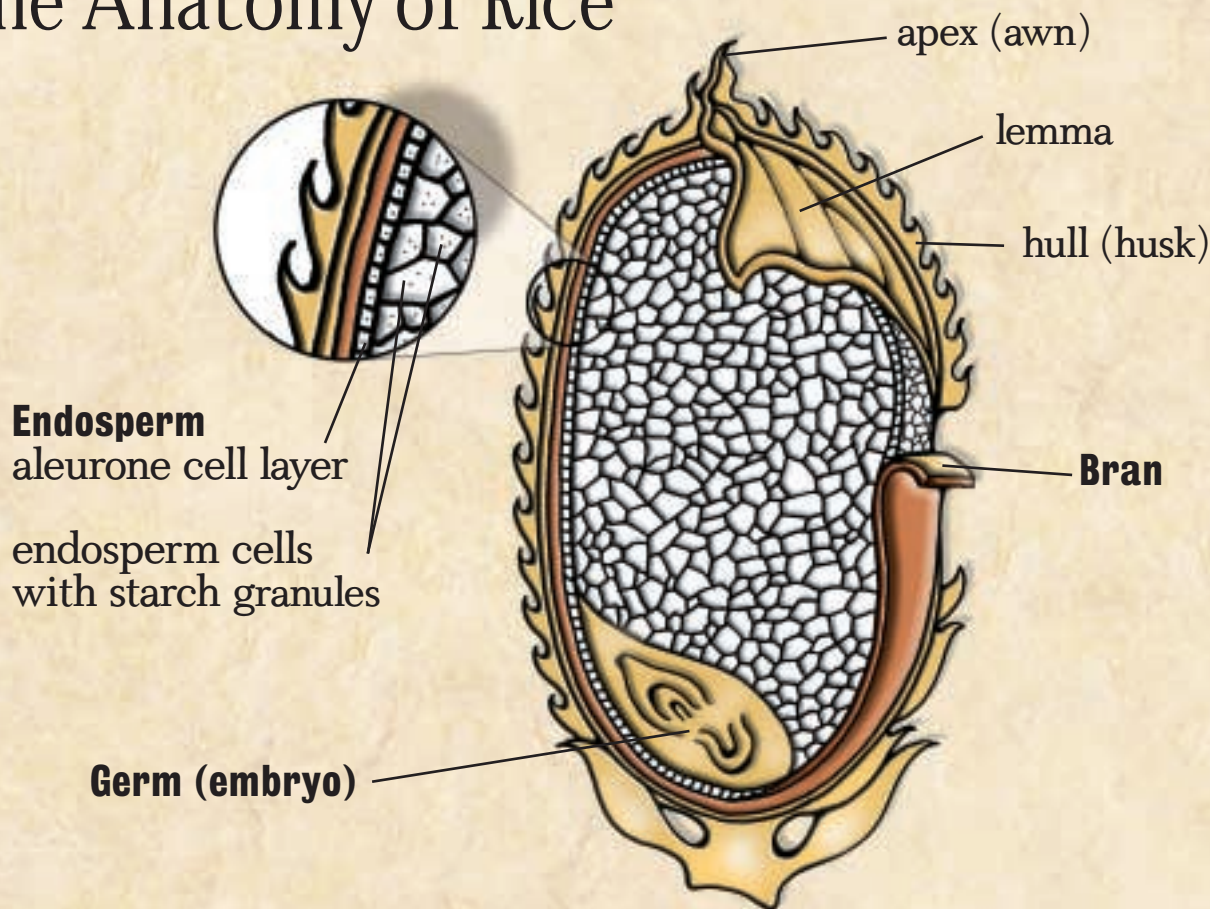


# The Anatomy of Rice



PHOTOS AND ILLUSTRATIONS: HINDUISM TODAY

FOOD

## Why Brown Rice is Healthier

Almost everyone eats white rice—but should they?

**C**AN YOU GUESS WHICH HIGHLY processed and very popular food contributes to diabetes and, if it wasn't fortified with vitamins by the manufacturer, a deadly disease—beriberi? That's right. It's white rice.

The vast majority of rice eaters won't touch brown rice. They consider it peasant's food or animal feed. Yet, the modern health food movement has proven unprocessed grains, including brown rice, to be healthier than their refined counterparts. Certainly, for thousands of years everyone ate brown rice, for the complex processing equipment needed to make white rice was invented only in 1860, in Scotland.

So what's the reason behind white rice anyway? HINDUISM TODAY asked Tim O'Donnell, vice president of sales and marketing at Lundberg Family Farms, a Californian company dedicated to organic rice. He said the main reason is shelf life. White rice keeps much longer than brown rice and therefore makes companies more money.

Over the last century, too, people have come to like the texture of white rice, as well as the shorter cooking time. White rice is also cheaper, because the factories are optimized to produce it. Switching the equipment to make brown rice costs extra money. But Lundberg's factory, which is set up to produce only brown rice, can match the

price of white rice, according to O'Donnell.

White rice got off to a rough start when, in 1897, it was found to be the cause of beriberi, a potentially deadly disease caused by lack of vitamin B1, which is stripped out in the processing. Companies responded, under government pressure, by enriching the rice. They put back the naturally occurring vitamins, but not the nutrients called phytochemicals, which includes the all-important fiber. Another hazard of white rice is that it can contribute to diabetes. And, for those already diabetic, white rice is less safe than brown rice because it breaks down into glucose more quickly than brown rice, causing a more drastic insulin reaction. 🍚



## Paddy Rice

Right off the stalk, rice has an inedible outer husk. The more than 100,000 varieties of rice come in many different shapes, sizes and colors.



## Brown Rice

With minimal processing by machine, hand pounding or, in some areas, putting the rice on the road and letting traffic drive over it, the husk is separated from the grain and then removed by winnowing. What's left is brown rice.



## White Rice

After the husk is removed, the rice is milled to remove the bran (the brown skin just under the husk) and the germ or embryo (the life of a rice kernel which grows into a rice plant). In the milling process, complex machinery rubs the rice together under pressure. All rice is brown rice before it is processed into white rice. This process strips out the life force of the rice along with most of the nutrients and almost all of the fiber. In order to compensate, 90 percent of American companies enrich white rice with powdered nutrients, in an attempt to replace some of what they took out. But, if the rice is rinsed before cooking, as it is in India, then the enrichment powder is lost. Many other nutrients are also removed in milling, the importance of which scientists are just beginning to understand. In the end, 55 percent of the original paddy rice remains.

# Let Us Count the Ways...

The chart at right shows the dramatic differences in nutritional value between enriched processed white rice and unenriched, unprocessed brown rice. Even with the enrichment required by law in most countries, including India, there are still vast differences. Brown rice has 349% more fiber, 203% more Vitamin E, 185% more B6 and 219% more magnesium. With 19% more protein, brown rice is a more balanced food. White rice does include 21% more thiamin, B1, which is added in the enrichment process. It is noteworthy that brown rice has a low Glycemic Index, 55 compared to white rice's 70, or even more with additional processing, such as parboiling, which posts an 87. For reference, a donut is 76. The development of diabetes later in life has been linked to the overconsumption of foods with a high Glycemic Index.

