Brain Injury Basics

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA

Offering help, hope, and a voice for people with brain injury and their families

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Objectives

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What is brain injury?	• Definitions, causes, incidence • Interconnections and parts of the brain
What changes occur after a brain injury	• Physical, cognitive, behavioral, and emotional challenges • Strategies
Accessing services	• Screening • Care continuum and types of services
Value of BIANC	• Resource for individuals with brain injury, families, and professionals

Causes of Brain Injury

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Gunshot wounds
Workplace injuries
Toxic exposures (substance abuse, ingestion of lead, inhalation of volatile agents)
Metabolic disorders (insulin shock, diabetic coma, liver and kidney disease)
Neurotoxic poisoning (carbon monoxide poisoning, inhalants, lead exposure)
Lack of oxygen to the brain (near drowning, airway obstruction, strangulation, cardiopulmonary arrest, hypoxia, anoxia)

Falls
Assaults
Motor vehicle crashes
Sports and recreation injuries
Shaken baby syndrome/abusive head trauma

Child abuse
Domestic violence
Military actions (blast injury)
Stroke (hemorrhage or blood clots)
Infectious disease (encephalitis, meningitis)
Seizure disorders
Electric shock/lightning strike
Tumors (surgery, radiation, chemo)

Types of Brain Injury: *Acquired Brain Injury (ABI)*

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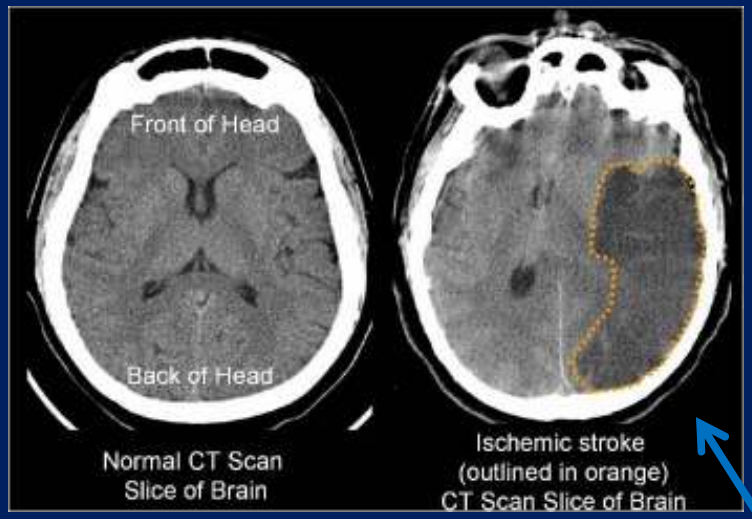
- Umbrella definition
  - external physical forces applied to the head
  - internal insults to the brain
- Occurs after birth – is not:
  - hereditary, degenerative, or induced by birth trauma

Examples:

Stroke, aneurysm, infection to the brain, anoxia (a lack of oxygen to the brain), tumor, traumatic brain injury

- Results in a change in cells of the brain
  - Affecting physical, metabolic, or the functional ability of nerve cells



Brain Injury

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Acquired Brain Injury

Non Traumatic Brain Injury

Anoxia, infections, strokes, tumors, metabolic disorders

Traumatic brain injury

Open Brain Injury

Penetrating injuries: assaults, falls, accidents, abuse, surgery

Closed brain injury

Internal pressure & shearing: assaults, falls, accidents, abuse

Types of Brain Injury:
Traumatic Brain Injury (TBI)

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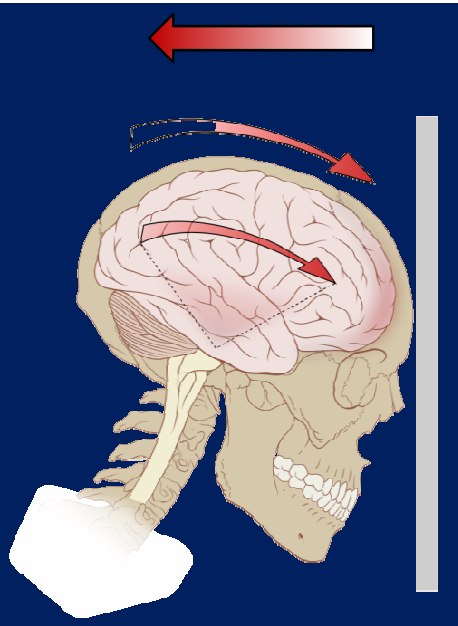
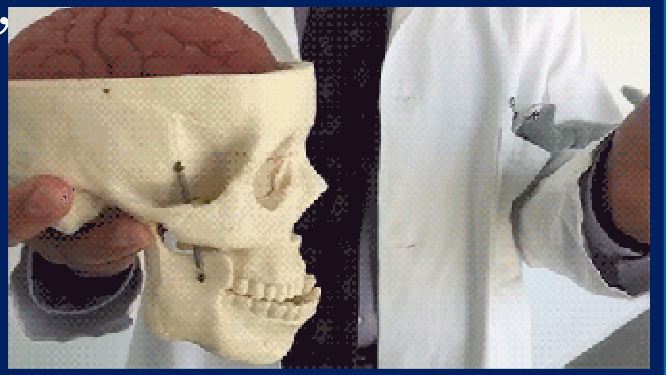
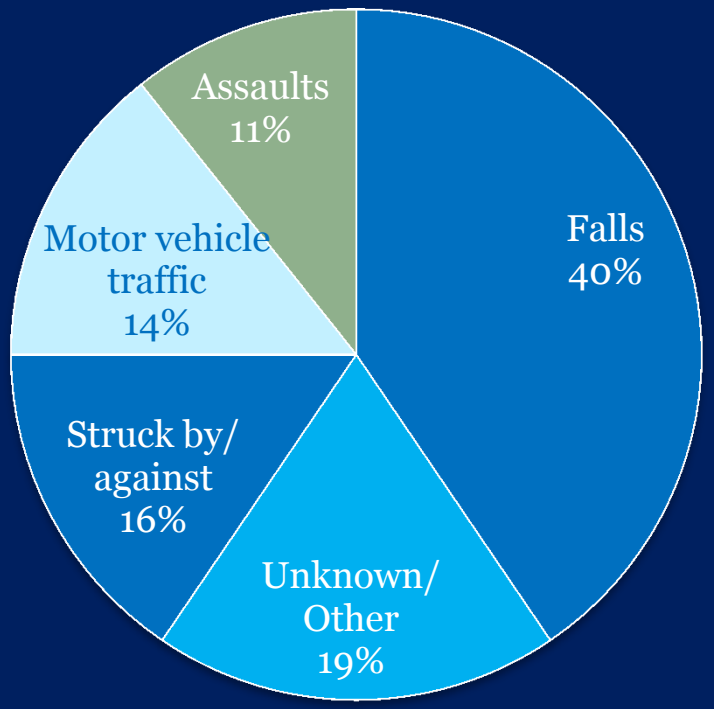
- An insult to the brain from an external force
- *May or may not* produce a diminished or altered state of consciousness
- Results in impairments of
  - Cognitive abilities, physical functioning, or disturbance of behavioral or emotional functioning
- Coup contre-coup injury





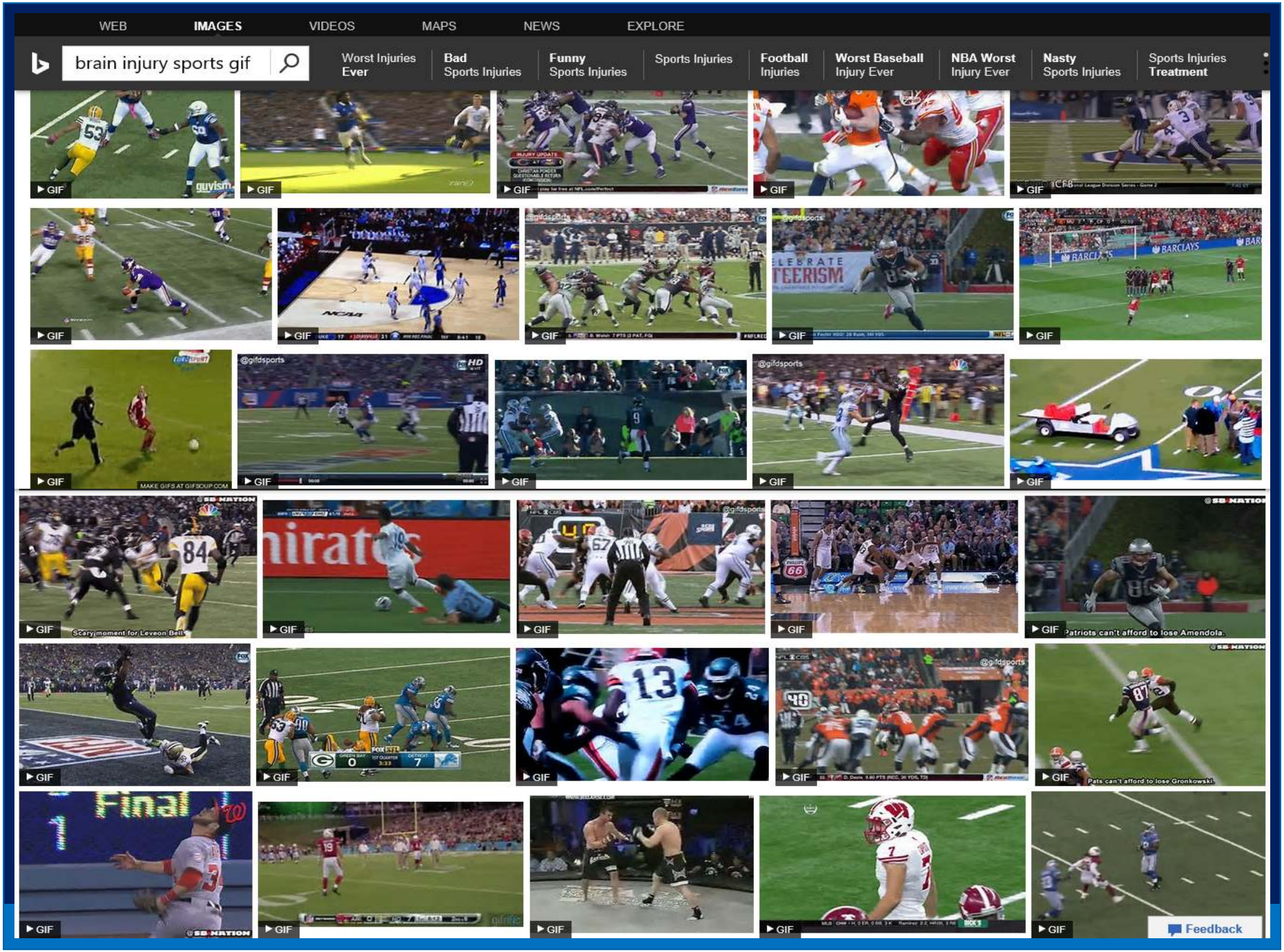
Causes of TBI

- According to the CDC, 2.5 million Americans sustained a TBI in 2010
- Males are about **1.5 times** as likely as females to sustain a TBI
- Falls are the leading cause of TBI
  - Vehicle crashes most often result in hospitalization and moderate to severe TBI



Risk for injury	
Second injury	3x
Third injury	8x

(CDC, 2016)


WEB
IMAGES
VIDEOS
MAPS
NEWS
EXPLORE
brain injury sports gif
Worst Injuries Ever
Bad Sports Injuries
Funny Sports Injuries
Sports Injuries
Football Injuries
Worst Baseball Injury Ever
NBA Worst Injury Ever
Nasty Sports Injuries
Sports Injuries Treatment
GIF
Scary moment for Le'veon Bell
Patriots can't afford to lose Amendola
Pats can't afford to lose Gronkowski
Final
Feedback

Classification of TBI

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Mild TBI (mTBI)

- Also termed **concussion**
- Can have either brief or no loss of consciousness (LOC)
- May demonstrate vomiting, lethargy, dizziness, and inability to recall what just happened

Moderate TBI

- Marked by unconsciousness for any period of time up to 24 hours
- Neurological signs of brain trauma, including skull fractures with contusion or bleeding
- May have focal findings on an electroencephalograph (EEG)/computed tomography (CT) scan

Severe TBI

- Marked by a period of loss of consciousness of 24 hours or greater

Classification of TBI

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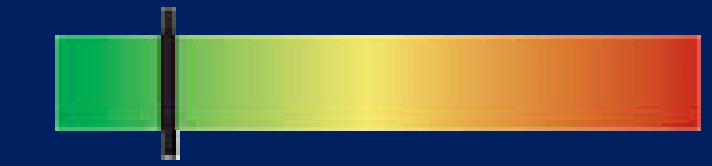
- TBI classification:
  - Mild (80%)
  - Moderate (10-30%)
  - Severe(5-25%)



