

# UNIVERSITY OF DELAWARE

## STROKE RESEARCH NEWSLETTER



Edition 4: Summer 2025



This newsletter is dedicated to Greg Mitchell. He and his wife, Beth, welcomed a beautiful baby boy named Theodore in April. We are so excited for Greg and Beth's new journey into parenthood! Congratulations!



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Greg holding his 8 lb 12 oz newborn!

### The Inside Scoop

We hope you are enjoying the warm and sunny weather! Many ask us if UD is open in the summer and the answer is YES! We are still hard at work with many of our research studies and it's a great time to get involved! We are located right across the street from the UDairy Creamery which has over 30 flavors to choose from! What a great way to cool off with a scoop of ice cream and enjoy a sweet treat!

### "Science Says" Section:

We highlighted the importance of Repetition in our last newsletter. Another principle of neuroplasticity is: "Use it or Lose it"

It simply means that in order to retain proficiency over a function, you must practice it regularly. The most frequently activated neural pathways in the brain are strengthened and maintained, while those less frequently activated become neglected and forgotten.

USE IT  
OR  
LOSE IT



Keep this in mind with your goals and your everyday activities - such as getting in more steps or practicing using your hand/arm!

Our second Stroke Research Education Group in May was a great success. Thank you to all who were able to join us! Dr. Jennifer Semrau discussed her arm and hand research with a big focus on proprioception- the sense of where our limbs and body are. Check out some takeaway tips on the last page of the newsletter! As a reminder, this group will provide a supportive environment for stroke survivors and caregivers to learn directly from researchers about evidence-based practices and real-world applications. This forum will also provide a safe space for stroke survivors to talk with one another and with researchers about challenges, goals, and successes.

Our next meeting will feature:

Rebecca Pompon, PhD

Data from Speech and Aphasia Research

Wednesday, August 20th, 11 am - 12 pm

UD STAR Campus - Health Sciences Complex Atrium

540 S College Ave, Newark DE 19713

# Take 3 Q&A

Thank you to Angie for participating in our take 3 Q&A section!



Angie recently got her drivers license back after attending a Driver Rehab Program through Bryn Mawr Main Line Health. She is enjoying her rediscovered freedom! This was a goal of hers for many months, which she obtained through constant hard work and perseverance.

Angie has participated in several, if not all, of our studies since 2023. When she's not participating in a study, she's playing with her beautiful grandchildren.

**What have you learned about yourself since having had the stroke?**

"I always knew I had a 'type A' personality, but since having the stroke I have learned that I am really self motivated. I don't like someone telling me I can't do something. It gives me the drive to keep trying to do it. I never knew this side of myself, wanting to prove someone wrong."

**What has been your most memorable part of the UD Stroke Program?**

"It's so hard to pick just one. Every person has had such an impact on my recovery. If I had to pick just one, it would be working one on one with Henry (one of our Research Physical Therapists) during the HIIT2 clinical trial. Henry taught me what I was doing wrong with my leg while walking, and he taught me how to engage my core to make my walking easier."

**What advice can you offer to other stroke survivors?**

"The only advice I can honestly give is never, ever give up! Whatever it is that you want to do, just keep trying! It's so difficult but don't let your caregivers intervene and do it for you."

## Showcase Space: Don Mann - Guitarist/Photographer

Don Mann has worked very hard to learn to reuse his left hand to play the guitar again. He has performed at a number of local venues and fundraising events. Aside from playing the guitar, he also is a photographer. His work specializes in head shots for businesses, actors, and models. He also does commercial and event photography. For more information about his photography you can visit his website at: <https://www.donmannphotography.com>

In his spare time, he enjoys spending time with his family and especially loves watching his grandson play baseball!



Don strumming his bass guitar at a charity event



Photography head shot of Don himself!

# Highlight on Dr. Jeremy Crenshaw



Jeremy Crenshaw, PhD, is an Associate Professor in Kinesiology and Applied Physiology, and he directs the Falls and Mobility Lab at the University of Delaware. Dr. Crenshaw is a proud alumnus of UD, earning his MS in Exercise Science. He completed a PhD in Movement Science from the University of Illinois at Chicago, and he continued with post-doctoral training at the Mayo Clinic in Rochester, MN. His research focuses on the biomechanics of balance. His studies evaluate how chronic stroke may affect balance, and how exercise interventions can improve that skill. He has specifically focused on reactive balance, or the skill of preventing a fall after a perturbation. He then links his laboratory-based assessments to balance confidence, physical activity, and the risk of falling outside the lab. His research has been funded by the National Institutes of Health (NIH), the American Society of Biomechanics, and the UD Research Foundation. He has mentored numerous student researchers, and he now directs the Biomechanics and Movement Science graduate program.

## Study Highlights

The Falls and Mobility Lab has two ongoing studies focused on chronic stroke. One study is an analysis of existing data, and it assesses how different types of balance confidence (e.g. walking balance, reactive balance) have specific influences on walking activity. This study will inform how we can target balance as a way to encourage more walking.

The second study evaluates how those with chronic stroke control balance while walking in challenging circumstances. This study requires a single visit in which participants walk on a treadmill at a preferred speed, a fast speed, and along a narrow path.



### Toolbox Tips !!!

This section is dedicated to building your toolbox with various tips from our researchers. Our goal is that over time you will all build your own toolbox to continue making strides in your own recovery journey.

Our last Stroke Research Education Group focused on Proprioception. Here are some takeaways that we talked about:

Proprioception is the sense of where our limbs are. It involves knowing where body parts are, understanding how much force to use, and coordinating between body parts and senses. Sometimes this sense can be disrupted after a stroke. Examples include: Being able to touch your fingertip to your nose with your eyes closed, holding a blueberry without squishing it, and using hand-eye coordination to catch a ball.

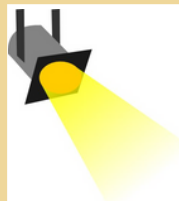
Try these:

**Weight-Bearing Exercises:** Leaning your arm/hand on a table, standing and bearing weight through your leg affected by the stroke

**Balance Exercises:** Standing on a firm surface with your eyes closed for up to 10 seconds

**Targeted Exercises:** Reaching for a target on a table with your hand or tapping the top of a pillow/book on the floor with foot

**\*\*Keep in mind safety when trying these! You may need to stand at a sturdy counter or table to help with balance or you can perform them in a seated position.**



### Spotlight on Sanjana Gontu: Undergraduate Research Assistant



"I am a rising Sophomore Biology major here at UD. I am so excited and honored to be taking part in the Summer Fellows Program this summer! Summer Fellows gives me the invaluable opportunity to further delve into the research field under the guidance of Dr. Reisman, Dr. Thompson, Dr. Butera, and more! This summer, I will be working in the Stroke Lab to implement a coaching program aimed to increase daily walking activity in participants who are living with stroke. I will assist by observing physical therapy research evaluations, coaching sessions, help with data entry, and early-stage analysis, while observing other parts of the study."

## Contact Us!

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We love hearing from our amazing participants!

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