

Body

Hope for an S-Shaped Back

By RACHEL RABKIN PEACHMAN

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I wore a hard plastic brace around my torso from ages 8 to 16 to treat scoliosis, or spinal curvature. Bracing has been standard treatment in children for the past five decades, and I wore my brace diligently, if awkwardly, in the hope that it would contain my S-shaped curvature and stave off the need for spinal fusion surgery.

By the time I was 16 and full-grown — and no longer considered at high risk for curve progression — my most prominent spinal curve had stabilized at 45 degrees. I'd narrowly escaped surgery and the complications that can accompany it. My orthopedist told me my treatment was done.

I've discovered in the years since that scoliosis is not something you endure and outgrow, like pimples and puberty. Significant curves often grow throughout adulthood, and can cause deformity, arthritis, pinched nerves, herniated discs, muscle spasms and reduced mobility and lung capacity.

Now, at the ripe age of 38, I find myself with a 55-degree upper curve, a 33-degree lower curve, consistent pain — and no standard treatment to follow.

Some orthopedists have recommended surgery; others have suggested conventional physical therapy. None can say whether either protocol will eliminate pain, and until recently these were my only options.

Now there may be another: an exercise regimen called the Schroth method. Developed in the 1920s in Germany by Katharina Schroth, the technique is a standard treatment for scoliosis in children and adults in several European

countries.

The therapy, tailored to each patient's curves, focuses on halting curve progression, reducing pain, and improving posture, strength and lung function. The exercises include stretching, strengthening and breathing techniques that counteract the rotation of spinal curvatures. Patients are supposed to do them at home and incorporate postural corrections into their daily lives.

Dozens of studies from abroad have found that the Schroth method and variations of it improved patient outcomes and reduced the need for surgery in people of all ages. In one study, patients who didn't do Schroth exercises saw their spinal curves progress up to nearly three times more than those of patients who did practice the exercises. In another study, 813 Schroth patients increased their ability to expand their chests to breathe by an average of 20 percent.

None of these studies were large, randomized controlled trials, and the Scoliosis Research Society, which influences guidelines for care in the United States, does not officially recognize physical therapy as a treatment option. "But the mind-set of the American scoliosis practitioner is shifting," said Dr. Michael Mendelow, an orthopedic spinal surgeon at Shriners Hospitals for Children in Greenville, S.C.

Boston Children's Hospital and Hospital for Special Surgery in Manhattan are among the health-care institutions that now have Schroth therapists. Insurers are starting to cover the treatment and the braces favored by Schroth experts, and certified practices have popped up across the country. Teaching centers such as Columbia University and Morgan Stanley Children's Hospital of NewYork-Presbyterian are sponsoring Schroth-related conferences.

"If you look critically at the body of literature, there is evidence that, when properly done in the right situation, with the right therapist and the right patient, Schroth can change the chance of curve progression," said Dr. Michael Vitale, chief of pediatric orthopedics at Morgan Stanley Children's Hospital.

Even the Scoliosis Research Society is taking a second look.

"We're primarily using Schroth on people who are being braced — I think it

will make bracing more successful,” said Dr. M. Timothy Hresko, chairman of the research society’s nonoperative committee and associate professor of orthopedic surgery at Harvard.

At the University of Alberta in Canada, researchers recently completed a randomized pilot study of Schroth, financed in part by the research society. The six-month study showed that adolescents with scoliosis who did these exercises fared better than teenagers who didn’t with regard to curve progression, pain and self-image. A larger multicenter randomized trial, funded by the SickKids Foundation and the Canadian Institutes of Health Research, is now enrolling adolescents.

Many scoliosis patients, in increasing discomfort, aren’t waiting for new study results. At age 15, Rachel Mulvaney of Mount Sinai, N.Y., went to a clinic run by Beth Janssen, a Schroth therapist, in Stevens Point, Wis. Her 42-degree curve was progressing, and orthopedists had told her she needed surgery.

“Within the first three days there, I was out of pain for the first time in five years,” said Ms. Mulvaney, now 19. After eight months of Schroth exercises, her curve decreased to 30 degrees, and it has since dropped to 22 degrees — a reduction extremely rare in patients her age.

Her orthopedist, Dr. John J. Labiak, clinical assistant professor of orthopedic surgery and neurosurgery at Stony Brook University, said he was “shocked and happily surprised” by her progress. He has begun recommending the method to other patients.

As for adults with scoliosis like me, who are beyond bracing yet hoping to avoid surgery, Schroth may be the last best chance. We can’t turn back time and change the progression of our curves, but maybe this therapy can make carrying groceries a little less painful or breathing a little easier — for us and those who grow up after us.

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