



## **Tips for Cooking at High Altitudes**

The recipes on this web site have been tested at an altitude of 1,100 feet. If you are cooking at altitudes above 3,000 feet, consider the following.

### **General Altitude Physics**

At altitudes above sea level, air pressure decreases the higher you go. At 3,000 feet and above, water not only boils at a lower temperature, it also evaporates more quickly because there's less pressure "keeping a lid" on it. This changes how food cooks, particularly in baking.

In addition to requiring changes in baking times and temperatures, decreased air pressure triggers reactions in ingredients that need to be adjusted, with greater adjustments required the more altitude increases. Experts advise that you first test a recipe as written, then make minor adjustments until you achieve the desired texture and doneness.

Most cooking experts figure adjustments based on several altitude breaks:

- **3,000 feet**
- **5,000 feet**
- **7,000 feet and**
- **9,000 feet and above.**

For each ingredient, a range of adjustments is usually suggested. For example, if you need to decrease sugar by 1-4 tablespoons per cup, at 3,000 feet you would reduce sugar amounts by 1 tablespoon per cup. At 9,000 feet or higher, you would decrease sugar by 4 tablespoons per cup. In between? Adjust accordingly.

### **Leavening (Baking Soda, Baking Powder): Reduce by 1/8 to 2/3 teaspoon**

Because leavening works faster where air pressure is lower, the amount used at sea level may cause a cake baked at high altitude to rise too fast, then fall.

### **Liquid: Increase by 2-4 tablespoons**

Liquids evaporate faster, so you need to compensate. Pie crusts baked at high altitudes benefit from a little more water (up to 2 tablespoons) so they don't dry out or burn while the filling cooks.

- Try "tenting" a pie with foil once the top crust is brown, to avoid burning.



**Eggs: Increase by one egg or use extra large eggs**

Eggs add liquid, so if you're not using any other liquid, try using extra large eggs or just add another whole egg if you use small, medium, or large eggs.

**Flour: Increase by 1-4 tablespoons**

Inadequate flour levels can lead to fallen cakes. Many boxed mixes recommend you increase flour and liquid, but above 6,000 feet you may need to add even more of both.

**Acidity: Replace half of the milk with yoghurt**

Acidity helps prevent fallen cakes, too, because it speeds up how fast cakes "set" as they're baking, so they have time to cook through to the bottom before the top gets overdone.

- Replace half of the milk with **Mountain High Yoghurt**. The texture and moisture levels will also be improved.

**Sugar: Reduce by 1-4 tablespoons**

Too much sugar makes cakes fall, so back off and enjoy a fluffier treat.

**Fats: Reduce by 1-2 tablespoons in very rich recipes**

Because the liquids are evaporating more quickly at altitude, fats get concentrated and heavy, leading to flatter or denser cookies and other goodies.

- If your using a cup or more of butter or shortening, back off a bit.

**Baking Temperature: Increase by 15 to 25°F (or not)**

Always **completely preheat** your oven before baking, as adequate heat helps you succeed.

- From **5,000 to 7,000 feet**, the extra **15 to 25°F** helps set the structure of cakes and other goodies so they don't fall.
- Between **7,000 and 9,000 feet**, however, it's better to stick to the **original heat setting** and **increase baking time by 5 to 10 minutes**.
- At **9,000 feet and higher**, new challenges set in, so consider preheating the oven at **25°F higher** than the recipe calls for, then **drop the temperature back** to the original one as soon as you place the recipe in the oven.

**If you want more specific information, an internet search will get you far. There are a number of cookbooks on the subject that are also great resources.**