

# Brain Injury and the Impact on Life and Farming

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Director  
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New England

# Agenda

- Welcome & Introductions
- Brain Injury 101
- Winston's Story
- Treatment & Rehabilitation
- Affects of Brain Injury on Daily Life & Assistive Technology Solutions
  - Relationships Are Everything
  - Safety vs. Dignity of Risk
  - Fatigue
  - Memory
  - Sequencing
  - Sense of Direction
  - Impulsivity & Reasoning
  - Sensory Issues
  - Suicide
- Sensitivity Activity
- Resources
- Questions

# Welcome & Introduction

- **Kelley McTague, COTA/L, ATP**

- Grew up farming in Maine, our home was a foster home & day program for adults with developmental disabilities.
- Was an Independent living specialist for Maine's Independent Living Center for 17 years
- Chairs The State of Maine's Acquired Brain Injury Advisory Council
- Husband is a man with a severe brain injury

- **Karen Funkenbusch, PhD**

- Director/PI, Missouri AgrAbility Project
- State HES Health and Safety Specialist
- State-Level AgrAbility Program, since 1994
- Partnership with Brain Injury Association of Missouri
- Spouse is farmer, Northeast Missouri

- **Maureen Cunningham, CFRE**

- Executive Director, Brain Injury Association of Missouri
- Member of various networking associations focusing on services for persons with disabilities through Missouri
- Active in Brain Injury Association Affiliate leadership team
- More than 20 years non-profit management experience



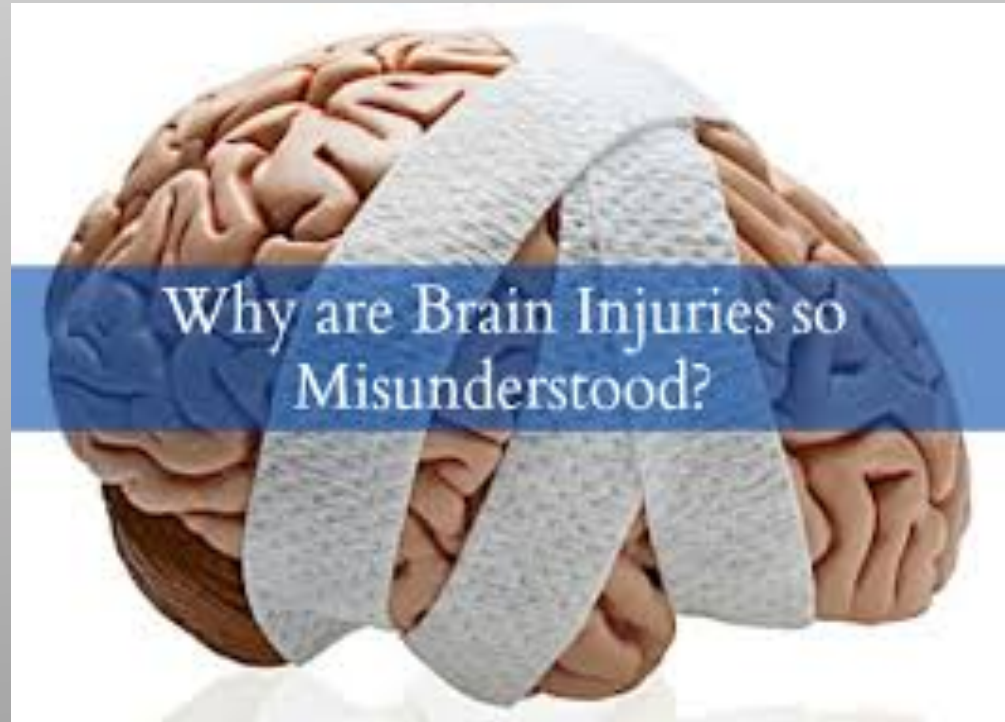
# Brain Injury 101

- **Statistics**

- Every 18 seconds someone sustains a brain injury
- Of the 1.4 million people who sustain a traumatic brain injury each year
  - 235,000 are hospitalized, 50,000 die
- Nearly 800,000 strokes occur each year
- 5.3 million Americans have a long-term disability due to brain injury

