

## SOLVING THE CASE MANAGEMENT PUZZLE



## President's Message:

Hello fellow CMSA members and Happy Spring (finally)! It is so nice to see the sunshine and flowers!

A huge Thank You to all the board members who worked so hard on the 2018 all-day conference! If you were able to attend, you know how successful it was. Thank you also to the many vendors whose contributions helped to keep the cost affordable to all the attendees. And finally, a special thank you to our speakers – Joy Washburn, Brian Tesler, Eric Bergman, and Ellen Fink-Samnick. We received very positive feedback on the presentations. All in all, it was a great day at a beautiful facility!

If you were unable to join us for the all-day conference, we have two more educational events planned for this year in September and November. Stay tuned for more information on the specifics of those.

In a few weeks, several of our board members will be heading to Chicago for the CMSA National Conference entitled, We Are Case Management. We are looking forward to a great time of education and networking. CMSA-GGRK is up for several awards this year!!

As you enjoy our beautiful Michigan summer, I hope you're able to reflect on your role as case manager and what keeping an 'outside focus' would mean for you. Due to the nature of the business, we are constantly being forced to change. I'd like to challenge you to also think about how you can make voluntary proactive changes in your own setting, and what you might like those changes to be.

Finally, I would love for you to start thinking about becoming a CMSA-GGRK board member. We will have several positions opening at the end of the year and I would like to encourage you to speak with your colleagues and current board member to learn how you can become a part of CMSA-GGRK

Respectfully,  
Cindy Ingersoll, RN, BSN, CBIS, CCM  
President CMSA-GGRK



"Summer afternoon—summer afternoon; to me those have always been the two most beautiful words in the English language."

-Henry James

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## Summer Facts

*School's almost out. The weather is changing, and you can already start feeling the warmth of summer. We've compiled some fun facts about summer to help get you in the spirit of the season!*

**Fun Facts about Summer:**

- The first day of summer is between June 20th and June 22nd every year. The first day of summer is called the summer solstice, and the day varies due to the Earth's rotation.
- The last day of summer is September 20th.
- The Eiffel Tower actually grows in the heat of the summer. Due to the iron expanding, the tower grows about 6 inches every summer.
- July is national ice cream month.
- The month of June is named after the Roman goddess Juno.
- The "dog days of summer" refer to the dates from July 3rd to August 11th. They are named so after the Sirius the Dog Star. This star is located in the constellation of Canis Major.
- July fun fact, Roman general Marc Antony named the month of July after Julius Caesar.
- July is national blueberry month.
- The longest day of the year is on the summer solstice.
- Mosquitos which are most prevalent during summer months have been on earth for more than 30 million years.
- August was named after Julius Caesar's nephew.
- Ice pops were invented in 1905 by an 11 year old boy.
- Scientists argue that summer babies are significantly more likely to suffer from mood swings than babies born in other seasons

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Recovery from a brain or spinal cord injury can be a long and difficult process. There is substantial clinical evidence that expertly applied aquatic therapy improves recovery times and patient outcomes. Rehabilitation in an aquatic environment provides patients with a unique medium for neuromuscular reeducation and strengthening. The water's buoyancy allows freedom of movement that is ideal for individuals who have restricted mobility due to weakness and paralysis. Increased muscular strength occurs quicker as movements are performed against the resistance of the water. This combination of freedom and resistance is very difficult to duplicate in any land-based therapy environment.

The water environment permits earlier detection of small neuromuscular movement and responses. The anti-gravity effect of water makes it easier to work with these movements to increase range of motion and strength.

Spasticity is a common issue with neurological injury that can be exacerbated by cold. A warm water therapy setting minimizes spasticity, facilitates movement and increases patient comfort.

Core strength and balance are key components of neurological restoration and functional ability. The increased viscosity and buoyancy of the water provides support in both the sitting and standing positions. Wave action can be utilized to challenge and strengthen core muscles and balance mechanisms. Off-balance falls are slowed due to the water resistance, which helps with protective response training. The patient's fear of falling is decreased thereby improving trial effort resulting in greater progress per session.

The clinician who understands and applies the principles of the aquatic environment will have an extremely useful neuro-rehabilitation tool. Patients appreciate the opportunity to work in a safe and comfortable environment that provides an opportunity for increased and more rapid progress.

