

## Orthopedic-Prosthetic Idea Exchange

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Many of our readers will be happy to learn that the long awaited study of the "Hydra-Cadence" above-knee leg is about to commence. One hundred units have been authorized by the Prosthetics and Sensory Aids Service, Veterans Administration, for field testing at 25 stations throughout the United States. The personnel of each clinic are being intensively briefed by personal visits by Dr. Eugene Murphy, Chief of the Research Division, Prosthetics and Sensory Aids Service, who has an extensive background in the field of prosthetics in addition to his engineering degrees. Dr. Murphy has prepared a complete outline for the investigation which should result in a full evaluation of the device from carefully controlled data. The selection of the above-knee amputees to wear the limb is being left to the discretion of the clinic, as undoubtedly the psychological factors will represent an important phase of the patient's response and evaluation to the new device, as has consistently been noted with previous prosthetic studies.

The new UCB patellar-tendon-bearing, cuff-suspension, below-knee leg is now being ordered in various VA field stations throughout the country. The new UCB below-knee prosthesis should not be confused with the old type Muley leg which generally has an open-end socket as an integral part of the shin, in contrast to the closed-end soft socket insert in a plastic laminated shin in the UCB leg. The initial authorizations will approve only unilateral amputees, until further information is secured from field reports on the new device. In this clinic we have ordered one for an exceptional bilateral amputee with an excellent prosthetic and psychological background, but insufficient time has elapsed to render a progress report. The best candidates for this device appear to be those amputees who habitually do not use a pelvic belt or who do not lace their thigh corset tightly, but merely slip in and out of the laced corset. In addition, it is preferable to select an amputee who has already had some familiarity with the SACH foot, an integral part of the new prosthesis, as we have encountered one or two amputees who preferred the old wood foot. Such candidates would obviously not be preferred individuals for a SACH foot type of prosthesis. We have two patients now using the UCB type of prosthesis and preliminary reports are quite encouraging.

One amputee is not happy with his SACH foot because of an unusual situation which may not be uncommon. He is a short individual with a long foot (size 11½) who finds difficulty in coming up over the toe break in the SACH foot because of its forward location. He expends more energy in passing from the stance to the swing phase than with the old type of conventional wood foot. We are now trying a firmer heel wedge in an effort to throw him forward onto the toe break sooner than with a medium type of heel. It is wondered whether any of our readers have had similar experiences—we would certainly like to hear from them so we can report it to your fellow readers.

One of the unsolved problems of the SACH foot has been curling-up of the toe after prolonged use, especially with those who are "hard" walkers.

We have thought of using a dorsal wedge at the toe break as a method of correction and are now experimenting with this idea. Do you have any suggestions? An interesting observation was made by one of our more ambitious amputees who noted that with the SACH foot he was able to roller and ice skate with more skill, stating he was able to turn easier, because of the additional motion and the springier feeling that he has with the SACH foot. Perhaps we have another point to recommend the SACH foot!

The prosthetic limb shops have long been plagued with disposal of surplus limbs left in their care at the time a new limb is fitted. For many years the amputee has been advised that the limb was worthless and that he should dispose of it as he wished. However, we now have an excellent use for these limbs, as the President's Committee for the Handicapped and the World Rehabilitation Fund are now participating in a program to collect surplus artificial limbs and braces for distribution to underdeveloped countries where materials for fabrication of such appliances are extremely scarce. In contrast to the modern limbs with high standards of fitting and fine adjustments made to promote functional use and protect the amputation stump as now practiced in the U.S.A. and many of the Western European countries, there are no limbs at all or very crude facsimiles of limbs being used in the Far East and Africa. It is the plan to convert limbs which have some useful life into a functional appliance for the many hundreds of thousands of amputees now completely disabled for the lack of such an orthopedic device. This is an extremely worthy project which merits the full cooperation of all members of the limb industry. Amputees and brace wearers are asked to voluntarily contribute their surplus artificial limbs and appliances and deliver them to the nearest VA facility, where they will be collected and shipped by another collecting agency. Incidentally, all surplus property regulations under the Government Surplus Property Act have been waived by the Department of Health, Education and Welfare.

An interesting complication with the use of a lower limb prosthesis has recently been noted in several instances in the Outpatient Department of the Veterans Benefits Office, Washington, D. C., consisting of pain in the posterolateral aspect of the hip on the prosthetic side. Careful clinical examination has revealed trochanteric bursitis, in some instances with calcification present, similar to the condition of bursitis of the shoulder. Improper length of the prosthesis has contributed to this condition in some cases, because of the additional strain placed on the hip with a constant pelvic tilt. Treatment has consisted of adjustment of the prosthesis plus injection of novocaine and hydrocortisone into the inflamed bursa, usually with excellent results. Some of our patients have complained of their pant's leg creeping into the corset when it is laced rather loosely, especially those who insert their stump without unlacing or lacing the corset. We have found the addition of an upward projecting stay on the inner side of the corset to aid in preventing this uncomfortable situation.

Your editor would like to call your attention to two recent articles, published by the Washington area Prosthetic Clinic, one entitled "The Orthopedic and Prosthetic Appliance Clinic Team," published in the February 1960 issue of the *Journal of International College of Surgeons*, and another, "Clinical Application of the SACH Foot," published in the March 1960 issue of the *Journal of Bone and Joint Surgery*. Reprints of these articles are available for distribution by writing to the editor, c/o this *Journal*.