

Brain Talk

Presented By Rachael Henry,
ABI System Navigator



braininjuryhelp.ca

Acquired Brain Injury System Navigation
of Southeastern Ontario



Ontario

South East Local Health
Integration Network
Réseau local d'intégration
des services de santé
du Sud-Est

Brain Injury Defined

Damage to the brain, which occurs after birth and is not related to a birth disorder or a progressive disease.

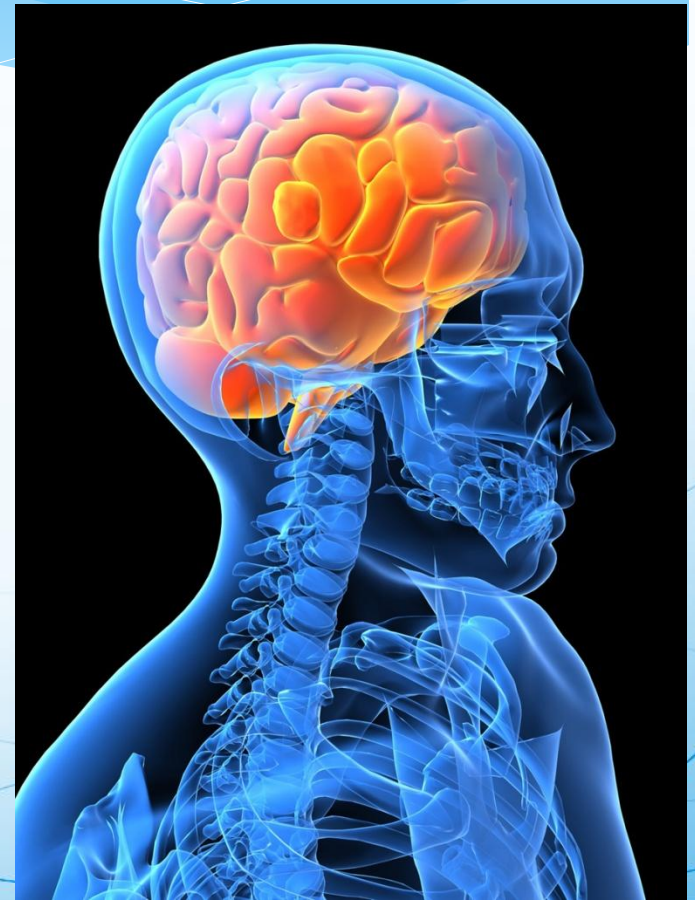
Traumatic Brain Injury (TBI) may be caused by a violent movement of the head or penetrating injury, for example a car accident, fall, or shrapnel.

Acquired Brain Injury (ABI) caused by other sources such as an aneurism, brain tumour, or lack of oxygen.

Sometimes the term “ABI” used to refer to both ABI and TBI.

Brain Facts

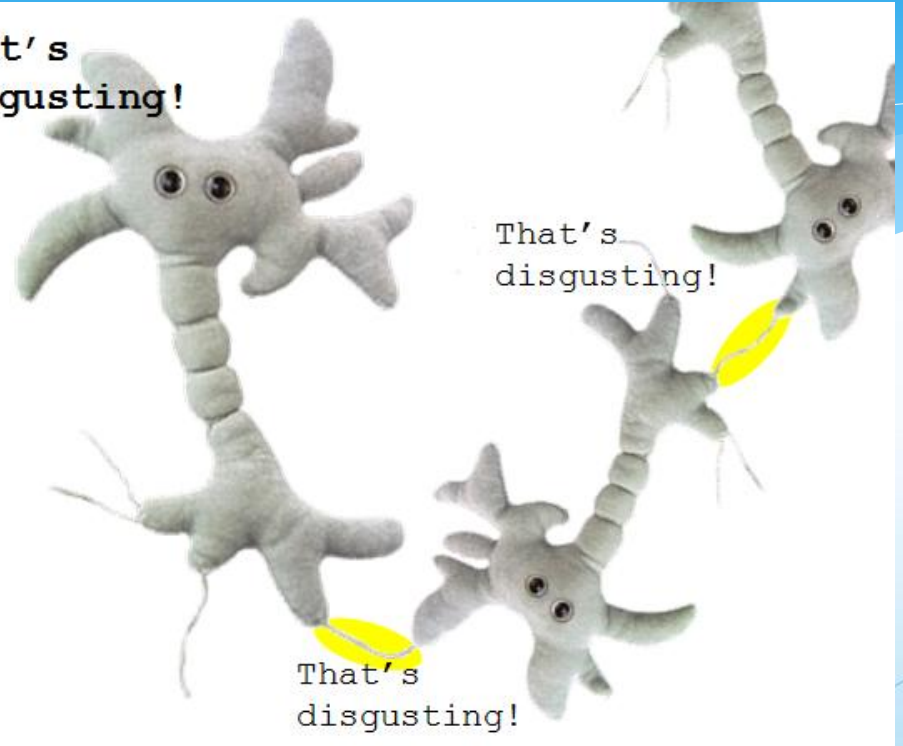
- * Contains 200 billion neurons (Nerve cells)
- * Weighs approximately 3 pounds
- * Each neuron connects (on average) to 50 other neurons
- * Two distinct components: White Matter and Grey Matter
- * Components include Cortex, Corpus Callosum, Cerebellum, Brain Stem



