

The Evolution of Kiddythotics®: The 1st Functionally-Corrected Prefabricated Orthoses for Children

By Vicki Baird and Lori Waters

A Case Study

Prior to this century, children with pathologic flat feet were often undertreated. Many factors contributed to the lack of treatment, including the challenge of casting children, cost of custom orthoses, and the growth rate of children. This case study examines how ProLab changed the treatment paradigm for pathologic pediatric flatfoot by developing Kiddythotics, the first functionally-corrected prefabricated orthoses for children. Today, ProLab's Kiddythotics continue to be the best pediatric prefab treatment.

Historic Perspective

ProLab Orthotics was established in 1989 as a high-quality orthotic lab. It quickly became recognized as a leader due to its evidence-based medicine (EBM) approach to orthotic design and its adaptation of new technologies to orthotic manufacturing. ProLab also assembled a team of DPM Medical Consultants to review medical literature and identify areas in podiatry where needs weren't being met and determine orthotic solutions for mechanical issues.

The ProLab Team looked at several issues in the 1990's, including cost-effective modalities for first line of treatment, new manufacturing technologies, and a cost-effective solution for treating children with pediatric flatfoot. Although the custom UCBL was available, many children were being left untreated due to the cost of custom devices. At the time, there were no prefabricated foot orthoses designed with the corrective features found in custom orthotics.

The Confluence of Technology and Research

ProLab was one of the first labs to adopt the new milling technologies for custom orthotics in the late 1990's, which laid the groundwork for the development of the original Kiddythotics. The Medical Team identified the corrections necessary for effective custom orthotic therapy and the new manufacturing technology provided an opportunity to produce a cost-effective prefabricated device. ProLab applied the vast data it had from manufacturing pediatric custom devices and integrated it into Kiddythotics. ProLab designed templates for children's prefabs and milled a rigid polypropylene shell, which incorporated an extra deep heel cup, medial and lateral flanges, a 4mm medial heel skive, and a full

rearfoot post. Kiddythotics effectively incorporated mechanical controls in a cost-effective functional device to treat pediatric flatfoot. This was a significant breakthrough for podiatry.

From Good to Great

ProLab is always moving forward by continuing to review medical research, exploring new technologies, and evaluating if patient needs are being met. With advancements in injection molding technologies in the mid-2000's, ProLab looked at redesigning Kiddythotics. The functional corrections were still supported by the current research but ProLab thought it could fine-tune the design to improve compliance and outcomes.

Injection molding allowed ProLab to maintain all the functional corrections in a rigid polypropylene shell

and to make the Kiddythotics in different colors. This made the orthotics more interesting for children and it helped parents keep track of the Kiddythotics. ProLab selected bold, eye-catching colors for the Kiddythotics. Each of the original six sizes was represented with a new color. The colors represent PROLAB: Purple, Radiant yellow, Orange, Leafy green, Apple red and Blue.

To help doctors select the proper size quickly, ProLab provided sizer sets that included a single Kiddythotic of each size.

The doctor could easily determine the correct size and dispense a pair of Kid-

dythotics on the first visit. Kiddythotics became the standard of care modality for pathologic pediatric flatfoot and doctors requested an additional larger size to extend the treatment for bigger children. ProLab complied with a seventh Grey orthotic—for Great!

More Information

Contact ProLab Orthotics at 800.477.6522, visit www.prolaborthotics.com, or circle #157 on the reader service card for more information on Kiddythotics and other ProLab orthoses.



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