

BRAIN INJURY: Creating an Environment for Success



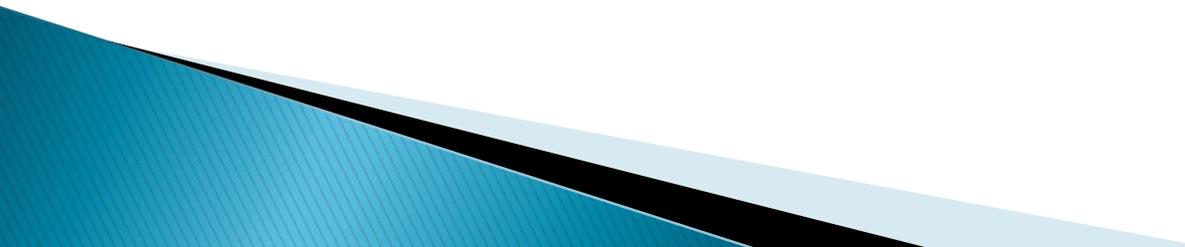
What is Traumatic Brain Injury?

- ▶ “...a blow or jolt to the head or a penetrating head injury that disrupts the function of the brain.”
- ▶ Not all blows or jolts result in Traumatic Brain Injury
- ▶ The severity of an injury can range from mild to severe
- ▶ A brain injury can result in short term or long term problems with independent function
- ▶ A brain injury can occur without a loss on consciousness.

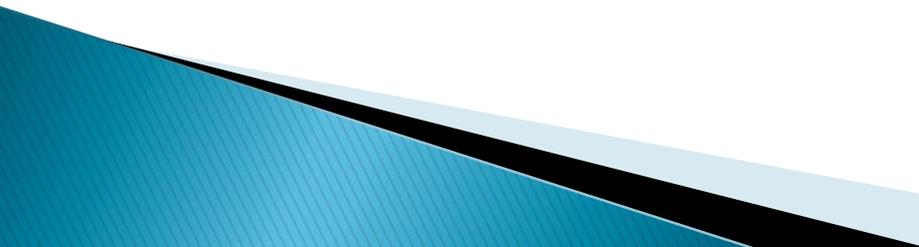
Examples of Traumatic Brain Injury

- ▶ Motor Vehicle Crash
 - ▶ Auto verses Pedestrian
 - ▶ Assault
 - ▶ Falls
 - ▶ Struck by/against (such as football, hockey)
 - ▶ Blast (IED)
 - ▶ Gunshot wound
- 

What is Acquired Brain Injury

- ▶ “...takes place at the cellular level within the brain [and] can affect cells throughout the entire brain...”
 - ▶ “An Acquired Brain Injury...is not hereditary, congenital, degenerative, or induced by birth trauma.” (BIAA)
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Examples of Acquired Brain Injury

- ▶ CVA/Stroke
 - ▶ Respiratory Arrest
 - ▶ Near Drowning
 - ▶ Strangulation/Hanging
 - ▶ Electrocution/Lightning strike
 - ▶ Tumor
 - ▶ Toxicity
- 

Here are the numbers...

- ▶ Every year an average of 1.4 million people in the U.S. sustain a brain injury (seen in hospital ED)
- ▶ 50,000 die from TBI
- ▶ 235,000 are hospitalized
- ▶ At least 5.3 million Americans live with disabilities related to brain injury.
- ▶ At unknown number sustain a mild TBI and are never seen in ED or receive care.

