

What is Riboflavin? *And why is it in my food?

By Anita Lambert

If you've ever looked at the label on your package of store-bought bread, you might have thought you'd picked up a chemistry set. There are a lot of four-syllable words!

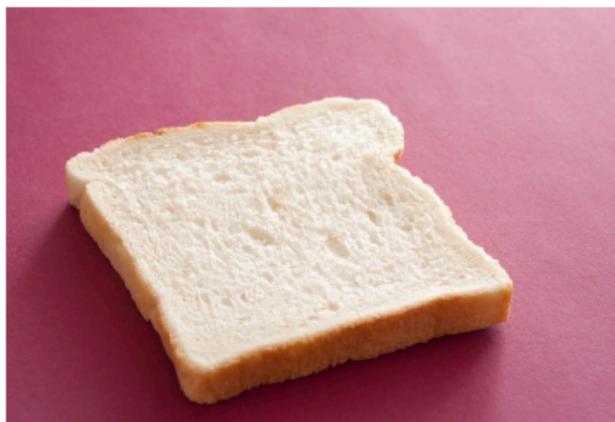
If you've wondered whether you're eating food or performing a science experiment, you're not alone. But before you panic — these tongue-twisters are there for a reason.

Let's look at a historical staple: Bread.

Once upon a time, bread had nutrients. Then, in the quest for maximum output and shelf life, grains used in breadmaking were stripped of their wholesome wheat germ in favor of a new faster method of grinding the wheat. The result? Lighter, fluffier, longer lasting (and eventually, bleached) white bread. It was cheap, smooth, and widely available. But people started getting sick. Those gleaming white loaves weren't feeding anyone; they were just filling bellies (and corporate bank accounts). When it's all people can access or afford, you have a recipe for a public health disaster.

The Rise of Enrichment Programs

By the 1940s, America was facing a quiet epidemic — as well as a world war. People were exhausted, anxious, and malnourished — even though they were eating. The government realized that when 25% of male citizens could-



n't pass military physicals because of vitamin deficiencies, something needed to be done for national security, of course. And so, a national focus on nutrition began, enrichment programs were born, and vitamins were added back to a staple whose goodness had been manufactured right out of it.

Let's take a look at part of the Bread Vitamin Comeback Crew:

Ascorbic Acid (Vitamin C): Arrrrg Matey! We don't want scurvy! Actually, the ascorbic acid used in bread is there primarily to increase shelf life and make the bread more fluffy. So don't forget to eat an orange.

Thiamine (Vitamin B1), Niacin (Vitamin B3), Riboflavin ("RYE-bo-flay-vin") Vitamin B3: These B vitamins, along with iron, entered the spotlight in the 1940s when the government realized a malnourished population couldn't fight a war. Food companies began enriching (adding these nutrients back) the bleached, lifeless bread. For those dependent on cheap ultra-processed bread or grains, it was

lifesaving progress.

Folate (Vitamin B9): It wasn't until 1992 when folate deficiency in the first four weeks of pregnancy (before most women know they're pregnant) was discovered to be a key factor in neural-tube defects (such as spina bifida). Cue the mandate to fortify white flour and enriched grain products with folate, thus greatly reducing the potentially devastating disorders.

Here are some others:

- Pantothenic Acid (Vitamin B5)**
- Pyroxidine or Pyridoxal (Vitamin B6)**
- Cobalamin (Vitamin B12)**

We haven't even gotten past the Bs yet!

Food fortification (adding nutrients that Americans may be missing in their diets) and food enrichment (re-adding nutrients that processing has stripped out of food) are important public health initiatives. But mostly, they allow big food manufacturers to continue to peddle semi-nutritious, calorie-laden food to the public as "wholesome," "enriched," and "healthy" choices.

So, what to eat? Eat a healthy mix of whole foods: grains, vegetables, fruits, legumes, dairy, and some meats. If you're living on boxed dinners, you're risking your health (but making the food companies richer). We'll cover more of this next month.

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