

# BIONIC BEATS

*A Monthly Publication*



## Clinical Research to Examine Adaptation to Prosthetics Among Children with Congenital Limb Loss

*By Jason Warne, via [UCF Today](#)*

New research led by [Limbless Solutions](#), a nonprofit organization based out of the University of Central Florida, aims to test the ability of children born with congenital limb loss to adapt to advanced bionic limbs.

Congenital limb loss - being born without one or more limbs - affects roughly 1 in 2,500 infants, according to the CDC. "Limited research has been conducted on how the brain's motor cortex structure changes from congenital limb loss and subsequent use of a prosthetic," according to Limbless Solutions' Executive Director, Albert Manero.

The four-month trial will use prosthetics alongside a custom-built video game for training to explore how children's brains adapt to new limbs and how the motor control of the brain learns and adapts.

According to Chetan Shah, MD, the chair of radiology at Nemours Children's Health, "this research will help us see how the brain responds to the child's newly acquired ability to use a prosthetic hand." Dr. Shah continues, "This is a novel way of using existing brain circuits to use an artificial limb, and most importantly, this is a life-changing device for a child both mentally and physically. We are extremely enthusiastic about this research."

### IMPORTANT NEWS, UPDATES, AND IDEAS

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## The Bionic Difference: Peter Morrison

*By Cooper Proudfoot*

Peter Morrison's life revolved around horses. Riding horseback, caring for his animals, and competing in events far and wide were his passion. However, one morning an accident threatened to take those things - and his highly active lifestyle - away forever.

Peter's truck hit a tree during his early morning commute and overturned, becoming severely crushed in the process. His left leg was heavily injured in the accident and broken in multiple places. Doctors at the hospital worked tirelessly for over a week to save the limb, but in the end, it was a losing battle and they decided to perform a below-knee amputation to save Peter's life.

The loss of his leg took a heavy toll on Peter and threatened to both completely change his life and keep him from pursuing his passion. Peter was in rehabilitation for his injury for over two months. Even that was a challenge, as Peter had to undergo physical therapy longer because of further injuries. The prospect of getting back on horseback was looking less and less likely, but Peter was not about to settle for anything less.

With the outstanding demands of his line of work and his decreased mobility, Peter would need very specialized devices to gain back even a semblance of what his life was like before. Peter faced a difficult adjustment for over a year, and he struggled to adapt to his new way of life. But Peter was highly motivated to improve his situation so while he was in recovery from his traumatic accident, he began looking for options to return to his old way of getting around as pain-free as possible.

That is when he found a nearby Bionic location. "We came to Bionic for my prosthesis and never looked back," he says, "Tony has been so kind, supportive, and helpful in meeting my needs." Bionic's state-of-the-art 3D printing process made creating and fitting the perfect prosthesis for Peter a reality. The very same day that Peter was cleared for a prosthesis by his surgeon, he was in the Merrillville clinic working with Anthony Gutierrez to create the socket that fit his active lifestyle.


Bionic was able to fit Peter with a transtibial prosthesis, which refers to a device below the knee - in this case, a Fillauer AllPro. "Today, I can do everything I did before the accident and then some. With Tony and Bionic, there's not much I can't do if I put my mind to it!"

Peter still returns to our Bionic locations for everything from repairs to adjustments, and we are always happy to see him back on his feet and doing well.

Nowadays you can find Peter on horseback, taking care of his animals, and traveling all across the United States. He looks forward to competing in shows when the season starts, and his horses are performing better than ever. Peter is thriving with his prosthesis, and we can't wait to see what the future will look like for him with Bionic by his side.



# APRIL 2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	31	 1	2
					April Fools	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	 18	19	20	21	22	23
Easter 	National Velociraptor Day					
24	25	26	27	28	29	30

## Vegan Chickpea Curry

### Via: Brit+Co

- Ingredients list
- 2 tablespoons coconut oil
- 2 medium yellow onions, chopped
- 14 ounces canned tomatoes, drained
- salt and pepper, to taste
- 16 ounces canned chickpeas, drained and rinsed
- 3 garlic cloves, minced
- 1 teaspoon curry powder
- 1/4 teaspoon cumin
- 1/2 teaspoon cinnamon
- 1/4 teaspoon nutmeg
- 1/4 teaspoon cayenne pepper
- 1 package baby spinach
- 13.5 ounces canned coconut milk
- 1 tablespoon flour
- 1 lime
- cooked rice



1. Add coconut oil to a deep pan over medium-high heat.
2. Add onions, tomatoes, salt, and pepper to the pan, and stir. Reduce heat to medium and cook until tomatoes release juices and onions soften, about 10 minutes.
3. Stir in chickpeas, garlic, curry powder, cumin, cinnamon, nutmeg, and cayenne pepper until combined. Add spinach, coconut milk, and flour, and stir again. Bring the curry to a boil, then reduce to a simmer for 10-12 minutes.
4. Remove curry from heat, top with lime juice, and serve over rice.

# New Hires

APRIL 2022



Karyn Juricic - Clinic Office Administrator,  
Joliet IL



Sarah Allen - Clinic Office Admin,  
Louisville KY



Matthew Hayden - Certified Prosthetist,  
Louisville KY



Dallas Whicker - Certified Prosthetist and Orthotist,  
Clarksville TN



Ciara Williams - Clinic Office Admin,  
Munster IN



JoAnne Bruce - OPIE Trainee,  
Merrillville Central Office



Ryan Watson - Certified Prosthetist and Orthotist,  
Bowling Green KY



Whitney Carr - Clinic Office Admin,  
Tinley Park IL



Beti Golriz - O and P Support Personel,  
Chicago IL



Jonathan Kozak - Business Coordinator Trainee,  
Merrillville Central Office



## Employee of the Month:



## Bionic Opens 3D Printing Lab

With the first day of Spring comes a monumental announcement from Bionic, as we are proud to inaugurate our brand-new 3D Printing Lab with a ribbon cutting and celebration!

Bionic has been committed to staying at the forefront of technological advancement in the world of prosthetics and orthotics, including the use of 3D printers and structure scanning to create test sockets for patients with unparalleled speed and accuracy. With this new addition, we hope to show our commitment to doing what we do with dedication and precision that is unrivaled in our field.

The lab currently features 4 printers, including the newest addition to our lineup - a new ICARUS model printer from Filament Innovations. This development expands even further upon the capabilities that we offer to our clinics across the country, as we take another technological step forward in our 5,000 sq. foot central fabrication facility.

Our Digital Technician, Zach Brown, will be working from the new Printing Lab to keep the machines running and produce sockets and more for the patients and the communities that we serve.

As always, Bionic seeks to constantly innovate in the realm of prosthetics and orthotics, and we could not be more proud of this giant new step forward.

## Miguel Rivera

Miguel has added a lot of organization, increased communication, and quality control checks to our fabrication department. He leads his team with kindness and is a very hard worker. Miguel is not afraid to reach out if he has a question and makes sure that every work order is read correctly to minimize mistakes. He is a wonderful addition to our lab and greatly appreciated!