

# The Committee on Prosthetics Education and Information

## National Academy of Sciences National Research Council— A Report

By HAROLD W. GLATTLY, M.D.

*Executive Secretary, Committee on Prosthetics  
Education and Information*

This article is the first of a series of reports concerning the activities and interests of the Committee on Prosthetics Education and Information of the National Academy of Sciences—National Research Council that will appear in the official publication of the American Orthotics and Prosthetics Association, the *Orthopedic and Prosthetic Appliance Journal*. An invitation to become a regular contributor to this periodical was recently addressed to the committee's chairman, Dr. C. Leslie Mitchell, by Mr. Lester A. Smith, the Executive Director of AOPA and editor of the *Journal*. CPEI welcomes the opportunity of establishing communication through this medium with the readers of this organ that include not only the prosthetists and orthotists of this country, but many hundreds of other individuals who have an interest in improving rehabilitation services to amputees and to individuals with other crippling orthopedic disabilities. It is our hope that, by means of these articles, the members of the limb and brace profession will achieve a better understanding of the national effort that is presently being organized in the field of prosthetics and orthotics education and will join with the Committee in the furtherance of its program.

These serial reports will cover the history of CPEI, its mission and objectives, and the activities and projects that comprise its present educational and informational program.

It is a truism to state that education is fundamental to progress in all fields of human endeavor. It is through education that trades and vocations achieve a professional status. A characteristic of any profession that embodies the use of scientific knowledge and an art in its application—as for example the medical profession—is the fact that all of the data and information relating to this vocation have been carefully collected, evaluated, systematized and organized to form the basis for a formal educational program for the training of individuals entering into that profession. During the past fifteen years, the prosthetists of this country have witnessed a profound change in the practice of their profession as a result of the development of an educational program relating to their discipline. It is not too optimistic to believe that during the coming decade a formal education program will be available for the training of those entering the practice of prosthetics. A similar sequence of events will also occur in the field of orthotics. A discussion of orthotics education will appear in a future issue of the *Journal*.

Until the Artificial Limb Program of the National Academy of Sciences was organized shortly after World War II, no comprehensive and systematic study of the problems involved in the rehabilitation of amputees had ever been made. With the support of the Surgeons General of the Army and Navy, and the Medical Director of the Veterans Administration, the Academy developed a program of biomechanical and medical research in the interest of developing improved devices, a better knowledge of the amputee as a patient, and a rational approach to his care and management. This program has

been monitored and coordinated through the years by a series of committees of the National Academy of Sciences—National Research Council that culminated in the formation of the Prosthetics Research Board in 1955. It was early recognized that amputee rehabilitation was a multidisciplinary problem involving the skills of certain physicians, prosthetists, and physical and occupational therapists. This led to the concept of the prosthetics clinic team and this idea has proved to be one of the most effective developments of the Artificial Limb Program. In 1950 the Veterans Administration began the organization of amputee clinics in certain of their medical institutions and these clinics have since served as a pattern for the establishment of specialized facilities for non-veteran amputees. A prerequisite to the formation of these amputee clinics was the availability of specialized prosthetics training for the team members. To this end, the Veterans Administration initiated in 1953, at the University of California at Los Angeles, an experimental educational program consisting of short, intensive courses for physicians, prosthetists, and therapists. A second program of courses was organized at New York University two years later, and a third program was initiated at Northwestern University in 1959. Now supported by the Office of Vocational Rehabilitation, these courses have come to be a permanent part of the Artificial Limb Program.

From all these activities there has come not only an armamentarium of greatly improved prosthetic devices but also an extensive compilation of information relating to the component functions of the human extremities, to the medical problems peculiar to amputees, and to the care and management of the limbless from the child congenital to the geriatric. This material can be used to develop permanent prosthetics educational programs in teaching health centers.

In 1958, it was recognized by the Prosthetics Research Board of the Academy-Research Council that, although the results of the Artificial Limb Program were then available for veteran amputees, the vast majority of our non-veteran amputee population were without the advantages of prosthetics clinic team management. Although a high percentage of the prosthetists in this country had taken the courses offered by UCLA and NYU, only a mere handful of physicians, physical therapists and occupational therapists had received this specialized prosthetics training. The vast majority of the members of the medical profession had been relatively unaffected by this educational program. As a result, the clinic-team concept of amputee management had as yet not gained general acceptance throughout the United States. Many states did not have even one organized clinic for the non-veteran amputees who in consequence were presenting themselves at limb shops without a prescription for a prosthesis. This was true with respect to both rural and metropolitan areas, including even those that are the sites of major medical centers. This situation existed primarily from a lack of information on the part of physicians with respect to the modern concepts of amputee management that stemmed from the Artificial Limb Program.

The Office of Vocational Rehabilitation and the Prosthetics and Sensory Aids Service of the Veterans Administration recognized that the millions of dollars of Federal funds that have been devoted to prosthetics research could be translated into improved amputee rehabilitation services only by a program that would educate, train and inform the members of the relevant medical and paramedical disciplines who are responsible for the care and management of this form of disability. These government agencies therefore requested the Prosthetics Research Board to develop a program to supplement the educational activities of the prosthetics schools.

