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Lizzi Smith, US Paralympic swimmer & one of four team captains for the Paralympics in Paris 2024, shares her story of growing up in a family of 10 and how swimming allowed her to push through any limitations people may have set on her abilities.

A decorated three-time Paralympian medalist, Lizzi Smith is back to not only medal again but also represent disabilities and shining a light on groups that historically have not been perceived as elite and strong and capable.

When Lizzi Smith isn’t posting helpful videos using her new prosthetic hand on her Instagram page, she is following her typical routine of going through two training sessions, either two swim training sessions or one swim and one strength training. As a Paralympic swimmer, she’s got her days planned out for her, but like any other 20 something, she has hobbies and lots of interests outside of swimming, such as looking for new coffee shops, going to an adaptive CrossFit session, rock climbing, or going for coffee and yoga with friends.

Lizzi Smith is from Muncie, Indiana and is the second youngest of 8 kids. And besides that, she has two silver medals and one bronze medal to her name.

She was born with amniotic band syndrome, but her parents were pretty set in their parenting ways and didn’t treat her any different. *“I was raised like all my siblings, and we never called it a disability so there wasn’t a ton of acknowledgement. I just had to get crafty with tying my shoes and doing the jump rope.”*

At the age of 7, she started swimming. She had never heard of the Paralympics and her only goal in the pool was to *“beat anyone with two hands.”* When she was 12, and found out what the Paralympics were, it opened her eyes to the realization that there was a whole new world of people with disabilities participating in sports, *“Which was a bit of rewiring for me because I was raised as if I didn’t have a disability.”*

Early on in her life, Lizzi didn’t use any adaptive or prosthetic devices at all. As her siblings got older and started going off to college, the financial ability for the family to get her a prosthetic device became challenging which gave her a bit of an identity crisis of trying to figure out where she fit in. She didn’t feel like she was disabled, but she also began to realize that she was being treated, and looked at, differently.



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“It was jarring to know that I’m slightly different from my peers but not really fitting into a disability community. I was still having to deal with the staring and people not quite knowing what to do with me. I know I can do everything, but having to explain that to people was exhausting. Swimming became a space where I didn’t have to explain myself, my head was under water and if anyone wanted to talk, I couldn’t hear it. I found a space where I could see how fast my body could move and I became pretty addicted to ‘I just want to win.’ When I found out about the Paralympics, I was like ‘Oh, I can be the best in the world with one hand. That’s a pretty cool opportunity.’”

When she was 16, Lizzi made the national team. Four years later, she found herself heading to the Rio Paralympics with one goal in mind, *“Anything but 4th...So, of course, then I came in 4th by a hundredth of a second which felt like a curse and instant heartbreak.”* She recognized after those Paralympic games that she needed to work on things other than swimming. She swam at Western Hills Athletic Club and lifted at different commercial gyms until she started working out with her strength trainer, Mark Rogers. They would get crafty with a chains and an

ankle strap to figure out ways to lat pull and deadlift but that still left a lot of upper body exercises that have major benefits to swimming like pushups, pull-ups, and rows untapped.

“Prior to Rio I was swimming, that was all of my training, swimming 2 hours a day, twice a day, and there wasn’t a ton I was doing outside the pool. So, I was hurting my shoulder on an ongoing basis. I would notice in photos that I’d do this weird thing where I was crossing my body over, and over time I began to notice injury. I simply wasn’t getting everything I could get out of myself physically because I was leaving an entire weight room untapped. So, in the lead up to Tokyo, I wanted a workout arm so that I could even out my body build up and get stronger. That’s where my interest in getting a prosthetic device came from.”

Her process began by finding a local clinician and identifying which adaptive device would help. Part of the plan on how to get this device reimbursed was proving that swimming was Lizzie’s job and there were things she was not able to do to the best of her abilities without a second hand. While this is a typical process for those individuals who are congenital, it is a huge mind shift. After years of doing everything with one hand and having to prove to others that you are fully capable of doing everything on her own, now she needed to say to herself that she did indeed need some help.

“It was a mental thing where I had worked so hard to be able to do everything, and then I had to show otherwise and ask for help. It’s exhausting and not a fun place to be emotionally. It felt like a whole world I didn’t know anything about or the devices or attachments or what can help me or how.”

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Like many users, she went to social media outlets to see what others were using, what the reviews were, and what might help. The insurance approval process took a year to complete and when the prosthesis arrived Lizzie couldn't contain her excitement. It's still a device she uses for every workout. It helped even things out and she even began to try and see what else the device could do and which activities it could help with. Unfortunately, there were some clear limitations, so she went back to the drawing board and began exploring myoelectric multi-articulating prostheses which she considered, *"the gold standard."*

When making some decisions on which multi-articulating prosthesis to choose, she shares, *"I'll be honest. A lot of it came down to appearance for me. I didn't want a logo, I'm already logo'd up when I'm swimming. I wanted my personality to shine through it. I didn't grow up in a world with a bionic hand and what I kept hearing about was the maintenance of it. Other amputees are sending their hands in for repair and then their hand is gone for months at a time. But that's not my experience with the Zeus Hand."*



When recently Lizzi needed a new thumb and some adjustments, Aether Biomedical (manufacturer of the Zeus hand) was able to send out a replacement thumb to Lizzi's clinician and assist her care team in how to make adjustments remotely.

As an athlete, Lizzi wants to run after every challenge and master it right away but adds that, *"Hanger/Aether have been doing a good job of pacing me. They're helping me learn how to have two hands. We're taking things slow but even so, there are so many wins. I was talking to my OT, who lost his arm at the age of 4, and we talked about how everything is a big bonus now. It's like being a kid again of 'I'm holding a cup!'"*

Lizzi's prosthetist, Allison Neil, L/CPO, has been a tremendous help in her success as well. *"I got extremely lucky. I don't even know how to find a good CP or OT and Sarra Mullen, L/CP [Aether's Chief Innovation Officer & Head of U.S. Operations], has helped tremendously."*

Having such a solid team isn't always the case for those in need of upper limb prosthetics, and Lizzi knows it. The ideal scenario is having a supportive clinical team, made up of a CP and an OT. Even better is having both of those individuals be well versed in upper limb prosthetics and knowing how to navigate the pre and post fitting nuances.

As Lizzi Smith prepares for her third Paralympics, she is excited to go home with yet another medal, but she is equally excited about spending more time working on getting used to using her Zeus hand for regular day to day activities. When asked what she would share with others exploring the idea of getting an upper limb prosthesis she shares, *"The biggest piece of advice for the whole community is to keep using our voices. It's not just OK to*

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have people listen and look. There IS a genuine need, and we need to point out the frustrations that we have to go through, like insurance. Just keep going back to it.”

As for what’s next on her goals list, *“That’s a hard question. Each day there is a big win. I’m excited to be able to do things seamlessly. Slow is faster. I need to take that advice.”*

You can catch Lizzi Smith competing in the Paralympics in Paris, which begins on August 28, 2024.

[Learn more about Aether Biomedical & the Zeus hand on the NuTech Synergies website.](#)

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