

# Accommodating Individuals with Acquired Brain Injury



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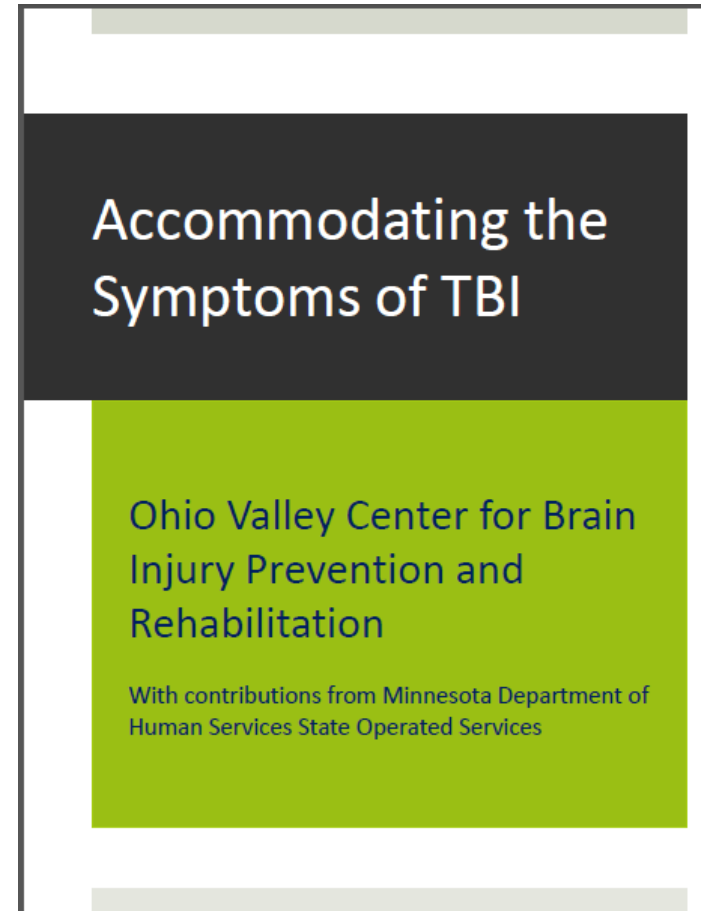
# Accommodating the Symptoms of TBI

John D. Corrigan, PhD, Jennifer A. Bogner, PhD

- Education on recognizing the common symptoms of ABI and how to accommodate.
- Provides simple, yet effective accommodations to make to help increase the odds of treatment success.

Website:

<https://tbi.osu.edu/modules/6>



# Acquired Brain Injury (ABI) Statistics

- Every 9 seconds, someone in the United States sustains a brain injury
- An ABI is any injury to the brain that is not hereditary, congenital, degenerative, or induced by birth trauma
- More than 3.5 million children and adults sustain an acquired brain injury (ABI) each year, but the total incidence is unknown
- Between 75% and 90% are categorized as MTBI/ concussion