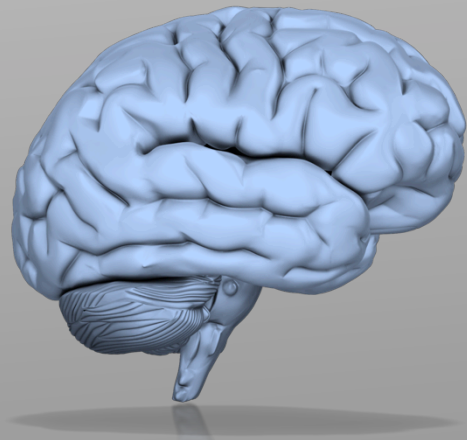
# Brain Injury 101

- **Types of Brain Injury**
  - Acquired Brain Injury
  - Traumatic Brain Injury



# Brain Injury 101

- **Causes of Acquired Brain Injury**
  - Stroke
  - Anoxia
  - Aneurysm

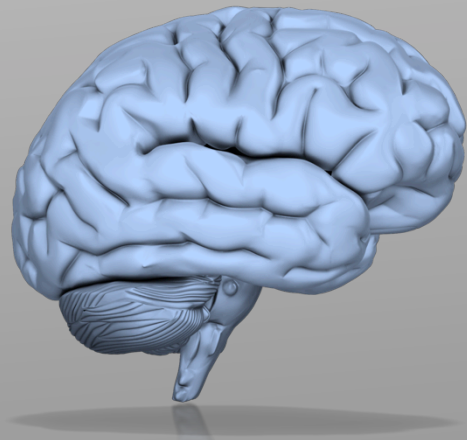


# Brain Injury 101

- **Causes of Traumatic Brain Injury**
  - Falls
  - Blunt Trauma (accidentally being struck by or against an object)
  - Motor Vehicle Crashes
  - Assault
  - Unknown

# Brain Injury 101

- **Effects of Brain Injury**
  - Cognitive
  - Physical
  - Perceptual
  - Psychological / Emotional





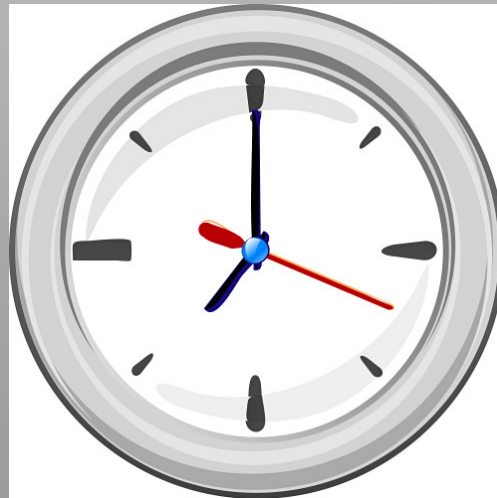
# Brain Injury 101

- Cognitive Effects – Difficulty with
  - Short-term Memory
  - Processing New Information
  - Concentration
  - Distraction
  - Judgment
  - Sensory Overload
  - Language Abilities



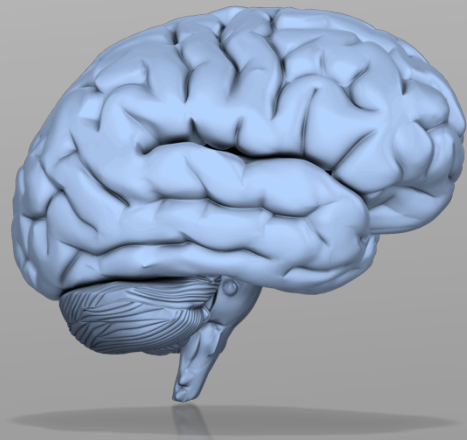
# Brain Injury 101

- Perceptual Effects – Difficulty With
  - Hearing
  - Touch
  - Time and Space Disorientation
  - Balance
  - Vision