Severity → Injury sustained

Severity → (no) Long-term challenges

About the Brain

Geography of the Brain

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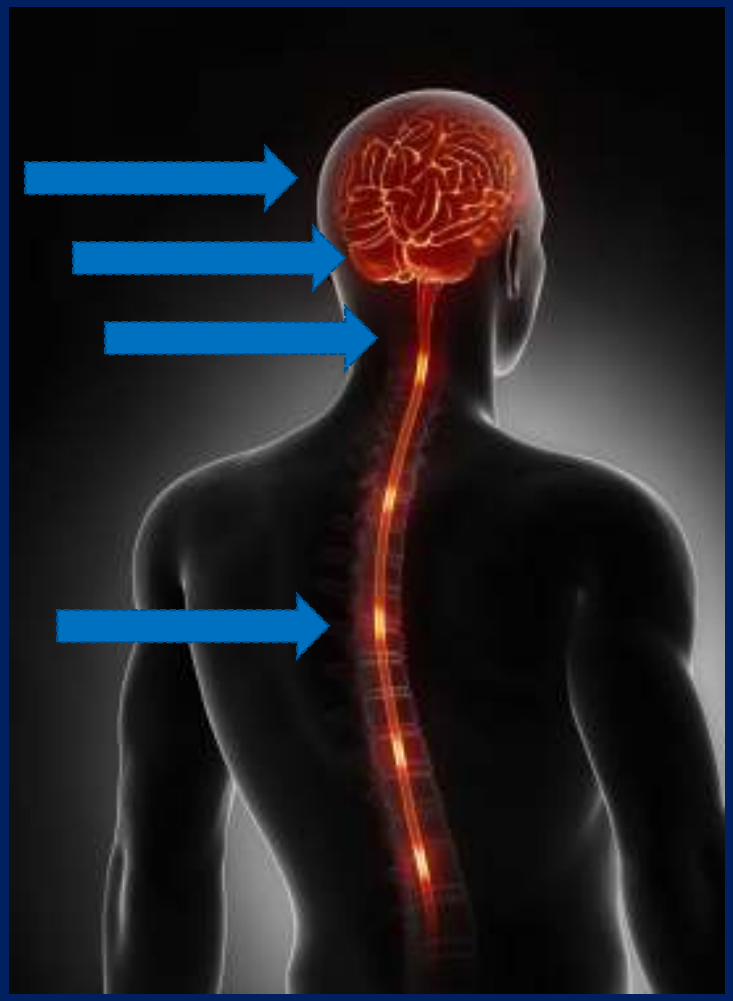
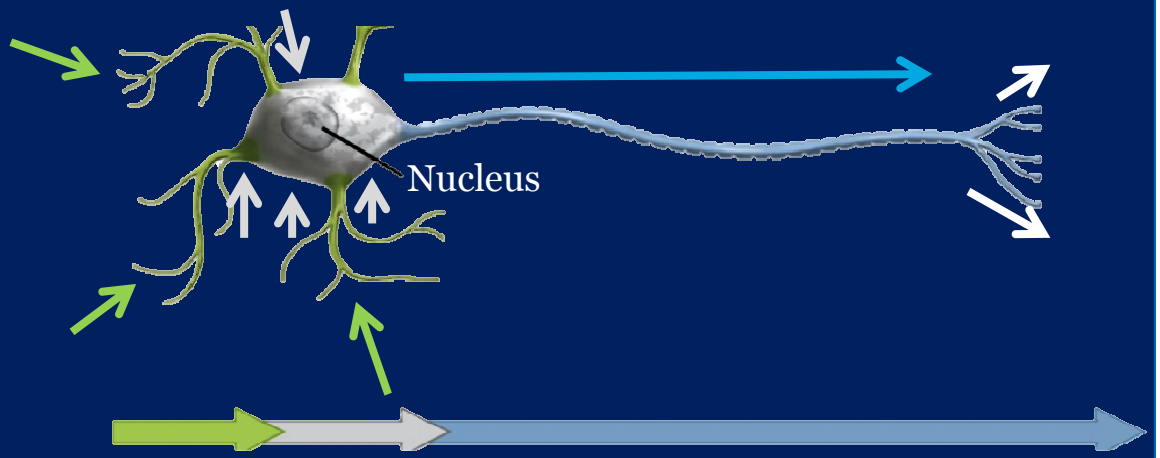
- Spinal Cord
  - Sensory & motor signals to the brain
  - Reflexes
- Brain Stem
  - Basic life functions (breathing, heartrate, etc.)
- Cerebellum
  - Coordinated movements, posture, balance
- Cerebral Cortex
  - Frontal Lobe
  - Parietal Lobe
  - Temporal Lobe
  - Occipital Lobe



The Brain

- All sensations, movements, thoughts, memories, and feelings are the result of signals that pass through neurons
  - **Dendrites**
  - **Cell body**
  - **Axon & Sheath**
- Glial cells
- "Use it or lose it"
  - *Neuroplasticity*



Dendrites
Collect chemical signals through *receptors*

Cell body
Integrates incoming signals and generates outgoing signal to axon

Axon
Passes chemical signals to dendrites of another cell or to an effector cell

The Brain

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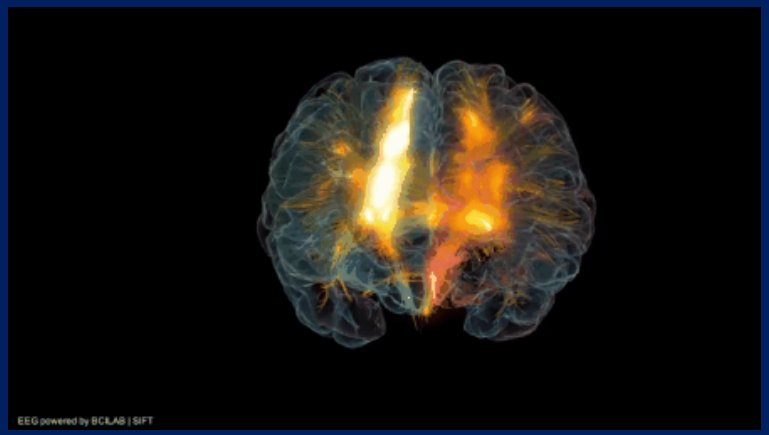

The Brain

- All sensations, movements, thoughts, memories, and feelings are the result of signals that pass through neurons
  - Dendrites
  - Cell body
  - Axon & Sheath
- Glial cells
- **“Use it or lose it”**
  - ***Neuroplasticity***

The Brain: Neurotransmitters

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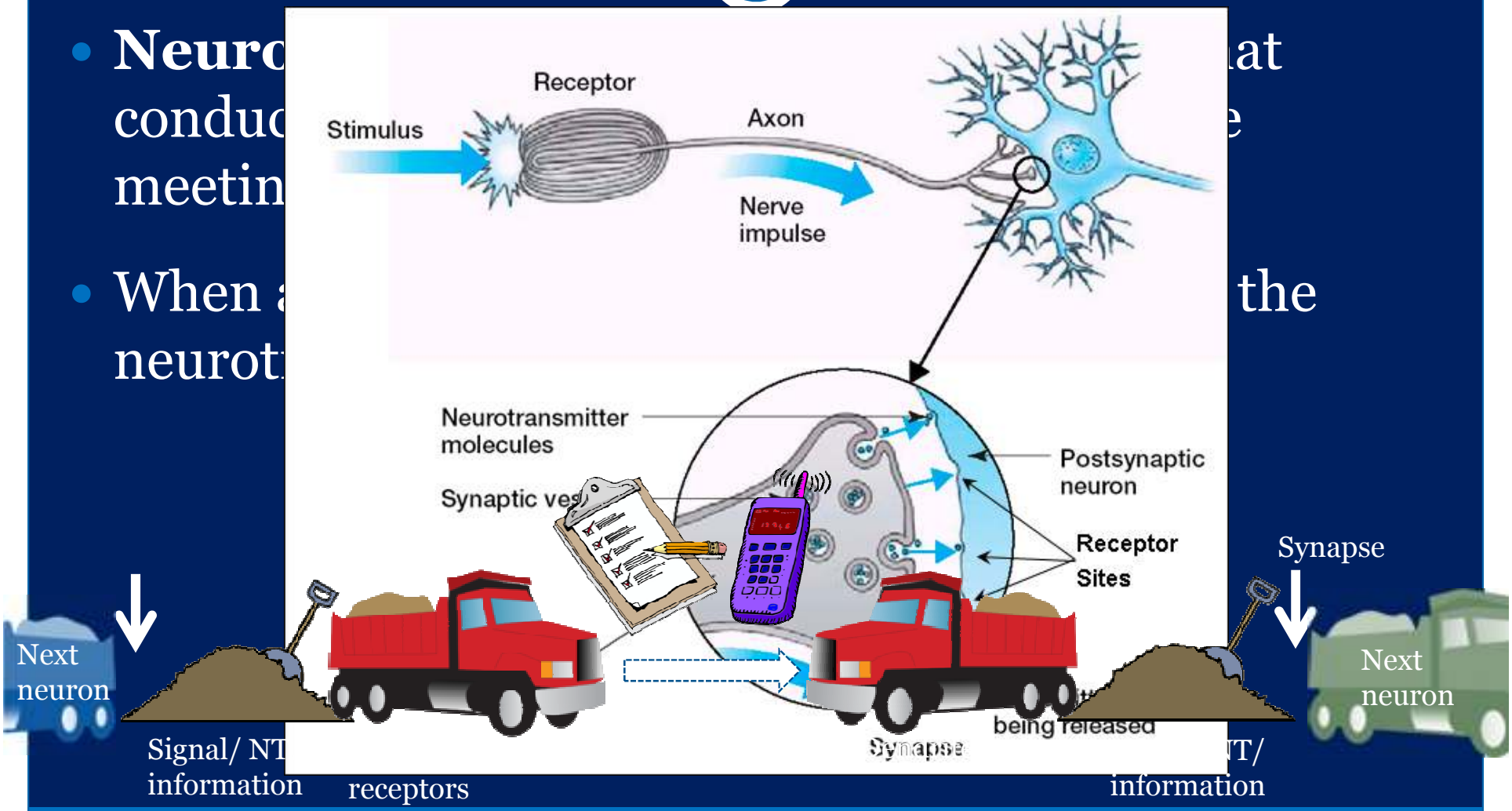
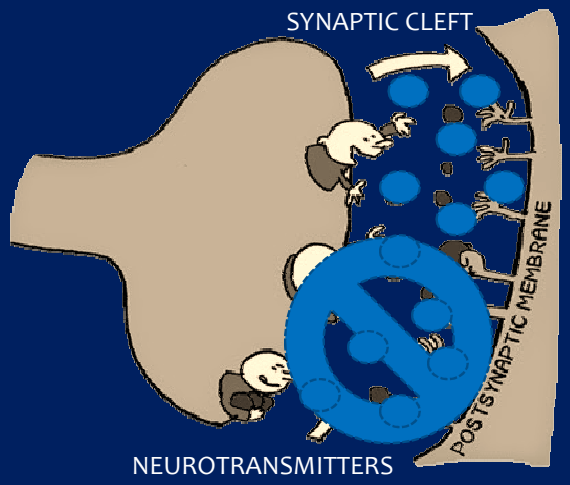
- **Neuro** …at conduc… …e meetin…
- When … …the neurot…



The Brain: Neurotransmitters (NTs)

- Malfunction in these NTs is found in many forms of mental illness
  - *Not enough NT*
  - *Too much NT*
  - *Malabsorption of NT*
- High stress levels may 'trigger' malfunctioning in NT in biologically vulnerable individuals
  - e.g. production of NT cannot keep up with the body's demands or are not effectively removed from the system



->High stress (e.g. environment)