The Committee on Prosthetics Education and Information was then organized as a committee of the Prosthetics Research Board in the spring of 1958, under the chairmanship of Dr. Alfred R. Shands, Jr. The Committee, as originally constituted, was composed of individuals with national stature in the more important disciplines concerned with the rehabilitation of amputees and cripples of an orthopedic character. The composition of the group is here presented with the picture of the Committee that was taken at the time of their first meeting, March 13, 1958, at the National Academy of Sciences. The following guest speakers participated in this initial meeting of CPEI:

Brig. Gen. F. S. Strong, Jr., Chairman, Prosthetics Research Board;

Miss Mary E. Switzer, Director, Office of Vocational Rehabilitation, Department of Health, Education and Welfare;

Dr. Robert E. Stewart, Director, Prosthetic and Sensory Aids Service, Veterans Administration;



**NEW MEMBERS OF CPEI**—Pictured during their first meeting, at the National Academy of Sciences in Washington March 13, 1958, are nine members of the newly constituted Committee on Prosthetics Education and Information. Seated, left to right: Col Harriet S. Lee, Chief of the Army Medical Specialists Corps, Office of the Surgeon General, Department of the Army, Washington; Dr. Alfred R. Shands, Jr., Medical Director of the Alfred I. duPont Institute of The Nemours Foundation, Wilmington, Del., and Chairman of the Committee; June Sokolov, Executive Director of the Hartford Rehabilitation Center, Hartford, Conn.; and William M. Bernstock, Assistant Chief of the Research and Development Division of the VA's Prosthetic and Sensory Aids Service, New York City. Standing, left to right: W. Frank Harmon, of the Atlanta Brace Shop, Atlanta; Renato Contini, Research Coordinator for the NYU College of Engineering, New York City; Dr. Herbert W. Park, Professor and Chairman of the Department of Physical Medicine and Rehabilitation at the Medical College of Virginia, Richmond; McCarthy Hanger, Jr., President of the J. E. Hanger Company of Missouri, St. Louis; and Dr. Samuel S. Herman, Chief of the Division of Medical Services and Facilities of the Office of Vocational Rehabilitation, Department of Health, Education, and Welfare, Washington. Absent when the picture was taken were the two remaining members of CPEI, Dr. George T. Aitken, orthopedic surgeon with the Mary Free Bed Guild Children's Hospital, Grand Rapids, Mich.; and Dr. Henry H. Kessler, Medical Director of the Kessler Institute for Rehabilitation, West Orange, N. J.

Mr. Glenn E. Jackson, then the Executive Director, Orthopedic Appliance and Limb Manufacturers Association;

Miss Cecile Hillyer, Chief, Division of Training, Office of Vocational Rehabilitation, Department of Health, Education and Welfare;

Dr. Paul B. Magnuson, Prosthetics Research Board;

Dr. Eugene F. Murphy, Chief, Research and Development Division, Prosthetics and Sensory Aids Service, Veterans Administration;

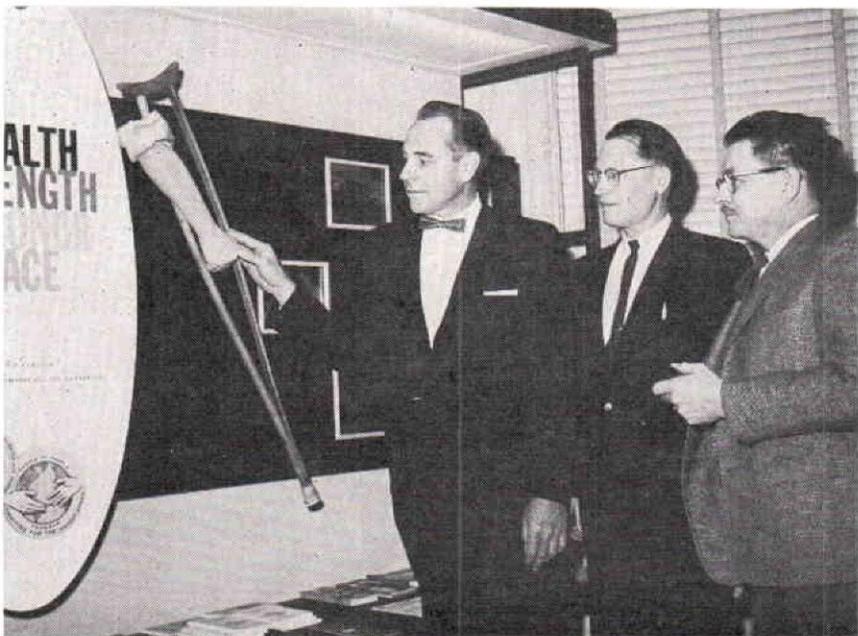
Mr. Louis Jordan, Executive Secretary, Division of Engineering and Industrial Research, NAS-NRC;

Dr. Sidney Fishman, Director, Prosthetics Education, New York University;

Dr. Miles H. Anderson, Director, Prosthetics Education, University of California at Los Angeles.

Both Miss Switzer and Dr. Stewart indicated that their respective agencies had need for an Academy-Research Council advisory committee in the field of prosthetics education, to assist them in discharging their obligations to our amputee population.

The next report will cover certain of the early activities of the Committee on Prosthetics Education and Information and a discussion of the committee's missions.



Charles A. Hennessy meets with Executive Director Lester Smith and Mr. Winfield S. Smith of the Committee for the Handicapped of the President's People to People Program before leaving for South America. (See page 57).