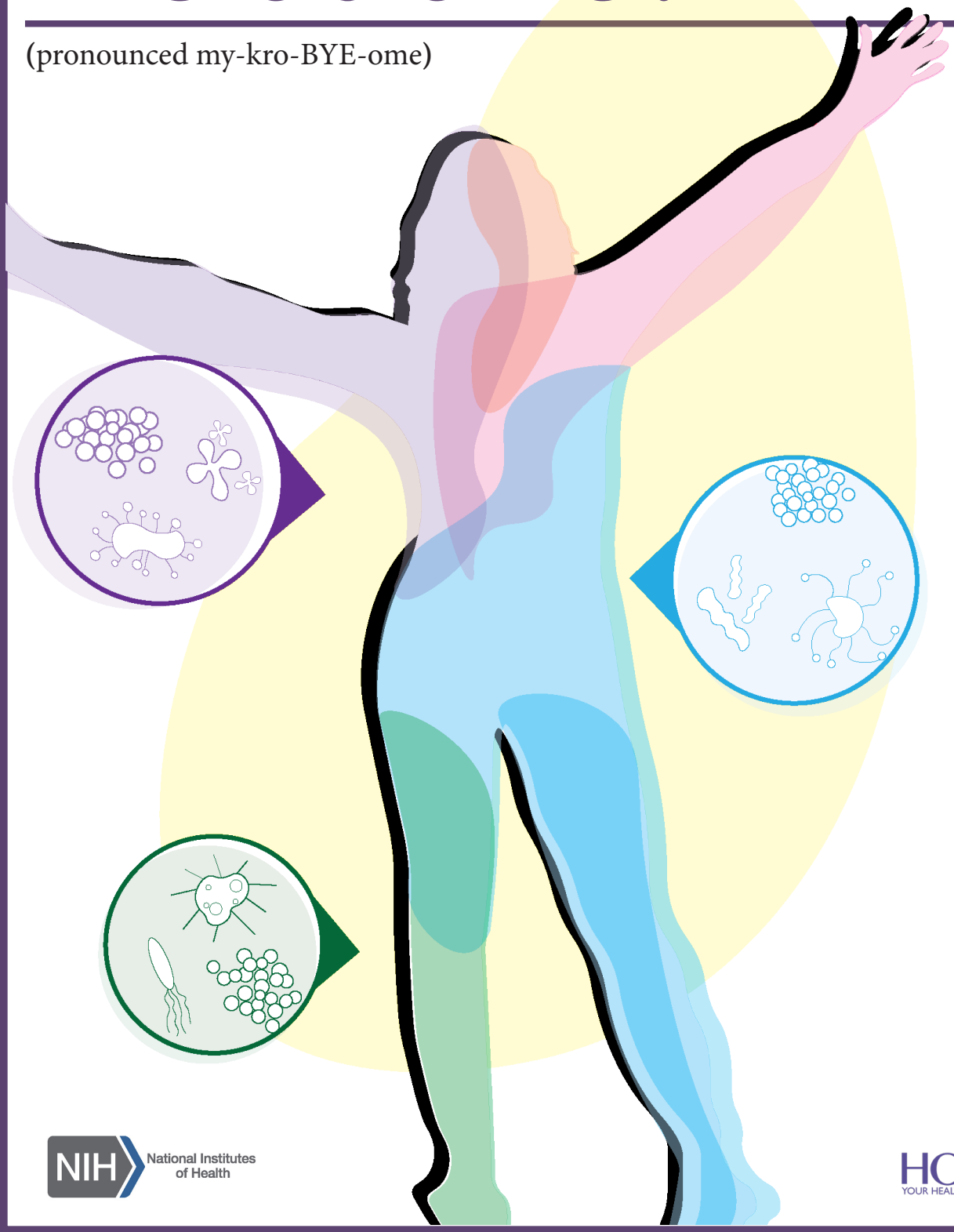
What is the **Microbiome?**

(pronounced my-kro-BYE-ome)