The Brain: Neurotransmitters

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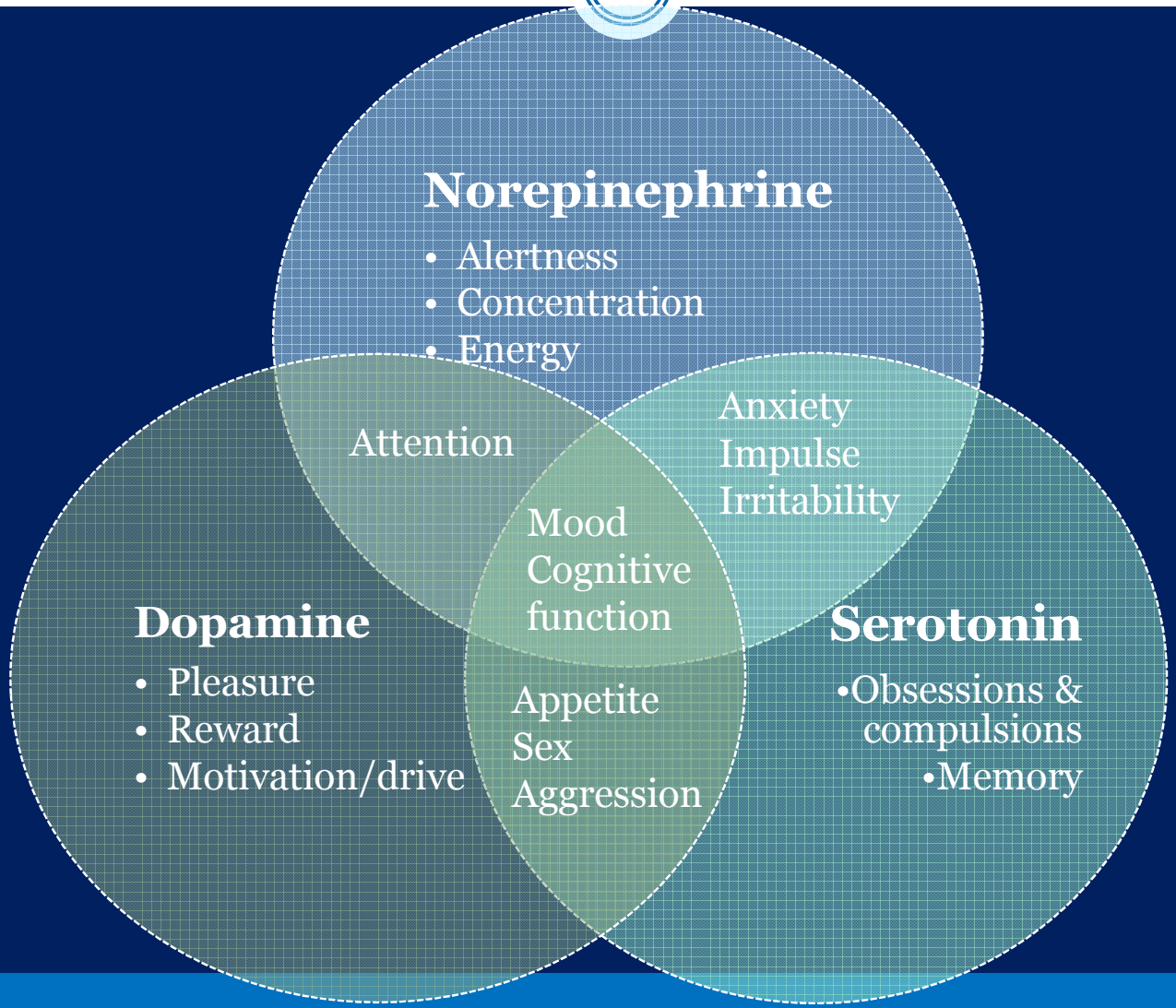
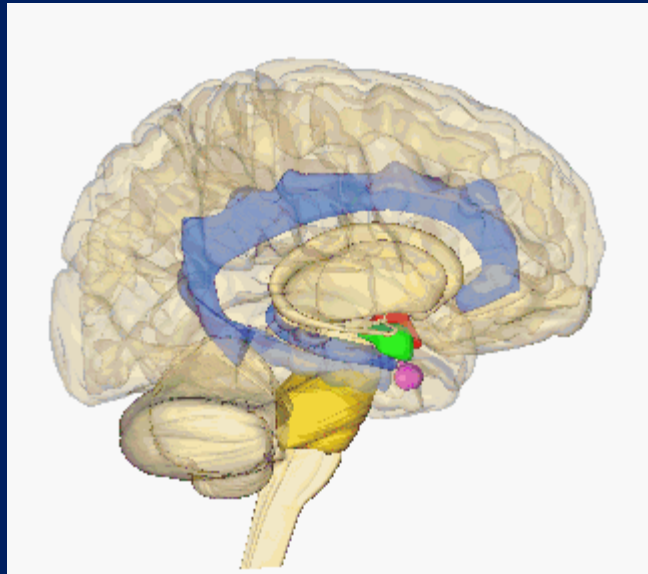


Limbic System

- Located in the middle of the brain encompassing:
  - the thalamus (sensory input),
  - the hippocampus (memory),
  - the amygdala (emotions), and
  - the hypothalamus (elemental drives)
- *Fight* or *Flight* - survival instincts
  - May be constantly activated resulting in hypervigilence or panic attacks
- *Reward Pathway* – related to substance use and risky behaviors
  - High or low activation of dopamine



Cerebral Cortex

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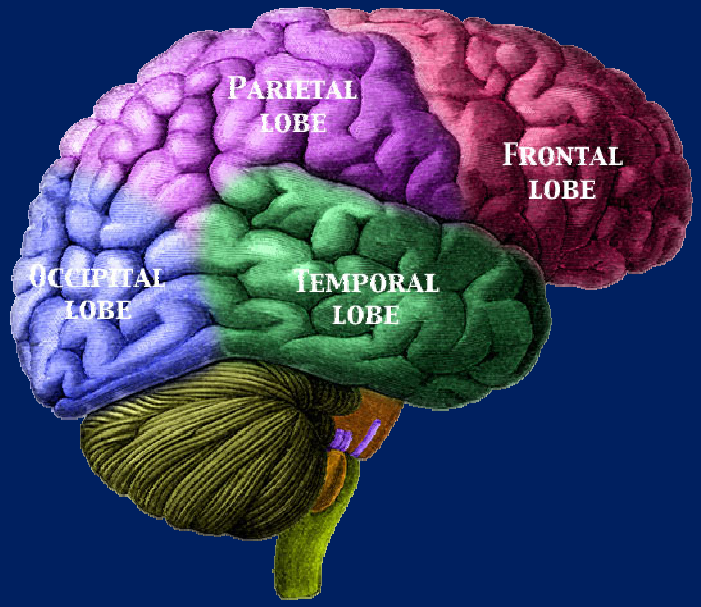
- Surrounded by cerebrospinal fluid
- Control Center for highest levels of thinking, moving, and behaving
- Right and Left Hemisphere
- Four Lobes
  - Frontal Lobe
  - Temporal Lobe
  - Parietal Lobe
  - Occipital Lobe



Who are you?

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Left Brain ⟷ **Right Brain**

- Analytical?
- Process things linearly?
- Use logic to solve problems?
- Like things to be done in a certain order?
- Look at the finer details?

- Creative?
- Process information holistically?
- Use your gut or intuition to solve problems?
- Can move from task to task freely?
- Look at more abstract concepts?

Right and Left Hemisphere

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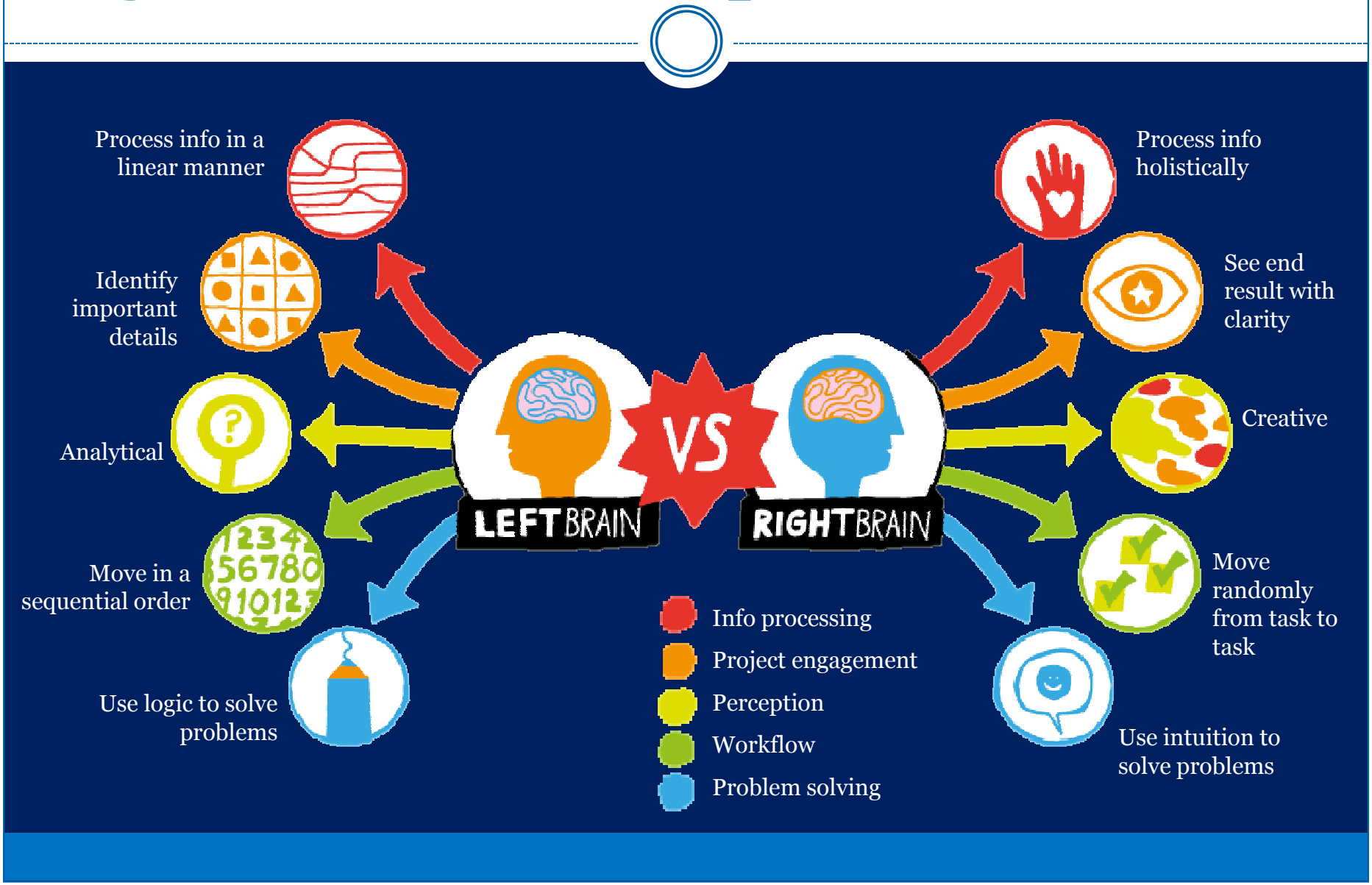

Frontal Lobe

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- Located in the front of the brain behind the forehead

Frontal Lobe

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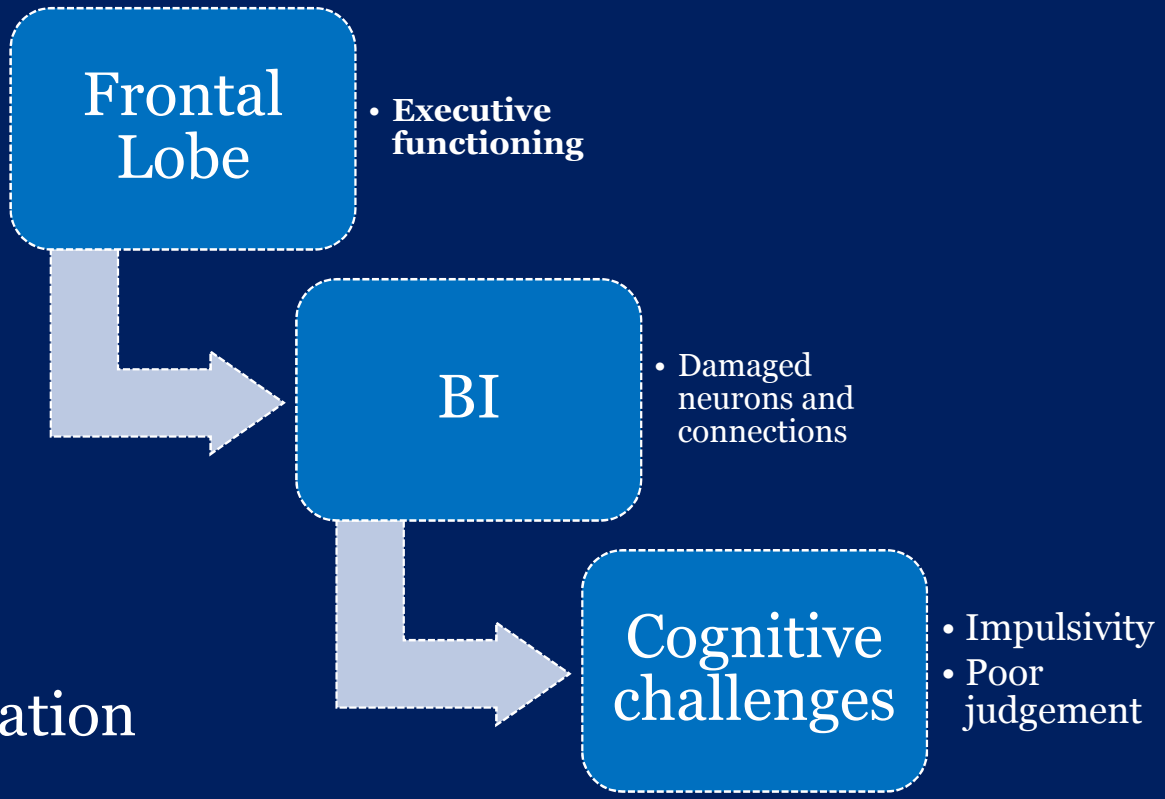
- Initiation
- Problem Solving
- Judgement
- Planning
- Organization
- Self-Monitoring
- Abstract Thought
- Attention/ Concentration
- Memory



