



Dr. Patricia Bath

HIDDEN HERO OF HISTORY

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Dr. Patricia Bath was an **ophthalmologist**, inventor, and humanitarian!

Patricia Bath was born in 1942 in New York City's Harlem neighborhood. Her father was Rupert Bath, the first Black motorman for the New York City subway system and her mother was a domestic worker. Both of her parents inspired her love of academics.

Her father, who also occasionally wrote for a newspaper, taught Dr. Bath about travel and the importance of exploring new cultures. Her mother bought her a chemistry set – sparking her interest in science.

At age 16, Dr. Bath applied for and was awarded a scholarship at the National Science Foundation, an organization that supports scientific research and education. She began a project with a university and the Harlem Hospital Center where she studied the connection between cancer, nutrition, and stress. This led her to some important discoveries about the nature of cancer – including a mathematical equation that could be used to predict cancer cell growth.

The head of the program recognized how significant her findings were and published them in a **scientific paper**. Her research also earned her a feature on the front page of the New York Times. At age 18, she won a Merit Award in Mademoiselle magazine for her contribution to the project.

Dr. Bath graduated from high school after two years and attended universities to study chemistry and medicine. She graduated from Howard University with honors in 1968 and eventually started her career in **ophthalmology**.

She began an internship back in her home at Harlem Hospital, and the following year, started a fellowship in ophthalmology at Columbia University. During this time, she discovered that individuals from **under-resourced communities** were twice as likely to suffer from blindness than her other patients. They were also eight times more likely to develop glaucoma, a type of eye disease.

She learned that many cases of eye disease were preventable. So, she created the community ophthalmology system to promote eye health in a more accessible way. The community ophthalmology system increased the amount of eye care given to people who were previously unable to afford treatment.

In 1981, she began the process of creating the Laserphaco Probe for which she received a patent in 1988. The device created a less painful and more precise treatment of **cataracts** using laser technology. With the invention, Dr. Bath helped restore the sight of individuals who had been blind for more than 30 years!



Dr. Bath was a humanitarian too. She was involved in many efforts that went towards bettering the lives of others. For example, when she was in school, she co-founded the Student National Medical Association. It is now the largest independent, student-run organization that focuses on the needs and concerns of Black medical students in the United States.

Throughout her schooling and career, Dr. Bath achieved many firsts:

- The first woman to lead a post-graduate training program in ophthalmology.
- The first African American person to serve as a resident in ophthalmology at New York University.
- The first African American woman to serve on staff as a surgeon at the UCLA Medical Center.
- The first African American woman doctor to receive a patent for a medical purpose.

Among many other outstanding achievements!

Glossary

Ophthalmology – The branch of medicine that focuses on the eye and its diseases.

Ophthalmologists – Eye doctors who perform medical and surgical treatments for eye conditions.

Scientific Paper – A written report that describes original research results that follows the scientific method where a problem is identified, information about the problem is gathered, a hypothesis (or question) is formed from the information and put to test with an experiment to prove or disprove it.

Under-resourced communities – Groups of people who do not receive the funding or resources for quality health care services.

Cataract – A cloudy area in the lens of the eye. If it is large enough, it can cause blurry vision or block vision.

Give it Some Thought

How did Dr. Patricia Bath's upbringing and experiences inspire her to become an ophthalmologist and inventor?

Besides being an ophthalmologist and inventor, what other ways did Dr. Bath contribute to the field of medicine and society as a whole?

Can you think of any ways you can make a positive impact in your community like she did?

Dr. Patricia Bath achieved many firsts in her field and made groundbreaking contributions. What values and traits do you think she possessed that allowed her to overcome challenges and achieve these milestones?

Use Your Imagination

Research Activity

Inspired by Dr. Patricia Bath's community ophthalmology system, pretend that you are organizing a community health campaign:

1. Do some research to come up with 3 main reasons on why a person should care about their eye health.
2. Create a poster that will raise awareness about eye health within your school or community.
3. Present your poster to share with others about the importance of getting regular eye check-ups.

Creative Activity

In this story, Mr. Redge overcomes his fear of going to see Dr. Frobbles and is excited that he gets to choose some reading glasses! But which ones should he choose? Help him by designing a special pair of eyeglasses perfect for the coolest and most stylish hedgehog from the Folktale Forest.

Draw in your journal, on a blank piece of paper, or use the eye glasses' sketch on the next page as your starting point for your design.



My Design for Mr. Redge's New Eyeglasses

