

MAINTENANCE AND CARE OF THE PROSTHESIS

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I. The Socket

A. Cleaning the Socket

1. Wash daily with mild soap and water. Rinse thoroughly with a cloth wet in warm water. Dry thoroughly and allow to air overnight.
2. At night remove the valve and allow air to circulate freely within the socket. Do not drape clothing over the socket.

B. Care of the Finish

1. When the protective coating on the socket wears off, the wood will absorb moisture. This should not be allowed to happen.
2. Notify the prosthetist if the finish within the socket becomes rough or dark areas appear in the wood.

C. Maintenance and Use of the Valve

1. If powder is used for applying the prosthesis, do not allow it to accumulate in the valve. All foreign material such as powder, lint, dust, etc. can be removed with a small soft brush. Be sure to take special care of the valve threading in the socket.
2. Keep the spring in the valve tight by screwing it down.
3. Replace the rubber gasket frequently.
4. If the valve continues to leak or will not seat properly in spite of proper care and cleaning, it is probably defective. The prosthetist should be notified.
5. Never use tools to tighten or loosen the valve.
6. The valve is tightened by turning it clockwise with the fingers and it is loosened by turning counter-clockwise.

II. The Knee Friction Mechanism

- A. Adjustment of the friction mechanism is needed when the shin swings through too rapidly or too slowly.
- B. Adjustment of friction in the conventional knee can be done by inserting an Allen wrench or a screw driver into each screw hole in the front of the knee. A quarter turn clockwise will increase the friction.
- C. The amount of friction can be noted by grasping the leg in both hands and holding it suspended by the socket. Allow the foot to drop down toward the floor. Swing the shin back and forth. The amount of friction in the knee joint will determine how freely the shin will swing. Each amputee will determine with his prosthetist how much friction in the knee joint is adequate for his needs.
- D. If the knee begins to extend backwards (hyperextended) and noise comes from the knee joint, the extension stop probably needs replacement. To inspect the extension stop for wear, bend the prosthetic knee and observe the bumper material at the top of the cut-out. The extension stop bumper will need to be replaced at frequent intervals.

III. The Shin

- A. If a cosmetic shin covering is used, guard against contact with sharp objects. If it is damaged, have it repaired immediately.
- B. If leg make-up is used on the covering, remove the make-up weekly with mild soap and water. Allow the shin to dry overnight before applying new make-up and recovering with a stocking.

IV. Care of the Ankle and Foot

- A. Inspect the covering of the foot frequently by removing the shoe. If the covering is torn, have it repaired immediately.
- B. If the foot gets wet at any time, remove the shoe and dry the foot as soon as possible. Always dry any other parts of the leg that become wet.
- C. If sand and dirt accumulate in the shoe, remove it and clean the foot. If dirt and sand get into the ankle joint, take the limb to the prosthetist.
- D. If the flexibility or resiliency of the rubber bumpers in the ankle and foot decreases, have them replaced. It is very important to have this done at regular intervals.
- E. Shoes should be kept in good repair, particularly the heels. If soles and heels become badly worn and uneven, it will cause uncomfortable change in gait and excessive energy consumption.
- F. The amputee should be sure that all of his shoes have heels that are of the same height in order to maintain the proper alignment of the prosthesis.
- G. Shoes are most easily changed when not wearing the leg. To remove the shoe, grasp it at the back and push the heel off the foot. Then shift the hand to the toe and pull the shoe upward and off the foot.
- H. Replacement of the shoe is done by completely loosening all lacing. Place the shoe over the toe of the prosthetic foot and push it down. When the foot is pushed down as far as possible, grasp the shoe at the heel and, with a shoe horn, work the shoe on the foot.

V. Care of the Leather

- A. Keep all leather parts clean and dry. Use saddle soap for cleansing.
- B. If leather becomes stained and smelly, return limb to the prosthetist for replacement of the leather.

VI. Caution

- A. Return the limb to the prosthetist at regular intervals to check on wear and breakdown of parts. In this way costly repairs or adjustments can usually be avoided.
- B. Do not use sandpaper, files, knives, rasps, saws or make any repairs on the prosthesis. Correction of your adjustments or alterations may result in costly repairs and/or replacement of components.

