Fraser Valley Brain Injury Association

FVBIA

BRAIN INJURY EDUCATION PROGRAM WORKBOOK

Worksheets | Resources | Notes

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FVBIA: BRAIN INJURY EDUCATION PROGRAM

Fraser Valley Brain Injury Association

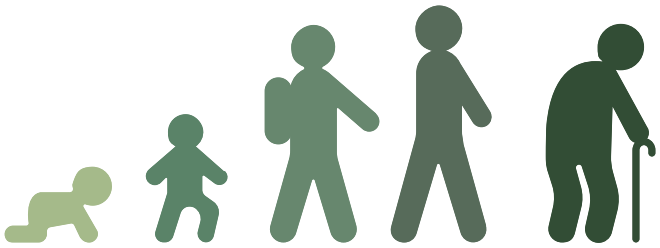
TABLE OF CONTENTS

1 WHAT IS AN ACQUIRED BRAIN INJURY (ABI)?

Acquired Brain Injury (ABI)

An injury to the brain, which is not hereditary, congenital, or degenerative. An ABI is an injury to the brain after birth.

ABI's do not include Fetal Alcohol Spectrum Disorder (FASD), Parkinson's Disease, Multiple Sclerosis (MS), etc.



Types of Acquired Brain Injuries

There are 2 main types of ABI's: traumatic (TBI), and organic (also known as non-traumatic).

Traumatic Brain Injury (TBI)

Traumatic Brain Injuries occur from an external source. List some sources of traumatic brain injuries:

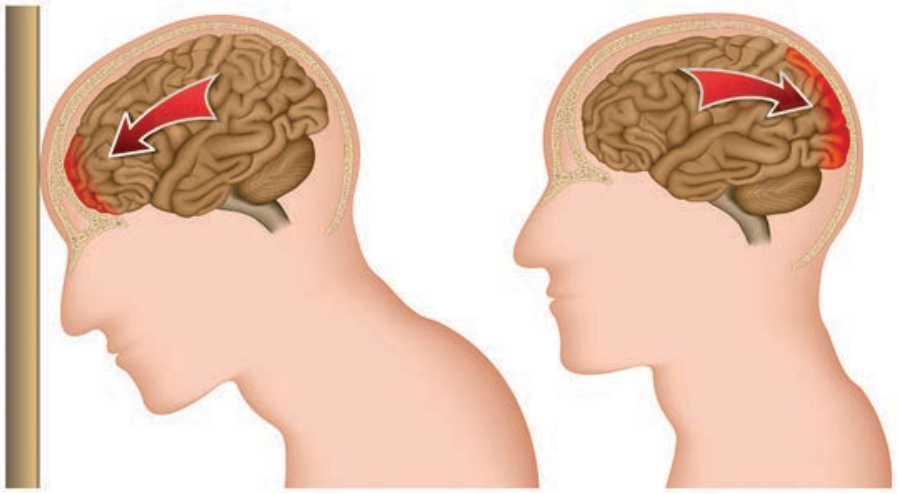
- Car Accident
- Fall
-
-
-
-
-
-

1 WHAT IS AN ACQUIRED BRAIN INJURY (ABI)?

What Happens During a Traumatic Brain Injury?

Primary Effects:

- Back and forth movement of the brain inside the skull (coup-contrecoup).



Secondary Effects:

- Swelling of the brain causing pressure inside the skull (closed box syndrome).
- Chemical changes in your brain after injury causing further damage.

Organic Brain Injury

The other type of acquired brain injury is an organic or non-traumatic brain injury. These injuries come from an internal source.

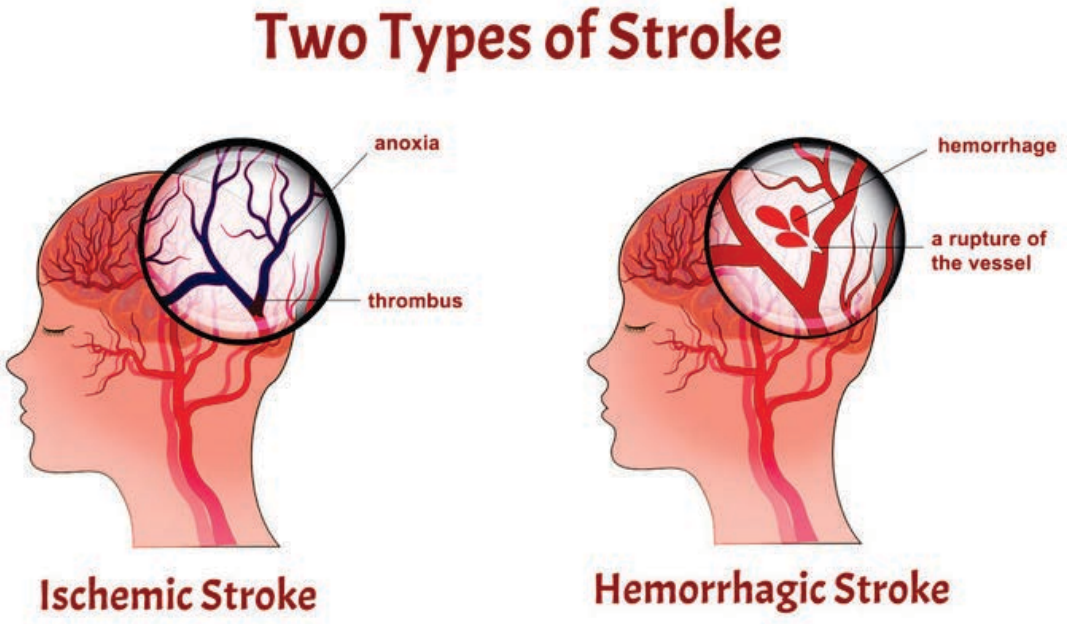
Over the next few pages, we will look at how organic brain injuries occur.

1 WHAT IS AN ACQUIRED BRAIN INJURY (ABI)?

Types of Organic Brain Injuries

Stroke

Strokes are a type of organic brain injury caused by a blocked or ruptured artery.



An important acronym to help you recognize the signs of a stroke is "FAST."

1 WHAT IS AN ACQUIRED BRAIN INJURY (ABI)?

Types of Organic Brain Injuries Continued

Anoxia and Hypoxia

Anoxia and hypoxia are caused by the lack of oxygen to the brain or brain tissues.

Anoxic brain injuries are caused by the brain being completely deprived of oxygen.

Hypoxic brain injuries are caused by the brain not getting enough oxygen.

Anoxia and hypoxia can be caused by:

- Near drowning
- Overdose
- Choking
- Carbon Monoxide Poisoning

1 WHAT IS AN ACQUIRED BRAIN INJURY (ABI)?

Types of Organic Brain Injuries Continued

Toxic Exposure

Exposure to toxic substances can cause brain injury. Some substances can cause cell walls to rupture or interfere with the cells' ability to perform which causes the cells to malfunction or die.

Toxic exposure to the following substances can cause an ABI:

- Drugs
- Heavy Metals
- Pesticides
- Solvents
- Carbon Monoxide

Infectious Diseases

- Infection of brain coverings (Meningitis).
  - Could be caused by viral and bacterial infections.
- Infection of brain tissue (Encephalitis).
  - Could be caused by herpes simplex virus and varicella virus. (chicken pox, shingles, mumps, etc.).

A viral infection or herpes simplex virus is unlikely to cause meningitis or encephalitis. Meningitis and encephalitis are highly treatable and not likely to cause a brain injury with early medical attention.

Tumors

Tumors in the brain can compress and destroy nearby tissues. Pressure from the tumor can also block proper blood flow to the brain.

1 WHAT IS AN ACQUIRED BRAIN INJURY (ABI)?

What Does a Brain Injury Look and Feel Like?

Although some individuals may have physical disabilities, brain injury is often referred to as an invisible injury. The iceberg analogy is a helpful way to understand what a brain injury might look and feel like. A person with a brain injury may be able to walk, talk, and seem healthy, leading others to assume everything is okay. However, much like the unseen portion of the iceberg beneath the surface, there may be hidden challenges that are not immediately visible, such as issues with communication, balance, or memory. Just as an iceberg's full mass lies beneath the water, there is so much more to a brain injury than what meets the eye.

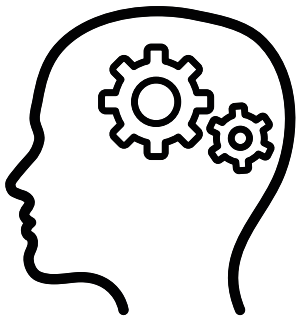
1 WHAT IS AN ACQUIRED BRAIN INJURY (ABI)?

Physical Effects of a Brain Injury

- Low energy/ energy crashes
- Sleep problems
- Headaches
- Sensitivity to light and sound
- Ringing in the ears
- Appetite changes and difficulty swallowing
- Changes to smell or taste
- Dizziness or balance concerns
- Weakness or paralysis
- Numbness, tingling, pain, muscle spasms
- Seizures

Cognitive Effects of a Brain Injury

- Difficulty concentrating
- Memory problems
- Changes to speech
- Changes to thinking (slowed thinking, stuck thinking, brain shutting down)
- Difficulty learning
- Difficulty with executive functions
- Sequencing, organizing and planning
- Multitasking
- Decision making
- Problem solving



It is important to remember that someone with a brain injury may not experience all of these symptoms. Some people experience one or two, others may experience more.

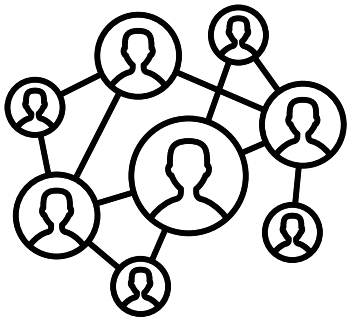
1 WHAT IS AN ACQUIRED BRAIN INJURY (ABI)?

Emotional Effects of a Brain Injury

- Changes to mood patterns
- Depression
- Anxiety
- Decreased motivation and follow through
- Impulsive actions
- Irritability and anger
- Difficulty adjusting to change
- Changes in self-confidence and independence
- Changes in self-awareness and insight
- Changes in self-identity and self-worth

Social Effects of a Brain Injury

- Changes in employment and reduced income
- Changes in housing
- Not allowed or able to drive
- Use of drugs or alcohol
- Conflict with the law
- Do not feel like you fit in, feeling misunderstood
- Relationship problems
- Hard to find purpose
- Increased conflicts
- Do not get out as much
- Role changes in family



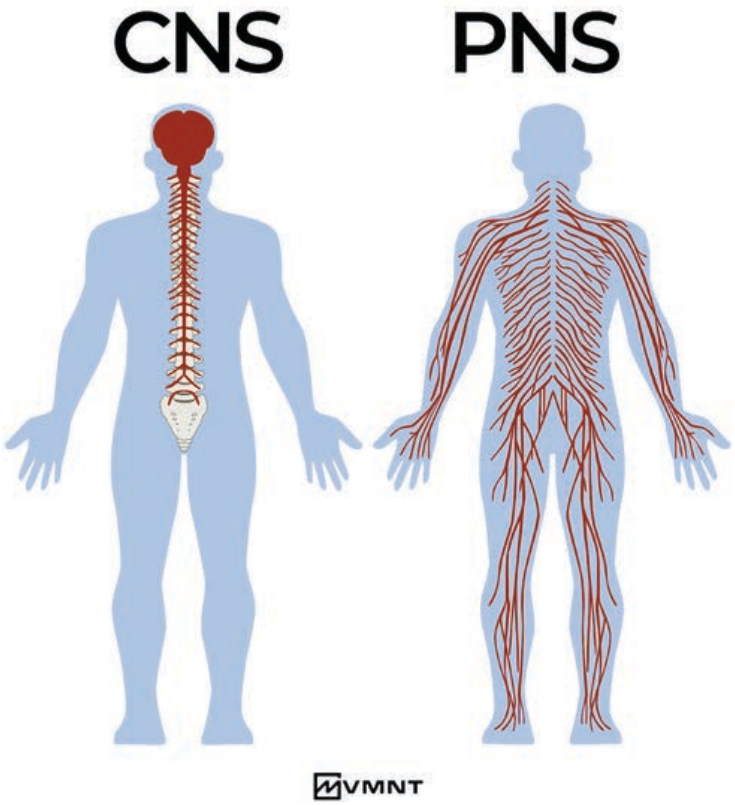
It is important to remember that someone with a brain injury may not experience all of these symptoms. Some people experience one or two, others may experience more.

2 BRAIN ANATOMY 101

The Nervous System

There are two main parts to the nervous system:

1. Central (CNS): Includes the brain and spinal cord.
2. Peripheral (PNS): Includes the rest of the body.

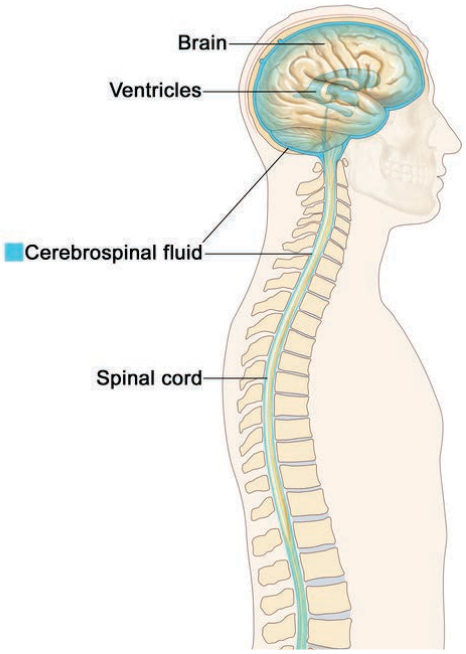


There is another part of the nervous system called the **Autonomic Nervous System**. The autonomic nervous system controls automatic functions in the body like heartbeat. It also controls:

2 BRAIN ANATOMY 101

Brain Anatomy Part 1

Cerebrospinal Fluid

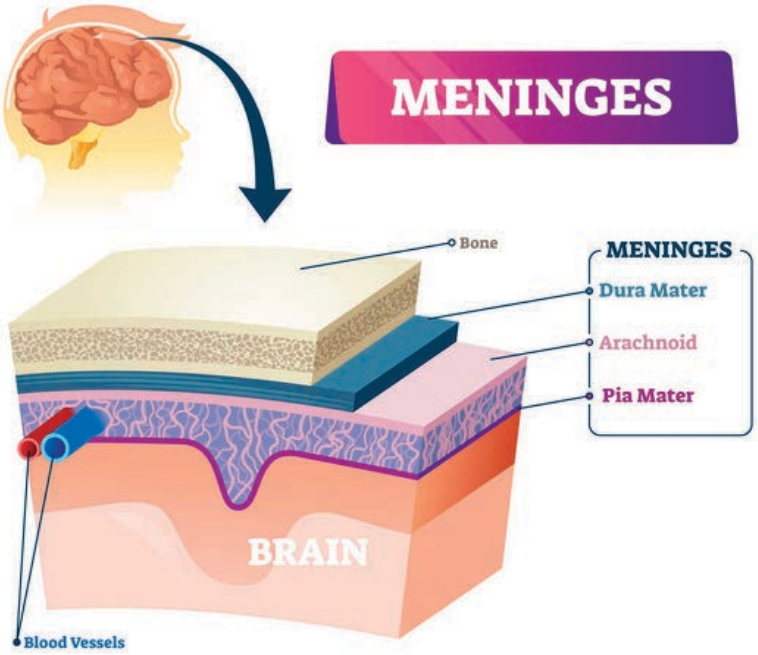


Cerebrospinal fluid (CSF) surrounds the brain and spinal cord, acting as a shock absorber.

Meninges

Meninges are membranes that cover and protect the brain

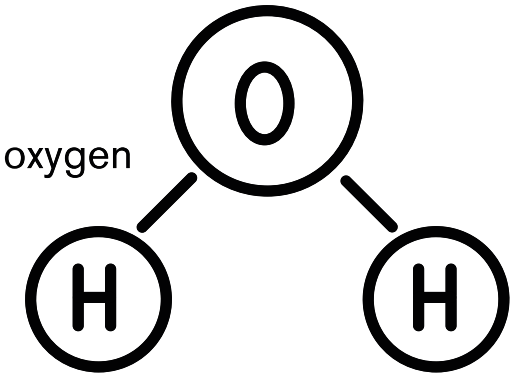
- Meninges are split into 3 layers.
- They anchor the central nervous system (CNS), keeping the brain from moving around within the skull.

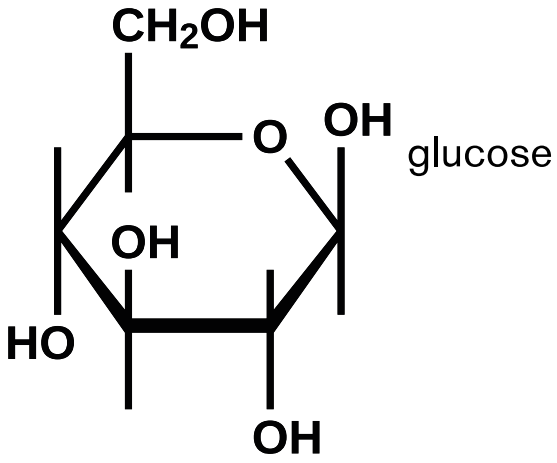


2 BRAIN ANATOMY 101

Brain Food

Oxygen and glucose (sugar) provide necessary nutrients for the brain
The brain receives its “food” through circulating blood flow.



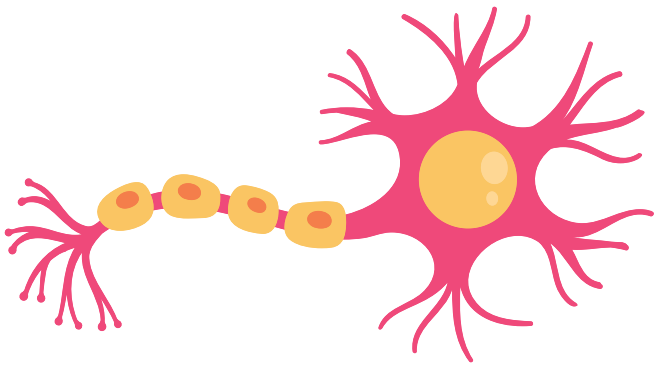


Neurons

What Are Neurons?

Neurons are specialized nerves that live in the central nervous system. They control and send messages to the body and brain through electrical impulses.

Each neuron fires up to 50 times a second.