How your brain works:



That's disgusting!



That's disgusting!

That's disgusting!

Your Brain Controls:

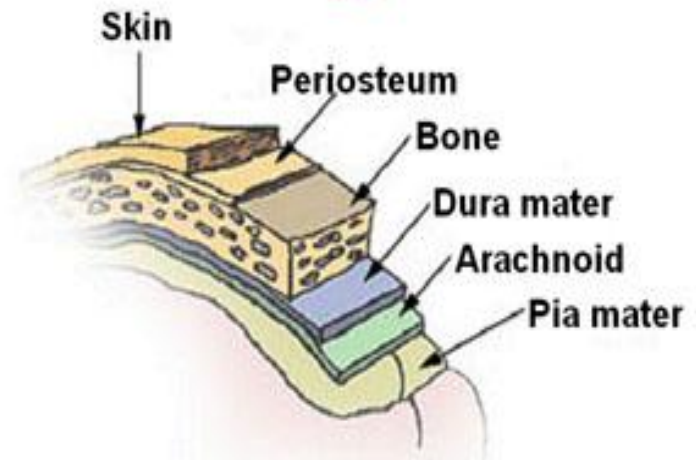
- * Emotions and Mood
- * Our 5 Senses
- * Hormonal regulation
- * Brain chemistry
- * Sleep and wakefulness
- * Alertness, concentration, and attention
- * Movement and balance
- * Strength
- * Speed
- * Speaking and understanding language
- * Organization and planning

Protection for the Human Brain

Layers of Protection:

- * Skull
- * Meninges
- * Cerebrospinal Fluid

Meninges



Dura mater -- outer layer lining skull

Arachnoid (mater) -- contains blood vessels

Subarachnoid space -- filled with CSF

Pia mater -- covers brain

We are all unique

Individual Strengths and Weaknesses
+ Different Area of Brain Injured
Unique Brain Injury Effects

- * Different recovery times
- * Different symptoms
- * Different strategies

Frontal lobe

Executive functions, thinking, planning, organising and problem solving, emotions and behavioural control, personality

