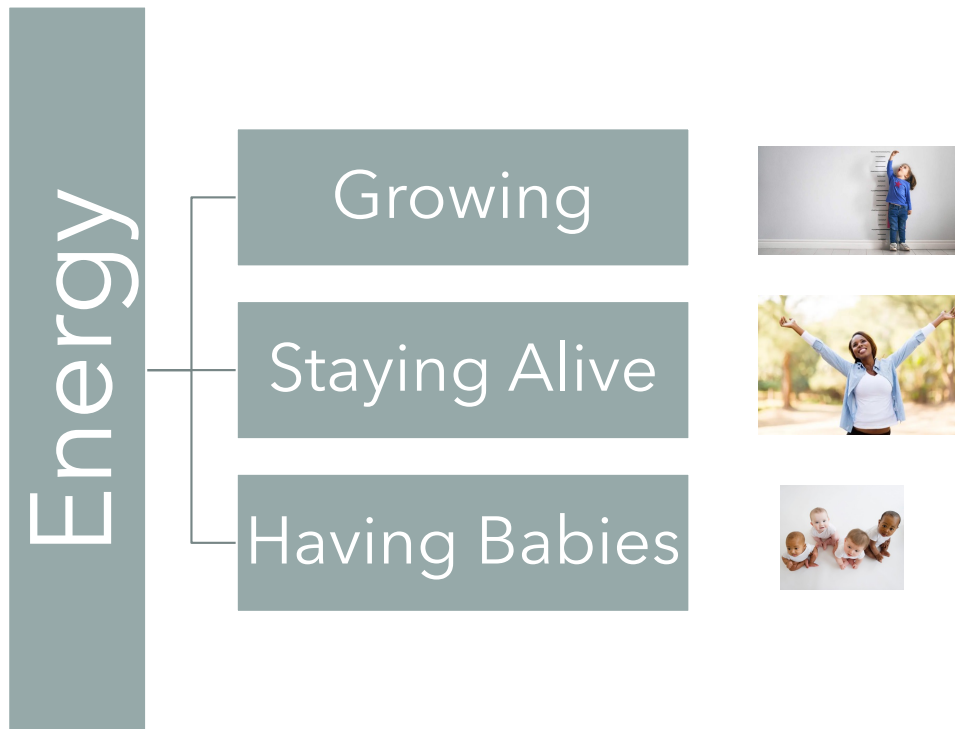
Can get rid of invaders that come in through your nose!

Do you think
this is
gross??

- Vultures don't.
- But they have special defenses in their stomachs that make this less dangerous.



- You get energy from eating.
- And use that energy for everything you do.



Costs of being sick.

When you are sick, you are trying to stay alive.

That means it's harder to do those other things.

Genetic
diseases

- Like Down Syndrome

Degenerative
diseases

- Like Parkinson's

Autoimmune
diseases

- Like type 1 diabetes

Chronic
diseases

- Like type 2 diabetes

Infectious
diseases

- Viruses and bacteria and worms

Kinds of Diseases

And when things break down to make it hard to stay alive, you can get other kinds of diseases, too.

Eat carefully

Exercise

Mediate and be mindful

Practice kindness

Practice positivity

Never judge people for being sick

Wash your hands

Stay home when you are sick

Wear a mask to protect yourself and vulnerable people


How to stay
healthy!

So...

Diseases are always bad.



But sickness is sometimes helpful, even though it feels bad.



Control what you can. Accept what you can't.
Love people who are sick and disabled.



THANK YOU.

And if you like this stuff, think about taking a class in "evolutionary medicine."