

## **Gifted Student-Athlete Overcomes Accident to Become Physician**

By Joan D. Bennett

In the fall of 1990, BJ Miller had the world at his feet. He was a sophomore at Princeton University in Princeton, New Jersey, and was enjoying his studies in Chinese. The year before as a freshman, he had been a member of the school's elite eight-man heavyweight crew team.

Late in the evening of November 27, BJ and some friends headed to a 24-hour deli at the edge of campus for a sandwich. Parked nearby was a vacant three-car commuter train that took travelers to Princeton Junction, where they could catch a train to New York City.

"My friends and I decided to climb on top of the train," remembers BJ. "I thought it was innocent enough." He was the first one up and as he raised his nearly 6'5" frame, electricity from the train's power line arced to his metal watch, sending 12,000 volts surging through his body before exiting through his feet.

Whether BJ would live was a question from the outset. Doctors claim that BJ's strong heart from crewing and excellent general health helped him survive initially. Many die from infection of the extensive burns.

### **Triple amputation**

BJ spent seven weeks in an intensive care burn unit in New Jersey. From the beginning, it was clear that he would need amputations to save the viable areas of his legs and left arm. The burns on BJ's arm were so severe, doctors initially planned to take his arm at the shoulder to avoid infection of burned tissue. BJ's parents pleaded with the surgeons to save more of his arm. About a week after the accident, surgeons amputated BJ's left arm below the elbow and both legs about seven inches below the knee. His arm required extensive skin grafts and he lost his biceps muscle to infection.

About eight weeks later, BJ returned home to Chicago to undergo rehabilitation at the Chicago Rehabilitation Institute. He stood on prosthetic legs for the first time in March 1991, reaching a height of 6'3", a more manageable height for getting around as an amputee, he claims.

Because BJ had entered Princeton with a sizeable number of advanced placement credits, he had planned to tour China the second semester of his sophomore year. Instead, he spent the spring and summer regaining his strength and learning how to walk on his prostheses. When he returned to Princeton in the fall, he was right on schedule with his class, having taken his final exams from the previous fall semester while recuperating from his accident.

### **Back at Princeton**

"Being back at school with my friends was a boon for my confidence," says BJ. "I wanted to 'get back on the horse,' throw myself back into my old life, knowing that it had changed a bit, but with an eye toward seeing what hadn't changed.

"I knew it would be difficult to address all the little emotions and deal with the physical things of being a full-time student again," he adds. "But it was more important to work on the physical aspect and get back to a full-time schedule. The emotional fine-tuning would take years anyway, and I needed that confidence of being back on the horse to deal with the emotional issues."

BJ used a golf cart to travel around campus and a wheelchair occasionally when he couldn't tolerate standing or walking. He says he approached his recovery by being willing to fall down. "I fell down a lot, but being willing to fall down helped me realize it wasn't such a big deal.

“After my accident, I didn’t ever feel my life was over,” adds BJ. “I had an example right in front of me.” His mother, who has severe polio, has used a wheelchair for most of BJ’s life. “I already had had cause to ponder what makes a life worth living.”

When he returned to Princeton, BJ brought a service dog named Vermont, a two-year-old black Labrador and Golden Retriever mix that went everywhere with him and became an enormous part of his life and recovery.

“Vermont did do some basic retrieving for me,” relates BJ, “but he was mostly an emotional crutch. He filled a role that no human would have ever filled. I didn’t need to explain anything to him. He was a living creature who was reliant on me, and he motivated me to get up in the morning. When I felt out of my head, we would go to the park to play fetch, and in a few minutes I would forget whatever it was that was bothering me.”

### **Filing suit**

While getting back into academic life and being with friends helped BJ recover, filing a lawsuit against Princeton University and New Jersey Transit under the state’s joint negligence law was a difficult decision for him. He admits that he was negligent for being somewhere he shouldn’t have been, but there had been previous accidents at the site and other lawsuits but no changes had been made.

He claims that the stress of dealing with the lawsuit and the negative publicity was far more difficult than dealing with his injuries. Five years after BJ filed suit, Princeton University and New Jersey Transit settled after the trial’s jury selection. BJ says he now has the funds to afford the prosthetic gear he needs, but he is especially happy that his suit led to fences being erected at the train depot and warning signs being posted.