### CLINICAL STUDIES – Therapy for TBI and Spinal Cord Injuries

A number of clinical studies support the efficacy of aquatic therapy as part of a rehabilitation program following traumatic brain injury or a spinal cord injury. In a 2010 paper, Dr. Kurt A. Mossberg and associates analyzed the effects of various training and exercise modalities on the physical work capacity of patients with TBI. They found that the **aquatics group showed improvements in strength, body composition, and cycle ergometry peak wattage and time compared to the control group.**<sup>4</sup>

Drs. Jung, Narasaki and Vrongistinos of California State University, Northridge point specifically to the added buoyancy of water as an important component of traumatic brain injury aquatic therapy, writing that "**specific outcomes in spatiotemporal and kinematic gait variables can be explained by employing hydrodynamics and water properties, such as buoyancy, water resistance and drag force.**" They conclude that "aquatic gait training can benefit individuals with TBI or similar neuromuscular disorders mostly due to its weight support effects from buoyancy."<sup>5</sup>

Spasticity is a persistent problem encountered in spinal cord injury patients. Research by Dr. Kesikta and associates has demonstrated that spinal cord injury aquatic therapy can lead to reduced spasticity; in a study of twenty spinal cord injury patients, it was found that compared to the control group, the use of hydrotherapy produced a significant decrease in spasm severity.<sup>6</sup> The authors conclude that this is especially beneficial when weaning spastic patients off habit-forming muscle relaxants since hydrotherapy rehabilitation programs can be a viable option to help decrease the amount of medicine a patient needs to take.

# NEUROLOGICAL AQUATIC THERAPY

*Continued from Page 2*

## TRAUMATIC BRAIN OR HEAD INJURY BACKGROUND

According to the US Centers for Disease Control and Prevention:

*Aside from aquatics' impact on the patient's mood, there is a rising amount of proven clinical evidence that points to the benefits of aqua rehab for hip replacement.*

This includes:

- Traumatic brain injury (TBI) is one of the leading causes of disability worldwide, with more than 2.5 million Americans affected each year.
- Of those 2.5 million, 280,000 required extended hospitalization.
- Leading causes of traumatic brain injury include: falls (40%), blunt trauma (15%) and motor vehicle accidents (14%).<sup>1</sup>
- 5.3 million Americans are currently living with long-term disabilities as a result of severe TBI.<sup>2</sup>



## PARALYSIS AND SPINAL CORD INJURIES

According to the University of Alabama National Spinal Cord Injury Statistical Center:

- Of those who survive major spinal trauma, 52.2% suffer complete or incomplete tetraplegia; 36.7% suffer incomplete or complete paraplegia.
- Spinal cord injuries are most commonly caused by motor vehicle accidents (36.5%), falls (28.5%), violence (14.3%) and sports injuries (9.2%).
- Spinal cord injuries require an average of 11 days of hospitalization followed by 36 days of disability therapy.<sup>3</sup>

## AQUADIC THERAPY for CHILDREN with CHRONIC SPINAL CONDITIONS

Alina, a child that suffers from Medulloblastoma Tumor in the posterior part of her brain, went to aquatic therapy after going through chemotherapy and a tumor recurrence. Cindy Jarosch, a physical therapist at St. Paul's Children's Hospital, helped Alina regain some lost skills such as strength, balance and coordination.

Children with physical conditions affecting neurological and spinal function — including cerebral palsy and spinal bifida — face significant barriers to participation in community sports and other forms of exercise. As a result, they frequently suffer from lower cardiovascular endurance, decreased muscle strength, poor balance and coordination, and overall diminished motor skills. Regular exercise in a disability pool can be useful when combating this — anecdotal evidence suggests that most children find aquatics more fun than land-based exercise. When children are excited about exercise, they participate more willingly and make more of an effort, which leads to improved therapeutic outcomes in the long run.

One study by investigators Fragala-Pinkham, Haley and O'Neil looked at the effects of regular aquatics on 20 children between the ages of 6 and 12 with a range of chronic conditions, including CP, myelomeningocele and autism spectrum disorder. The authors found that the **“aquatic aerobic exercise program was effective in improving cardiorespiratory endurance”** and exercise capacity, concluding that **“aquatic exercise may provide a safe and beneficial alternative low-impact exercise for children with disabilities.”**<sup>7</sup>

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# Neurological Aquatic Therapy

Continued from page 3

## NEUROLOGICAL POOL THERAPY: POTENTIAL USES FOR CLINICIANS



**Gait training:** Reeducating muscles to stand and walk is an important part of water therapy for paralysis from a brain injury. Gait training can help patients regain balance, movement and strength and reduce spasticity. Because water can support up to 90% of an individual's body weight in an exercise pool, clinicians can increase resistance and/or move the client partially out of water to gently increase the intensity of the training.