# Brain Injury 101

- **Physical Effects – Difficulty With**
  - Motor and Physical Skills
  - Endurance/Fatigue
  - Persistent Headaches
  - Sensitivity to Light or Noise
  - Seizures



# Brain Injury 101

- **Psychological Effects – Difficulty With**
  - Dependence / Independence
  - Depression
  - Self-Awareness
  - Mood Swings
  - Personality Changes
  - Suicidal Thoughts
  - Paranoia



# Winston's Story



# Finding His Way One Day At a Time



# Treatment & Rehabilitation

- The event
- Doctors office or ER?
- ICU & Acute Rehab
- Neuropharmacology
- Neuropsychological Evaluation

# Treatment & Rehabilitation



- Neuro-rehabilitation Clinics (OT, PT Speech)
- Psychology, Psychiatry, Counseling
- Vocational Rehab
- Community Support



# Effects of Brain Injury on Daily Life

- Relationships Are Everything
- Safety vs. Dignity of Risk
- Fatigue
- Memory
- Sequencing
- Sense of Direction
- Impulsivity & Reasoning
- Sensory Issues
- Suicide



# Relationships Are Everything

## Who are you and what have you done with Winston?

- This area is the most important message Winston wanted me to portray
- His brain injury disrupted his relationships with everyone he knew
- He states in hindsight all areas of rehab should be helping the person and their family and friends understand brain injury

# Relationships are Everything

(Continued)

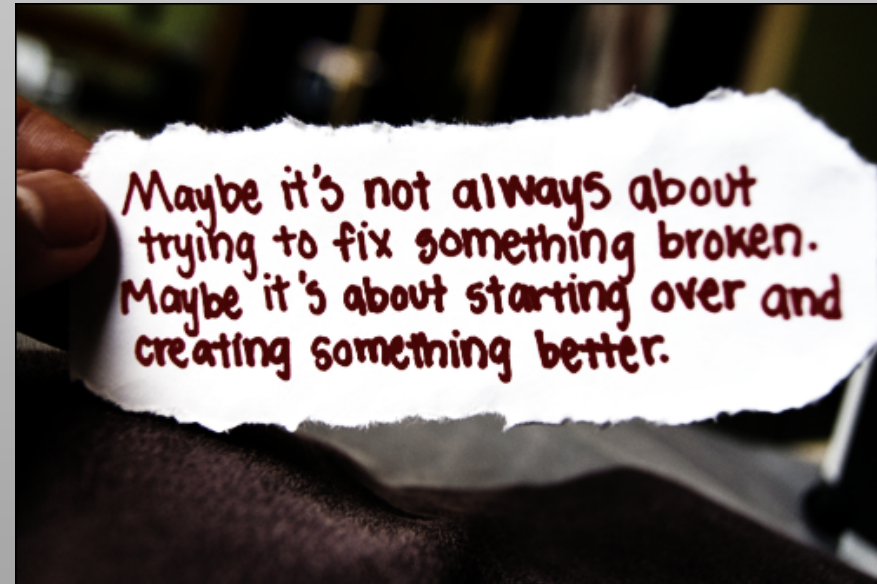
- Marriage
- Parenting
- Family
- Friendships
- Employers
- Your Community



# Safety vs. Dignity of Risk

## Trying to find safety / brain development balance

- Who knows what's wrong: poor reasoning, poor judgment, no inhibition, holes in my long term memory and no short term memory
- How do these issues relate to my every day life? I wonder which mistake I will learn from today?
- Solutions: **SUPERVISION**, lists, reminders, video instructions, adjust tasks, practice, practice, practice.



