

# Prosthetic-Orthotic Education— Past, Present, and Future



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*Life is short, and the Art long; the occasion fleeting; experience fallacious, and judgment difficult. The physician must not only be prepared to do what is right himself, but also to make the patient, the attendants, and the externals cooperate. (Hippocrates, 425 B.C.)*

The contemporary level of prosthetic and orthotic education in the United States is not the result of accidental growth and development. The current status, with the three solidly established programs at New York University, Northwestern University, and the University of California, Los Angeles; the Michigan Crippled Children's Commission program in Grand Rapids; and the many regional educational presentations are the result of twelve years of dedicated trial-and-error planning by specialists from the Army, the Navy, the Veterans Administration, industry, and many physicians, engineers, and educators from several university centers.

The first research efforts were started in certain of the military amputation centers toward the close of World War II, and these were continued at Walter Reed and in various university centers with financial support from the Veterans Administration and from the Office of the Surgeon General of the Army. In 1948, the research activities were coordinated under the supervision of the Advisory Committee on Artificial Limbs of the National Academy of Sciences—National Research Council. Lower-extremity research and development was centered in two laboratories at the University of California: in the Department of Engineering at Berkeley, and in the Medical Center at San Francisco. Basic upper-extremity research was conducted by the Department of Engineering at the University of California at Los Angeles. The Navy Prosthetics Research Laboratory at the U. S. Naval Hospital, Oakland, California, concentrated on lower-extremity development, and the Army Prosthetics Research Laboratory at Walter Reed Army Medical Center, cooperated in the development of upper-extremity components. New York University, with the cooperation of the VA Prosthetic Center in New York, was assigned the responsibility for testing and field application to assure that devices and techniques developed under the program were, before acceptance, useful improvements in amputee rehabilitation.

The earliest organized educational presentations were in the Veterans Administration Suction Socket Schools in 1948-49. The primary purpose was

to indoctrinate the new VA Regional Office Clinic Teams with the principles of suction socket prescription, fitting, and training. The background information had been developed at UC, Berkeley, and faculty personnel for the schools was trained in a pilot school in this facility. The suction socket schools were thoroughly successful in accomplishing their limited purpose.

In the meetings of the technical committees of the Advisory Committee on Artificial Limbs, it became increasingly apparent that a planned program for dissemination of research developments was imperative. For a review of the upper-extremity problems an Institute on Upper-Extremity Prosthetics was held at the University of California in Los Angeles in January 1951 under the sponsorship of Craig Taylor. General F. S. Strong, who has been our guiding hand for all programs throughout the years, succinctly stated the objective of this Institute as follows: "The problem then is to prepare a program for practical application so that the results of research and development in the past may be translated to the service of amputees over the years to come." The direct result of this Institute meeting was the development of the pilot course for upper-extremity prosthetics, the first of which was held in Los Angeles in January 1952. Since this beginning, there has been a steady expansion of our educational activities.

By 1955, twelve successful Upper-Extremity Schools had been held at UCLA. A special Committee on Prosthetics Education had been appointed, and following a meeting in New York City on April 19, 1955, a pilot school program for lower-extremity prosthetics was activated. This pilot school was held at the U.S. Naval Hospital in Oakland, August 15 to September 2, 1955. The New York University Educational Program was activated with the first course to be given in January 1956.