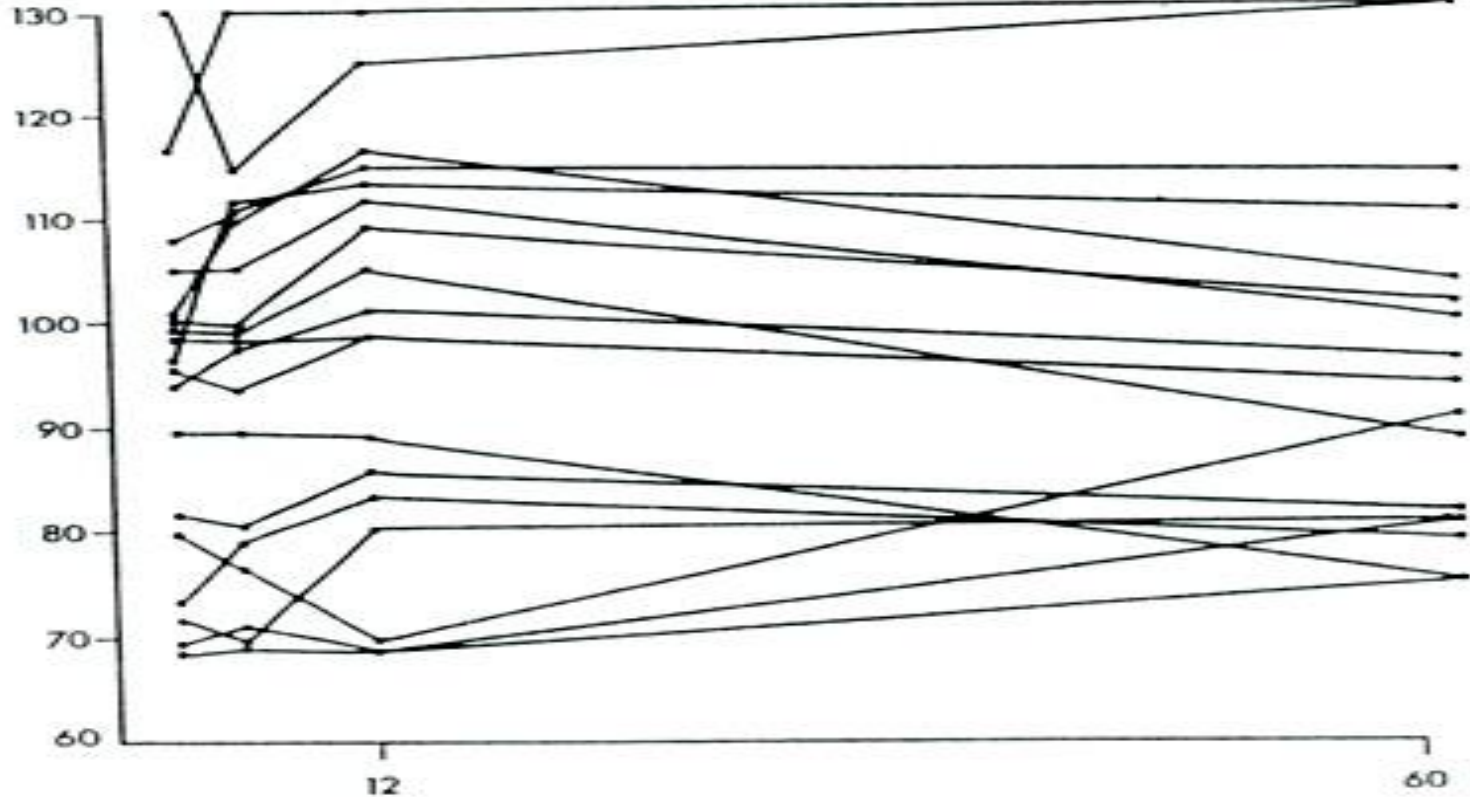
# Acquired Brain Injury Deficits

- Brain Injury can lead to neurocognitive changes such as problems with memory, attention, executive functioning, and behavior.
- These neurocognitive changes from TBI can commonly result in
  - substance abuse problems,
  - disrupted relationships,
  - employment issues and
  - problems with learning, etc.

# “Recovery” after TBI

(Brooks, 1984)