# Fatigue

**Fatigue is one of the most consistent symptoms for those with Brain Injury**

- Increase stress = Increase fatigue
- Rest is vital for healing
- Safety affects of fatigue

## **Solutions:**

- Schedule rest whenever possible
- Keep routines
- Educate the person and their family how vital this is for safety



# Memory

**Memory Issues are also one of the most common issues associated with brain injury:**

- Short Term Memory Issues: Mild to Severe
- Long Term Memory Issues: Mild to Severe

**• Safety Factors for consideration:**

- Missing important chores, appointments or family needs
- Forgetting to take medication
- Forgetting how to complete a task or steps of tasks
- Frustration and anger (dealing with one's own and that of others)

# Memory Solutions

- Routines are vital!!
- Write it all down: memory journal
- Use phone notes, lists and reminder apps to write down everything
- Calendar where everyone can see it, ask family for reminders
- Use phone calendar and set alerts for everything
- Family, remind the person to look at that calendar at set times of the day
- Some smart watches are good for vibration alerts if working in a loud area or on equipment regularly
- Use medication minding technology & alerts on phone
- Develop video tutorials for tasks to assure no steps are forgotten
- Supervision

# Sequencing

Getting things done in the right order and understanding the relationships between steps is very important for safety and success

**Examples:** Following a recipe, changing the oil, hooking up a piece of equipment, closing the gate on the way out, cleaning, etc.

## **Solutions:**

- Supervision
- Written or video instructions
- Alerts (gates open!)
- Practice, practice, practice



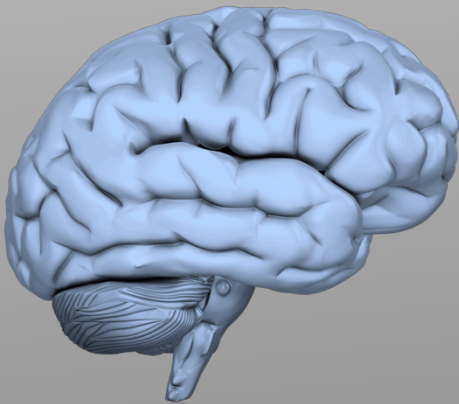
# Space and Time Disorientation

- **Issues**

- Risk of secondary injuries
- Over or under watering crops, feeding livestock, or meals for self or family
- Safety concerns

- **Suggestions**

- Written and phone notes with status, date and time
- Verbal confirmation of distances and time, especially new environment
- Low-vision walking stick or other assistive device



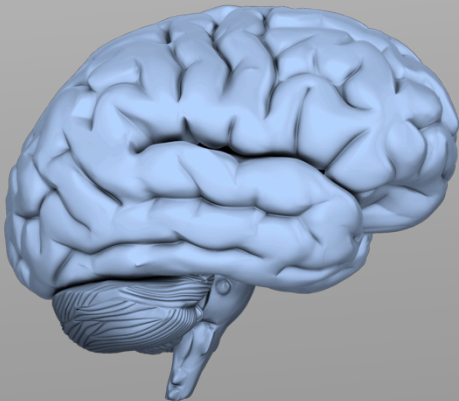
# Impulsivity & Reasoning

- **Issues**

- Not considering all aspects of decision or action
- Thought not given for safety
- Rash decisions with bad consequences

- **Suggestions**

- Ask exploratory questions to help the person consider potential outcomes
- If safety, excessive costs, relationships are not high risk – let the person try
- Safeguard the environment



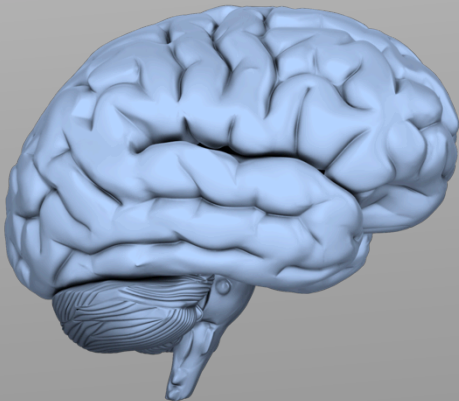
# Sensory Issues

- **Issues**

- Changes in touch, temperature, taste and movement
- Overstimulation can lead to behavior issues
- High risk of secondary injuries

