

# Muilenburg Prosthetics and Orthotics REVIEW

## Spirited 10-Year-Old Doesn't Let Limb Loss Slow Him Down

To see Courtland Pelt climb the monkey bars, play soccer, ride his bike, and wrestle his older brother, you would not think this 10-year-old is a below-the-knee amputee.

"He's a positive kid," says his mother, Michelle Hughes. "His attitude is, 'this (limb loss) isn't going to stop me.'"

Courtland became an amputee two years ago after he was run over by a riding lawn mower.

"We were at a friend's house, and Courtland was lying in a hammock," recalls Michelle. "The person riding the mower told Courtland to shift his weight on the hammock, and he would mow around him. But Courtland was just eight years old, and not heavy enough to do so. He flipped off the hammock and into the path of the mower."

Doctors at Memorial Hermann Hospital tried for 10 days to save the leg, using skin and muscle grafts. But there was not enough blood flow. On day 11, Courtland was amputated below the knee. On day 12, he was home again.

"I'm a nurse," explains Michelle. "The doctors told me Courtland would do better at home."

While Courtland underwent outpatient rehabilitation at Shriners Hospitals for Children – Houston, he was introduced to MPO practitioner Joshua B. Utay, CPO, who is a specialist in lower extremity prostheses and above knee designs.

"A BK amputee has an advantage because he still has the use of a knee joint, which is priceless," Josh says. "Having a knee joint means the balance is better, the prosthesis is lighter, and the time for rehab is shorter."

At their initial meeting, Josh explained to Courtland how a prosthesis would help him get up and running again, and how it would be fabricated especially for him. However,



Courtland was hesitant at first, convinced the leg would hurt him.

"Though an artificial limb shouldn't hurt, we are putting forces on the limb that are not natural, so there might be initial discomfort until a patient becomes accustomed to it. But," Josh emphasizes, "a prosthesis should never feel painful."

Although a child's prosthesis has the same components as an adult's – liner, socket, foundation components, and foot – Courtland's was fabricated to allow for his natural growth. This was accomplished in part by utilizing distal pads in the socket, poured in place using RTV silicone with a foaming agent that cures to the consistency of a sponge. The RTV fills in any gaps in the socket to provide a custom fit. When a pad wears out, a new pad can be easily poured, accommodating changes in growth. For additional strength to accommodate a child's level of activity, the wooden-core exoskeletal prosthesis is lined with carbon fiber. Courtland currently wears the basic SACH (Solid Ankle Cushion

*continued on next page*

## Advancements In Prosthetics

October 23-27, 2006  
at Muilenburg Prosthetics and Orthotics

- Free Clinical Evaluations by Appointment –
- Tours of our Fabrication Facility –
- Prosthetic Technology Display –

*see page 4 for more info*

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## Patients Invited to Attend Advanced Prosthetic Clinic

MPO is inviting all patients to make an appointment for its Advanced Prosthetic Clinic, Oct. 23-27, at our facility, 3900 LaBranch. We have invited nationally-known experts John Michael, CPO, FAAOP, and Agnes Curran, CP, to join Ted Muilenburg, CPO, FAAOP, and other staff prosthetists in conducting complimentary prosthetic evaluations. Attendees will also learn the latest developments in prosthetic technologies and techniques.

John Michael is an ABC-Certified Prosthetist-Orthotist who has authored dozens of scientific articles, chapters, and texts and lectured widely in the U.S. and abroad. He has practiced as a clinician and educator in a variety of private sector and university settings over the past 25 years.

Agnes Curran is an ABC-Certified Prosthetist



and is nationally recognized for her expertise in the prosthetic field. She has attended national education and advanced clinical training symposiums across the United States in both lower and upper extremity prosthetics.

This free clinic is open to all amputees and provides a forum for questions, and an opportunity to learn more about the best fit, function, and design of the prosthesis.

