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Amputation Offers Teen a New Life

by Joan D. Bennett

Walking hand in hand with a girlfriend is a simple activity for most teenagers, but not for 18-year-old Jonathan Laughead of Wellesley, Massachusetts. At least not until his leg was amputated.

“I’m getting my life back,” says Jon as he gets ready to try out his new prosthesis, “but to do this I had to lose my leg.”

Jon’s road to amputation began in March 1999 when he developed a lump in his left shin and was diagnosed with osteosarcoma, a rare form of bone cancer. Treatment included chemotherapy and then surgery that July at Massachusetts General Hospital in Boston to remove his tumorous left tibia and replace it with a donor bone, which was attached with two plates and 16 screws.

During additional surgery, muscles in his calf were moved to his shin to increase blood flow and protect the bone graft. Jon’s chemotherapy resumed after surgery and continued until December, but while his cancer was in remission, his troubles weren’t over.

In April 2000 he developed an infection in his leg that required hospitalization and intensive intravenous antibiotic treatment. An ongoing battle with infection required continual antibiotic therapy.

By April 2001, Jon had given up his crutches for a cane and set out to make up for lost time. Basketball is Jon’s love and he is a fierce competitor on the court, and in the driveway. That summer, after winning three pick-up games with friends, Jon felt pain in his left leg. X-rays showed the donor bone was fractured and several of the screws broken.

Jon was back on crutches, with his leg in a cast and later in a brace. Even though he put little weight on his leg, the graft was healing slowly. Infections continued and at the end of March 2002, he felt a “popping” sensation in his leg while at school. His leg plates were broken.

Jon had two options. The leg might be able to be repaired by moving more tissue and muscles from his other leg or buttocks. Or there was amputation. He remembered his surgeon, Dr. Henry Mankin, chief of orthopaedics and orthopaedic oncology at Mass General, saying a few months earlier, “The end of life is death, not amputation. It’s time to start thinking about this.”

During surgery to assess Jon’s situation, his doctors found the donor bone completely infected, with all the screws loose or broken. Amputation was the only option. On April 13, Jon’s left leg was amputated just above the knee.

New life as an amputee

Less than seven weeks after his amputation, Jon is trying out his new prosthesis at Next Step Orthotics and Prosthetics in Manchester, N.H. His doctors had told him he could be in a prosthesis in eight weeks. Jon told them he would do it in six. And he has a good reason. In a week he will be graduating from high school and he wants to walk across the stage.

Peter Couture, C.P., President and Clinical Director of Next Step, has fit Jon with a custom prosthesis with a sophisticated hydraulic system and a foot that releases a lot of energy. He wants Jon to do whatever he wants from the start.

Couture, who fits amputees from children to world-class athletes, coaches Jon on how to walk with his new leg. Jon concentrates as he tries out his leg between parallel bars, then with crutches, a cane and finally on his own. Jon's mother, Janet; sister, Lauren; and girlfriend, Cilenia, cheer him on with each try. This is the first time Cilenia has seen Jon walk without crutches.

"You're doing really great," says Couture to Jon. "A lot of people don't get this far. You're way ahead of schedule."

"Once I learn how to use this leg, my friends are going down [on the basketball court]," boasts Jon. "I could beat them with a gimpy leg. Imagine what I could do with a good leg."

During a visit to see Couture a few weeks earlier, Jon met Paralympic sprinters and gold medalists, Dennis Oehler and Todd Schaffhauser, who, after testing Jon's muscle strength in his residual limb, invited him to learn to run at their upcoming clinic at Next Step. "It may take me a while, but I think I can do it," says Jon. "I'm going to work real hard so I'm strong enough to run."

A week after trying his prosthesis for the first time, Jon proudly walks across the stage of Wellesley High School, wearing his prosthesis and using crutches as he receives his diploma. It's an event that Jon and his family wondered if they would ever see.

Learning to run

Jon arrives at the amputee running clinic at Next Step eager to learn. Other amputees and physical therapists are there to participate and observe. Teaching Jon to run just three weeks after being fit with his prosthesis will be a record for Oehler and Schaffhauser. Over the past 14 years they have taught over 7,000 amputees around the world to run, the earliest being six months after being fitted with a prosthesis.

"Our program is training for life," says Schaffhauser to the group, "but you've got to work hard for it. You can learn to live the best quality life you want to live."

The duo takes Jon through a series of exercises that strengthen his muscles and break down the movements of running with a prosthesis. After practicing each of the movements, Jon tries to put them together as he moves across the floor, with Oehler and Schaffhauser spotting in front of and beside him.

Jon's gait is uneven but the smile on his face as he turns to his mother and Cilenia tells the story. He tries a few more times, stops for a socket adjustment by Couture and then tries again, each attempt better than the last. Oehler says Jon is close to doing what they hoped he would do.

"It was a lot harder than it looks," says Jon after, "but I wasn't expecting to be a track star."

Looking to the future

A few weeks later Jon is looking ahead, something he hasn't done much of the last three years. He is taking drivers education and is looking forward to having his license. He has also been doing physical therapy and wearing his prosthesis for long hours each day, getting his residual limb stronger so he can work on running again.

Jon has been testing his new mobility. Using a wheelbarrow, he moved some firewood for his mother with his friends.

While his classmates start college in the fall, Jon plans to wait a year before going to school. He told his mother he is considering medicine or prosthetics as a field of study.

Jon plans to spend the next year getting strong, finding a job, and learning to walk and then run well. "I'd forgotten how nice it is to walk," says Jon, adding that he enjoys going for walks with Cilenia, hand in hand.

"Obviously I didn't want to lose my leg, but it's probably for the best," he adds. "I knew I could be more active and with less restriction with amputation."

Since getting his prosthesis, Jon says life is looking up. "It's really changed my outlook. Just to be able to walk around is better than being on crutches all day or in bed. There's more freedom. As I'm getting better at walking, I'm getting more confident. It's a good change."