

New Stump Correction Technique Developed At St. Vincent's Hospital

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A frequent problem which many prosthetists encounter in fitting a new above-knee amputee, especially a geriatric amputee, is finding that the stump has not been bandaged, and that a flabby condition is the result. Upon inquiry, the amputee may report that "the bandage would keep slipping off." Or if he has used the figure-eight method with Spica and without proper supervision, he will have developed a flexion contracture.

Under these circumstances, the usual ethical solution is to refer the case to physiotherapy for correction. This course will delay the rehabilitation for several weeks, if not a month. Such delays are very costly both for the patient and for the community, since a hospital bed and the time of the hospital personnel must be in use for the entire period. In such cases we have been able to shorten the time to one half, eliminate the elastic bandage and prevent or correct flexion contracture when it exists.

The method used has been approved and used under the supervision of Dr. Rene Allard, Consultant Physiatrist at St. Vincent Hospital, Ottawa, Ste. Justine Hospital and Hotel Dieu, Montreal. This correction method is most successful when the amputee is relaxed, and when the device is worn even when the patient is sleeping, upon authorization of the attending physician.

Description of Device

As shown in the illustrations (Figures 1-3) this new device consists of:

- (A) A waist belt of firm 2" webbing with a 1" safety buckle sewed to it anteriorly.
- (B) Three 1" elastic webbings approximately 8" long, with a safety buckle sewed at the top of one end of the elastic by means of a 1" webbing.
- (C) Three Grip Ends, of a size large enough to thread 1" elastic webbing through loops.
- (D) One heavy woolen stump sock, one or two sizes smaller than stump.

Procedure of Assembly

Sew two elastic webbings (ends with safety buckles) to waist belt, posteriorly over the gluteus maximus muscle and the third one anteriorly, midway between the two posterior ones. Thread each strap through the Grip End buckles attached to the waist belt.

Put the stump sock on the patient, leaving at least three inches (the part too small for the stump) extending distally below the end of the stump.

Put the waist belt on the patient, and have him stand. Then fasten the two posterior Grip Ends, adjusting so that there is enough tension to perform the extension task.

Fasten the anterior suspender to the stump sock, adjusting this one with very little or no tension, since the purpose of this strap is only to prevent the sock from slipping off the stump. Most favorable results are achieved if the patient wears the belt and stump sock even when he retires. When the patient is sleeping, the antagonist muscles are relaxed, and the device is then most beneficial.

The above technique has proven most successful with our patients. The use of conical elastic open-toe socks is being considered for use in the near future.



Figure 1

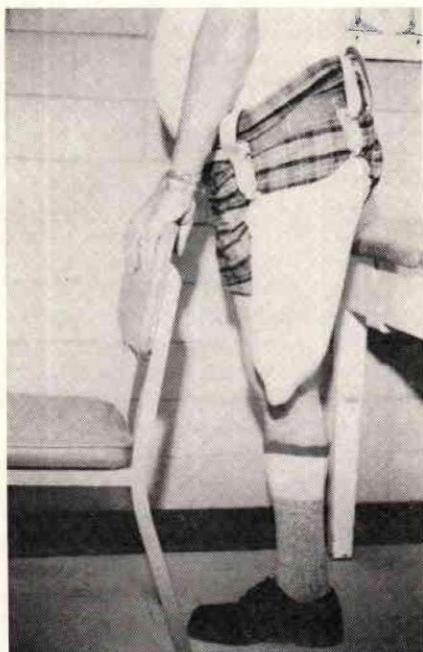


Figure 2



Figure 3