

Editorial ► Neuroplasticity, a Blessing and a Curse!

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We have all heard the myth that after the age of 6-8 years, there is nothing we can do for a patient, as the child is past the critical period. Time and time again, this myth has been debunked. The Amblyopia Treatment Studies from the PEDIG group, the CITT trials, and countless studies highlighting improvements post-brain injury should have put out that fire long ago. However, we still see it in the literature!

The question is: why is this myth not present in other disciplines? When someone injures their shoulder, does the OT or PT say, "Sorry, you are too old for us to help you?" Do speech-language pathologists tell patients that they can't learn to talk again following a stroke? No answer is needed to those questions, of course. I would like to share my story and enter it into evidence as Exhibit One that you are never too old to learn new tricks; neuroplasticity should be embraced and not taken for granted.

In the summer of 2012, our pool at the local community center opened, and I took the boys to beat the heat. I got into the pool and noticed that something felt different down my left leg. I did not understand what I was feeling, but it stung, and I knew that something was off. After several visits to the pool, having the same sensation, I decided to go to the neurologist. I described my symptoms, which were changing. I was noticing that my overall sensation on the left side was decreasing; pretty scary stuff for an active person. I was immediately sent for an MRI.

What occurred when I was given the results was a lesson in how not to give your patients bad news. When presenting the MRI and the results, the neurologist stated, "Well, I have been practicing for 20 years and have never seen one of these!" Yeah, that is exactly what you want to hear when you are on the receiving end of the news! I was diagnosed with a herniation of the spinal cord in my thoracic spine. I was referred to the surgeon, and we decided to take a wait-and-see approach since it was major surgery and the condition was actually not progressing that quickly.

Well, by the next summer, there was no more wait-and-see, as I got into the pool and the legs felt the same. Oh, crap! I was scheduled for surgery within weeks and was lucky to have loving friends and family who took care of me. Even my kids took pity on me for a few days. I was lucky in that the issue was merely sensory and had not impacted my motor responses. The surgeon had spent 6 hours in my spine scraping scar tissue off of the nerves that were protruding from the cord.

Fast-forward to autumn 2014: I started to get very tired when walking, and stairs were laborious. I was working out full-time and had no restrictions. I am an active person and

work out as much as I can, so I went to the physical therapist associated with the surgeon to get some activities to build the muscle endurance. After a few months, I realized that I was holding steady but not improving. I was actually starting to have balance issues. I took the fateful trip back the surgeon, and lo and behold, I had developed a cyst at the same level in the spine, and the nerves were compressed. I was either headed for another surgery or for a wheelchair. Well, the decision was easy, but the last few weeks were a nightmare. I was falling constantly and got a brace to support my ankle. I even moved up the surgery date as I was getting scared.

After another 6-hour surgery, I was told that the cyst was compressing 50% of the cord. I awoke, and within hours, I could tell that something was different. I honestly thought that I was crazy, that improvement could not take place that quickly, but I was wrong. Change took place rapidly at first. Leg function started to return within days. I knew enough to demand physical therapy and used the walker to get out the door and into the facility. I was determined to work hard and to regain quickly what I had lost. I was lucky to have an able and willing rehab partner in my father-in-law to help me push myself. Even lifting the leg was a challenge at first, but with time, I kept getting stronger.

I am happy to say that I continue to get stronger every day, but those who know me know that I am not a patient person. In a job interview, this would be my admitted weakness. Well, I have learned that recovery takes time and yes, patience. Small improvements have replaced big ones, and I am constantly blowing through the plateaus when they occur. I am back in my boot camp and yoga classes with modification and a sense of humor. Yes, there are limitations in my life, but I know that I can push those boundaries and own them!

So, if my surgeon, PT, and neurologist did not tell me that I was too old and past my critical and sensitive period, why do there remain optometrists who routinely tell their patients that there is little hope to recover lost vision? Some have graduated since I have been teaching, from schools at which I have taught, which is akin to Brutus stabbing Caesar to me! And yes, I do bleed in these cases!

What makes the visual system different than any other neuro-sensory system? The answer, of course, is nothing! My spinal issue, the patients who have neurological deficits following ABI, and those who suffer from strabismus or amblyopia all benefit from all of optometry embracing the concept of neuroplasticity. Yes, I know that I am preaching to the choir, as the readership of this journal is on board the neuroplasticity train, but if I can get one more colleague to buy a ticket, I consider it a job well done!



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