

RESOURCES FOR HEAD TRAUMA (rev. 2026)

Disclaimer: I am a brain injury survivor and am compiling this document as a resource for myself and others who are on the journey towards healing. I have no medical training; this should not be used to replace medical care. After a brain injury, consider working IMMEDIATELY with your medical providers who can help you (and your loved ones) as you recover.

I welcome feedback, additional resources, corrections, or broken link information at Huelskamp1@msn.com.

Lisa Huelskamp

* Traumatic Brain Injury recovery is complex and is not linear.



FIGURE 3-1 Illustrative stages of a person's journey through recognition of, treatment for, and recovery after TBI. After a TBI, stages of care may include recognition of the injury, acute care, classification, rehabilitation care, further follow-up, and recovery to the greatest extent possible. This care journey is not always continuous or smooth, and a person may experience chronic symptoms that necessitate ongoing care, or may be reinjured and experience another TBI.
SOURCE: Graphic developed by Masai Interactive.

Taken from: Traumatic Brain Injury: A Roadmap for Accelerating Progress

<https://www.nationalacademies.org/our-work/accelerating-progress-in-traumatic-brain-injury-research-and-care>

What is Traumatic Brain Injury?

Traumatic brain injury (TBI), a form of acquired brain injury, occurs when a sudden trauma causes damage to the brain. TBI can result when the head suddenly and violently hits an object, or when an object pierces the skull and enters brain tissue. Symptoms of a TBI can be mild, moderate, or severe, depending on the extent of the damage to the brain. A person with a mild TBI may remain conscious or may experience a loss of consciousness for a few seconds or minutes. Other symptoms of mild TBI include headache, confusion, lightheadedness, dizziness, blurred vision or tired eyes, ringing in the ears, bad taste in the mouth, fatigue or lethargy, a change in sleep patterns, behavioral or mood changes, and trouble with memory, concentration, attention, or thinking. A person with a moderate or severe TBI may show these same symptoms, but may also have a headache that gets worse or does not go away, repeated vomiting or nausea, convulsions or seizures, an inability to awaken from sleep, dilation of one or both pupils of the eyes, slurred speech, weakness or numbness in the extremities, loss of coordination, and increased confusion, restlessness, or agitation.

Source: National Institute of Neurological Disorders and Stroke <http://www.ninds.nih.gov/disorders/tbi/tbi.htm>

Living with Brain Injury

Brain injury is unpredictable in its consequences. Brain injury affects who we are, the way we think, act, and feel. It can change everything about us in a matter of seconds. The most important things to remember:

- A person with a brain injury is a person first
- No two brain injuries are exactly the same
- The effects of a brain injury are complex and vary greatly from person to person
- The effects of a brain injury depend on such factors as cause, location, and severity

Injuries of the left side of the brain can cause:

- Difficulties in understanding language (receptive language)
- Difficulties in speaking or verbal output (expressive language)
- Catastrophic reactions (depression, anxiety)
- Verbal memory deficits
- Impaired logic
- Sequencing difficulties
- Decreased control over right-sided body movements

Injuries of the right side of the brain can cause:

- Visual-spatial impairment
- Visual memory deficits
- Left neglect (inattention to the left side of the body)
- Decreased awareness of deficits
- Altered creativity and music perception
- Loss of “the big picture” type of thinking
- Decreased control over left-sided body movements

Diffuse/Diffuse Axonal Brain Injury (injuries are scattered throughout both sides of the brain) can

cause:

- Reduced thinking speed
- Confusion
- Reduced attention and concentration
- Fatigue
- Impaired cognitive (thinking) skills in all areas

“Diffuse axonal injury (DAI) is a form of traumatic brain injury. It happens when the brain rapidly shifts inside the skull as an injury is occurring. The long connecting fibers in the brain called axons are sheared as the brain rapidly accelerates and decelerates inside the hard bone of the skull. DAI typically causes injury to many part of the brain, and people who suffer a DAI are usually left in a coma. The changes in the brain are often very tiny and can be difficult to detect using CT or MRI scans. It is one of the most common types of traumatic brain injury and also one of the most devastating.” Taken from <https://www.healthline.com/health/diffuse-axonal-injury>.

If you are having trouble finding information, feel free to contact us either via e-mail, or through our toll free Brain Injury Information Center at 1-800-444-6443. You are not alone - 2.4 million people sustain a traumatic brain injury (TBI) each year. According to the Centers for Disease Control and Injury Prevention, the leading causes of TBI are:

- Falls (40.5%)
- Other/Unknown (19%)
- Struck by/against events (15.5%)
- Motor Vehicle-traffic crashes (14.3%)
- Assaults (10.7 %)

Source: BRAIN INJURY ASSOCIATION OF AMERICA, 1608 Spring Hill Road, Suite 110 • Vienna, VA 22182 • Phone: 703-761-0750 • Fax: 703-761-0755; National Brain Injury Information Center (Brain Injury Information Only)
1-800-444-6443 <http://www.biausa.org/living-with-brain-injury.htm>

Symptoms, Signs, and Risks

Head Injury symptoms vary, depending on risk factors and the force of impact that caused the injury. Most people (nearly 90 percent) complain of headaches and fatigue.

Common Symptoms of Concussions (aka Head Injury or Head Trauma)

According to UPMC Sports Medicine Concussion Program's research, common signs of a concussion fall under four main groups:

Migraine Cognitive Sleep Disturbance Neuropsychiatric

Headache	Dizziness	Cognitive slowing	▪ Increased emotionality
Visual problems	Attention problems	Trouble sleeping	▪ Sadness
Light sensitivity	Memory dysfunction	Sleeping less than normal	▪ Irritability
Noise sensitivity	Fogginess	Sleeping more than normal	▪ Nervousness
Nausea	Fatigue		

Concussion Risk Factors

UPMC Sports Medicine Concussion Program research, with nearly 100 published works since 2000, has shown that people in certain clusters or groups were more at risk for a concussion and protracted recovery times.

These may include:

- People with a history of migraines
- People with a history of a learning disability
- People with frequent cerebral concussions
- Females
- People age mid-40's or older (information from Ohio State Physical Medicine & Rehabilitation – Traumatic Brain Injury Department)

Concussion Recovery Time

Most people with a concussion recover quickly and fully. But for some people, symptoms can last for days, weeks, or longer. (Source and excellent resource: CDC, Facts about Concussion and Brain Injury, www.cdc.gov/concussion/feel_better.html)

Cutoff scores from specific parts of ImPACT™ (Immediate Post-concussion Assessment and Cognitive Testing) show, in roughly 85 percent of cases, that recovery from a concussion may require a month or longer.

Athletes who experience on-field dizziness immediately after sustaining a concussion are seven times more likely to face recovery periods of at least a month.

Fogginess and migraine-related symptoms occurring three or more days after the injury indicate the recovery period can last at least a month.

Source: <http://www.upmc.com/Services/sports-medicine/services/concussion/about/concussions/Pages/symptoms.aspx>

Concussion Tips & Tricks for the Classroom: <https://www.biausa.org/downloads/public-affairs/media/CYM2018/Concussion/Concussion%202.pdf>

As an educator, I find this chart very helpful. I highly recommend reading out to the school nurse, school counselors, administration, coaches, and teachers if someone in their care is suffering from a head injury.

The Center on Brain Injury Research & Training: How Is Brain Injury Different from Other Disabilities?
<http://cbirt.org/resources/educators/difference/>

BrainLine - <http://www.brainline.org/> BrainLine is a national multimedia project offering information and resources about preventing, treating, and living with TBI.

SMITH BRAIN CONNECTIONS Nonprofit dedicated to Traumatic Brain Injury education
<https://smithbrainconnections.com/>

Coping with Behavior Problems after Head Injury

(taken from <https://www.caregiver.org/coping-behavior-problems-after-head-injury>) Reviewed by Claude Munday, Ph.D., William Lynch, Ph.D., and John Haller, Traumatic Brain and Spinal Cord Injury Project

Identifying Behavior Problems

Head injury survivors may experience a range of neuropsychological problems following a traumatic brain injury. Depending on the part of the brain affected and the severity of the injury, the result on any one individual can vary greatly. Personality changes, memory and judgment deficits, lack of impulse control, and poor concentration are all common. Behavioral changes can be stressful for families and caregivers who must learn to adapt their communication techniques, established relationships, and expectations of what the impaired person can or cannot do.

In some cases, extended cognitive and behavioral rehabilitation in a residential or outpatient setting will be necessary to regain certain skills. A neuropsychologist also may be helpful in assessing cognitive deficits. However, over the long term both the survivor and any involved family members will need to explore what combination of strategies work best to improve the functional and behavioral skills of the impaired individual.

Personality Changes

Even a person who makes a “good” recovery may go through some personality changes. Family members must be careful to avoid always comparing the impaired person with the way he/she “used to be.” Personality changes are often an exaggeration of the person's pre-injury personality, in which personality traits become intensified. Some changes can be quite striking. It may be, for example, that the head injury survivor used to be easygoing, energetic, and thoughtful and now seems easily angered, self-absorbed, and unable to show enthusiasm for anything. Nonetheless, try not to criticize or make fun of the impaired person's deficits. This is sure to make the person feel frustrated, angry, or embarrassed.

Memory Problems

Head injury survivors may experience short-term problems and/or amnesia related to certain periods of time. Generally, *new learning* presents the greatest challenge to memory or remembering. In contrast, pre-injury knowledge is more easily retained.

The ability to focus and concentrate are keys to addressing some short-term memory problems.

Keep distractions (e.g., music, noise) to a minimum and focus on one task at a time.

Have the individual repeat the name of a person or object, after you, if memory impairment is severe. Whenever possible, have the person write down key information (e.g., appointments, phone messages, list of chores). Keep to routines. Keep household objects in the same place. Use the same route to walk to the mailbox or bus stop.

If getting lost is a problem, you can label doors or color code doors inside the house, or hang arrows to indicate directions. When going out, the person should be accompanied initially to ensure the route is understood. A simple map can be sketched from the bus stop to the house. And make sure that the person always carries his/her address and emergency phone numbers.

Establishing Structure

A structured environment can be essential in helping a head injury survivor relearn basic skills. A written routine schedule of activities and repetition make it easier to remember what's expected and what to do next.

Lack of Emotion

After a head injury, a person may lack emotional responses such as smiling, laughing, crying, anger, or enthusiasm, or their responses may be inappropriate. This may be especially present during the earlier stages of recovery.

Recognize that this is part of the injury. Try not to take it personally if the person does not show an appropriate response.

Encourage the person to recognize your smile at a humorous situation (or tears if you are sad), and to take note of the proper response.

Emotional Lability

In some cases, neurological damage after a head injury may cause emotional volatility (intense mood swings or extreme reactions to everyday situations). Such overreactions could be sudden tears, angry outbursts, or laughter. It is important to understand that the person has lost some degree of control over emotional responses. The key to handling lability is recognizing that the behavior is unintentional. Caregivers should model calm behavior and try not to provoke further stress by being overly critical. Help the person recognize when his/her emotional responses are under control, and support/reinforce techniques that work.

Aggressive Behaviors

Provided a situation does not present a physical threat, various approaches may be used to diffuse hostile behavior: Remain as calm as you can; ignore the behavior.

Try to change the person's mood by agreeing with the person (if appropriate) and thus avoiding an argument. Show extra affection and support to address underlying frustrations.

Validate the emotion by identifying the feelings and letting the person know these feelings are legitimate. Frustration over the loss of functional and/or cognitive abilities can reasonably provoke anger.

Do not challenge or confront the person. Rather, negotiate (e.g., if you don't like what's planned for dinner tonight, how about choosing Friday's menu?).

Offer alternative ways to express anger (e.g., a punching bag, a gripe list).

Try to understand the source of the anger. Is there a way to address the person's need/frustration? (e.g., make a phone call, choose an alternative activity).

Help the person regain a sense of control by asking if there is anything that would help him/her feel better.

Isolate the disruptive impaired person. Consider your own safety and his/hers. Treat each incident as an isolated occurrence, as the survivor may not remember having acted this way before or may need to be prompted to remember. Try to establish consistent, non-confrontational responses from all family members (children may need to learn some "dos" and "don'ts" in reacting to the survivor).

Seek support for yourself as a caregiver. Support groups, professional counselors, and, if necessary, protective services or law enforcement may be contacted.

Self-Centered Attitude

The person who has survived a head injury may lack empathy. That is, some head injury survivors have difficulty seeing things through someone else's eyes. The result can be thoughtless or hurtful remarks or unreasonable, demanding requests. This behavior stems from a lack of abstract thinking.

Help cue the person to recognize thoughtlessness. Remind him/her to practice polite behavior. Realize that awareness of other people's feelings may have to be relearned.

Poor Concentration

"Cueing" or reminders can be helpful in improving concentration and attention. Repeat the question. Don't give too much information at once, and check to see that the person is not tired.

Head injury survivors should be encouraged to develop self-checks by asking themselves questions such as *"Did I understand everything?"*, *"Did I write it down?"*, and *"Is this what I'm supposed to be doing?"*. *"I made a mistake"* or *"I'm not sure"* should lead to the conclusion, *"Let me slow down and concentrate so I can correct the error."* Correct actions should be consciously praised, *"I did a good job."*

Lack of Awareness of Deficits

It is relatively common for a head injury survivor to be unaware of his/her deficits. Remember that this is a part of the neurological damage and not just one being obstinate. Be aware, however, that denial can also be a coping mechanism to conceal the fear that he/she cannot do a particular task. The person may insist that the activity cannot be done or is "stupid."

Build self-esteem by encouraging the person to try a (non-dangerous) activity that he/she feels confident doing.