P.M. IQ SCORES



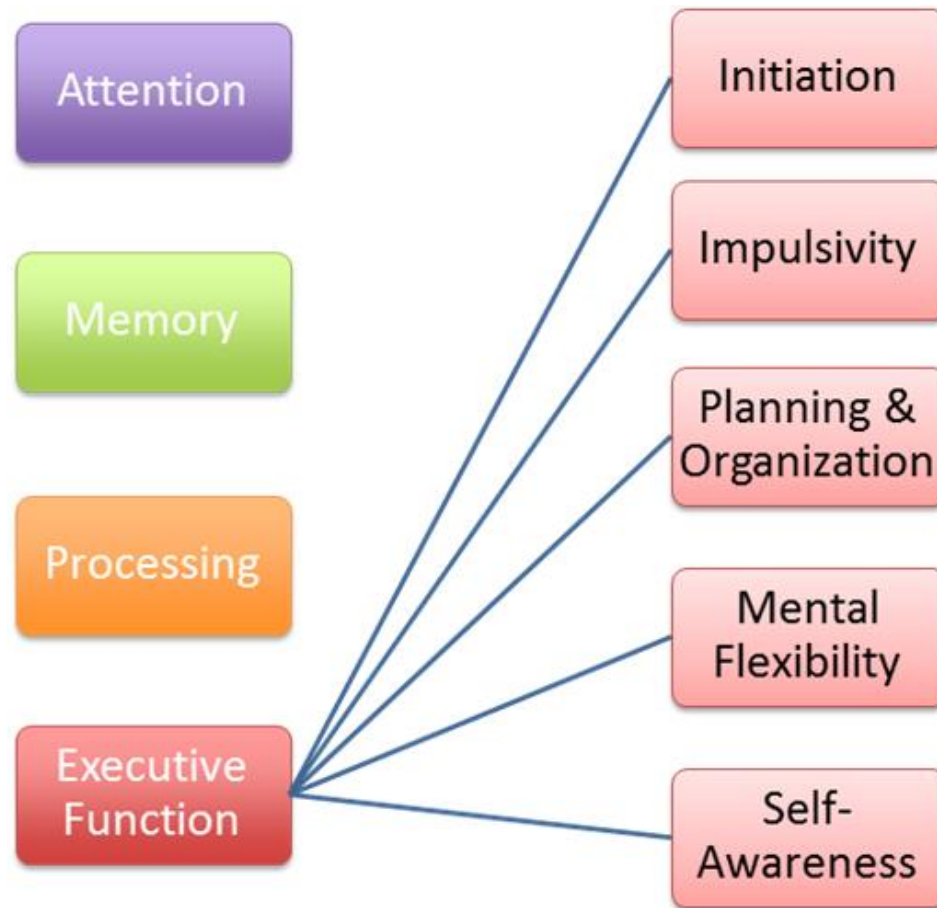
Change is more common than stability

# Cognition after ABI

After an ABI, a person may face some cognitive deficits which may include problems with:

- attention
- concentration
- speech and language
- learning and memory
- reasoning
- planning
- problem-solving, etc.

# Neurocognitive Functions



# Attention Deficits

Individual may appear to:

- Restless
- Distracted easily
- Having difficulty doing more than one task at a time
- Unable to complete a task
- Not able to sit still
- Not able to finish a conversation
- Being tangential



# R| Possible Accommodations for Attention

- Focus on one task at a time.
- Be sure you have the person's attention before beginning a discussion or task.
- Decrease distractions when working or talking with the person. (Eliminate or reduce noises.)
- Work with the individual to ask for repetition and use active listening skills (repeating back from they heard, etc.).

# Processing Deficits

Individual may appear to:

- Tire easily
- Not keep up with a conversation
- “Zone” out
- Be passive
- Seem disinterested
- Not pick up on instructions

# Possible Accommodations for Processing

- Provide one idea at a time
- Keep it simple
- Slow down
- Check in with the person
- Ask for repetition of information

# Memory Deficits

Individual may appear:

- Forgetful
- Inattentive
- Have no follow-through
- Unable to learn new information
- Inconsistent in performance
- Noncompliant

# Possible Accommodations for Memory

- Repetition with consistent rehearsal strategies (procedural memory)
- Assistive Technology (Memory notebooks, phone apps, etc.)
- Task guidance systems (written, digital)
- Structured cueing
- Pharmacological Treatment

# Executive Function Impairments after Frontal Lobe Injury

- Initiation
- Impulsivity
- Organization and Planning
- Judgment/ Decision Making
- Problem Solving
- Awareness
- Attention and Working Memory
- Abstract Thinking