**Activities of daily living training:** During neurological aquatic rehabilitation, recovering a normal gait is an important long-term therapy goal. Additionally, aquatics can also be used to focus on specific areas of concern relative to other daily activities — HydroWorx aquatic therapy pools for disabled and handicapped are an ideal environment to practice sit-to-stand, reach and balance training exercises.



**Pain management:** Warm water increases circulation and range of motion it also decreases perception of effort while exercising. It is often used to treat chronic pain conditions such as fibromyalgia. By the same logic, aquatics can also be useful for individuals recovering from TBI or spinal cord injury and dealing with the effects of acute pain.



**Resistance and toning:** Patients at an advanced stage of recovery can benefit from the higher viscosity of water, which helps muscles work harder without risking injury or strain. In most handicap pools, resistance can be adjusted precisely to accommodate the patient's recovery and prepare them for further land-based strength training.

## HYDROWORX POOLS AND NEUROLOGICAL AQUATIC THERAPY

Designed to meet the needs of today's physical therapy professionals, HydroWorx pools for disabled and handicap clients include a number of unique features that make them well-suited for promoting recovery from paralysis and brain/spine injuries. These include:

- **Underwater Treadmill:** Invaluable for gait training, underwater treadmills are available as a standard feature on all HydroWorx pools. As opposed to gait training in a standard pool, the underwater treadmill allows individuals to practice gait patterns that closely mimic land patterns. The speed of the underwater treadmill starts at .2 mph and increases in .2 mph increments allowing patients to safely progress at their own speed.
- **Underwater Cameras:** The ability for the patient and the clinician to monitor and visually see gait patterns without looking down is essential to regaining normal function. Clinicians can instruct patients on how to correct their movements immediately. The ability for a TBI or spinal cord injury patient to see their legs moving underwater also does wonders for their mental outlook.
- **Mechanized Floor with Adjustable Depth:** Patients recovering from brain or spine injuries frequently have mobility issues that make getting into and out of a therapy pool difficult. HydroWorx pools are available with moveable floors that allow for zero depth entry and can be raised or lowered in just 30 seconds, making them safe and easily accessible for all patients; eliminating the need for ladders or steps.
- **Resistance Jets:** Variable speed resistance jets allow clinicians to adjust the level of water pressure and vary the intensity of the workout accordingly.
- **Deep-tissue Massage:** Every HydroWorx pool comes with an attachable massage hose. A deep-tissue massage post-therapy strips lactic acid from muscles, reducing the amount of soreness and promoting a faster recovery.

### Sources:

- [https://www.cdc.gov/traumaticbraininjury/get\\_the\\_facts.html](https://www.cdc.gov/traumaticbraininjury/get_the_facts.html) <sup>2</sup> <https://www.cdc.gov/TraumaticBrainInjury/severe.html>  
<sup>3</sup> [https://www.nscisc.uab.edu/PublicDocuments/fact\\_figures\\_docs/Facts\\_2013.pdf](https://www.nscisc.uab.edu/PublicDocuments/fact_figures_docs/Facts_2013.pdf); <sup>4</sup> "Endurance Training and Cardiorespiratory Conditioning after Traumatic Brain Injury." *Journal of Head Trauma Rehabilitation* (2010 May-Jun; 25(3): 173-183). [Article Link](#) <sup>5</sup> "Kinematic Analysis of Aquatic Treadmill Walking at Three Water Depths in Individuals with Traumatic Brain Injury." Podium Presentation at Annual Gait and Clinical Movement Analysis Society at Richmond, VA (2008). [Article Link](#)  
<sup>6</sup> "The use of hydrotherapy for the management of spasticity." *Neurorehabilitation and Neural Repair* (2004 Dec; 18(4): 268-273). [Article Link](#)  
<sup>7</sup> "Group aquatic aerobic exercise for children with disabilities." *Developmental Medicine & Child Neurology* (2008 Nov; 50(11): 822-827). [Article Link](#)

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## Horses Providing Healing and Comfort for TBI Victims – By Stephen Smith



Victims of [Traumatic Brain Injury \(TBI\)](#) struggle to get through life. Even the simplest of tasks such as getting dressed can be arduous. Many TBI victims are forced to rely on others to provide for their daily needs. Most spend several hours in physical or occupational therapy each week. While traditional therapy serves a purpose, the

discovery of equestrian therapy is providing new hope for TBI victims and their families.

