

TBI

Model System Updates

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Physical Therapy and Traumatic Brain Injury

By: Taylor Obata

Physical Therapy (PT) is an important part of helping someone recover from a traumatic brain injury (TBI). It can be challenging for both patient and provider given the many symptoms that someone can have after TBI. I spoke with **Maggie Goldberg, DPT, CSRS**, a Physical Therapist on the Inpatient Rehabilitation unit at Harborview Medical Center, to learn more about PT and TBI.

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By: Staff

I first wanted to know why PT is important after a TBI. Maggie told me that PT is needed to deal with a wide variety of issues including: movement and balance, re-learning daily activities and schedules, and improving overall fitness and strength. She said that, depending on the location of the brain injury, TBIs can result in things like weakness, clumsiness, difficulty with balance, difficulty walking and moving, problems with thinking skills, poor vision, and difficulty managing feelings or how you act. Physical therapists generally work with other members of a rehabilitation team (such as speech or occupational therapists) to address these possible issues. The main goal is to help a patient improve their independence and quality of life.



Because there are so many symptoms and issues that can arise after a TBI, I wanted to know how Maggie creates a plan for her patients while they are in the hospital and once they discharge home. I learned that the first thing a physical therapist will do with a new patient is perform a comprehensive evaluation. The therapist will learn about the patient from their medical notes as well as observe their strengths and weaknesses. They will also specifically do tests of strength, coordination, balance and [vestibular function](#), vision, sensation, attention, pathfinding, and ability to follow instructions. After completing the evaluation, the physical therapist will make a detailed plan to address the issues that they find. Maggie shared that she really likes working on the inpatient rehabilitation unit as she gets to work with the other therapists, doctors, nurses, psychologists and other members of a patient's rehab team.

After learning how a physical therapist creates a plan for someone who's experienced a TBI, I wanted to know if there were any common challenges that come up for Maggie when helping someone with a TBI meet their PT goals. She explained that some common challenges are problems with thinking skills and ability to control how someone acts on their own. It can be difficult to work on PT when someone is agitated, impulsive or unaware of what is safe and what is not. This can happen if someone does not have insight or understanding of their injury and its impacts on their abilities. This requires physical therapists to carefully focus their plans to help patients with TBI to be successful in therapy. Maggie also shared that she often works with patients and their families to connect how their symptoms can impact their progress and understand how the symptoms are related to their

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brain injury.

Lastly, I wanted to know if Maggie had any advice for physical therapists that have not had as much experience helping clients with TBI, since it is not standard for all physical therapists to be trained to understand the unique issues related to TBI. Although she herself is relatively new to caring for patients with a TBI, she did have some advice for fellow therapists. She says to stay flexible with your treatment approach, and to plan and recognize that patients who have experienced a TBI may not improve in a straightforward way as is sometimes seen in other types of injuries. For instance, a patient may excel in a treatment or activity one day, and the next day the same thing may not work for them. This is where it is important to be flexible and figure out if there are other factors that might be affecting someone's ability to participate that day. She also recommends working with people in other specialties that are involved in that patient's care, such as speech and occupational therapists.



UW TBI Model System Investigators Win Award!

UW TBI MS Investigators Jeanne Hoffman, Sylvia Lucas, Nancy Temkin, Sureyya Dikmen, and Kathy Bell won an award for **Best Abstract in Neurotrauma** at the 12th World Congress of the International Brain Injury Association (IBIA). This is the largest gathering of international professionals working in the field of brain injury, and included hundreds of researchers and presenters from all over the world.

The investigators' abstract, "Five year headache trajectories after moderate to severe traumatic brain injury," was chosen out of over 600 accepted abstracts, a great honor and a confirmation of the incredibly high-quality of research they conduct.