Give the person visual and verbal reminders or “hints” (e.g., a smile or the words “*good job*”) to improve confidence in carrying out basic activities more independently.

If you feel the person can handle confrontation, challenge him/her to try the activity. Demonstrate that **you** can do the task easily.

Inappropriate Sexual Behavior

After a head injury, a person may experience either increased or decreased interest in sex. The causes could be a result of brain regulation of hormonal activity or an emotional response to the injury.

Sexual disinterest from a head injured spouse should not be taken personally. Avoiding sexual contact could stem from fear or embarrassment about potential performance. Do not pressure the person to resume sexual activity before he/she is ready. Helping the person dress nicely and practice good hygiene may help increase his/her confidence in feeling attractive.

Increased sexual interest can be particularly stressful and embarrassing to families and caregivers. Without good impulse control, the survivor may make crude remarks out in public, make a pass at a married friend, try to touch someone in an inappropriate setting, or demand sexual attention from a spouse or significant other.

It is important to remind the person that the behavior is not acceptable.

A spouse should not feel pressured into submitting to sexual demands that are unwanted.

A sexually aggressive person may need to be isolated from others where inappropriate behavior is not controlled. A call for help may be necessary, if physical threats are made.

Support groups may be useful in helping the person realize the consequences of inappropriate sexual behaviors.

Learning to Cope/Getting Support

Coping with behavior problems after a head injury requires identification and acknowledgment of the impaired individual’s deficits. A comprehensive neuropsychological assessment is recommended. This may help both the survivor and the family to better understand neurological and cognitive deficits.

In some cases, it may be easier for the family caregiver to recognize personality changes than to resolve the problem behavior. Targeted strategies may be used to deal with specific behavioral issues.

Finally, it is critical that family members seek and receive support (family, friends, support group, counselor) in dealing with their own emotional responses to caring for a head injured loved one.

THE SOURCE OF SYMPTOMS AND THEIR SOLUTIONS CAN BE VESTIBULAR, CERVICAL, AND/OR OCULAR, IN ADDITION TO EMOTIONAL/COGNITIVE. These are described with applicable resources in future pages.

Physical rehabilitation with certified specialists in Brain Injury:

Ohio State Physical Medicine & Rehabilitation – Traumatic Brain Injury Department
3300 Morehouse Medical Plaza Pavilion
2050 Kenny Road
Columbus, OH 43221; (614) 293-7604 <http://pmr.osu.edu/>

<http://wexnermedical.osu.edu/patient-care/healthcare-services/brain-spine-neuro/brain-injuries>

<http://wexnermedical.osu.edu/patient-care/healthcare-services/physical-therapy-rehabilitation/brain-injury-rehabilitation-program>

Includes Dr. Sheital Bavishi, DO (Rated in the top 10 percent of physicians in the nation for patient satisfaction, 2014) <http://wexnermedical.osu.edu/patient-care/find-a-doctor/sheital-bavishi-do-48912> with Physician's Assistant Susan Bowman Burpee, MS <https://nursing.osu.edu/faculty-and-staff/faculty-directory/burpee-susan.html>

Insurance OSU Accepts: <http://wexnermedical.osu.edu/patient-care/patient-and-visitor-guide/insurances-we-accept>

Free surface-lot parking for patients in designated spaces. Valet parking will be offered to all patients and visitors who are going to either the Pavilion or Tower. The cost is \$3, and hours of operation are Mon.-Fri. 7:30 a.m.-5 p.m. A valet attendant will be available Mon.-Thurs. until 8 p.m. to retrieve vehicles after valet closes.

* Service Challenges with Disorders of Consciousness/Coma

Cynthia L. Beaulieu, PhD, ABPP-CN, Associate Professor, Department of Physical Medicine & Rehabilitation

She is a psychologist who specializes in clinical neuropsychology, which focuses on assessing brain function and cognition. She is a wonderful resource for long-term, varying degrees of unconsciousness.

<https://wexnermedical.osu.edu/find-a-doctor/Cynthia-Beaulieu-PhD-95858>

614-293-3830

Another resource: <https://www.curingcoma.org/home>

Driving Evaluation <http://wexnermedical.osu.edu/patient-care/healthcare-services/physical-therapy-rehabilitation/rehabilitation-driving-program>

The Rehabilitation Driving Program at Ohio State's Wexner Medical Center, the same location listed above, is one of the few locations in Ohio that has a driving evaluation. It gives the patient and loved ones a piece of mind that the injured person is able to safely be behind the wheel.

First, one of their occupational therapists (OT) evaluates the patient. If a different OT has worked with the patient, those records can be sent and reviewed by the OSU OT to save time and money. Second, if the OSU OT feels the patient is ready and would benefit from the driving evaluation, the appointment is scheduled.

Next, the appointment includes an initial evaluation session to identify:

- Current physical status (mobility and strength)

- Cognitive skills (memory, problem solving and reaction time)
- Vision (color and depth perception)
- and actual driving in the OSU car Evaluation of skills you need to safely and effectively operate a vehicle, including completing a driving course with driving specialist and following directions of specialist regarding traffic flow, traffic lights and turns

Note: If one completes the first part(s), but not the actual driving, an appointment can be scheduled for that part.

Ohio State University's Division of Headache and Sports Concussion is focused on researching and treating sports concussion and chronic headaches. Our clinics treat patients with such conditions as:

- Migraine
- Sports concussion
- Cluster headaches
- Trigeminal Autonomic Cephalalgias (TACs)
- New daily persistent headaches
- Other rare primary headache syndromes
- Secondary headaches such as cervicogenic headache and post-traumatic headache

<https://wexnermedical.osu.edu/neurological-institute/neurology/our-team/headache>

Article:

https://health.osu.edu/health/brain-and-spine/bringing-relief-to-people-with-headaches-concussions?category=Health%20and%20wellness&utm_source=sfmc&utm_medium=email&utm_campaign=omc_faculty-staff-newsletter_fy25_oncampus-20241011&sfmc_key=0032E00002r5ENCQA2

* **COTA Mainstream/Paratransit** <https://cota.com/services/cota-mainstream/>

Mainstream Phone: 614-275-5828; COTA Helpline: 614-228-1776.

We bring the bus to you!

ACCESSIBLE TRANSPORTATION THAT PICKS YOU UP

COTA Mainstream offers origin-to-destination rides for people whose functional limitations prevent them from riding COTA's fixed route buses. Eligible riders can choose from two Mainstream options:

- **Mainstream service** – Reserve your shared-ride trip through the COTA Reservations Department phone line, email or fax line.
- **Mainstream on-demand service** (powered by UZURV) – Call the UZURV Call Center (614-344-4488) to reserve private, accessible, same-day, non-stop, door-to-door service.

COTA MAINSTREAM SERVICE

- **To use COTA Mainstream, you must:**

- Complete an application
- Attend an interview assessment
- Meet eligibility criteria for the service

- **Fare** for COTA Mainstream is

- ADA trips – \$3.50 per one way
- Non-ADA trips – Total fare depends on trip mileage. Cost will not be less than \$5.
- * Mainstream customers ride fixed-route service free of charge

- **Acceptable payments** for COTA ADA Mainstream trips include:

- Cash (exact change)
- COTA Mainstream ticket (valued at \$3.50 per ticket)
- COTA Mainstream monthly Pass (\$105.00 per month)

- **Tickets and Monthly Passes** for COTA Mainstream may be purchased at COTA's Mobility Services Facility located at 1330 Fields Ave. or by calling [\(614\) 275-5828](tel:6142755828).

- **Trips may be scheduled** by:

- Calling the Reservations Department at [614-272-3033](tel:6142723033). Reservation hours are Monday – Friday, 7:00 a.m. – 6:00 p.m., Saturday and Sunday, 8:00 a.m. – 6:00 p.m.
- Emailing trip reservations – [Send an Email Reservation](#)
- Faxing trip reservations at [614-272-3018](tel:6142723018)
- Please note: If you are scheduling a trip for next day service, emailed and faxed trip reservations must be received ½ hour prior to the Reservations Department close of business hours.

MAINSTREAM ON-DEMAND (POWERED BY UZURV)

- **With UZURV, you can:**

- Reserve Non-ADA trips up to 30 days in advance
- Request your favorite driver
- Bring guests (space permitting), a Personal Care Attendant (PCA) or a service animal

- **Fare** for Mainstream On-Demand

- The total fare depends on trip mileage, which is calculated at the time of booking. It will not be less than \$5. You may pay only with credit or debit cards. [Download Fare Details](#).

• **Trips may be scheduled:**

- at least one hour, or more, in advance by calling the UZURV Call Center at [614-344-4488](tel:614-344-4488). You will need your Mainstream ADA I.D. client number to make a reservation and while riding the service.

• **Service Hours** (7 days a week)

- Monday – Friday: 5:30 a.m. – 10:00 p.m.
- Saturday and Sunday: 7:30 a.m. – 7:30 p.m.

• **Call Center Hours of Operations**

- Monday – Friday: 5:30 a.m. – 8:00 p.m.
- Saturday and Sunday: 7:30 a.m. – 7:30 p.m.

APPLYING: Eligibility for Mainstream cannot be based on financial hardship. A person must be over eight (8) years of age to qualify for eligibility. To apply, download and complete the [Mobility Services Application](#) or call Mobility Services at [614-275-5828](tel:614-275-5828) – (614) 275-5833 to request the application be mailed, faxed or emailed.

Once you receive the application you must complete part 1 of your application. You must also have a specialist that oversees your currently functional limitation(s) that prevent you from using the fixed route bus complete part 2 of the application. After both parts have been completed, call [614-275-5833](tel:614-275-5833) to schedule an appointment to attend an interview/functional assessment or complete an assessment over the phone.

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21800 Ohio Highway 47, West Mansfield, Ohio 43358, United States

937-358-2024

* Physical Rehabilitation - vestibular:

Research: Vestibular Rehabilitation After Traumatic Brain Injury: Case Series. *Phys Therapy*. 2015 Nov 19
<http://www.ncbi.nlm.nih.gov/pubmed/26586860>

There are many providers. Recommended – <https://www.ohiohealth.com/neighborhoodcare/>

Jodi A. Renard, PT, DPT, C/NDT, CBIS; PT Acquired Brain Injury Program Coordinator, Ohiohealth Outpatient Neurological Rehabilitation Program

Tel: (614) 788-9272

Fax: (614) 533-0463

She and Dr. Curtis (listed below in another section) work very well together and will coordinate treatment.

Free Parking

Neuro-Vestibular Physical Therapy:

- Test* for and treat vestibular, balance, and eye movement problems that may occur with concussions. ▪

Work with trained, neurological physical therapists** to begin vestibular therapy.

- Apply techniques that help retrain the brain to discern complex environments that include space, motion, and head/eye movements.
- Use training exercises that focus on visual motion sensitivities, ocular motor skills, and balance.

* Vestibular testing consists of a number of tests that help determine if there is something wrong with the vestibular (balance) portion of the inner ear. These tests can help isolate dizziness symptoms to a specific cause that can often be treated. The tests are:

- electronystagmography (ENG)
- electrocochleography (ECOG)
- rotational chair test
- posturography
- fistula test
- new and emerging tests

(Note: OSU uses several of these tests including ENG, ECOG, rotational chair, and fistula test using warm and cool water at Gahanna Care Point, 920 N. Hamilton Road, Gahanna, Ohio) Taken from and read more at <http://americanhearing.org/disorders/vestibular-testing/#rotatory>

** A neurologic physical therapist is a physical therapist who specializes in the evaluation and treatment of individuals with movement problems due to disease or injury of the nervous system. Physical therapists can help improve or restore the mobility you need to move forward with your life. The American Physical Therapy Association at offers a consumer service called Find a PT. Find a PT allows you to search a national database of physical therapist members of the American Physical Therapy Association (APTA) for neurologic therapists. From: <http://www.neuropt.org/consumerinfo/what-is-a-neurologic-physical-therapist>

For a comprehensive look at Balance and Vestibular Rehabilitation Therapy, visit <http://americanhearing.org/disorders/balance-and-vestibular-rehabilitation-therapy/>

(Personal Note: OSU said test would take about 2-2 ½ hours. Mine took 3. It took me 6 days to recover from the testing. Good data was useful, though, and led to Neuro-Vestibular Physical Therapy.)

* Physical Rehabilitation – **cervical**:

There are many providers. Recommended – <https://www.ohiohealth.com/neighborhoodcare/> , specifically,

OhioHealth Upper Arlington Rehabilitation

4664 Larwell Drive

Columbus, Ohio 43220

Tel: (614) 566-1120

Scheduling: (614) 566-1111

Fax: (614) 566-1130

Maria Rosario Guitierrez, PT - specializing in neck trauma related to head trauma, with the Ohiohealth Outpatient Neurological Rehabilitation Program

She and Jodi Renard (listed below in another section) work very well together and will coordinate treatment. Free Parking

Neuro-Optometric Rehabilitation - **ocular**:

Clarkson Eyecare (formerly Riverview Eye Associates)

3600 Olentangy River Road #B

Columbus, OH 43214-3437

P. 614-451-7244 F. 614-545-0749

<https://www.clarksoneyecare.com/locations/oh/columbus/riverview/>

Monday 7:30 AM-6:00 PM

Tuesday-Friday 7:30 AM-5:00 PM

Saturday 8:30 AM-12:00 PM

Dr. Steven J. Curtis, O.D., FCOVD (OSU Graduate) and his on-staff Occupational Therapists; Ask for 'Stacey,' as he does the scheduling.