Reprints of this article may be obtained from The Orthopedic Appliance and Limb Mfrs. Association, 411 Associations Bldg., Wash. 6, D. C.



Shown above is a typical interview, which is one of the requirements leading to Certification of qualified individuals. Left to right: the examiners, Orthotist Erich Hanicke, Dr. A. W. Spittler and Orthotist Frank Harmon are interviewing a candidate who holds in his hand the brace which he has submitted as a part of his testing. The article below describes the written test.

“WHAT KIND OF EXAMINATION IS GIVEN TO APPLICANTS FOR CERTIFICATION?”

The American Board for Certification has approved the following statement for the information of persons who are applying for Certification and who want to know about the written examinations.

Following is a general description of the nature and contents of the written examination given to applicants for Certification.

To become Certified the candidate prosthetist or orthotist must secure a passing grade in a series of written achievement examinations. These examinations are designed to evaluate proficiency in the basic areas of prosthetics and orthotics that have been studied and practiced by the candidate. In addition, the candidate will be evaluated through the use of several standardized instruments to obtain information about intelligence, personality and mechanical aptitude.

The Certification Examinations are prepared by a consulting psychologist of the University of California, Los Angeles, in cooperation with the Committee on Examinations of the American Board for Certification of the Prosthetic and Orthopedic Appliance Industry, Inc.

The achievement examination for prosthetists will generally evaluate the candidate's knowledge of:

- I. Anatomy and kinesiology of the upper and lower extremities as related to prosthesis fit and use.
- II. Principles and practices of upper extremity prosthetics.
- III. Principles and practices of lower extremity prosthetics.

The achievement examination for orthotists will generally evaluate the candidate's knowledge of:

- I. Anatomy and kinesiology of the human body as related to the application of orthotic appliances.
- II. Principles and practices of bracing the lower extremities.
- III. Principles and practices of body bracing.

The following sources are recommended as references for the Certification Examination to be given in 1958:

- a. *The Orthopaedic Appliance Atlas*. Ann Arbor, Michigan: J. W. Edwards, 1952.
- b. *The Proceedings of the First Annual Symposium on Orthopedic Appliances*. Washington, D. C.: Orthopedic Appliance and Limb Manufacturers Association, 1950.
- c. Bowen, W. and Stone, H. *Applied Anatomy and Kinesiology*. Philadelphia: Lea and Febiger, 1953.
- d. Wells, Katherine F. *Kinesiology*. Philadelphia: W. B. Saunders, 1950.
- e. Grant, J. C. *An Atlas of Anatomy*. Baltimore: Williams and Wilkins, 1956.
- f. Klöpsteg, P. E., Wilson, P. D., et al. *Human Limbs and Their Substitutes*. New York: McGraw-Hill, 1954.
- g. *Manual of Upper Extremity Prosthetics*. Los Angeles: U.C.L.A., Department of Engineering, 1952.
- h. Anderson, M. H. and Sollars, R. E. *Manual of Above-Knee Prosthetics*. Los Angeles: U.C.L.A. School of Medicine, 1957.
- i. *Artificial Limbs*. Washington, D. C.: Prosthetics Research Board, National Academy of Sciences—National Research Council (Periodical).
- j. *Orthopedic and Prosthetic Appliance Journal*. Washington, D. C.: Orthopedic Appliance and Limb Manufacturers Association. (Selected Articles.)

NATIONAL ADVISORY COUNCIL

The 1,100 Certified Orthotists and Prosthetists of America and Canada have chosen 70 of their number as a National Advisory Council to the Certification Board. These 70 persons, who will serve a term of three years, will have a number of important functions, including the nomination of one of the seven-man Certification Board.

A session of the newly elected Council is on the program for the National Assembly at Miami Beach this coming October.

Several members of the Council have held national office in OALMA and the Certification Movement. Their number includes Paul Leimkuehler, currently Second Vice President of OALMA, who represents the Seventeenth District; Herbert J. Hart, OALMA Regional Director for Northern California; and J. D. Snell of Shreveport, former Vice President of OALMA.

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