

## **EXAMPLE LONG HISTORICAL STORY BASED ON RESEARCH**

**Prompt:** Write a long historical story about a famous event that really happened and the people who participated in it. Show the scientific challenges that were faced and how they were resolved. Make sure that the story contains at least eight paragraphs and all the elements of a story. Provide a reference list containing at least four references and in-text citations where needed. Use the MLA style.

TITLE OF THE STORY: One Bite Is Enough!

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### One Bite Is Enough!

Back in the 1930s, scientific experimentation was not very advanced. One scientist, Allan Walker Blair, wanted to conduct experiments to determine the effects of various toxins or poisons on the human body. He was on the faculty at the University of Alabama's medical school. At that time, experimentation on humans was often poorly done and unethical. For example, one study conducted in 1932 exposed men to a disease, but did not tell them that they were being exposed, nor were they given treatment for the disease once they contracted it. In contrast, Allan Blair wanted to conduct well-controlled studies that would be ethical. He set out to carefully plan his experiments.

For his best-known experiment, Allan Blair chose to study the effects of a Black Widow spider's bite on the human body. Black widow spiders are members of the Widow Spider family, called Theridiidae. Notably, they are shiny black in color. They have a red hourglass on the underside of their abdomens and red stripes on the topside. Their bodies can be as big as half an inch long. Interestingly, they were dubbed "widow spiders" because they poison and kill the male spiders after mating with them. As a result, the female spiders become "widows." Because scientists had observed female black widow spiders killing their mates with poison, they wondered what effect that poison might have on humans.

Because of his interest in poisons, Allan Blair started to study the history of research experiments on black widow spiders. He noticed that several people had tried to document

the effects of black widow spider bites on humans. Doctors, for example, had described their observations when someone they knew had received a black widow bite. In 1921, a man named William Baerg had done a self-experiment when he allowed a black widow spider to bite him for a few seconds. Nine hours after he had been bitten, Baerg had to be taken to the hospital because he was experiencing such horrible pain. For three days, he was in agony with fever and pain. After he recovered, Baerg wrote about his experiences for the scientific community.

Twelve years later, Allan Blair read about William Baerg's self-experiment and his reports. He also read other scientists' reactions to Baerg's reports. He realized that Baerg's self-experiment and personal sacrifice in going through the experience was not accepted as valid by the scientific community. Other scientists said that Baerg did not control for other factors that could have caused his pain and fever. They doubted that such a small creature could cause such severe pain in a man. Besides, he was just one man who had had a spider bite. Perhaps other men would not react in the same way.

As a result of scientists' rejection of the Baerg experiment, Allan Blair decided to conduct a controlled experiment that would be accepted by other scientists. He felt that the nation should be warned to avoid black widow spider bites if the bites were as dangerous as William Baerg had described. At first, he began to look for volunteers to allow themselves to be bitten by a black widow. Two of his students and his wife volunteered. After thinking about the situation, he decided not to allow his students to be bitten because the university could be sued if they did not recover. He also decided not to allow his wife to be bitten because he wanted his children's mother to stay healthy. By process of elimination, he decided that he would allow himself to be bitten. He was a healthy man who

was 32 years old, weighed 168 pounds, and had an athletic build (How a UA doctor” 1). He had recently won a faculty tennis tournament at the university. Surely, a small spider could not affect him very much.

With a great deal of thought, he planned the experiment so that it would not be criticized by other scientists. Before the experiment, he isolated himself so that he would not be exposed to other diseases that might cause pain and fever. He also had doctors examine him to determine that he was healthy. They tested him medically to verify that he was healthy, and they kept records of his test results. In addition, he started the experiment in his laboratory, which was a carefully cleaned room, in the presence of other people who could take notes about his reaction to the bite.

When all was ready, Allan Blair started the experiment. He allowed the spider to bite him for twice the time that Baerg had allowed his spider to bite him. He started taking notes. For a while, Blair was able to write his observations about what was happening in his body. Within 20 minutes, he wrote that he was feeling pain in his arm. The pain spread throughout the muscles of his body until he was having trouble breathing. After two hours, he was in such distress that he was taken to the hospital, and his lab assistants started taking the notes. His doctor stated, “I do not recall having seen more abject pain manifested in any other medical or surgical condition.” (How a UA doctor” 1) Blair insisted that the hospital staff continue to do medical tests throughout his ordeal to document the effects of the poison on his body. For example, they gave him regular electrocardiograms to show the effects on his heart. He was taken home from the hospital in an ambulance after a week of recovery.

After he had returned home, Allan Blair continued to experience some symptoms as a result of his experiment. For example, for several weeks, he had itching all over his body. Later, in 1934, he published an article in the *Archives of Internal Medicine* about his experiment (Blair, 1934). He wrote about his observations, his doctor's observations, and the medical results. He concluded that the bite of the black widow spider is very poisonous to man. As a result, people have known to avoid black widow spiders as much as possible.

Interestingly, when Allan Blair first planned his experiment, he intended to conduct a second experiment where he would allow himself to be bitten for a second time by a black widow spider. Originally, he was intrigued about whether the first bite would make him immune to the poison in the second bite. He theorized that perhaps he would not experience the same symptoms after the second bite. After he had recovered from the first bite and when he was asked whether he would conduct the second experiment, he declined. Not surprisingly, he did not want to risk having the same symptoms for a second time. He worried that he would not survive the second bite. He had learned the lesson that self-experimentation while risking one's own life is not a smart choice.

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