



Dr. Elizabeth Blackwell

Dr. Elizabeth Blackwell was the first woman in America to receive a medical degree. She also promoted the education of women by opening her own medical college for women in 1868. Born in 1821, Blackwell worked as a teacher to earn money for her family. In the 1840s despite the lack of precedents, Blackwell decided to become a doctor. After being rejected by many schools, Geneva College in New York accepted her. Though facing resistance from classmates and professors, in 1849 Blackwell graduated first in her class. Blackwell opened the New York Infirmary for Women and Children hospital in 1857 along with her sister, Dr. Emily Blackwell and Dr. Marie Zakrzewska.

Dr. Antonia Novello

Dr. Antonia Coello Novello was the first woman and the first Hispanic to serve as Surgeon General of the United States. Novello received her M.D. from the University of Puerto Rico School of Medicine and did her residency in nephrology at the University of Michigan Medical Center. In 1978 Novello joined the Public Health Service Commissioned Corps where she made significant contributions to the creation of the Organ Transplantation Procurement Act of 1984. Novello was appointed Surgeon General in 1990. She focused on improving the health of women, children, and minorities.





Dr. Chien-Shiung Wu

Dr. Chien-Shiung Wu was the first female instructor in the Physics Department at Princeton University. Wu was born in 1912 and grew up in Liuhe, China. She decided she wanted to continue her education at a level higher than was possible in China. In 1936 Wu was accepted to the University of California, Berkeley. Wu earned her Ph.D. in physics for her work in nuclear fission in 1940. She first taught at Smith College and then at Princeton University. During World War II Wu worked on the Manhattan Project. She developed a process to enrich uranium to produce large quantities of fuel. In 1956 Wu and two of her colleagues disproved Parity Law. For their work Wu's male colleagues won a Nobel Prize in 1957, Wu did not.

Dr. Helen Taussig

Dr. Helen Taussig founded the field of pediatric cardiology. She overcame opposition to become a preeminent cardiologist and physician. Despite severe dyslexia and gender discrimination, Taussig obtained her medical degree from Johns Hopkins in 1927. Suffering from hearing loss due to a childhood illness, Taussig mastered non-stethoscope ways to monitor the heart. Using these innovative techniques, Taussig discovered the cause of "blue baby syndrome" and helped design a surgery to correct it.





Edith Clarke

Edith Clarke was the first female electrical engineer in the United States. Clarke attended Vassar College where she studied mathematics and astronomy, graduating in 1908. In 1919 Clarke became the first woman to earn a master's in electrical engineering from MIT. Clarke took a job as a computer with General Electric. Then in 1921, Clarke submitted a patent for a "graphical calculator" which would help solve electric power transmission line problems. She was also the first woman to present a paper to the American Institute of Electrical Engineers. In 1947, Clarke became the first female electrical engineering professor in the country. She taught at the University of Texas for nine years before retiring.

Katherine Johnson

Katherine Johnson worked for NASA's Langley Research Center from 1953 to 1986. She helped calculate the trajectory of the early space launches and the first moon landing. Johnson was known for asking questions, she wanted to truly understand the work she was doing. She also asked why women were not allowed to attend briefings or meetings. When no answer could be given Johnson started showing up, and asking more questions. She became an important part of the team, known for her geometry skills. Johnson was also honored with many awards during her time at NASA.





Amelia Earhart

Amelia Earhart was a record-breaking aviator. During World War I, Earhart worked at a Canadian military hospital and met aviators becoming intrigued with flying. With her first plane ride in 1920, Earhart realized her true passion and began lessons. On her 25th birthday, she purchased her first plane. Earhart flew it in 1922, while setting the women's altitude record. In 1932, she became the first woman to pilot a plane solo across the Atlantic. In 1929, she helped found the Ninety-Nines, and in 1935, Purdue University hired her as an aviation advisor. On June 1, 1937, Earhart left Miami to become the first woman to fly around the world. With 7,000 miles to go, the plane lost radio contact and was never found.

Bessie Coleman

Elizabeth "Bessie" Coleman was the first African American woman to pilot a plane and earn an international pilot's license. An aviation pioneer, "Brave Bessie" thrilled audiences with her daring aerial tricks. Coleman barnstormed her way across the country, performing daring aerial acrobatics at air shows wherever she could find an audience. She looped de looped and barrel rolled her way into the hearts of cheering—and integrated—crowds. Coleman refused to perform anywhere African Americans were not welcome.





Ellen Swallow Richards

Ellen Swallow Richards introduced the word *ecology* to the United States in 1892. After receiving a BA in chemistry from Vassar College, she was the first woman admitted to MIT. Then denied admission into MIT's doctoral program, she established a woman's chemistry laboratory. Her studies in environmental problems caused by urbanization led to the first state water-quality standards in the nation and the first modern municipal sewage treatment plant in Massachusetts. She also founded the field of home economics and worked on the Pure Food Acts.

Rachel Carson

Marine biologist and nature writer, Rachel Carson sparked a global environmental movement. Her most notable achievement was her book *Silent Spring*, which focused the attention of American citizens on the negative effects of pesticide usage. Carson's work was recognized with medals from the National Audubon Society and the American Geographical Society as well as induction into the American Academy of Arts and Letters. She was posthumously awarded the Presidential Medal of Freedom in 1980.

