



# The stars aligned that day

Julia Sims, sudden cardiac arrest (SCA) survivor

Recovering from what she believed was a bad case of the flu, Greensboro, North Carolina, resident Julia Sims, sat up in bed one Spring morning and assured her husband of 37 years that she would be fine and insisted that he keep his standing golf game. She then turned to her daughter and convinced her to spend the day shopping. It was Saturday, March 19, 2011. A day Julia Sims's daughter and husband would like to forget, and one she would never remember.

## **The tests came back normal**

The 57-year-old wife, mother and grandmother, says her health problems started in November 2010. "My company was going through a merger so I chalked up the intense pain in my back, shoulders and neck, indigestion, and extreme fatigue to working long hours." Julia continues, "I had always considered myself a pretty healthy person. I was never one for going to the doctor or taking medications, other than the occasional aspirin. But in January 2011, after two months of not feeling well I decided to see my primary care physician." Julia's doctor ran an electrocardiogram (EKG) and even though it was negative, recommended that she see a cardiologist. "I had a number of tests, including a stress test," recalls Julia. "The cardiologist sat in the room with me and told me that everything looked fine and that he hoped that I got to feeling better soon. Unfortunately, my symptoms persisted."

## **I knew something was terribly wrong**

Julia's husband, Jeff Sims, and their daughter Brett, grew concerned as weeks passed and Julia's health and energy continued to deteriorate. "Julia had come home early from work on Thursday, thinking she had the flu. Brett stayed home with her on Friday. On Saturday morning she told us that she was feeling much better. I even let her convince me to go golfing." Jeff continues, "I typically stay and have lunch with my golf buddies but I decided to go home and check on Julia." Across town, Brett picked up her phone, "My mom called and asked if I could bring her some soup, which was a good sign that her appetite was back."

Brett and her father pulled into their driveway within seconds of each other. They both went upstairs to check on Julia. "She was sitting up in bed," recalls Brett. "I handed her the soup, we chatted for a few minutes, and then I went downstairs."

Jeff says he started to joke with Julia in hopes of raising her spirits. “She told me she had taken a shower and that she was feeling better,” says Jeff. “I turned to put my shoes in the closet. When I turned back around Julia was sitting in the bed with her head down. I walked over and gently raised her head. That’s when I knew something was terribly wrong.” Jeff continues, “She was unresponsive. Her eyes were set and she wasn’t breathing.”

Julia had fallen victim to sudden cardiac arrest (SCA).

### I am not giving up on you

Jeff yelled to his daughter as he raced downstairs to find his phone. “Brett attempted mouth-to-mouth breathing on her mom as I called 9-1-1.” Jeff says he had absolutely no Cardiopulmonary Resuscitation (CPR) training and was thankful that the 9-1-1 operator helped him stay calm as she coached him through it. “I kept talking to Julia, telling her, ‘no, you’re not going to leave me this way, I am not giving up on you.’”

As Jeff performed CPR on his wife, a crew from Pineroft Sedgefield Fire Department (PSFD), Station 23 was dispatched. Ed Hampton, a Firefighter II and EMT with PSFD, was at the station when the call came in. “I am a volunteer firefighter and, as I often do, stopped by the station to help the guys out. I wasn’t there more than 15 minutes when our alert tone sounded for a 9-Echo-1, which is the code for full cardiac arrest.”

“The first time I met Julia, she was dead. Now, every time she calls or sends me a text, I smile.”

*Ed Hampton, Firefighter II  
EMT Pineroft Sedgefield Fire Department  
Greensboro, North Carolina*



Jeff and Julia Sims know first hand that it takes more than CPR to survive SCA. “The defibrillator is really what got Julia’s heart rhythms back on track. I don’t think she would have made it without that,” says Jeff.

## Take heart

Often brought on by ventricular fibrillation, a condition in which the heart’s electrical activity malfunctions, sudden cardiac arrest (SCA) can happen to anyone at anytime, anywhere.

- SCA is one of the leading causes of death in the United State claiming nearly 300,000 lives each year.<sup>1</sup>
- Nearly 70 – 80 percent of all cardiac arrests occur in the home and a majority are witnessed by someone who could potentially help<sup>2</sup>
- Studies have repeatedly shown the importance of immediate bystander CPR plus defibrillation within 3 – 5 minutes of collapse to improve the chance of survival from sudden cardiac arrest<sup>3</sup>
- For every minute that passes without CPR and defibrillation, survival decreases by 7 – 10 percent<sup>3</sup>

According to PSFD reports, the time from dispatch to arrival was three minutes and eleven seconds. “When we arrived on scene we saw Jeff performing dispatcher-assisted CPR on his wife as she lay in the bed. Two of my firefighters moved Julia to the floor and continued CPR while I turned on our Philips HeartStart FRx Automated External Defibrillator (AED) and placed the pads on Julia.” According to Ed, the FRx advised a shock and the shock was delivered.