- **Suggestions**

- Develop routine with healthy eating, exercise and productive activities
- Recognize triggers of undesired behaviors and practice response to handle
- Reminders and coded cards – red with “hot” or “stop”



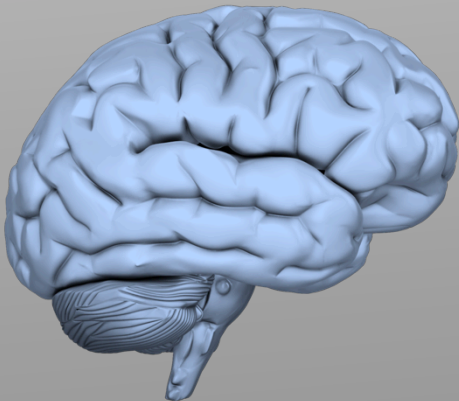
# Suicide

- **Issues**

- Higher for persons with brain injury
- Depression is common and can lead to suicidal thoughts, attempts, and death
- Related factors: impulsive behaviors, fixation of thoughts, hopeless feeling

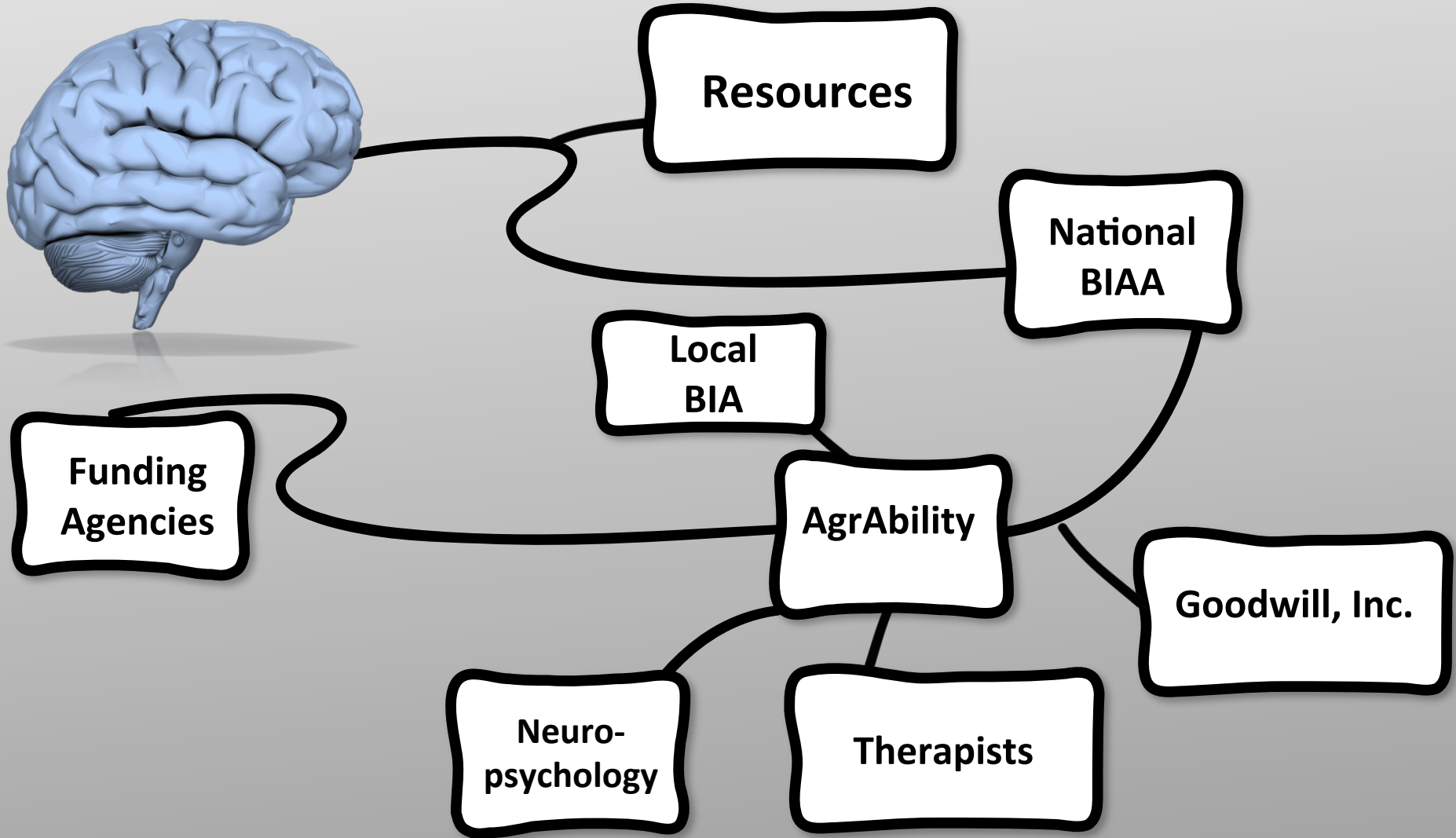
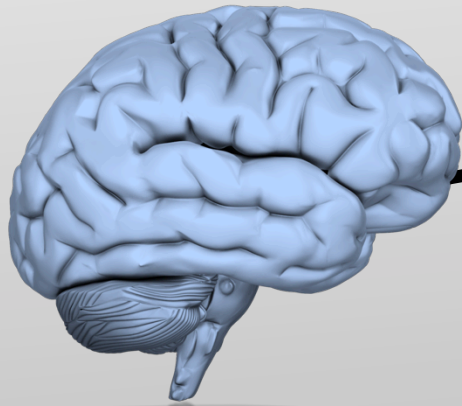
- **Suggestions**

