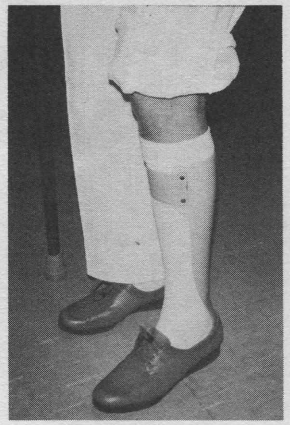
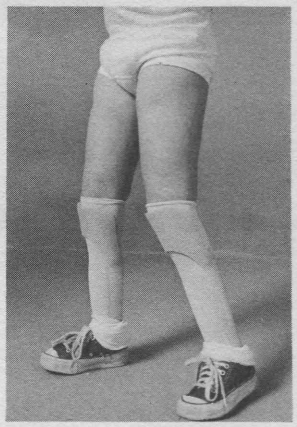
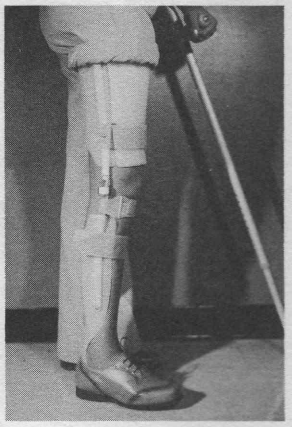


Molded Plastic AFO



Modified Molded Plastic Orthoses



Molded Plastic KAFO

Plastics in Lower-Limb Orthotics

Polypropylene has been in use for lower-limb orthoses in various parts of the U.S. and Canada for more than 5 years. Although polypropylene itself was introduced and used in orthotics slightly before vacuum forming was introduced most of the fabricators have used this technique in fabrication. Some AFO designs are being offered "off-the-shelf" in a series of sizes. Some suppliers stress that the purpose of these prefabricated units is to determine if the patient will benefit from a custom made device or devices.

A partial bibliography on the use of plastics in orthotics is included on this page.

We invite readers of the Newsletter to give us the benefit of their experiences with respect to both custom-made designs and off-the-shelf units by filling out the questionnaire on page 3 and returning it to AAOP, 1444 N Street, N.W., Washington, D.C. 20005. You are asked to be as complete as possible in the information you give so that meaningful conclusion can be obtained. If additional space is needed please use a blank piece of paper and attach it to the original.

Partial Bibliography Plastic Lower-Limb Orthotics

1. Artamonov, Alex, *Vacuum forming of sheet plastics*, ISPO Bulletin, No. 4, October 1972
2. Casson, Jerry, *Advanced designs of plastic lower-limb orthoses*, Orth. and Pros. 26:3, September 1972
3. Cohen, Samuel, and Warren Frisina, *Polypropylene spiral ankle-foot orthosis*, Orth. and Pros., 29:2, June 1975
4. Demopoulos, James T. and Johne E. Eschen, *Experience with plastic patellar-tendon-bearing orthoses*, Orth. and Pros. 28:4, December 1974
5. Dixon, Malcolm, and Robert Palumbo, *Polypropylene knee orthosis with suprapatellar latex strap*, Orth. and Pros., 29:3 September, 1975
6. Engen, Thorkild J., *The TIRR polypropylene orthoses*, Orth. and Pros. 26:4 December 1974
7. Glancy, John and Richard E. Lindseth, *"The polypropylene solid-ankle orthosis,"* Orth and Pros. 26:1, March 1972
8. La Torre, Richard R., Michael Richards, and Sooklall Ramcharran, *Ischial-thigh-knee-ankle orthosis*, Orth. and Pros. 27:4, December 1973
9. Lehneis, H. R., *New concepts in lower-extremity orthotics*, Med. Clin. of NA.A. 53:3:585-592, May 1969
10. Lehneis, Hans Richard, Warren Frisina, Herbert W. Marx, and Tamara T. Sowell, *Bioengineering design and development of lower-extremity orthotic devices*, Bull. Pros. Res., BPR 10-20, Fall 1973
11. Lehneis, Hans Richard, *Plastic spiral ankle-foot orthoses*, Orth. and Pros. 28:2, June 1974
12. Marx, Herbert W., *Lower-limb orthotic designs for the spastic hemiplegic patient*, Orth. and Pros. 28:2, June 1974
13. Rice, Edward, *A new design for the drop-foot polypropylene orthosis*, ISPO Bulletin No. 12, October 1974
14. Rubin, Gustav, and Michael Danisi, *A knee-stabilizing ankle-foot orthosis with adjustable spring-loaded ankle*, Orth. and Pros. 29:3, September 1975
15. Rubin, Gustav and Michael Danisi, *A "slip" cuff for ankle-foot orthoses–a piston-action absorbing polypropylene orthotic cuff*, Orth. and Pros. 28:1, March 1974
16. Simons, Bernard C., Robert H. Jebsen, and Louis E. Wildman, *Plastic short leg brace fabrication*, Orth. and Pros. 21:3, September 1967
17. Rubin, Gustav, and Robert L. Palumbo, *A polypropylene knee-ankle orthosis*, ISPO Bulletin No. 8, October 1973
18. Sarno, J. E., and H. R. Lehneis, *Prescription considerations for plastic below-knee orthoses*, Arch. Phys. Med. and Rehab., 52:11:503-510, November 1971
19. Stills, Melvin, *Thermoformed ankle-foot orthoses*, Orth. and Pros. 29:4, December 1975
20. Stills, Melvin, *Vacuum-formed orthoses for fracture of the tibia*, Orth. and Pros., 30:2 June 1976
21. Titus, Bert R., *A patellar-tendon-bearing orthosis*, Orth. and Pros. 29:1, March 1975
22. Wilson, A. Bennett, Jr., *Vacuum forming of plastics in prosthetics and orthotics*, Orth. and Pros. 28:1, March 1974