# Misattributions about Behavior after Frontal Lobe Injury

- “Not cooperative”
- “Not motivated”
- “Over-react”
- “Difficult”
- “Rigid” – “not flexible”
- “Unrealistic”
- “Doesn’t follow through”

# Accommodating Frontal Lobe Dysfunction: Initiation

May appear as	Possible Accommodations
<ul style="list-style-type: none"><li>• Appear “lazy”</li><li>• Appear passive</li><li>• Seem unmotivated</li><li>• Be unable to complete a task or goal</li><li>• Need constant reminders and cuing to act on things</li></ul>	<ul style="list-style-type: none"><li>• Using external cueing strategies</li><li>• Using to-do lists</li><li>• Breaking tasks into steps so the goals are more achievable</li><li>• Use a timer</li></ul>



# Accommodating Frontal Lobe Dysfunction: Impulsivity

May appear as	Possible Accommodations
<ul style="list-style-type: none"><li>• Talk without thinking</li><li>• Act without thinking</li><li>• Trouble knowing when to stop something</li><li>• Interrupting often</li><li>• Not following directions</li><li>• Act without regard for safety</li></ul>	<ul style="list-style-type: none"><li>• “Stop and think” strategies,</li><li>• Teach to anticipate with external cues and strategies</li><li>• Provide incentives for short-term goals and small, slower steps</li><li>• Take breaks</li><li>• Relaxation training</li><li>• Give direct feedback</li></ul>

# Accommodating Frontal Lobe Dysfunction: Planning and Organization

May appear as	Possible Accommodations
<ul style="list-style-type: none"><li>• Stuck in one place</li><li>• Having difficulty to do tasks that used to be easy (ex. getting dressed, finishing assignments, etc.)</li><li>• Doing same thing over and over.</li><li>• Having difficulty trying new ways of doing things, even if the old ones fail.</li><li>• Having difficulty doing more than one thing at a time.</li></ul>	<ul style="list-style-type: none"><li>• Structure</li><li>• Consistency</li><li>• Consistent feedback</li><li>• Using checklists for task completion</li><li>• Using a task guidance systems</li></ul>

# Accommodating Frontal Lobe Dysfunction: Problem-Solving/Judgment

May appear as	Possible Accommodations
<ul style="list-style-type: none"><li>• Having problems making good choices</li><li>• Having problems analyzing thing</li><li>• Having problems readjusting when things don't go right</li><li>• Make quick decisions</li><li>• Thinking rigidly</li><li>• Unable to change their way of thinking.</li></ul>	<ul style="list-style-type: none"><li>• Use problem-solving steps and strategies</li><li>• Teach to brainstorm</li><li>• List pros and cons</li><li>• Ask for help to make decision</li><li>• Encourage to generate options and use</li><li>• Break things down into smaller steps</li></ul>

# 1 Accommodating Frontal Lobe Dysfunction: Awareness

May appear as	Possible Accommodations
<ul style="list-style-type: none"><li>• Denying symptoms</li><li>• Underestimating goals</li><li>• Having unrealistic expectations</li><li>• Dominating interactions</li><li>• Being frustrated with self</li></ul>	<ul style="list-style-type: none"><li>• Education on brain injury</li><li>• Talk about potential situations and obstacles</li><li>• Teach compensation strategies for deficits</li><li>• Encourage to have open mind</li><li>• Encourage person asking for feedback</li><li>• Encourage person to use journal to increase self-awareness</li></ul>

# ] Accommodating Frontal Lobe Dysfunction: Working Memory

May appear as	Possible Accommodations
<ul style="list-style-type: none"><li>• Unable to hold on to information long enough to use it</li><li>• Struggle to concentrate in order to follow instructions</li><li>• Having difficulties in many different subject areas, mainly reading and math</li><li>• Unable to work to do simple math in head (count change, basic addition, etc.)</li></ul>	<ul style="list-style-type: none"><li>• External management distractions</li><li>• Internal exercises- relaxation practice</li><li>• Verbal or visual mediation</li><li>• Verbal or visual mnemonics and rehearsal)</li><li>• Task guidance systems (e.g., step-by-step list of tasks and sub-tasks)</li><li>• External and internal pacing (e.g., one task at a time)</li></ul>

# Mental Health and Emotions after Brain Injury

# Neuropsychiatric Problems after Brain Injury

“TBI is a risk factor for continued psychiatric problems of increased depression and anxiety and suicidal ideation and these problems go on for several decades subsequent to the TBI”.