Motor cortex

Movement

Sensory cortex

Sensations

Parietal lobe

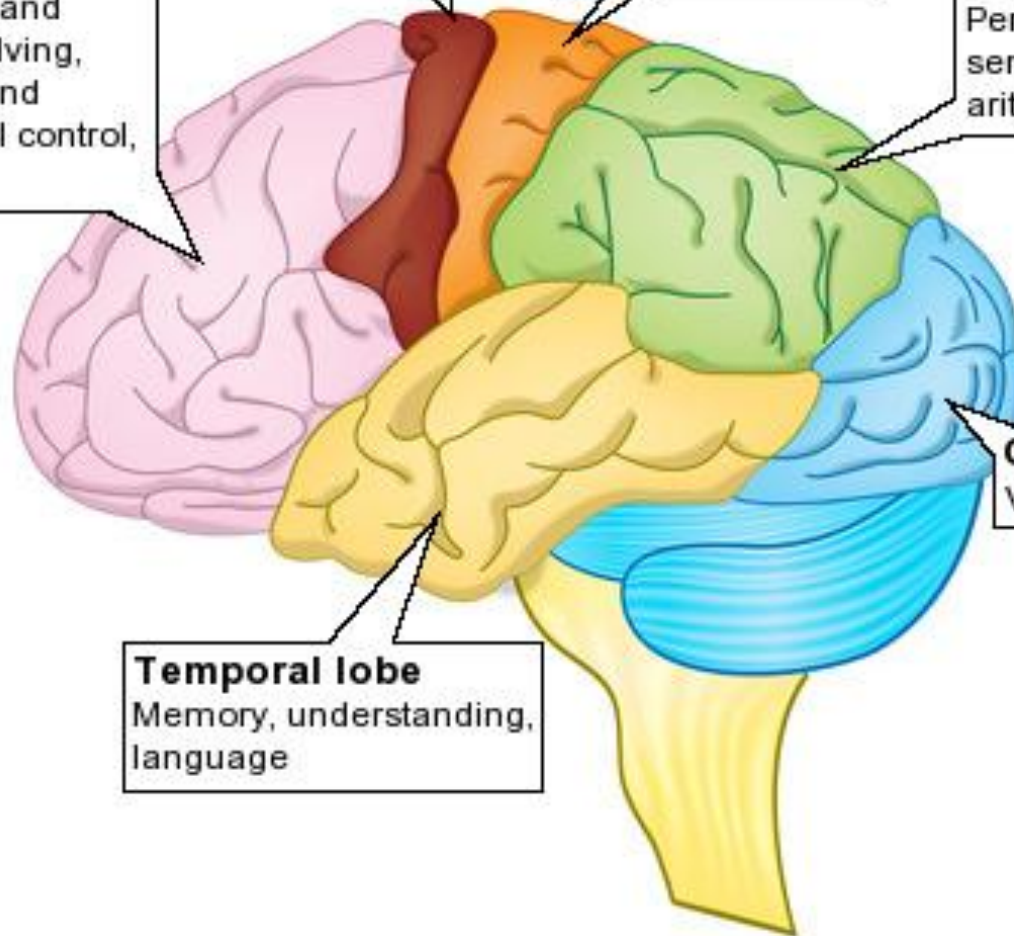
Perception, making sense of the world, arithmetic, spelling

Temporal lobe

Memory, understanding, language

Occipital lobe

Vision



Mild, Moderate and Severe

Classified by 2 factors:

1. Length of loss of consciousness (LOC) or post-traumatic amnesia (PTA)
2. Glasgow Coma Scale (GCS)

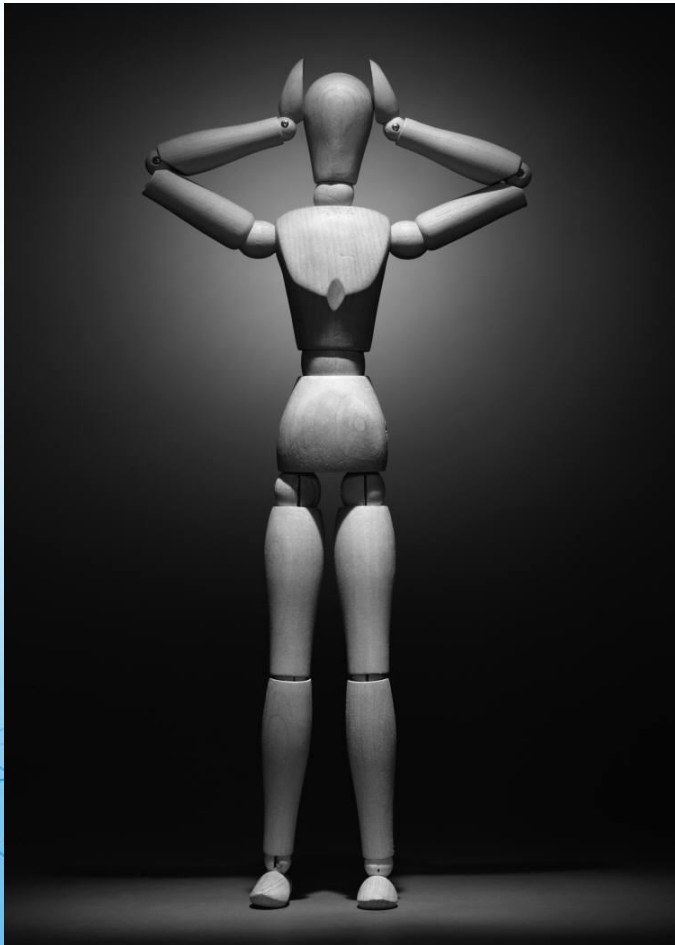
Severe: LOC and/or PTA more than 24 hours,
GCS: 3-8

