



## SCIENTISTS REGROW FROGS' LOST LEGS. WILL HUMAN LIMBS BE NEXT?

By Marcia Frellick (Source: WebMD)

Could missing human limbs be regrown? That's a possibility scientists are now considering after regenerating frogs' legs for the first time. Scientists say they have been able to help frogs regenerate limbs using a five-drug combination. Though other animals -- including salamanders, starfish, zebrafish, lizards, and crabs -- can do that on their own, frogs can't.

The successes of a team of researchers at Tufts and Harvard universities in Boston are raising hopes that one day, human limbs or organs can be regrown. The potential is tremendous, the researchers report in *Science Advances*. Over the next 30 years, more than 3.6 million people a year in the United States alone are expected to lose limbs from diabetes, military combat, trauma, and peripheral artery disease, according to the paper's authors. Prosthetics offer only limited help with mobility. While there have been many scientific advances in the area, scientists have not been able to recover tissue loss or reverse it.

The researchers combined five drugs to help adult frogs regrow their back legs. The drugs were put into gel in a wearable dome called a BioDome. The dome was sealed over the frog's stump for 24 hours after amputation. The new limb growth occurred over the next 18 months. The scientists report in a news release that they used the five-drug method after their previous work using a single drug, progesterone, with the BioDome. In the single-drug method, the limb grew as a spike and didn't have the function of the limbs in the current study. Each of the five drugs had a different role, including easing inflammation, stopping collagen production to avoid scarring, and encouraging the growth of nerve fibers, blood vessels, and muscle.

"The new limbs had bone structure extended with features similar to a natural limb's bone structure, a richer complement of internal tissues (including neurons), and several 'toes' grew from the end of the limb, although without the support of underlying bone," they reported. Nirosha Murugan, PhD, a research affiliate at the Allen Discovery Center at Tufts and first author of the paper, says the completeness of the regrown limb was exciting. "The fact that it required only a brief exposure to the drugs to set in motion a months-long regeneration process suggests that frogs and perhaps other animals may have dormant regenerative capabilities that can be triggered into action," she says.

Activating the pathways could allow the limb to take on the process of growth and organization of tissue similar to the way that happens in an embryo, rather than requiring ongoing therapy over the months it takes to grow the limb, the scientists say. After regrowth in many of the frogs, the new limbs were able to respond to touch and were ready for use in swimming and moving.

So what's the next step for the research? "We'll be testing how this treatment could apply to mammals," said author Michael Levin, PhD, a professor of biology at the Tufts School of Arts & Sciences and director of the Tufts Allen Discovery Center.

## Highlights

Regrowing Limbs?

Employee of the month spotlight

Simple one-pot recipe for a healthy meal

Monthly Calendar and wordsearch

The growing Bionic family - meet the new staff

Compliance Corner - More codes added to Medicare Prior Auth List



## Jignesh Parmar MSPO, Board Eligible Practitioner

Jignesh recently finished his residency at Bionic. His willingness to help wherever and whenever he can is extraordinary. He often travels to support clinics beyond his region. His dedication to his patients and their care is second to none and shows through his work ethic and positive attitude.

### Fun Facts about Jignesh:

- *Jignesh loves visiting beautiful islands and has a bucket list of 22 to visit! So far he has checked three off his list.*
- *He is an amateur street-style photographer and loves taking pictures in his free time.*
- *He enjoys drawing in his free time and his favorite mediums are charcoal and pencil.*

## One-Pot Cilantro Lime Chicken & Rice

### Ingredients

- 1 lb boneless, skinless chicken breast, cubed
- 1 tablespoon olive oil
- 1 yellow onion, diced
- 2 poblano peppers, chopped
- 2 cloves garlic, minced
- 2 ½ cups low-sodium chicken broth
- 1 lime, juiced
- 14 ½ oz canned cooked black beans, rinsed and drained
- 2 diced tomatoes
- 1 ½ cups jasmine rice, uncooked, rinsed
- ½ teaspoon salt
- ¼ teaspoon pepper
- 3 tablespoons cilantro, chopped

1. In a skillet, heat a small amount of oil on medium-high heat. Add chicken and season with salt and pepper.
2. Cook the chicken thoroughly, about 6-8 minutes. Remove the chicken from the skillet and set it aside.
3. Add remaining olive oil to the skillet. Add onion and peppers and sauté for 5-7 minutes.
4. Add garlic and cook for an additional minute.
5. Add the chicken broth, lime juice, black beans, tomatoes, rice, salt, and pepper and stir to combine.
6. Reduce heat, cover, and simmer for 15-20 minutes or until rice is cooked through.
7. Add chicken back to the pot. Add cilantro and combine.
8. Enjoy!



