



Food Facts Highlights: Bread Dough & Friendship Starters

Are there any safety concerns with bread dough left to rise longer than 2 hours? What about the use of friendship or sourdough starters left to stand at room temperature for hours or days? Bread dough can be left out to rise longer than 2 hours. Bread rises due to the action of yeast. Yeast adds flavor to bread and it leavens bread as it converts grain carbohydrates into carbon dioxide. When bread is rising, the principal activity is the multiplication of yeast cells and the production of flavor components and gas. Any bacteria that might be present in ingredients such as eggs will not be able to compete with the rapidly growing yeast. As long as the dough is thoroughly cooked, there should be no problem leaving bread dough out to rise longer than 2 hours. This said, most recipes can be modified so that bread dough is treated within the safe food handling guidelines. If you intend to raise bread dough over an extended period, raise the dough through the first rising at room temperature; for most recipes this will take no more than 2 hours. Then, shape the dough as desired and place it in the refrigerator for the next rising. Remove the dough from the refrigerator and allow it to warm for 30 min at room temperature before baking. The growth of the yeast and carbon dioxide production will be slowed in the refrigerator, but product safety will be maintained.

Read on for more information on **Friendship or Sourdough starters**. Baker's yeast (*Saccharomyces cerevisiae*) ferments sugars for energy. When yeast grows in the absence of air, the end result of their fermentation is alcohol. In the presence of air, the end result is carbon dioxide. A fruit starter recipe that calls for a tightly covered jar and no stirring will have more alcohol, that recipe that does not cover the bowl tightly and stirs the mixture every day will have more carbon dioxide and less alcohol. The fermentation process also results in many very complex flavor compounds. Other by-products of the yeasts' growth are acids, lactic acid being the main one. These acids contribute tang to the flavor, and gave the old-time mixture its name "sour dough". In addition to lending a tang to Friendship Cake starters or sour dough, the acids produced also modify the proteins in the flour, which in turn, affect the elasticity of the bread and the texture of the final product. The acids also help preserve the starter from spoilage by inhibiting the growth of certain bacteria. As always, it's important to cook bread dough well that contains starter. But if you follow the directions for this type of ingredient, your final product should be safe to eat.