MICROBES: FRIENDS AND FOES

Microorganisms, also called microbes, are tiny forms of life that surround us — invisible to the naked eye. They are found in water, in the soil, in the air, and even in the human body. Some microbes are important for our health while some make us sick. The most common are bacteria, viruses and fungi.

Abbott's scientists who study infectious diseases — sometimes called “virus hunters” — work to make sense of which microbes are friends and foes.

### BACTERIA

You encounter both “good” and “bad” bacteria daily. Some bacteria are used in the preparation of foods, chemicals, and antibiotics. Studies of the relationships between different groups of bacteria continue to yield new insights.

#### Examples of BENEFICIAL BACTERIA

- Get bacteria to help break down food for digestion.
- Certain bacteria can help activate cells within the immune system.

#### Examples of HARMFUL BACTERIA

- **TUBERCULOSIS**
- **STREPT THROAT**
- **FOOD POISONING** (E. Coli or Salmonella)

### VIRUSES

These microorganisms are much better known for causing disease but also play a role in vaccine development. Scientists are working to understand how viruses might be beneficial to health.

#### Example of a harmful virus used in a BENEFICIAL WAY

Influenza is a contagious disease that can be serious. A yearly flu vaccine can help prevent it.

- The vaccine contains a small amount of influenza, which is either weakened or inactive. The vaccine helps your body fight off an infection from this virus.

#### Examples of HARMFUL VIRUSES

- **HEPATITIS C**
- **HIV**
- **WEST NILE and ZIKA**
- **STREP THROAT**

### HOW DO WE DETERMINE IF A VIRUS IS HARMFUL?

Virus hunters take a number of steps to figure out if a virus is causing harm.

- **Work in areas where a disease is prevalent**
- **Interview sick people to figure out how they might have become ill and take samples**
- **Conduct research on microbes in samples**
- **Develop tests that can detect microbes in infected individuals**

These are just some of the ways that virus hunters are helping you stay healthy.

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11. For more information: Visit abbott.com/virushunters. Like this graphic? Share on social media using #VirusHunters.