Parietal Lobe

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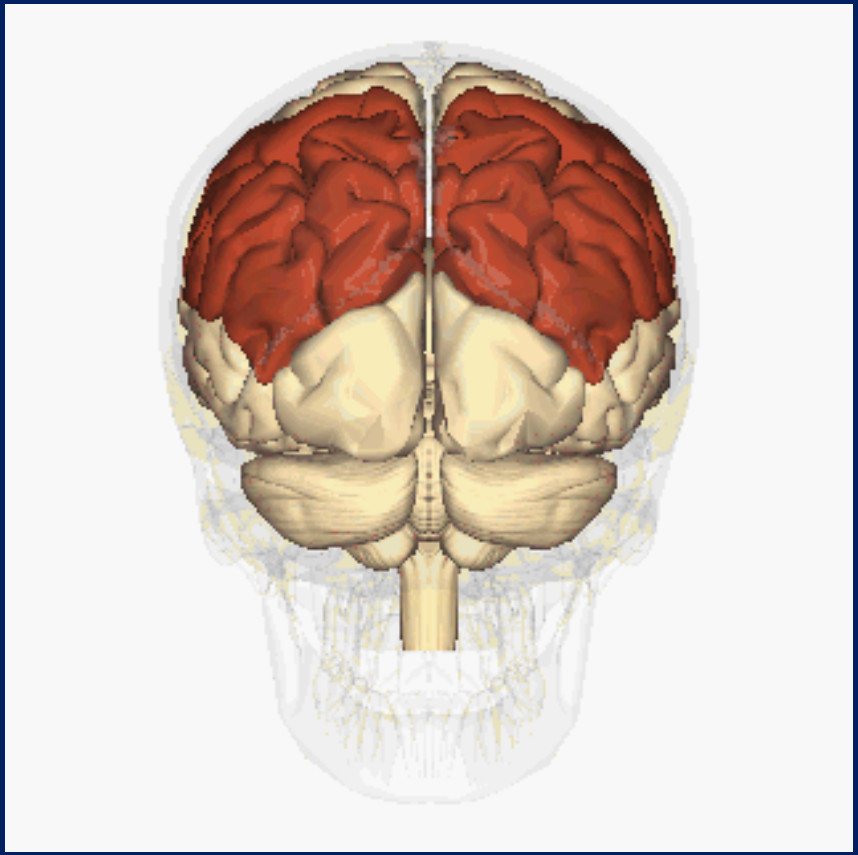
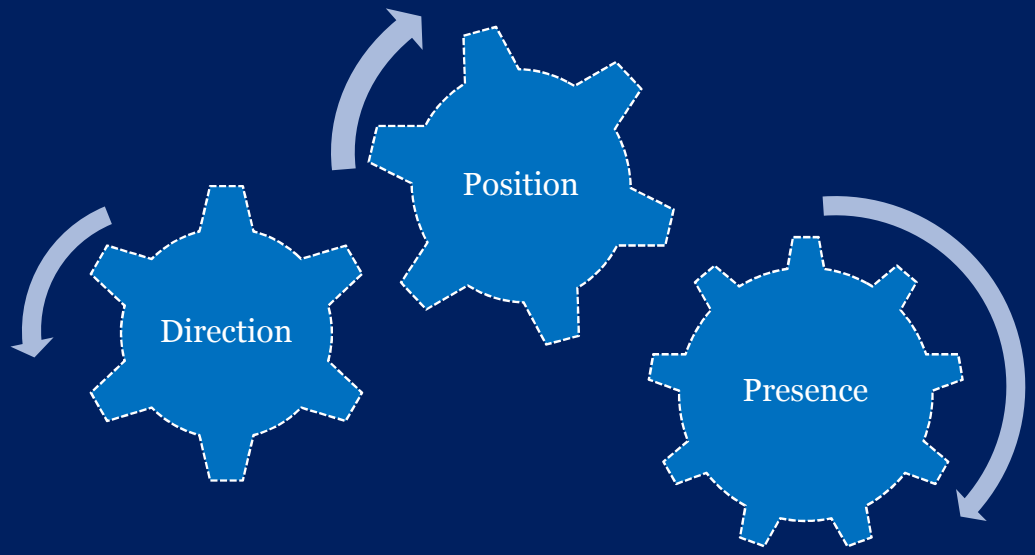
- Located behind the frontal lobes at the top of the brain.



Parietal Lobe

- Controls sensation such as touch and pressure
- Visual spatial perception
- Integrating information, understanding what words mean and the surrounding world



Temporal Lobe

- Located on the right and left side of the brain just above the ears

Temporal Lobe

- Memory
  - *Working, short-term, long-term*
- Hearing
- Understanding/producing language
  - *Aphasia*
    - Understanding vs. Production
- Organization and sequencing
- Ability to identify and sort new info

Occipital Lobe

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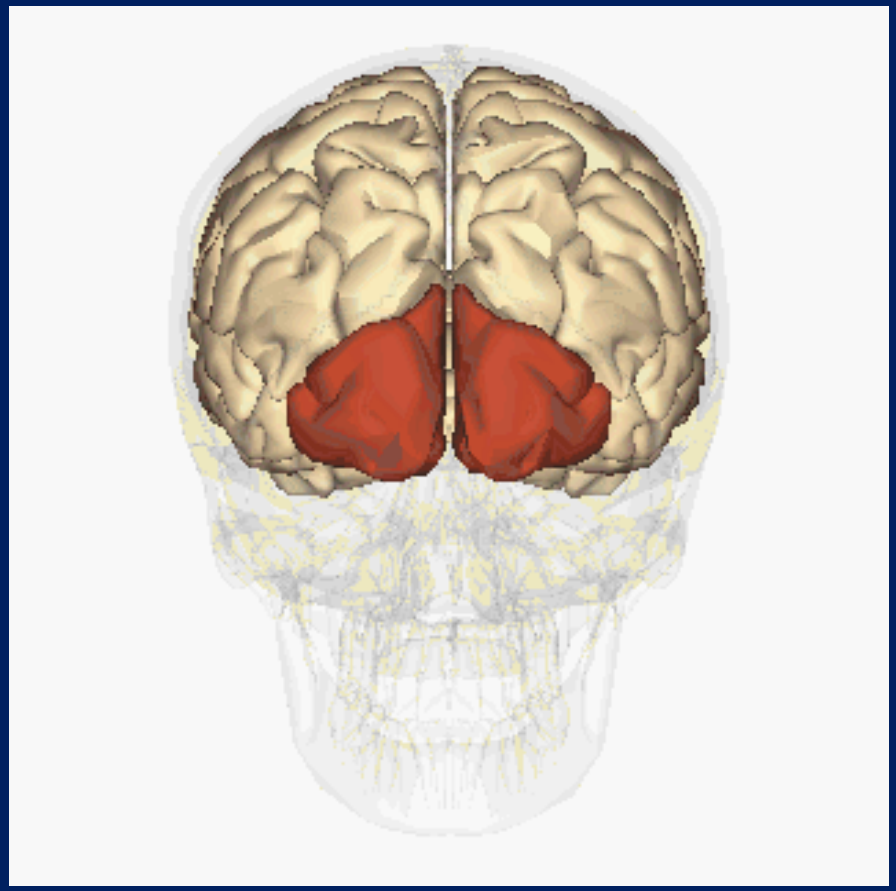
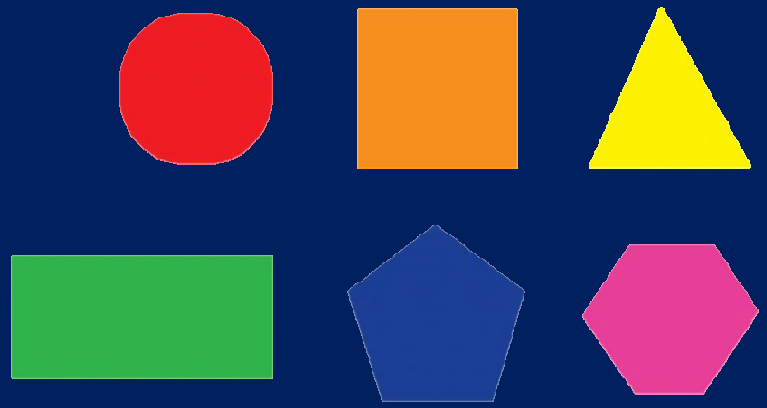
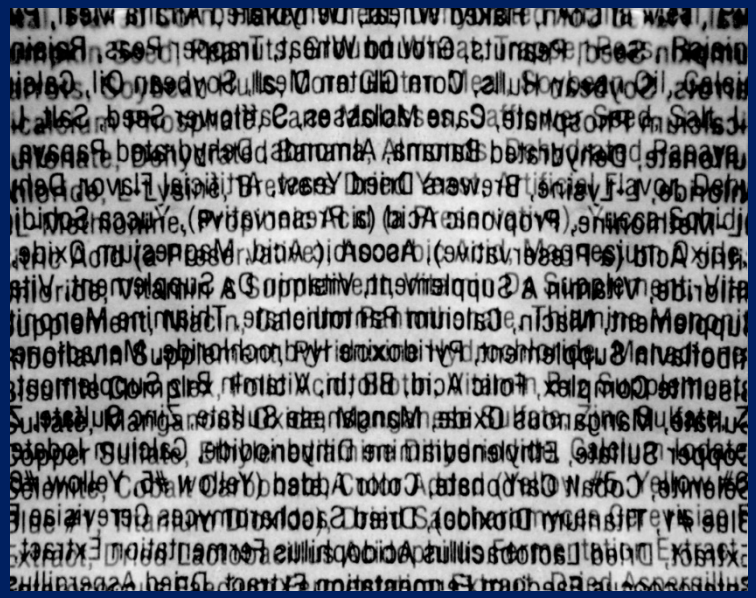
- Located toward the lower back of the brain



Occipital Lobe

- Vision
- Ability to process visual information
- Ability recognize shapes, colors, letters, and words





Key Ideas

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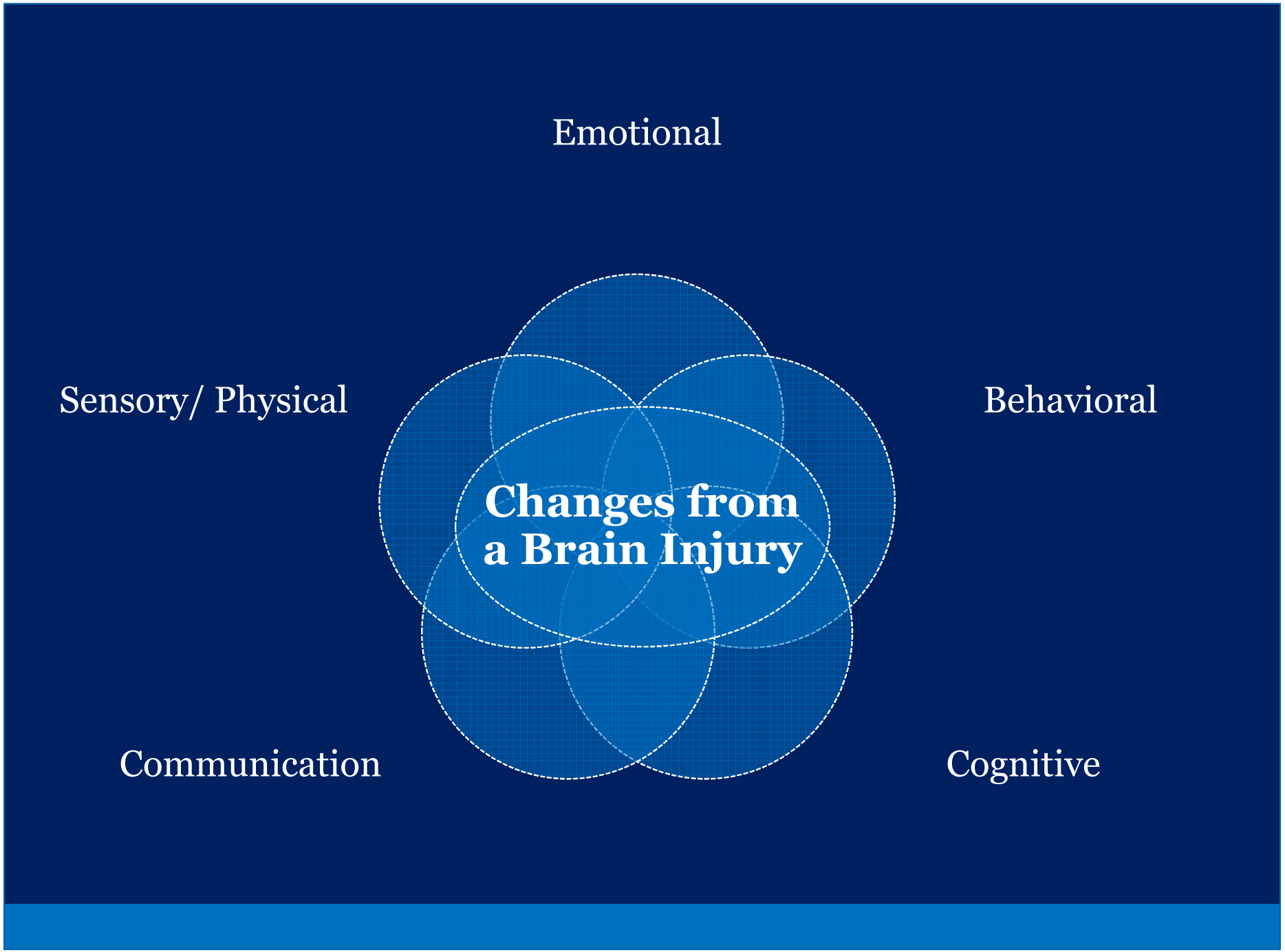
There are numerous causes of brain injury and can happen to anyone

