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Pediatric unilateral below-elbow amputees: retrospective analysis of 34 patients given multiple prosthetic options.

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Thirty-four unilateral below-elbow amputees from the Shriners Hospitals for Children/Twin Cities were retrospectively analyzed in long-term follow-up. All of these patients were provided with a variety of prosthetic options, including a "passive" cosmetic upper extremity device. Most of the patients were also fitted with conventional prostheses using a body-powered voluntary closing terminal device (97%) as well as myoelectric prostheses (82%). These patients were considered consistent prosthetic users by the clinic team. The average follow-up was 14 years, with many of the patients being followed up throughout their entire childhood. All patients were sent questionnaires, and the authors carried out patient interviews and chart review. Final analysis indicated that 15 patients (44%) selected a simple cosmetic "passive hand" as their prosthesis of choice. In long-term follow-up 14 patients (41%) continued as multiple users. Fourteen patients (41%) selected the conventional prosthesis using a voluntary closing terminal device as the prosthesis of choice. Only five patients (15%) selected the myoelectric device as their primary prosthesis. The authors conclude that successful unilateral pediatric amputees may choose multiple prostheses on the basis of function and that frequently the most functional prosthesis selected in the long term is the simplest in design. The authors believe strongly that unilateral pediatric amputees should be offered a variety of prosthetic options to help with normal activities of daily living.