### **On to medical school**

Following his accident, BJ was intrigued by medicine and felt indebted to the field. While a student at Princeton, he briefly considered attending medical school after graduation, but felt the time commitment was too great. Following his graduation in 1993 with a degree in art history, he went to work at a museum in Chicago and later worked for the State Department in France. Vermont traveled everywhere with him.

Within a couple years, BJ’s thoughts about medical school returned. “Before, what scared me about medicine was that it would take so much time and be very difficult,” he says. “Then I realized that time would pass no matter what I did. There was nothing else I was dying to be doing. I felt physically capable I could handle it and I had the confidence having graduated from college.”

In 1995 he began taking pre-med classes, spending a year in Denver and another year in Oakland. He started medical school in 1997 at the University of California at San Francisco. BJ loved the Bay Area and its proximity to Yosemite National Park, where he frequently hiked with friends.

### **Achieving a better fit**

While medical school was both rewarding and challenging, BJ had another challenge facing him. Bony protrusions on the ends of his leg stumps were causing him pain when wearing his prostheses.

He had tried a number of prosthetists over the years, but always came back to Peter Couture, C.P., president and clinical director of Next Step Orthotics and Prosthetics in Manchester, N.H. “BJ’s surgeries were to save his life,” says Couture. “They weren’t ideal for prosthetics. We fit around these problems but at some point his limbs needed to be revised so he could better accept prosthetics for a lifetime.”

Couture suggested BJ undergo the Ertl procedure to remove the bony ridges on his stumps. In October 2000, Jan Ertl, M.D., of Kaiser Permanente Hospital in Sacramento, Calif., took about an inch of bone off both of BJ's legs and fused the remaining ends together, forming a bony bridge between the bones to stabilize the legs.

BJ took time off from medical school following the procedure and could put no weight on his stumps for two months while the bridge hardened. He had new prosthetic legs built in Chicago while he was home recuperating, but even months later they continued to be painful and the tissue on one leg was bloody and refused to heal.

BJ sought out Couture, who determined that the legs were too short for BJ's stumps and were placing too much pressure on them. Couture fit BJ with new legs, using clear sockets so he could see how they fit BJ's stumps. Within a week, the leg's tissue healed.

"I was immediately catapulted to the next level of comfort and ability," says BJ. "I now feel I have the confidence that I function as optimally as is humanly possible."

### **Full speed ahead**

After the procedure, BJ jumped right back into life, returning to medical school and graduating in December 2001. He planned to begin his residency program at the Medical College of Wisconsin in Milwaukee in the summer of 2002, but put it off until the fall so he could care for Vermont, who had cancer and died that July.

Not one to sit around, BJ camped and hiked in the back woods of Yosemite later that summer with a friend. During one hike, he accidentally hit the release button on one of his legs, which flew off and fell 100 feet onto a rocky precipice below. His friend carefully climbed down to retrieve BJ's leg.

When he can't get out to hike or mountain bike, BJ goes to a local gym to ride a stationary bike and does light bench and shoulder presses, with a prosthetic arm built by Couture, to help keep his body and muscles relatively symmetrical.

As BJ completes the first year of his residency in internal medicine, he is considering a focus in hospice care. He initially considered rehab medicine but says he is looking to make it part of his life, but not his whole life.

Another interest in his life is tea. He says he pursues tea like others pursue wine and has started a loose leaf tea company, Tribute Tea ([www.tributetea.com](http://www.tributetea.com)), with a friend.

### **Thoughtful perspective on life**

BJ is so sure on his feet now, that when he is wearing pants, many people think he has only a prosthetic arm. "I feel so comfortable on my legs now, I really don't think about it at all," he says. "Sometimes people are around me weeks or months before they realize about my legs. It's not just because of the way I walk. It's something more than that."

In reflecting on whether his accident has changed him, he says that in many ways he is the same person that he always was. "Like every other experience, it has altered me," he adds. "My injuries are dramatic, but it's just one more experience of many. It doesn't make or break my life."