

# Heart of the matter

*New Jersey mom of five recounts her heart attack during pregnancy*

BY LINDA CHILDERS

In the summer of 2008, Nefertari Nelson-Williams of Willingboro, N.J., was nine months pregnant and happily awaiting the birth of her fifth child. Then one June evening, her life unexpectedly changed when she awoke from a nap sweating profusely and having chest pains and shortness of breath.

"It felt like an elephant was sitting on my chest," Williams, now 38, says of the frightening experience. "I had no idea what was happening but I knew it wasn't labor."

Williams' husband rushed her to a nearby hospital. After being evaluated by a cardiologist, Williams was airlifted the next morning to the Hospital of the University of Pennsylvania in Philadelphia. She was admitted to the intensive care unit under the care of cardiologists and the Maternal Fetal Medicine team, which specializes in the care and treatment of women with high-risk pregnancies.


"In those early hours at the hospital, it looked as if I would have to choose between saving my baby's life or saving my own," Williams says. "Yet even when the doctors told me this devastating news, I felt my baby girl moving around inside me, almost as if she were telling me everything would be ok."

After Williams received an initial evaluation, she had an angiogram and it was determined she had experienced spontaneous coronary artery dissection, or SCAD. This rare, sometimes fatal cardiac condition occurs when a layer of the arterial wall tears off and the blood flows behind it and creates a seal leading to a blockage that can induce a heart attack. SCAD is considered so rare that few clinical studies have been done to determine what causes SCAD, the potential risk factors and what treatment plans are most effective.

## RISKY DELIVERY

Michal Elovitz, M.D., an associate professor and perinatologist who specializes in critical care obstetrics at the Hospital of



A close-up photograph of a woman and a young girl sitting on a swing set. The woman, on the left, has long dark hair and is wearing a white button-down shirt. She has her eyes closed and a gentle smile. The young girl, on the right, is wearing a white top with a decorative pattern on the shoulder and has a small hair clip in her hair. She is looking up at the woman. The background consists of bare tree branches against a clear blue sky. A quote is overlaid in the upper right corner.

**“I felt my baby girl moving around inside me, almost as if she were telling me everything would be OK.”**



the University of Pennsylvania, was involved in Williams' care and promised her she would do everything in her power to ensure a positive outcome for both mom and baby.

"Although we treat a lot of pregnant women with acquired and congenital heart disease, this was the first case of SCAD we had taken care of in the last decade," Elovitz says.

In fact, the disease is so rare that often emergency room doctors mistakenly diagnose patients with a gallbladder problem or a pulmonary embolism.

"While her case was quite difficult, our interventional cardiologists were finally able to place a stent to help repair the dissection. However, her heart muscle [was already damaged] and she required intensive monitoring in the ICU," says Elovitz, who worked to monitor the health of Williams and her unborn baby.

Knowing Williams had experienced rapid labor with her first four pregnancies, and that a cesarean section carried additional risks, Elovitz decided the safest course of action was to allow Williams' pregnancy to progress naturally while being carefully monitored.

A former model and teaching assistant who worked with autistic children, Williams never imagined she would find herself fighting for her life at the age of 35. At 5 feet 10 and 149 pounds, she was the picture of health, cooking healthy meals for her family, working out at the local YMCA and chauffeuring her four children, who ranged in age from 3 to 15, to numerous afterschool activities.

"I had no cardiac risk factors," Williams says. "In fact, when my doctor performed the catheterization, he said my arteries were pristine."

Williams found there were few explanations as to why she had a SCAD episode—unlike other cardiac conditions, it's not un-

common for SCAD to occur in people who are in good physical shape and have no prior history of heart disease. A research study currently underway at the Mayo Clinic in Rochester, Minn. (see *Finding answers for SCAD patients*) is attempting to determine whether genetic factors play a role in the development of SCAD.

"We do know that 30 percent of SCAD cases occur in women near the time they are delivering a baby," says Sharonne Hayes, M.D., a cardiologist who is heading the Mayo Clinic research study on SCAD. "We also suspect some people have genetic mutations that increase their risk of SCAD."

Although Williams knows of no family history of SCAD, her mother did experience a massive stroke in 2005, leaving her unable to move the right side of her body. Before her own medical emergency, Williams, an only child, visited her mother regularly at a nearby skilled nursing facility. Her mother and children were at the forefront of her mind as Williams waited in the intensive care unit, stricken with acute pulmonary edema, or fluid in the lungs, and tried to wait patiently for her daughter to be born.

On June 14, 2008, her mother's birthday, Williams went into labor. Doctors took her to the main operating room, where Elovitz worked side-by-side with the obstetrical anesthesia team, cardiologists and the obstetrical team to ensure a safe delivery for both mom and baby. After less than an hour, Williams delivered a healthy baby girl, Shayna.

