

NAME _____ Per. ____ Date ____
Safety & Sanitation Intro Mrs. Leitheuser, NBCT

It's important that we are **safe food handlers in this classroom**. To that end, we must learn how to prevent foodborne illness and how to handle and prepare food in the safest manner possible. Dangers to food can be outlined in 4 categories:

- **Biological Hazards**
- **Physical Hazards**
- **Chemical Hazards**
- **Unsafe food handling practices**

Biological hazards: also called **pathogens** are **living organisms that exist in or on foods**. These pathogens can cause foodborne illness. There are four basic types: **Bacteria, Virus, Parasites and Fungus**. We will take a closer look at 5 common foodborne illnesses: E. Coli, Salmonella, **Botulism, Norovirus** and Listeria.

Physical Hazards: a piece of hair, or a piece of food packaging, or a piece of **metal or glass getting into our food** are all examples of physical hazards to food. Some of these can result in injury to the person eating the food.

Chemical Hazards: Cleaning compounds, bug spray, food additives, and **fertilizers** are all examples of chemical hazards. Be careful when cleaning countertops and other surfaces when food is nearby.

Unsafe food handling practices: Handling and preparing **food in an unsafe manner can cause foodborne illness**, so we will focus on education and prevention here. Food can become contaminated in a variety of ways, it is good to remember:

F	Food
O	Oxygen
A	Acidity
M	Moisture
T	Time
T	Temperature

Food- A pathogen needs a food source. **Meat, dairy products and eggs** are all rich in proteins, a food source that pathogens love. Cooked beans, **grains, rice and pasta**

(starchy foods) can also readily serve as a food source, as can sweet foods such as fruit.

Oxygen: Some pathogens **need oxygen**. Vacuum sealing or storing in airtight containers keeps oxygen out which can help prevent certain pathogens from reproducing.

Acidity: Pathogens prefer foods that are low in acid, **much easier to flourish** and grow in.

Moisture: The more moisture in a food, the **friendlier it is to pathogens**.

Time: Serve food quickly because the longer it sits, the faster **the temperature reaches the danger zone**.

Temperature: Pathogens thrive and reproduce at temperatures between 40-140 Fahrenheit (the danger zone). This is why the **refrigerator helps to stave off bacteria growth**. As well, this is why cooking meat to a safe temperature (above 165 F) is important because cooking to that temperature destroys most pathogens.

Two types of contamination: **direct and indirect (cross) contamination**:

Direct contamination: the food **is already contaminated when you** receive it. So, always wash fruits and **vegetables before you eat them raw and cook** foods to the correct temperature before you eat them- this can cut down on this type of contamination.

Indirect or Cross contamination: The food becomes unsafe **while it is being prepared, cooked, or served via contact with** biological, physical or chemical contaminants. People are the cross contaminants and we don't want to be! Most common: **raw foods or items that touched raw foods** (utensils, hands) come in contact with fresh ready to eat items (salads, fruit etc).

A word about personal hygiene and grooming:

Hair **will be up**

Hands will be washed **with soap and hot water** (often)

Safe clothing (no bulky **clothing or loose fitting clothing**, no open toed shoes)

Vinyl gloves will be worn when appropriate This is just an intro- your cut/paste packets and our discussions over the next week will go into deeper detail on all of

this information.