Vision Performance Center offers an innovative therapeutic approach unique to Central Ohio through the combination of three focused therapies:

- Optometric Vision Therapy
- Occupational Therapy
- Sensory Processing Therapy

Therapy is structured as a performance enhancement program focusing on children and adults of any age or developmental stage. To increase functional vision skills and functional performance, individuals are evaluated and participate in therapy sessions cooperatively customized and led by our in-house team of Dr. Steven J. Curtis, developmental optometrist and Shelley L. Ullom, **licensed and registered occupational therapist**. The Vision Performance Center of Columbus provides this unique approach focusing on the integration of vision, sensory processing, and motor skills, providing patients a way to learn how to effectively utilize their visual and sensorimotor

skills for everyday activities.

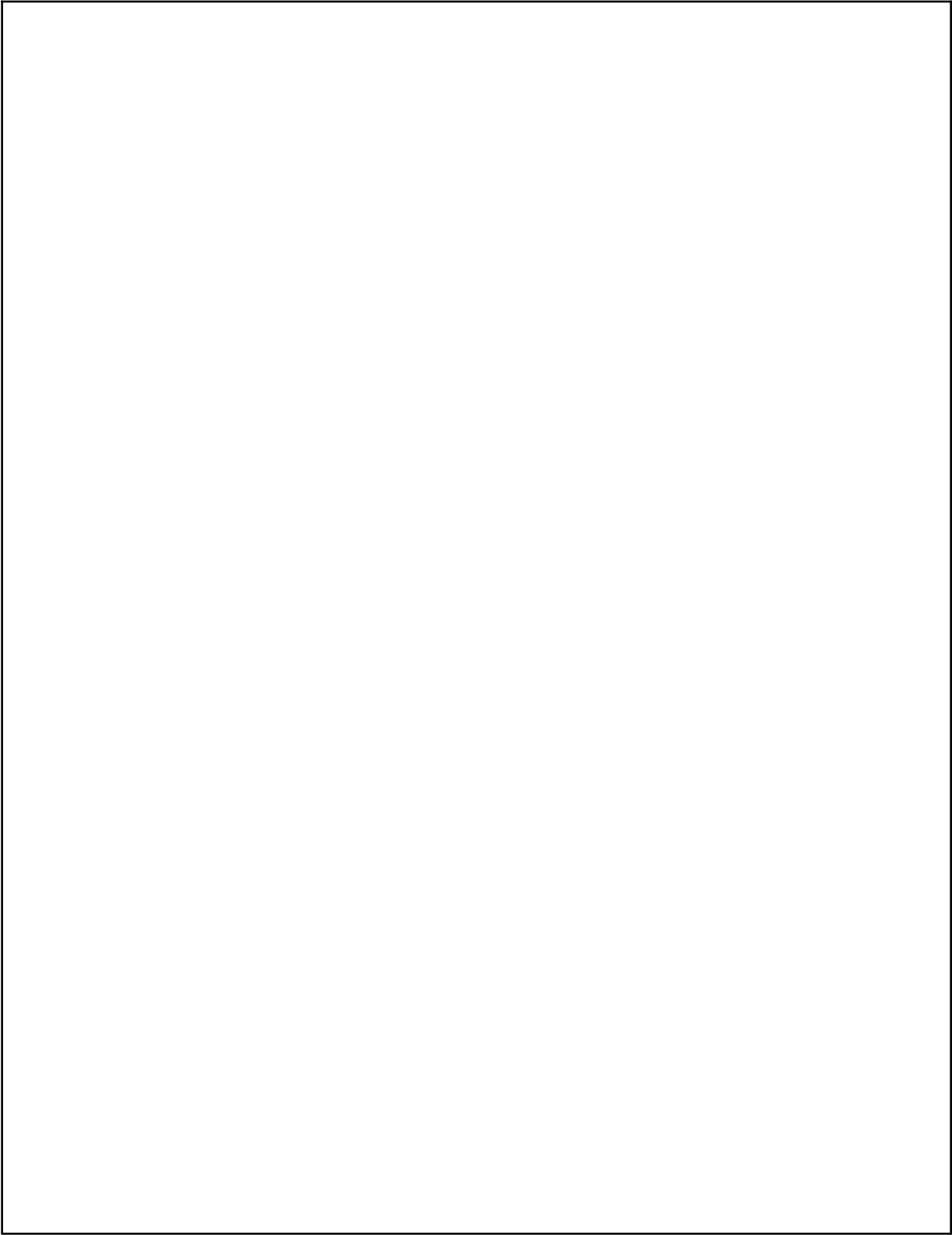
Therapeutic benefits may include improved:

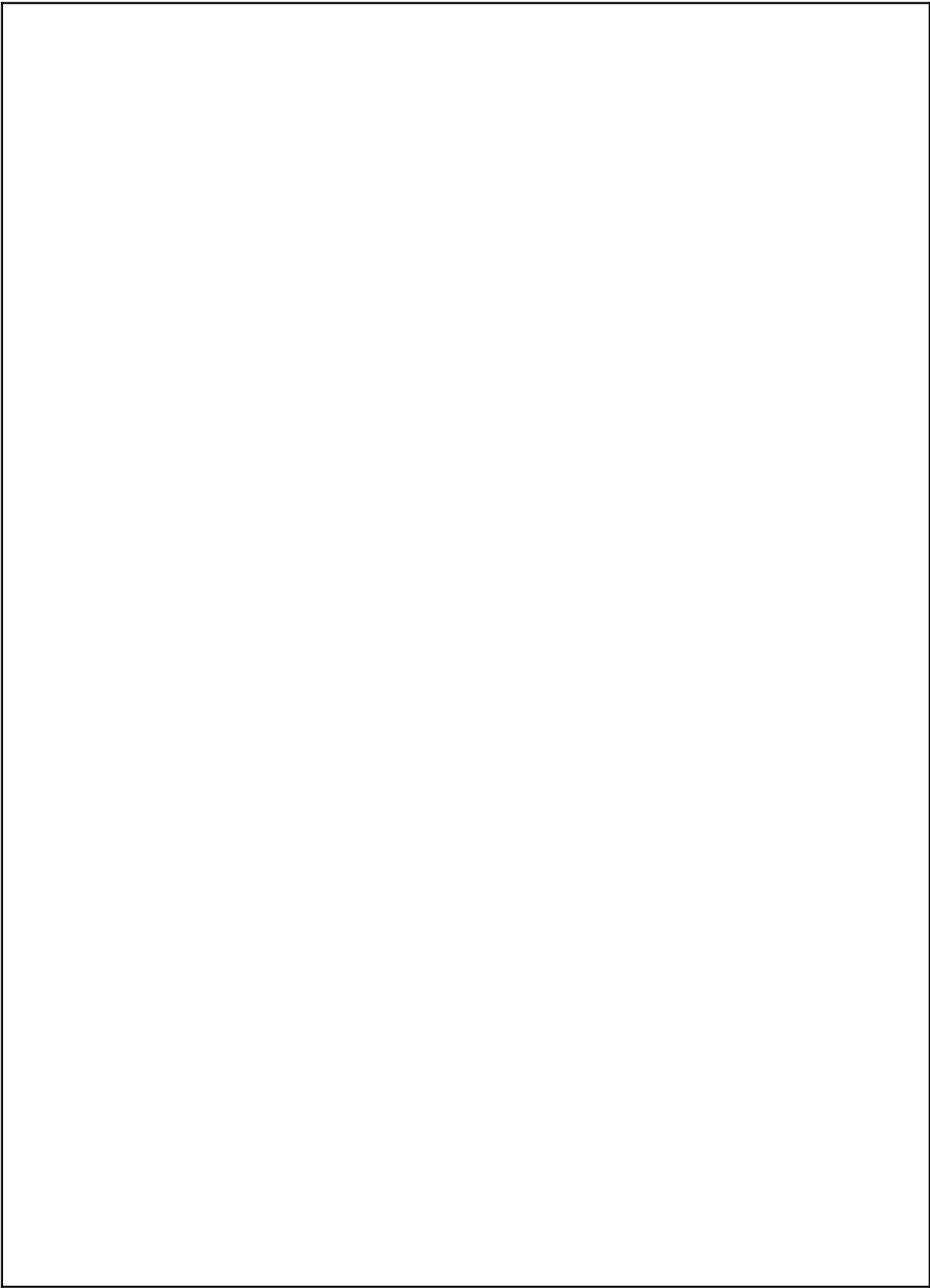
- Reading
- Writing
- Eye-Hand Coordination
- Gross / Fine Motor coordination
- Balance
- Organization / Attention

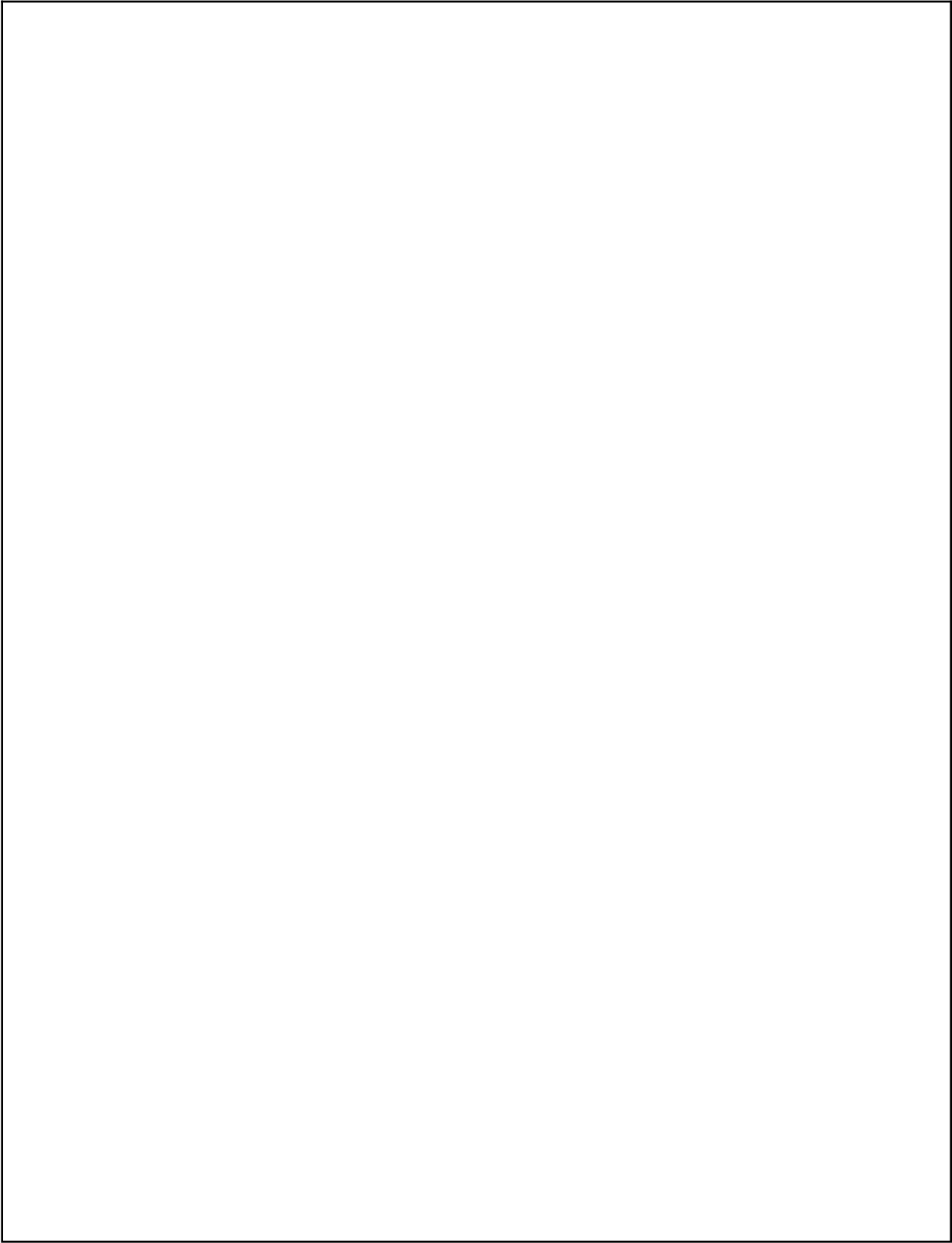
Neuro-Optometric Rehabilitation is a therapy which utilizes optometric vision therapy, prisms, lenses, filters and occlusion to help stimulate parts of the brain which are not functioning to their highest potential, due to interruptions caused by brain injury. Brain injury from concussion, stroke, birth trauma (ADD/ADHD), chemical trauma (chemo therapy), physical trauma, in-utero trauma (CP,FAS), can be treated with Neuro-Optometric Rehabilitation.

Optometrists specially trained in Neuro-Optometric Rehabilitation are the eye care professionals with the knowledge and experience to help rehabilitate acquired brain injury survivors. With the help of Neuro-Optometric Rehabilitation and its multi-disciplinary team, there is great hope for the brain injury survivor that it CAN get better than this. For more information, please visit the NORA website at www.nora.cc.

Dr. Curtis has many brochures, the 1st page of three of those are pictured below. To access all the brochures in full, visit https://drive.google.com/drive/folders/1baxWdre8ZL6gcwrMOli1MFYh_-e-6bwY?usp=sharing.







* Emotional and Cognitive Rehabilitation with certified neuropsychologists:

Both Drs. Listed below work and communicate well with Dr. Bavishi/ Susan Bowman Burpee to coordinate care.

1) Wanda L. McEntyre, Ph.D. , Assistant Professor-Clinical, Rehabilitation Psychology

<http://www.rehabpsych.org/staff/mcentyre/>

Department of Physical Medicine and Rehabilitation

Division of Rehabilitation Psychology

480 Medical Center Drive

Columbus, OH 43210-1245

Phone: 614-293-3830

Fax: 614-293-4870

Referrals to Dr. McEntyre can be made by calling (614) 293-3830.

