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## Home & Style

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### Clarksburg therapist and student confront disabilities, meet challenges

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CLARKSBURG - Jason Henderson saves his arms for formal occasions, like eating out and other social events.

Most of the time he uses his hooks.

He can't get his bionic arms wet or lift anything heavier than 10 pounds. And at \$50,000 each, he's very careful about the wear and tear on his custom-made arms.

Last spring, when 22-year-old Henderson was fitted with the arms, he was the first person to have two i-LIMBS.

Occupational therapist Carol Kisner had worked with clients with one bionic limb. To help Henderson, she researched and improvised.

It took some creativity at times. Hand injuries, she said, are especially devastating. "If you don't have a hand, it changes everything."

One reason Kisner says Henderson has done so well is because he lost both hands. He can't fall back on a good hand to help out.

Henderson believes his hands saved his life.

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It was raining on July 19, 2007. Henderson was in an outbuilding on his parents' farm in Stonewood, a section of Clarksburg.

He had finished his sophomore year at Fairmont State University and was spending the summer helping around the farm.

His mother called on the cell phone. She was headed out to pick up dinner. What did Jason want?

Henderson had gone into the building to move fireworks stored there so they wouldn't get wet. Fireworks fascinated him, especially the mortar shell style - the ones that boom.

He had just picked up a Salute canister when static electricity in the air ignited the shell. It was as if he had been holding a stick of dynamite that detonated. The force of the explosion lifted the roof 2 inches.

Henderson couldn't see. He thought he was dead, but realized he was thinking so he couldn't be. He could hear his heart pounding. He managed to inch his way along the wall to the door. When he tried to open the door, he knew something was wrong with his hands.

Hearing the blast, his father arrived quickly and got his son out of the building. His mother, a nurse, was just seconds away from leaving on her errand. She tied tourniquets to his arms and leg, where a piece of the canister had inflicted a wide, deep-to-the-bone wound. His body was peppered with wounds from the container, one just an inch from his jugular vein.

One eye was put out, the other was burned. He lost both arms 4 inches above his wrists. The container lid that rocketed through the roof just missed his head. He believes his hands shielded his body from the full force of the explosion.

"It was the unluckiest and the luckiest day of my life," Henderson said recently, recounting the accident.

Laughter in rehab

Carol Kisner was on her honeymoon when Henderson was referred to United Rehab at Johnson Center in Bridgeport in mid-August 2007.

Two years before, on the day she became engaged, Kisner passed the American Society of Hand Therapists exam, making her one of 17 certified hand specialists in the state.

At the center, she works with her patients behind a U-shaped desk, gliding from one to another in her wheelchair, handing an elderly gentleman a device to repeatedly grip and starting the injured policeman who had been run over on another exercise.

She teases, cajoles and jokes with her patients on the other side of the table.

Henderson said he enjoyed the banter during his months of therapy. "I'm kind of a joker, too. I like to look at the bright side of things."

Initially, he couldn't be fitted for prostheses until the swelling went down, Kisner said. He was still in pain from the burns and surgery. He had spent 20 days in Ruby Memorial in Morgantown and another nine at HealthSouth rehabilitation center.

While in the hospital, a relative sent him an article about a bionic hand that, coincidentally, its maker had introduced in the U.S. the same week as Henderson's accident. "It definitely gave me hope," he said.

Eating was tricky

The i-LIMBS made by Touch Bionics have hands with fingers that can move - unlike the traditional prosthetic that allows just a clamping grip between the thumb and the index and middle fingers.

Inside each arm is a battery-operated sensor. Henderson is able to direct the movement by using electrical signals generated from the muscle in his arms. He demonstrated how he can pick up coins with his fingers.

Henderson was measured for i-LIMBS and hooks at the same time. The bionic hands are made in Scotland and the order couldn't proceed until his insurance company gave approval.

Meanwhile, he spent about an hour twice a week with Kisner, learning how to use his hooks - and to have patience. Around his shoulders, Henderson wears a harness that connects to artificial arms with hooks. He uses his shoulders to move his arms, with rubber bands at the wrist and along the metal arm controlling finer movement.

That was the hardest part of therapy - "learning to do things gingerly, with finesse," Henderson recalled.

Eating was tricky. There's no wrist movement with his prosthetics, and he had to learn how to control the pressure he exerted. "Eating a sandwich, you can cut right through it," he said.

The fact that Kisner is disabled was reassuring for Henderson. "It was a big comfort," he said, "to have a handicapped counselor and see her succeeding in life."