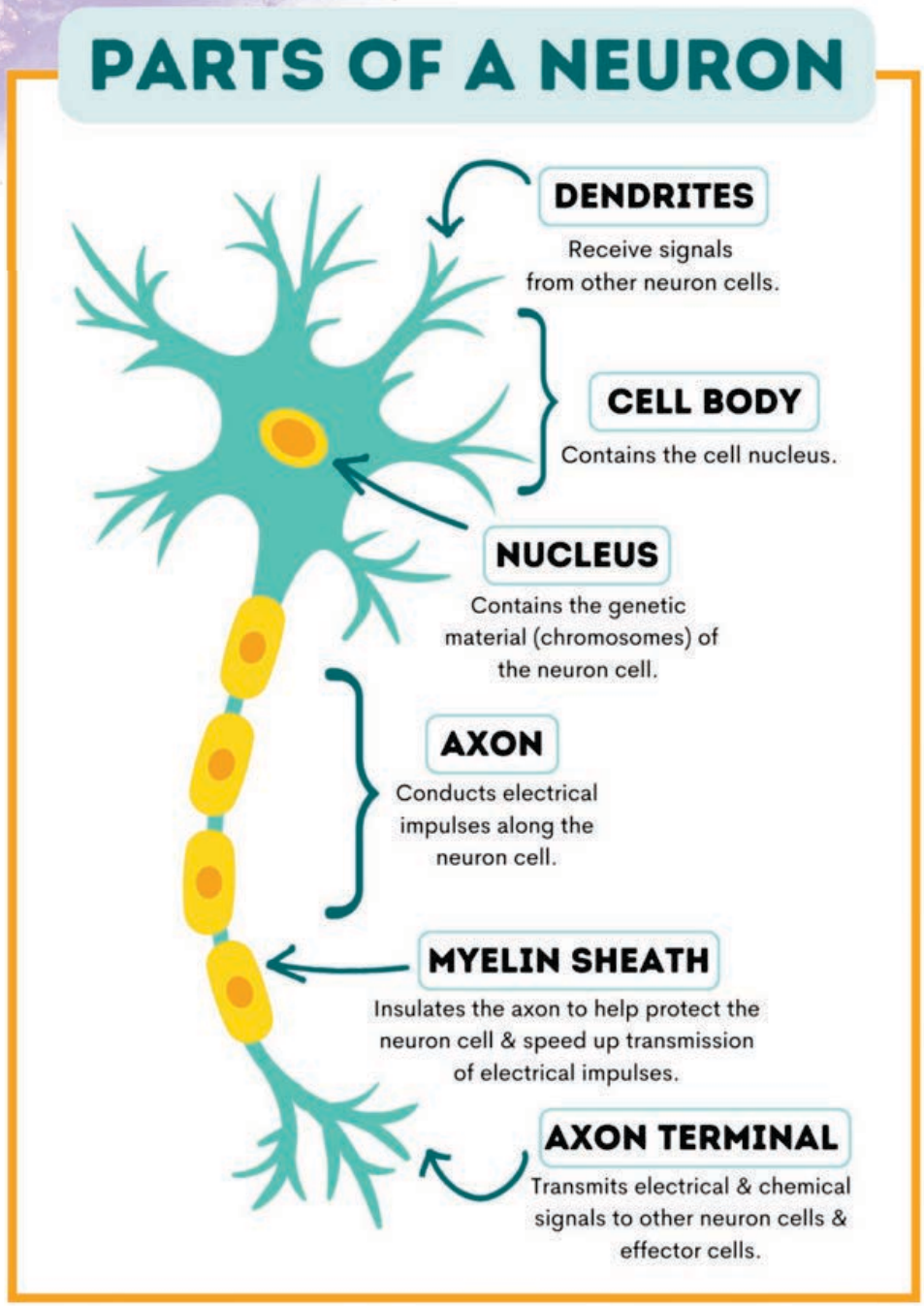


2 BRAIN ANATOMY 101

What Are Neurons Continued

There are approximately 100 billion neurons in the brain. In fact, there are as many neurons in the brain as there are stars in the milky way.

Neuron Anatomy

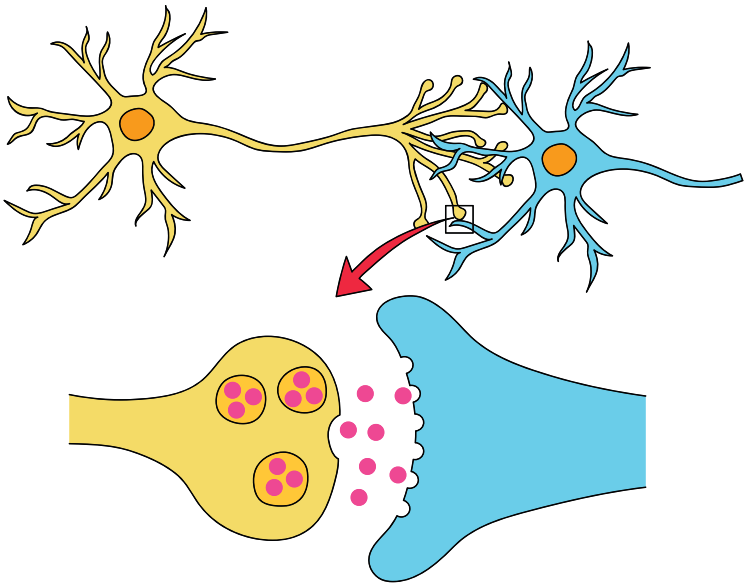


2 BRAIN ANATOMY 101

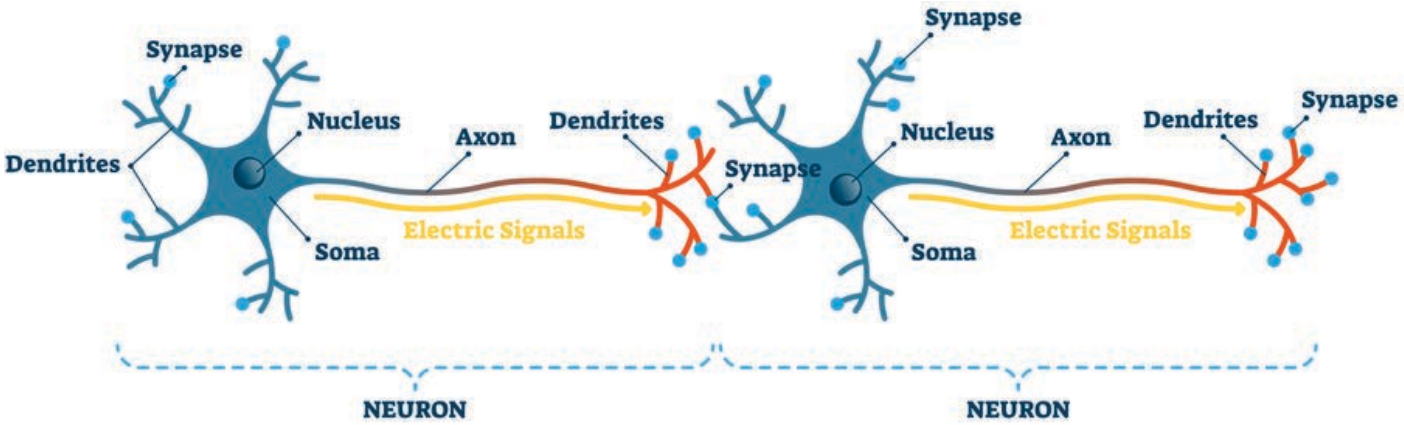
Neuron Anatomy Continued

Neurons connect to each other at a synapse. Chemicals called neurotransmitters carry impulses (messages) between these synapses from one neuron to the next.

- Each neuron connects to about 7000 others.
- The brain contains 100-500 trillion synapses.
- At any given moment, a neuron receives 1 million impulses from other neurons.



This is an example of how neurons connect to each other. One neuron's dendrites connect to the other neuron's dendrites.

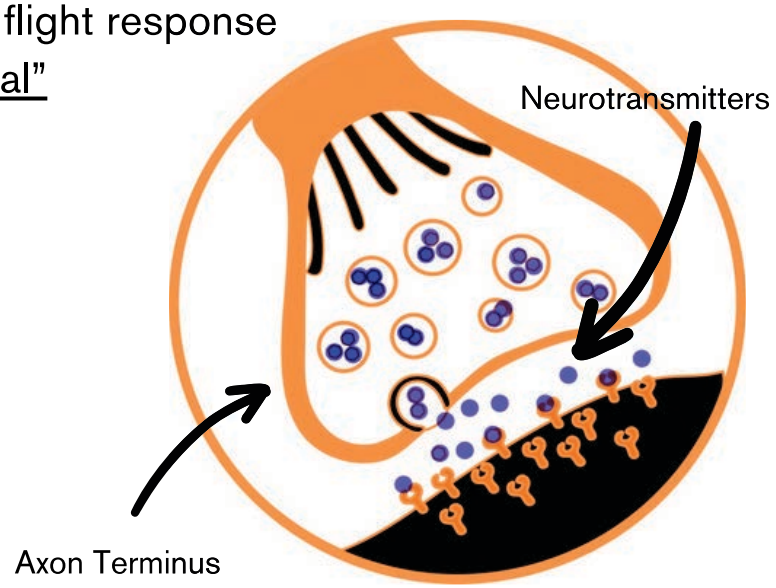


2 BRAIN ANATOMY 101

Neurotransmitters

There are 4 common neurotransmitters:

1. Norepinephrine
    a. Gives us energy
    b. Responsible for the fight or flight response
2. Dopamine “The Reward Chemical”
    a. Gives us a “high”
3. Serotonin “The Mood Stabilizer”
    a. Elevates and levels mood
4. GABA
    a. Makes us calm



Neurotransmitters:
Too Much or Too Little

Dopamine

Too little dopamine
- decreased movement, lack of emotion, feeling flat

Too much dopamine
- euphoria, hallucinations, excessive movement

GABA

Too little GABA
- anxiety, insomnia

Too much GABA
- lack of motivation, excessive sleepiness

2 BRAIN ANATOMY 101

Neurotransmitters: Too Much or Too Little

Too little norepinephrine can cause:

Too much norepinephrine can cause:

Too little serotonin can cause:

Too much serotonin can cause:

2 BRAIN ANATOMY 101

Changes After Brain Injury

After a brain injury, someone might experience **noisy brain**. Noisy brain is the erratic firing of neurons after an injury. This is caused by:

- Dead neurons not firing.
- Damaged neurons sending faulty signals.
  - Faulty signals can be too slow or irregular.
  - Faulty signals cause disruption in the entire system.
  - Neurons receiving faulty signals can stop working.

Because of this, the nervous system is no longer efficient, causing the brain to feel “noisy,” “crackly,” or “buzzy.”

Neurons do not have a fixed lifespan and often live as long as you do.

When neurons do die, cellular garbage collectors mobilize and dispose of the corpses and clear away debris.

3 BRAIN ANATOMY 201

Parts of the Head/ Brain

Skull

The skull protects the brain from minor bumps. It consists of 22 bones and is approximately the thickness of 3 pennies (1/4").

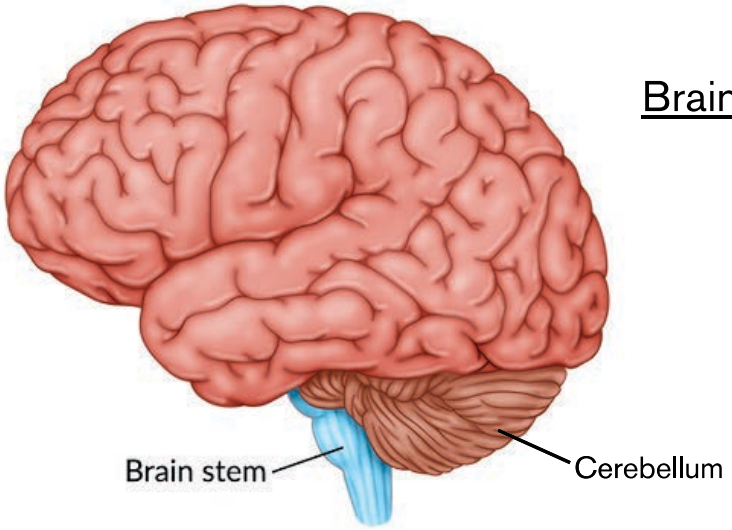
Brain Stem and Cerebellum

Brain Stem

- Responsible for life and death functions.
- It is the pathway to and from the body.

Cerebellum

- Responsible for balance, posture, coordination, and voluntary movements.



Brain Stem: Life and Death Functions

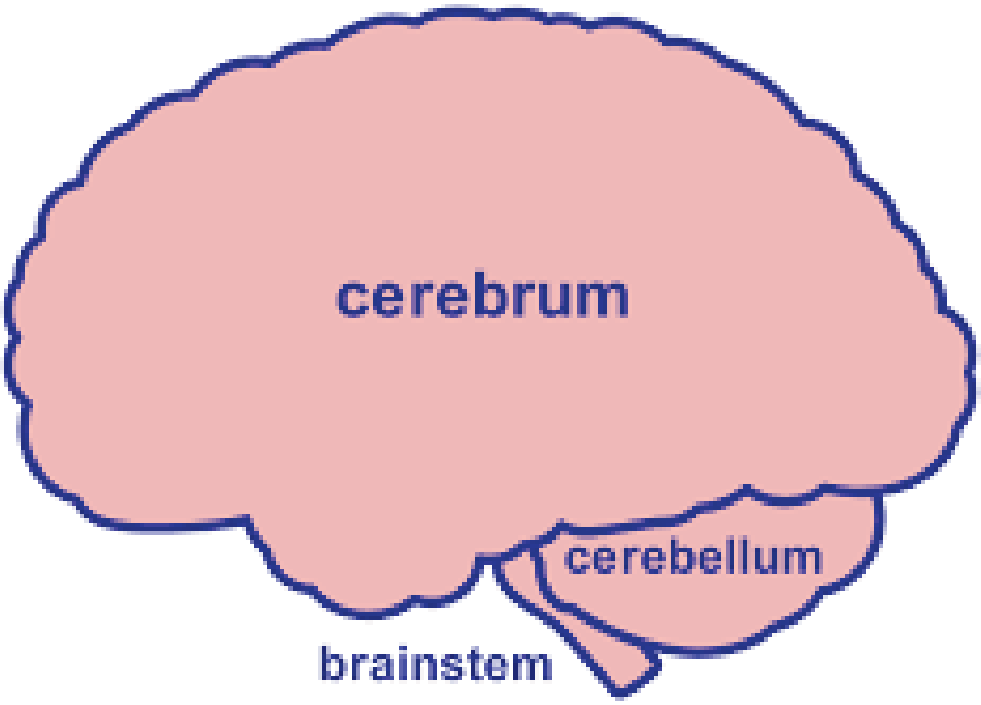
3 BRAIN ANATOMY 201

Cerebrum

The cerebrum is the largest part of the brain. It is divided into two halves called cerebral hemispheres.

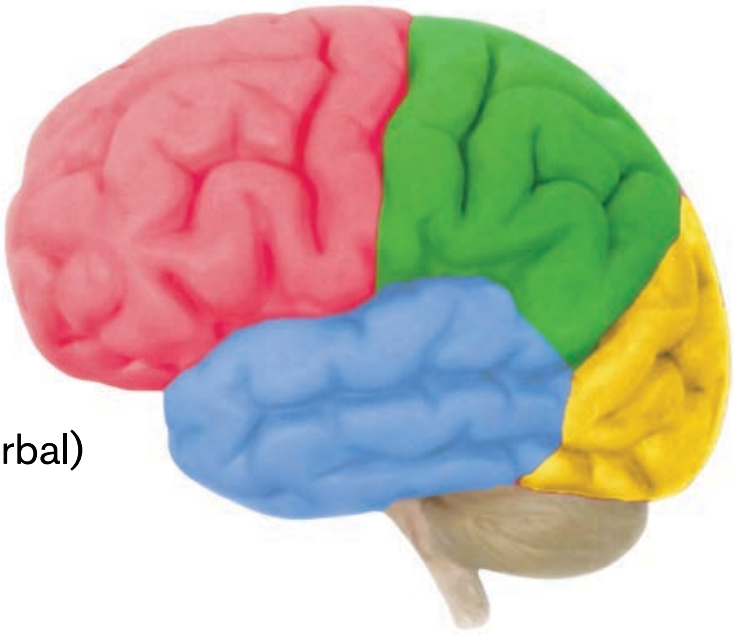
The cerebrum contains four main lobes. Their names are:

1. Frontal Lobe
2. _____
3. _____
4. _____



3 BRAIN ANATOMY 201

Lobes in the Cerebrum



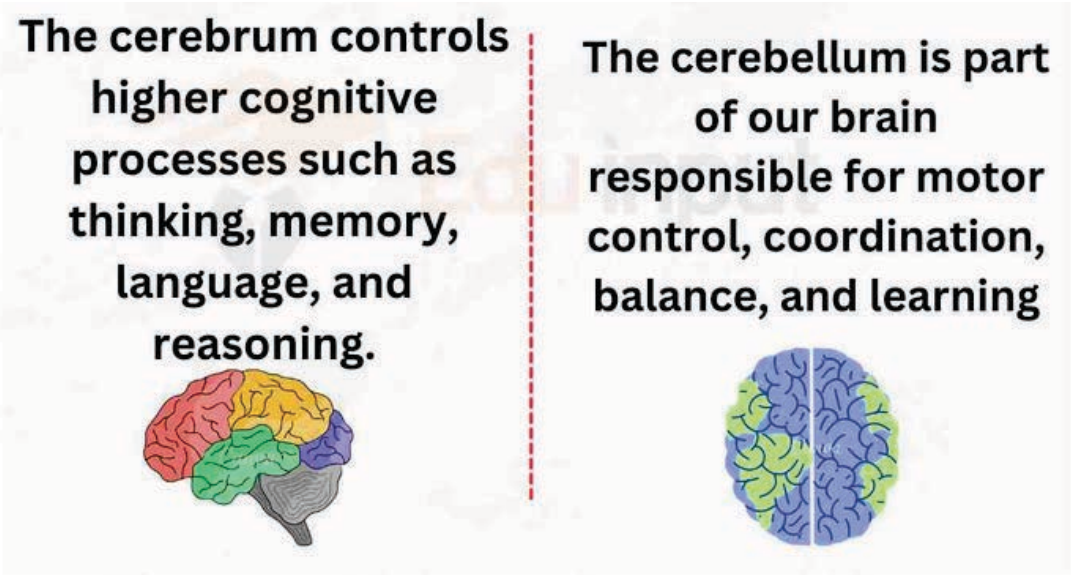
Frontal (Red)
- Voluntary movement
- Thinking, logic
- Filter for emotions and behaviour

Temporal (Blue)
- Memory
- Hearing
- Communication (verbal and non-verbal)

Parietal (Green)
- Senses (touch, pain, temperature)
- 3D vision

Occipital (Yellow)
- Vision (shape, colour, movement)

Cerebrum vs Cerebellum

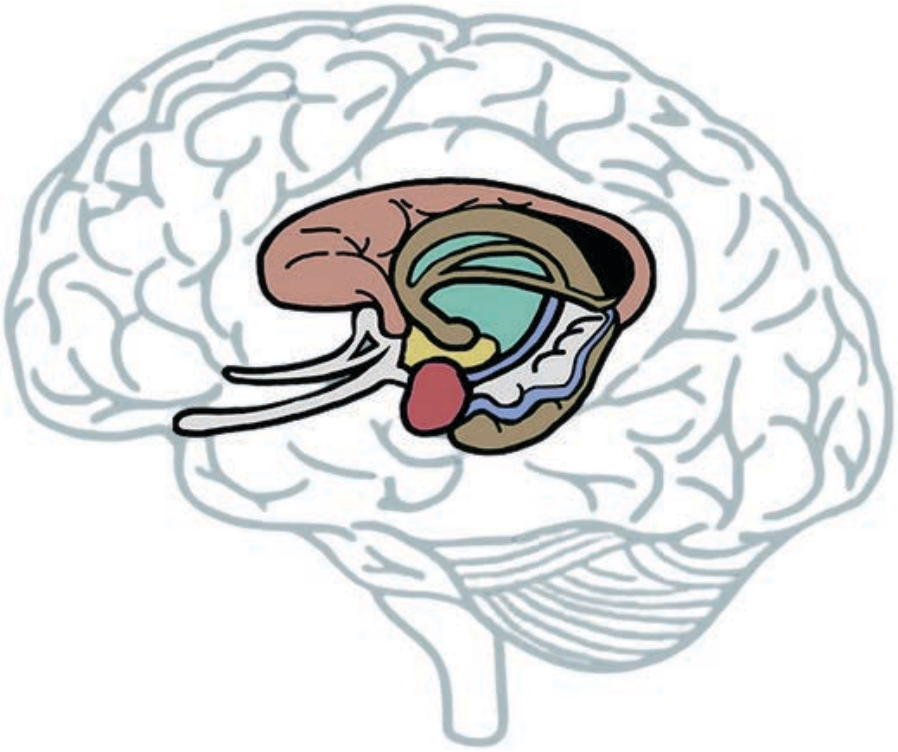


3 BRAIN ANATOMY 201

Limbic System

The limbic system is responsible for raw and unfiltered emotions, or “gut feelings.” The limbic system also aids in the storage of long-term memories.