2) Neuropsychology at OhioHealth: Helping Patients and Families Understand and Cope with Brain Injury or Illness

<https://www.ohiohealth.com/services/neuroscience/our-programs/neuropsychology>

Personal note from the author:

I worry so much about perception. My neuropsychologist says I shouldn't worry about what others think. She's right, but I still totally do. If I've not 'over done it' on a given day, I am told I LOOK and SOUND normal. It's encouraging, but I think it is harder for me (and others) to be patient and understand that I'm still diagnosed with a traumatic brain injury, taking meds, have PT and OT and speech therapy HW every day, suffer symptoms every day, and have more work ahead of me to actually BE normal. If I had a cast on my brain that people could see, maybe it'd be easier. This video seemed to help me. Maybe it will help others, too.

[Video] "You Look Fine!" – The Real-Life Struggle of an Invisible Injury – TBI Awareness. ... The Real-Life Struggle of an Invisible Injury – TBI Awareness <https://www.youtube.com/watch?v=LnRpuEEPduc>

Assistive Technology of Ohio is Ohio's A.T. Act Program <https://atohio.org/>

Our Mission

AT Ohio's mission is to help Ohioans with disabilities learn about or acquire assistive technology. Assistive Technology refers to devices, equipment or services that assist individuals with disabilities to function independently in the areas of work, home or school. We offer several programs and services to achieve that goal. We also keep up with current legislative activity that affects persons with disabilities, and educate legislators about the needs and concerns of citizens with disabilities.

Assistive Technology of Ohio (AT Ohio) is a federally funded nonprofit organization that is part of the **College of Engineering** at **The Ohio State University**. AT Ohio is the officially designated **Tech Act** program **for Ohio**. The federal agency of **Health and Human Services** provides funding for all tech act programs. Each state and U.S. territory provide appropriate services under the guidelines of the Assistive Technology Act of 1998, as amended in 2004.

Please note: We are NOT a grants-giving or funding organization. We do not assist in financing the purchase of adapted vans or any assistive technology. If you need funding for a device, we might be able to direct you to resources that may provide funding, but we do not fund for finance vehicles or devices. To learn more about assistive technology programs in other states, please visit the [Association for Assistive Technology Act Programs](#) (ATAP) the national web site for state-designated Assistive Technology Programs.

We are back on campus Monday-Friday, 9:00 a.m.-4:00 p.m. (The building is locked at 4:30 p.m.) We are not open on weekends.

We are not yet working on computers, but hope to have that up and running very soon.

We are open to visitors and for device demonstrations by appointment. If you wish to visit us for a device demonstration, please call 800-784-3425 or 614-292-2390 or email atohio@osu.edu to make an appointment.

HEAD PAIN MANAGEMENT- BOTOX

Botox is an option for head pain management. Both the **OSU Head Trauma Department** and **The Cleveland Clinic** (www.clevelandclinic.org, Neurological Center for Pain; Dept. phone: 216-636-5860) offer several options including Botox injections. Typically, the injections are around the perimeter of the head (to the base of the neck) as well as on top of the head. This author's treatments at both locations included 34 injections at each appointment. OSU used an electronic device to precisely place the medicine. Cleveland Clinic did not. Because the nervous system is 'hypersensitive' during recovery, the injections are painful. The long-term (up to 2.5-3 months) relieve that many patients experience after the treatment can counterweight the pain of the injections. Insurance often covers this option in three month increments.

Neurofeedback: (from <http://www.comprehensive-services.us/neurofeedback.html>)

Comprehensive Services is proud to be the first center for Neurofeedback, or EEG Biofeedback, in Central Ohio. We have over 20 years of experience in what is often referred to as Brain Training, Brain Balancing, or Brain Exercise. Richard Davis, Ph.D., EEG-BCN, President and Owner of Comprehensive Services, Shauna Hoover, PC-CR, CDCA, CHt ,and Laurie Berger, Ph.D., work together as a team, utilizing state-of-the-art Neurofeedback equipment and software programs to help our clients to achieve the best possible results in the shortest amount of time.

We provide a complete range of biofeedback and neurofeedback approaches, and we are able to train on multiple sites (up to 24) at the same time. We do training at the cortex, or surface of the brain, or utilize sLoreta to train interior hubs and networks of brain activity, depending on each client's individual needs, determined through scientific and evidence based evaluation. A medical doctor is available for consultation and quality assurance review.

Comprehensive Services, Inc. has a complete selection of the most recent hardware and software. Our practitioners are experienced and trained with activation training, Alpha Theta Training, amplitude training, Heart Rate Variability Training, conventional neurofeedback, brain performance training, Open Focus with Synchrony Training, qEEG, sLoreta Neurofeedback, Slow Cortical Potential and Infra-slow, SMR training, Squash techniques, and Zscore Neurofeedback. We are also well acquainted with protocols specific to attention, focus, concentration, anxiety, depression, obsessive & compulsive symptoms, and seizure symptoms.

We use Brain Avatar, Brain Master, EEGinfo or the Othmer Approach, EmWave, LENS, Micro Tesla, Roshi, and Thought Technology.

Neurofeedback has been found to achieve lasting and successful intervention in modifying and helping to resolve symptoms associated with:

- seizure disorders
- attention, concentration, and memory problems
- traumatic brain injury
- chronic pain
- autistic-spectrum disorders
- depression
- anxiety
- headache/migraine
- addictions
- sleep problems

Neurofeedback is a viable, non-invasive option for children and adults with attention deficit disorder or attention deficit hyperactivity disorder. It has also been able to help clients improve learning disabilities, reading and math abilities, and to achieve other educational and academic goals.

Neurofeedback has also been used to help maximize the performance of athletes, artists and executives, including the Italian Soccer Team, that won the World Cup in 2008, musicians in the London Royal Orchestra, and several U.S. Olympic Gold Medal winners.

How It Works:

Through research, neurofeedback specialists have found that the brain can be under-aroused or over-aroused, or alternate between the two states. Certain symptoms occur as a result, such as focus issues, anxiety, reoccurring headaches, depression, and others. Neurofeedback helps eliminate these symptoms by training the brain to understand what different brainwave states feel like and how to return to those states. It is a safe, non-invasive and drug-free treatment that has a high rate of success without side effects.

Before beginning neurofeedback training, a brain map, or QEEG, is administered to determine areas of over or under arousal, and identify, with significant detail, the location and nature of dysregulated EEG, leading to a training or treatment plan. The functioning of the brain is objectively assessed in comparison with normative data for the patient's age, family history, clinical history, and presenting symptoms.

Training can take from six to 40 sessions, and occasionally more, depending on one's QEEG results and/or symptoms. Sessions can be scheduled as often as once or twice a day or as infrequently as once a week.

Neurofeedback is an exciting, relatively new option that has helped many people overcome their negative symptoms, perform at their best, and live a more productive life. If you wish to learn if you are a candidate, or to simply find out more about neurofeedback, you may contact our intake department to schedule a free consultation.

Additional information about neurofeedback is available at www.isnr.org



Our office is located at 1555 Bethel Rd., Columbus, OH 43220; 614-442-0664, Fax 614-442-0620, info@csigp.com

Office Hours: Clinical Hours (vary by clinician, please contact office staff during the above hours with any questions)
Monday through Thursday: 9:00am - 8:00pm; Friday: 9:00am - 5:00pm; Saturday: 9:00am - 1:00pm

Administrative Office Hours for information or questions: Monday through Thursday 9:00am - 5:00pm; Friday 9:00am - 3:00pm;

Answering Service after Office Hours: Office hours for Clinical Practice normally conform to administrative office hours; however, additional clinical hours are frequently provided on weekday evenings and weekends. These are arranged between the provider and client.

AMEN Clinics

<https://www.amenclinics.com/conditions/concussions-and-traumatic-brain-injury/>

founder Daniel G. Amen MD and his wife and bestselling author Tana Amen, our highly trained team of specialists, free newsletters, upcoming events, career opportunities, and so much more.

Eleven locations around the US, including Chicago (closest)

Acupuncture and Massage:

There is much to be said for looking at ALL treatment options for a head injury. Here are some reputable sources discussing acupuncture and therapeutic massage as another option. There are many, many more articles on positive benefits of acupuncture and massage from acupuncture- and massage-based organizations and providers.

Acupuncture helping people with concussions from USA Today

<http://www.usatoday.com/videos/news/2013/05/29/2370949/>

Acupuncture Makes Strides in Treatment of Brain Injuries, PTSD (VIDEO) from US Dept. of Defense

<http://science.dodlive.mil/2011/06/20/acupuncture-makes-strides-in-treatment-of-brain-injuries-ptsd-video/>

How Does Acupuncture Help People with TBI? <http://www.brainlinemilitary.org/content/multimedia.php?id=9091>

Acupuncture for acute management and rehabilitation of traumatic brain injury from US National Library of Medicine. 2013 (This research says no adverse effects resulted; it looks to be effective but more people are needed for a deeper study.) <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0014578/>

Acupuncture for TBI Headaches <http://www.samueliinstitute.org/research-areas/military-medical-research/mmr-focal>

Can Massage Help Manage Symptoms of TBI? From Neurologic Rehabilitation Institute at Brookhaven Hospital.
2014 <http://www.traumaticbraininjury.net/can-massage-help-manage-symptoms-of-tbi/>

Hyperbaric

(Source: Hyperbaric Oxygen Therapy (HBOT) <https://www.brainline.org/treatment-hub/hyperbaric-oxygen-therapy/hbot/>)

What is hyperbaric oxygen therapy? Hyperbaric Oxygen Therapy (HBOT) is a treatment involving breathing pure oxygen in a pressurized environment. Air pressure in the special chamber is typically 1.5 to 2.5 times higher than average.

The evidence on the effectiveness of HBOT for TBI and PTSD is inconsistent and inconclusive. Overall, HBOT may hold some promise as a potential helpful treatment when provided during the acute stage (within 1 week to 1 month post injury). However, at this time there is not sufficient evidence to recommend its use as standard practice. To date, there are no well-designed studies investigating the benefits of HBOT in the subacute or chronic stages of recovery. More well designed large-scale studies are needed in order to determine its effectiveness, as well as to answer important questions like exactly what it helps with (i.e., survival vs. neuroprotection vs. functional and cognitive outcomes), and to establish standardized procedures for how to administer it (i.e., at what pressure setting, how often, for how long).

A 2015 Government Accountability Office study examined 32 peer-reviewed, published articles about the use of HBOT to treat traumatic brain injury and PTSD, 29 of which focused solely on TBI. Three of those articles focused on the safety of HBOT in treating TBI and concluded that HBOT is safe. But in assessing the effectiveness of HBOT--does it actually work?--GAO's study reported mixed results. GAO's review included 12 articles reporting on intervention studies or clinical trials seeking to measure the effectiveness of HBOT therapy in treating TBI. Four of those articles (two on severe TBI and two that did not specify severity) reported that HBOT therapy was effective. The other eight articles focused on mild TBI. Six of those eight concluded that HBOT was not effective and two concluded that it was.

A follow-up report in 2018, conducted by the Department of Veterans Affairs' Evidence-based Synthesis Program, examined the use of HBOT to treat TBI or PTSD. This report re-analyzed 16 randomized controlled studies that had been included in either the 2015 GAO report, the 2017 Journal of Head Trauma Rehabilitation report, or both. The 2019 VA report found "inconclusive evidence of HBOT's benefits at least for mild TBI and PTSD" and found that "current evidence does not clearly support any one argument over another for or against HBOT (Evidence Brief: Hyperbaric Oxygen Therapy (HBOT) for Traumatic Brain Injury and/or Post-Traumatic Stress Disorder, 2018)."

The report concluded: "Broad usage of HBOT as an initial treatment for mild or moderate to severe TBI and/or PTSD in lieu of conventional treatments still does not appear warranted. When patients do not respond to and/or do not tolerate adequate trials of multiple conventional therapy options and are considering emerging treatment options, offering HBOT to veterans with mild or moderate to severe TBI and/or PTSD is reasonable. Prior to HBOT use, clinicians and patients should consider its potential increased risk of barotrauma and/or pulmonary complications."

Although this review found no significant benefit, a recent study published in 2020 on HBOT in civilian and military subjects with mTBI/PPCS (persistent post-concussion syndrome) did show significant improvements in postconcussion and Post-Traumatic Stress Disorder symptoms, memory, cognitive functions, depression, anxiety, sleep, and quality of life as compared to control group patients. Improvements lasted for at least 2 months after the 40th HBOT session.

HBOT is generally regarded as a safe procedure, but like many medical procedures, the treatment carries some potential risks. They include:

- Middle ear injuries, including leaking fluid and eardrum rupture, due to changes in air pressure •
Temporary nearsightedness (myopia) caused by temporary eye lens changes
- Lung collapse caused by air pressure changes (barotrauma)
- Seizures as a result of too much oxygen (oxygen toxicity) in your central nervous system •
Lowered blood sugar in people who have diabetes treated with insulin
- In certain circumstances, fire — due to the oxygen-rich environment of the treatment chamber (Hyperbaric Oxygen Therapy - Mayo Clinic, 2020)

Although there has been a lot of research done on HBOT over the past 40-50 years, and although it is a well validated treatment for many other conditions, there remains a great deal of inconsistency and uncertainty regarding the potential effectiveness of HBOT for the treatment of TBI (across the range of severity) and for PTSD.

In addition, HBOT can be expensive and often is not covered by most health insurance. Please consult with a medical professional, consider getting a second opinion, and carefully consider the pros and cons before seeking this treatment.

Where can I find more information?

