



Innovator: & Pioneer

[Blood Journey](#)
[Blood History](#)
[Blood Basics](#)
[Innovators & Pioneers](#)
[Education](#)
[Ask th](#)

Louis Diamond

Born: May 11, 1902 in Ukraine

Died: June 14, 1999

Nationality: American

Occupation: pediatrician



Louis K. Diamond (May 11, 1902 - June 14, 1999), pediatrician, was born in the Ukraine, Russian Empire, the son of Eleazor Diamond, occupation unknown, and Lena Klein Diamond. After emigrating to the United States with his parents at age two, he grew up in Manhattan. He entered Harvard University in 1919 and worked his way through school, always holding at least two jobs. Although he was initially interested in chemistry, the summers he spent working as a camp counselor in New England helped to foster an interest in the field of pediatrics. On graduating in 1923, he entered Harvard's medical school, receiving his M.D. in 1927.

Shortly after finishing medical school, Diamond studied briefly with Florence Sabin at the Rockefeller Institute before returning to New England, where he spent the next several years studying pediatrics at Children's Hospital under the guidance of Dr. Kenneth Blackfan. On 2 July 1929 he married Flora Kaplan; they had two children. Although just out of medical school, Diamond set up one of the first pediatric hematology research centers in the United States at Children's. Focusing on anemias, by 1930 he had succeeded in identifying thalassemia, a hereditary anemia that affected children of Italian and Greek ancestry.

His most important discovery, however, came when he and Dr. Blackfan found that what seemed to be four separate infant diseases were actually variations on a single syndrome, erythroblastosis fetalis, otherwise known as Rh disease (because it was originally identified in Rhesus monkeys). Diamond and Blackfan, along with Dr. J. M. Baty, presented their findings in a landmark paper published in the JOURNAL OF PEDIATRICS in 1932. Several years later Dr. Philip Levine identified the source of infant mortality as being the mother's Rh-negative blood adversely reacting with the Rh-positive blood of her newborn infant. Although doctors experimented with complete blood transfusions to save the lives of newborn infants, the process was both difficult and dangerous. In response to the new information, Diamond prevailed on a group of Boston area hospitals to collaborate and found the Blood Grouping Laboratory in 1942, where pregnant women could receive blood screenings that would alert their physicians to possible postpartum complications.

Diamond continued to work on the problem of blood transfusions in newborns with a variety of colleagues until 1946, when he and Dr. F. H. Allen, Jr., developed a technique that allowed the transference to take place through the infant's umbilical cord vein. Regular transfusions were difficult owing to the small size of blood vessels in newborns, and there was a further complication due to the use of steel needles and rubber catheters. Diamond used plastic tubing on the umbilical vein, which was larger than average and remained open for several days after birth. For his work Diamond received the Mead Johnson Award from the American Academy of Pediatrics in 1946; the results were published in the NEW ENGLAND JOURNAL OF MEDICINE in 1951.

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[Back to introduction](#)

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Diamond had remained on the staff of Children's Hospital following the completion of his residency and remained there until retiring in 1968, eventually rising to the rank of associate physician-in-chief of the Hematology Division. He concurrently served on the faculty of the Harvard University Medical School, where he became a full professor in 1963. His most important outside assignment came between 1948 and 1950, when he was picked to head the American Red Cross's transfusion services. Despite having to deal with issues such as postwar apathy, resentment on the part of local blood banks against an American organization, and difficulties in southern states over the use of racially nonsegregated blood, Diamond by all accounts made a major contribution toward establishing the Red Cross as a permanent medical entity in a number of communities nationwide.

Despite his position on the cutting edge of medical technology, Diamond often deplored the trend toward what he perceived to be an overreliance on technology among medical students; while conducting rounds, he often startled residents who had just recited a litany of patient test results by asking them about the color of the child's cheeks. In addition to his role in training many future leading pediatricians, Diamond also participated in a number of medical associations, including the American Pediatric Society, which he served as president. In his later years Diamond continued to be an active researcher; for his work in preventing kernicterus (a condition associated with rhesus incompatibility and leading to brain damage) he received the Award for Scientific Research in Mental Retardation from the Joseph P. Kennedy, Jr., International Foundation in 1966. During his long career Diamond also received the Carlos J. Finlay Gold Medal, Cuba (1951), the Award of Merit from the Netherlands Red Cross (1959), and the Theodore Roosevelt Medal for Distinguished Public Service in Science (1964). He also participated in producing treatments for kwashiorkor, a disease caused by protein deprivation that ravaged Third World children, and was among the first to use chemotherapy in treating childhood leukemia. During his career he published some 200 scholarly articles, the most widely cited of which was *ATLAS OF THE BLOOD OF CHILDREN* (with Kenneth Blackfan, 1944).

After retiring from Harvard in 1968, Diamond moved to the University of California at San Francisco, where he served as an adjunct professor of pediatrics and had a chair named in his honor. He again retired in 1987 and moved to UCLA, where he remained active into his nineties. He died at his home in Los Angeles.

Although his field of research encompassed many areas and his techniques for overcoming Rh blood rejection were later supplanted by advancing technology, Louis Diamond earned the title "father of pediatric hematology" for his ground-breaking work that greatly reduced mortality rates among newborn infants.

Bibliography

No collection of Diamond's papers has been located, but his reminiscences can be found within the Oral History Collection at Columbia University in New York. Diamond's career receives its most thorough overview in Charles A. Janeway, "Presentation of the Howland Award to Louis K. Diamond," *PEDIATRICS RESEARCH* 7 (1973): 853-57, while his role with the national Red Cross receives attention in Douglas Starr, *BLOOD: AN EPIC HISTORY OF MEDICINE AND COMMERCE* (1998). Obituaries are in the *LOS ANGELES TIMES* and the *NEW YORK TIMES*, 25 June 1999.

-- Edward L. Lach, Jr.

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