- Depression is treatable. Seek professional medical care and counseling
- Maintain positive, problem-solving attitude. Be aware of suicide cues.
- Obtain professional crisis management guidance – Suicide Crisis Helpline



# Sensitivity Activity





# National



<http://www.biausa.org/index.htm>

## BrainandSpinalCord.org

<http://www.brainandspinalcord.org/brain-injury/assistive-technology.html>



# National



[http://www.brainline.org/landing\\_pages/categories/technology.html](http://www.brainline.org/landing_pages/categories/technology.html)



**45 Life-Changing iPhone and iPad  
Apps for People with Brain Injury**



# National



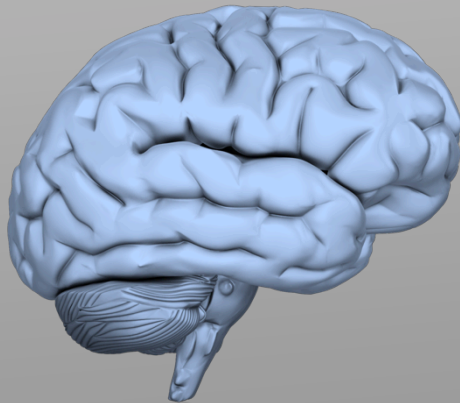
**Assistive Technology Exchange Center (ATEC)**

<http://www.ocgoodwill.org/changing-lives/assistive-technology-exchange-center>



**Medicare**

<http://ssa.gov/disabilityssi/>



# National

brainline<sup>★</sup>military

A service of brainline.org

Living with traumatic brain injury (TBI):  
help for service members, veterans,  
national guard, reserve, and families

<http://www.brainlinemilitary.org/categories/rts.php?topic=Accommodations+and+Technology>



