In 1910, Abraham Flexner, under the auspices of the Carnegie Foundation for the Advancement of Teaching, published a report on medical schools that led to a revolution in how medicine was taught across the country. By 1920, Flexner approached Dr. Benjamin Rush Rhees, then president of the University of Rochester, with the idea of establishing a medical school at the university that would utilize his revolutionary ideals in medical education. Flexner and Rhees then approached George Eastman, founder of Eastman Kodak, to help back the idea financially. Additional monies came from the General Education Board of the Rockefeller Foundation and the daughters of the late Henry Alvah Strong, former business partner to George Eastman, to build a university, medical school, and hospital on land located on the southern boundaries of the City of Rochester near the banks of the Genesee River.

The first dean of the medical school, Nobel Laureate George Hoyt Whipple, M.D., came to Rochester in 1921, recruited from the University of California at San Francisco. Whipple helped shape the school from its inception, hiring faculty and staff and supervising the design and construction of buildings.

The medical school opened its doors in 1925 and Strong Memorial Hospital opened as a 250-bed community facility in 1926. The University of Rochester School of Medicine and Dentistry graduated its first class in 1929. Whipple's vision, built on the philanthropy of George Eastman, was a school and a hospital under one roof that integrated basic science and clinical practice. Today, that concept of physically integrating patient care and academics under one roof is still going strong.

Students in the School are educated by the Double Helix Curriculum, integrating the basic science and clinical medicine strands of medical education and weaving them throughout the four-year curriculum.

The School of Medicine and Dentistry transformed the future of medicine in Rochester and nationwide when it created the biopsychosocial model of education. Developed by Drs. George Engel and John Romano, this method systematically considers biological, psychological, and social factors and their complex interactions in understanding health, illness, and health care delivery.