'They didn't want me

on their insurance'

After graduating from East Preston High School, Kisner said she intended to go on to college, but she kept postponing the decision.

In June 1990, she was 25 and employed as a warranty clerk, ordering parts for a Morgantown car dealership.

She was just sitting at her desk when she suffered a spontaneous blood clot on her spinal cord.

She said she wasn't too alarmed at first because she was assured she would be fine. She hadn't severed her spinal cord, so it was possible she would recover. Only she didn't.

Kisner was sent to Harmarville, Pa., for rehabilitation. She had the luxury of being there for about eight weeks, a stay she says insurance wouldn't cover today. With therapy, she learned to sit up, move from bed to chair, chair to car, to dress, cook, clean, shower and to return to her life - but in a wheelchair.

Two days before she was to go back to work, the dealership laid her off. "They didn't want me on their insurance. I was high cost, too expensive."

Now she can say, "It was the best thing. If I hadn't been laid off, I would probably still be there."

She can push patients harder

She decided to give college a try. She enrolled at West Virginia University, graduating with a degree in social work. She wanted to be an occupational therapist, but WVU didn't offer the program until 1995. She was in the first graduating class, obtaining a master's degree in occupational therapy.

Kisner can't remember the name of the patient she worked with during a student internship at Ruby Memorial, but the woman had a hand injury. That's when she knew what she wanted to do.

"I feel so fortunate to have my hands. They make you who are - that's how important they are," she said.

In working with patients, Kisner said her disability "is an advantage 99.9 percent of the time. ... When I tell them I understand what they're going through, they know I do."

She believes she can push her clients a little harder because they know she's been on their end and is making a fair request.

'So many people

comforted me'

With Henderson, Kisner said she had to be creative to help him with daily functions. For instance, a long-handled sponge on the end for showering had a hand loop for holding. Velcro solved that problem. They had to figure out such movements as how to get his wallet out of his pocket and how to manage a zipper.

"Shaving was dangerous to learn," Henderson laughed. He said he so wanted to be like he was before that, for a while, he stuck with a bladed razor. He now uses an electric razor.

In therapy sessions, they made sandwiches, baked cookies and fixed a pizza.

A ring in the center of the steering wheel of his Dodge Ram pickup enables him to drive with his hooks.

"I can do anything, but efficiency is the big loss," Henderson said.

He lives with his parents, John and Lisa Henderson, and drives to classes at FSU, where he is a junior studying business. The university provides him a scribe to take notes during class.

He uses a laptop computer, controlling the mouse with his arm.

Henderson appears remarkably upbeat and un-self-conscious in talking about his ordeal and challenges.

"He's such a good boy," coos Kisner. Later, in a serious tone, she calls him "an exceptional kid ... an amazing kid."

As he sees it, "I'm lucky to be alive. It could have been a lot worse."

He talks openly about his injury and recovery in case it might comfort someone else. "I feel like I owe people that. So many people comforted me," said Henderson. Without his family and friends, "I don't know where I would be."

He and Kisner have been in promotional videos for Touch Bionics, which explains why an aunt saw him on The Discovery Channel.

It's also earned him some free gloves from the company. At first, there was no padding in the gloves, and he was tearing up those \$400 silicon gloves. "I have one pair of gloves that look like real hands with veins and fingernails. They're really nice."

Until recently, he was the only person in the world with two i-LIMBS. A youth in Kentucky who lost both hands in an ATV accident called to talk with him.

With the i-LIMBS, he can manipulate the fingers in a wraparound position, giving him better control when he's eating. But he can better see what he's gripping with the hooks, which are lighter and the harness helps carry the weight.

He is encouraged by medical advantages, such as the recent transplant of a hand from a cadaver onto a patient.

"You never know what's on the horizon," Henderson said. "It's hope. I'm good on hope."

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Jason Henderson picks up a penny with his \$50,000 hand. The 22-year-old was the first person to have two i-LIMBS, made by Touch Bionics.



Occupational therapist and certified hand specialist Carol Kisner worked with Henderson to manage his bionic arms.



Carol Kisner, an occupational therapist and certified hand specialist, works with patients at United Rehab at Johnson Center in Bridgeport, where she has worked for seven years. She is preparing to open her own clinic in Morgantown.



Carrying his bionic arms, Jason Henderson unlocks his truck. About five months after losing his hands, Henderson was able to manage highway driving.