

Scientific Method In Action



The Strange Case of BeriBeri

In 1887 a strange nerve disease attacked the people in the Dutch East Indies. The disease was beriberi. Symptoms of the disease included weakness and loss of appetite, victims often died of heart failure. Scientists thought the disease might be caused by bacteria. They injected chickens with bacteria from the blood of patients with beriberi. The injected chickens became sick. However, so did a group of chickens that were not injected with bacteria.

One of the scientists, Dr. Eijkman, noticed something. Before the experiment, all the chickens had eaten whole-grain rice, but during the experiment, the chickens were fed polished rice. Dr. Eijkman researched this interesting case. he found that polished rice lacked thiamine, a vitamin necessary for good health.

1. State the Problem **A disease was affecting the people.**
2. What was the hypothesis? **If the chickens were injected with the bacteria, then they will become sick as well.**
3. How was the hypothesis tested? **The chickens were given blood from sick patients to see if they became sick. There was also a group of chickens that did not receive the blood (this is the control group).**
4. Should the hypothesis be supported or rejected based on the experiment? **The hypothesis is rejected because both groups were affected.**
5. What should be the new hypothesis? **If the chickens were fed polished rice, then they will have beriberi.**

1 - Patty Power

Which people are in the control group? *Group B*

What is the independent variable? *New sauce*

What is the dependent variable? *Amount of gas*

What should Mr. Krabs' conclusion be? *The new sauce appears to work as it reduced the amount of gas produced in 60% of the people tested.*

Why do you think 10 people in group B reported feeling better? *They thought they were getting the new sauce as a result thought that they didn't have as much gas. (Placebo effect)*