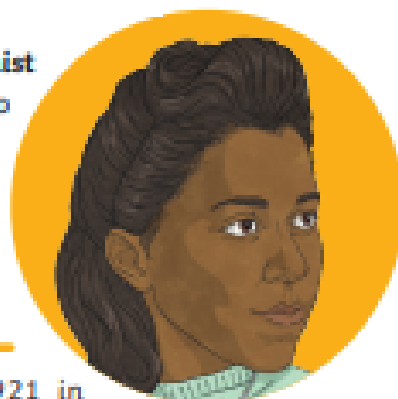


Marie Maynard Daly

Marie Maynard Daly was an American **biochemist** who is known for her pioneering research into the effects of cholesterol on our health. She was the first Black American woman to receive a **PhD** in chemistry.



Early Life

Marie Maynard Daly was born on 16th April 1921 in Queens, New York, USA. Her family believed strongly in the importance of education at a time when very few Black American people attended university. Marie had no siblings and her father was a keen scientist with a passion for chemistry. He was offered a place at university to study science but was forced to decline as he could not afford the fees. Marie's mother was a keen reader and encouraged Marie's love of books, especially those about science.

Education

Marie inherited her father's love of science; she excelled at the subject during her time at an all-girl school, Hunter College. Following high school, Marie went on to study chemistry at Queen's College, New York. She graduated with a bachelor's degree in 1942 and was named Queens College Scholar (an award given to their top graduates). Just one year later, Marie completed her master's degree in chemistry at New York University.

Marie started a PhD at Columbia University in 1944. The Second World War meant that there was a shortage of male students so Marie was able to be offered a funded place. Her studies focused on the chemicals of the human digestive system. In 1947, Marie became the first Black woman to receive a PhD in chemistry in the USA.

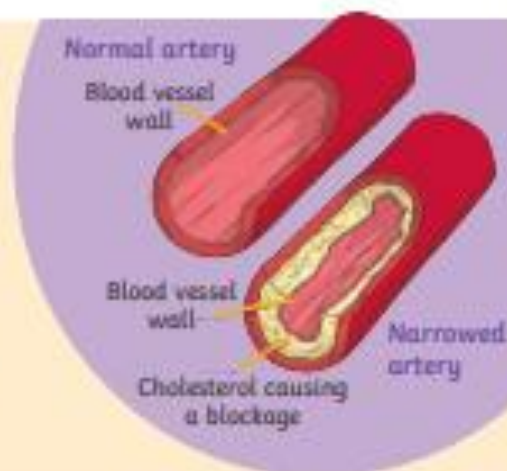
Career in Research

Marie stayed at Columbia University, taking a position there as a teacher. During this time, she also continued her research into how the body's chemicals help digest food.

Cholesterol

Marie found that foods high in fat (such as dairy products and meat) cause a substance called cholesterol to clog the **arteries** and prevent blood flowing correctly around the body.

High levels of cholesterol in the arteries can cause heart conditions and strokes.



Marie's research was important because it revealed the crucial relationship between cholesterol and the **circulatory system**. She also helped to demonstrate how diet and lifestyle choices can affect our health.

In 1960, Marie started working at Albert Einstein College of Medicine. As well as teaching students, she continued researching how lifestyle and diet can affect the body. Her research also looked at the impact of cigarette smoking on lung tissue. She remained at the Albert Einstein College until she retired in 1986.



Marie felt strongly that Black and Minority Ethnic students, like her, should have access to medical school education. In 1988, Marie established a scholarship fund for Black science students at Queens College to help to pay for their studies. She did this in honour of her father, whose own studies were affected by lack of finances.

Legacy

Marie received her degrees during a time when very few Black women attended university. In 1999, Marie was named one of the Top 50 Women in Science, Engineering and Technology by the National Technical Association. In 2016, a school in her hometown of Queens was named after her.



Glossary

arteries: The large vessels (tubes) that are part of the circulatory system.

biochemistry: The study of the chemistry that takes place in living things.

circulatory system: The blood vessels that carry blood to the heart and around the body.

PhD: The highest level of university degree a person can achieve. PhDs are awarded to students who research and write about something important and new in their subject.

Questions

1. Which word best defines Marie Maynard Daly's career? Tick one.

- teacher
- researcher
- dietitian
- author

2. Draw **four** lines and match each event to the correct year.

1988

1942

1960

1947

Marie began working at Albert Einstein College of Medicine.

Marie became the first Black American woman to receive a PhD in chemistry.

Marie established a scholarship fund for Minority Ethnic students.

Marie graduated with a bachelor's degree in chemistry.

3. Fill in the missing words.

In 1988, Marie began a _____ fund for Black science students at _____ to help pay for their studies.

4. **...she excelled at the subject...**

How else could the author have written this phrase?

5. Why did Marie's father not complete his degree in chemistry?

6. What would be a suitable sub-heading for the first paragraph of the text?

7. Explain how a person can lower their cholesterol levels.

8. Why do you think that there was a shortage of male students at Columbia University during the Second World War?

9. Summarise what you have learnt about cholesterol.