Moderate: LOC and/or PTA more than 30 min, but less than 24 hrs.
GCS: 9-12

Mild: LOC and/or PTA under 30 min,
GCS 13-15

Concussions are classified as mTBI

Brain Injury Symptoms



Brain Injury Impacts Many Areas

- * Medical
- * Physical
- * Sensory
- * Thoughts and Communication
- * Behaviour and Personality

An Invisible Injury

- * The survivor's struggles aren't always apparent to others
- * Difficulties with fatigue, attention, mood, and pain cannot be seen
- * If you want to help a survivor, ask them if you can help, but don't make assumptions about what they can or cannot do.
- * With practice, survivors can learn to tell others how to help. Eg. "My memory is terrible. Can you write that down?"



Recovery

I THINK WE MAY NEED TO
UPDATE OUR DISASTER RECOVERY PLAN.
THIS ONE SUGGESTS WE ALL RUN
AROUND IN CIRCLES SHOUTING
'WHAT DO WE DO?!!' 'WHAT DO WE DO?!!'

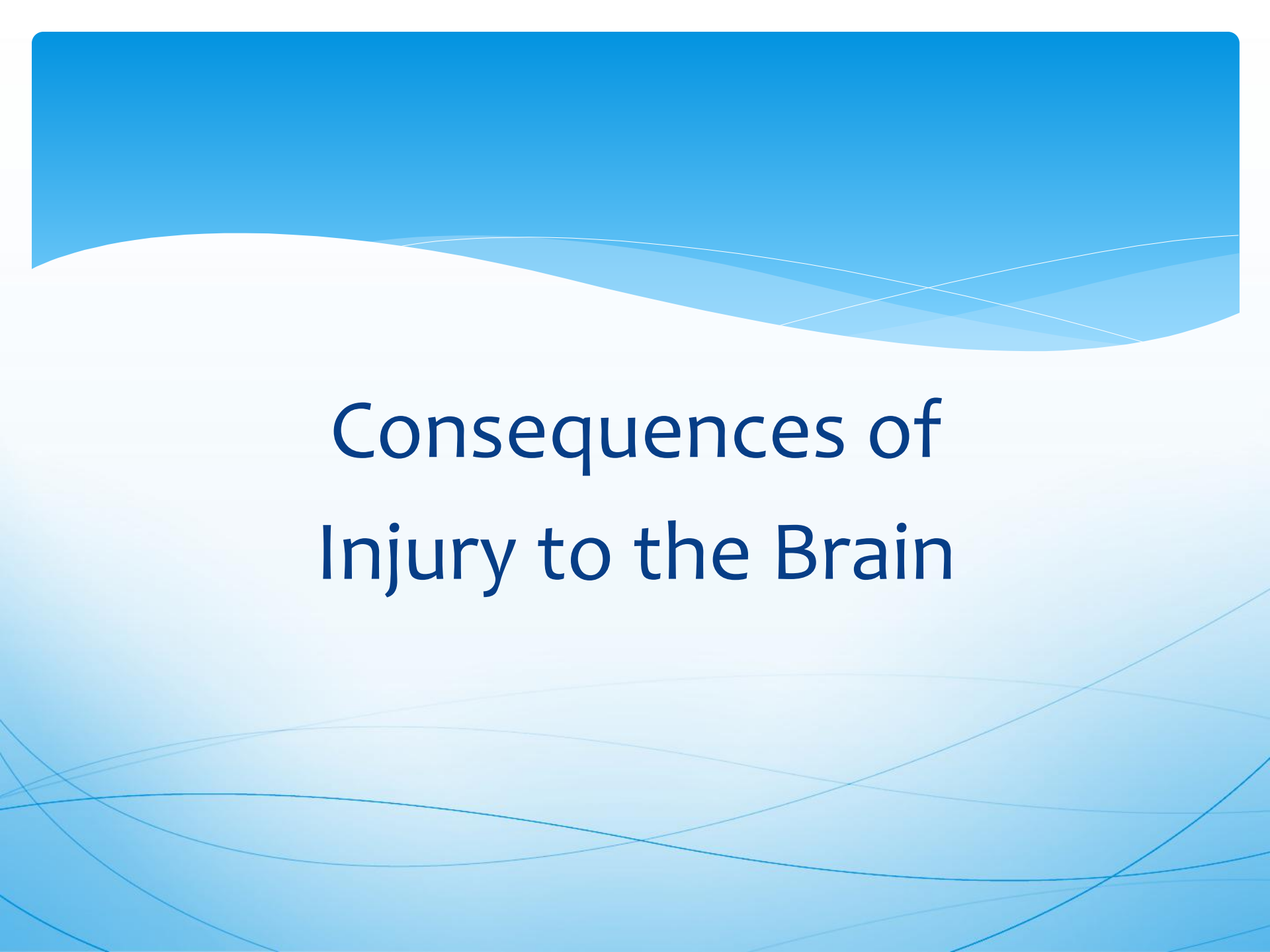


What Affects Recovery?

- Age
- Health
- Seriousness of Injury
- Early medical care
- Length of coma
- Amount of time since injury
- Pre-injury personality and abilities
- Quality of rehabilitation and support

How and When?

- * Begins within 24 hours and continues for a lifetime.
- * Brain chemistry slowly returns to normal.
