Giving thanks
for family and friends

Injured tennis player turns focus to volunteering and research

By KRISTA S. KANO

Ria Desai has been on a tennis court nearly every day since she started playing competitively at 9 years old.

That all changed when Ria, 16, of Solon was in a head-on car crash with her mother and younger brother in 2017 that gave her a severe concussion and fractured the cartilage in her chest.

Ria recently explained that the night of the accident, she went home feeling fine, but when she woke up the following morning, she could barely sit up in her bed. At first, it was the concussion that kept her from playing, but then the chest injury prevented her from rotating her arm.

She couldn't stretch to serve, and she was in pain whenever she made contact. Still, she attended practices for the Laurel School varsity tennis team and went to every home meet during her junior year season.

"Tennis has been such a big part of my life," the Laurel senior said. "It's what I do almost every day after school, so it was pretty hard to try to find other things to take my mind off that and fill the space while I couldn't play."

She could have binged TV, played videogames or scrolled through Instagram, but instead, Ria chose to fill her time volunteering with tennis clinics and developing a research project to look at the connection between athletic activity and bone density in girls.

She started working more with an organization called The Up Side of Downs that offers Buddy Up Tennis clinics to children with Down Syndrome in Northeast Ohio. She also increased her hours volunteering with Inner City Tennis Clinics, a summer camp for Cleveland children that incorporates tennis, literacy, wellness, poetry and fitness.

Photo by Alana Clark

Ria Desai of Solon launched a research project looking at the relationship between physical exertion and bone mass in girls. She is a student at Laurel School.

"It definitely helped, just being on the court even though I wasn't holding the racket. I was helping someone else with the skills I knew, and that was a valuable experience for me," Ria said.

Then, six months after the accident, Ria enrolled in Laurel's D3 learning unit, taking classes that she otherwise wouldn't take during the school day. She took a STEM research class, and came up with the idea to study the relationship between bone density and athletic activity.

"It came from my mom always telling me to drink milk because of bone issues and a lack of calcium. And then, though I wasn't playing at the time, I was still an athlete, so I combined those two ideas and developed the project."

Working with Cleveland Clinic rheumatologist Dr. Chad Deal, Ria had 46 Laurel Upper School students self report on the amount of athletic activity, their calcium intake, and their calcium or vitamin D supplement intake. She then split her sample into two groups based on their level of athletic activity.

"In the end, I did find that the group with more activity had significantly higher bone density. This is a preliminary study, but it suggests that there is a relationship," Ria said.

While Ria admits that her study had limitations (small sample size and potentially unreliable data due to self-reporting), she presented her findings at the Northeastern Ohio Science and Engineering Fair, and then had her project accepted by the American College of Rheumatology, where she presented a poster of her findings.

"It was definitely an interesting experience. I was with my poster and people would come by and ask me to explain the work I'd done and explain the results, but just being in a room full of professionals. It was really cool to see my work was something they were interested in and it did measure up somewhat to the work they were doing. Most of the other people presenting were fellows and professionals and being a high school student in that environment was really exciting," she said.

Ria is now working on turning the project into a manuscript and hopes that it gets accepted into a journal and paper. She also hopes to expand the study to include more ages as well as boys.

"There's a lot of research done about older women's bone density, but I wanted to see whether there was something girls my age could start doing to help bone density at this age and prevent bone issues in the future. The study suggests that physical activity at this age, when bones aren't fully developed does have an impact," she said.

Ria returned to play tennis this year for Laurel and said that stepping on the court was both nerve-wracking and exciting. Despite feeling like she was not at 100 percent recovery, Ria made it to the state tennis tournament this year, and hopes to study biomedical engineering next year in college.

"The biggest thing I learned is that some things take time and patience. I'm not afraid to admit I'm not the most patient person, but the healing process, the multiple treatments I went through and being out for over a year taught me that though it takes time and patience, things always get better," Ria said.

"I found good ways to do something else in the place of playing tennis. The good outweighed the bad."