- [TreatNOW](#) - An overview of Hyperbaric Oxygen Therapy
- [HBOT for brain injury](#) *From TBI Therapy*
- [Hyperbaric Health and Wellness Foundation](#)

Providers:

- Ohio State: <https://wexnermedical.osu.edu/wound-healing/hyperbaric-oxygen#:~:text=Ohio%20State%20offers%20central%20Ohio's,of%20oxygen%20in%20the%20blood.>
- Mayo Clinic <https://www.mayoclinic.org/tests-procedures/hyperbaric-oxygen-therapy/about/pac-20394380> •
Oxygen Air Therapy <https://oxygenairtherapy.com/> in Dublin: 614-407-4268, Pickerington: 614-733-4268, and
Brook Park: 440-467-2266
- Ohio Health - <https://www.ohiohealth.com/services/wound-care>
- Mount Carmel - <https://www.mountcarmelhealth.com/find-a-service-or-specialty/wound-care/hyperbaric-oxygen-therapy>
- Kettering Health <https://ketteringhealth.org/services/wound-care/hyperbaric-oxygen-therapy/> •
And many more

Out of Ohio:

- *Johns Hopkins Medicine* - <https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/hyperbaric-oxygen-therapy>
- <https://oxygenairtherapy.com/> - Jacksonville, FL: 407-984-7757
- and many, many more

RESEARCH OPPORTUNITIES:

NeuroTrauma Registry of Ohio <https://cbi.osu.edu/community/ntroh>

The NeuroTrauma Registry of Ohio (NTR-OH) is a voluntary research registry that connects injury survivors to new research studies that aim to better understand and treat traumatic brain injury (TBI) and spinal cord injury (SCI). People who have experienced TBI or SCI can support research by joining NTR-OH.

More research articles on HBOT:

Expanding Treatment Options for Severe Brain Trauma UC San Diego Health, July 23, 2020 | Jeanna Vazquez
<https://health.ucsd.edu/news/releases/Pages/2020-07-23-expanding-treatment-options-for-severe-brain-trauma.aspx>

“Out of all the kinds of treatments we provide, hyperbaric oxygen therapy is one of the safest and best tolerated,” said Ian Grover, MD, medical director of Hyperbaric Medicine and Wound Care at UC San Diego Health. “With head trauma, the brain cannot get enough oxygen, which worsens the healing response, but with

7/21/2022 26 Huelskamp, L. PhD

this treatment we’ll be able to increase oxygen delivery, and we believe the benefits for patients will be seen almost immediately.”

Treatment of Traumatic Brain Injury With Hyperbaric Oxygen Therapy May 28, 2019, by Bruce I. Goderez, MD, Psychiatric Times, Psychiatric Times Vol 36, Issue 5, Volume 36, Issue 5

<https://www.psychiatrictimes.com/view/treatment-traumatic-brain-injury-hyperbaric-oxygen-therapy>

“HBOT can bring about dramatic improvement in many neurological conditions for which we have had very little to offer other than palliative care. Considering the high incidence of many of these neurological conditions, the safety of treatment, and the simplicity and relatively low cost of mild-HBOT, it is unfortunate that it is not more widely available.”

Is Hyperbaric Oxygen Therapy Effective for Traumatic Brain Injury? A Rapid Evidence Assessment of the Literature and Recommendations for the Field by Crawford, Cindy BA; Teo, Lynn MAOM, MS; Yang, EunMee MS; Isbister, Caitlin MS; Berry, Kevin MD; Journal of Head Trauma Rehabilitation: May/June 2017 - Volume 32 - Issue 3 - p E27-E37

Conclusions: For mild TBI, results indicate HBO2 is no better than sham treatment. Improvements within both HBO2 and sham groups cannot be ignored. *For acute treatment of moderate-to-severe TBI, although methodology appears flawed across some studies, because of the complexity of brain injury, HBO2 may be beneficial as a relatively safe adjunctive therapy if feasible.* Further research should be considered to resolve the controversy surrounding this field, but only if methodological flaws are avoided and bias minimized.

Role of hyperbaric oxygen therapy in severe head injury in children by Advait Prakash, Sandesh V. Parelkar, Sanjay N. Oak, Rahul K. Gupta, Beejal V. Sanghvi, Mitesh Bachani, and Rajashekhar Patil, J; Pediatr Neurosci. 2012 Jan-Apr; 7(1): 4–8. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3401652/>

Conclusion: In children with traumatic brain injury, the addition of HBOT significantly improved outcome and quality of life and reduced the risk of complications.

Traumatic Brain Injury and Hyperbaric Oxygen Treatment by Michelle Faber | Oct 27, 2019 | All Blogs, Brain & Neurological Disorders <https://www.hyperbariccentral.com/traumatic-brain-injury-and-hyperbaric-oxygen-treatment/>

Hyperbaric oxygen therapy for traumatic brain injury: bench-to-bedside by Qin Hu,^{1,2} Anatol Manaenko,² Ting Xu,² Zhenni Guo,² Jiping Tang,² and John H. Zhang, M.D., Ph.D.^{2,3,*}; Med Gas Res. 2016 Apr-Jun; 6(2): 102–110.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5110132/>

Conclusions: HBOT has been demonstrated to have neuroprotective effects without increased oxygen toxicity in experimental TBI models when administered at pressures less than 3 ATA (Table 1). The improved tissue oxygenation and cellular metabolism, anti-inflammation, anti-apoptosis and promoting neurogenesis and angiogenesis may constitute the multiple and complementary mechanisms underlying HBOT-induced neuroprotection (Figure 1). Due to the heterogeneity of human TBI, the efficacy of clinical HBOT remains controversial (Table 2). Delayed treatment time, subjective methods for outcome measurement, and inappropriate HBOT paradigms could contribute to misinterpretation of results and prevent a positive recommendation of HBO in TBI patients. These key factors should be considered in the future clinical studies of HBO in TBI and other neurological diseases.

More research and articles as well as Books can be found at <https://www.brainline.org/treatment-hub/hyperbaric-oxygen-therapy-hbot>

YOGA

Online yoga, mindfulness & education to build resilience for the brain injury community

<https://www.loveyourbrain.com/mindset-interactive>

Books: (available on Amazon)

The Traumatized Brain: A Family Guide to Understanding Mood, Memory, and Behavior after Brain Injury (A Johns Hopkins Press Health Book) 1st Edition

Vani Rao, MBBS, MD, is an associate professor and the director of the Brain Injury Clinic and the Behavioral Neurology and Neuropsychiatry Fellowship Program within the Department of Psychiatry and Behavioral Science at Johns Hopkins University School of Medicine. Sandeep Vaishnavi, MD, PhD, is the director of the Neuropsychiatric Clinic at Carolina Partners. He is a neuropsychiatrist at the Preston Robert Tisch Brain Tumor Center, Duke University Medical Center, and is affiliated with Duke's Departments of Psychiatry and Community and Family Medicine.

Series: A Johns Hopkins Press Health Book; Paperback: 224 pages

Publisher: Johns Hopkins University Press; 1 edition (September 28, 2015)

Chicken Soup for the Soul: Recovering from Traumatic Brain Injuries: 101 Stories of Hope, Healing, and Hard Work

Amy Newmark is publisher and editor-in-chief of Chicken Soup for the Soul. Dr. Carolyn Roy-Bornstein is a physician and writer with a grown son recovering from a traumatic brain injury. Lee Woodruff is a contributor to CBS This Morning and author whose husband, ABC News anchor Bob Woodruff, recovered from a traumatic brain injury incurred while embedded with the military in Iraq.

Series: Chicken Soup for the Soul; Paperback: 432 pages

Publisher: Chicken Soup for the Soul; 1 edition (June 24, 2014)

Online support:

<https://www.facebook.com/TbiAwareness/>

<https://www.facebook.com/TBI-Brain-Injury-Talk-168479193221899/>

<https://www.facebook.com/TBIHopeandInspiration/>

https://www.hopeafterheadinjury.com/hopesurvives?utm_campaign=1adbf3f0-9b27-4a7f-96b0-2964083d8a40&utm_source=so&utm_medium=mail&cid=7489673c-1d41-4dbc-8951-1075f861e86b

<https://www.migraineagain.com/>

Hope Survives | Brain Injury Podcast

Have you or a loved one experienced a traumatic brain injury, stroke, concussion, or ABI? This podcast is for you. Sharing hope, support, and education for brain injury survivors, caregivers, and families. Hosted by award-winning TBI survivor, advocate, and singer/songwriter Cristabelle Braden, this is an uplifting podcast to bring hope to your darkest days.

Subscribe and stay tuned for messages of encouragement, interviews with professionals, and survivor stories. [Apple](#)

[Podcasts](#)

[Spotify Podcasts](#)

[Google Podcasts](#)

[RadioPublic](#)

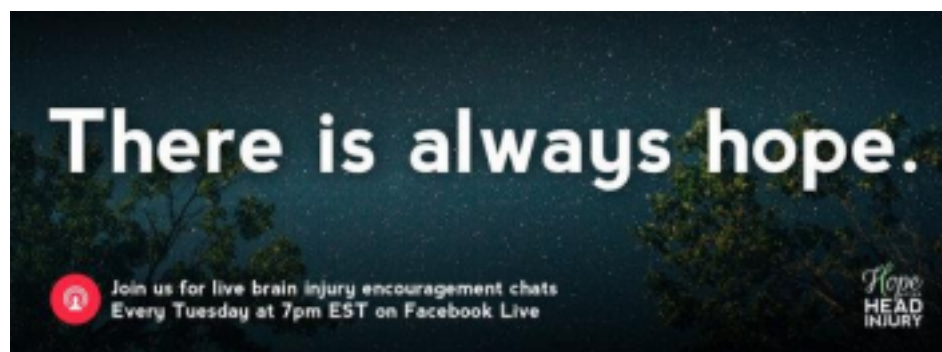
[Pocket Casts](#)

[Breaker](#)

Faces of TBI: Amy Zellmer, Podcast Host and Magazine Publisher, offers a podcast dedicated to traumatic brain injury (TBI) and concussion awareness. Created by survivors for survivors. Hear from survivors, caregivers, medical professionals, and others! [More info](#)

You may also like Vestibular Disorders Association (VEDA)

<https://www.facebook.com/vestibulardisorders/?fref=ts>



Opportunities

- Brain Injury Awareness 5K Run and 1 mile Family Walk: March 24, 2024

[Sign Up](#) [Donate](#)

- **2024 BIA5K Mark Minister Award Nomination Request:** Thirty years after suffering a traumatic brain injury that left him with lifelong disabilities, Worthington native Mark Minister and his wife, Brandy, have been fundraising for the annual Ohio State University Brain Injury Awareness 5K Run and 1 Mile Walk. Please nominate a survivor that you know who exhibits courage in the face of adversity, resilience over challenge, and serve as an inspiration to those around them. Anyone is invited to submit nominations for this award! The 2024 Awardee will be honored at the 8th Annual Event at The Ohio State University. [Nominate a survivor](#) Questions? brain.osu@gmail.com

Live Support groups:

For a statewide list of support groups, visit BRAIN INJURY ASSOCIATION OF OHIO <https://www.biaoh.org/help@biaoh.org>

OSU NeuroNights (on Zoom!)



What is NeuroNights?

Our workshop series builds wellness skills, community, and connections for survivors and families affected by brain injury and other neurological conditions. All are welcome to participate, and all sessions are FREE!

Each month, we explore a different wellness theme over three (3) sessions:

- Week 1: LEARN – introduce attendees to the topic, possibly in a panel discussion with a clinician and researcher
- Week 2: APPLY - therapists provide an actions-oriented overview of the topic, including how to engage in activities and resources relevant to the theme

- Week 3: SHARE – survivors and students share stories and reflect on the topic

How do I participate?

- If you haven't already signed up, please register [here](#). (If you have previously registered, no need to re-register) • To join the workshops, visit <https://go.osu.edu/neuronights> in your web browser, then click the red box titled "ACCESS THE WORKSHOPS HERE". Once the Zoom meeting pops up, enter the **password "wellness"** and you're all set! The links will be active 15 minutes before each scheduled session.

Our survivor stories have been posted, as well as a few outstanding videos from this past months:

<https://discovery.osu.edu/cbi-neuronights>

Please feel free to register here, to keep you in the loop and receive email updates over the summer. (If you have previously registered, no need to re-register)

Sign up for research studies: check <http://go.osu.edu/CBlopportunities> for brain injury research studies and presentations. View videos of our past sessions on our website by scrolling down to "Spring 2021" and "Older Session Archive"

Ohio Organizations:

Love Your Brain: A program to improve the quality of life of people affected by traumatic brain injury through programs that build community and foster resilience. A research-backed program that supports people with TBI (including concussion) and caregivers to connect, learn, and thrive! [More info](#)

The Ohio Brain Injury Connection www.ohiobraininjury.org

(through Ohio State; **free**, in-person or virtual)

The Ohio Brain Injury Connection is a program to assist individuals and/or their loved ones who have experienced brain injuries. This person-centered resource facilitation program is designed to help individuals accomplish the following:

- navigate resources and supports responsive to their needs
- identify the nature and extent of their history of brain injury
- develop skills and knowledge for self-advocacy
- identify opportunities for optimizing their brain health
- articulate their long-term plan for achieving their goals

What to expect:

This isn't a medical service program that provides medical advice or treatment. A resource advisor will provide education, find resources and work in tandem to develop a plan and steps that will reach your goals. A

resource advisor is a healthcare professional with experience working with individuals with a history of brain injury. This is a confidential, voluntary program with a frequency of communication on a case-by-case basis that reflects the goals of the individual. The resource advisor will help an individual explore the role of brain

injuries in their life, identify compensatory strategies tailored to the individual, review their brain health and make a plan to take the next steps to improve their quality of life.