- * Injured neurons sprout and establish new connections.
- * Neuroplasticity occurs - uninjured areas of the brain take over from injured areas
- * Some things will be the same as before the injury – others will be very different.



Consequences of Injury to the Brain

Cognitive Difficulties

Each individual is unique and each brain injury is different. The approach you take must factor in the individuals strengths and challenges in order to be successful.

Memory

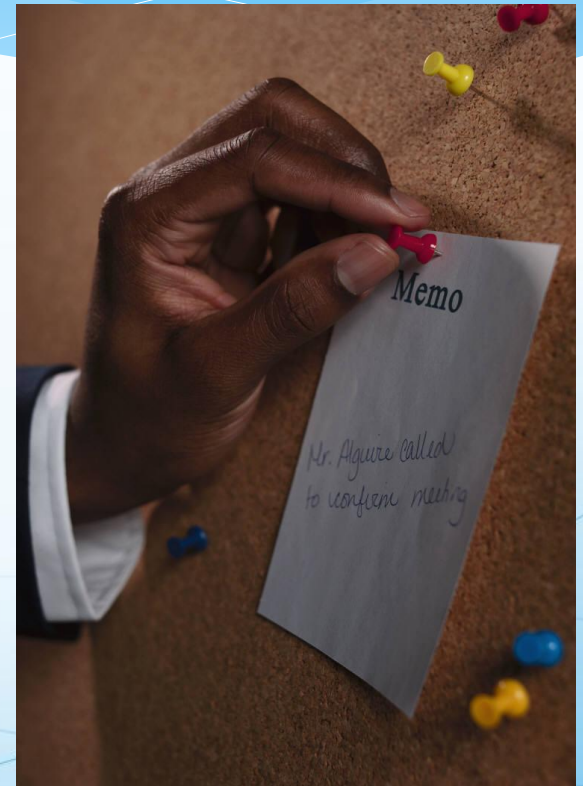
Simplify and Develop Routines

- * Keep things in the same place
- * Keep important information in a binder or folder all together
- * Keep a schedule and plan ahead
- * Label cupboards and drawers
- * Develop weekly routines



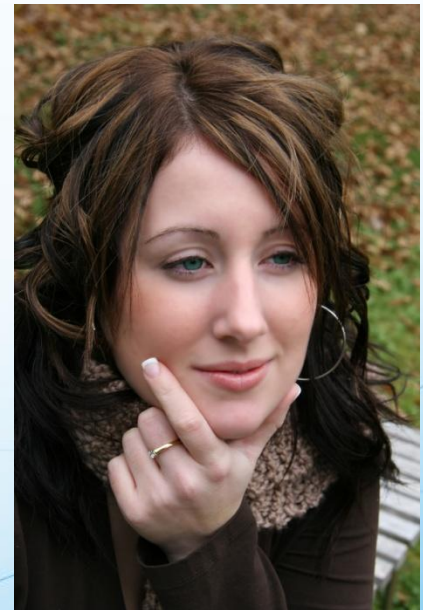
Memory

- * Written memories: keep calendars or journals of past events and future plans
- * Use Post-It notes or whiteboards for cuing, instructions, or new information
- * Make sure instructions are clear and concise
- * Check in & summarize often to ensure understanding



Attention

- * Find an area free of distractions, noises, etc.
- * Finish one task before starting another (no multitasking allowed!)
- * Stay well rested
- * If showing signs of fatigue –take a break to refresh