Clinic highlights for patients include: a free, personal one-on-one, half-hour evaluation from specialists in lower and/or upper extremity prosthetics; recommendations on what new developments or technology can improve the fit, function, comfort, or durability of their prosthesis; and an opportunity to interact with other amputees at the clinic.



For more information or to schedule an appointment to attend this free clinic, call 713-524-3949 or 866-524-3949.

## Courtland, from page 1

Heel) foot.

“Courtland didn’t like the prosthesis at first, and wouldn’t even look at it,” recalls Josh. “But we convinced him to give it a try while using the parallel bars in our office. After he adjusted to it, he became very active. It’s been an amazing transformation. Now, he’s running all over.”

In fact, Courtland has been so happy with his prosthesis that he designated the day he got it as the leg’s birthday, which is properly celebrated every year on August 13.

“Courtland had adjusted very well to the leg,” Michelle says. “And, every time he would be challenged by his therapists to run, jump rope, or climb steps, he would respond.”

Michelle recalls how on his first day back at school, the teacher gave Courtland a chance to tell his classmates about his prosthesis. The children didn’t have any questions, but eagerly exchanged information as several spoke up to say



Courtland with Josh Utay, CPO, in 2003 when Courtland was fit with his first prosthesis

they had uncles, grandparents, or knew someone else who was an amputee.

On the playground, Courtland was challenged by some classmates who said he probably wouldn’t be able to climb the monkey bars. Courtland responded by climbing the bars as quickly and easily as anyone else on the playground.

“We’re positive about everything,” Michelle says. “His brother, Blake, now 14, who also witnessed the accident, treats him no differently. They fight and wrestle and do all the activities you

expect brothers to engage in.”

Michelle notes that Courtland is very patriotic. Now, his leg sports an American flag, which was laminated to the prosthesis by MPO. “Quite a few of our patients have their prosthesis design personalized in some way,” Josh notes. “When Courtland’s ready for another design and his next prosthesis, which will most likely include a dynamic response foot to keep up with his active schedule, we will be happy to accommodate him.”

## Keep Yourself and Your Family Safe When Using a Power Mower

A recently published article in *Pediatrics: Official Journal of the American Academy of Pediatrics*, (August 2006), cited that more than 9,000 children and teenagers are injured by lawn mowers each year. The most common type of lawn mower related injuries were cuts, (41.2 percent), sprains and strains (21.4 percent), burns (15.5 percent), broken bones, (10.3 percent), and amputations, (5 percent).

The study, by David Vollman, B.S., and Gary A. Smith, M.D., Department of Pediatrics, Ohio State University College of Medicine and Public Health; and Center for Injury Research and Policy, Columbus Children’s Research Institute, Children’s Hospital, Columbus, Ohio, concluded that current prevention strategies are inadequate, and recommended that lawn mower voluntary safety standards be revised to include more rigorous performance provisions including a “no-mow-in-reverse default feature.”

In addition to accidents in which a victim is run over, injuries also result when objects such as sticks, stones, toys, golf balls, and the like are thrown as the lawn mover moves over them. Lawn mowers can throw debris up to 300 feet a second, a speed of 200 miles per hour.

To prevent lawn mower injuries to children, the American Academy of Pediatrics recommends the following:

- Try to use a mower with a control that stops the mower from moving forward if the handle is let go.
- Children younger than 16 years should not be allowed to use ride-on mowers. Children younger than 12 years should not use walk-behind mowers.
- Make sure that sturdy shoes (not sandals or sneakers) are worn while mowing.

- Prevent injuries from flying objects, such as stones or toys, by picking up objects from the lawn before mowing begins.
- Make sure that children are indoors or at a safe distance well away from the area that you plan to mow.
- Start and refuel mowers outdoors, not in a garage or shed. Mowers should be refueled with the motor turned off and cool.
- Make sure that blade settings (to set the wheel height or dislodge debris) are done by an adult, with the mower off and the spark plug removed or disconnected.
- Do not pull the mower backward or mow in reverse unless absolutely necessary, and carefully look for children behind you when you mow in reverse.
- Always turn off the mower and wait for the blades to stop completely before removing the grass catcher, unclogging the discharge chute, or crossing gravel paths, roads, or other areas.
- Do not allow children to ride as passengers.