How to become a part of this program:

An individual or loved one will call or email to begin working with a resource advisor. A resource advisor will reach out within two business days. Verbal consent will be completed by the participant to agree to participation in this program. Once these steps are complete, a participant can begin to develop their individualized plan for success.

Examples of resource advisors' guidance:

- provide information on brain injuries
- help you find appropriate support groups
- be a nonjudgmental sounding board, offering supportive listening and confidentiality •
- act as a liaison with a medical provider
- help you file disability or Medicaid paperwork
- help you identify barriers and solutions to utilizing resources
- help find resources for workplace accommodations

To get in touch with a resource advisor, call 614-293-7785 or email obic@osumc.edu; www.ohiobraininjury.org

Brain Injury Advisory Committee

Ohio Brain Injury Advisory Committee (BIAC) is a statewide advisory board made up of 10-12 individuals representing specific membership categories as defined in ORC Section 3335.61. These seats are held by members who are appointed by the Dean of the College of Medicine at The Ohio State University Wexner Medical Center for 2-year, renewable terms. Appointed members are joined by the Director, or designee, of the following state departments: Department of Health, Ohio Mental Health and Addiction Services, Ohio Department of Medicaid, Department of Developmental Disabilities, Department of Job and Family Services, Department of Public Safety, Bureau of Workers' Compensation, Department of Education, Opportunities for Ohioans with Disabilities, and the Department of Aging. Additionally, honorary members and volunteers also serve on the BIAC.

Interested in joining us for a meeting? These are held from 10 am - 2 pm in the SPHINX Centennial Leadership Suite, 2nd Floor of the Ohio Union, 1739 N. High St. Columbus, OH 43210.

We offer an alternative option to attend the meeting virtually. If you would like to attend through Zoom, please reach out to Brei.miller@osumc.edu. We use automated captioning for this event.

If you require an accommodation such as live captioning or interpretation to participate in this event, please contact Brei Miller at brei.miller@osumc.edu or 614-293-8879. Requests made within 10 business days will generally allow us to provide seamless access, but the university will make every effort to meet requests made after this date.

Our Staff

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BRAIN INJURY ASSOCIATION OF OHIO

<https://www.biaoh.org/> help@biaoh.org 833-783-1495

In the blink of an eye, everything can change. 1 in 4 adult Ohioans have incurred a Traumatic Brain Injury in their lifetime. Brain injuries do not discriminate; they can happen at any age, to any race, ethnicity, gender or socioeconomic class. We are here to help and be the voice of help, hope and healing for the brain injury community.

BIAOH has been working for the people of Ohio for over 30 years to provide assistance and support in the cause of brain injury prevention, treatment, research, education and advocacy. Every year, thousands of Ohioans receive information and support through the toll-free HELPLINE staffed by an experienced specialist and through our website and Facebook for the answers to their questions about brain injury, access to services, and supports or, simply encouragement to meet the challenges of this life changing injury.

Brain Injury and Domestic Violence

<https://www.odvn.org/> ODVN Partner Inflicted Brain Injury Program
kaseyh@odvn.org Kasey Holderbaum

Brain Health Collective

<https://udayton.edu/education/initiatives/brain-health/index.php>

Conference

Ohio TBI Summit <https://www.biaoh.org/summit>

Foods/Diet/Nutrition/Hydration

Nutrition and Traumatic Brain Injury: Improving Acute and Subacute Health Outcomes in Military Personnel (2011)

Free download at <https://www.nap.edu/catalog/13121/nutrition-and-traumatic-brain-injury-improving-acute-and-subacute-health>

B-12 deficiency is common with brain injuries as it is needed for myelin sheath repair. Folic acid is also needed in extra amounts. It is also needed to maintain the blood brain barrier. A blood level of about 1000 for B-12 and greater than 20 for folate is suggested for injured brains.

Confirmed via neurologist and Dr. Bavishi (from previous page), research supports that B-2, sold over the counter at most pharmacies, helps in the brain repair. One may want to consider adding the supplement to one's daily routine.

<http://www.brainblogger.com/2014/07/30/vitamin-b12-deficiency-and-its-neurological-consequences/>

<https://www.webmd.com/brain/news/20080908/vitamin-b12-boasts-brain-benefits>

There are lots of supplement options (pills, drops, shots, etc.) as well as food sources of B12.



Handbook On Hydration: https://www.migraineagain.com/wp-content/uploads/2016/04/The-1-Easiest-Fastest-Migraine-Treatment_Final.pdf?vgo_ee=40sXpgVoQRpT4Fcndwbzy4vy7T5YEJ8ohjC9vauJg30%3D

Download our latest ebook on Hydration. In it you'll learn why and how hydration plays a role in the lives of people with migraine. You'll also get good hydration strategies that will help you boost your water and fluid intake on a daily basis!

You will also learn:

- * Why hydration is important for people with migraine
- * Could you be dehydrated?
- * Dehydration Facts
- * Common migraine triggers that increase risk of dehydration

News from Dr. Damian Rowe, BSc, DC (Source: Chappell Health News LLC. aaron@chappellhealthnews.com)

Whether a traumatic blow to the head is sufficient as a singular event to cause immediate damage or if successive sub concussive impacts are experienced over time, the resulting damage to neuronal cells affecting their function and ability to repair has a common pathophysiology- self-perpetuating immunoexcitotoxicity. The damaged neural cell releases compounds that in turn causes further damage to neighboring cells causing a cascade of spreading damage by releasing more immunoexcitotoxic compounds from the cells - chief among them are glutamate, aspartate and quinolinic acid which are highly proinflammatory.

In accordance with a multitude of more recent research, the 2012 article published in The Physician and Sportsmedicine journal titled Postconcussion Syndrome: A Review of Pathophysiology and Potential Nonpharmacological Approaches to Treatment, states that traumatic brain injuries number up to 3.8 million every year and that number has been rising since this data was reported in 2006. That doesn't even account for the unreported occurrences of traumatic brain injuries which then go untreated and contribute to cumulative damage called chronic traumatic encephalopathy, CTE. These authors - from the Department of Neurosurgery at the University of Pittsburgh Medical Center in Pittsburgh, Pennsylvania - report that most instances are classified as mild traumatic brain injuries (mTBI) or commonly called concussion.

Most signs and symptoms of concussion spontaneously resolve within 2-7 days which include headache, nausea, visual disturbance and balance abnormalities. Around 15% of concussion cases do not resolve on their own but persist causing/perpetuated-by sleep disturbances resulting in severe debilitation. Post-concussion syndrome (PCS) requires at least 3 symptoms for a minimum of 4 weeks following head injury including headache, dizziness, sleep problems, psychological and cognitive disturbances. Unresolved cognitive or memory problems can significantly limit daily activities and have potentially neurodegenerative consequences later in life according to a referenced study cited by the authors of a 2020 study from the University of Kansas, The Ketogenic Diet in the Treatment of Post-concussion Syndrome—A Feasibility Study. The authors state, "The results from this study do suggest potential for the KD [ketogenic diet] to benefit patients with prolonged symptoms."

The beneficial effects of omega 3 polyunsaturated fatty acids (PUFAs), especially DHA and EPA, after traumatic brain injury are adroitly demonstrated by the authors of ω -3 Fatty Acid Supplementation as a Potential Therapeutic Aid for the Recovery from Mild Traumatic Brain Injury/Concussion. Without sufficient EPA and DHA, the self-perpetuating neuronal damage/cell death and immunoexcitotoxicity contribute to further susceptibility to repeat injury.

Consensus appears to be that these omega-3 PUFAs in conjunction with magnesium, vitamin D3 and inflammation

modulating plant substances like curcumin, resveratrol and EGCG from green tea is a wise method for not only repairing damaged neuronal cells but limiting the cellular susceptibility to collateral damage by immunoexcitotoxicity in the first place.

From the above authors, the collective evidence based best practice is to keep these vital supplements on hand and part of a daily routine to ensure physiologic dosing is simplified in conjunction with a ketogenic diet consisting of unlimited non-starchy vegetables, 100 grams (on average) of protein from fatty fish, eggs, dark meat poultry and unprocessed red meat, and 70% caloric energy from fats including extra virgin olive oil, avocado, olives, nuts and seeds and moderate nut and seed butters, butter and bacon (yes! you read that correctly). Limit carbohydrate intake to no more than 10% of total caloric value and eliminate sugar.

This clinically validated non-pharmaceutical approach emphasizes cellular repair and regeneration rather than the convention of simply masking symptoms.

Sleep – the much elusive sleep!

Sleep disturbance is connected to the heightened neurological system. At TBI patient can't easily 'turn off their injured brain.' There are **many** products on the market, some of which are listed below. Consult your doctor. Note: taking acetaminophen (a.k.a. Tylenol) for pain or the PM version for sleep has long term liver issues as well as creates, ironically, headaches.

Somnapure To help with sleeping, melatonin may be useful. Another product (containing melatonin, L-theanine, valerian, Hops, lemon balm, chamomile, and passionflower) may be even more useful. It is non-habit forming and safe for daily use. It can be purchased at Walgreen's, Wal-Mart, and Bed, Bath, and Beyond for apx. \$12.99. Read about this and other natural sleep aids at <https://www.consumerhealthdigest.com/sleep-aid-reviews/somnapure.html>



NoctuRest Fast, Advanced Sleep Supplement | All-Natural Liquid Formula for 2X Absorption | Melatonin, Magnesium, Chamomile & More by NoctuRest; found on Amazon



Equipment:

Read this article on devices used to help with migraine mitigation and pain relief

https://www.migraineagain.com/neuromodulation-migraine-prevention/?slot=0&id=nl_2023-06-25_31898523&utm_source=Newsletters&nl_key=nl_migraine_again_weekly&utm_medium=email&utm_content=2023-06-25&utm_campaign=Weekly_Newsletter

White Noise Sound Machine | Portable Sleep Therapy for Home, Office, Baby & Travel | 6 Relaxing & Soothing Nature Sounds, Battery or Adapter Charging Options, Auto-Off Timer | HoMedics Sound Spa by Homedics; found on Amazon for \$19.99



Black Polyurethane X-Tra Durable Packs - Neck Contour (21"L) - Model A955016

Ice Pack, oversized, durable. Comes in handy for some head pain relief and to quiet the nervous system. Top one pictured below.

Sold by: [Kay Rehab](#) \$42.99 from Amazon (and Amazon has the other sizes, too)



Frozen water bottles with socks on them work well, too!

Halo (from <https://www.si.com/edge/2016/04/27/halo-neuroscience-electrical-brain-stimulation-nfl-performance-training-athletes>)

“On the outside, the headset looks like a regular pair of noise-cancelling headphones, but this particular one isn’t manufactured by Bose, Sony or another common brand—it’s made by Halo Neuroscience. On the inside of the wide headband, above each ear pad, are rows of soft plastic teeth. Infused with a conductive saline solution, the teeth can transmit electrical pulses through the skull to the motor cortex, the region of the brain that controls movement. The electrical stimulation increases the ability of neurons in that region to build new connections, which is essentially how the brain learns new abilities.”

<https://www.haloneuro.com/>

https://smile.amazon.com/Halo-Sport-Unlock-Your-Potential/dp/B01N5FM1AZ/ref=sr_1_1?ie=UTF8&qid=1509160342&sr=8-1&keywords=halo+neuroscience

e



Cefaly (from <https://www.cefaly.us/>)

Unique FDA approved device for migraine prevention

“Cefaly offers the best safety efficacy ratio compared to current anti-migraine oral medication. It is the first line

treatment for patients having frequent migraine attacks. Cefaly enables the use of medicines to be significantly reduced and the sufferer's quality of life to be markedly improved. It is the solution for most of migraineurs. Cefaly has been approved by the FDA for use under prescription.

Cefaly is an External Trigeminal Nerve Stimulator (e-TNS). An adhesive electrode is placed on the forehead and the Cefaly is connected magnetically to this electrode. Precise micro-pulses are then sent through the electrode to the upper branch of the trigeminal nerve preventing future migraine attacks. Since 2008, Cefaly has been the subject of a number of clinical studies demonstrating its effectiveness and safety. ”

For the prevention of migraine: \$349 (Medical prescription needed)



SHOES

<https://cadense.com/> = shoes made especially for those who have walking difficulties

READING DEVISE

<https://www.orcam.com/en-us/home> = "handheld and wearable assistive solutions, catering to the visually impaired and those with reading challenges"

Articles:

Going Though A Hard Time? Here Are 8 Practices For Healing

<https://www.mindbodygreen.com/articles/8-healing-practices-for-hard-times-from-an-intuitive> (Has an audio option to listen instead of read)

The doctor who brings people back from comas By Alayna DeMartini March 31, 2025

https://health.osu.edu/health/brain-and-spine/doctor-bavishi-hope-traumatic-brain-injury?category=Headline%20news&utm_source=sfmc&utm_medium=email&utm_campaign=omc_faculty-staff-newsletter_fy25_oncampus-20250407&sfmc_key=0032E00002r5ENCQA2

COVID-19 Virus Enters the Brain

<https://neurosciencenews.com/covid-19-brain-protein-17458/>

"More and more evidence is coming out that people with COVID-19 are suffering from cognitive effects, such as brain fog and fatigue."

A third of kids develop a mental health problem after concussion

April 29, 2021 source: Murdoch Children's Research Institute (MCRI) and published in the British Journal of Sports Medicine <https://www.sciencedaily.com/releases/2021/04/210429142621.htm> "A third of children and adolescents develop a mental health problem after a concussion, which could persist for several years post-injury, according to a new literature review."