The limbic system is located towards the middle of the brain and overlaps with several lobes.



3 BRAIN ANATOMY 201

Limbic System Continued

These are the main parts of the limbic system recognized by most scientists:

Hypothalamus

- Regulates hunger, thirst, body temperature, hormones.
- Responsible for fight or flight.

Hippocampus

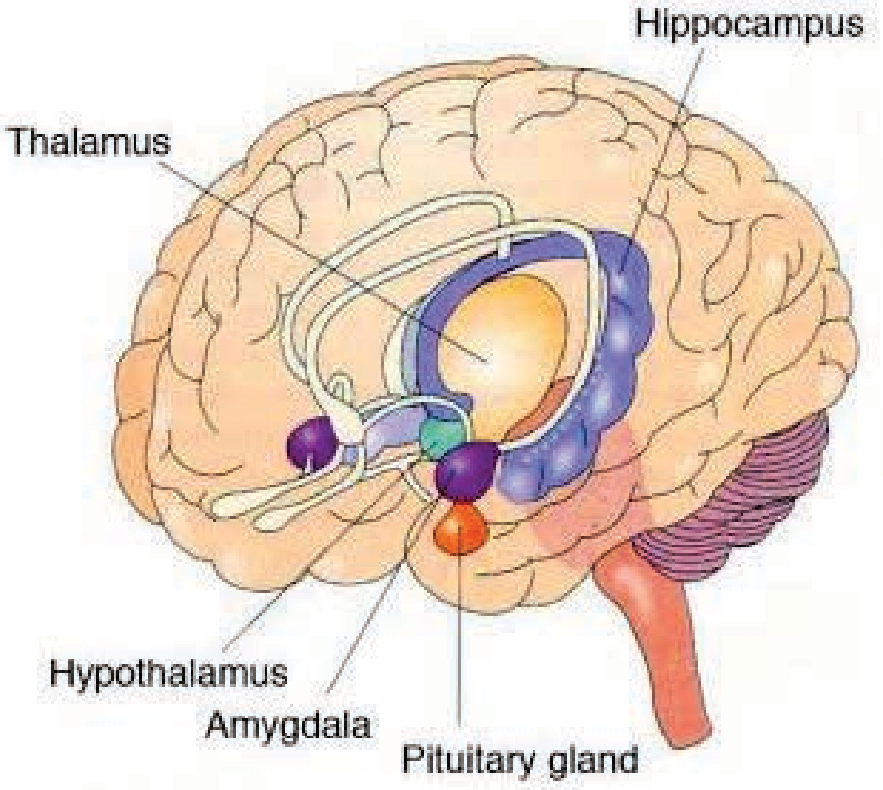
- Holds short-term memories and transfers them to long-term storage.

Thalamus

- Information relay station.

Amygdala

- Processing centre for emotions, like fear and motivation.



3 BRAIN ANATOMY 201

Limbic System and Frontal Lobe

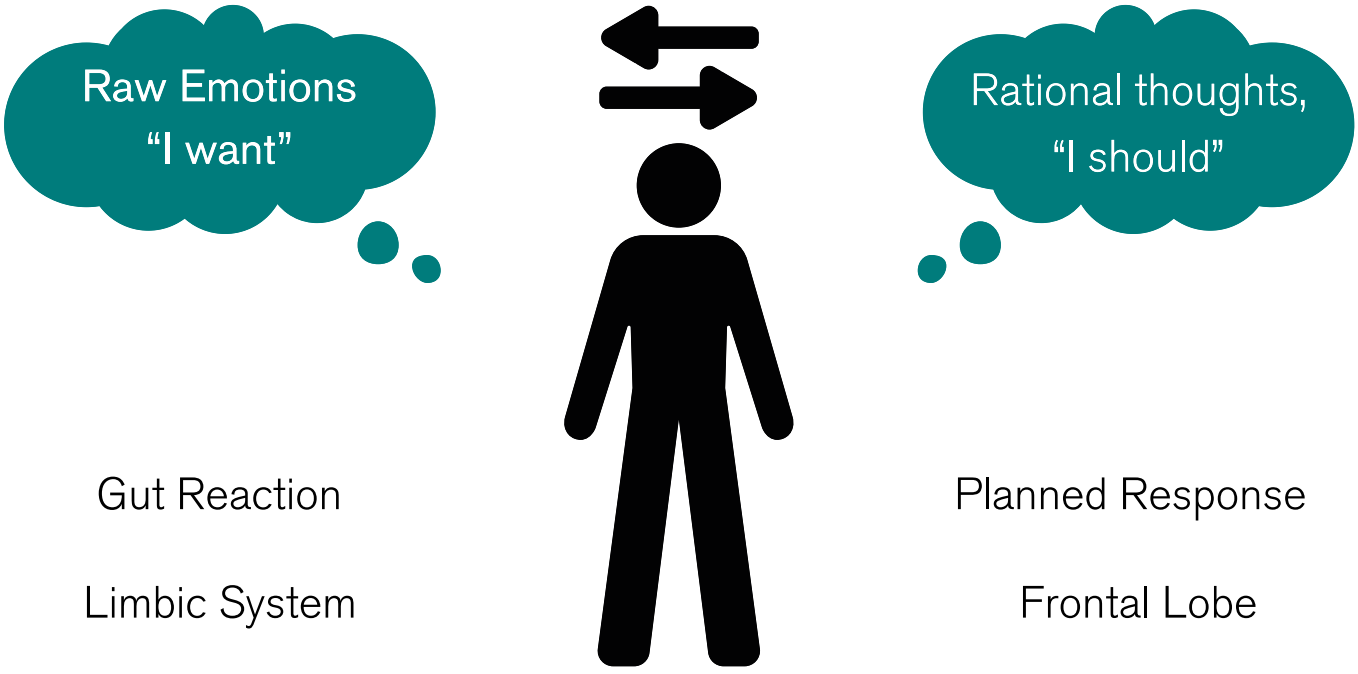
Both the limbic and frontal lobe are responsible for emotion. What is the difference?

The Limbic system is responsible for instinctive, "raw" emotion.

VS

Frontal lobe is responsible for planned, logical thinking and reasoning.

Working together, the limbic system creates an initial emotional response to an event, and the frontal lobe interprets the emotions and rationalizes them using logic.

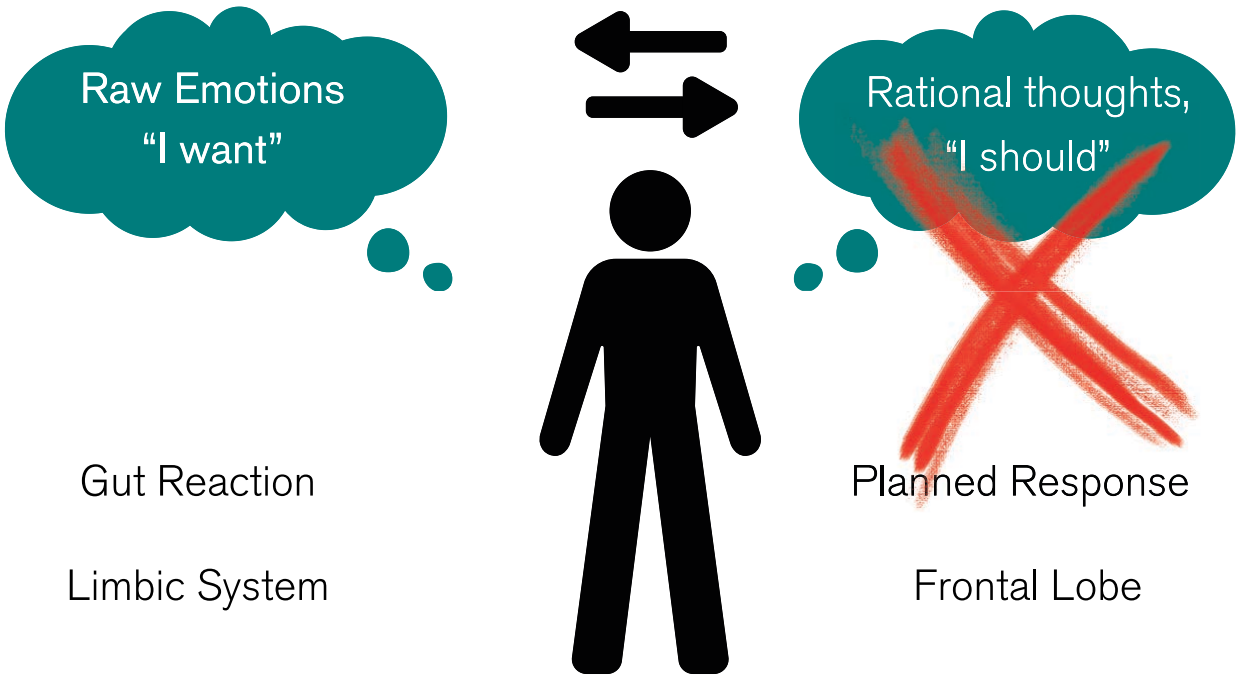


3 BRAIN ANATOMY 201

Limbic System and Frontal Lobe Continued

When the frontal lobe is injured, emotions are not filtered or balanced.

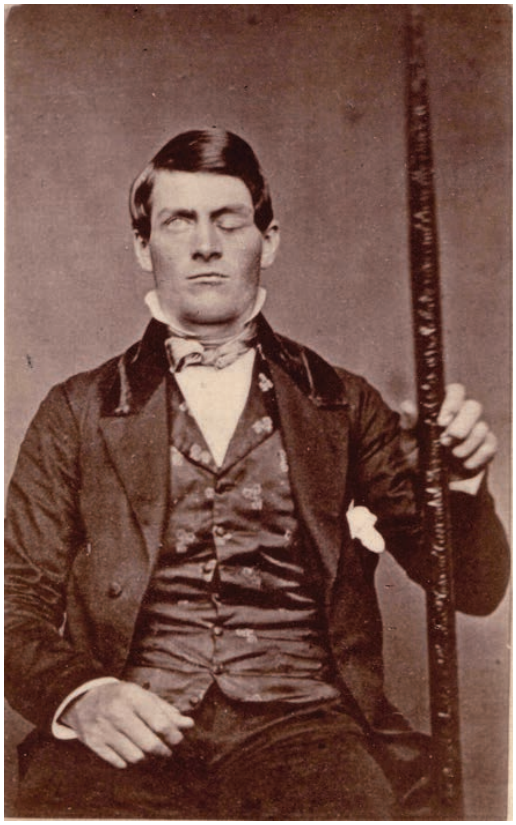
As the limbic system only aims to seek pleasure and avoid pain, emotions can become powerful and take over. On the other extreme, emotions may become flat and dull with no ups and downs.



The limbic system does not mature like the rest of your brain; it stays a child. It will send out gut reactions on how to act, thinking things like "me", "I want", "now".

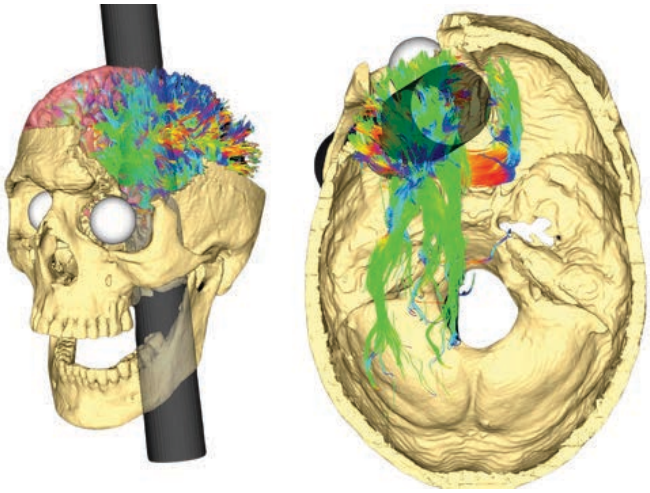
3 BRAIN ANATOMY 201

Case Study: Phineas Gage



Phineas Gage (1823–1860) was an American railroad construction foreman, remembered for his survival of an accident in which a large iron rod was driven completely through his head, destroying much of his brain's left frontal lobe. The effects were so profound that friends saw him as "no longer Gage".

Prior to his accident, Gage was described as a kind, gentle, polite man who was extremely considerate of others. His friends and employees enjoyed his presence and work ethic.



After his accident, friends noticed that Gage had become angry and volatile. Due to his significant personality changes and aggressive behaviour, he was fired from his job and eventually lost most of his friends.

This case study shows how important the frontal lobe is. Damage to the frontal lobe can lead to significant personality changes. It can cause a person to act very differently than before, possibly leading to impulsive and reckless behaviour.

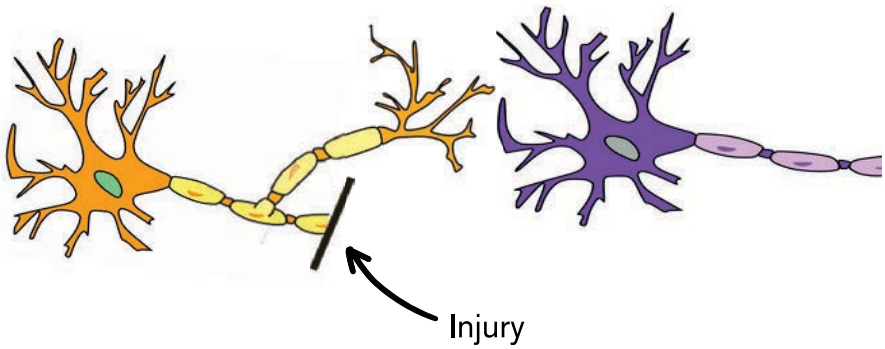
4 NEUROPLASTICITY

What is Neuroplasticity?

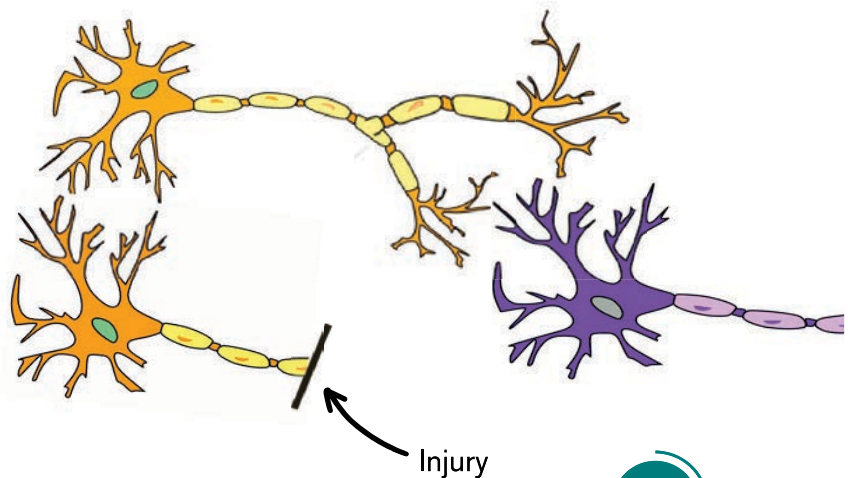
When the brain is damaged, so is the network of neurons that process information. The brain adjusts to these changes by adapting and creating new neurological pathways.

Neuroplasticity refers to the brain's natural ability to compensate for an injury.

How Do Neurons Create New Pathways?



Example 1: A neuron grows a new branch to go around the part that is injured.



Example 2: The damaged neuron's neighbour can also compensate by growing a new branch.

4 NEUROPLASTICITY

How to Stimulate Neuroplasticity

Nutrition

The brain is unique and can only receive fuel as it cannot produce its own. It needs to have a supply of good nutrition to function properly. To get this fuel, the body breaks down carbs and converts them to a sugar called "glucose".

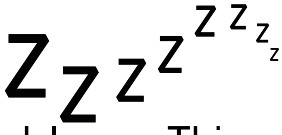
Good nutrition includes things like:

- Carbohydrates
- Protein + Healthy Fats
- Vitamins

When you do not eat well, the brain does not get the fuel it needs.

