

ADVANCEMENTS IN CLINICAL APPLICATION OF CUSTOM SILICONE INTERFACE FOR PEDIATRIC PROSTHETICS

William Yule, Bill Limehouse, Branden Petersen and Patrick McGahey

Hanger Clinic

ABSTRACT

The current technology of custom silicone sockets for pediatric upper limb prosthetics has been advantageous to the pediatric patient population. Historically, pediatric prosthetic systems have been designed to meet developmental needs as a child progresses and ages with onion skin design and other flexible socket interfaces. With the advent of custom silicone socket interfaces the pediatric upper limb patient population has benefitted in more comfortable, flexible and durable myoelectric and conventional upper limb prosthetic systems.

Prosthetic practitioners have utilized various commonly accepted practices when fitting the pediatric patient. Custom silicone socket systems are now more readily available than in previous years and have presented more advantages to successful fittings than previous designs. The ultimate goal of this technology is to improve the clinical outcomes for the pediatric patient population through a better socket interface which adds comfort, flexibility and better acceptance of the prosthesis. Case studies and application will be presented to show the benefits and results applicable to this technology.

This presentation will familiarize the healthcare professional of silicone technology and its application advantages in the clinical setting as it relates to fitting this patient population. Options and methodology will be presented to educate health care practitioners as it applies to the fitting and functional applications in the clinical practice for the pediatric upper limb loss patient.