Severity does *not necessarily* correspond to long-term challenges

Brain injury can impact neurons, glial cells, neurotransmitters, or their connections – resulting in functional, cognitive, emotional, and behavioral changes

It can be important to understand the inter-workings of the brain in order to comprehend the impact of a brain injury


Emotional
Sensory/ Physical
Behavioral
Changes from a Brain Injury
Communication
Cognitive

Physical Changes

- Weakness or paralysis
- Balance/coordination difficulties
- Sensory changes
  - *(Smell, taste, vision, hearing)*
- Headaches
- Changes in sleep patterns
- Fatigue
- Seizures
  - *Alcohol increases the risk of seizures following a TBI*

Physical Changes: Strategies

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- Accommodations
  - Ambulatory aids (wheelchair, cane, etc.)
  - Specialized tools for daily living activities
  - Assistive technological devices including eye-tracking or voice-text software
- Patience
- Create small goals rather than large unattainable ones

Cognitive Changes (Thinking)

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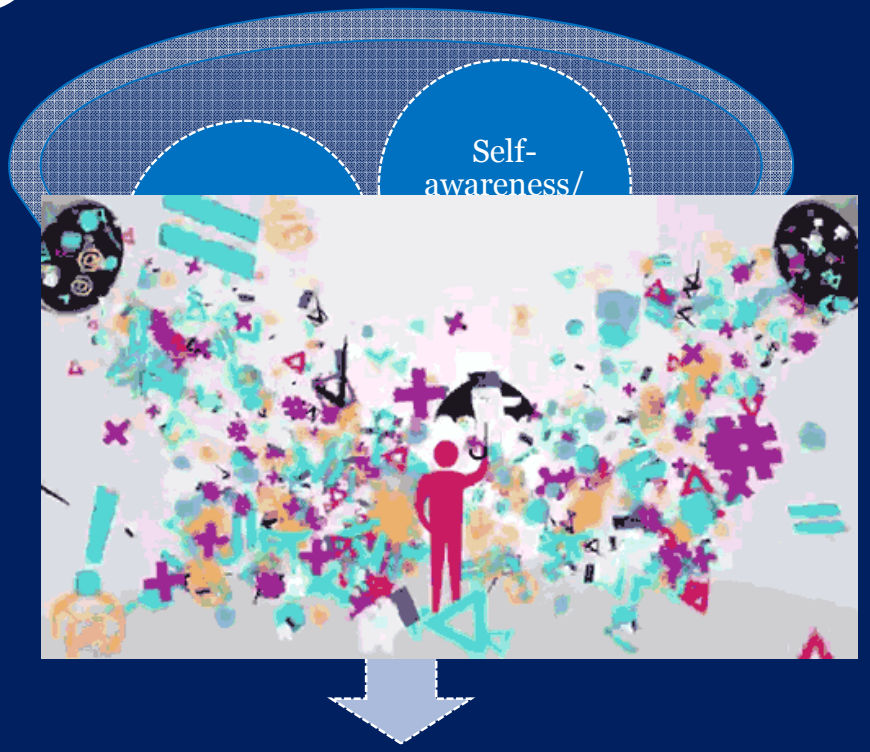
- Difficulty with:
  - Short-term memory
  - Attention/concentration
  - New learning
  - Initiating activities
  - Planning
  - Organization
  - Follow-through
  - Reasoning, problem-solving and decision-making



Executive functioning

Cognitive Challenges

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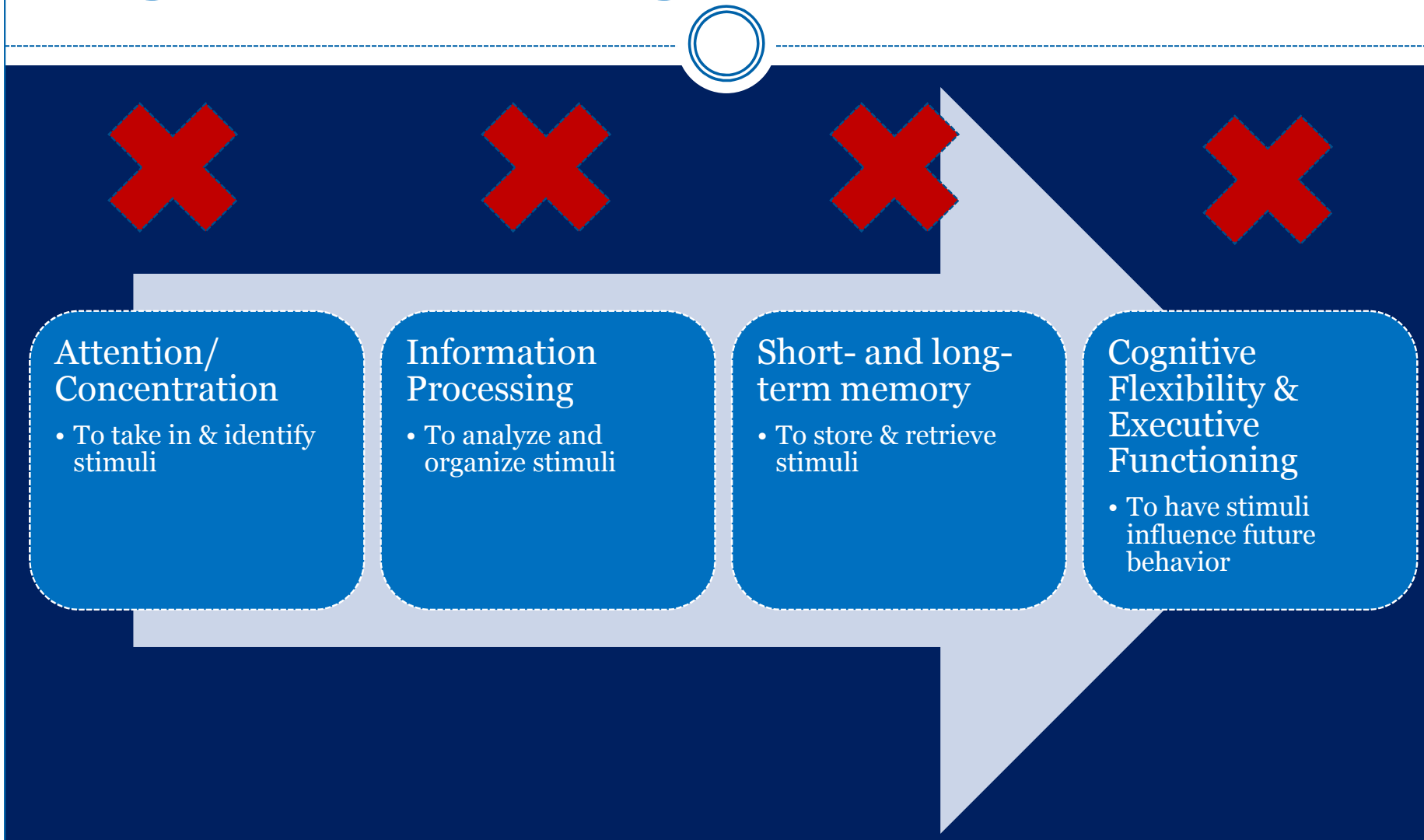

Cognitive Changes: Strategies

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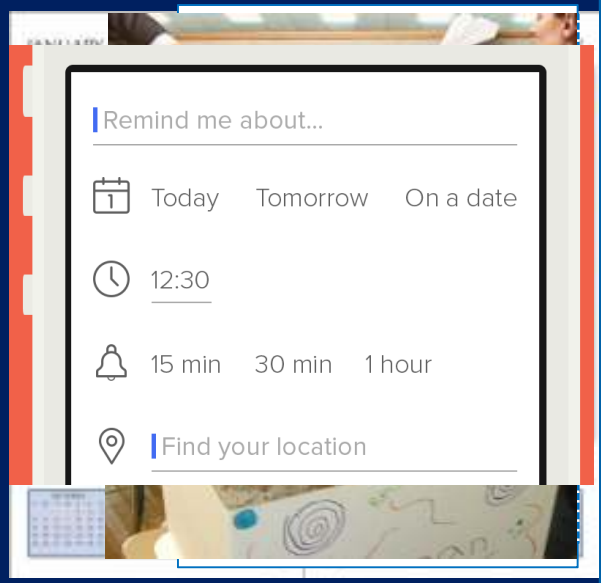
- Use a planner, tape recorder, checklist, phone or tablet apps to remember appointments and meetings
- Use of timers, watch alarms, talking watches, phone or tablet apps for prompts regarding time to do activities
- Use of step-by-step written instructions and/or verbal instructions to complete tasks
- Post simple reminder signs for prompts
- Decrease distractions in the room



Social Interaction and Communication Changes

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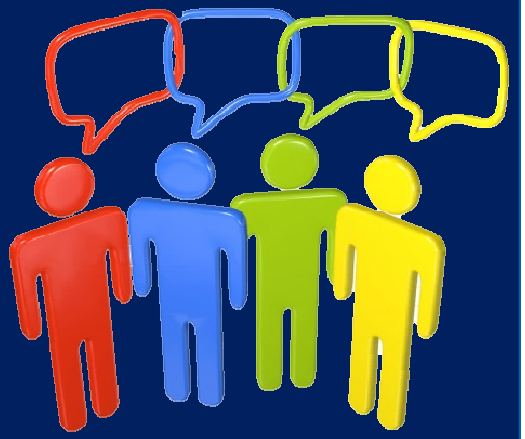
- Difficulty starting conversation
- Has a hard time finding words
- Struggles to follow conversation

- Says exactly what is on their mind
  - Impulsivity
- Diminished self-esteem and confidence

- Overtakes the conversation
- Difficulty reading social cues/ body language
- Unaware of personal space or boundaries of others



Social Interaction and Communication Strategies

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- Tell the individual when you have difficulty following their conversation
- Model clear topic changes for the individual to observe
- Respectfully tell the individual of repeated the same comments or shared the same story several times
- Choose between open ended and yes-no questions
- Rephrase the question if the person is having difficulty understanding
- Wait and give the person time to respond
- You may be able to cue by giving the first sound of the word
- Subtle non-verbal cues

Social Interaction and Communication Strategies

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Difficulty with word finding/production

Grid Player, Verbally, Communication board/book

Excessive communication

Behavioral and Emotional Changes

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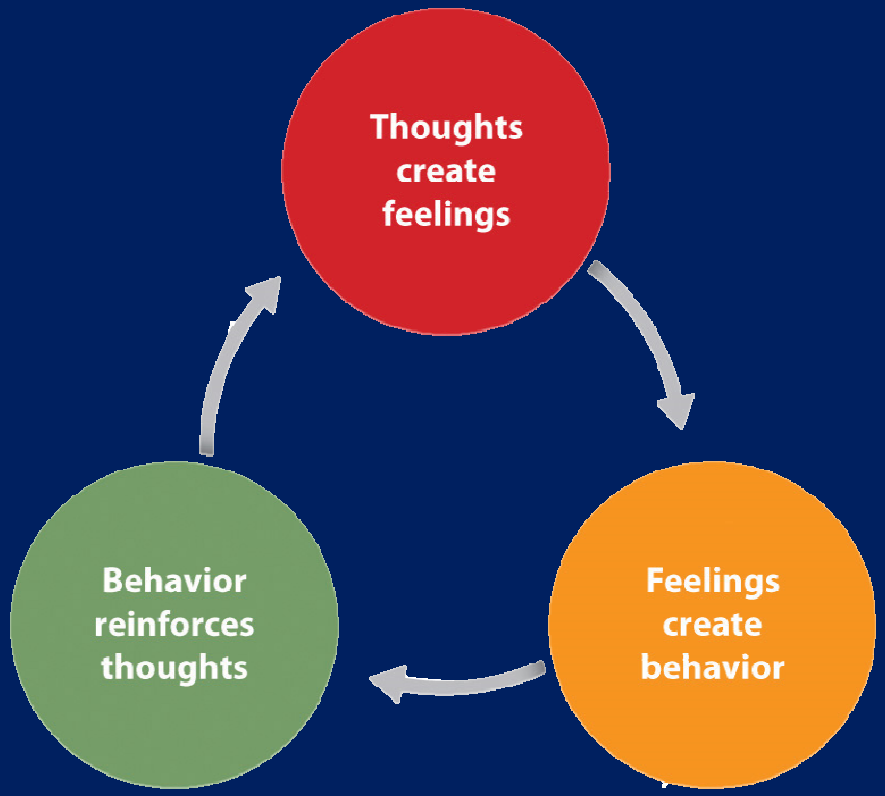
- Anxiety
- Aggression and irritability
- Depression
- Self-centered thinking
- Difficulty controlling emotions – anger/ frustration
- Impaired self-awareness
- Paranoia, mania, hallucinations, delusions
- Inappropriate sexual behaviors