Organization and Planning

- * Use a bulletin board or white board
- * “To Do” lists
- * Schedule activities in your day planner/calendar
- * Before you do or say anything cue to “Stop and Think”
- * Plan steps to activities together
- * Use past experiences with something similar to help prepare

Organization and Planning

Staying On Task:

- * For appointments/meetings: Help residents generate a list of topics they want to discuss
- * Write a step by step plan for goals
- * Make sure goals are reasonable and attainable – talk it out with someone else
- * Provide gentle, respectful feedback
- * Problem solve as a group

Questions

- * What might be some of the issues for Marjorie?
- * What do staff need to learn about her?
- * What strategies could be put in place to help?

Motor System Deficits:

- * Weakness or paralysis
- * Decreased control of movement
- * Decreased balance
- * Changes in muscle tone – high or low tone
- * Decreased range of motion
- * Decreased endurance and strength
- * Fatigue
- * Perseveration of movement

Strategies for motor system difficulties

1. Remediation

Activities to restore function

Examples: exercise program
balance training
practicing particular skills

2. Compensation or Adaption

Learn alternative ways of doing an activity

Use assistive devices

Substitute new activities

Change the environment

3. Prevention and maintenance of abilities

- * Maintain mobility and level of fitness
- * Education regarding posture, body mechanics, positioning
- * Pacing, schedule rest periods, relaxation techniques

Coping with Fatigue



Fatigue

Prioritize, Plan, and Pace

- * Schedule activities at the beginning of the day, or the time the resident is most alert
- * Provide breaks for rest as needed
- * Consider the impact of the environment on mental fatigue
- * Rule out other health factors (hypothyroidism, anemia, etc.)
- * Attend to emotional health. Symptoms of depression or other mental health concerns can include fatigue.

Fatigue

Good Sleep Habits

- * Limit caffeine intake later in the day
- * Sunshine, fresh air, and exercise
- * Keep a set bedtime and waking time. Most people need 6 – 8 hours of sleep, but some need more.
- * Develop a nighttime routine based on the resident's preferences, for example read a book, have a bath, listen to soothing music, or have a cup of caffeine-free tea or hot milk.
- * Do deep breathing exercises to help with relaxation.
- * Avoid bright lights, televisions, and computer screens for at least half an hour before bed

Sensory System

- * Visual difficulties
- * Hearing difficulties
- * Dizziness
- * Pain
- * Proprioception – judging your body's movements
- * Altered sensations of pressure, temperature, touch, taste and smell



Problems related to Perception

- * Perception is the integration of sensory impressions into psychologically meaningful information.
- * It is how we understand and move through our daily world.



Perception Difficulties:

- * Awareness/understanding of where the self is in relation to objects in the environment.
- * Judging shape and size of objects.
- * Understanding the concepts of right and left.
- * Ability to distinguish the foreground or object from the background.
- * Ability to find one's way from one place to another.
- * Attending to all aspects of a task or object.
- * Awareness of one's environment
- * Recognizing facial expressions and what they mean

Communication

- * Why is communication important with your clients?
- * What types of communication difficulties have you seen in others?
- * How have you dealt with communication problems in the past?

Communication:

Aphasia (8% of people)

- * Reduction in abilities of listening, speaking, reading and writing.
- * Often know what they want to say, but have trouble putting the right words together
- * Difficulties related to language content, form and use.
- * “Communicate better than they talk”

Cognitive-Communicative Problems

(90 + %)

- * Reduction in abilities related to use of language (verbal/non-verbal)
- * Related to cognition; If you have difficulty organizing your thoughts, your speech will be disorganized as well.
- * Typically diffuse/widespread damage.
- * “Talk better than they communicate”

Problems related to Communication

- * Beginning, maintaining, and ending a conversation
- * Digress off topic or lack continuous flow of thoughts
- * Ideas limited, unable to elaborate
- * Not following socially accepted rules
- * Poor turn taking skills
- * Decreased active listening skills
- * Difficulty finding right words
- * Rigid thinking; inability to accept alternative ideas
- * Difficulty recognizing and using body language
- * Lack or inappropriate facial expression or tone of voice
- * Increased likelihood of misunderstandings

Communication Strategies for Others

- * Tailor your approach to the individual
- * Speak clearly, slowly and in short phrases
- * Take your time to listen. Patience is key.
- * If you're having difficulty understanding, provide feedback regarding difficulties with specific examples.
- * Reduce background noises (i.e. TV, radio)
- * Ask questions to clarify
 - Restate previous points to help stay on topic.
- * When presenting novel information, offer to let people “think about it” for a while – they may need time to incorporate this idea
- * Be prepared to repeat yourself a few times!