CDC

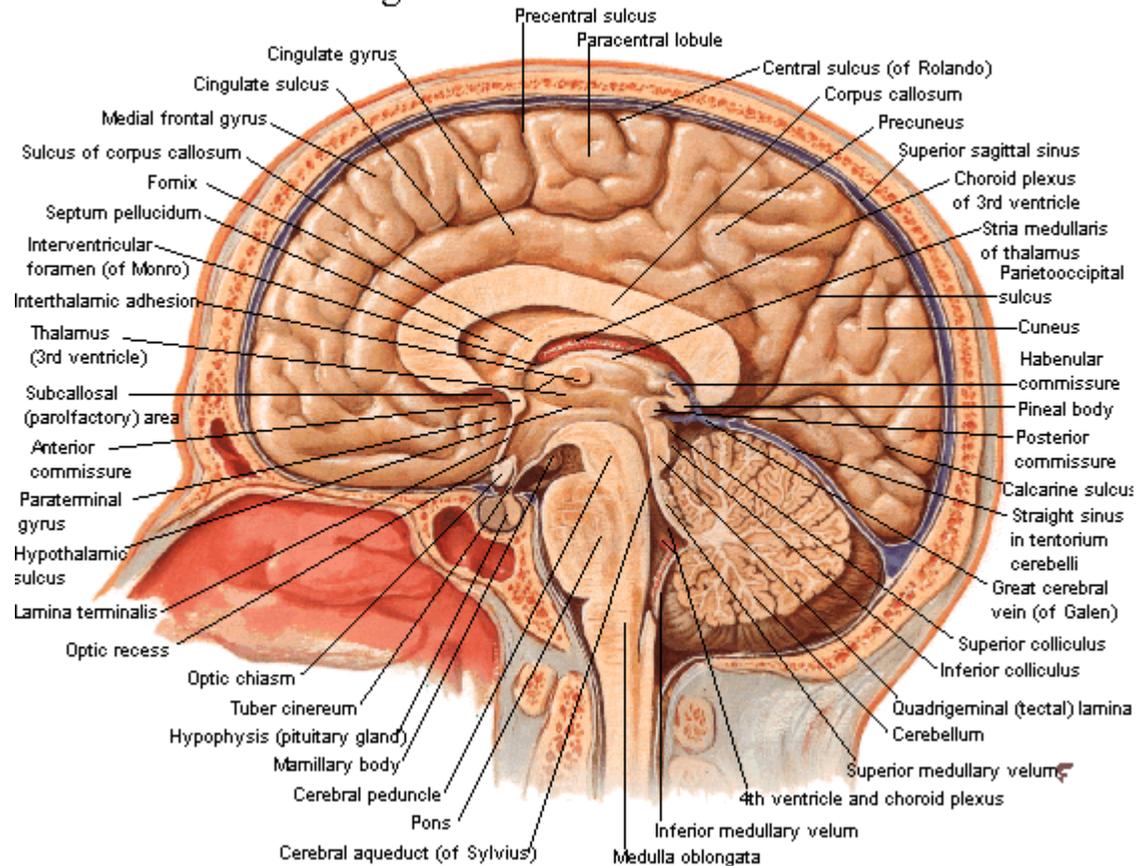


How is the brain injured?

- ▶ Acceleration– deceleration
- ▶ Rotational force
- ▶ Tearing
- ▶ Shearing
- ▶ Bruising
- ▶ Swelling
- ▶ Toxicity
- ▶ Bleeding
- ▶ Lack of oxygen
- ▶ Chemical Changes

COMPLEXITY OF THE BRAIN

Cerebrum - Brain in Situ Sagittal Section - Medial View



How is the brain affected?

- ▶ Cognitive Impairment
 - ▶ Communication Impairment
 - ▶ Sensory and Motor Impairment
 - ▶ Mood and Behavior Disorders
- 

Cognitive Changes



- ▶ Memory impaired (can't recall 3 step directions)
- ▶ Poor concentration and attention
- ▶ Concrete thinking—inability to think abstractly
- ▶ Impaired Executive Function (planning, organizing, problem-solving)
- ▶ Poor judgment

Sensory Motor Changes



- ▶ Photophobia, light sensitivity
- ▶ Impaired balance and coordination
- ▶ Paralysis, apraxia, spasticity (arm may seem to punch)
- ▶ Headaches
- ▶ Seizures
- ▶ Vision and hearing impaired

Communication



- ▶ Slurred, slow or unintelligible speech
- ▶ Difficulty understanding what is said—response is delayed while brain is catching up
- ▶ Word finding difficulties
- ▶ Uses nonsense, jargon or incoherent words or phrases
- ▶ Voice quality may be hoarse, nasal, high pitched, monotone, too fast or slow

