



## There's Yeast in My Bread!

If you ever watched someone make bread, you might have noticed that they added a light brown material called yeast to the dough. What is yeast, and why add it to the dough?

Yeast is a kind of fungus. You might have heard of some other kinds of fungus.

Mildew is a kind of fungus that grows on organic materials like paper and leather. Mushrooms are the visible part of fungi that live on organic matter in the soil. These fungi are distant relatives of the yeast used to make bread.

One baker's yeast organism is a single **cell**. A single yeast cell is way too small to be seen with unaided eyes. With a microscope, you can see that one yeast organism is a tiny round object.



Yeast

Why put fungus in your bread dough? Yeast eats **sugar**. When a yeast cell takes in a molecule of sugar, it breaks it down to use it for energy. The yeast breaks several carbon atoms off the sugar molecule. The carbon atoms combine with **oxygen**, forming carbon dioxide (CO<sub>2</sub>) gas. The carbon dioxide produced by the yeast creates thousands of tiny bubbles in the dough. The dough rises as it fills with gas bubbles. The bubbles make the bread light and soft.

Where does the sugar that feeds the yeast come from? Some bread recipes call for a little sugar, but extra sugar is not necessary. Wheat flour contains a lot of starch and a small amount of a chemical called an enzyme. The enzyme breaks down the starch molecules into simpler molecules. Some of these molecules are sugar. The sugar that the yeast eats is from the starch in the flour. It takes time for the enzyme to act on the starch. So it can take several hours for bread to rise.

Next time you have a slice of bread, look closely at its texture. It is all full of holes, like a sponge. The holes were carbon dioxide bubbles. And remember, when you are eating a piece of bread, you are eating millions of baked yeast cells. Yum!



The holes in bread are the result of carbon dioxide bubbles.