- Improper nutrition: glucose decreases=not enough energy
- Eating infrequently: spikes in insulin break glucose down=not enough fuel

Sleep



Everything we do causes neurons to change, rewire, and learn. This can be tiring for the brain, making sleep important as it allows the brain to recharge. When the brain recharges, it allows us to stimulate neuroplasticity and form habits more effectively. Here is what sleep does:

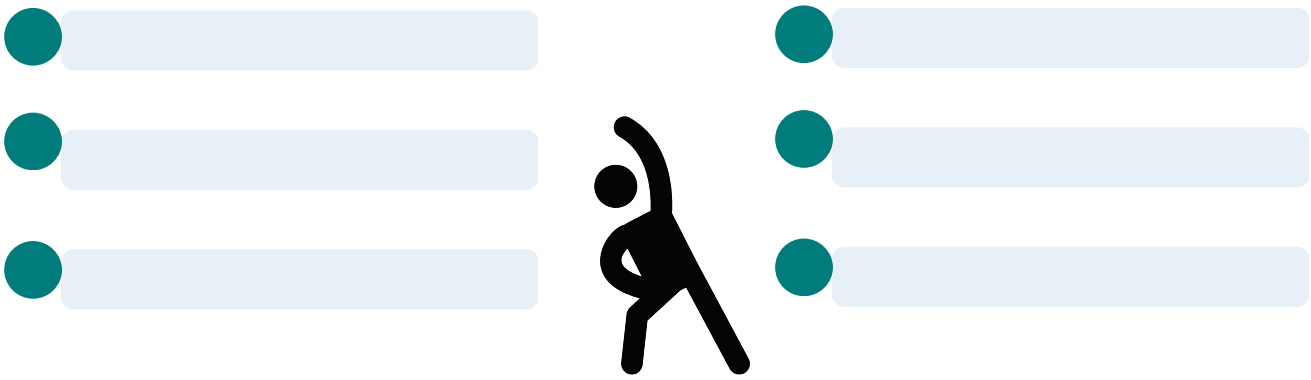
- Memory consolidation
  - Consolidates memories and strengthens connections, including memories related to habits.
- Cognitive performance
  - Helps with cognitive function like good decision-making, impulse control, and regulation.
  - Keep you on track and resistant to temptations.
- Emotional regulation
  - Allows us to approach a habit with a calmer and more disciplined mindset.

4 NEUROPLASTICITY

Exercise

Exercising helps neurons wire together and create strong pathways. Exercise also releases brain-derived neurotrophic factor (BDNF), an essential protein that can assist in building new neurons and synapses.

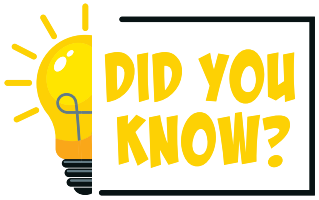
What type of exercises can you do to stimulate neuroplasticity?



Attitude

Positive attitude: promotes positive neuron circuits and allows neurons to live longer and form stronger connections.

Negative attitude: creates a connection between neurons and forms neural pathways in the brain that encourage sadness. These negative tendencies can cause the brain to distort the truth and make it more difficult to break the negative cycle.



A negative attitude can make surrounding neurons go dormant.

4 NEUROPLASTICITY

Stimulate and Challenge the Brain

Doing a new, challenging, exciting, or important activity can stimulate brain-derived neurotrophic factor (BDNF) to make neurons grow and form stronger connections. Giving a task or activity your full attention can also help stimulate neuroplasticity.

What activities can you do to stimulate neuroplasticity?

Learn New Skills and Practice Them

To maintain strong and healthy neurons, it is crucial to engage them. This can be done by learning or relearning a skill. When practicing a skill, consider these tips:

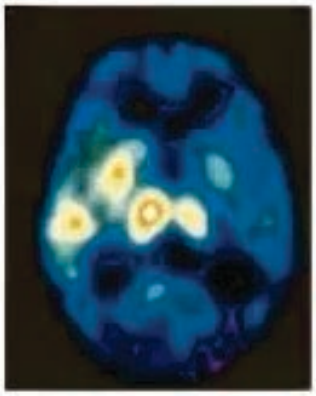
- Practice over and over.
- Start from the beginning.
- Incorporate skills into daily routines.
- Break tasks into small parts.
- Set small, achievable goals.
- Monitor progress.
- Celebrate achievements and reflect on challenges faced.

4 NEUROPLASTICITY

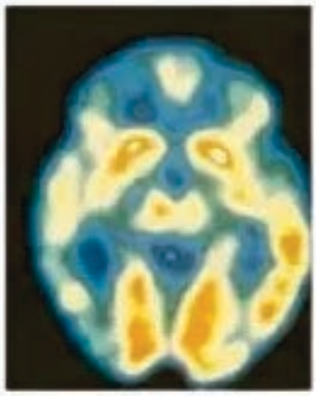
What Slows Neuroplasticity?

Stress

Stress causes decreased function and death in neurons located in the hippocampus which is responsible for memory and learning.



Stressed & Depressed



Opimal Functioning

Neurons

Regular vs Chronic Stress

We may not realize when we are stressed, so it is important to look for signs of stress when something is not feeling quite right.

What triggers stress for you? What are the physical signs that you are stressed (nail biting, clenched jaw, stiff neck)?

Triggers	Physical Signs

4 NEUROPLASTICITY

Being Overtired

Lack of sleep or being overtired can cause a variety of physical, cognitive, and emotional symptoms. In fact, lack of sleep can shut down some brain functions such as visual perception, memory association, and reaction time.

What are some signs that you are overtired?

Alcohol and Drug Use

Use of alcohol and drugs should be avoided during recovery of a brain injury or if you have a life-long brain injury. Drugs and alcohol can make brain injury symptoms worse and can prevent the brain from healing properly.

As the brain continues to adapt to the presence of a substance, parts of the brain responsible for judgment, decision-making, learning, and memory begin to physically change. Once these changes take place, substance use becomes like a reflex, and an addiction can result.

Substance use (drugs or alcohol) can cause an organic/non-traumatic brain injury due to their toxicity. Using substances can lead to overdose, stroke, or seizure which can also cause damage to the brain.

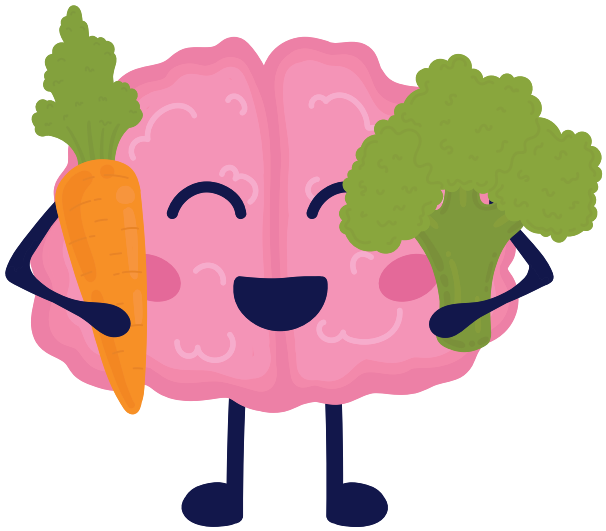
4.1 DEEP DIVE INTO NUTRITION

How Nutrition Impacts a Brain Injury

Our brains use 20% of our daily calorie intake. When someone sustains a brain injury, they need to eat enough calories to help the brain recover, especially in the first few days after injury.

In addition to getting enough calories, it is important to get specific nutrients to help our brain recover and thrive. Some important parts of nutrition include:

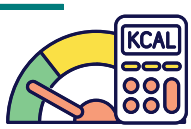
- Amino Acids
  - Animal Proteins
  - _____
  - _____
- Protein
  - Cheese
  - _____
  - _____
- Omega-3 Fats
  - Fish/Seafood
  - _____
  - _____
- Vitamins and Minerals



If a person does not get enough of certain nutrients in their diet, it can limit brain recovery and function.

4.1 DEEP DIVE INTO NUTRITION

Are There Brain Healing Foods?



Recovery from brain injury requires time, patience, rehabilitation, and coping strategies, including diet. Special diets, like the anti-inflammatory diet, can help alleviate pain, improve mood, and enhance sleep following a brain injury.

Anti-Inflammatory Diet

Anti-inflammatory diets are made up of foods like fatty fish, healthy oils, flaxseed, fruits, vegetables, and lean proteins. Consult a dietitian for a comprehensive anti-inflammatory diet plan.

Healthy Fats

About 60% of the brain is composed of fat, which means our diet should emphasize healthy, unsaturated fats over saturated ones. Foods rich in these beneficial fats include:

- oils, nuts, natural nut butters, and certain fruits and vegetables like avocados. Unsaturated fats support better overall health and brain function.

Omega-3 Fats

Most commonly found in fish, omega-3 has been shown to improve cognition and recovery of neurons after a traumatic brain injury.

- Evidence suggests that DHA, an important form of omega-3 fatty acid, can help improve neuronal function.

Proteins and Amino Acids

Amino acids are a component of protein. They are used for the growth, repair and maintenance of almost every tissue in the body and brain. Good sources of protein include:

- Fish, chicken and other lean meats, eggs, legumes, nuts and seeds.

4.1 DEEP DIVE INTO NUTRITION

Anti-Inflammatory Diet Continued

Fruits and Vegetables

Fruits and vegetables are the best source of the vitamins and minerals the body requires to become and stay healthy. Each type of fruit and vegetable contains a unique blend of vitamins and minerals, so it is best to try to get a variety of them throughout the day.

Whole Grains

Whole grains contain a lot of the B vitamins that our bodies need to keep our brains functioning well. They are important for sending messages to and from the brain, controlling our muscles and allowing us to function.

- Whole grains, like brown or wild rice, multigrain breads, and cereals should be eaten more often than highly processed grains.

Water

Dehydration can impair brain function. Drinking water regularly throughout the day can reduce the risk of becoming dehydrated.

- HealthLink BC recommends 6-8 250 mL (8 fl oz) glasses a day.

4.1 DEEP DIVE INTO NUTRITION

Eating Habits After a Brain Injury

After a brain injury, a person's ability to taste and smell may be temporarily or permanently altered or lost. These sensory changes can impact food and drink preferences, leading to challenging adjustments. A dietitian can assist in developing a personalized meal plan to navigate these shifts.

Memory Issues Impacting Eating

Individuals with brain injuries may experience memory difficulties that make it hard to remember when to eat or how to prepare meals. Conversely, if they forget that they have already eaten, they might unintentionally eat more than necessary.

Strategies for managing memory-related eating difficulties include:

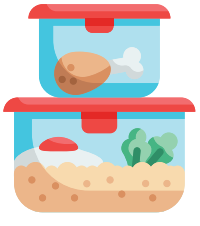
- Creating a meal plan that outlines each step of preparation.
- Keeping a food journal to record what was eaten and when.
- Using alarms or reminders to prompt the start of meal preparation.

Lack of Hunger or Fullness

In some instances, a person may struggle to feel sensations of hunger or fullness. This can alter eating habits and affect overall nutrition.

Strategies for coping with changes in hunger sensations include:

- Establishing scheduled times for meals with defined portion sizes.
- Keeping a food journal to monitor meal times and food intake.



5 REBUILDING AFTER AN ABI

The Healing Process

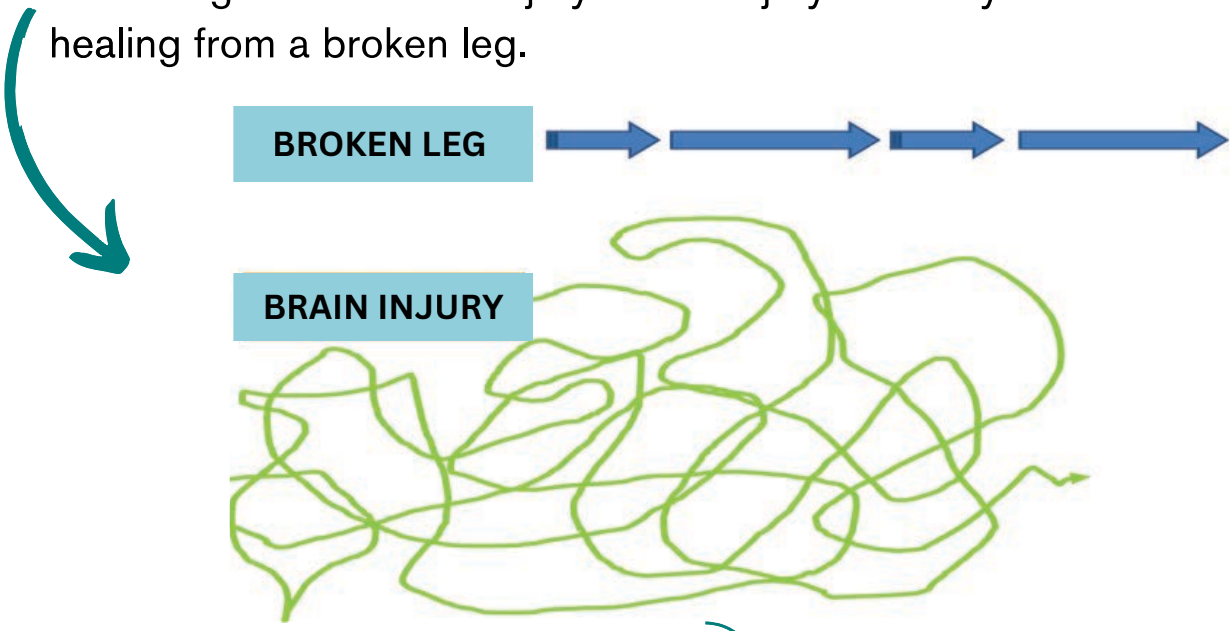
Every brain injury is unique, like a snowflake. There is no way to predict the outcome of someone's life after a brain injury. Improvement will be different for each person and recovery can be slow, unpredictable, and inconsistent.

Recovery varies with the type, location, and severity of brain injury, as well as the extent of neuron damage.

MYTH: The brain will stop healing after one year post injury. The survivor will no longer make any progress.

FACT: The brain will continue to heal, improve, and rewire long after a brain injury.

This image was drawn by a brain injury survivor to depict the journey of healing from a brain injury. Brain injury recovery is not as linear as healing from a broken leg.



5 REBUILDING AFTER AN ABI

What to Expect When Healing From an ABI

Many people who have experienced a brain injury will have an integrated support team. These are some specialists that can help an individual after a brain injury:

Physiotherapists

- Assess, treat, and manage pain, injuries, movement dysfunctions and chronic conditions.

Occupational Therapists

- Focus on improving the ability to perform activities of daily living.

Kinesiologists

- Help find the best way to move the body, strengthen muscles, improve range of motion, reduce pain, and prevent further injuries.

Counsellors/ Psychologists/ Psychiatrists

- Help address challenges and build problem-solving skills by clarifying issues and exploring possible options.
- Psychiatrists can provide medications to manage symptoms.

Social Workers

- Make assessments and develop intervention plans to connect clients to resources, provide counselling and support, mediate conflict, advocate for services, and strengthen clients' capacity to successfully manage their problems.

Speech and Language Therapists

- Support individuals in producing clear speech sounds, understanding and using spoken language effectively, and developing fluent communication. They also help improve skills related to reading, writing, eating, feeding, and swallowing.

5 REBUILDING AFTER AN ABI

Setting Yourself Up For Success

Explore strategies that can help set you up for success and manage the challenges that may arise following a brain injury.

Strategies for Physical Effects

Some strategies for managing physical effects are:

- Prioritizing your energy and time.
- Working within your limits.
- Doing things during your best time of day.
- Allowing more time and break tasks into small steps.
- Taking breaks and stop BEFORE you crash.
- Keeping a log/journal to learn energy and pain patterns.
- Having good sleep hygiene.

Sleep hygiene refers to the habits, behaviors, and environmental factors that support restful sleep. Environmental factors, such as lighting or noise, can affect your sleep, and some of these may be outside your control.

What kinds of environmental factors do you have control over?

5 REBUILDING AFTER AN ABI

Strategies for Physical Effects Continued

After a brain injury, some tasks may become more difficult. You may also find that you are more sensitive to noise and sound. There are many adaptive tools you can utilize to help with sensitivity and continue to do more tasks independently. Here are some examples:

Shoes	Try long handled shoehorns and sock aids, Velcro or elastic shoelaces.
Clothing	Velcro or snaps can be added to clothing to replace zippers or buttons.
Handling	Dycem (a sheet of sticky material) or a sheet of non-adhesive shelf liner can be used to hold items in place while stirring food or sanding wood.
Dining	A rocker knife can be used to cut meat with one hand, and a pizza cutter can cut softer items.
Cooking	A one-handed can opener may be found in discount stores.
Writing, Speech, Communication	Use foam tubing to build up pens, etc. Smart phone and tablet apps can convert speech to text or text to speech.
Driving	Hand controls and foot pedal adapters can be used for driving.

Many adaptive tools can be found at a low cost or for free through various organizations in your community.

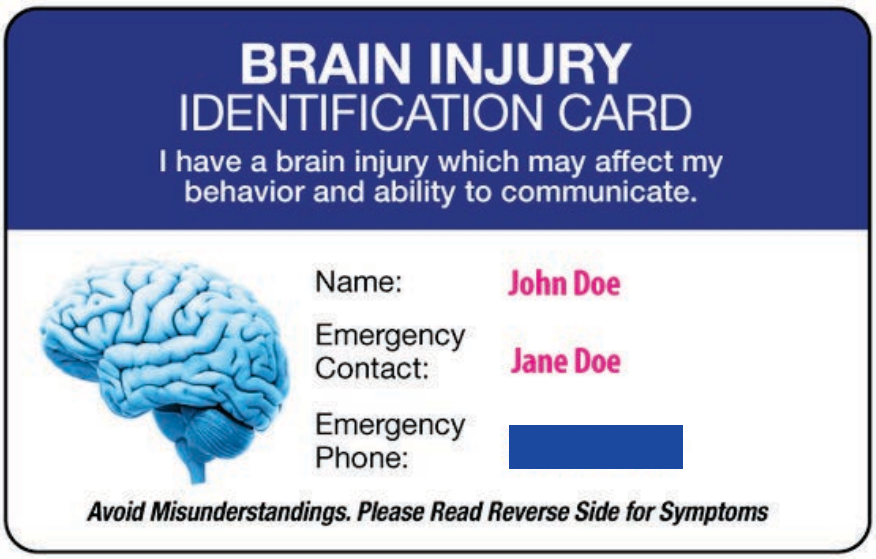
5 REBUILDING AFTER AN ABI

Strategies for Cognitive Effects

Some tips for cognitive effects of a brain injury:

- If you give something your full attention, you have a better chance of that storing that memory.
- Use tools like calendars or try writing things down.
- Follow a routine each day to add stability.
- Avoid distractions.
- Do one thing at a time to help with focus.
- Make a list to follow.
- When you encounter a problem, do some deep breathing and then make a plan of action.
- Talk to someone you trust to work through problems or ask for feedback and advice. This person could be a spouse, friend, family member, or a professional in the community.

A card that explains your brain injury and the specific challenges you may encounter may be useful. This could help those around you understand what is happening and how best to help you.