Dr. Jeanne Hoffman with IBIA Chairman and CEO, Dr. David Arciniegas
Photo by Sylvia Lucas

Survivor Perspective: Physical Activity and TBI

By: Garrett Lund

A sudden event can have the potential to transform one's life. This is what happened to me in August of 2005. It was during that month that I began the process of reexamining my life and thinking about how I could get back to who I was. Before my accident, physical activity was what defined me. Yet, when I left the hospital, I was not thinking of the activities that I once loved. Within the first week of being home my mom proposed the idea of going back to the gym. Since I was not working yet, it was appealing in the sense that it gave structure to my day. Still, initially I was not interested and slowly eased into it. Now looking back, physical activity is something that helped shape and define my recovery.

Given the nature and complexity of TBIs (traumatic brain injuries), there is not yet extensive, concrete knowledge on how physical activity can influence your recovery. The initial appeal of physical activity during my first year of recovery is that it gave structure to my day. This can be the hardest part of your recovery when you are limited with what you can do. Ultimately, I would go to the gym several days per week and initially those were the days that I dreaded most. Without my mom's assistance there is a good chance that I would have stopped going to the gym which would have destroyed the structure that I had developed. After several weeks, those days I went to the gym became the days I looked forward to. There still is not much research on the direct mental benefits of physical activity after a TBI, but without a doubt, it helped with my mental recovery. Still to this day, I continue to find that days of physical activity will help me feel more aware and mentally sound. There is proof of the mental benefits of exercise for all individuals, but for me this was much more pronounced during the initial months of my recovery from a TBI.

Now looking back, physical activity is something that helped shape and define my recovery.

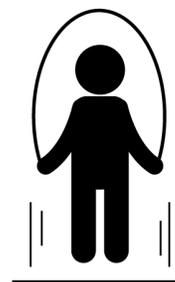
Beyond physical activity, there are several other things that I believe helped with my mental recovery. The most influential items in my initial recovery, outside of physical activity, were social interactions and mental games. To this day I will thank people for individual conversations we had, because I was confident that each interaction was helpful for my recovery. It was important to learn how to socially interact again and was also nice to have conversations that reminded me of the individual I once was. Beyond social interactions, I also found that mental games were very helpful. For the first several months I

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would get on these apps every morning. This was always a great way to start my day, and it became a great way to gauge my mental recovery. One of the cool things about apps is that they make it possible to easily gauge your progress. At this point, I will not play for several months then go back to see that I have progressed which is a great subtle reminder that your recovery can continue for years. In general, it is a fun way to continue to check in months down the road.

For me the first year of recovery was the stretch of time that I was able to gauge my mental progress and developed a great sense of what helped and what would set me back. At the end of the day it would be difficult to gauge which items were the most beneficial, but without a doubt I am incredibly grateful for the time I devoted to physical activity. It began as something that was helpful by giving structure to my day, and looking back, there is no doubt that it helped with my mental recovery. The ability to engage in physical activity after a TBI can vary from one person to the next. This variance is based on the degree of other physical injuries sustained, so individuals would need to develop plans unique to their recovery. Since physical activity helped shape my mental recovery, this is something that I hope to see more research on down the road.

Thank you to my mom and all those that helped me stay physically active—which ultimately helped with my mental recovery.



What's Your Survivor Story?

Send your story to uwtbi@uw.edu and we may be able to feature it in our next newsletter!

Announcements:

BIAWA 2017 Brain Injury Art Show

Every year the Brain Injury Alliance of Washington hosts the wonderful Brain Injury Art Show. The free event runs from **June 30th to October 1st**, and will be held in the **Community Education Gallery** of the **Bellevue Arts Museum**. More information [here](#).



Opening Reception: July 13th, from 4:30 - 6:30 PM
Bellevue Arts Museum - Community Education Gallery
510 Bellevue NE, Bellevue, WA 98006

Looking to get involved in TBI research?

We have multiple studies that are currently recruiting participants. The first study is for individuals that are experiencing new or worse headaches since their injury. The second is for current TBIMS participants.