"She was my miracle baby," says Williams, who never doubted that her daughter would enter the world healthy and that she would be able to hold her.

Although thankful she and her unborn daughter were both alive to celebrate, Williams found she still faced a long road to recovery.

"I was able to bring my baby home a week later, but my journey

## Finding answers for SCAD patients

While some research indicates that SCAD may be caused by an increase in hormone levels during pregnancy, doctors are still unable to pinpoint a definitive cause.

"We do know that SCAD affects women more than men, and occurs primarily during pregnancy or in the postpartum period," says Sharonne Hayes, M.D., director of the Mayo Women's Heart Clinic in Rochester, Minn. "Some cases of SCAD also seem to be linked to extreme exercise such as hiking for three days in the mountains or attending a rigorous week-long boot camp."

Hayes and her colleagues at the Mayo Clinic are currently conducting research on SCAD to learn more about this rare condition. Hayes hopes to determine if there is a genetic mutation that puts patients at an increased risk of SCAD, whether

SCAD is associated with other connective-tissue disorders and if any of the treatments for SCAD could potentially make the condition worse.

"We are building a database of patients with SCAD to hopefully identify patterns that can guide future research," Hayes says. "We are also creating a biobank of blood samples from SCAD patients and their families to see whether genetic factors play a role in the development of SCAD."

Hayes hopes that the study will bring answers to the 200,000 Americans who suffer a SCAD each year. To be eligible to participate in the studies, patients must have a confirmed diagnosis of SCAD. To learn more about the virtual SCAD study, and to volunteer as a participant, call (507) 255-0473.

## Williams enjoys making jewelry and spending time with her children.



was just beginning," Williams says. "I was going home to five children and a failing heart and was required to take blood thinners and about nine other pills daily."

The blood thinners required constant monitoring, especially in the beginning, so Williams had to travel to Philadelphia every two days with five children.

"It was tough but I was happy to be alive so I was happy to do it," she says.

Six weeks after being discharged from the hospital, she went to cardiac rehab only to find she wasn't strong enough to complete even the easiest workout regimen.

"I found out my heart wasn't functioning as effectively as they had hoped so I was admitted back into the hospital in November 2008 so doctors could place an implantable cardioverter defibrillator, or ICD, in my chest," Williams says. "The ICD shocks my heart back into rhythm should it stop or begin to beat too fast"

### A NEW WAY OF LIFE

With the damage to her heart, Williams has learned to adjust to a new way of life. She doesn't have the physical stamina to return to her job working with preschoolers, and she tires easily, often having to spend three days a week in bed. But her zest for life makes up for any setbacks. Today, she enjoys making jewelry and spending time with her five children.

"At one point my ejection fraction [a scale that doctors use to measure heart function] was only

17 percent, and normal ejection fraction is 50 to 70 percent," Williams says. "It is now up to 35 percent, which is still critical but an improvement." While she no longer works out at the gym, Williams continues to enjoy her own forms of physical activity.

"There's nothing that will motivate me to move faster than a shoe sale at the mall," she says with a laugh. "And I still like to dance around the house with the kids."

With a positive outlook, Williams now hopes to share her story with others. She continues to see her cardiologist every four months, takes nine pills each day, and despite her "new normal," she continues to make the most of each day.

"I'm thankful for every moment I'm able to spend with my family," Williams says. "I view the tests and appointments as opportunities to learn more about my condition so I can share my journey with others." ■

## Recognizing heart attack symptoms in women

Although Williams experienced the "classic" heart attack symptom that felt like an elephant sitting on her chest, many women experience a heart attack without chest pressure.

"Women often experience jaw pain, arm pain, shortness of breath, dizziness and extreme fatigue when they have a heart attack," says Marla Mendelson, M.D., a cardiologist and Medical Director of the Program for Women's Cardiovascular Health at Northwestern's Bluhm Cardiovascular Institute in Chicago, Ill. "If a woman is experiencing any of these symptoms and has at least one risk factor for heart disease (high cholesterol, high blood pressure, diabetes), she needs to go to the emergency room. Not every chest pain is a heart attack, but it's never wrong to have your symptoms evaluated."

Many women delay getting medical care for heart attacks, Mendelson says, because of misconceptions such as only men and very old people get heart attacks or not recognizing the signs and symptoms of a heart attack.

"Women need to be more proactive about their heart health," Mendelson says. "By taking control of their risk factors such as lowering their blood pressure and cholesterol, they can significantly reduce their risk of cardiac disease."

To reduce your cardiac risk factors, Mendelson recommends:

- quitting smoking
- trying to get 30 minutes of moderate physical activity (even walking) most days of the week
- maintaining a healthy weight
- eating less saturated fat and more fiber and produce
- avoiding *trans* fats
- learning some stress management skills
- consuming alcohol in moderation.

To find out more about reducing your risk, visit [goredforwomen.org](http://goredforwomen.org).