“The first shock was unsuccessful. So we performed CPR for two minutes and then delivered the second shock,”

recalls Ed. Unable to establish a rhythm, another round of CPR was performed. Ed delivered a third shock and was in the middle of CPR when the Emergency Medical Services providers (EMS) arrived. “The paramedics took over and used a manual defibrillator to deliver three more shocks. After the sixth shock, we did regain a rhythm and detect a pulse.”

After nearly 45 minutes of working on Julia, the lead paramedic determined she was stable enough to transport to Moses Cone Hospital.



The cardiac catheterization laboratory (cath lab) is where physicians can diagnose and treat heart conditions using diagnostic imaging systems and catheters instead of surgery.

### **I revised my outlook**

Interventional Cardiologist, Jonathan J. Berry, MD, FACC, President Southeastern Heart and Vascular Center and Cardiovascular Section Chief with Cone Health System, was on call that day and responsible for all heart attacks that came into the hospital during his 24-hour shift, “When Julia arrived at the emergency room she was unconscious and extremely unstable. We immediately moved her into the catheterization laboratory (cath lab) and began to assess her situation.” They discovered a blocked artery in a critical part of Julia’s heart. “Even though Julia had normal test results prior to this event, her atypical symptoms were consummated into an abrupt occlusion, which resulted in arrhythmia and sudden cardiac death.”

Dr. Berry notes that Julia was one of the sickest patients he had seen during his 20-year career. “It was a very difficult case. Once on the table, it took me less than 10 minutes to find the occlusion.

But as I started to open up the artery with wire, balloons, and stents, Julia’s heart stopped. Not only did we have to administer more cardiac medication, but we also had to do CPR and defibrillate her a total of six times while on the table.” Ultimately, Dr. Berry was able to place one stent in Julia’s right coronary artery.

After several hours on the table, Julia left the cath lab alive – tenuous, but alive. She was immediately transferred to the coronary intensive care unit (ICCU) where she was cooled, sedated, and pharmacologically paralyzed. She remained in a medically induced coma for two weeks. “Julia was very unstable for the first seven to ten days,” recalls Dr. Berry. “I told the family that she was unlikely to survive. But as time went by, I revised my outlook.”



“AEDs definitely help save lives because there’s no other way to convert a heart from ventricular fibrillation into a perfusing rhythm.”

*Jonathan J. Berry, MD, FACC*

*President of Southeastern Heart and Vascular Center and Cardiovascular Section Chief  
Cone Health System, Greensboro, North Carolina*

### **All of it was and is still very surreal to me**

Julia says she still can’t believe the events that took place that fateful day in March. “All of it was and is still very surreal to me. I don’t remember the days leading up to my sudden cardiac arrest. I only know what people have told me. I don’t remember being sick. I don’t remember attending our St. Patrick’s Day party at work. I don’t remember hosting a dinner party four days prior to collapsing. The last thing I remember is going out for dinner on Valentine’s Day.” Her next memory is nearly two months later. “I remember waking up in the hospital and seeing a handwritten note from my husband. It said, ‘You are in the hospital. You are going to be okay. You are loved.’ He wrote it over and over again.”

Julia is one of the fortunate few SCA victims who not only live to share their stories, but who actually walk out of the hospital without any permanent limitations. “I went back to work part-time on June 1, 2011, and went back to full-time on August 1, 2011. I’m doing great.”

## Early CPR and defibrillation allowed her to get to me and my team

When asked why Julia made a complete recovery, Dr. Berry says it's simple.

"People who survive SCA have effective intervention within the first few minutes of collapse, including CPR and a shock from an AED. Julia's experience validates the importance of having a system that works. Early CPR and defibrillation allowed her to get to me and my team."

Ed agrees, "When we arrived on scene, Julia had been without a pulse, not breathing for approximately five to six minutes. Jeff was doing CPR but without the AED to shock her heart and bring it from ventricular fibrillation back to a sinus rhythm it's most likely that Julia would not have survived." As for Julia, she says words cannot express the gratitude she has in her heart for the people who came to her aid when she needed it most. "Everything that happened that day was perfect."

- 1 Lloyd-Jones D, Adams R, Carnethon M, et al: "Heart disease and stroke statistics - 2009 update: A report from the American Heart Association Statistics Committee and Stroke Statistics Subcommittee." *Circulation*. 2009;119(3):480-486.
- 2 Eisenberg MS, Mengert TJ. Primary care: cardiac resuscitation. *NEJM* 2001; 344:1304-1313, April 26, 2001
- 3 Link MS, Atkins DL, Passman RS, Halperin HR, Samson RA, White RD, Cudnik MT, Berg MD, Kudenchuk PJ, Kerber RE. "Part 6: Electrical Therapies: Automated External Defibrillators, Defibrillation, Cardioversion, and Pacing: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care." *Circulation*. 2010;122(suppl 3):S706-S719.



"I call them my boys," says Julia, of the Pinecroft Sedgefield crew who arrived at her home in less than four minutes after being dispatched. "I will be eternally grateful to them."

Pictured left to right: Stafford Sandefur, Ed Hampton, Jeff Sims, Julia Sims, Jonathan Moore, Brett Sims.

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