

# Our Beautiful Stinky Friend

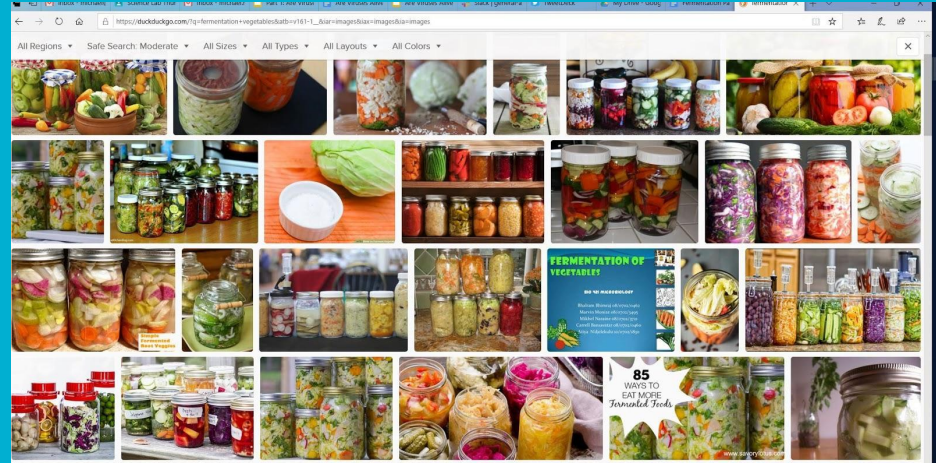
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Part 1: A Practical Guide to Fermentation



# What is Fermentation?

- Describes one way that organisms make energy when oxygen levels are low in cells
- Occurs in all biological organisms
- Makes energy to sustain but happens at a cost
  - Produces by-products that make the organism has to remove or break down
- This process can be manipulated in microbes to make many different types of food

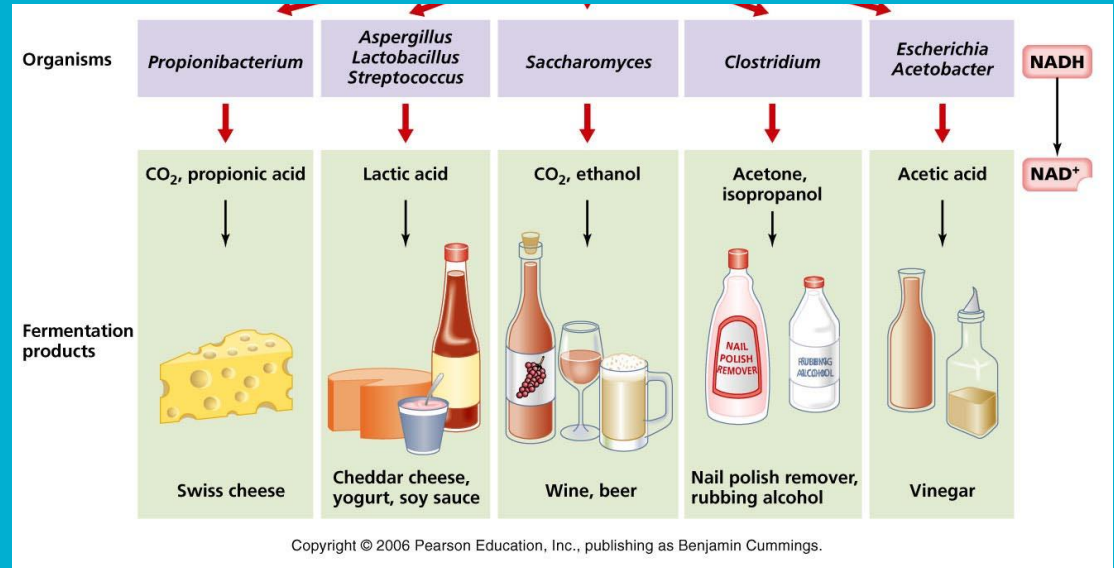


# What Foods Can We Make by Fermentation?

The table to the right shows five microbes and the types of food products that make when they are fermented

**Which is your favorite?**

Note: You must be at least 21 years of age to select the center picture



# What Does Fermentation Look Like?

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*What questions do you have about what is going in each jar? In what ways are the fermentations similar? In what ways are they different?*

# What Do I Need to Ferment?

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The simplest fermentations require:

1. A mason or jam jar with lid
2. A vegetable
3. Salt
4. A pot boiling water

You can also add additional ingredients to spice it up:

1. Spices (caraway seeds, thyme, sage)
2. Garlic and/or onions
3. Vinegar



# How Do I Set Up a Fermentation Reaction?



[This link contains sources](#) that you can use to plan a fermentation experiment.

Find the prompt entitled

“How does one cook without heat?”

Below that heading are two pieces of media. One is a short YouTube tutorial and the other is a longer podcast. You may listen to one or both of these to gather information that will help you plan a fermentation reaction and recipe.

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There is also a link to a lab notebook that will help you plan your experiment