Dealing with Emotions

The background is a solid blue color. At the bottom, there are several white, wavy, overlapping lines that create a sense of movement and depth, resembling a stylized horizon or a series of waves.

Behavioural and Emotional Problems

- Disinhibition: Not being able to stop thoughts or behaviour that may be inappropriate.
- Emotional lability: mood changes
- Denial
- Egocentrism: Self-centered
- Depression and withdrawal from others
- Easily Frustrated, Irritable, Temper Outbursts
- Impulsivity
- Unrealistic expectations: overly optimistic or pessimistic
- Lack of motivation
 - Dependency on others
 - Reduced threshold due to pain or stress

Strategies for Behavioural and Emotional Problems

Change the situation:

- * Identify behaviour and emotional triggers
- * Be proactive – find ways to engage the individual in activity and feel positive about themselves (Montessori approach)
- * Be clear and direct in giving feedback
- * Slow down and reduce pressure
- * Remove distractions
- * No surprises – involve the person in planning
- * Write things down to increase understanding
- * Provide the opportunity to be successful & give praise

Triggers!

We all have them:

Internal

Fatigue

Hunger

Grief & Sadness

Medication

Illness & Pain

Hormones

Blood Sugar

External

Lack of Choice & Control

Particular Individuals

Changes in routine

Noise

Holidays

Weather

Other's expectations

Early Warning Signs

Learn to identify the body's signals

Physical Symptoms

- Heart racing
- Clenching muscles
- Racing thoughts
- Butterflies / feeling in pit of stomach
- Pain, Headaches
- Digestive issues
- Holding breath
- Restlessness
- Lump in throat
- Feeling overwhelmed, difficulty focusing

Observable Signs

- Sighing
- Breathing heavily
- Tense body posture
- Repeatedly talking about the same topic
- Complaints of stomach ache, headache, pain, dizziness
- Fidgeting
- Pacing
- Clearing throat
- Tearfulness
- Less coherent or focused; unable to answer questions clearly, follow directions
- Zoning out

Adjusting to Change

Stages of Grief and Loss: Dr. Roberta Temes

1. Numbness (mechanical functioning and social insulation)
2. Disorganization (intensely painful feelings of loss)
3. Reorganization (re-entry into a more 'normal' social life.)

Emotions and Mental Health

- * Having a brain injury can increase your risk for certain mental health conditions
- * Can be caused by changes to thought processes and ability to control emotions, loss of abilities and freedoms, changes in relationships, difficulty coping
- * Improvements can occur in many ways: by learning new strategies, finding enjoyable activities, medications, or counselling



Controlling Negative Behaviour

Patients will generally respond best when treated with respect, empathy, and clear guidelines.

- * Planning ahead, and making plans to address needs such as pain, hunger, loneliness, boredom, etc.
- * Noticing early warning signals
- * Take a break before emotions escalate
- * Avoiding triggers
- * Give warning if you need to talk about or do something difficult
- * Teach strategies, such as deep breathing
- * Redirecting or distracting from the problem
- * Providing opportunities to talk about concerns
- * Directing the resident to a quiet space where they can calm down naturally
- * Stating clear, consistent boundaries and expectations
- * GPA works with ABI too!