U.S. Department  
of Veterans Affairs

<http://www.benefits.va.gov/compensation/>

<http://www.benefits.va.gov/vocrehab/index.asp>



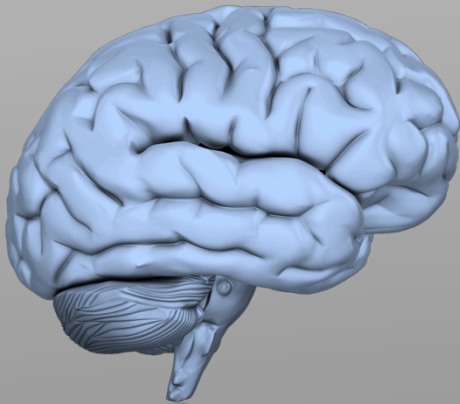
# Low Interest Loans



<http://www.resnaprojects.org/allcontacts/allafpcontacts.html>

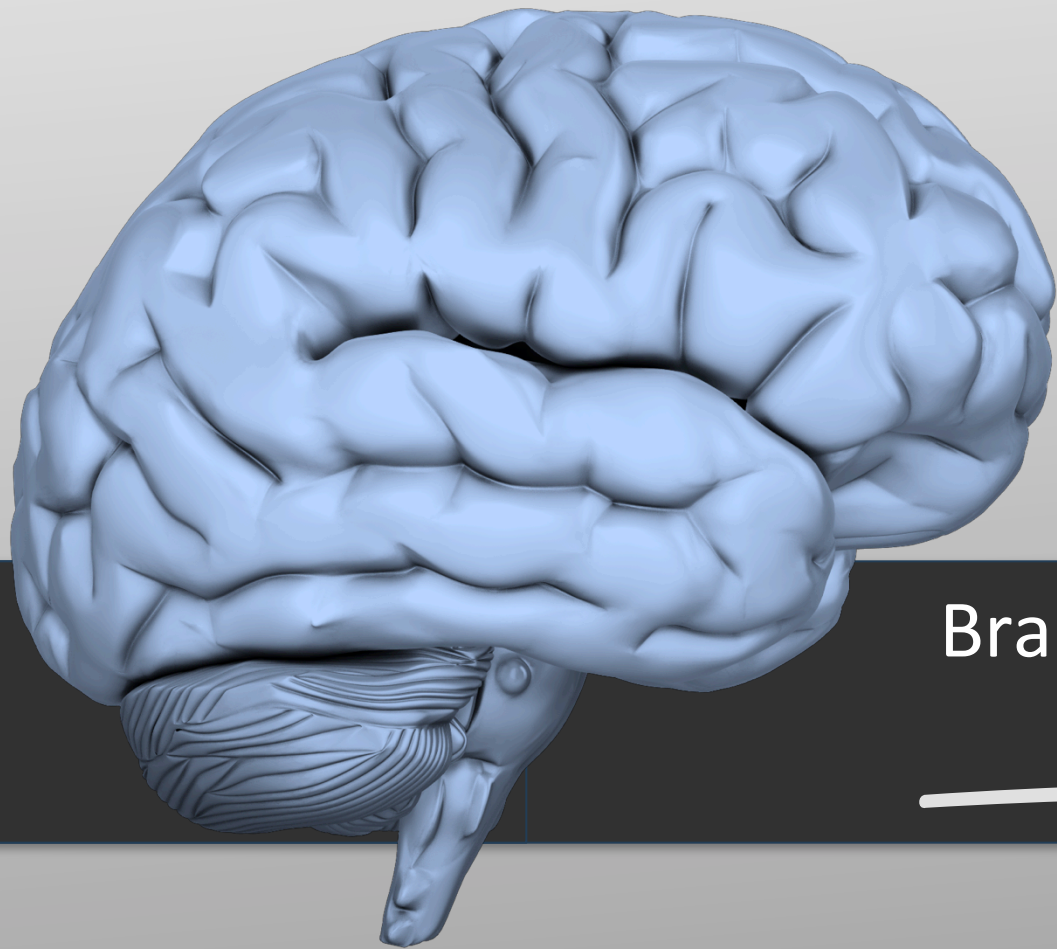
**National Assistive Technology  
Technical Assistance Partnership (NATTAP)**

<http://www.resnaprojects.org/nattap/at/stateprograms.html>



# State

- Community Action Agencies
- Centers for Independent Living (CIL)
- Rehab Services for the Blind
- Rural Development - U.S. Department of Agriculture
- Vocational Rehabilitation
- Other



# Brain Injury and the Impact on Life and Farming

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# QUESTIONS