Mood and Behavior



- ▶ Frontal lobe disorders and violent behavior
- ▶ Emotional mood swings
- ▶ Easily frustrated
- ▶ Intermittent explosive disorder
- ▶ Impulsive—acts before thinking
- ▶ Physical aggression
- ▶ Inappropriate sexually
- ▶ Intrusive
- ▶ Paranoid
- ▶ Depressed

Meeting the Needs of Persons with Brain Injury

- ▶ The Needs of persons with brain injury are really no different than those of others we serve or even ourselves.
 - ▶ What is it we all need or want?
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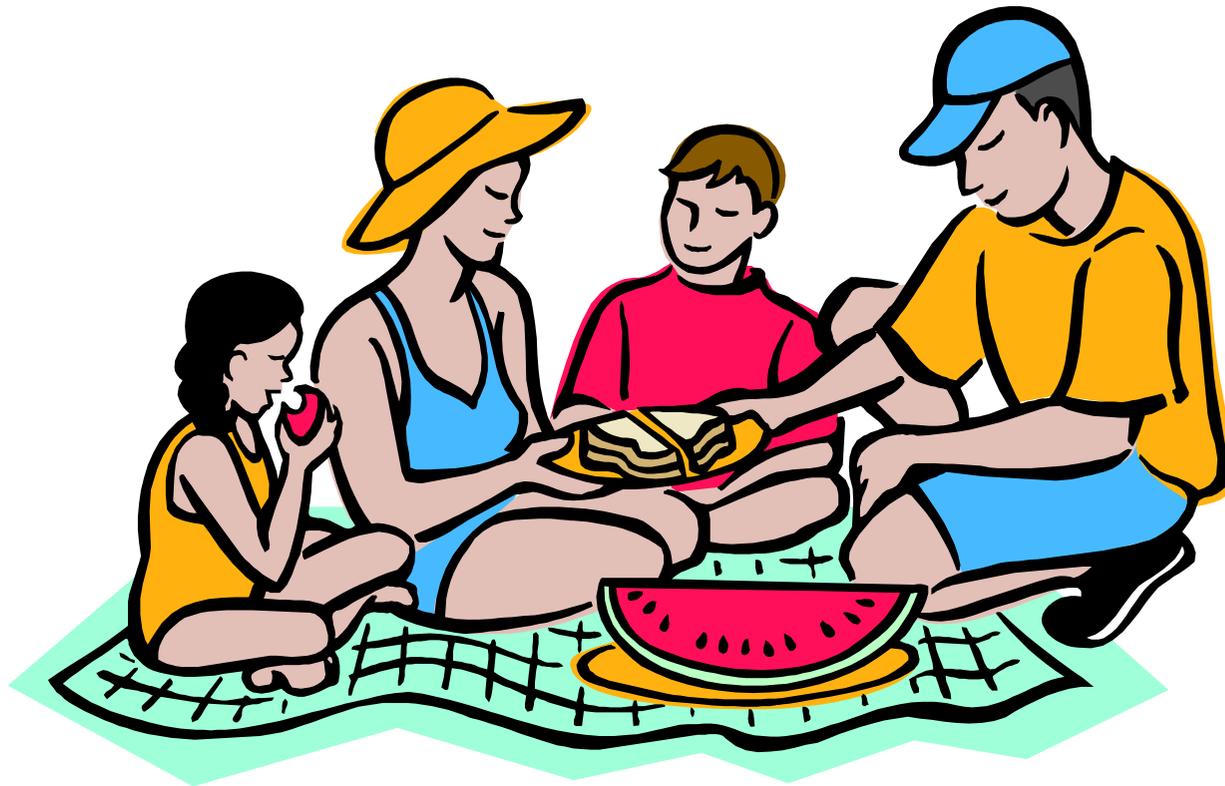
A Safe Place to Live