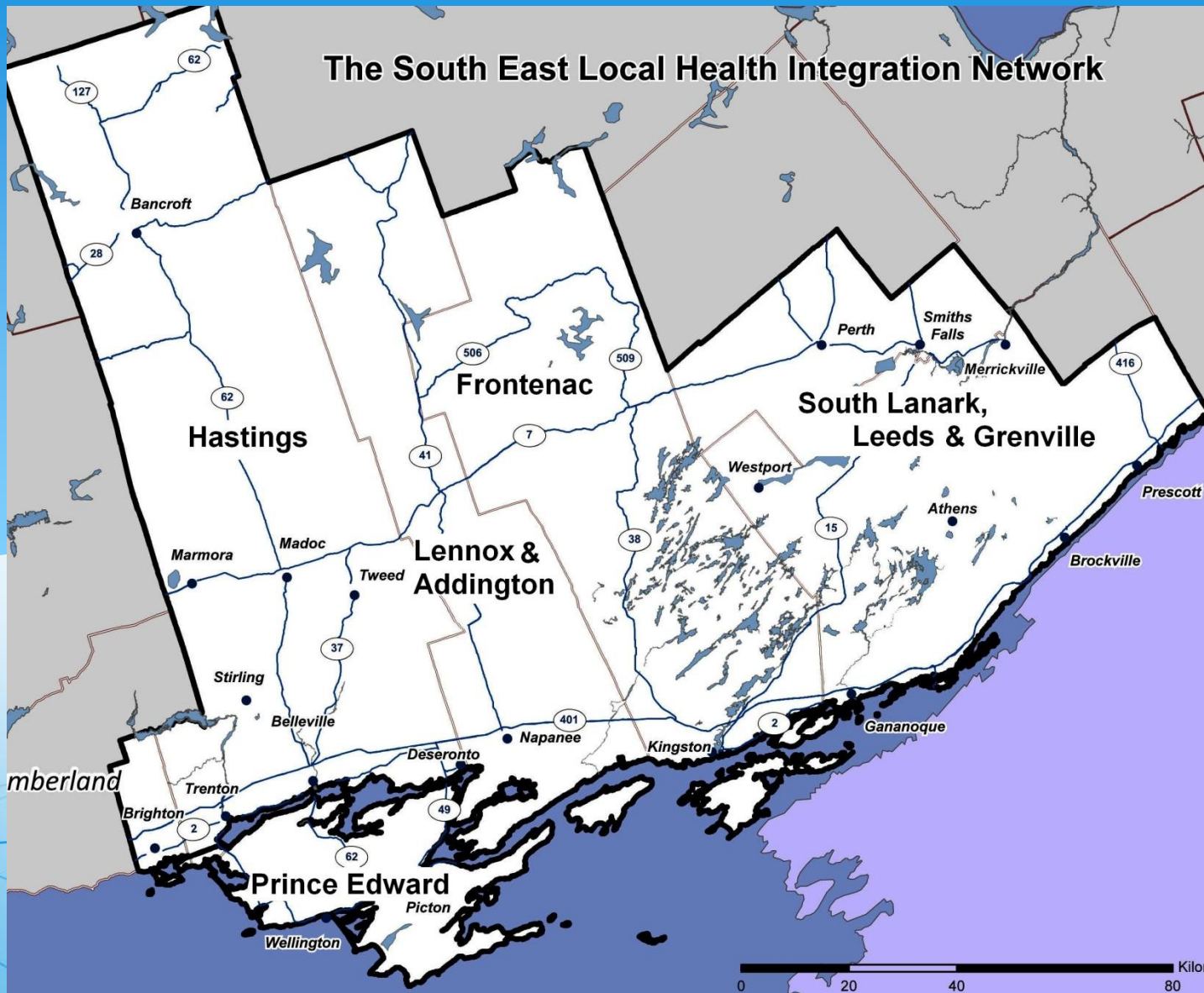
Controlling Negative Behaviour, con't:

- * Although physical restraints or medications are sometimes useful in controlling behaviour, they place patients at risk and can sometimes escalate the situation
- * Clients with brain injury may be made **more confused** and agitated when medicated or restrained
- * They may struggle and injure themselves or others
- * Medications can cause negative side effects
- * Because of this restraints should be used only as a last resort.

Questions:

- * What factors might be related to Carla's outbursts?
- * How might this be impacting Carla's interactions with others?
- * What challenges are foreseen?
- * How might you address the concerns?

The South East Local Health Integration Network



**“System Navigation
is a function,
fulfilled by
different roles”**

Regional Community Brain Injury Services Service Coordinators

- Accepts Individual Referrals
- Completes Intakes
- Consultation
- Community Connections

System Navigator

- Community Collaboration, Education
- Tracks Needs and Provides Advocacy

Community and Health Services

- Providing Services in Areas of Own Expertise or Skill
- Seeks ABI Specific Support as Needed

Access for All

- System Navigation provides support to anyone affected by brain injury: Survivors, Families, the Community, and Professionals
- Ensures both clients and service providers have a comprehensive awareness of potential resources
- Ongoing support throughout the referral and needs assessment process to ensure needs are fully met

If you are wondering what to do, give us a call!

Thanks for being here!

Questions?