If you are interested in participating in research, check out our studies below:

The TWIST Study

Study Contact: Taylor Obata, tobata@uw.edu or by phone at 206-685-8354

The TWIST Study looks at whether Sumatriptan (also known by the brand name *Imitrex*[™]) an FDA-approved medication for treatment of migraine, shows similar effectiveness for treatment of chronic post-traumatic headache. Eligible subjects must be **16 to 65 years of age**, within **2 weeks to 5 years post TBI**, and experiencing **new or worse** headaches since their TBI. Subjects are asked to keep a headache diary while enrolled.

The LE-TBI Study

Study Contact: Taylor Obata, tobata@uw.edu or by phone at 206-685-8354

The Late Effects of TBI or LE-TBI Study aims to learn more about the long-term effects of TBI in the general population. This study is for individuals who are already enrolled in the TBI Model System Study, are over 40 years of age, and at least 1 year out from their injury. You must be able to undergo an MRI and be willing to have a brain tissue sample donated in the event of your passing during the course of the study. Please give us a call for more information.

All studies are voluntary and will not affect the care you receive at the University of Washington

UW TBIMS Starting New Research Study! Comparison of Sleep Apnea Assessment Strategies to Maximize TBI Rehabilitation Participation and Outcome (C-SAS Study)

The UW TBIMS is a partner site for the [PCORI](#) funded [C-SAS Study](#). This study will compare methods to screen for sleep apnea as well as two strategies to diagnose it in patients admitted to inpatient rehabilitation at Harborview Medical Center for treatment after a TBI.



BIAWA Health and Wellness Class: Planning for Leisure and Community Involvement

By Erica Wasmund

I recently had the opportunity to attend one of the BIAWA's Health and Wellness classes at Multi-care Good Samaritan Hospital in Puyallup. The class was led by Janet Blaisdell who is a recreational therapist at Good Sam. Janet first explained the difference between recreation and leisure. Leisure activities are things we do for fun in our free time, which can include recreational activities such as sports and exercise, but can also be things like building model cars, playing chess, or bird watching. She explained that after a brain injury, you may not be able to fully do the things you once enjoyed, or your interests may have changed.

Janet stressed that the important thing is finding out what qualities you liked about doing that activity and seeking out something with similar qualities. For instance, was it being outside or being with that group of friends that made you enjoy the activity? Maybe it was the mental challenge. For instance, if you used to ski, but now your balance isn't great, you could try cross country skiing or snow shoeing instead. Maybe you used to love going to a Seahawks game or the Mariners, but the crowds and planning the trip to a game is now overwhelming. Could you go see a minor league game, or invite friends over to watch the game at your house? It's important to be realistic about what you need and think through the entire activity from start to finish. Here are some things to consider that will help you plan for leisure and recreational activities:

- ◇ Where am I going?
- ◇ How will I get there? Am I going alone or could I ride with someone?
- ◇ Do I need to get transportation help?
- ◇ How much energy will I need? Should I plan this on a day that I don't have anything else going on, or can I go to lunch with my friends and then still have enough energy for the planned activity?
- ◇ What is the cost?



- ◇ Do I need any modifications or adaptive equipment? For instance, could I ask for the guards to be put in place when I go bowling?

When getting back into your community after an injury, there are a number of resources you can use. A great place to start is the Parks and Recreation Department in your area. They not only list all the outdoor activities, but they list activities that are going on at the community centers like art classes, chess, and even support groups. Planning for these activities can be fun, but also sometimes scary or frustrating. To help make this a success, think about any potential barriers to your participation, and stay aware of your needs and comfort in a given situation. If you are prone to getting agitated or emotional, make sure you have your plan in place. Things might change, or come up, but having a back-up plan will relieve some stress. Think about questions like: can I go early and scope it out to make sure I don't get lost? Is there a place that I can take a break from the noise or lights if I need to? Know that if all else fails, it's okay to leave early.

Janet suggests starting with a short and simple outing or activity to help you get the hang of it and figure out what kind of support you need. With a successful trip, you are more likely to want to do it again. Find what you like and have fun!

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If you want more information about getting involved in outdoor activities, BIAWA's "Planning for Outdoor Activities After Brain Injury" class is at Good Sam on June 20th from 3-4:30. You can register for that class and others on BIAWA's website [here](#).