## FEBRUARY 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	31	1	2 Kelly Haen Joel Piodos 	3	4 Erika Haynes Kelly Haen Tasha Pendergast-Kiboko 	5
6	7	8	9 Rebecca Grybauskas 	10	11	12
13 Clayton Prescott 	14 Jignesh Parmar Valentines Day 	15	16 	17	18 Scottie Hutchinson 	19
20 Jenny Hutchinson 	21 Presidents Day 	22 Maria Melgar 	23	24 Sharnice James Jason Rider Brad Watson 	25	26 Raquel Sanchez 
27 Kasey Turner 	28	1	2 	3	4	5

R X T A C V F H A P A F N M Q  
 L I K N T I E U R F B Z P Y E  
 Z Y U H S I T O A T L E D O Q  
 L O W E R Y S O G R N G R E K  
 H Q B S Y T Q C H P A H E L C  
 Q K T R H W L V Z T G N P E C  
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 C J T J N S S C J L X O U T A  
 Q I D I Y T I M E R T X E R J  
 C K C I N V K B K S A O G I M  
 M Y A V C L B V X G F M Z C O  
 I D S R U M J M C B U V A E Z  
 F D R X I P F A R I C C G O T  
 J Y G L T Q B I P O U A S W U  
 F S F X H G S U W H Q D A J H

### Word Bank

Bionic  
 clinic  
 extremity  
 limb  
 lower  
 myoelectric  
 Orthotic  
 Prosthetic  
 upper

# NEW TEAM MEMBERS

FEBRUARY ISSUE



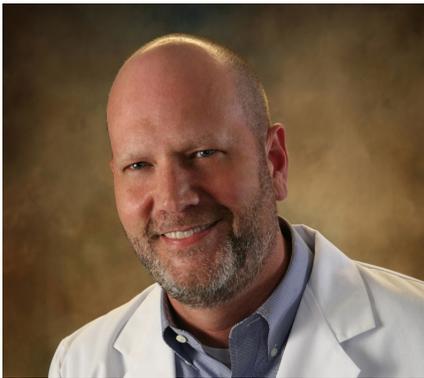
Alec Schuch - Technician,  
Merrillville IN



Sonya Lazoski - Authorization Specialist,  
Merrillville IN



Cooper Proudfoot - Marketing Intern,  
Merrillville IN



Brad Watson - Certified Prosthetist and Orthotist  
Clarksville TN



Stacy Autry - Senior Office Admin,  
Tinley Park IL



Ha Pozos - Clinic Office Admin,  
Bolingbrook IL



Kasey Turner - Certified Orthotic Fitter,  
Bowling Green KY



Arianna Flores - Logistics Coordinator,  
Merrillville IN



Kelly Haen - Orthotic and Prosthetic Asst.,  
Green Bay WI



Whitney Carlock - Certified Orthotic Assistant,  
Clarksville TN



Kimberley McClam - Billing Specialist,  
Merrillville IN



Nicholas Bromley - Board Eligible  
Prosthetist and Orthotist,  
Chicago IL

# NEW TEAM MEMBERS

FEBRUARY ISSUE



Jenny Hutchinson - Certified Orthotist,  
Clarksville TN



Violet Bloom - Certified Prosthetist and Orthotist,  
Melbourne, Rockledge, Titusville FL



Roy Ostrander - Certified Prosthetist,  
Fort Myers FL



Shawn Klindworth - Certified Orthotist,  
Rockledge FL



Christine Nagy - Regional Admin. Manager,  
Titusville FL



Jane Marlor - Certified Orthotist,  
Fort Myers FL



Andrea Brzososki - Clinic Office Admin,  
Rockledge FL



Kendle Nagy - Clinic office Admin.,  
Melbourne FL



Aubrey McGillvray-Cox - Clinic Office Admin,  
Fort Myers FL

## Not Pictured:

Shae Deuser- Billing Payment Specialist, Merrillville IN

Eldon Swopes - Regional Manager, FL

Linda Holmes - Clinic Office Admin, Clarksville TN





# Compliance Corner

(excerpt from AOPA)

## **CMS Expands its Prior Authorization Program and Adds O&P Codes to the List**

On January 12, 2022, the Centers for Medicare and Medicaid Services (CMS) announced that the following 5 O&P HCPCS codes will require Medicare Prior Authorization:

- L0648 Lumbar-Sacral Orthosis, Prefabricated, Off-The-Shelf
- L0650 Lumbar-Sacral Orthosis, Prefabricated, Off-The-Shelf
- L1832 Knee Orthosis, Customized To Fit A Specific Patient By An Individual With Expertise
- L1833 Knee Orthosis, Prefabricated, Off-The Shelf
- L1851 Knee Orthosis (KO), Single Upright, Prefabricated, Off-The-Shelf

Medicare prior authorization for these five codes will be implemented in three phases:

- Phase 1 includes New York, Illinois, Florida, and California and begins on April 13, 2022.
- Phase 2 adds Maryland, Pennsylvania, New Jersey, Michigan, Ohio, Kentucky, Texas, North Carolina, Georgia, Missouri, Arizona, and Washington and begins on July 12, 2022.
- Phase 3 includes all remaining states and territories and begins on October 10, 2022.

The five orthotic codes above represent expansion of Medicare prior authorization beyond the six lower limb prosthesis codes (L5856, L5857, L5858, L5973, L5980, and L5987) that have been subject to prior authorization since 2020.

The five codes that will require prior authorization as part of the new process (two spinal and three knee orthoses) are all codes that have high utilization patterns and have been identified as having high potential for fraud and abuse. Four of the five orthosis codes that are included in the expanded list of codes subject to prior authorization are included in the Medicare DMEPOS competitive bidding program.

A concern about subjecting the five orthosis codes to Medicare prior authorization is that these orthoses often are needed immediately to stabilize an injured and unstable spine or knee. Requiring prior authorization may be challenging due to the acute nature of treatment with these orthoses.

Clinics that use these codes routinely will have to start educating physicians and therapists about the upcoming changes. The admin and auth team will work closely with you to ensure we can get these authorizations at the earliest possible when it goes into effect.