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DONE DIPLOMATICALLY?



first
EXPRESSIONS:

A GOOD BEDSIDE MANNER
GOES MUCH DEEPER THAN A
REASSURING SMILE

WHEN PAIN GIVES ATHLETES NOTHING TO GAIN

As a sophomore at Glenvar High School in western Roanoke County, Carly Wilkes has solidified herself as one of the top distance runners in the region, state and even the nation. But when persistent foot pain started to plague her, finding out the cause and how to overcome it before it sidelined her short- and long-term goals made it an opponent she didn't see coming – or one she could beat alone. Fortunately, custom-fit foot orthotics proved to be the answer to keeping her hopes and dreams on pace.

words | RICH ELLIS



Carly Wilkes

While Carly Wilkes may be a typical teenager – a 15-year-old high school sophomore who enjoys hanging out with her friends and has hobbies that include swimming, baking, and cooking – she's anything but typical when it comes to athletics, and specifically, to running.

Wilkes is a distance runner. A really, really good distance runner. As a freshman, she placed third in the state in the Virginia High School League's (VHSL) State Cross Country Championships and second statewide in the 3200 meters and 1600 meters indoor track events. That same year she was named to the first team in the All-Timesland Runner rankings. And she was crowned the Three Rivers District Female Cross Country Runner of the Year.

This year as a sophomore, Wilkes' dominating performance has continued. She ran in the Footlocker South Regional Cross Country race in Charlotte, NC on November 30 where she placed sixth, helping 'Team Virginia' capture the state award for having the highest scoring runners out of the 14 competing states, in addition to Puerto Rico and the U.S. Virgin Islands. Next year, Wilkes hopes to compete in the same event's Championship race, where the top 10 finishers earn a berth in the Footlocker National Cross Country race in San Diego and compete against top 10 runners from the other regions.

When Should An Athlete's Pain Become Cause for Concern?

Wilkes' talent is already getting the attention of cross country and track programs at the collegiate level, which quite possibly could lead to athletic scholarship opportunities for her. Understanding a lot can happen between now and then, she remains focused on controlling what she can – remaining an excellent student in the classroom and continually getting stronger as a runner on the course and track. But when one of her greatest challengers became persistent foot pain that she couldn't outrun or beat alone, Wilkes and her parents, Deidre and Kirk, knew it was time for a different game plan.



"The break-in period I recommend is to gradually start wearing them over the course of a week, before wearing them all the time. An orthotic's lifespan depends on how it wears and a patient's activity level. I encourage patients to return for a complimentary evaluation every six to eight months so we can examine the orthotics for excessive wear and make any necessary adjustments – particularly if there has been a change in shoe size as a child grows."

BRADLEY CONNER
A certified prosthetist-orthotist (CPO) with Virginia Prosthetics & Orthotics in Roanoke.



A mold made from an impression of Carly's foot is carefully trimmed of excess material to ensure it will replicate with complete accuracy the orthotic that will be made using it.

A heat press conforms the material used to develop the orthotic to the foot mold designed specifically for Carly's foot.

The molded orthotic is trimmed to fit Carly's shoes. Orthotics can be adapted and worn in any type of shoe. They are recommended to be used daily, not just during athletic participation.

Once production of the orthotics is complete, they are inserted into shoes and carefully evaluated for precise fit and comfort, making adjustments as needed.

The process for making custom orthotics is detailed and involved. It includes a thorough exam by a podiatrist, followed by a referral to an orthotist who will make an exact impression of the foot from which to manufacture the orthotics.

"What goes through your mind, as a parent, is, 'Is this injury a season-ending or career-ending one?'" explains Deidre. "You hear about these types of injuries happening and wonder if it's something that requires surgery. Information available online varies as to the cause and how to treat it, which creates more speculation than certainty about what to do. But what we were sure about was that Carly's condition wasn't getting any better no matter how much she rested or by running on softer surfaces [such as on grass instead of asphalt]. It became more and more evident she needed to be evaluated by a medical professional who could tell us exactly what was going on before it got worse and potentially caused long term harm."

For Carly, the intermittent foot pain was more of a disappointment than anything else.

"When the time came for one of the more competitive meets – one where I knew there would be other really strong runners – it was so disappointing not to be able to run," Carly recalls. "I tried to warm up and run through the pain, but I was having to limp and compensate with my other foot. I knew it wouldn't be a good idea to try and race."

The pain would come and go sporadically, mainly in her left foot, and specifically near the ball of that foot, under her second and third toes, and sometimes even radiate to the top of her foot.