Mental Health, Behaviors, and Brain Injury

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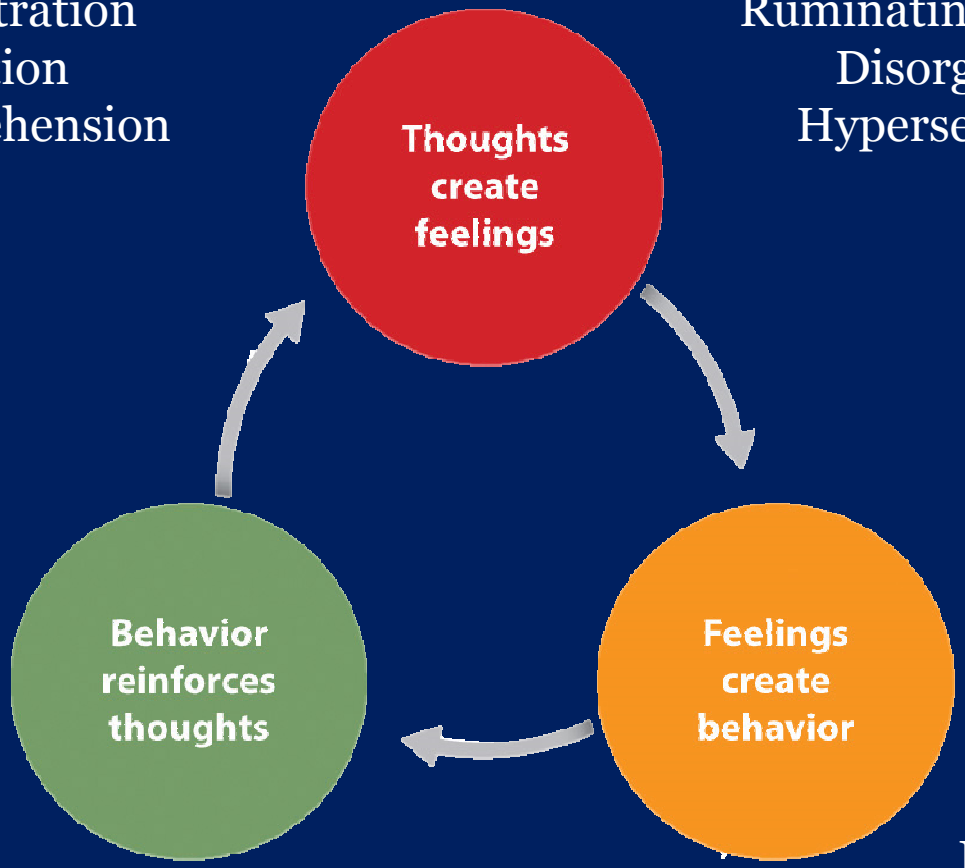
Concentration
Production
Comprehension

Ruminating ideas
Disorganized
Hypersensitive



Irritable
Combative
Isolated
Impulsive

Anxiety
Depression
Psychosis
Anger
Guilt
Embarrassment

Mood Disorders & BI

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Depression

- A feeling of sadness, loss, despair or hopelessness that does not get better over time
- Cause for concern:
  - *losing interest in usual activities and interfering with daily life*
  - *occurs at least several days per week and lasts for more than two weeks*

- Most common physiological symptom after brain injury
- Best predictor of psychosocial adjustment post-injury

Mood Disorders & BI

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- Symptoms of depression include:

Feeling down, sad, blue or hopelessac	Loss of interest or pleasure in usual activities	Feeling worthless, guilty, or that you are a failure
Changes in sleep or appetite	Difficulty concentrating	Withdrawing from others
Tiredness or lack of energy	Moving or speaking more slowly, or feeling restless or fidgety	Thoughts of death or suicide

Behavioral Strategies

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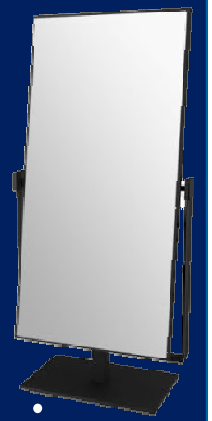
- Do not ignore the behavior
- Never reinforce the behavior
- Provide on-the-spot feedback
  - Be specific about *why* change is needed
- Provide positive feedback
- Provide a positive model for behavior
- Teach social interaction skills

Emotional Strategies

- **Listening**
  - If trouble identifying or expressing, mention triggers you have noticed and validate their feelings
- Pay attention to body language
- **Asking** how to help
- Patience and trying to understand their point of view
- Avoid ignoring or judging negative emotions even if they make you feel uncomfortable



Behavioral and Emotional Strategies

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Medications

- Antidepressant/ anxiety medications

Psychotherapeutic (counseling)

- Cognitive-behavioral therapy or CBT
- Behavioral activation therapy

Combination of approaches

- Such as antidepressant medication plus sessions with a trained counselor to work on changing behavior

Other approaches:

- Exercise
- Acupuncture
- Mindfulness
- Biofeedback
- Yoga
- Brain injury support groups

Key Ideas: Changes after a Brain Injury

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Change	• *Affects of BI*
Physical	• Changes in brain structure (neurons & neurotransmitters) • Could lead to mental illness and behavioral symptoms
Cognitive	• Changes in executive functioning • Difficulty with impulse control and decision-making • Changes in thought processes leading to behaviors
Emotional & Behavioral	• Lifestyle and brain changes can lead to anxiety, depression, PTSD • Use of drugs/alcohol as coping strategy • Important to identify hidden emotions/thoughts and triggers

TBI Screening

Currently being piloted at:

- Local Management Entities/Managed Care Organizations (LME/MCO)
  - Alliance Behavioral Health, Eastpointe, Cardinal Innovations Solutions, Trillium, Vaya Health, Partners Behavioral Health, Sandhills
- CommWell Federally Qualified Health Centers (FQHC)

Purpose: to investigate the number of individuals with TBI in North Carolina thereby affecting services and funding for individuals with brain injury

TBI Screening: Could be as Easy as 1, 2, 3

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1. Have you ever **hit your head** or been hit on the head, including being told you had a concussion?

2. Did you **lose consciousness** or experience a period of being dazed and/or confused because of the injury to the head?

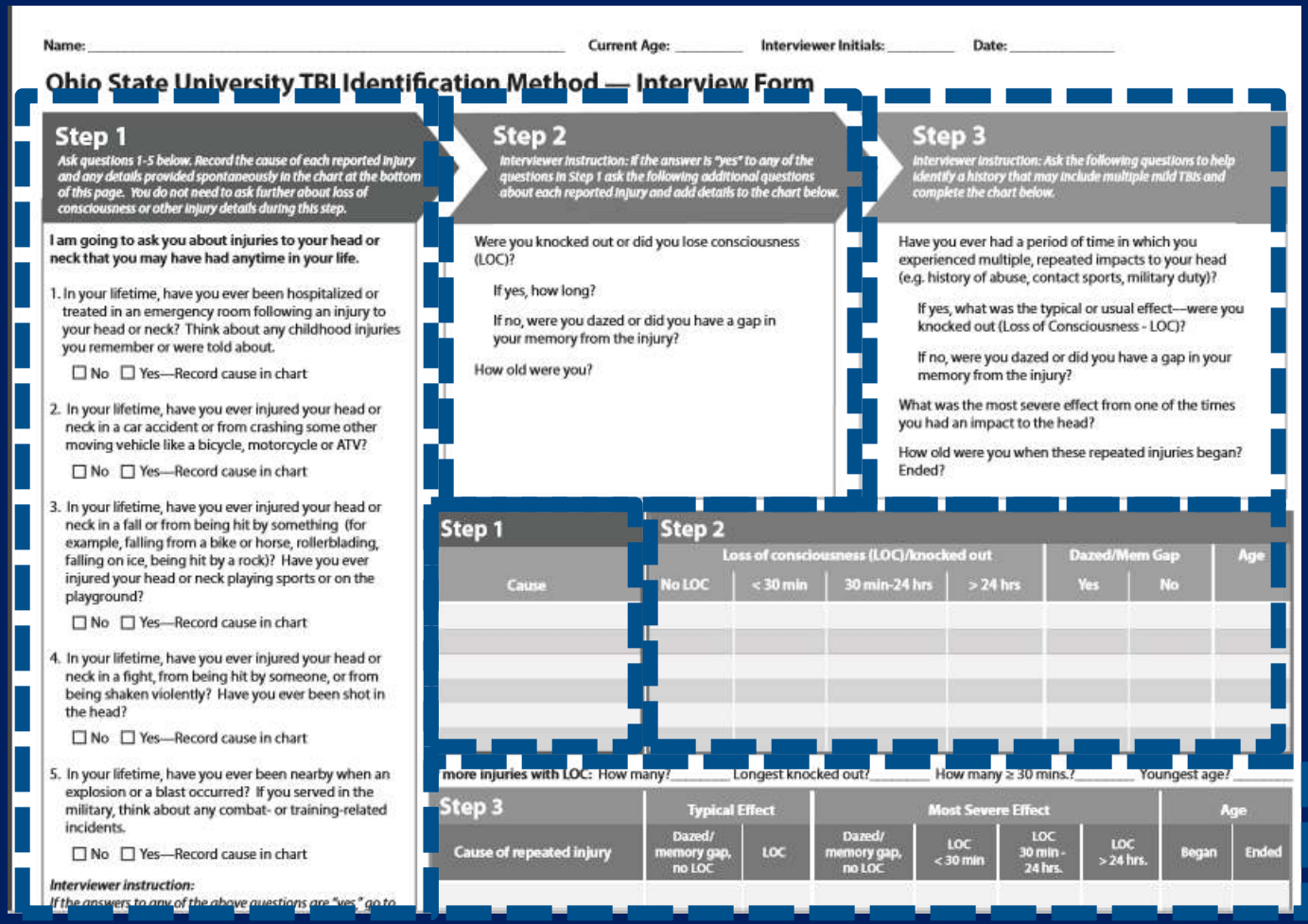
3. Have you ever had a period of time in which you experienced **multiple, repeated impacts** to your head (e.g. history of abuse, contact sports, military duty)?

Available TBI Screening Tools

- Ohio University TBI Identification Method
  - 3 steps
  - For all individuals
- Defense and Veterans Brain Injury Center (DVBIC) TBI Screening Tool
  - 3 questions
  - For service members

Ohio University TBI Identification Method

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA



Name: _____ Current Age: _____ Interviewer Initials: _____ Date: _____

Ohio State University TBI Identification Method — Interview Form

Step 1

Ask questions 1-5 below. Record the cause of each reported injury and any details provided spontaneously in the chart at the bottom of this page. You do not need to ask further about loss of consciousness or other injury details during this step.

I am going to ask you about injuries to your head or neck that you may have had anytime in your life.

1. In your lifetime, have you ever been hospitalized or treated in an emergency room following an injury to your head or neck? Think about any childhood injuries you remember or were told about.
   ☐ No ☐ Yes—Record cause in chart
2. In your lifetime, have you ever injured your head or neck in a car accident or from crashing some other moving vehicle like a bicycle, motorcycle or ATV?
   ☐ No ☐ Yes—Record cause in chart
3. In your lifetime, have you ever injured your head or neck in a fall or from being hit by something (for example, falling from a bike or horse, rollerblading, falling on ice, being hit by a rock)? Have you ever injured your head or neck playing sports or on the playground?
   ☐ No ☐ Yes—Record cause in chart
4. In your lifetime, have you ever injured your head or neck in a fight, from being hit by someone, or from being shaken violently? Have you ever been shot in the head?
   ☐ No ☐ Yes—Record cause in chart
5. In your lifetime, have you ever been nearby when an explosion or a blast occurred? If you served in the military, think about any combat- or training-related incidents.
   ☐ No ☐ Yes—Record cause in chart

Interviewer instruction:
If the answers to any of the above questions are "yes," go to

Step 2

Interviewer instruction: If the answer is "yes" to any of the questions in Step 1 ask the following additional questions about each reported injury and add details to the chart below.

Were you knocked out or did you lose consciousness (LOC)?

If yes, how long?

If no, were you dazed or did you have a gap in your memory from the injury?

How old were you?

Step 3

Interviewer instruction: Ask the following questions to help identify a history that may include multiple mild TBIs and complete the chart below.

Have you ever had a period of time in which you experienced multiple, repeated impacts to your head (e.g. history of abuse, contact sports, military duty)?

If yes, what was the typical or usual effect—were you knocked out (Loss of Consciousness - LOC)?

If no, were you dazed or did you have a gap in your memory from the injury?

What was the most severe effect from one of the times you had an impact to the head?

How old were you when these repeated injuries began? Ended?