### Traumatic Brain Injury a Serious Concern

The Centers for Disease Control and Prevention (CDC) indicates that 1.7 million Americans visit the hospitals each year with a TBI. In fact, **TBIs are a factor in 30 percent of all deaths related to injury**. A staggering 17 percent of TBI-related injuries are caused by vehicular accidents. Over 35 percent of brain injuries are caused by falls such as slipping on a wet surface. Any serious jolt or shaking of the head can also cause a TBI.

Millions of people each year will slip and fall. Whether they are at home or at a public place, falling can cause serious injuries. However, many people will not seek medical attention. Most will brush off the injuries as too minor to waste the time going to the emergency room or visiting a doctor. It is unfortunate that the average person does not realize how serious a bump on the head can be. The CDC considers TBI to be a public health issue that warrants serious concern.

Those who struggle with [brain injury](#) often have difficulty with maintaining proper balance. Even in mild forms of TBI, victims risk further injury due to their inability to maintain balance or control physical movements. However, horse therapy has helped countless TBI victims to overcome many challenges of this devastating injury.

### Equestrian Therapy for TBI Victims

A Michigan newspaper, the *Grand Traverse Insider*, details the great benefits available through equestrian therapy. The publication introduces Christine O'Connell, founder of Charity Hill Ranch, a provider of horse therapy. Christine's began providing horse therapy after her daughter suffered a closed-brain injury. The girl was left blind, required a feeding tube, and she could not maintain her balance.



Christine discovered that horses provided her daughter with comfort and joy. As her daughter progressed through horse therapy, she began to heal. Even though the doctors said her daughter's prognosis was poor, the therapy was almost miraculous, allowing Ms. O'Connell's daughter to graduate high school and live a full life. The medical community has recognized the profound benefits of equestrian therapy. This

treatment is particularly comforting for children who have sustained significant brain injuries. A child's connection to the horse provides emotional stimulation while helping the child to work muscles and develop balance. Children are more responsive to horses than traditional therapies, leading to better outcomes for many.

Like a welcome summer rain, humor may suddenly cleanse and cool the earth, the air and you.

-Langston Hughes

## Greek Garbanzo Bean Salad



### INGREDIENTS

- 2 (15oz) cans garbanzo beans
- 2 cucumbers, halved lengthwise and sliced
- 12 cherry tomatoes, halved
- ½ red onion, chopped
- 2 cloves garlic, minced
- 1 (15oz) can black olives, drained and chopped
- 1oz crumbled feta cheese
- ½ cup Italian style dressing
- ½ lemon, juiced
- ½ tsp garlic salt
- ½ tsp ground black pepper

### DIRECTIONS:

Combine the beans, cucumbers, tomatoes, red onion, garlic, olives, cheese, salad dressing, lemon juice, garlic salt and pepper. Toss together and refrigerate 2 hours before serving. Serve chilled



"The summer night is like a perfection of thought."

-Wallace Stevens

## UNEXPECTED REASONS YOU'RE MORE-LIKELY TO HAVE A SUMMER CAR ACCIDENT



When people think of summer, it's often of vacations, beaches, and fun times. The roads are clear, there's no snow on the ground, and the weather is gorgeous. Seemingly, the warmer months would be the best time to be on the road. If national statistics are indicative of Charleston car accident rates, though, summer months are the deadliest.

### More Accidents Happen Between June and November

Throughout the country, 32,719 fatalities occurred in the most-recent reporting year according to the Insurance Institute for Highway Safety (IIHS). In the snowy month of February, just 6% of fatalities occur, but as the weather warms up, fatal accidents increase as well. By the time June and July arrive, 9% of the yearly's fatalities occur within each month. Fatalities on the road peak at 10% in the month of August, and then decline at a steady rate through February again.

### Common Causes for Summer Car Accidents

Winter hazards are generally obvious, and most people instinctively take steps to overcome or avoid them. However, summer events aren't easily identified, which makes them more difficult to prepare for and respond to.

**There are more inexperienced drivers on the road.** Because school is on break for the summer, high school and college students log more hours behind the wheel instead. Lack of driving experience adds up to more collisions, and the severity of them increases as well.

**Construction takes over the streets.** Most municipalities are unable to do road maintenance during the winter months, so activity peaks once it warms up outside. Not only does construction pose a hazard in and of itself, but it also leads to more congestion on the roads.