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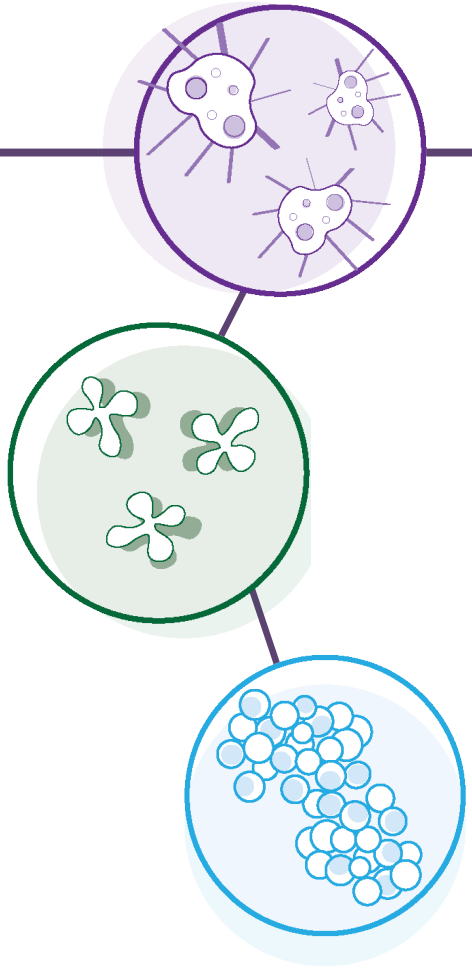
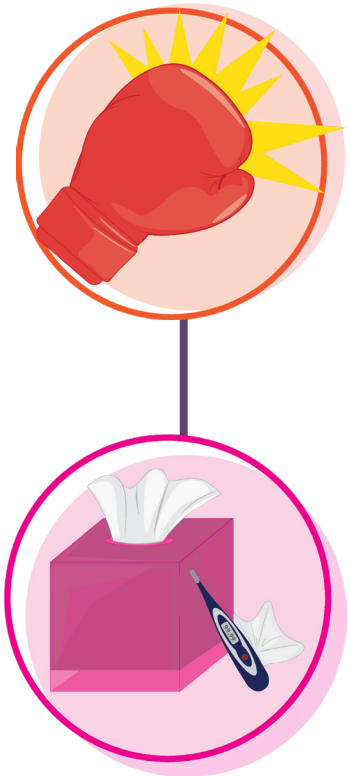
The Microbiome



Our bodies contain trillions of very tiny organisms (called microbiota or microbes) that serve an important purpose. These include bacteria, fungi, parasites, and viruses. Most of them live in our gut (intestines), but they are also found throughout the entire body. **The microbiome is sometimes even called a "support organ," because it's so important to keeping our bodies running smoothly.**

Each person's **microbiome is unique to them, and it changes over time depending on what they are exposed to.** The original microbiome we're born with is determined by our DNA, but we are also exposed to our birth parent's microbiome during birth and/or breastfeeding. Our environment and the food we eat, for example, also affect the makeup of our microbiome.



The microbiome has a lot of functions. **When it's healthy, it can help stimulate the immune system,** help with digestion, break down vitamins for the body, and can even help us **fight off diseases.**

Some of the organisms promote health in the body, and a smaller number of them may make it more likely we'll get sick (pathogenic). Usually, this isn't a problem because these different organisms stay in harmony with each other. **They exist and work together to keep the body going.**

But if the balance is disturbed, it can make the body more susceptible to disease. This could be brought on by getting certain infectious illnesses, eating certain types of diets, or taking antibiotics or certain medications for a very long time.

What kind of microbiomes are we focusing on in HOPE?

We are interested in **three specific areas of the microbiome in HOPE:**

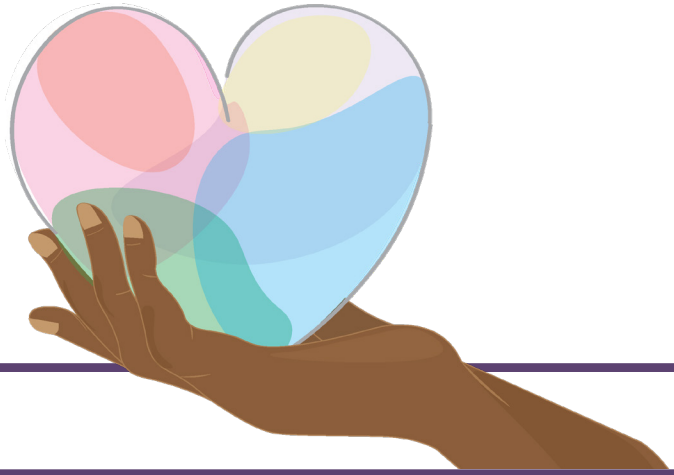
- The **oral microbiome** is the community of organisms found in the mouth (teeth, gums, and tongue).

- The **vaginal microbiome** is the community of organisms found in the vagina.

- The **rectal microbiome** is the community of organisms found in the rectum (the very end of the digestive system).

Why are we collecting samples for the microbiome?

We want to **better understand how HIV and the medicines that treat HIV** (called antiretrovirals, or ARVs) might **change a person's microbiome.** If there are changes from HIV or HIV medicines, we also want to see if those changes are **connected to any health outcomes.**



Questions?

Don't hesitate to speak to a staff member at your site today!

Learn more about the HOPE Study here:

https://phacsstudy.org/Our-Research/HOPE

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