Step 1	Step 2						
	Loss of consciousness (LOC)/knocked out				Dazed/Mem Gap		Age
Cause	No LOC	< 30 min	30 min-24 hrs	> 24 hrs	Yes	No	

more injuries with LOC: How many? _____ Longest knocked out? _____ How many ≥ 30 mins.? _____ Youngest age? _____

Step 3	Typical Effect		Most Severe Effect				Age	
Cause of repeated injury	Dazed/ memory gap, no LOC	LOC	Dazed/ memory gap, no LOC	LOC < 30 min	LOC 30 min - 24 hrs.	LOC > 24 hrs.	Began	Ended

Step 1: any previous injuries to the head of neck

Step 2: any periods of loss of consciousness

Step 3: any situations that make vulnerable to repeated injury

Ohio University TBI Identification Method

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA

Record findings

Interpret data

Name: _____ Current Age: _____ Interviewer Initials: _____ Date: _____

Step 1	Step 2						
	Loss of consciousness (LOC)/knocked out				Dazed/Mem Gap		Age
Cause	No LOC	< 30 min	30 min-24 hrs	> 24 hrs	Yes	No	

If more injuries with LOC: How many?_____ Longest knocked out?_____ How many ≥ 30 mins.?_____ Youngest age? _____

Step 3	Typical Effect		Most Severe Effect				Age	
Cause of repeated injury	Dazed/ memory gap, no LOC	LOC	Dazed/ memory gap, no LOC	LOC < 30 min	LOC 30 min - 24 hrs.	LOC > 24 hrs.	Began	Ended

Interpreting Findings

A person may be more likely to have ongoing problems if they have any of the following:

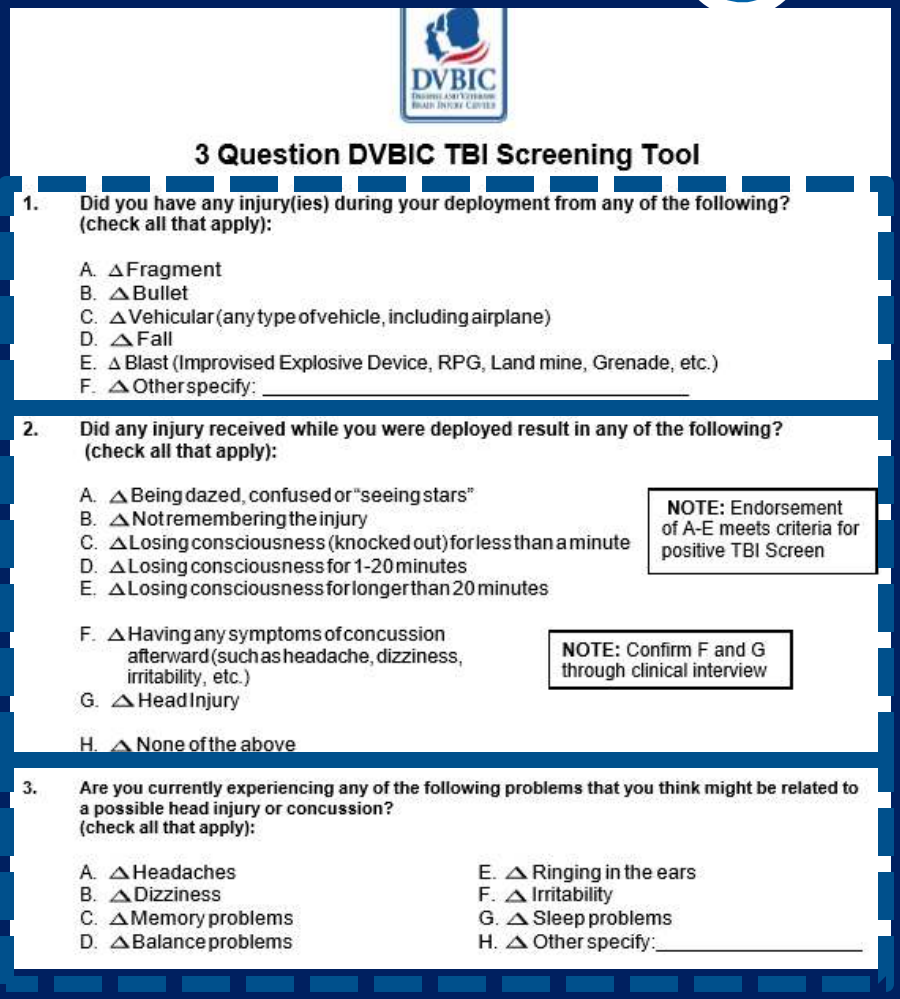
- **WORST**
  One moderate or severe TBI
- **FIRST**
  TBI with loss of consciousness before age 15
- **MULTIPLE**
  2 or more TBIs close together, including a period of time when they experienced multiple blows to the head
- **RECENT**
  A mild TBI in the last weeks or a more severe TBI in the last months
- **OTHER SOURCES**
  Any TBI combined with another way that their brain function has been impaired

For more information about TBI or the OSU TBI Identification Method visit:

- Ohio Valley Center at OSU
  www.ohiovalley.org/informationeducation
- BrainLine.org
  www.brainline.org

Defense & Veterans Brain Injury Center TBI Screening Tool

Brain Injury Association of North Carolina



DVBIC

3 Question DVBIC TBI Screening Tool

1. Did you have any injury(ies) during your deployment from any of the following? (check all that apply):

A. △ Fragment
B. △ Bullet
C. △ Vehicular (any type of vehicle, including airplane)
D. △ Fall
E. △ Blast (Improvised Explosive Device, RPG, Land mine, Grenade, etc.)
F. △ Other specify: _____

2. Did any injury received while you were deployed result in any of the following? (check all that apply):

A. △ Being dazed, confused or "seeing stars"
B. △ Not remembering the injury
C. △ Losing consciousness (knocked out) for less than a minute
D. △ Losing consciousness for 1-20 minutes
E. △ Losing consciousness for longer than 20 minutes

NOTE: Endorsement of A-E meets criteria for positive TBI Screen

F. △ Having any symptoms of concussion afterward (such as headache, dizziness, irritability, etc.)
G. △ Head Injury

NOTE: Confirm F and G through clinical interview

H. △ None of the above

3. Are you currently experiencing any of the following problems that you think might be related to a possible head injury or concussion? (check all that apply):

A. △ Headaches
B. △ Dizziness
C. △ Memory problems
D. △ Balance problems
E. △ Ringing in the ears
F. △ Irritability
G. △ Sleep problems
H. △ Other specify: _____

1. (Specific injury cause)

2. (Resulting condition)

3. (Current condition)

Positive Screen – What Next?

Brain Injury Association of North Carolina

Screening result

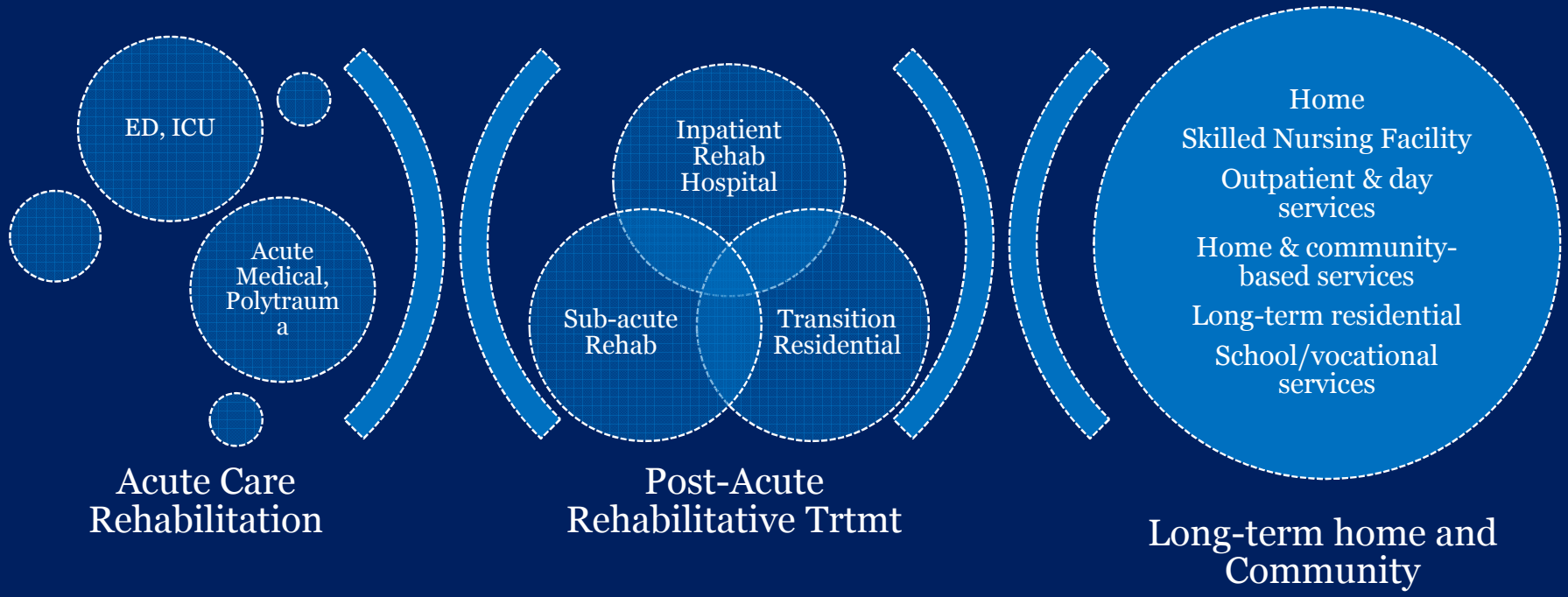
Diagnosis of brain injury

- All involved with care should be notified of a positive screening and documentation should be obtained
- Learn more about the person and their injury
  - How it affects their daily life
- Emphasize the use of compensatory strategies
  - Apps, planners, timers, recorders, assistive technology, etc.
- Consult with other professionals to determine appropriate services

Importance of TBI Screening

- Screening is essential in determining if a brain injury has occurred
- Some individuals may *not realize* they have sustained a brain injury
  - May go unnoticed in co-occurrence with mental illness
- Once an individual has a positive screening result, correct services can be determined and utilized – affecting understanding, health, and quality of life

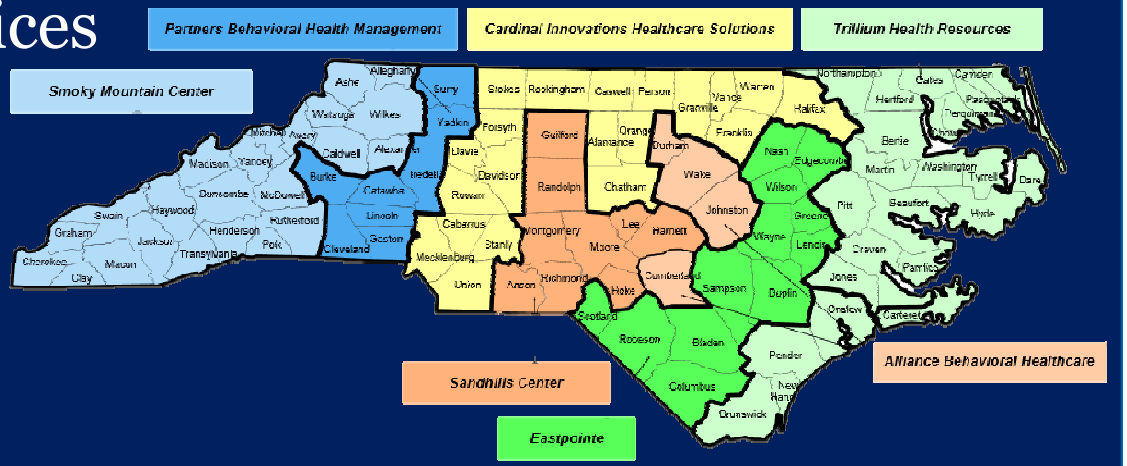
Accessing Resources & Services in the Community



Local Management Entities/Managed Care Organizations (LME/MCO)

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA

- Manages mental health, substance use and intellectual/developmental disability services
- Connect individuals and families to the help they need when they need it
- Responsible for managing state and federally funded services for people who receive Medicaid, are uninsured or cannot afford services



Hospitals & Rehabilitation

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA

- *Things to consider:*
  - Amount of therapy
  - Length of stay
  - Insurance

- UNC Hospitals – Physical Medicine and Rehabilitation
- Wake Forest Baptist ABI Program
- WakeMed Brain Injury Program
- Carolinas Rehabilitation
- Vidant Health
- Mission Health

Neurologist vs. Neuropsychologist

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA

Neurologist

- specialists who assess, diagnose and treat disorders of the nervous system. They help patients who have experienced injuries or trauma to the central nervous system
- use a variety of tools to perform their jobs, such as MRIs, observation and examination to measure factors like a patient's reflexes, senses and brain function

Neuropsychologist

- assessing and treating a wide range of neurobehavioral problems of the central nervous system
- treat the cognitive, mental and behavioral effects of brain disorders
- perform neuropsychological evaluations and psychological tests as well as offer specific interventions based on the patient's concerns and problems