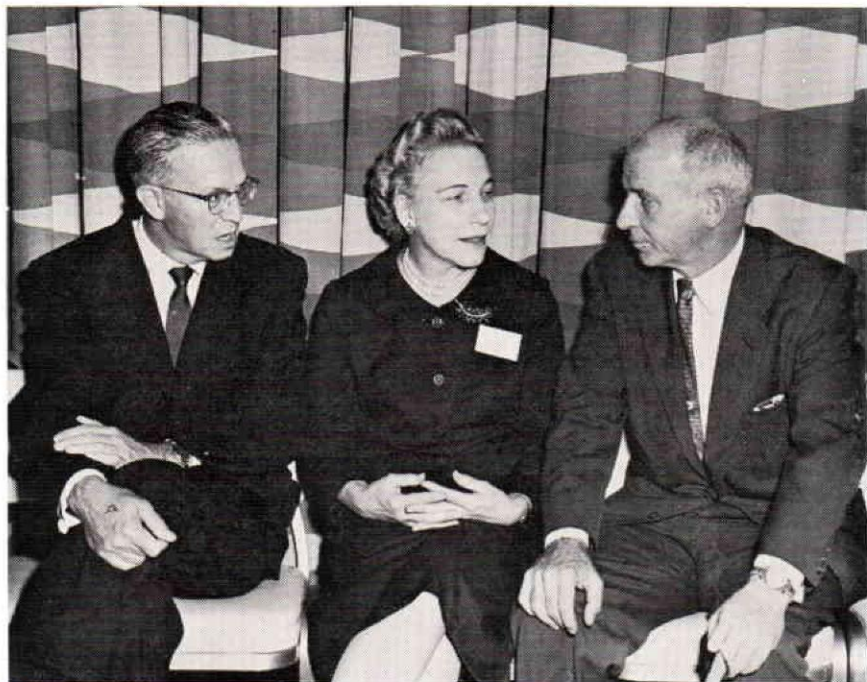
During the latter part of 1955, General Strong dissolved the Panel on Prosthetics Research and Development and the entire program was reorganized under a newly appointed Prosthetics Research Board. The Committee on Prosthetics Research and Development replaced the old panel and a new Committee on Prosthetics Education and Information was appointed. The author was designated chairman of the Sub-Committee on Prosthetics Education and for the next three years this committee functioned actively in an effort to co-ordinate the expanding educational program and to minimize the natural differences of opinion among the participants. In these meetings of the Sub-Committee, the physicians and prosthetists advocated steady expansion of the teaching programs to introduce new components and techniques for industry-wide use without undue delay. The research engineers and those interested primarily in the evaluation-field-testing programs wished to go slowly in this regard. The various viewpoints were equally compromised with Dr. Howard Eberhart summarizing the engineers' stand as follows: "The usual attempts on the part of those interested in education, as we all are, to get material away from the research groups, who are reluctant to release findings before they are confident of their conclusiveness and applicability, will always be a problem. This is true in areas other than prosthetics as well, represents progress after a fashion, and something we have to learn to live with. It does provide some spur to the research groups, and although it may be resented, it is good."

With the demise of the Prosthetic Research Board, the Committee on Prosthetics Research and Development was reorganized under the Division of Engineering, NAS-NRC, and the Committee on Prosthetics Education and Information was placed in the Division of Medical Sciences, with Dr. Al Shands as Chairman and Dr. Hal Glattly as Executive Secretary.



As a natural result of the success of the programs on the east and west coasts, the need for a centrally located educational program in the midwest was increasingly apparent.

In planning for the prosthetic education program at Northwestern University, the experience of the administrative personnel from UCLA and NYU was used to a maximum degree, and their cooperation is hereby appreciated. Our planned program was enthusiastically accepted into the Department of Orthopedic Surgery by Dr. Richard H. Young, Dean of the Medical School. We were fortunate that the new Rehabilitation Institute of Chicago was in a remodeling program, and space was placed at our disposal for use in accordance with our plans. The expensive modernization of the fourth floor of the Institute was financed by a special grant from the Office of Vocational Rehabilitation. Our Prosthetics Research Centre, under the direction of Mr. C. A. McLaurin, was in operation and valuable assistance was rendered by Mac and Fred Hampton in the development of the educational facility.



Richard H. Young, M.D., Dean of the Medical School; Miss Cecile Hillyer, Chief, Division of Training, Office of Vocational Rehabilitation; and Doctor Compere discuss plans for Prosthetic Orthotic Education at Northwestern.

Of number one importance was our good fortune in obtaining Dr. J. Warren Perry as Director of the Prosthetic Education Program. Warren became enthused with the objectives and possibilities of the program, and he smoothly guided us through the first two years of operation. Herbert Blair Hanger joined our staff as assistant director and his services in both administration and in teaching have been outstanding.

The need for proper coordination of our current university programs caused the organization of the University Council on Orthotic and Prosthetic