No safe level of alcohol consumption for brain health: observational cohort study of 25,378 UK Biobank participants May, 2021 Full journal article: <https://doi.org/10.1101/2021.05.10.21256931>; (3 min audio summary) at <https://www.forbes.com/sites/elvaramirez/2021/06/01/study-no-amount-of-drinking-alcohol-is-safe-for-brain-health/?sh=64fb29487eaa>

Cellular Connections Found Between Nervous and Immune Systems

<https://neurosciencenews.com/lymph-node-immune-nervous-system-17465/> Source: Broad Institute Summary: Researchers have identified a direct cellular interaction between the nervous system and the immune system. Pain sensing neurons around the lymph nodes can modulate lymph node activity. *"The nervous and immune systems have long been thought to be separate entities in the body, but new research has uncovered a direct cellular interaction between the two. Scientists from Harvard Medical School, the Broad Institute of MIT and Harvard, MIT, and the Ragon Institute of MGH, MIT and Harvard have found that pain-sensing neurons surround lymph nodes in mice, and can modulate the activity of these small organs, which are key parts of the immune system."*

Doctors Use Electrical Implant to Aid Brain-Damaged Woman

<https://www.nytimes.com/2019/04/13/health/implant-brain-injury.html>

Transcranial magnetic stimulation shows promise in treating stroke, dementia, and migraines

<https://neurosciencenews.com/tms-stroke-dementia-migraine-15773/> Source: Loyola University Health System Summary: Transcranial magnetic stimulation (TMS) shows promise in diminishing the effects of early dementia and proves a safe and effective method for treating acute migraine and PPA. *"Transcranial magnetic stimulation (TMS) has shown significant efficacy in treating major depressive and obsessive compulsive disorders. A newly published literature review by Antonio H. Iglesias, MD, a Loyola Medicine neurologist and assistant professor at the Loyola University Chicago Stritch School of Medicine, highlights the compelling scientific and clinical data supporting further studies into the use of TMS to treat a broader range of common neurological conditions, including stroke, acute migraines and dementia."*

Dr. Oliver Sacks: The Healing Power of Gardens

<https://www.nytimes.com/2019/04/18/opinion/sunday/oliver-sacks-gardens.html?action=click&module=Opinion&pgtype=Homepage>

"In 40 years of medical practice, I have found only two types of non-pharmaceutical "therapy" to be vitally important for patients with chronic neurological diseases: music and gardens."

The effect of head injury upon the immune system

<https://www.ncbi.nlm.nih.gov/m/pubmed/17682542/>

"It is suggested that an imbalance between these two immune responses is responsible for organ dysfunction and increased susceptibility to infections in polytrauma victims."

Functional Medicine Approach to Traumatic Brain Injury

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5580364/>

"Functional medicine treatment recommendations often include the use of acupuncture, Ayurveda, chiropractic manipulation, detoxification programs, herbal and homeopathic supplements, specialized diets, massage, meditation and mindfulness practices, neurobiofeedback, nutritional supplements, t'ai chi, and yoga. At present, some of these alternative treatments appear to be beneficial, but more research is needed to validate reported outcomes."

The Role of Sleep in Healing Traumatic Brain Injuries <https://neurosciencenews.com/sleep-tbi-18032/>

Could Birth Control Pills Ease Concussion Symptoms in Female Athletes?

<https://neurosciencenews.com/progesterone-concussion-women-18053/>

How Improving Sleep Can Prevent Migraine Attacks

<https://www.healthline.com/health/migraine/migraine-improved-sleep-habits>

Blog:

<https://thefoggyshore.wordpress.com/2016/02/10/10-things-i-wish-my-doctor-had-told-me-about-mild-traumatic-brain-injury-mtbi/>

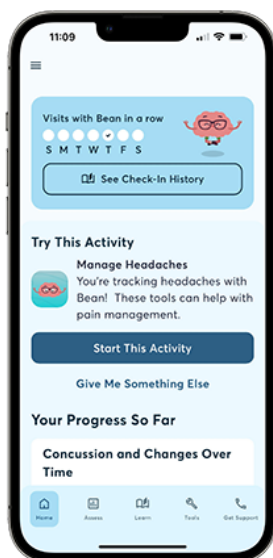
APPS:

Mobile App: Concussion Coach - PTSD: National Center for PTSD

Recovery from a concussion can be frustrating, and you may be struggling with symptoms like headaches, insomnia, concentration and memory problems, irritability and more. The Concussion Coach app was created for everyone, including Veterans and Service members, to help manage symptoms related to a concussion or head injury. Concussion Coach is designed to help you learn and practice healthy activities that can improve your concussion symptoms.

Features include:

- Daily check-ins with Bean, your personalized concussion guide
- Suggested activities and tools to help manage your concussion symptoms
- Screeners (or questions about symptoms) for concussion and PTSD
- Trackers for goals, concussion symptoms, pain, and self-compassion
- Education about concussion, including what to expect and what may change over time
- Resources for concussion and related conditions



Videos:

What happens when you have a concussion? - Clifford Robbins

<https://www.youtube.com/watch?v=xvjK-4NXRsM>

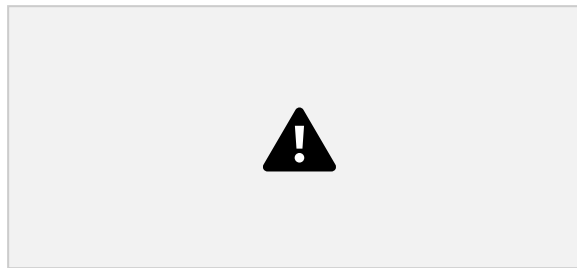
Keep Moving Forward: Children with Brain Injuries

<https://www.youtube.com/watch?v=wUZWRhH4aal>

National Awareness:

NATIONAL CONCUSSION AWARENESS DAY

September 20 is "National Concussion Awareness Day"!



Support the *Brain Injury Association of America* for National Concussion Awareness

Day! **biausa.org**

<https://www.biausa.org/public-affairs/public-awareness/concussion-awareness>

Awesome Video: https://www.youtube.com/watch?v=T_mY0jBpZ6g&feature=youtu.be

Caregivers

(taken from <https://www.caregiver.org/traumatic-brain-injury>)

When someone suffers a traumatic brain injury (TBI), the entire family is affected. Studies show that caregivers of people who have suffered a brain injury may experience feelings of burden, distress, anxiety, anger, and depression. If you are caring for a partner, spouse, child, relative, or close friend with TBI, it is important to recognize how stressful this situation can be and to seek support services.

Services that may be most helpful to you include in-home assistance (home health aides or personal care assistants), respite care to provide breaks from caregiving, brain injury support groups, and ongoing or short-term counseling for caregivers to adjust to the changes that have come as a result of the injury. You also may need to ask your support system of family, friends, and community members for help with your loved one's care, so that you don't get burned out.

In your role as a caregiver, you will probably find that it can be difficult to find appropriate and adequate services for your loved one. It is important to know that you will most likely need to be persistent in your search for assistance. You should use your network of family and friends, as well as professionals, to get tips about available resources.

Taking Care of YOU: Self-Care for Family Caregivers By Family Caregiver Alliance

(taken from <https://www.caregiver.org/Taking-Care-You-Self-Care-Family-Caregivers>)

First, Care for Yourself

On an airplane, an oxygen mask descends in front of you. What do you do? As we all know, the first rule is to put on your own oxygen mask before you assist anyone else. Only when we first help ourselves can we effectively help others. Caring for yourself is one of the most important—and one of the most often forgotten—things you can do as a caregiver. When your needs are taken care of, the person you care for will benefit, too.

Effects of Caregiving on Health and Well-Being

We hear this often: "My husband is the person with Alzheimer's, but now I'm the one in the hospital!" Such a situation is all too common. Researchers know a lot about the effects of caregiving on health and well-being. For example, if you are a caregiving spouse between the ages of 66 and 96 and are experiencing mental or emotional strain, you have a risk of dying that is 63 percent higher than that of people your age who are not caregivers.¹ The combination of loss, prolonged stress, the physical demands of caregiving, and the biological vulnerabilities that come with age place you at risk for significant health problems as well as an earlier death.

Older caregivers are not the only ones who put their health and well-being at risk. If you are a baby boomer who has assumed a caregiver role for your parents while simultaneously juggling work and raising adolescent children, you face an increased risk for depression, chronic illness, and a possible decline in quality of life.

But despite these risks, family caregivers of any age are less likely than non-caregivers to practice preventive healthcare and self-care behavior. Regardless of age, sex, and race and ethnicity, caregivers report problems attending to their own health and well-being while managing caregiving responsibilities. They report:

- Sleep deprivation
- Poor eating habits
- Failure to exercise
- Failure to stay in bed when ill
- Postponement of or failure to make medical appointments for themselves

Family caregivers are also at increased risk for depression and excessive use of alcohol, tobacco, and other drugs. Caregiving can be an emotional roller coaster. On the one hand, caring for your family member demonstrates love and commitment and can be a very rewarding personal experience. On the other hand, exhaustion, worry, inadequate resources, and continuous care demands are enormously stressful. Caregivers are more likely to have a chronic illness than are non-caregivers, namely high cholesterol, high blood pressure, and a tendency to be overweight. Studies show that an estimated 46 percent to 59 percent of caregivers are clinically depressed.

Taking Responsibility for Your Own Care

You cannot stop the impact of a chronic or progressive illness or a debilitating injury on someone for whom you care. But there is a great deal that you can do to take responsibility for your personal well-being and to get your own needs met.

Identifying Personal Barriers

Many times, attitudes and beliefs form personal barriers that stand in the way of caring for yourself. Not taking care of yourself may be a lifelong pattern, with taking care of others an easier option. However, as a family caregiver you must ask yourself: “What good will I be to the person I care for if I become ill? If I die?” Breaking old patterns and overcoming obstacles is not an easy proposition, but it can be done—regardless of your age or situation. The first task in removing personal barriers to self-care is to identify what is in your way. For example:

- Do you think you are being selfish if you put your needs first?
- Is it frightening to think of your own needs? What is the fear about?
- Do you have trouble asking for what you need? Do you feel inadequate if you ask for help?
- Do you feel you have to prove that you are worthy of the care recipient's affection? Do you do too much as a result?

Sometimes caregivers have misconceptions that increase their stress and get in the way of good self-care. Here are some of the most commonly expressed:

- I am responsible for my parent's health.
- If I don't do it, no one will.
- If I do it right, I will get the love, attention, and respect I deserve.
- Our family always takes care of their own.
- I promised my father I would always take care of my mother.

"I never do anything right," or "There's no way I could find the time to exercise" are examples of negative self-talk, another possible barrier that can cause unnecessary anxiety. Instead, try positive statements: "I'm good at giving John a bath." "I can exercise for 15 minutes a day." Remember, your mind tends to believe what you tell it.

Because we base our behavior on our thoughts and beliefs, attitudes and misconceptions like those noted above can cause caregivers to continually attempt to do what cannot be done, to control what cannot be controlled. The result is feelings of continued failure and frustration and, often, an inclination to ignore your own needs. Ask yourself what might be getting in your way and keeping you from taking care of yourself.

Moving Forward

Once you've started to identify any personal barriers to good self-care, you can begin to change your behavior, moving forward one small step at a time. Following are some effective tools for self-care that can start you on your way.

Tool #1: Reducing Personal Stress

How we perceive and respond to an event is a significant factor in how we adjust and cope with it. The stress you feel is not only the result of your caregiving situation but also the result of your perception of it—whether you see the glass as half-full or half-empty. It is important to remember that you are not alone in your experiences.

Your level of stress is influenced by many factors, including the following:

- Whether your caregiving is voluntary. If you feel you had no choice in taking on the responsibilities, the chances are greater that you will experience strain, distress, and resentment.
- Your relationship with the care recipient. Sometimes people care for another with the hope of healing a relationship. If healing does not occur, you may feel regret and discouragement.
- Your coping abilities. How you coped with stress in the past predicts how you will cope now. Identify your current coping strengths so that you can build on them.
- Your caregiving situation. Some caregiving situations are more stressful than others. For example, caring for a person with dementia is often more stressful than caring for someone with a physical limitation.
- Whether or not support is available.

Steps to Managing Stress

1. Recognize warning signs early. These might include irritability, sleep problems, and forgetfulness. Know your own warning signs, and act to make changes. Don't wait until you are overwhelmed.
2. Identify sources of stress. Ask yourself, "What is causing stress for me?" Sources of stress might be that you have too much to do, family disagreements, feelings of inadequacy, or the inability to say no.
3. Identify what you can and cannot change. Remember, we can only change ourselves; we cannot change another person. When you try to change things over which you have no control, you will only increase your sense of frustration. Ask yourself, "What do I have some control over? What can I change?" Even a small change can make a big difference. The challenge we face as caregivers is well expressed in the following words modified from the original Serenity Prayer (attributed to American theologian Reinhold Niebuhr):

"God grant me the serenity to accept the things I cannot change,
Courage to change the things I can, and (the) wisdom to know the difference."

4. Take action. Taking some action to reduce stress gives us back a sense of control. Stress reducers can be simple activities like walking and other forms of exercise, gardening, meditation, or having coffee with a friend. Identify some stress reducers that work for you.

Tool #2: Setting Goals

Setting goals or deciding what you would like to accomplish in the next three to six months is an important tool for taking care of yourself. Here are some sample goals you might set:

- Take a break from caregiving.
- Get help with caregiving tasks like bathing and preparing meals.
- Engage in activities that will make you feel healthier.
- Goals are generally too big to work on all at once. We are more likely to reach a goal if we break it down into smaller action steps. Once you've set a goal, ask yourself, "What steps do I take to reach my goal?" Make an action plan by deciding which step you will take first, and when. Then get started!