Day Programs & Vocational

- *Things to consider:*
  - Diagnosis
  - Desire to work
  - Location
  - Funding
- Division of Vocational Rehabilitation
  - Local departments throughout state
  - Assist in employment
- Day Programs
  - Community Partnerships, Gateway Clubhouse, Hinds Feet Farm, Lifespan Creative Campus – multiple locations

Residential

- *Things to consider:*
  - Amount of assistance needed (daily activities, health care needs, etc.)
  - Amount of supervision
  - Larger or smaller
  - Behavioral challenges
  - Funding

- Home Care
- Lippard Lodge – Winston Salem
- ReNu Life – Goldsboro
- Learning Services – Raleigh & Creedmore
- NeuroRestorative – Raleigh
- Hinds Feet Farm – Hendersonville

The Value of BIANC

BRAIN INJURY ASSOCIATION

OF NORTH CAROLINA

About Us

Brain Injury Association of North Carolina

- Founded in 1982 by family members
- Non-Profit 501(c)3 organization
- Affiliate of the Brain Injury Association of America
- Governed by a Board of Directors
- Supported in part by federal and state grant contracts

ACL Administration for Community Living

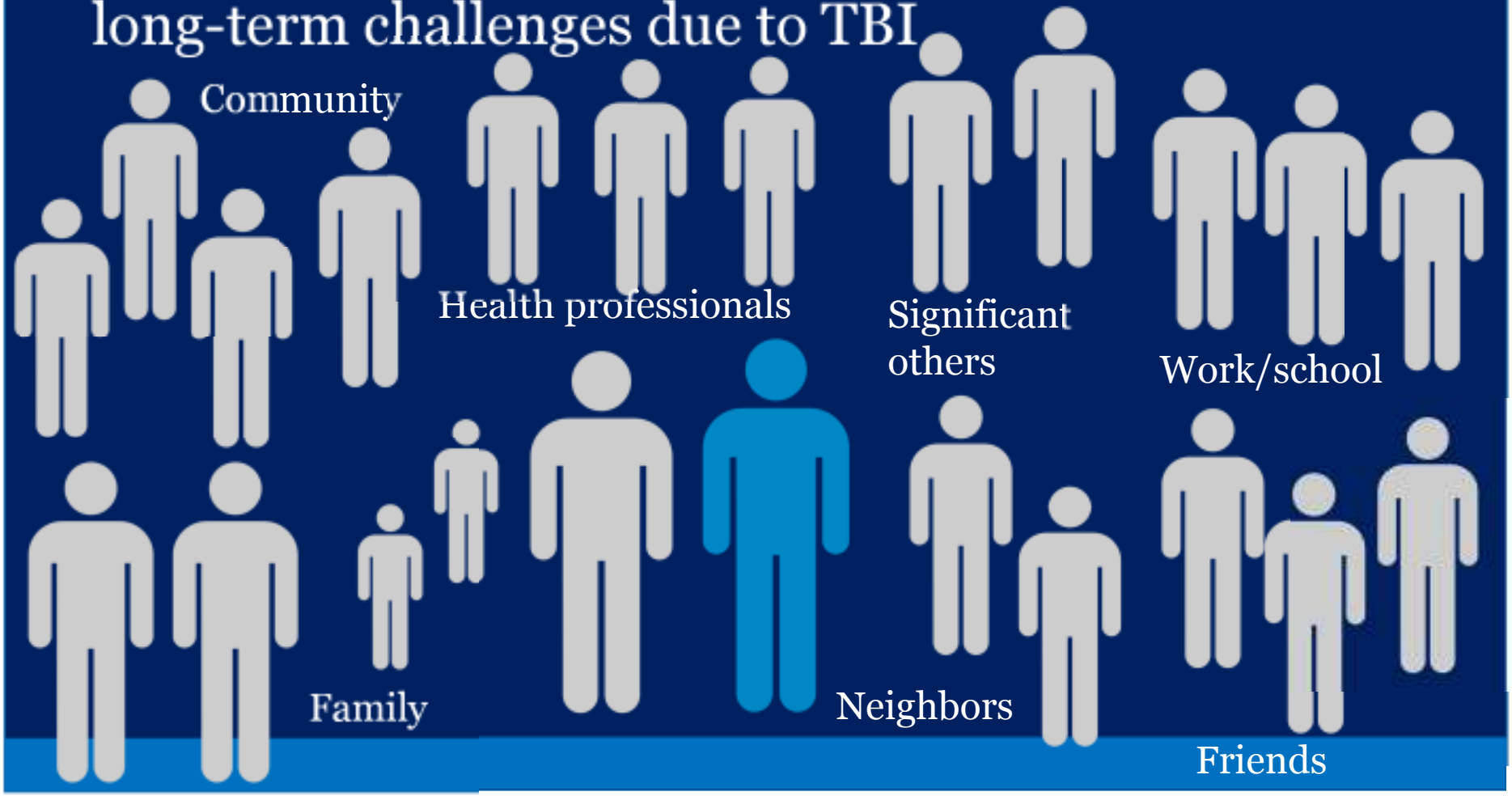
dhhs nc department of health and human services

"Offering help, hope, and a voice for people with brain injury and their families…"

Brain Injury Facts

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA

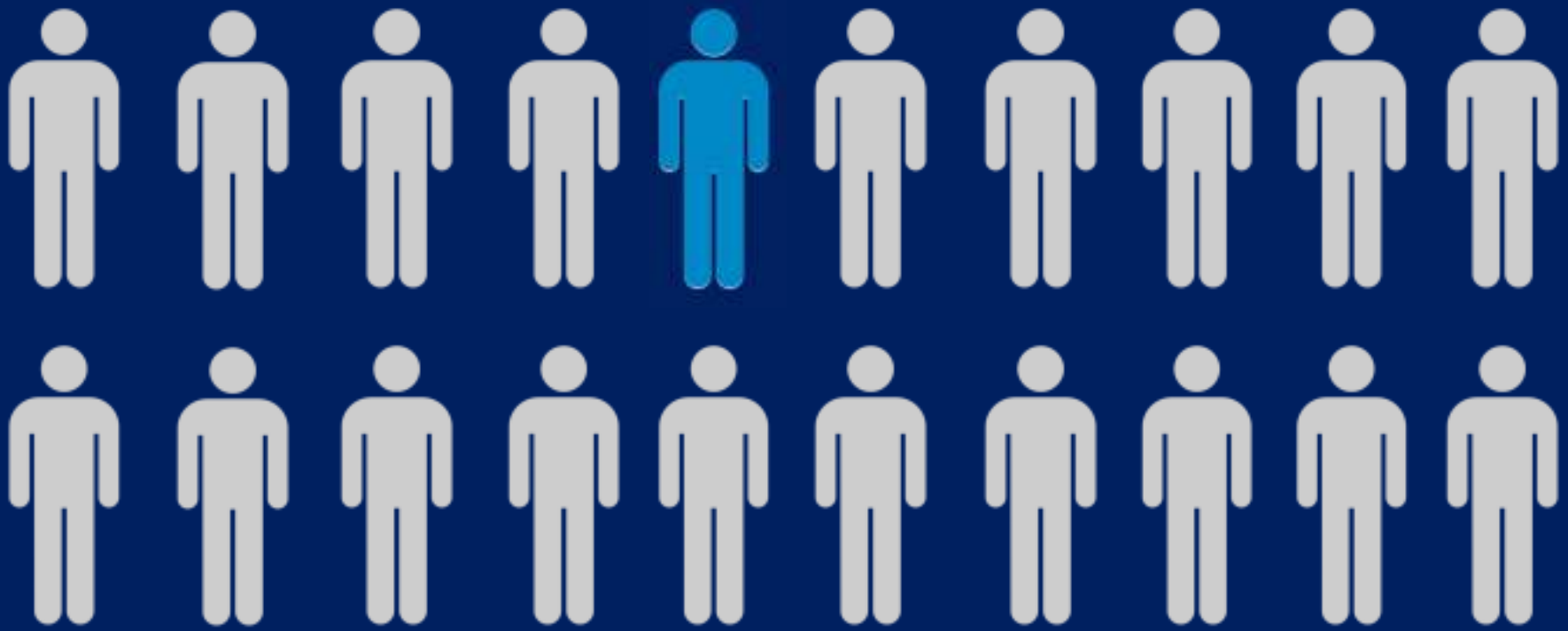
- 201, 800 people in North Carolina are living with long-term challenges due to TBI



Brain Injury Facts

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA

- **Only about 5%** of individuals with severe TBI have funding for long term treatment



Regional Offices & Brain Injury Resource Centers

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA

- Materials available for survivors, family members, and professionals
- Information and referrals
- Training opportunities
- Community partnerships

Carrying Out Our Mission

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA

Education & Training

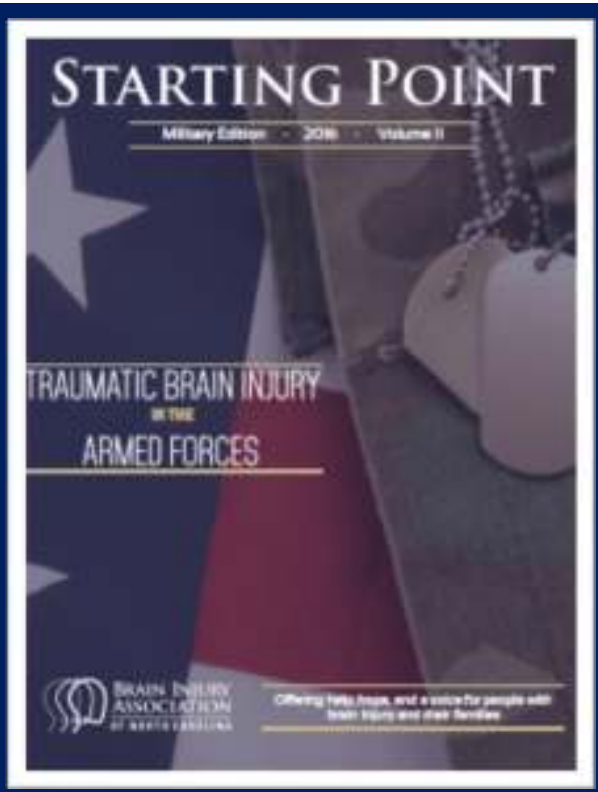
Outreach & Support

Awareness & Prevention

Advocacy & Involvement

Education & Training

- Family Conference
- Professional Conference
  - 2017 Asheville, NC
- Certified Brain Injury Specialist (CBIS) classes
- Monthly e-Blasts
- Specialized trainings
- Quarterly “Starting Point” Newsletter
- Printed brochures & materials



ACBIS Academy of Certified Brain Injury Specialists

Outreach & Support

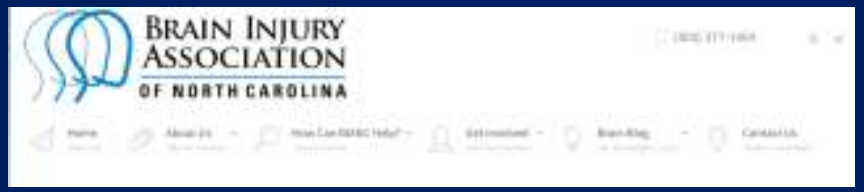
- Facilitate connections to appropriate services
  - Help survivors and families find the resources and support they need in their community
- Free, one year complimentary memberships available

Support Groups

- More than 30 groups statewide
- Pediatric and adult-focused options
  - Survivors and carepartners
- Led by community professionals and volunteers

Updated Website & Resource Book: www.bianc.net

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA



Resource Categories

- Abuse Support
- Advocacy
- Assistive Tech
- Caregiver Support
- Counseling
- Day Programs
- Educational
- Financial
- Guardianship
- Legal
- LME/MCO
- Neurology
- Neuropsychiatry
- Neuropsychology
- Pediatrics
- Recreational
- Rehab Physicians
- Rehab Services
- Residential
- Respite Care
- Speech Pathology
- Substance Abuse
- Support Groups
- Veteran Services
- Vision
- Vocational Rehab

Outreach & Support: Events

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA

Recreational Events

- Regional events are planned through the year to encourage wellness, exercise, and fun!

Annual BIANC Camp

Awareness & Prevention

- Skill Packs
- Media Connections
- Social Media
- Community Partnerships

- Conferences
- Exhibits
- Walk & Roll-athon
- Strikeout Concussions
- Highland Brewery & Conscious Brews

Advocacy & Involvement

Brain Injury Association of North Carolina

- Brain Injury Awareness "Day on the Hill" in D.C.
- Governor's Brain Injury Advisory Council
- North Carolina Legislative Day
- Rehab Providers Meetings
- Gfeller-Waller Law
- Proclamation
- TBI Medicaid Waiver

Important Things to Remember

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA

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

Important Things to Remember

BRAIN INJURY ASSOCIATION OF NORTH CAROLINA

- The effects of a brain injury are:
  - *Complex*
  - *Vary greatly from person to person*
  - *Depend on such factors as cause, location, and severity*
- No two brain injuries are exactly the same
  - When you've seen one brain injury, you've seen one brain injury
- A person with a brain injury is a person first

Contact Us

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