

FOCUS ON NUTRITION

The Clue of the Shaky Chickens

Scientists are like detectives. They look for clues and track down killers. The baffling puzzle of the shaking chickens took years to unravel.

Photo Source: USDA



When investigating the cause of beriberi, Dr. Eijkman found that chickens fed white rice got beriberi. The chickens fed brown rice didn't get beriberi.

In the late 1800s, a brutal killer was loose in Asia. The work of this killer was well known for many years. Suddenly, the killer went on a rampage. It claimed thousands of victims. People called the killer "Beriberi."

Beriberi means "I can't, I can't." This killer caused muscles to waste away. The victims become paralyzed. When they are asked to walk, victims say "I can't." When their hearts become paralyzed, they die. Beriberi is a disease. Many people suffered from it. Yet, no one knew how they got it.

A doctor named Dr. Eijkman was working in Asia. He began studying this killer. He thought beriberi was caused by a germ. He looked for a germ, but couldn't find one. The disease was getting worse. It had spread to chickens. The chickens shook. They wobbled when they tried to walk. Many of them died. What was causing this terrible disease?

One day, Dr. Eijkman walked by a local chicken farm. He found a valuable clue. He noticed that the chickens didn't shake and wobble anymore. He questioned the farmer. He wanted to know how the chickens were cured.

The farmer said, "The price of white rice has gotten too high so I stopped feeding my chickens white rice. Now I feed them brown rice."

The price of white rice had gone up after a new, method for processing rice was developed. This method removed the bran and germ. Only the white endosperm was left. People wanted the pretty white rice. They didn't want "dirty looking" brown rice anymore. They ate white rice at every meal.

Dr. Eijkman thought about his clue. "Is there something in brown rice that prevents beriberi?" he wondered. He set up an experiment to find out.

He fed one group of chickens brown rice. He fed a second group white rice. The chickens fed brown rice didn't get beriberi.

Turn over →

Those fed white rice got beriberi. When he fed the chickens with beriberi brown rice, they got better. When he fed people with beriberi brown rice, they also got better quickly.

Dr. Eijkman was right! There is something in brown rice that prevents, and cures beriberi. What is it? About 30 years later, a scientist working in London found the answer. It is a vitamin. The vitamin is called thiamin. Thiamin is in the germ of

grains. The white rice lacked thiamin. That is because white rice is only the endosperm. When the germ is removed, so are the vitamins and minerals.

Beriberi became a big problem in Asia when the people switched from brown to white rice. Amazing as it may seem, this killer is still at work. Many people in the Philippines die from this disease every year! They could be saved if they ate brown rice or enriched rice.