5 REBUILDING AFTER AN ABI

Strategies for Emotional / Behavioural Effects

Many people have difficulty coping with the emotional and behavioural effects of brain injuries. These are some coping strategies:

- Journalling
- Reaching out to others
- Expressing emotions through art
- Practicing mindfulness or meditation
- Taking a moment to relax
- Looking for positives

If you find yourself feeling overwhelmed or struggling with your emotions, take a step back and find a quiet, calming space where you can breathe, relax, and reset.

Focus on the positives in your life—moments of growth, joy, and connection. Make a list of accomplishments or things you're grateful for, and celebrate your progress, no matter how small.

Avoid words like "should" or "can't," as thoughts such as "I should be able to do this" or "I can't get anything right" make it harder to heal. Speak to yourself with kindness and understanding.

Reach out to others who understand what you're going through; connecting with people who share similar experiences can remind you that you're not alone and that recovery is possible.

Healing from a brain injury is a marathon, not a sprint. It takes time, patience, and self-compassion. There is no single right way to heal and no set timeline.

5 REBUILDING AFTER AN ABI

Set Yourself Up For Success: Mindfulness

Mindfulness is a form of meditation that centers on maintaining a heightened awareness of your present sensations and feelings, without judgment or interpretation.

It can include practices such as focused breathing, guided imagery, and other techniques designed to calm the body and mind while reducing stress.

Mindfulness: Breathing Exercises

Belly Breathing

Put your hand on your stomach and breathe deeply, feeling your abdomen rise and fall. This can be done while taking a short break during work or while watching TV. Bring your attention to the movement of your belly, encouraging full and deep breaths.

Box Breathing

Breathe in for four counts, hold for four counts, exhale for four counts, and then hold again for four counts.

Alternate Nostril Breathing

Alternate nostril breathing involves covering one nostril and alternating on each inhale and exhale.

4-7-8 Breathing

Breathe in for 4 seconds, hold for 7 seconds, and exhale for 8 seconds.

Mindfulness: Guided Imagery

Guided imagery is most often used as a relaxation technique. It involves sitting or lying quietly and imagining yourself in a favourite peaceful setting such as a beach, meadow, or forest. Some things to ask yourself while you practice:

- What does this place smell like?
- What does it look like?
- Is anyone there with you?
- What sounds do you hear?
- What are you feeling?
- Is it hot? Is it cold?
- What emotions do you feel?

Breathing Tracking Worksheet on page 107

Mindfulness: Other Options

<u>The Raisin Exercise</u>

This can be done with any kind of food. In this exercise, take a few raisins and pretend you have never seen a raisin before.

Allow yourself to pay careful attention to:

- How the raisin looks.
- How the raisin feels.
- How the raisin smells.
- How the raisin tastes.

Focusing on the raisin is meant to bring your mind to the present, to what is right in front of you. We may be used to raisins and not used to taking time to actually notice them.

Mindfulness: Other Options Continued

Chair Yoga

Chair Yoga is low impact, uses little equipment, and can be done if you are not very flexible or have some health conditions that limit movement. It is also a great option if you are tired or have low energy.

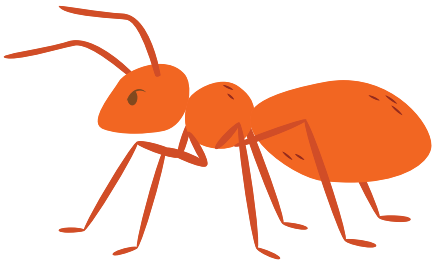
5 REBUILDING AFTER AN ABI

Setting Yourself Up For Success: Challenging ANTs

Automatic Negative Thoughts, (ANTs) often appear as a reaction to the interpretations we have about our reality. ANTs compel us to interpret situations in an unbalanced way.

ANTs can generate negative emotions like anxiety, stress, sadness, anger, guilt, and unworthiness.

Automatic
Negative
Thoughts



Steps for Challenging ANTs

There are 4 main steps to challenging ANTs:

Step 1. Recognize the Thought

Recognize when negative thoughts occur. Although these thoughts are internal, it is helpful to recognize them in the 3rd person. Would you allow someone else to speak to you the way that the ANT does? By separating yourself from the thought, you are in a better mental position to take step 2.

Step 2. Challenge the Thought

Ask yourself if the ANT is true. Some ANTs are completely false, and you do not actually have evidence that supports the thought you have.

Steps for Challenging ANTs Continued

Step 3. Get Perspective

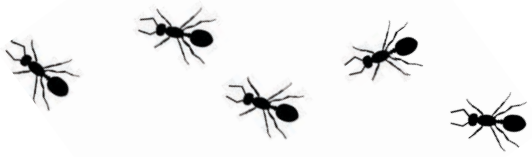
We have many thoughts every day. Have you noticed that you give different thoughts different amounts of weight or attention?

While some ANTs may be completely false, some may be valid. You may have areas in your life where you wish you had made different or better choices. Think about a 10-point scale. Are you giving a thought the weight of a 9 when it deserves the weight of a 2?

Step 4. Replace the Thought

Look at the irrational negative thought that you have determined is exaggerated or not accurate and replace it with something more realistic and positive.

Examples:



I'll never get that job/make the team/have success, so why try?	I'm good at the skills they are hiring for, so I'm a likely candidate.
I'm annoying, so why would anyone like me?	I have some close friends. I don't have to be perfect to be likable.
Life isn't fair and I never get my way.	Life isn't fair but sometimes I get my way. For example...

Challenging ANTs Worksheet on Page 105

5.1 SELF ADVOCACY

Discrimination

Discrimination is defined as the unjust or prejudicial treatment of different categories of people, especially on the grounds of ethnicity, age, sex, or disability.

Types of Discrimination

Direct discrimination: Being treated worse or differently because of one's disability.

Indirect discrimination: Where rules, practices or policies are set for everyone, but some people are disadvantaged due to their disability.

Discrimination arising from disability: When someone is treated unfavourably because of an aspect connected to their disability.

Failure to make reasonable adjustments: Employers have a legal responsibility to make reasonable adjustments to a workplace or role to accommodate a disabled individual.

Victimization: When someone is treated badly only because they have made a complaint of disability discrimination.

Harassment: When someone is the victim of behaviour related to their disability which is intended to, or has the effect of, creating an intimidating or hostile environment for them.

5.1 SELF ADVOCACY

Advocacy

Advocacy: Making sure individuals have the resources to meet their needs and are not discriminated against because of impairments or disability.

How to Become an Effective Advocate

Recognize your Worth

- You are valuable, and your needs/wants matter. When you recognize your worth, you are less likely to tolerate disrespect or mistreatment.

Speak Up and Set Boundaries

- Speaking up for yourself can be uncomfortable, especially if you are used to avoiding conflict. However, it is essential to speak up when someone crosses your boundaries or mistreats you.

Practice Assertiveness

- Be clear, assertive, and respectful when you communicate your needs and wants. It is okay to say no to requests that do not align with your values or priorities.

Build a Support System

- Finding people who support your cause or can relate to it, can help you feel less alone.

Clearly Identify the Issue you Want to Address

- Know what you want to address and what the desired outcome is.

Educate Yourself and Know Your Rights

- Know about the topic/cause and have a good understanding about any policies related to it. Do some research about your rights.

5.1 SELF ADVOCACY

Assertiveness

Assertiveness is a valuable skill that can help you communicate your needs and wants effectively. It involves being clear, direct, and respectful when communicating with others.

Practicing assertiveness can be uncomfortable, but it can help you advocate for yourself more effectively. Some tips to help:

- Assess your communication style. Do you voice your opinions or remain silent?
- Use "I" statements. This lets others know what you are thinking or feeling without sounding accusatory.
- Practice saying "no".
- Rehearse what you want to say.
- Use appropriate body language.
- Keep emotions in check.

5.1 SELF ADVOCACY

Assertiveness with Healthcare Professionals

Sometimes, doctors and other healthcare professionals may assume they know what you want or need. They may also assume that you understand complicated terms or treatment options. If you are assertive, you can make sure you are clear about what information you are missing and what you want done.

When seeing a healthcare professional, try using these tips:

- Come to your appointment with a list of concerns, questions, and outcomes you would like to see.
- Use “I” statements.
- Avoid attacking or blaming the health care professional.
- Let them know if you feel rushed, confused, intimidated or dissatisfied.
- Let them know if you need them to speak slower, louder or more clearly.
- Bring someone you trust with you to support you and take notes.
- Be honest and detailed.
- When you book your appointment, indicate that you have a brain injury and may require more time for the appointment.

Remember: you know your body best. If something feels like it is not right, be your own advocate.

You deserve to be comfortable. Their role is to help you.

5.1 SELF ADVOCACY

Creating an Advocacy Plan

There are many ways to become an effective self-advocate, and anyone can do it. There are 5 main steps to creating an advocacy plan:

1. Clearly identify the issue you want to address.
    a. Know your rights.
2. Ask for support from friends and family.
3. Express yourself in a clear and calm manner.
    a. Challenges you are facing.
    b. What you need.
    c. What they can do to help.
4. Advocate to the right people for your issue.
    a. Health Care Professionals? Employers? Government?
5. Take notes and records to track responses and progress.

Breaking Down the Steps

<u>Clearly Identify the Issue you Want to Address</u>

It is important to know what you are advocating for. Be specific about what you want. You could advocate for things like healthcare, housing, services and supports, accommodations, or employment.

<u>Asking for Support from Friends and Family</u>

Just because you are self-advocating does not mean you have to do everything alone. The support of family and friends can go a long way. They can help by making calls, contributing advocacy ideas, and giving feedback.

5.1 SELF ADVOCACY

Breaking Down the Steps Continued

Expressing Yourself in a Clear and Calm Manner

Talking about the challenges you are facing can feel overwhelming at times. Advocacy can be difficult, but expressing yourself with anger or frustration may hinder your effectiveness. Instead, try practicing what you want to say in front of someone you trust and ask for their feedback. Remember, constructive feedback is not personal, it is an opportunity to improve how you communicate.

Advocate to the Right People

You need to advocate to the right people. If you are advocating for housing rights, speaking with your employer may not be the best choice but speaking with the government would be.

Take Notes and Keep Good Records

The best way to track your progress and the responses you receive is to keep accurate records. Create a journal, word document, or voice memo. It may be helpful to print out emails and store them in a folder.

Advocacy Worksheet on page 106

6 HELPING SOMEONE WITH AN ABI

Caregiving

Caregivers support others who need assistance taking care of themselves. They might be a family member, friend, or professional who provides support as often as every day or as little as a couple hours a week.

Being a Caregiver

Being a primary caregiver is a demanding yet rewarding role, focused on improving the quality of life for individuals with varying abilities. Caregivers help with tasks, self-care, activities of daily living, and provide safety, respect and support.

While caregiving can be incredibly fulfilling, it is important to also prioritize your own well-being as the demands can be exhausting.

According to a study from Statistics Canada in 2012:

Among regular caregivers—those who spent at least 2 hours caregiving each week—38% of those who helped their child, 34% who helped their spouse and 21% who helped their parents, reported feeling depressed. Those who cared for a spouse or child also reported more health and psychological problems, mainly because of the intensity of care provided.

6 HELPING SOMEONE WITH AN ABI

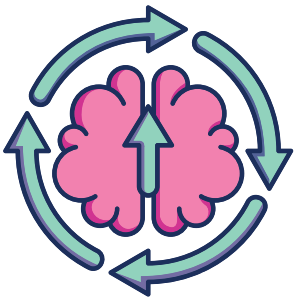
What Does Caregiving Look Like?

Caregiving may include helping with one or more activities important for daily living such as bathing and dressing, paying bills, shopping and providing transportation. It also may involve providing emotional support and helping with managing a chronic illness or disability.

Caregiving will look different for everyone and depends on the individual's needs and what other support they may have.

Here are a few ways someone could provide support as a caregiver:

- Learn more about brain injury.
- Give them independence while keeping safety in mind.
- Allow neuroplasticity to activate.
- Encourage and assist with rehabilitation exercises.
- Be patient with emotional difficulties.
- Overcome communication barriers.
- Cheer them on and provide emotional support.
- Help with chores and household tasks.
- Assist them with appointments.
- Help with self-care and activities of daily living.



6 HELPING SOMEONE WITH AN ABI

Supporting Someone After an ABI

Discharge Planning

The day when the person with a brain injury is ready to leave the hospital is exciting, but it can also be overwhelming as the transition can be stressful.

Creating a discharge plan, which serves as a guide for your loved one's departure from the hospital, can facilitate a smoother process while alleviating stress for both you and the individual with a brain injury.

The purpose of this plan is to ease the transition to the person's next destination. It includes information regarding:

- Follow up appointments.
- How to transfer the individual from the hospital.
- Medication and prescriptions.
- Special equipment that is required and where to get it.
- Specific care instructions.
- Therapies that may be required after hospital discharge.
- Things to avoid during recovery/recuperation.
- What you can expect from your friend or family member.

By creating a comprehensive plan, you can feel confident you have the information you need in advance of discharge day.

6 HELPING SOMEONE WITH AN ABI

Rehabilitation Tips

Talk to the Healthcare Team

If they have permission to share updates with you, talking 1-1 with the rehabilitation team is a great way to track progress. They can also give feedback, tips, and next steps to help with the rehabilitation process.

Track Progress, Recommendations, and Instructions for Exercises

Having a notebook to track progress, writing down conversations and keeping instructions will help you stay organized. It will also be helpful for keeping the rehabilitation team updated on activities between appointments.

Practice Patience

Brain injury is challenging for everyone involved; it is easy to get frustrated. Recovery takes time, and in many cases, there will be permanent changes.

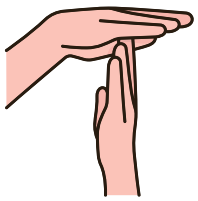
Rehabilitation does make a difference, but it is not a cure for brain injury. It is important to be patient with the process, the person with the brain injury, and with yourself.

6 HELPING SOMEONE WITH AN ABI

Rehabilitation Tips Continued

Take Breaks

While staying committed to rehabilitation activities is important, it is equally crucial to take regular breaks. If you or the person with the brain injury push too hard, it can lead to fatigue, negative emotions, or difficulty completing the activities. Taking a break helps both of you feel refreshed and better able to focus when it is time to resume.



Organize your Rehabilitation Space and Equipment

A rehabilitation program can be created for the injured person to do at home between appointments with exercises designed to be done easily in residential settings.

Creating a specific spot for rehabilitation or gathering all the equipment in one place will keep things organized and make it easier to get through those rehabilitation tasks.

Returning To Work

Not all individuals with a brain injury can or want to return to work; although, some may want to. Returning to work after experiencing a brain injury can create a sense of uncertainty, accompanied by a range of emotions.

As the individual contemplates re-entering the workplace, they may also reflect on how this will affect their new daily routine and what it means for their future.

Returning To Work Continued

Returning to work is not a one-time event; it is a process that starts long before stepping back into the workplace. It involves research, planning, setting goals, attending meetings, and making adjustments at home. The injured person may also be dealing with symptoms and effects from their brain injury along with ongoing rehabilitation.

With the right workplace modifications and support, people can often successfully return to work while continuing their recovery. However, working can lead to more fatigue and reduced energy in other parts of their life.

Finding the right balance between providing help, support and encouragement, while still fostering their independence, may take time and practice.

Here are some options to consider:

- Provide practical, hands-on assistance.
- If possible, take on additional household chores and errands.
- Be willing to let some things go around the house and reassure them that it is perfectly fine.

Expect some frustration and chaos until a new routine is established and try not to take it personally.

6 HELPING SOMEONE WITH AN ABI

Providing Check-ins

Scheduling regular check-ins with your partner, friend, or family member is a great way to stay connected and discuss how things are going. These conversations can also help identify patterns, celebrate successes, and address any challenges that arise.

Together, you can determine how often to hold these check-ins (e.g., daily or weekly) to ensure they happen at a good frequency.

Supporting as a Friend

Here are some ideas for supporting someone who has a brain injury:

- Learn about brain injury symptoms and impacts.
- Talk to them about what they are experiencing.
- Learn different strategies to help manage brain injury symptoms.
- Encourage them to seek support.
- Look out for them.
- Offer practical support.
- Include them in things.
    - Be aware of their social battery (how long can they be with others before becoming overwhelmed and how often).
    - Be aware of environments they may struggle with.

6 HELPING SOMEONE WITH AN ABI

Mental Health for the Caregiver

Self-Compassion

"I feel a sense of guilt when I focus on my own wants/needs while they need my help."

Many caregivers feel they should not focus on themselves when someone else needs their help.

However, when you are struggling with your own mental health and well-being, it can affect other areas of your life and the life of the person with an acquired brain injury.

Self-compassion is simply taking care of yourself, and it is crucial for staying healthy. This means treating yourself with kindness and being aware of your feelings and surroundings.

Take time to reflect on your emotions and recognize that caring for yourself is just as important as caring for others.

Building Resilience

Caregiving requires flexibility. There can be lots of unexpected challenges. As such, caregivers need to build up personal resilience.

Resilience is defined as the ability to maintain well-being and effective functioning in the face of high levels of disruption. In other words, the ability to stay cool under pressure and adapt to changes.

6 HELPING SOMEONE WITH AN ABI

Building Resilience Continued

Developing resilience is an important skill for caregivers. You can strengthen it by engaging in hobbies, participating in physical activities, and creating a strong personal support network.

Some ways I can build my resilience are:

Grief

Grief is often associated with the death of someone close, but it can also arise following a life-changing event, such as a brain injury.

It is completely normal for both the survivor and their loved ones to experience grief and loss after a brain injury.

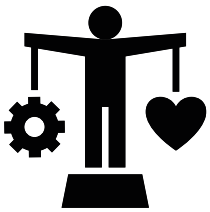
The grieving process has no set timeline, and there will be both good days and difficult ones. Over time, with patience, self-care, and support for your loved one, you will gradually adjust to the presence of grief without allowing it to define your life.

6 HELPING SOMEONE WITH AN ABI

Caregiver Burnout

Over time, caregivers may experience increased stress, physical problems, or emotional challenges because of:

- The number of things you are doing.
- The amount of responsibility you have.
- The time it takes to complete tasks.
- The emotional and physical strains of completing tasks.
- The struggles of adjusting to this new way of life.
- Financial constraints.
- The struggles of balancing personal life, work, and caregiving.



Caregiver burnout occurs when you reach a point of physical, mental and emotional exhaustion where you can no longer function. This can happen over long periods of time. In most cases, caring for someone with a brain injury is a lifetime commitment. This can contribute to the risk of caregiver burnout.

If you are experiencing burnout, or feel close to it, it is time to employ strategies to improve your personal health and wellness.