# Emotional/Behavioral Problems

- Very common after ABI and can be the result of several causes:
  - Directly from damage to brain tissue.
    - Ex. Damage to frontal lobes which are connected with emotion and behavior.
  - Cognitive problems may lead to emotional changes or make them worse.
    - Ex. Person may not be able to find the right word they want to say which will make them frustrated.
  - Emotional reactions to the major life changes that are caused by the brain injury.
    - Ex. Loss of job, relationship, inability to drive, etc.



# Substance Use Disorder after Brain Injury

# Substance Misuse Disorder after ABI

- Persons who have sustained a brain injury test positive for alcohol in two-thirds of moving vehicle crashes and 60% of assaults
- Persons with TBI and substance abuse problems are less likely to be working and have lower satisfaction with life
- Approximately 10% -20 of persons who did not have substance abuse problems before their injury develop them after a brain injury
- 50% of persons in substance abuse programs have at some time been treated for TBI

# Opioids and ABI

- Traumatic Brain Injury is a Significant and Unrecognized Risk Factor for Opioid Misuse
- People with TBI have a high rate of premorbid substance abuse
- TBI often results in headache or orthopedic injuries for which they are prescribed opioids.
- TBI frequently results in impairment of:
  - Memory – people forget that they have taken their pain medication, and therefore take it again.
  - impaired judgement, self-regulation, and impulsivity which may lead to overuse of pain medication.

# The Challenges of Treatment for SUD after ABI

- Most Substance Abuse programs do not have a good understanding of the effects of Brain Injury
- Brain injury professionals aren't trained substance abuse counselors
- SA Counselors may see behavior problems as intentional
- Cognitive impairments may effect the pt's communication or learning style
- Cognitive impairments may be misinterpreted as resistance to TX

# Tips for managing Substance Misuse Disorder after ABI

- Incorporate frontal lobe functional behaviors into treatment planning
  - Education on potential risks and effects
  - Psychotherapy with knowledgeable professional
  - Modify help for individual's learning style
  - Provide direct feedback following inappropriate behaviors
  - Exercise caution when making inferences about motivation or lack of.
  - Use motivational interviewing techniques- roll with resistance
  - Enlist family and friends

# Tips for managing Substance Misuse Disorder after ABI continued

- Incorporate frontal lobe functional behaviors into treatment planning continued.
  - Small group settings
  - Present information in multiple formats (Verbal, Visual, Auditory)
  - Present information in small “chunks”
  - Use of role-playing
  - Allow for increased time to process information
  - Repeat presentations of key information.
  - Repeat, review, rehearse...

# Educational Resources on Brain Injury

# TBI and Opioid Use Toolkit

<https://www.in.gov/isdh/28599.htm>

- Overview: 5 Sections:
  - Patient and Family Resources
  - Provider Resources
  - TBI and Opioid Use Webinars Slides and Videos
  - Repository of Resources from Outside Agencies
  - Repository of Primary Literature



# Publications on TBI and OUD

- Brain Injury and Opioid Overdose Infographic
  - <https://www.in.gov/isdh/files/TBI%20and%20Opioid%20Risk%20Factor%20infographic%20AUG2020%20Final.pdf>
- “BIAA Position Statement on TBI and Opioids“:
  - <https://www.biausa.org/public-affairs/media/the-solution-to-opioids-is-treatment>
- “BIAA Position Statement on Non-lethal Opioids and Acquired Brain Injury“:
  - <https://www.biausa.org/public-affairs/media/non-lethal-opioid-overdose-acquired-brain-injury>
- Intersection between TBI and OUD:
  - <https://www.in.gov/isdh/files/INROADS%20Project%20-%20Intersection%20Between%20Traumatic%20Brain%20Injury%20And%20Opioid%20Use%20Disorder.pdf>

