

Making a splash

SCOLIOSIS SURGERY CAN'T KEEP SWIMMER OUT OF POOL — OR COMPETITION

By KiKi Bochi

Becca Heller is a 12-year-old with a mission. Devoted to the sport of swimming and committed to a training schedule that would make most adults drop from exhaustion, Becca will let nothing stop her.

Not frustration or fatigue. Not gentle teasing from her family. Not pressure from her friends. Nothing.

Not even back surgery.

“I’m happy so long as I’m trying my hardest,” says Becca, who just completed sixth grade at Loggers Run Middle School in Boca Raton. “It’s hard to explain. I feel good in the water, and, really, I just like the challenge.”

From the time she began competitive swimming in



elementary school, Becca has achieved amazing success. She’s been nationally ranked since she was 8 years old, and has competed in the Sunshine State Games and Junior Olympics. She holds eight Florida Gold Coast Swimming Association freestyle records, and last year she stunned the swimming world when she finished first in a 12.5-mile open-water swim around Key West, defeating men and women at least twice her age.

She accomplished all this despite a diagnosis of scoliosis, a condition that causes a curvature of the spine and can lead to organ damage, limited lung capacity and back pain.

Becca just kept on swimming. But as her spine curvature exceeded 50 degrees, Becca’s parents, doctors and coach knew she could not continue this way.

“Every day, the curve was getting worse and worse and worse,” says her mom, Lauren Heller. “It got to a point that we knew she needed back surgery. It wasn’t a matter of ‘if,’ it was a matter of ‘when.’”

Since the surgery had the potential to change her life, Becca was consulted in what she wanted to do. Her mother says she chose to have the surgery as soon as possible so she could get back into the water.

“They said if I waited any longer, it could affect my flexibility and my swimming, so I decided to do it right away,” Becca says.

There was a time when scoliosis surgery meant months of recovery. Kids would be trapped in body casts, and it sometimes took a year — or more — for them to return to normal activity.

Becca was fortunate that her pediatric orthopedic surgeons, Michael Jofe and Randolph Cohen, are versed in the newest technique, called pedicle screw fixation.

“Not everyone is using it,” says Jofe, who performed Becca’s surgery at Joe DiMaggio Children’s Hospital in Hollywood. “This is a highly specialized procedure and it can only be done in a highly specialized facility.”

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The old approach to scoliosis surgery used wires and hooks to attach a rod to the spine, straightening the curve by 55 percent or so. In addition, removal of the ribs was sometimes recommended, which could have a permanent effect on lung function. The technique used by Jofe and Cohen instead uses screws to attach the rod, resulting in a much more significant curvature correction of 85 to 90 percent, and no rib surgery.

“It’s a vastly improved technique,” Jofe explains. And almost as important, he says, “The tremendous advantage is that kids can resume full activity as soon as they are comfortable.”

For Becca, that meant that within two weeks, she was back in the pool.

CONTINUED ON PAGE 24

Recognizing scoliosis

Each year scoliosis patients make more than 600,000 visits to private physician offices. An estimated 30,000 children are put into a brace for scoliosis, while 38,000 patients undergo spinal fusion surgery.

There are several warning signs to look for to help determine if you or someone you love has scoliosis. If you notice any one or more of these signs, you should schedule an exam with a doctor.

- Shoulders are different heights — one shoulder blade is more prominent than the other
- Head is not centered directly above the pelvis
- Appearance of a raised, prominent hip
- Rib cages are at different heights
- Uneven waist
- Changes in look or texture of skin overlying the spine (dimples, hairy patches, color changes)
- Leaning of entire body to one side
- An observable curve to the spine when leaning down

Scoliosis is usually confirmed with an X-ray, CT scan, MRI or bone scan of the spine. The curve is then measured and is discussed in terms of degrees. Generally speaking, a curve is considered significant if it is greater than 25 to 30 degrees. Curves exceeding 45 to 50 degrees are considered severe and often require more aggressive treatment.

Sources: National Scoliosis Foundation, Cotrel Spinal Research Foundation

CONTINUED FROM PAGE 23

Jofe eagerly gave the nod of approval.

“With the old surgery, she would not have been able to get back to this level of activity for at least a year,” he says. By that point, it would have been questionable whether she could have rebuilt her strength, speed and endurance, Jofe says. It could have meant the end of her swimming career.