These classes are led by knowledgeable and experienced professionals. I highly encourage you to check out the [summer catalog](#) and see if any of them are a good fit for you!

Healthy Recipes for Spring

Mixed Bean Salad

Author: Mayo Clinic Staff

Servings: 8

Ingredients:

- 1 can (15 ounces) unsalted green beans, rinsed and drained
- 1 can (15 ounces) unsalted wax beans, rinsed and drained
- 1 can (15 ounces) unsalted kidney beans, rinsed and drained
- 1 can (15 ounces) unsalted garbanzo beans, rinsed and drained
- 1/4 cup chopped white onion
- 1/4 cup orange juice
- 1/2 cup cider vinegar
- Sugar substitute, if desired

Instructions:

1. In a large bowl, combine the beans and onion. Stir gently to mix evenly.
2. In a separate bowl, whisk together the orange juice and vinegar. Add sugar substitute for desired sweetness.
3. Pour the orange juice mixture over the bean mixture. Stir to coat evenly. Let stand 30 minutes before serving.



Fresh Fruit Kebabs with Lemon Lime Dip

Author: Mayo Clinic Staff

Servings: 2

Ingredients:

- 6 ounces low-fat, sugar-free lemon yogurt
- 1 teaspoon fresh lime juice
- 1 teaspoon lime zest
- 4 pineapple chunks (about 1/2 inch each)
- 4 strawberries
- 1 kiwi, peeled and quartered
- 1/2 banana, cut into 4 1/2-inch chunks
- 4 red grapes
- 4 wooden skewers

Instructions:

1. In a small bowl, whisk together the yogurt, lime juice and lime zest. Cover and refrigerate until needed.
2. Thread 1 of each fruit onto the skewer. Repeat with the other skewers until the fruit is gone.
3. Serve with the lemon lime dip.





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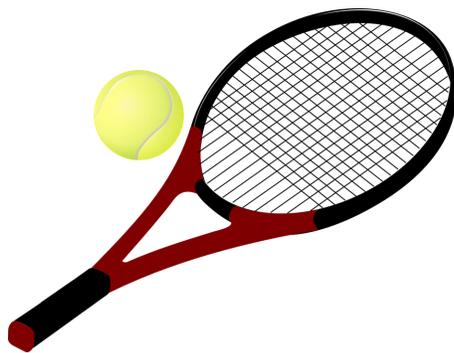
Who's Who at UW

Charles (Chuck) Bombardier, PhD is a professor in the Department of Rehabilitation Medicine and an investigator on the next UW TBI Model System grant. Dr. Bombardier is the head of the Division of Clinical and Neuropsychology. He is also the attending psychologist on the inpatient rehabilitation unit at Harborview medical center.



His research and clinical interests have been in the area of diagnosing and treating depression in people who have had a TBI. He has been involved in studies that used exercise, antidepressant medications, or psychotherapy to help people who have had a TBI recover from depression. He has also studied alcohol and other drug use after TBI.

Dr. Bombardier earned a BS in psychology from the University of Washington, and an MS and PhD in clinical psychology from Washington State University. He completed his pre-doctoral internship and post-doctoral fellowship at Duke University Medical Center in Durham, North Carolina. He has been on the faculty in the Department of Rehabilitation Medicine since 1989. He is board certified in rehabilitation psychology and a fellow of the American Psychological Association.



Outside of work, Dr. Bombardier enjoys tennis and woodworking. He is married to Michele Bombardier a speech language pathologist and poet. They have three sons, Joel (29), Evan (26), and Nathan (21).

The Washington Traumatic Brain Injury Resource Center

BIAWA is first and foremost a source of support for those affected by Brain Injury, and the Resource Center is a critical part of this.

[Brain Injury Alliance of Washington](http://www.biawa.org/): www.biawa.org/

[BIAWA Support Center](http://www.biawa.org/getsupport.php): www.biawa.org/getsupport.php



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