

# What Makes a Good Loaf of Bread?

There are only four ingredients you need to make yeast bread: yeast, flour, liquid, and salt. All other ingredients are there to add flavor, nutrition, color and to change the characteristics of the crumb.

1. **Yeast-** is a one-celled plant, available in dried form, instant blend, and live cakes. In yeast bread, yeast multiplies and grows by using available sugars and water, giving off carbon dioxide and ethyl alcohol (fermentation). As long as air is available, the yeast multiplies. Kneading and punching down breaks up small clusters or colonies of yeast cells so they can get in contact with more air and food.
  - a. Compressed yeast cakes were introduced in 1876 and revolutionized baking. The down side was the need for refrigeration and the resulting spoilage factor. Active dry yeast was developed for use during World War II. In 1984, instant-rise yeast, genetically modified and packaged with its own food supply, became available. It rehydrates and becomes active instantly when mixed with liquid. This type of yeast is very convenient, but because the rise is so fast, not much flavor develops from the fermentation process.

**1 cake of compressed yeast= 1 pkg. of active dry yeast.**

**1 pkg. active dry yeast= 2 ¼ tsp.**

**1 envelope packet of Active Dry Yeast, Instant Yeast, Rapid Rise Yeast, Fast Rising Yeast/Bread Machine Yeast= ¼ oz or 7 grams (2 ¼ tsp.)**

2. **Flour-** provides the structure for bread. The gluten, or protein, in flour, combines to form a web that traps air bubbles and sets. Starch in flour sets as it heats to add to and support the structure. In yeast breads, gluten formation is desirable, since it forms a stretchy web that traps carbon dioxide and steam during baking, to give bread its texture.
  - a. **Bread Flour-** is high protein flour, and produces bread that has a higher volume because it contains more stretchy gluten. **All-purpose flour** works for most breads.
3. **Liquid-** helps carry flavorings throughout the product, forms gluten bonds, and reacts with the starch in the protein for a strong but light structure. Liquids also act as steam during baking, contributing to the tenderness of the product. Yeast needs liquid in order to develop, reproduce, multiply, and form byproducts which make the bread rise.
4. **Salt-** strengthens gluten, and adds flavor. Salt enhances flavors. In yeast breads, salt helps moderate the effect of the yeast so the bread doesn't rise too quickly.
5. **Fat-** coats gluten molecules so they can't combine as easily, contributing to the finished products' tenderness. Yeast breads that have a high proportion of fat-to-flour content are much, more tender, don't rise as high, and have a tender mouth-feel. Fat also contributes flavor to the bread, and helps the bread brown while baking.
6. **Dry milk powder-** contributes minerals for gluten development and protein and sugar for better crust, adds flavor and helps keep the loaf moist.
7. **Sugar-** adds sweetness, as well as contributing to the product's browning. The main role for sugar in yeast breads is to provide food for the yeast. As the yeast grows and multiplies, it uses the sugar, forming byproducts of carbon dioxide and alcohol, which give bread its characteristic flavor. Sugar tenderizes bread by preventing the gluten from forming. Sugar also holds moisture in the finished product. Sugar can be in the form of granulated, honey, brown, etc.
8. **Eggs-** are a leavening agent and the yolks add fat for a tender and light texture. The yolks also act as an emulsifier for a smooth and even texture in the finished product.
9. **Vital wheat gluten-** has approximately three to 5 times the gluten forming potential of bread flour. Since it forms a lot of gluten, it absorbs a lot of water. Too much can make a loaf tough and dry. *Cautious* amounts of vital wheat gluten are ideal for lightening heavy loaves.

## Whole Wheat Bread

<b>Ingredient</b>	<b>Kitchen Machine</b>	<b>Stand Up Mixer</b>
Yeast	<b>4 loaves</b> 2 Tbs.	<b>2 loaves</b> 1 Tbs.
Warm water	½ c.	¼ c.
Oil	⅔ c.	⅓ c.
Sugar	⅔ c.	⅓ c.
Salt	2 Tbs.	1 Tbs.
Whole wheat flour	12-14 c.	6-7 c.
Hot tap water	5 c.	2 ½ c.

Blend about half of the flour and the hot tap water in a mixing bowl. Meanwhile, in a separate bowl, proof yeast with warm water (add ½ tsp of sugar to help the yeast grow). Add salt, oil and sugar to mixing bowl. Mix until well blended. Add prepared yeast mixture. Add enough additional flour to make the dough just stiff enough to clean the sides of the bowl. Knead on low for 10 minutes. On lightly, oiled counter divide dough into four (two) equal portions. Shape loaves and place in greased pans. Cover with a damp towel and let rise in a warm place until it has doubled in bulk. Bake at 350° for 35-40 minutes (internal temperature of 190°F).

## Sweet Roll Dough

2 Tbs. yeast	2 c. warm water
½ c. warm water	1 tsp. salt
7 ½- 8 c. whole wheat flour	½ c. melted butter (cooled to room temperature)
½ c. powdered milk	
¾ c. sugar	

In a small bowl, combine warm water (1/2 c.), 1 Tbs. sugar and yeast. Let stand for 5 minutes. In a large mixing bowl, add 3 c. of the flour, powdered milk, 2 c. warm water, salt, melted butter, sugar and the egg. Mix until combined. Add yeast mixture and enough flour to form dough. The dough should be a little sticky. Place finished dough in a greased bowl to rise (turn dough around in bowl to grease all sides). Cover and let rise in a warm place until double in size about one hour. Punch down risen dough. On a greased surface, roll out the dough into a rectangle the size of around 24-inch by 18 inches. Makes around 24 rolls.

## Cinnamon Rolls

Sweet Roll Dough	<u>Glaze:</u>
½ c. melted butter	1, 8 oz. pkg. cream cheese
¾ c. brown sugar	2 c. powdered sugar
1 ½ tsp. cinnamon	
½ c. chopped nuts (opt.)	
1 c. raisins (opt.)	

Pour melted butter over and spread over surface of sweet roll dough. Sprinkle with brown sugar, cinnamon, chopped nuts and raisins. Starting on the 24-inch side, roll the dough up tightly until you have a cinnamon roll tube. Pinch opposite end to seal. Cut one inch sections with a thread or pastry cutter. Place in a greased pan. Let rise until cinnamon rolls have doubled. Bake at 350° for 20 minutes or until golden brown.

## Orange Dinner Rolls

Sweet Roll Dough
½ c. melted butter
¾ c. sugar
1 ½ Tbs. orange zest

Finish rolls as the Cinnamon Rolls recipe above.