Example (Goal and Action Steps):

Goal: Feel healthier.

Possible action steps:

1. Make an appointment for a physical checkup.
2. Take a half-hour break once during the week.
3. Walk three times a week for 10 minutes.

Tool #3: Seeking Solutions

Seeking solutions to difficult situations is, of course, one of the most important tools in caregiving. Once you've identified a problem, taking action to solve it can change the situation and also change your attitude to a more positive one, giving you more confidence in your abilities.

Steps for Seeking Solutions

1. Identify the problem. Look at the situation with an open mind. The real problem might not be what first comes to mind. For example, you think that the problem is simply that you are tired all the time, when the more basic difficulty is your belief that "no one can care for John like I can." The problem? Thinking that you have to do everything yourself.
2. List possible solutions. One idea is to try a different perspective: "Even though someone else provides help to John in a different way than I do, it can be just as good." Ask a friend to help. Call Family Caregiver Alliance or the Eldercare Locator (see Resources list) and ask about agencies in your area that could help provide care.
3. Select one solution from the list. Then try it!
4. Evaluate the results. Ask yourself how well your choice worked.
5. Try a second solution. If your first idea didn't work, select another. But don't give up on the first; sometimes an idea just needs fine-tuning.
6. Use other resources. Ask friends, family members, and professionals for suggestions.
7. If nothing seems to help, accept that the problem may not be solvable now. You can revisit it at another time.

Note: All too often, we jump from Step 1 to Step 7 and then feel defeated and stuck. Concentrate on keeping an open mind while listing and experimenting with possible solutions.

Tool #4: Communicating Constructively

Being able to communicate constructively is one of a caregiver's most important tools. When you communicate in ways that are clear, assertive, and constructive, you will be heard and get the help and support you need. The box below shows basic guidelines for good communication.

Communication Guidelines

- Use "I" messages rather than "you" messages. Saying "I feel angry" rather than "You made me angry" enables you to express your feelings without blaming others or causing them to become defensive.
- Respect the rights and feelings of others. Do not say something that will violate another person's rights or intentionally hurt the person's feelings. Recognize that the other person has the right to express feelings.
- Be clear and specific. Speak directly to the person. Don't hint or hope the person will guess what you need. Other people are not mind readers. When you speak directly about what you need or feel, you are taking the risk that the other person might disagree or say no to your request, but that action also shows respect for the other person's opinion. When both parties speak directly, the chances of reaching understanding are greater.
- Be a good listener. Listening is the most important aspect of communication.

Tool #5: Asking for and Accepting Help

When people have asked if they can be of help to you, how often have you replied, “Thank you, but I’m fine.” Many caregivers don’t know how to marshal the goodwill of others and are reluctant to ask for help. You may not wish to “burden” others or admit that you can’t handle everything yourself.

Be prepared with a mental list of ways that others could help you. For example, someone could take the person you care for on a 15-minute walk a couple of times a week. Your neighbor could pick up a few things for you at the grocery store. A relative could fill out some insurance papers. When you break down the jobs into very simple tasks, it is easier for people to help. And they do want to help. It is up to you to tell them how.

Help can come from community resources, family, friends, and professionals. Ask them. Don’t wait until you are overwhelmed and exhausted or your health fails. Reaching out for help when you need it is a sign of personal strength.

Tips on How to Ask

- Consider the person’s special abilities and interests. If you know a friend enjoys cooking but dislikes driving, your chances of getting help improve if you ask for help with meal preparation.
- Resist asking the same person repeatedly. Do you keep asking the same person because she has trouble saying no?
- Pick the best time to make a request. Timing is important. A person who is tired and stressed might not be available to help out. Wait for a better time.
- Prepare a list of things that need doing. The list might include errands, yard work, or a visit with your loved one. Let the “helper” choose what she would like to do.
- Be prepared for hesitance or refusal. It can be upsetting for the caregiver when a person is unable or unwilling to help. But in the long run, it would do more harm to the relationship if the person helps only because he doesn’t want to upset you. To the person who seems hesitant, simply say, “Why don’t you think about it.” Try not to take it personally when a request is turned down. The person is turning down the task, not you. Try not to let a refusal prevent you from asking for help again. The person who refused today may be happy to help at another time.
- Avoid weakening your request. “It’s only a thought, but would you consider staying with Grandma while I went to church?” This request sounds like it’s not very important to you. Use “I” statements to make specific requests: “I would like to go to church on Sunday. Would you stay with Grandma from 9 a.m. until noon?”

Tool #6: Talking to the Physician

In addition to taking on the household chores, shopping, transportation, and personal care, 37 percent of caregivers also administer medications, injections, and medical treatment to the person for whom they care. Some 77 percent of those caregivers report the need to ask for advice about the medications and medical treatments. The person they usually turn to is their physician.

But while caregivers will discuss their loved one’s care with the physician, caregivers seldom talk about their own health, which is equally important. Building a partnership with a physician that addresses the health needs of the care recipient

and the caregiver is crucial. The responsibility of this partnership ideally is shared between you, the caregiver, the physician, and other healthcare staff. However, it will often fall to you to be assertive, using good communication skills, to ensure that everyone's needs are met—including your own.

Tips on Communicating with Your Physician

- Prepare questions ahead of time. Make a list of your most important concerns and problems. Issues you might want to discuss with the physician are changes in symptoms, medications or general health of the care recipient, your own comfort in your caregiving situation, or specific help you need to provide care. The physician only sees a moment in time with the patient. Make sure you let him/her know what your concerns are in terms of daily care/health.
- Enlist the help of the nurse. Many caregiving questions relate more to nursing than to medicine. In particular, the nurse can answer questions about various tests and examinations, preparing for surgical procedures, providing personal care, and managing medications at home.
- Make sure your appointment meets your needs. For example, the first appointment in the morning or after lunch are the best times to reduce your waiting time or accommodate numerous questions. When you schedule your appointment, be sure you convey clearly the reasons for your visit so that enough time is allowed.
- Call ahead. Before the appointment, check to see if the doctor is on schedule. Remind the receptionist of special needs when you arrive at the office.
- Take someone with you. A companion can ask questions you feel uncomfortable asking and can help you remember what the physician and nurse said.
- Use assertive communication and “I” messages. Enlist the medical care team as partners in care. Present what you need, what your concerns are, and how the doctor and/or nurse can help. Use specific, clear “I” statements like the following: “I need to know more about the diagnosis; I will feel better prepared for the future if I know what's in store for me.” Or “I am feeling rundown. I'd like to make an appointment for myself and my husband next week.” Or “I need a way for my mother to sleep at night as I am now exhausted being up every two hours at night with her.”

Tool #7: Starting to Exercise

You may be reluctant to start exercising, even though you've heard it's one of the healthiest things you can do. Perhaps you think that physical exercise might harm you, or that it is only for people who are young and able to do things like jogging. Fortunately, research suggests that you can maintain or at least partly restore endurance, balance, strength, and flexibility through everyday physical activities like walking and gardening. Even household chores can improve your health. The key is to increase your physical activity by exercising and using your own muscle power.

Exercise promotes better sleep, reduces tension and depression, and increases energy and alertness. If finding time for exercise is a problem, incorporate it into your daily activity. Perhaps the care recipient can walk or do stretching exercise with you. If necessary, do frequent short exercises instead of those that require large blocks of time. Find activities you enjoy.

Walking, one of the best and easiest exercises, is a great way to get started. Besides its physical benefits, walking helps to reduce psychological tension. Walking 20 minutes a day, three times a week, is very beneficial. If you can't get away for that long, try to walk for as long as you can on however many days you can. Work walking into your life. Walk around the mall, to the store, or a nearby park. Walk around the block with a friend.

Tool #8: Learning from Our Emotions

It is a strength to recognize when your emotions are controlling you (instead of you controlling your emotions). Our emotions are messages to which we need to listen. They exist for a reason. However negative or painful, our feelings are useful tools for understanding what is happening to us. Even feelings such as guilt, anger, and resentment contain important messages. Learn from them, and then take appropriate action.

For example, when you cannot enjoy activities you previously enjoyed, and your emotional pain overshadows all pleasure, it is time to seek treatment for depression—especially if you are having thoughts of suicide. Speaking with your physician is the first step. (See the FCA fact sheet Depression and Caregiving.)

Caregiving often involves a range of emotions. Some feelings are more comfortable than others. When you find that your emotions are intense, they might mean the following:

- That you need to make a change in your caregiving situation.
- That you are grieving a loss.
- That you are experiencing increased stress.
- That you need to be assertive and ask for what you need.

Summing Up

Remember, it is not selfish to focus on your own needs and desires when you are a caregiver—it's an important part of the job. You are responsible for your own self-care. Focus on the following self-care practices:

- Learn and use stress-reduction techniques, e.g. meditation, prayer, yoga, Tai Chi.
- Attend to your own healthcare needs.
- Get proper rest and nutrition.
- Exercise regularly, even if only for 10 minutes at a time.
- Take time off without feeling guilty.
- Participate in pleasant, nurturing activities, such as reading a good book, taking a warm bath.
- Seek and accept the support of others.
- Seek supportive counseling when you need it, or talk to a trusted counselor, friend, or pastor.
- Identify and acknowledge your feelings, you have a right to ALL of them.
- Change the negative ways you view situations.
- Set goals.

It's up to you!

Resources

Family Caregiver Alliance

National Center on Caregiving

(415) 434-3388 | (800) 445-8106

Website: www.caregiver.org

Email: info@caregiver.org

FCA CareJourney: www.caregiver.org/carejourney

Family Care Navigator: www.caregiver.org/family-care-navigator

Family Caregiver Alliance (FCA) seeks to improve the quality of life for caregivers through education, services, research and advocacy. Through its National Center on Caregiving, FCA offers information on current social, public policy and caregiving issues and provides assistance in the development of public and private programs for caregivers. For residents of the greater San Francisco Bay Area, FCA provides direct support services for caregivers of those with Alzheimer's disease, stroke, traumatic brain injury, Parkinson's and other debilitating disorders that strike adults.

FCA Fact and Tip Sheets

A listing of all facts and tips is available online at www.caregiver.org/fact-sheets.

Depression and Caregiving

Dementia, Caregiving, and Controlling Frustration

Other Organizations and Links

AARP

www.aarp.org

Administration for Community Living

For caregiver support groups, respite providers, and other caregiving services.

www.acl.gov

Eldercare Locator

www.eldercare.acl.gov

(800) 677-1116

ARCH National Respite Network and Resource Center

www.archrespice.org

Recommended Reading

The Caregiver Helpbook: Powerful Tools for Caregivers

www.powerfultoolsforcaregivers.org

Who Says Men Don't Care?

Gambone, James, PhD, Rhonda Travland, MS, 2011

www.MaleGuideForCaregiving.com

How To Be a Resilient Caregiver

www.lifework.arizona.edu/ec/caregiver_manual_now_available_online

Passages in Caregiving

Sheehy, Gail, Harper Collins, 2010

Credits

1 Shultz, Richard and Beach, Scott (1999). Caregiving as A Risk for Mortality: The Caregiver Health Effects Study. JAMA,

December 15, 1999, vol. 282, No. 23.

A special thank you to the Powerful Tools for Caregivers program for permission to use information from The Caregiver Helpbook and their Powerful Tools for Caregivers Class Leader Tips Manual. The Caregiver Helpbook is highly recommended reading for caregivers.

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Useful Resources and Services for Families Affected by TBI

National Disability Rights Network Protection and Advocacy for Individuals with Disabilities Protection and Advocacy (P&A) System and Client Assistance Program (CAP)

This nationwide network of congressionally mandated disability rights agencies provides various services to people with disabilities, including TBI. P&A agencies provide information and referral services and help people with disabilities find solutions to problems involving discrimination and employment, education, health care and transportation, personal decision making, and Social Security disability benefits. These agencies also provide individual and family advocacy. CAP agencies help clients seeking vocational rehabilitation. For more information on P&A and CAP programs, see the National Disability Rights Network website, www.ndrn.org.

Traumatic Brain Injury Model Systems

Funded through the National Institute on Disability and Rehabilitation Research, the TBI Model Systems consist of 16 TBI treatment centers throughout the US. The TBI Model Systems have extensive experience treating people with TBI and are linked to well-established medical centers that provide high quality trauma care from the onset of head injury through the rehabilitation process. For more information on the TBI Model Systems, see www.tbindsc.org.

Brain Injury Association of America (BIAA) Chartered State Affiliates

BIAA is a national program with a network of more than 40 chartered state affiliates, as well as hundreds of local chapters providing information, education, and support to individuals, families, and professionals affected by brain injury. To locate your state's TBI programs that can be of assistance, see the Brain Injury Association of America's online listing of chartered state affiliates at www.biausa.org/state-affiliates.

Social Security Disability Insurance (SSDI) & Supplemental Security Income (SSI)

It is possible that your loved one may be entitled to SSDI and/or SSI. SSDI and SSI eligibility is dependent on a number of factors including the severity of the disability and what assets and income your loved one has. You should contact the Social Security Administration to find out more about these programs and whether your loved one will qualify for these benefits. For more information on SSDI and SSI, see www.ssa.gov.

Centers for Independent Living (CIL)

Some families have found that it is important to encourage their loved one with a TBI to continually learn skills that can allow them to live as independently as possible. CILs exist nationwide to help people with disabilities live

independently in the community and may have resources to help your loved one reach a goal of living alone. CIL services include advocacy, peer counseling, case management, personal assistance and counseling, information and referral, and independent living skills development. For more information on the national CIL system, see www.virtualcil.net/cils.