6 HELPING SOMEONE WITH AN ABI

Improving Mental Health and Wellbeing

Learning to Identify Stress

It is important to learn how to identify when you are stressed and find ways to manage and cope with it.

Start off by identifying your stress triggers. What makes you feel angry, tense, worried or irritable?

It is also important to recognize how you react to stress. Maybe you:

- Bite your nails.
- Do not eat or sleep as much.
- Clench your jaw.

These are the ways I can recognize that I am stressed:

Reflect on your daily feelings and activities. Writing them down can be beneficial. This practice may help you identify stress triggers and symptoms.

Tip: Improve your time management by prioritizing tasks and commitments. Organize your schedule based on your available time and energy.

6 HELPING SOMEONE WITH AN ABI

Ask for Help

There is a network of people, family, friends, and professionals, that you can rely on for support, whether it is for you or for the person with an acquired brain injury. Often, people are willing to help but may not know exactly how.

Help!

Be clear about the specific ways they can assist, such as sending reminder texts for appointments, picking up a few grocery items while they are at the store or taking your dog for a walk while you take the person with a brain injury for a medical appointment.

Say "No"

Saying yes to every request can lead to an overwhelming amount of responsibility and demands on your time.

If there is something you cannot do, say no. If it is something that needs to be done but you cannot do it, ask a friend or family member for assistance.

Saying "no" can be hard. Especially if you are a people pleaser or have to say no to someone you care about.

Practice saying no in some easy, low-risk situations like:

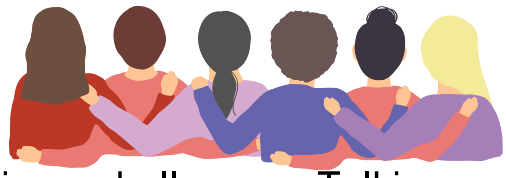
- When someone offers you dessert.
- When someone tries to sell you something on the street.
- When someone asks if you would like milk in your coffee.

6 HELPING SOMEONE WITH AN ABI

Find Support

Join a Support Group

There are many support groups for brain injury caregivers across Canada. Connecting with others who understand your struggles creates a new support system. It gives you a chance to share your experiences, feel heard, and pick up helpful tips or strategies you may not have considered.



Attend Counselling

Counselling can help anyone dealing with various challenges. Talking regularly to a professional therapist offers a safe space to address your stress and concerns. Their advice is unbiased, and you can be open and honest in the conversation.

Respite

Respite means a short break or time away from something difficult. Respite can be for a day, a weekend, or a more substantial length of time. There are many benefits to respite for caregivers, including:

- Less stress.
- Improvements in your mood.
- More time to rest and restore your energy levels.
- Time to explore personal interests.

There are several types of respite care available such as:

- In-home: someone comes into the home as a temporary caregiver.
- Facility-based: your loved one goes to a care facility for a temporary stay.
- Day programs: your loved one goes on an outing for the day.

6 HELPING SOMEONE WITH AN ABI

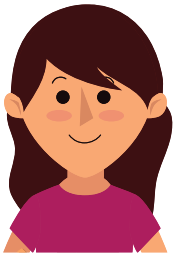
Be You!

While caregiving for someone else, it is common to stop doing things you typically enjoy. While caretaking, some people feel like they have lost their sense of self-identity.

It is important to try and make time to continue doing things that you enjoy. Plan ahead and put time aside each week to do things for yourself like exercising, drawing, watching a movie, or playing a sport. It is also important to keep other relationships going as it is easy to lose touch with people when you are a caregiver.

By continuing to take time for other important people in your life, even if it is just a few minutes, you are keeping in touch and valuing people who support and value you.

Some things I like to do or people I like to see are:



Caregiver Resources can be found on page 100

7 SUBSTANCE USE

Parts of the Brain Affected by Substances

Drugs At Synapses

Neurons control everything we do through electrical impulses and neurotransmitters. Neurotransmitters help messages jump the gap (the synapse), from one neuron to the next.

Drugs work differently in the brain than neurotransmitters. They can:

- Interfere with how messages are sent, received, and interpreted.
- Change the frequency at which neurons fire.
- Cause permanent changes to the brain and its functions.

Drugs can affect neurotransmitters by:

- Causing the production of too many neurotransmitters.
- Stopping the production of neurotransmitters.

Drugs can mimic neurotransmitters and cause abnormal functions. Some drugs, like marijuana and heroin, can activate neurons because their chemical structure is similar to a natural neurotransmitter in the body. This allows the drugs to attach to and activate the neurons.

Drugs alter how the brain communicates with itself and the rest of the body. The short and long-term effects of drug use depend on factors such as each person's brain, genetics, environment, and the type of substances used.

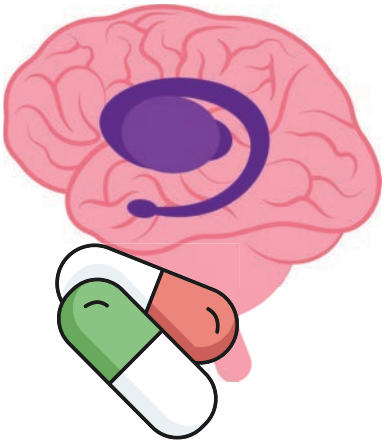
7 SUBSTANCE USE

Drugs in the Limbic System

The limbic system is also known as the reward centre of the brain. Drugs often target the limbic system and release a flood of “feel good” chemicals known as neurotransmitters.

Dopamine is a neurotransmitter that creates a strong sense of pleasure. Drugs release far more dopamine than natural activities like exercise, sex, new experiences, or fresh air.

When someone uses drugs for the first time, their brain experiences up to 10x more dopamine than from naturally pleasurable activities.



Since the brain cannot naturally recreate this feeling, it stops making dopamine and turns to the substance to bring back that high.

7 SUBSTANCE USE

How Does Addiction Start?

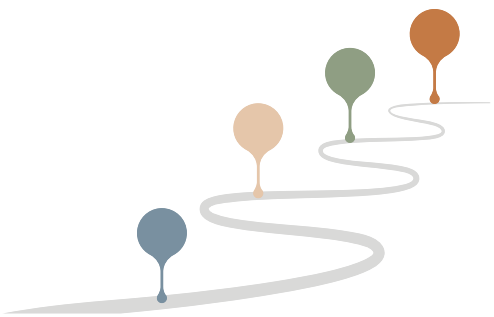
The Process

The first time using drugs creates an intense feeling of pleasure.

- This intense feeling causes the brain to create an appetite for it.
- The brain will stop making dopamine and neurons/brain parts will die off.
- Low levels of dopamine often cause an individual to feel flat, dull, or lifeless. This feeling will become the new normal.
- The limbic system takes charge and demands to feel good again. The limbic system is like a child, demanding pleasure. This demand creates the beginning of drug seeking behaviour.
- The brain is very good at forgetting the negative effects and will hold onto the pleasure and reward of the drugs. This is automatic, the brain is wired to seek pleasure and reward.

At first, drug use is often a voluntary choice. But over time and repeated use, the brain undergoes changes that make drug use a compulsive behavior.

The ability to choose freely fades—not because of weakness, but because of how the brain is wired.



7 SUBSTANCE USE

Specific Drug Effects on the Brain

Alcohol Effects

Alcohol can be one of the hardest substances on the brain as it can damage and disrupt the nervous system. Alcohol impacts the whole brain and can cause it to shrink.

It also affects these parts of the brain:

<u>Frontal Lobe</u>

- Impaired thinking and decision-making
- Loss of coordination
- Loss of emotional control
- Increased aggression

<u>Parietal Lobe</u>

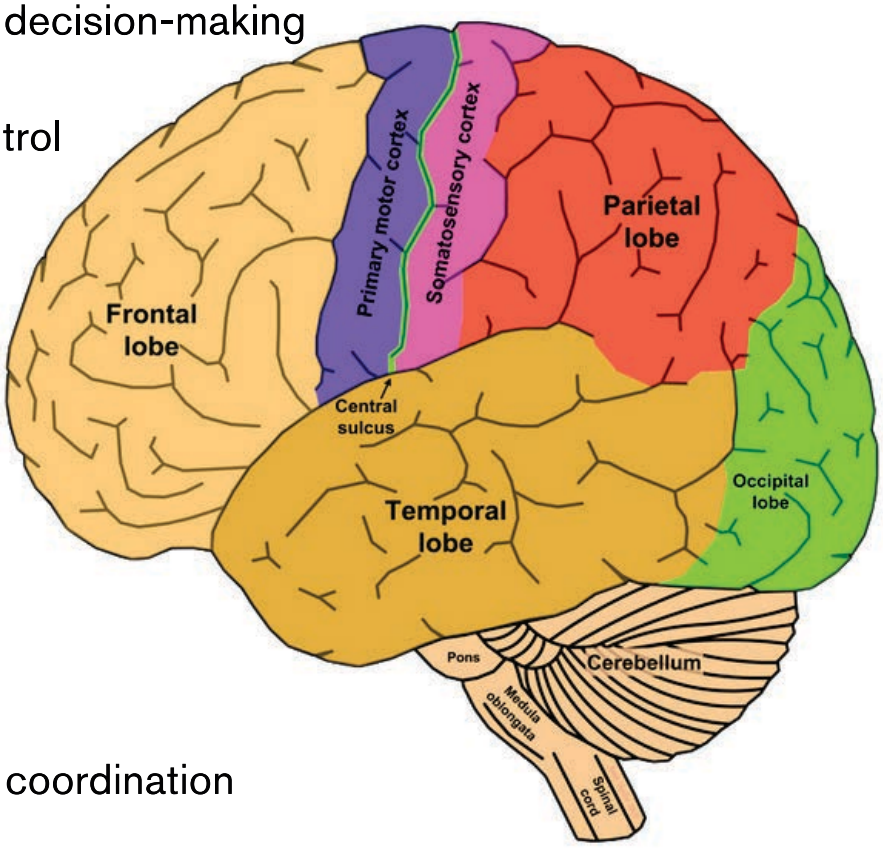
- Slowed reaction time
- Shaking or tremors

<u>Temporal Lobe</u>

- Impaired memory
- Slurred speech
- Impaired hearing
- Blackouts

<u>Cerebellum</u>

- Impaired balance and coordination



Blackouts are often described as periods of time that cannot be remembered. Alcohol can temporarily stop the transfer of memories from short-term to long-term storage. This temporary stop is called a “blackout.”

7 SUBSTANCE USE

Excessive Alcohol Use - The Facts

The type of alcohol consumed is not the primary factor in how the brain is affected, it is more about the volume and percentage of alcohol. Two shots of hard liquor and two fruity coolers will have the same effect on the brain.

Some signs that drinking might be a problem:

- Poor sleeping.
- Experiencing low mood and anxiety after drinking.
- Drinking to avoid negative symptoms of a hangover.

Some warning signs that alcohol dependency might be a concern:

- Compulsive need to drink.
- Worrying how to get the next drink.
- Waking up and drinking right away.
- Withdrawal symptoms.

Some withdrawal symptoms:

- Nausea/ vomiting
- Anxiety
- Body aches and pains
- Cold sweats
- Trembling
- Fatigue

7 SUBSTANCE USE

Excessive Alcohol Use - The Facts Continued

What is considered too much alcohol? Limit alcohol to no more than:

- Women:
  - 2 standard drinks per day/ 10 standard drinks per week.
  - 3 standard drinks on special occasions.
  - avoid drinking alcohol on some days.
- Men:
  - 3 standard drinks per day/ 15 standard drinks per week.
  - 4 standard drinks on special occasions.
  - avoid drinking alcohol on some days.

Did you know?

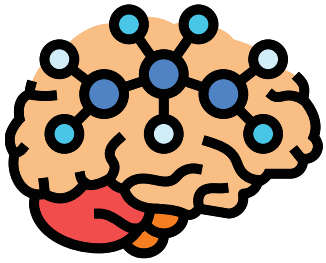
- 3 to 6 standard drinks per week increases the risk of developing several types of cancer, including breast and colon cancer.
- 7 standard drinks or more per week significantly increases the risk of heart disease or stroke.

7 SUBSTANCE USE

Alcohol and Neurotransmitters

Alcohol affects several neurotransmitters. For example, it can:

- Increase GABA - reduces anxiety.
- Increase Norepinephrine - increases arousal.
- Lower Serotonin - makes it harder to cope with stress.
- Decrease Glutamate - necessary for brains to have energy.



Long-Term Effects of Alcohol Use

Long-term use of alcohol can cause problems in the body and brain. Here are some examples:

- Alcohol can make depression and anxiety more severe.
- Permanent memory loss.
- Acute liver failure/chronic liver disease.
- Brain (white matter) shrinkage.
- Wernicke-Korsakoff Syndrome (previously known as “wet brain”).
    - Characterized by lack of muscle coordination (involuntary movements, tremors, balance loss), lack of energy, vision problems, psychosis.

7 SUBSTANCE USE

Marijuana Effects

Marijuana can be beneficial for medical purposes; it can alleviate chronic pain for those suffering illnesses such as cancer. However, there are side effects of chronic and dependent marijuana use.

Here are some parts of the brain that are affected:

Hypothalamus
- Increased appetite
- Altered hormone levels

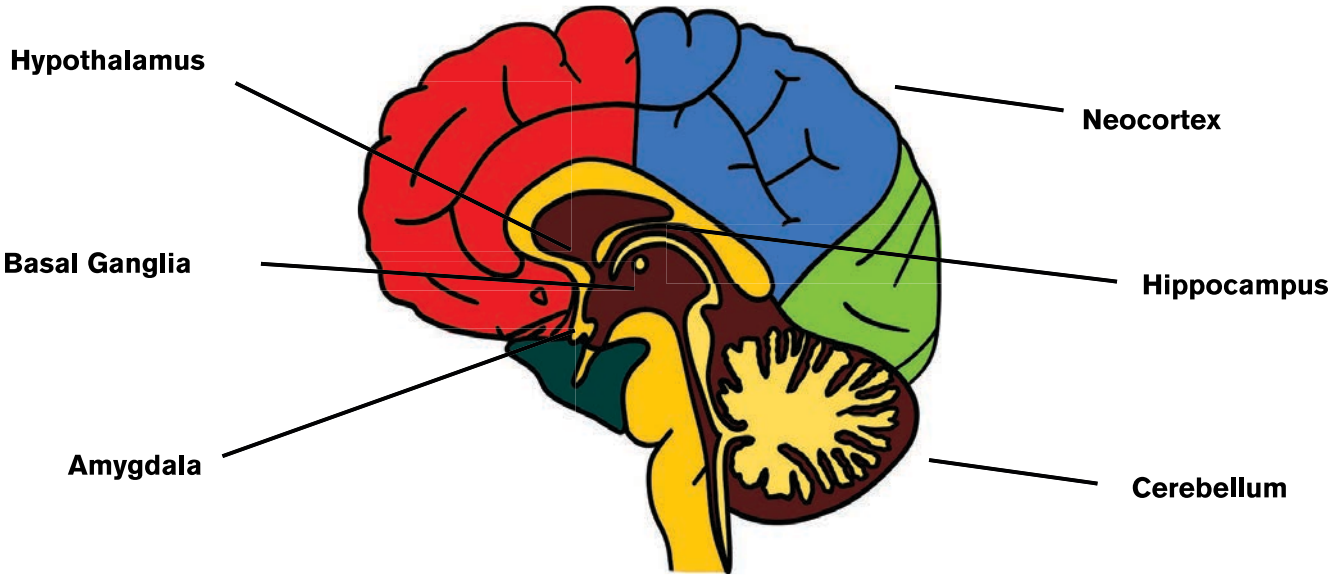
Basal Ganglia
- Decreased motivation
- Change in behaviour and movements

Amygdala
- Alters mood and perception
- Can cause relaxation or euphoria
- Can cause anxiety and panic

Neocortex
- Impaired thinking and attention
- Altered sensory perception

Hippocampus
- Impaired memory and thinking

Cerebellum
- Impaired balance
- Slowed reflexes



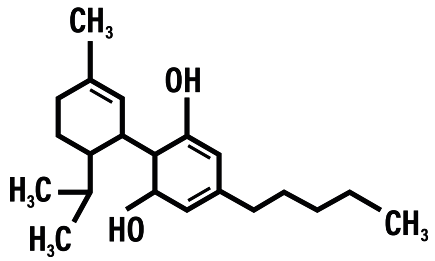
7 SUBSTANCE USE

Marijuana Effects - Mental Health

Marijuana affects everyone differently and to varying degrees. Some people may feel relaxed, calm, and happy, while others may experience panic and anxiety. These reactions depend on the individual and how marijuana impacts their amygdala.

For those with a genetic vulnerability to mental health disorders, such as schizophrenia, marijuana can trigger acute psychosis. This is particularly true for individuals with a direct male relative (like a father, brother, or uncle) who has schizophrenia, as marijuana can activate the genetic marker for the condition.

If someone already has a pre-existing condition like schizophrenia, marijuana use can worsen the disorder and intensify symptoms.



Marijuana THC vs CBD

CBD	THC
• Non-psychoactive – can't get you high • Reduces anxiety • Has antipsychotic properties • Promotes wakefulness	• Psychoactive – alters perception of time and reality, magnifies senses • Can bring on anxiety and paranoia • Can cause acute psychosis • Induces sleep

7 SUBSTANCE USE

Marijuana and Neurotransmitters

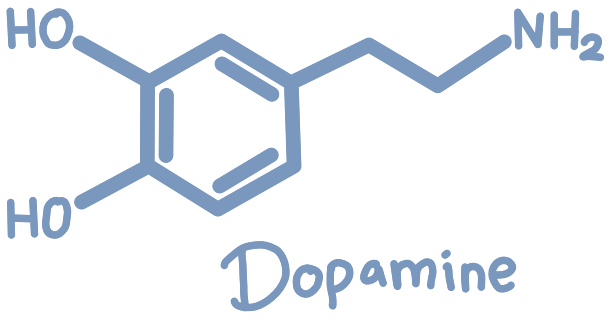
Here are some examples of neurotransmitters involved when using marijuana:

Anandamide - mimics a natural cannabinoid in brain

- Anandamide regulates mood, memory, appetite, pain, cognition, and emotions.
- THC mimics anandamide and binds directly to the cannabinoid receptors for the body's natural endorphins.

Dopamine

- Marijuana use can initially increase dopamine release, making you feel good. However, chronic use may impact motivation and the ability to feel pleasure. This is due to:
  - A drop in dopamine production.
  - A decreased response to dopamine.



Long-Term Effects of Marijuana

Long-term use of marijuana can:

- Increase life problems and lower life satisfaction.
- Reduce blood flow in the brain's arteries.
- Slow brain development.

7 SUBSTANCE USE

Stimulant Effects

Stimulants are a type of drugs that speed up messages travelling between the brain and body. They can make a person feel more awake, alert, confident, or energetic. Stimulants include drugs like cocaine, crack, crystal meth, and amphetamines.