Something Meaningful To Do



Family and Friends



- ▶ The difference for persons with brain injury is in their ability to access these for themselves
 - ▶ The greatest challenge for persons with brain injury is usually related to behavior
 - ▶ Our challenge is to establish the milieu or the physical and social setting in which things occur that is conducive to success
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Environment– a safe place to live

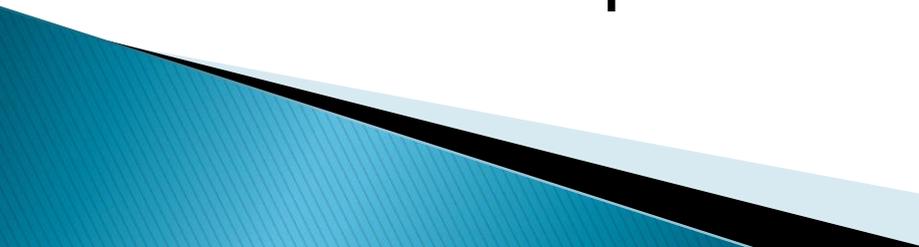
- ▶ Information from Designing Rehabilitation Facilities to Environmentally Manage Behaviors (Michael Mozzoni, PhD)
- ▶ What message is conveyed by your furnishing and décor?
- ▶ Impoverished environs and furnishings of 2x4s or stark metal says *I'm expected to act out*
- ▶ Comfortable setting with furnishings socially arranged says *I'm expected to behave with respect and concern*
- ▶ Heavy, cushioned vinyl or leather vs bolted down metal chairs

- ▶ Look for precipitating factors to behaviors – what is it that sets him off?
 - ▶ Provide structure and consistency – memory impairments. Environmental cues.
 - ▶ Opportunities for stimulation – not excessive just different (colors, sounds, light, activity)
 - ▶ Opportunities for calm, sanctuary – a place to go to “take a break”
 - ▶ Opportunities for Praise – catch them doing something right.
- 

Activity – something meaningful to do

- ▶ **Responsibility** – caring for self and others (ADLs housekeeping, laundry, plants, pets, learning, volunteering)
 - ▶ **Expression** – exploration and expression of self (arts, crafts, writing, music, decorating)
 - ▶ **Physical**– productive use of energy (walking, exercise, chores, sports)
 - ▶ **Fun and Competition** – appropriate physical and cognitive challenges (cards, tables games, puzzles, community outings)
 - ▶ **Accountability and Responsibility** – establish and follow through with expectations (earn privileges with positive behavior)
- 

Social Supports – Friends and Family

- ▶ Often persons with brain injury have lost relationships with friends and family
 - ▶ Physical, cognitive and behavioral issues impede their ability to develop new and appropriate relationships
 - ▶ Provide opportunities for social interaction including outside of the facility
 - ▶ Model appropriate behavior and interaction
 - ▶ Encourage and guide them through relationships
- 

Education

- ▶ Compassionate and knowledgeable staff is the key to success
 - ▶ Dr. Mozzoni cited: *Some believe that 95% of maladaptive behaviors in treatment settings after brain injury can be accounted for by staff behavior*
 - ▶ *Therefore 95% of maladaptive behaviors can be reduced by adjusting staff behavior*
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- ▶ You can't expect more from the person with brain injury than you do from your staff
 - ▶ Staff should be modeling the expected behavior in their interactions with each other and clients.
 - ▶ A great starting place is THE VOICE
 - ▶ HOW something is said is usually more important than WHAT is said
 - ▶ Tone, Volume, Cadence
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- ▶ **Caregiver Education Series**–Brain Injury Association of America
 - ▶ **What is Traumatic Brain Injury**
 - ▶ **Project LEARNet**
 - ▶ **Brainline.org**
 - ▶ **Centers for Disease Control and Prevention**
 - ▶ **Brain Injury Alliance of Colorado**
 - ▶ **Brain Injury Association Of America**
 - ▶ Library Resources
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Always Remember...

- ▶ They did not always have a brain injury
 - ▶ They lived a full and different life before the injury
 - ▶ Learning to use this “new brain” can be very difficult and frustrating
 - ▶ They are unique and interesting individuals with much to offer
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THANK YOU



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