

Published July 29th, 2015

Helping Others is in Firefighters' Blood

By Nick Marnell



Daniel Andrade at Alta Bates Summit Comprehensive Cancer Center in Berkeley
Photo provided

For firefighter Daniel Andrade, donating his blood stem cells to an anonymous patient was not much different from his standard job procedure.

"It's just like running a call," said the Contra Costa County Fire Protection District firefighter. "You don't know anything about the people that you are helping. You help them no matter who they are. When you sign up to be a firefighter, it's totally in your DNA to help others."

After Andrade and the rest of the Academy 47 firefighters completed a group training activity, they stopped at a booth sponsored by Be The Match, a bone marrow transplant registry, and entered their names. A representative swabbed the inside of Andrade's mouth for a DNA sample and after his tissue type was tested, he became nationally registered as a bone marrow donor.

Two months later, he received a phone call at work. "It was a rep from Be The Match," he said. "A gentleman needed a marrow transplant, and my

DNA and his matched." The recipient was a 57-year-old male leukemia patient. "It hit home," said Andrade, whose dad is 58, and who saw a firefighter recently retire from ConFire because of leukemia.

People remain on the registry for 10, sometimes 20 years, before they are matched. "But two months? Wow! Those are crazy odds," he said. "My first thought was, OK ... let's do it!"

Andrade said that his ConFire peers were probably more excited than he was and offered to cover all of his missed shifts.

"I hadn't even thought about the risks," he said. But Andrade, having never been admitted to a hospital, did make one confirming phone call about the procedure. "My sister is a nurse. She said it was cool."

After physicals and blood tests came five days of blood preparation at Alta Bates Summit Comprehensive Cancer Center in Berkeley. Andrade received daily filgrastim injections to increase the number of blood stem cells and move them from his marrow into the bloodstream. "They didn't hurt too bad, but my joints filled up with marrow," he said. "My hips and knees swelled. I was completely worn out." His stay at a hotel in Berkeley, along with all of his medical and travel expenses, were paid for by the national program that operates the registry.

On June 22, the day after Father's Day, Andrade arrived at the cancer center for his procedure, termed peripheral blood stem cell donation. He was given a mild muscle relaxant, and then the collection of his blood-forming cells began.

Blood was drawn from his left arm through sterile tubing into a sophisticated cell-separating machine - an insatiable machine, gulping the blood out of his left arm, passing it through a centrifuge, extracting the blood-forming cells that it needed.

"I felt instant relief from the swelling and pressure as the blood left my body," said Andrade.

A line from the machine connected to an IV bag, which slowly filled with the blood stem cells. All the while, the machine pumped plasma and blood cells back into Andrade's right arm. After the machine feasted on Andrade's blood non-stop for five hours, a courier arrived and placed the one-pint bag of harvested blood stem cells into an ice chest, to be delivered to the leukemia patient within 24 hours.

The prior week, the recipient had received a heavy dose of chemotherapy, which wiped out his diseased blood cells. That allowed Andrade's donated cells to easily move through the recipient's bloodstream and settle in his bones, which is where the donated cells began to grow and produce new blood cells, essentially giving the leukemia patient a new blood and immune system. "He and I became similar," said the firefighter.

Andrade signed a waiver that, due to confidentiality guidelines, he cannot meet his recipient for one year. "Yes, I want to meet him," he said.

During the last hour of the procedure, the hospital staff took Andrade's blood sample to confirm that his blood counts were normal. His parents drove the groggy, lethargic, sore-armed firefighter home to Roseville. After less than two weeks of recovery, Andrade reported to work at ConFire station 15 in Lafayette.

"Above and beyond? I don't think so," said Andrade. "I just had the opportunity to do this. Any one of us firefighters would have done the same thing."

"I have always admired how firefighters aren't just heroes on-duty, but their entire lifestyle is dedicated to giving to others and sacrificing what they have for others," said ConFire chief Jeff Carman. "I am proud to have Daniel as one of our firefighters. Even though he is a new firefighter for us, he is already showing great leadership qualities."

Be The Match representative Hannah Jacobs said that California ranks number one in the nation for patients searching for a marrow match, and that nearly 5,000 Californians have donated marrow since the 1987 inception of the registry.

For information on becoming a donor, visit bethematch.org.

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