“We’re talking about a very elite athlete,” Jofe says. “When we treat a child surgically for scoliosis, the most important thing is safely straightening the spine. But we were happy that she was able to return to swimming so quickly.”

Of course, it wasn’t easy. At first, Lauren Heller says, Becca couldn’t even get her arms



above her head. But that didn’t stop her. Neither did the fact that she couldn’t turn her head to breathe; she used a snorkel. She simply refused to give up.

“A lot of people told her she would be down for the count, but she proved them wrong,” Lauren Heller says. “When you tell her she can’t do some-

thing, that’s when she says ‘Oh, yes I can.’”

The surgery was performed in January, and Becca is already back in competition.

Your child has scoliosis: Now what?

The decision of how to treat scoliosis is not always clear. While there are guidelines for mild, moderate and severe curves, the protocol is based on a range that leaves open a choice of treatments. Treatment decisions will depend on your child’s age, the cause of the scoliosis, the curve’s degree, location, and pattern, the stage of bone growth, and how much your child is likely to grow.

Most children with scoliosis have mild curves — less than 20 degrees — and probably won’t need a brace or surgery. Monitoring is needed, however, to be sure the curve doesn’t progress. The recommendation for kids who are still growing is to have checkups every three to six months to see if there have been changes in the curvature of their spine.

With curves above 25 to 30 degrees in a child who is still growing, bracing is usually recommended to help slow the curve’s progression. There are many different kinds of braces, with names such as the Boston brace, Wilmington brace, Milwaukee brace and Charleston brace, based on the centers where they were developed. The selection of a brace is determined by many factors, including the specific characteristics of your child’s curve.

If your child’s curve is greater than 40 to 50 degrees, doctors typically recommend surgery because curves this large have a high risk of progressing even after bone growth stops.

Surgery involves correcting the curve and the fusion of the bones in the curve. In the treatment of scoliosis, fusion involves connecting two or more vertebrae with pieces of bone taken from the pelvis. Eventually, the vertebrae and the pieces of bone grow together, preventing further progression of the curve. Doctors attach metal rods, hooks, screws or wires to the spine to hold the vertebrae together during the months after surgery while the bones fuse. The instrumentation is left in the body, even after the bones have fused, to avoid another surgery. Sometimes surgery is performed through an incision in the back, and sometimes through an incision on the abdomen or beneath the ribs. A brace may be required to stabilize the spine after surgery.

Scoliosis surgery is one of the longest and most complicated orthopedic surgical procedures performed on children. The operation takes several hours. Complications may include bleeding, infection, pain, nerve damage, and arthritis and disk degeneration. Sometimes another surgery is needed if the first one fails to correct the problem. Hospitalization can last several days, and activities are usually restricted during recovery.

Sources: Medline, U.S. National Library of Medicine, the National Institutes of Health and Mayo Clinic.

She’s training twice a day, five days a week. Her normal day starts with a two-hour practice at 4:30 a.m., before school. In the afternoon, after school, she practices again. She also gets at least one practice session in on weekends.

Currently, she swims for the St. Andrews Swim Team, racing against swimmers from Martin to Monroe counties. She was just named to the seven-member Gold Coast team for her age group and will be traveling to compete in Atlanta in August.

“Every week, I’m getting faster and faster,” Becca says. She doesn’t set speed goals for herself — or at least none that she’ll state publicly. But she is willing to share her not-so-secret ambition: “My ultimate goal is to swim the English Channel before I get my driver’s license.”

Thanks to her surgery, anything is possible.

“The surgery was the best thing that ever happened to her,” Lauren Heller says. “It took a couple of months out of her life, but she’ll never have to worry about this again. If you looked at her now, you would never know she had surgery except for the scar down her back.”

Lauren Heller says Becca is setting her own pace. “When she meets one of her goals, she kind of smiles a little, then says, ‘OK. What are we going to do next?’” Lauren Heller says.

So where is Becca headed? The Olympics, maybe?

“We don’t talk about that,” her mom says. “Who knows what might happen? We just take it one season at a time.”

Becca’s younger brother Cobi, 11, and her older sister, Stephanie, 14, also are talented swimmers. But they are not quite so driven as Becca, their mom says.

“She has found something she really loves to do. Why shouldn’t she be happy?”

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