**Vacationers crowd the roads.** As extra people take to the streets headed to vacation destinations, the roads naturally become more congested and more difficult to navigate. Moreover, those on vacation aren't usually in a rush to get anywhere and they aren't familiar with the roads, so they tend to drive much slower than locals do.

**There are more cyclists and motorcyclists out during the warmer months.** Naturally, bikes and motorcycles add to congestion, but the biggest problem is that motorists don't expect to see them, so they don't look for them.

**Between road conditions and heat, road rage increases.** Dehydration from excessive temperatures can also lead to impairment, which can manifest itself as road rage or other unsafe driving practices.

**Tire blowouts occur more often when it's hot out.** The air inside tires naturally expands with heat. Although severely worn tires are more at risk for blowouts caused by this expansion, extreme heatwaves can cause seemingly road-worthy tires to fail as well.



## 4 Summer Food Safety Tips

As the weather heats up, follow these tips for proper food handling.

### **Preventing Foodborne Illness**

Picnics, backyard barbecues, beach cookouts—dining al fresco is one of summer's best perks. But it's easy to forget that as the temperature rises, so does your chance of getting sick from contaminated food. Bacteria thrive in warmer conditions and people are cooking outdoors frequently—away from sinks, refrigerators, and kitchen thermometers.

What can you do to avoid the unpleasant experience of food poisoning this summer?

### **Stay Clean**

Washing hands, surfaces, and food is one of the easiest ways to prevent foodborne illnesses. "In some cases people know about the basics but they don't always do them, and obviously these practices are well worth the time," says Shelley Feist, executive director of the Partnership for Food Safety Education.

Always wash hands with soap and water for at least 20 seconds before and after handling food. If you are outdoors without access to a sink, use antibacterial hand sanitizer as an alternative.

Rinsing fruits and vegetables is as simple as running tap water over them, but without access to running water it can be difficult. Washing your food before packing it in your picnic basket will ensure that the food is clean—even if your camp site doesn't have fresh water.

### **Separate Raw Food**

During grilling season it can be more difficult to avoid cross-contamination because there's often less access to clean surfaces and dishes. "When raw meat goes on the grill you can't put it back on the same platter you brought it out on," says Feist. Have an extra plate on hand or thoroughly wash any utensil, dish, or surface that has touched raw meat or seafood with hot, soapy water before reusing.

## Summer Food Safety

*Continued from page 6*

### **Separate Raw Food -continued**

Cross-contamination can also occur when traveling if raw meat, seafood, and poultry aren't wrapped properly. Carefully wrap food and place it in a separate cooler (or at the bottom of the cooler) to prevent any raw juices from leaking and contaminating other foods.

### **Cook Food Thoroughly**



Don't depend on the color of meat or seafood to determine whether or not it's cooked thoroughly. "Consumers are stubbornly stuck on visual indicators but, for both quality and safety, using a thermometer gives you an idea that it's safe and not overcooked," says Feist.

Instead of cutting your meat, poultry, or seafood open (and dirtying more utensils!), determine its readiness with a food thermometer and the [USDA's food temperature guidelines](#).

### **Keep Cold Food Cold**

Traditional picnic baskets may look pretty, but they won't keep your food at a safe temperature for long. And since it's necessary to discard any food that has been left out in the summer sun for more than two hours (one hour if the temperature exceeds 90 degrees), choose a well-insulated cooler filled with ice instead.

Though a cooler is never an ideal replacement for a refrigerator because a home refrigerator should be kept at 40 degrees or below, there are four easy ways to slow down the growth of harmful bacteria:

- *Keep coolers out of direct sunlight and use separate food and beverage containers to help maintain a lower temperature. On a hot summer day, you should be drinking plenty of water so the beverage cooler will likely be opened (and thus exposed to warmer temperatures) more frequently.*
- *Nestle bowls of summer salads in larger bowls of ice to direct cooling and insulate food.*
- *Full coolers tend to stay cold longer. If your cooler has empty space, fill it with ice.*
- *If traveling by car, don't store your cooler in the trunk—the temperature is typically lower in the passenger area.*

By BRIGITT EARLEY

DID YOU WANT TO TALK TO  
THE  
**DOCTOR**  
IN CHARGE, OR  
THE  
**CASE MANAGER**  
WHO KNOWS  
WHAT'S GOING ON?

**ONE PERSON  
CAN MAKE A  
DIFFERENCE,  
AND  
EVERYONE  
SHOULD TRY.**  
-JOHN FITZGERALD KENNEDY

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