Additional safety tips can be found at the American Academy of Pediatrics Web site, <http://www.aap.org>.

To read the complete study in *Pediatrics* visit, <http://pediatrics.aappublications.org>.

## First Swing Clinic Teaches Golf Basics!

MPO and TIRR are hosting a First Swing Golf Clinic Nov. 3 and Nov. 4 at TIRR Hospital and First Tee Golf Course. The clinic is designed for those who want to teach the game to those with disabilities, and for those who want to learn. For more information, contact Kristen Reeves, MSPT at TIRR, 713-707-5239, or email [reevek@tirr.tmc.edu](mailto:reevek@tirr.tmc.edu).



## Prosthetic Accessories Aid Comfort and Fit for Those Wearing Cushion and Locking Liners

Keeping comfortable while wearing a prosthesis all day is often a challenge due to changes in weight or volume, a natural occurrence from the normal pumping action of walking in a prosthesis. The results are a socket that is too loose or too tight, and uneven pressure on the liner. Adding socks over the liner isn't always the answer because socks increase the volume all over, not just where it has been lost. Socks also eliminate the total weight-bearing effect that can result in premature wear of the liner.

To keep the socket fitting comfortably, several products are available to manage volume fluctuation.

- Ohio Willow Wood offers Alpha® Volume Management Pads. Daily volume changes are controlled when users place the pad between the limb and the liner in areas where volume has been lost. The Volume Management Pads are available in a set of three different sizes (small, medium, and large), and the pads are made of skin-friendly gel. Each pad is three millimeters thick and can be stacked on top of each other when necessary.



Alpha® Volume Management Pads

- Otto Bock's Spots and Brim Pads provide volume management and weight-bearing socket relief. Made of urethane, Spots have the ability to absorb and eliminate forces, making them ideal for situations where the skin is vulnerable to breakdown or uneven pressure. Brim pads have the same qualities as Spots, but the butterfly-shaped pad is designed to provide comfort in the brim area of transfemoral sockets.

- Silipos all-gel Molding Distal Roll-Ons help combat skin problems and enhance socket liner fit. First available in 2004, the roll-ons are made of skin-friendly mineral oil gel. They can be cut to shape for extra protection anywhere under a liner, or they can be cut into a band of any width for extra comfort and protection under the proximal end of a suspension sleeve. They are self-adhesive to other Silipos products, allowing users to customize their gel thickness.

For more information on volume management, or to address a specific fit and comfort issue, contact your Muilenburg practitioner. We are here to advise you on the best product for your specific needs.

## INSURANCE CORNER

### Don't Forget the Preauthorization

Understanding your insurance plan is very important to maximizing your benefits. However, one element that is easily forgotten by patients before they visit us for a product or service is preauthorization. Preauthorization is the approval by your insurance company for us to treat you or obtain a product for you.

The staff is here to help you in any way we can. We will make every effort to answer your questions and to help you fill out forms, but because there are so many different types of coverage and variances in regulations between companies, we may not be familiar with the particulars of your individual plan.

To make sure you are fully aware of what you need to do prior to visiting us, call the number on the back of your insurance identification card, and ask if you need preauthorization for any orthotic/

prosthetic product or service.

It's easy to assume that because you have current coverage, you don't need to worry about paying 100 percent of the cost. But many carriers require that before we can provide you a product or a service that is covered by your insurance, you need to get preauthorization from them. And, any billing prior to this authorization becomes the responsibility of the insured.

It's important to keep in mind that even with a preauthorization, you still may be required to pay a part or full cost of the product/service.

At Muilenburg, we want to make sure our patients get all the benefits to which they are entitled. We are always happy to be of assistance, and we look forward to serving you.