



TRAUMA CARE

The Joy of Riding

As Joyann Santoro puts it, she's "all about life." If she isn't working out, doing yoga or hiking, she can be found riding her horse, walking her rescue dog, running or fishing with her husband, Mike.

Shown from left: Joyann Santoro received life-saving rib surgery to repair nine broken ribs suffered in an accident with a horse. She is joined by her physician, Adam Shiroff, MD, Associate Professor of Surgery at Robert Wood Johnson Medical School and Associate Director of the Trauma Program at RWJ, who is one of the few surgeons in the country experienced in the rib fixation procedure.

That's why when a horse kicked her in the ribs during a freak accident last February, she wouldn't accept the news that her injuries could permanently prevent her from doing everything she loves.

"I just wanted my life back," Ms. Santoro says. "Don't tell me that I'm going to be in a wheelchair."

The day began like most Sundays. Ms. Santoro went to the stable where she boarded her horse Nicky to exercise him when another horse became aggressive and chased after Nicky. As Ms. Santoro tried to separate the animals, she was kicked in the midsection. She immediately collapsed to the ground, gasping for air.

"I thought I had the wind knocked out of me, but I could barely talk," Ms. Santoro recalls. "The pain was absolutely excruciating – my brain was in denial telling me, 'You're okay - it's not that bad.'"

It turns out that Ms. Santoro's injuries were much more serious than she thought: the kick caused a collapsed lung, lacerated liver, a broken arm (in three places) and, worst of all, nine broken ribs, including a flail chest. Her life was in immediate danger.

Rib fractures and chest wall injuries cause excruciating pain and leave individuals who suffer the injury gasping for every breath. When ribs flail, the broken ribs become detached from the chest wall hindering patients' ability to breathe while causing them severe pain. Patients with flail chest also lack the ability to move air in and out of

their lungs freely, resulting in fluid build-up. Nearly 60 percent of these patients face long-term disability and they are at tremendous risk for pneumonia or other respiratory complications.

"When they placed me in the ambulance, the crew asked where they should take me," Ms. Santoro recalls. "I don't remember why they decided on Robert Wood Johnson, but I'm glad they did."

After arriving Robert Wood Johnson University Hospital (RWJ), Stancie Rhodes, MD, Assistant Professor of Surgery at Robert Wood Johnson Medical School, assessed Ms. Santoro, calmed her fears and explained everything the trauma team would do.

"Dr. Rhodes was an angel above me," Ms. Santoro says. "It's scary when you are so vulnerable. They kept me informed of everything."

Health care can be a puzzle with many pieces needing to fall into place for a successful outcome.

The solution to Ms. Santoro's puzzle came from the Level I Trauma Center at RWJ and Adam Shiroff, MD, FACS, Assistant Professor of Surgery at RWJMS and Associate Director of the Trauma Program at RWJ. Dr. Shiroff is one of the few trauma surgeons experienced in rib fixation surgery to treat rib flail.

"When I first met Joyann in the ICU, she seemed broken," Dr. Shiroff says. "I could tell she was concerned that she wouldn't be able



Shown left: Prior to her operation, the images show multiple fractures to Ms. Santoro's ribs.



Shown right: After her operation, 3D images show all of Ms. Santoro's ribs repaired.



to get back to doing what she loved to do. She made me promise to make the pain and the clicking (the sound from the fractured rib movement) stop."

Rib fixation involves exposing the fractured ribs, elevating them manually and aligning them to the normal slope of the patient's chest. Titanium plates are inserted, molded around the fractured ribs and screwed in place. According to Dr. Shiroff, patients can experience almost immediate relief from their pain and their breathing returns to normal.

"Within 24 hours, Joyann stood up outside of her ICU bed, shook my hand and thanked me," Dr. Shiroff says.

Ms. Santoro remained in the hospital for a week, and after undergoing physical therapy, she was running and riding Nicky again within two months.

I can't say enough about the entire staff," Ms. Santoro says. "Everyone there was wonderful and the whole hospital is cutting edge- I wouldn't want to go anywhere else."

Visit www.rwjtrauma.org or call 1-888-MD-RWJUH.