# Brain Injury Educational Resources

- **Brain Injury Association of Indiana:** [www.biaindiana.org](http://www.biaindiana.org)
  - The Brain Injury Association of Indiana is a nonprofit 501 c (3) service organization dedicated to reducing the incidence and impact of brain injury through education, advocacy, support, prevention and by facilitating inter-agency commitment and collaboration.
- **Brain Injury Association of America:** <http://www.biausa.org/>
  - The Brain Injury Association of America (BIAA) is the voice of brain injury. We are dedicated to advancing awareness, research, treatment, and education and to improving the quality of life for all individuals impacted by brain injury.
- **Traumatic Brain Injury Model Systems:**  
<http://www.msktc.org/tbi/>
  - The MSKTC is a national center that helps facilitate the knowledge translation process to make research meaningful to those with spinal cord injury (SCI), traumatic brain injury (TBI) and burn injury (Burn).The MSKTC works closely with researchers in the 16 Traumatic Brain Injury (TBI) Model Systems.
- **Resource Facilitation for Individuals with Brain Injury:**  
<http://www.resourcefacilitationrtc.com>
  - Prepare an individual with brain injury so they may return to the workforce. Resource Facilitation assists with access to services and supports to enhance recovery and make informed choices to meet their goals.

# Brain Injury Educational Resources cont.

- **Brainline:** <http://www.brainline.org/>
  - BrainLine is a national multimedia project offering information and resources about preventing, treating, and living with TBI. BrainLine includes a series of webcasts, an electronic newsletter, and an extensive outreach campaign in partnership with national organizations concerned about traumatic brain injury.
- **Lash and Associates Publishing/ Training Inc.:** <http://www.lapublishing.com/home>.
  - Lash and Associates Publishing/ Training Inc. is the Leading Source of Information and Training on Brain Injury, Blast Injury and PTSD in Children, Adolescents, Adults and Veterans
- **United States Brain Injury Alliance:** <http://usbia.org/>
  - The mission of the United States Brain Injury Alliance is to engage the community in preventing brain injury and improving lives.
- **Center for Disease Control and Prevention- Traumatic Brain Injury:** <https://www.cdc.gov/traumaticbraininjury/>
  - CDC's research and programs work to prevent TBIs and help people recognize, respond, and recover if a TBI occurs.

# Brain Injury Educational Resources cont.

- National Resource Center for TBI- Virginia Commonwealth University: <http://www.tbinrc.com/>
  - The mission of the National Resource Center for Traumatic Brain Injury (NRCTBI) is to provide relevant, practical information for professionals, persons with brain injury, and family members.
- National Institute of Neurological Disorders and Stroke: <https://www.ninds.nih.gov/>
  - NINDS's mission is to support and perform basic, translational, and clinical neuroscience research through grants-in-aid, contracts, scientific meetings, and through research in its own laboratories, and clinics. NINDS funds and conducts research training and career development programs to increase basic, translational and clinical neuroscience expertise and ensure a vibrant, talented, and diverse work force
- ACRM- American Congress of Rehabilitation Medicine: <https://acrm.org/resources/professional/>
  - ACRM is a vibrant group with diverse individual backgrounds from all over the world — all united with the common interests in rehabilitation and evidence-based research to enhance the lives of those with disabling conditions.

## For more information on:

- Acquired Brain Injury
- Accommodating Brain Injury
- Screening for brain Injury and next steps
- Referring a client to Resource Facilitation and Brain Injury Community Resources

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# References

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<http://ohiovalley.org/informationeducation/screening/index.cfm>

<http://ohiovalley.org/tbi-id-method/>

Traumatic Brain Injury Model Systems: <http://www.msktc.org/tbi/>

# Questions?