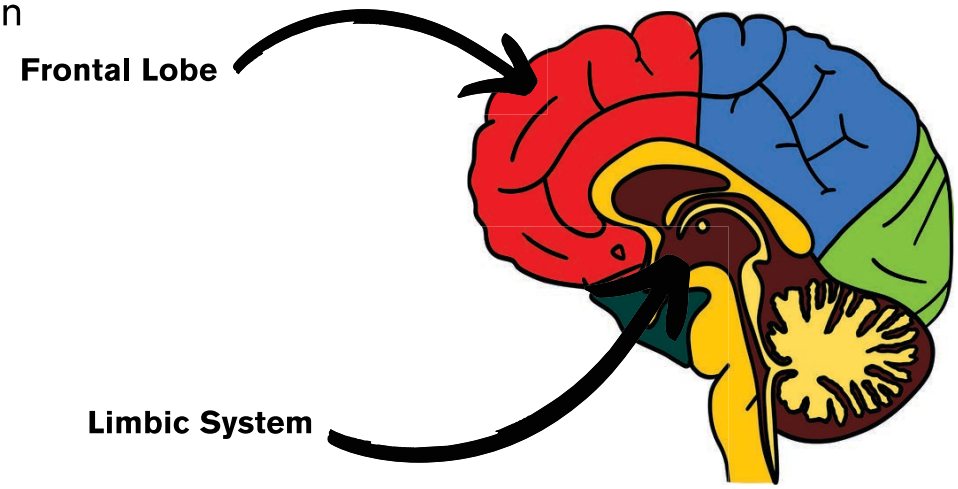
Stimulants mainly affect these parts of the brain:

<u>Frontal Lobe</u>

- Heightened attention

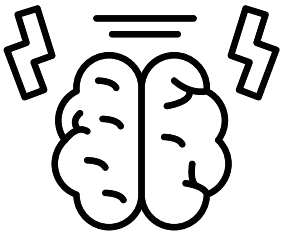
<u>Limbic System</u>

- Euphoria/rush
- Increased activity
- Decreased sleep
- Decreased appetite
- Altered memory



7 SUBSTANCE USE

Stimulants and Neurotransmitters



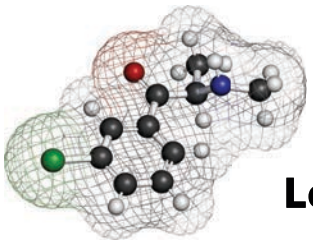
Stimulants mainly affect two neurotransmitters:

Dopamine

- Too much dopamine leads to feeling euphoric.
- Too much dopamine can also cause hallucinations, psychosis, excess movement and involuntary movement.

Norepinephrine

- Too much norepinephrine can cause hyperactivity, insomnia, irritability, anxiety, and increased heart rate/blood pressure.



Long-Term Effects of Stimulants

Long-term use of stimulants can cause a number of physical and mental concerns. These can include:

- Stroke.
- Mood and sleep disturbances.
- Violent behaviour, hostility, psychosis.
  - Lack of sleep combined with the effects of stimulants can cause an individual to become aggressive or do things they normally would not do.
- Confusion, paranoia, hallucinations.
- Parkinson's-like symptoms.
  - Excess/decreased movement, permanent balance issues, concerns while walking, and increased risk of falls.

7 SUBSTANCE USE

Hallucinogen Effects

Even though some of these are considered to be “natural” substances they are still extremely harmful to the brain and can poison the body as well. Each time you use a hallucinogenic or psychedelic, it has different and unpredictable effects on the brain. This means that each “trip” can be different despite using the same substance.

These are three parts of the brain that are affected by hallucinogens/ psychedelics:

Frontal Lobe

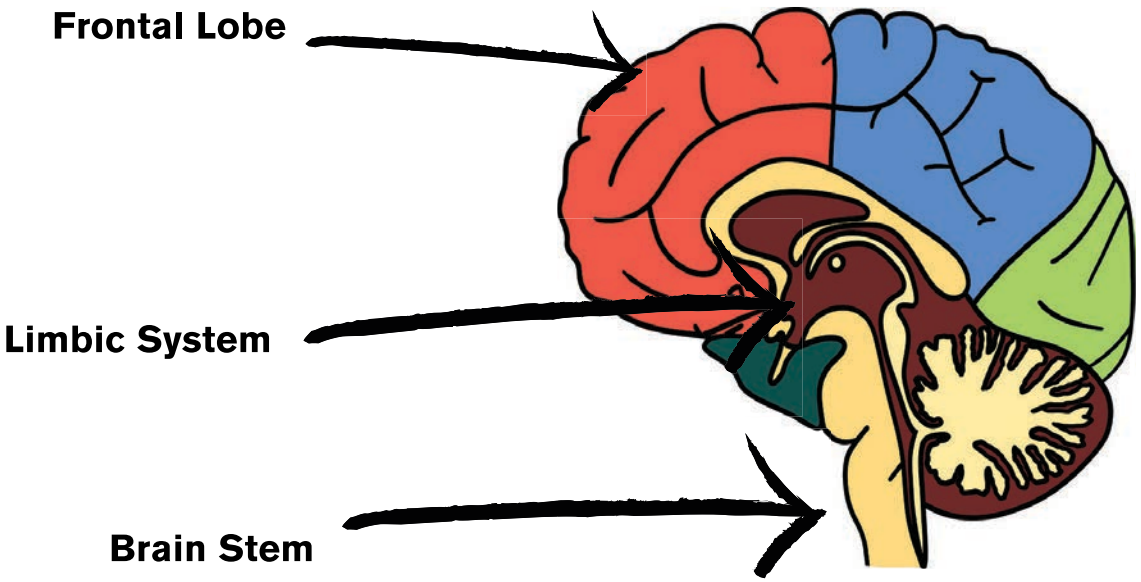
- Rapid mood swings
- Decreased/increased attention
- Altered perception
- Increased arousal

Brain Stem

- Rapid heart rate

Limbic System

- Rapid mood swings



7 SUBSTANCE USE

Hallucinogens and Neurotransmitters

Hallucinogens affect these neurotransmitters:

Dopamine

- Too much dopamine leaves one feeling euphoric.
- Too much dopamine can also cause hallucinations, psychosis, excess movement and involuntary movement.

Norepinephrine

- Too much norepinephrine can cause hyperactivity, insomnia, irritability, anxiety, and increased heart rate/blood pressure.

Serotonin

- Too much serotonin can cause mania, seizures, hyperthermia, tremors, panic attacks, delusions, and hallucinations.
- Time, space, thoughts, hearing, and sight might be altered. This can lead to dangerous situations or actions.
- Many hallucinogens also mimic serotonin and can change how the brain perceives reality.

Long Term Effects of Hallucinogens

Long term effects of hallucinogens can cause or lead to:

- Psychological dependency: people become attached to the experiences they have while high.
- Lingering flashbacks of episodes or “bad trips.”
    - There is no control over when flashbacks happen. This can be distressing if you have had a particularly bad experience.
- Mental health conditions and confusion.
- Impaired memory and attention.
- Effects can also mimic symptoms of schizophrenia.

7 SUBSTANCE USE

Opiate Effects

Opiates shut down the brain structures that produce endorphins, the pain-relieving and stress reducing hormone, causing the brain to rely solely on the drug to get those sensations. Opiates or “downers” include drugs such as heroin, morphine, codeine, and fentanyl. Although different downers produce different side effects, the one common attribute is that they affect the limbic/reward system.

Parts of the brain affected are the:

Thalamus

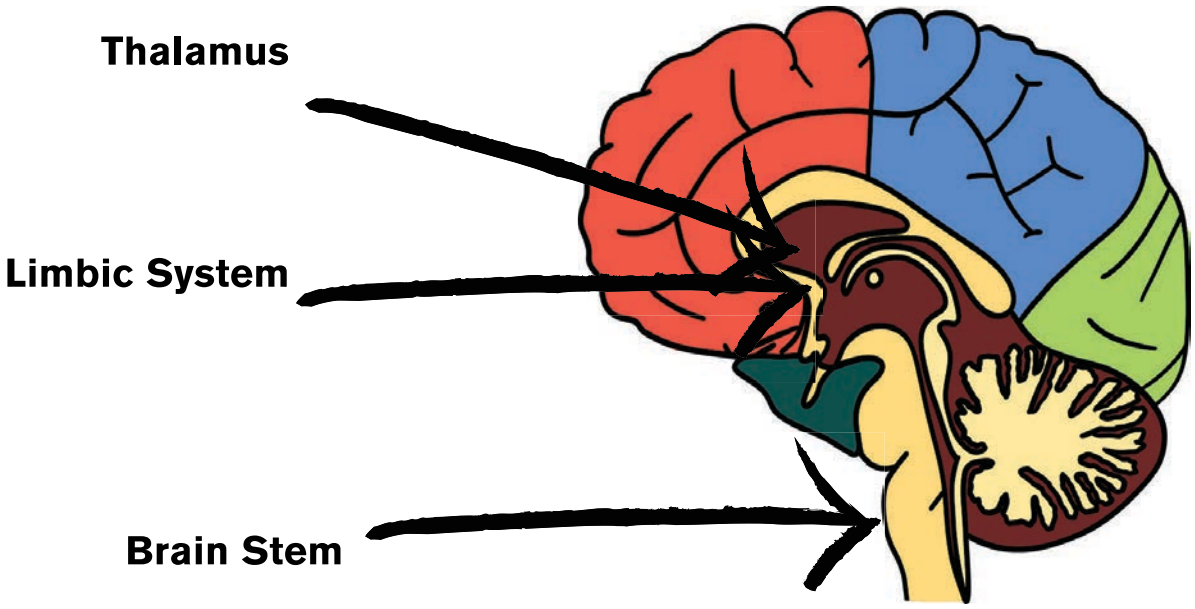
- Altered pain and pain control

Limbic System

- Causes feelings of relaxation and euphoria
- Alters moods

Brain Stem

- Slows breathing
- Slows heart rate
- Can cause nausea and vomiting



7 SUBSTANCE USE

Opiates and Neurotransmitters

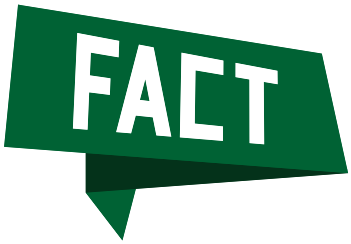
Opiates affect the natural opiate receptors in the brain. Opiates activate receptors in the brain to release dopamine, which acts as a natural pain killer.

However, this does not actually change the level of pain being felt. It changes how the brain perceives pain by shutting down that receptor.

Long-Term Effects of Opiates

There are many long-term effects of opiate use. These symptoms and effects include:

- Changes in shapes and functions in neurons and synapses.
  - Brain cells and neurons learn to function on the drug and cannot work well without it.
- Tolerance to pain medication, requiring more of the substance each time.
- Extreme discomfort.
  - Those using opiates tend to live in two states: feeling really good while using them and feeling extreme pain and discomfort while not using.
- Overdose/ death.
  - Overdoses are caused by the brain stem shutting down. The brain stem is responsible for keeping us alive, so when it is no longer working right, a person could go into cardiac arrest.



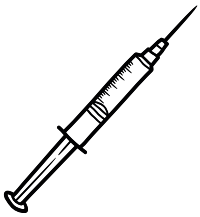
Currently, one of the largest causes of organic brain injury is the opioid crisis and overdoses.

7 SUBSTANCE USE

Opioid Overdose

An overdose (OD) happens when a toxic amount of a drug, or combination of drugs exhaust the body. People can overdose on many things, including alcohol, acetaminophen, opioids or a mixture of drugs.

Opioid overdoses happen when there are too many opioids or a combination of opioids and other drugs in the body causing the individual to become unresponsive and eventually stop breathing. Brain damage begins after 4-6 minutes of not receiving enough oxygen.



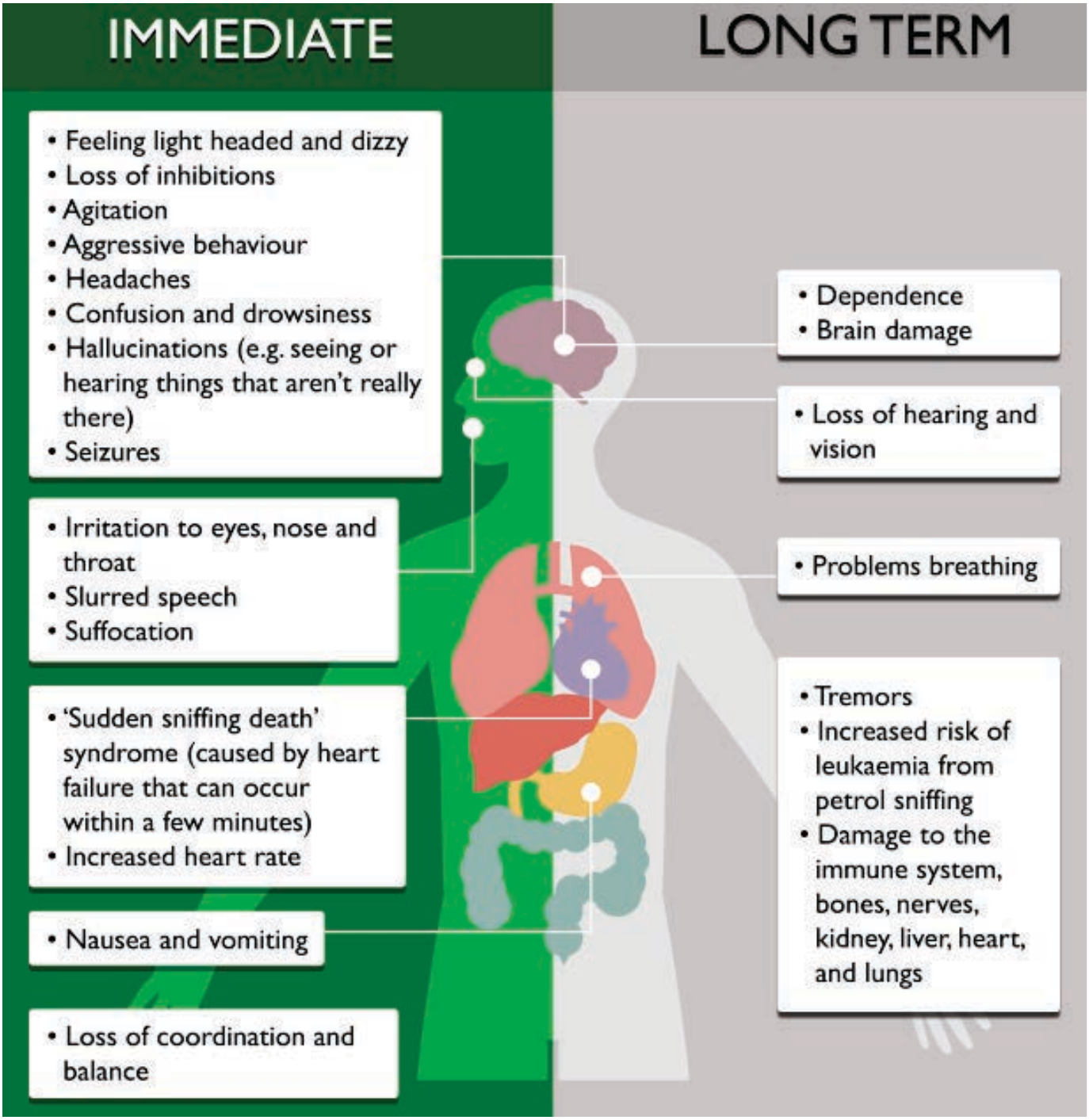
Naloxone or Narcan is a type of medicine that can reverse an opioid overdose. Naloxone works by blocking opioid receptors in the brain.

- Naloxone can work in 3-5 minutes.
- Naloxone comes in different forms such as a muscle injection or nasal spray.
- Too much naloxone or giving naloxone to an individual who is not overdosing is not harmful.
    - In the event of an overdose, naloxone can safely be given to pregnant individuals and animals.
- Naloxone only lasts about 30 minutes. Although very rare, this means it is possible for an individual to overdose again if the opioids have not left their system.

7 SUBSTANCE USE

Inhalant Effects

Inhalants can include a variety of substances like paint thinner, aerosols, and gasoline, so pinpointing which part of the brain is affected by inhalant use can be difficult.



Inhalant Effects Continued

Most inhalants cause injury to brain cells by damaging the protective sheaths known as myelin, that surround nerve fibers. This can cause effects similar to those that occur in neurological diseases like multiple sclerosis (MS).

IInhalants can also cause “sudden sniffing death” which happens when the aerosol substance replaces all the oxygen in the person’s body, causing heart failure within just a few minutes.

Long-Term Effects of Inhalants

Since there are different chemicals in various inhalants, long-term effects cannot be generalized like they can for other substances.

Generally, the neurotoxic effects of prolonged inhalant abuse include neurological symptoms that reflect damage to parts of the brain involved cognition, movement, vision, and hearing.

Cognitive effects can range from mild to severe. Inhalants also are highly toxic to other organs like the liver, heart, and lungs.

Some other effects of inhalant use:

- Permanent damage to the brain by changing brain chemistry.
- Destroys myelin (insulating cover on neurons).
- Brain atrophy (shrinkage).

7 SUBSTANCE USE

Drug Impacts on the Maturing Brain

The human brain is not fully mature until the mid-20s. Before that, the limbic system controls feelings of reward and pain. One of the last parts of the brain to develop is the frontal lobe which is responsible for decision-making, judgement, planning, and impulse control.

The adolescent brain is often considered "all gas and no brakes" because it struggles to balance self-control and impulse. This is why there are laws to protect teenagers, such as restrictions on buying alcohol or cigarettes and signing contracts.

Teenagers are naturally inclined to take risks, seek pleasure and avoid pain. However, their ability to understand consequences and avoid risks is not fully developed until the pre-frontal cortex matures.

The brain is wired to seek activities that release dopamine, and drugs and alcohol flood the brain with this chemical. Substance misuse changes the brain and makes it harder for users to say no. Early intervention in a teenager's life to address substance misuse is crucial to prevent long-term consequences, as their brains are still developing and vulnerable to the effects of drugs and alcohol.

Fortunately, the brain can rewire itself through neuroplasticity, meaning it can heal and recover from substance misuse to some extent, especially with treatment and support. However, there is limited research on neuroplasticity and substance use in youth due to challenges in gathering data and studying long-term effects.

7 SUBSTANCE USE

Drugs Causing Brain Injury

Anoxia and Hypoxia

Anoxia refers to the complete lack of oxygen in the brain, while hypoxia occurs when the brain receives less oxygen than it needs. These can happen during an overdose.