"Sometimes, it would hurt just to even walk," Carly says. "The pain first appeared around eighth grade, occurred mostly during track season in ninth grade, and got really bad toward the end of last outdoor track season [spring 2019], forcing me to miss a few meets."

After off-the-shelf shoe inserts and an initial consultation with one doctor didn't yield any improvements, Carly's father Kirk decided to consult with a doctor who specializes in similar foot problems and

was referred to Charles Zelen, DPM, a podiatrist with Foot and Ankle Associates of Southwest Virginia in Roanoke.

"Dr. Zelen examined Carly's foot and could tell right away what the problem was," Kirk explains. "She has really flat feet, coupled with a bunion that creates pressure in that area and causes her pain. Dr. Zelen suggested we should first consider custom foot orthotics to address the problem without surgery and wrote us a prescription for them."

Foot Pain in Athletes Commonly Unrelated to a Sports Injury

Carly's next step in her quest for pain-free running found her at Virginia Prosthetics & Orthotics in Roanoke, where she was examined by Bradley Conner, a certified prosthetist-orthotist (CPO).

"Carly has essentially two issues with her feet that are causing pain when she's active," Conner explains. "The first is pes planus – more commonly known as 'flat feet' in which there is little or no arch. The second is over pronation where the foot rolls inward excessively. Both issues are the result of genetics, as opposed to any type of injury. Another reason for her pain can be traced to metatarsalgia – a painful inflammation of the ball of her foot that also can be causing some of the pain and numbness she's experiencing with her toes."

And while running isn't the root cause of Carly's foot issues or pain, it is exacerbating her condition due to the stress that accompanies the increased activity.

"Running is an endurance sport, and the feet are a runner's foundation," Conner explains. "So when a runner is experiencing foot pain, it prevents him or her from performing at their optimal level. Additionally, this type of foot problem – if it isn't corrected – can also lead to knee problems."

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patients notice improvements within a week or two of first wearing their orthotics, while others may notice improvements right away.

"The break-in period I recommend is to gradually start wearing them over the course of a week, before wearing them all the time," Conner explains. "An orthotic's lifespan depends on how it wears and a patient's activity level. I encourage patients to return for a complimentary evaluation

every six to eight months so we can examine the orthotics for excessive wear and make any necessary adjustments – particularly if there has been a change in shoe size as a child grows."

Carly says she wears the orthotics in all of her shoes – except for dress shoes or sandals – and then switches them out and puts them in her running shoes.

"They felt a little weird at first, but then you get used to them," Carly says. "So far, I haven't had any more foot problems, but I'll really be able to tell when track season starts in the spring."

Listen to Your Body: An Important Lesson Learned

For now, Carly feels her goals are back on track. Still, she is fully aware that nothing is guaranteed. Her experience has taught her a valuable lesson she won't soon forget; adversity can present itself when you least expect it. And when it comes to injury or having pain that doesn't improve, it's how you react to and handle it that can make all the difference.

"My dream has always been to earn a scholarship to run at the collegiate level. Not having to deal with constant pain is one less obstacle, but I know the path to reaching my goal isn't going to get any easier. Listening to my body and recognizing when it's telling me something isn't normal before letting it get worse is something I won't forget," concludes Carly.

Custom-Fit Foot Orthotics Provide Total Contact with the Foot

The orthotics that Conner designed for Carly differ significantly from off-the-shelf shoe inserts because they are custom made specifically for Carly's feet, and as a result provide total contact with each foot.

"The fact that a patient receives a true total foot contact fit from the orthoses helps prevent excessive pressure points and delivers the maximum effectiveness when it comes to adjusting the foot," Conner explains. "With these types of foot conditions, there is a biomechanical imbalance in the foot. We need to correct it using a wedge or post that's built into the orthotics. That just can't be done with an off-the-shelf insert."

Carly's orthotics make total contact with her feet because Conner began by taking an impression of her foot by pressing it into a foam-filled box. From that impression, the team at Virginia Prosthetics & Orthotics then formed a mold that is an exact replica of Carly's foot, and from that, built an orthotic that slips easily into her running shoes and everyday shoes.

In Carly's case, Conner says the orthotics work by supporting and aligning her foot to control her excessive pronation, alleviate her symptoms, and decrease her pain. The orthotics are composed of multiple foam and cork layers for comfort, and even though they're custom molded, can be adjusted.

"We do a follow up after several weeks of wearing the orthotics, and one of the things we look at are wear patterns," Conner explains. "They should be even – but if it's excessive, we can make further adjustments."

Additionally, Conner says he added a metatarsal pad to Carly's orthotics to help with the pain she was experiencing at the ball of her foot by redirecting the pressure away from the ball back into the arch. Typically,

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