An opioid overdose can reduce breathing and heart rate, leading to decreased oxygen supply to the brain. The brain regions that require the most oxygen and energy are especially vulnerable to injury in these situations.

When oxygen loss is severe, it can also damage brain areas that rely on the smallest blood vessels, located farthest from the heart.

Although research on brain injuries in individuals who survive overdoses is still limited, there is growing recognition that the consequences can be severe.

Common effects of an anoxic or hypoxic brain injury:

- Limb weakness
- Balance and coordination issues
- Abnormal, involuntary movements
- Speech and language challenges
- Changes in cognitive abilities - thinking and decision-making
- Changes in personality
- Loss of vision
- Memory loss

7 SUBSTANCE USE

Drug Toxicity

Certain substances may have neurotoxic effects at high doses or with chronic exposure. These are substances that may cause damage or injury to brain cells.

Brain injuries due to drug toxicity events can impact people's memory, speech, vision, ability to concentrate, ability to control behaviour and movement and other abilities. Impacts can range from mild to severe and can lead to coma or death.

Symptoms can vary and may not appear for several weeks following a drug toxicity event. This means that identification of a brain injury following drug toxicity may be delayed or the injury may remain undiagnosed.

Stroke

Strokes are caused by blocked, narrowed, or burst vessels. Stimulant drugs, such as cocaine and amphetamines can affect cerebral circulation and blood pressure, potentially producing strokes.

A stroke can result in:

- Breathing and heart problems.
- Trouble with body temperature control.
- Balance and coordination problems.
- Weakness or paralysis.
- Trouble chewing and swallowing.
- Difficulty speaking.
- Vision changes.
- Coma.

7 SUBSTANCE USE

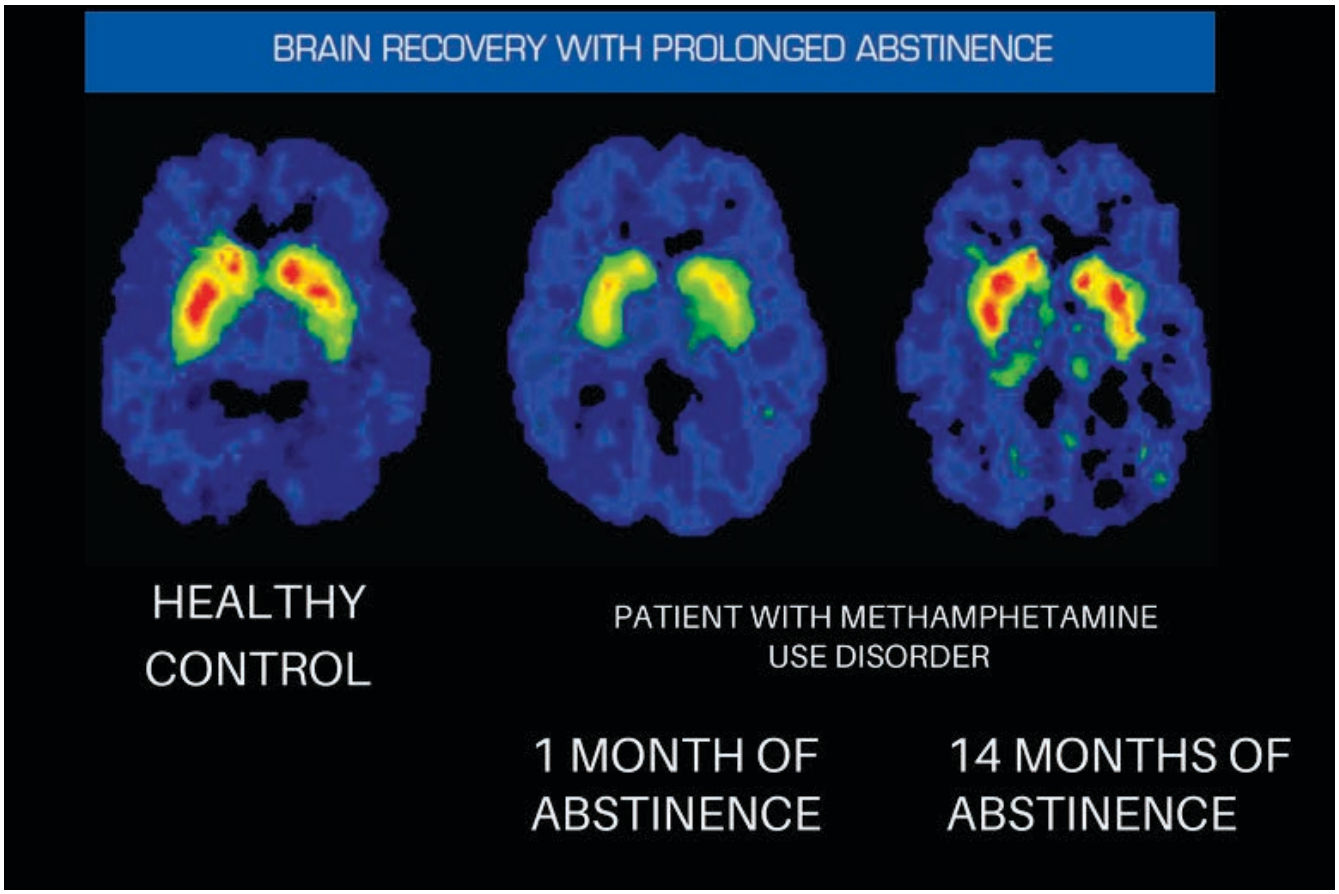
Addiction Recovery and Neuroplasticity

Neuroplasticity is: _____

_____

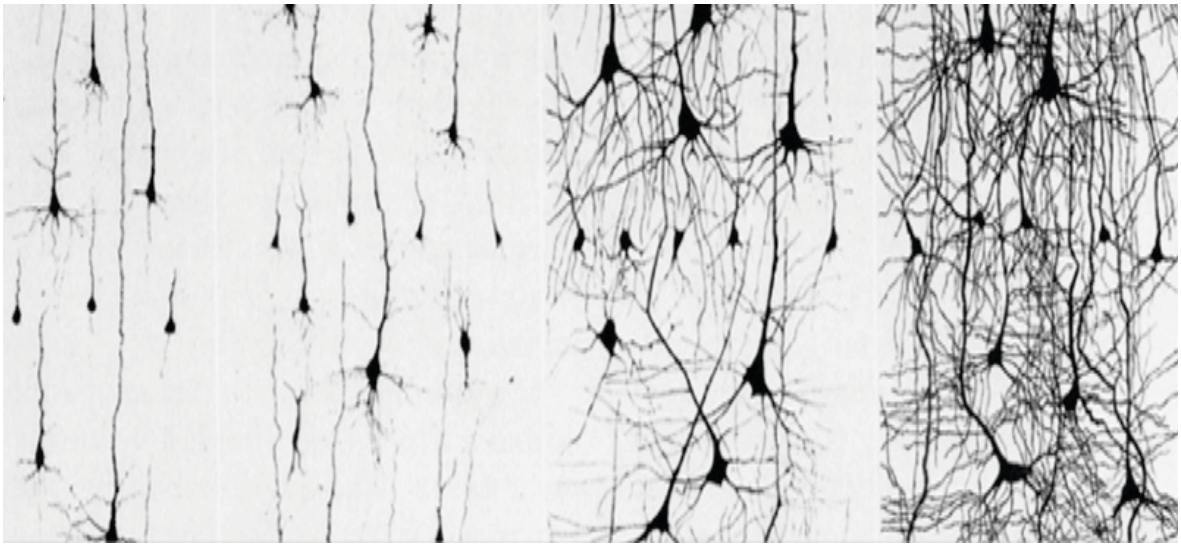
_____

Neuroplasticity applies to any type of damage to the brain, even damage caused by substance use. You can help your neurons change in a positive way and help your brain recover, learning to enjoy life without substances.



7 SUBSTANCE USE

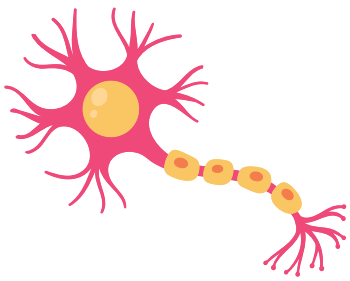
Neurons



These series of pictures show how neuroplasticity can stimulate neuron growth and strength.

The first photo on the left is where someone with a brain injury may start. As you continue to learn, stimulate your brain, and practice staying clean, more neurons connect and create strong bonds.

The more you learn and the more you do, the stronger your neuron pathways will get.



More stimulation of neurons=More connections=Stronger function

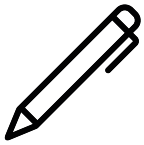
7 SUBSTANCE USE

Making it Work for You

Deciding that you want a change is always the first step.

When you decide it is time for a change, plan what you want to change and how you want to change it. How can you do this?

- Stimulate your neurons in a positive way. Learn, discover something new, try something new, read, or exercise.
- Replace negative behaviours with positive ones. What can you do instead of the behaviour you are trying to change?
- Be realistic and try to think positively.



1. _____
2. _____
3. _____
4. _____

Relapse is not failure. It is a way of telling you something is not working.

- Maybe you need to go back to treatment.
- Maybe you need a bigger support system.
- Relearn your triggers.

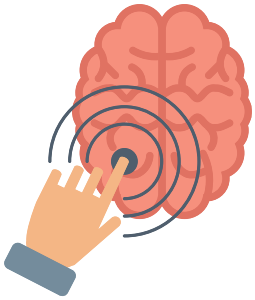
It takes time for your brain to rewire itself. Be patient and lean on your supports. There will be hard days, but there will also be good days.

7 SUBSTANCE USE

Triggers and the Brain

Changes in the brain caused by substances are so powerful that everything involved in the addiction becomes imprinted on the brain. This means a person can easily be triggered later by people, places, and things associated with past use. Some triggers to think about:

- People
- Places
- Objects
- Sounds
- Smells



Example (True Story)

A girl who was able to stop using drugs, would relapse every now and then. She wasn't able to understand why she could go months without them but would suddenly relapse, seemingly without cause.

It turned out that when she wore a certain pair of shoes she would start using again. These shoes were very similar to the ones she wore while she used substances every day. To her brain, it was a visual cue to use, causing her to give in to the addiction.

While in recovery, it is important to be mindful of triggers, even ones as seemingly simple as a pair of boots. Some triggers might be:

8 HOMELESSNESS AND ABI

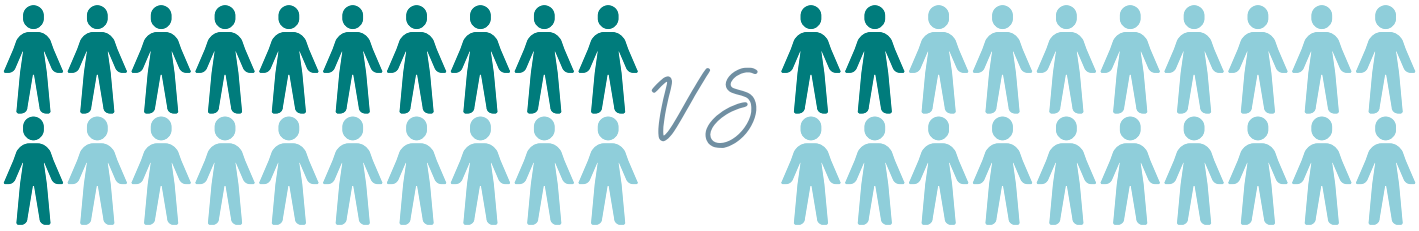
The Statistics

53.1% of people experiencing homelessness have a history of traumatic brain injuries.

22.5% of people experiencing homelessness with a history of TBI's have a TBI that is moderate-severe.

Any severity of brain injury in unhoused populations is 4x higher than housed populations.

Moderate-severe brain injuries are 10x higher in unhoused populations when compared to housed populations.



In the next 12 months ...

- 30% of the unhoused population will experience a traumatic brain injury.
- 12% will experience more than one traumatic brain injury.

This rate of TBI exceeds those in NFL football and active military service.

8 HOMELESSNESS AND ABI

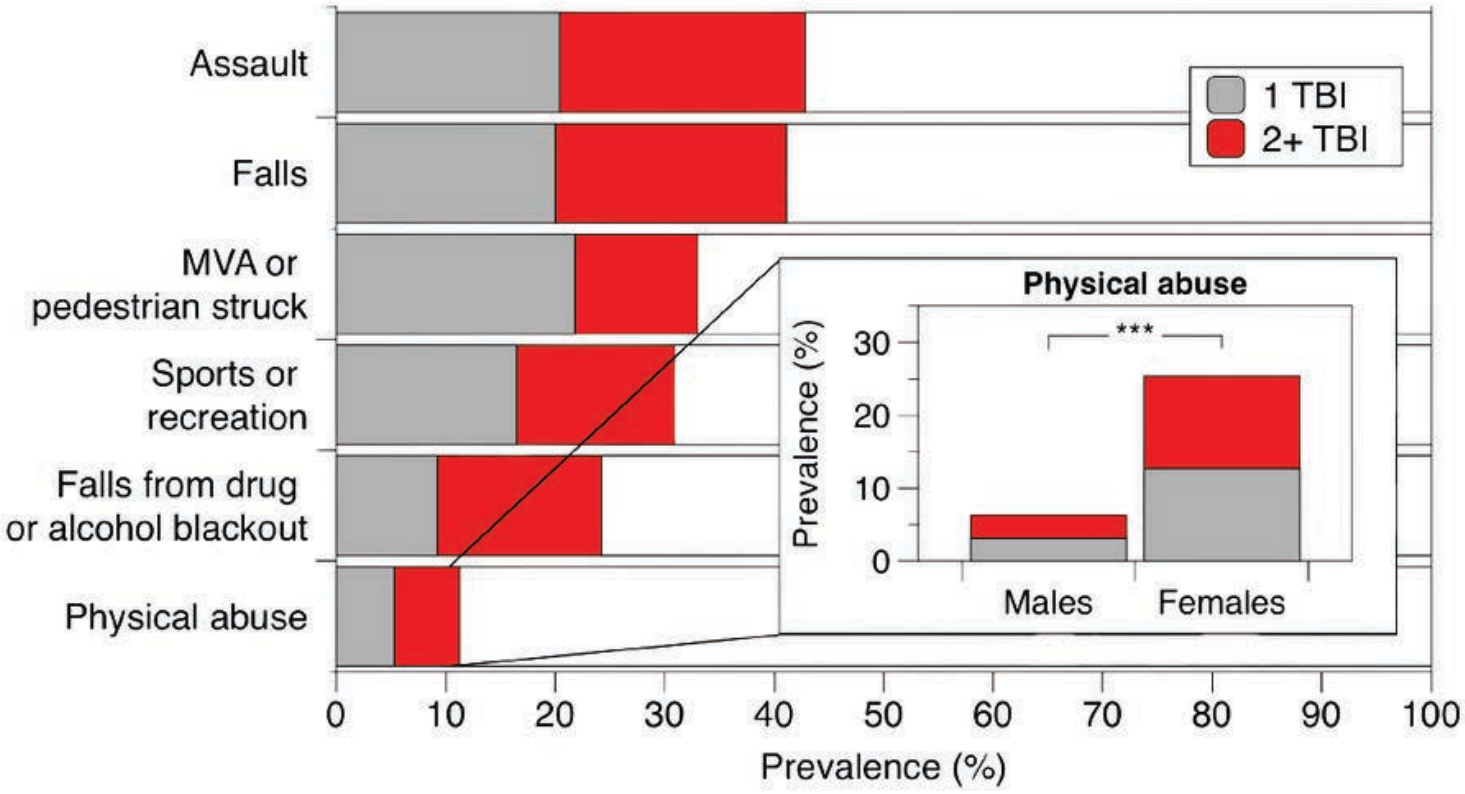
The Hotel Study

The Hotel Study is a ten-year longitudinal study with more than 500 participants in the Vancouver region. The Hotel Study focuses on the intersection of physical and mental health, along with the relationship to drug addiction, access to public health systems, and brain injury.

The Hotel Study: What Were the Findings?

How many Hotel Study participants experienced TBI and how did they happen?

- >80% (400+ people) had experienced TBI, most commonly due to assault & falls.



8 HOMELESSNESS AND ABI

The Hotel Study: What Were the Findings?

How is TBI related to housing loss?

- More severe TBI's are closely associated with losing stable housing.
- Experiencing a TBI closer to losing stable housing is associated with a longer duration of homelessness.

How many people living in homelessness have brain lesions visible on neuroimaging?

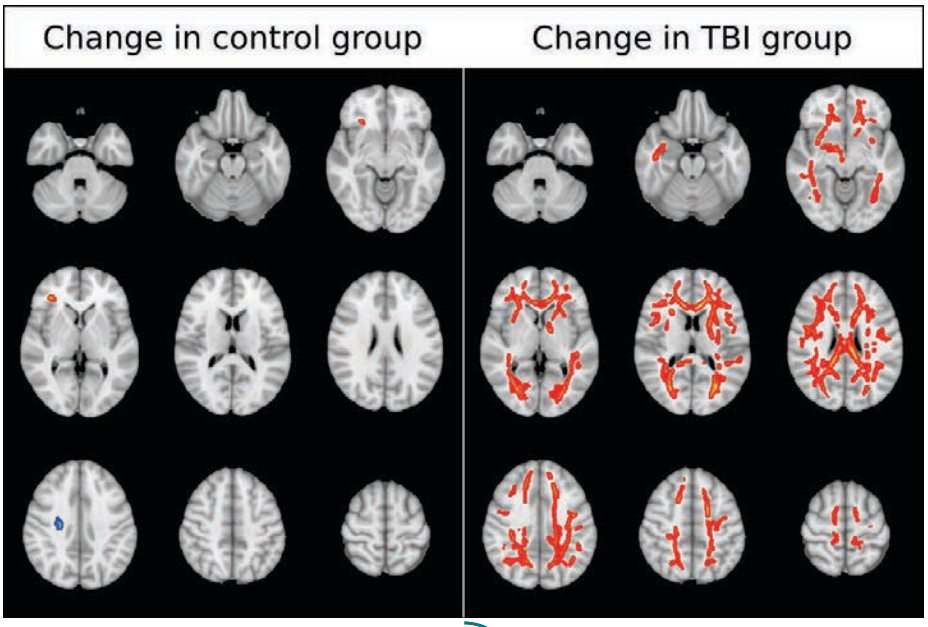
- 7% (35 people) of Hotel Study participants have visible brain lesions - mostly frontal and temporal lesions.

How many people living in homelessness experience TBI per year?

- 29.8% (149 people) sustained a TBI over one year.
- 12% (60 people) sustained multiple TBI's.

Are there immediate brain changes after new TBI's?

- Imaging shows that there are widespread microscopic white matter changes after mild TBI.



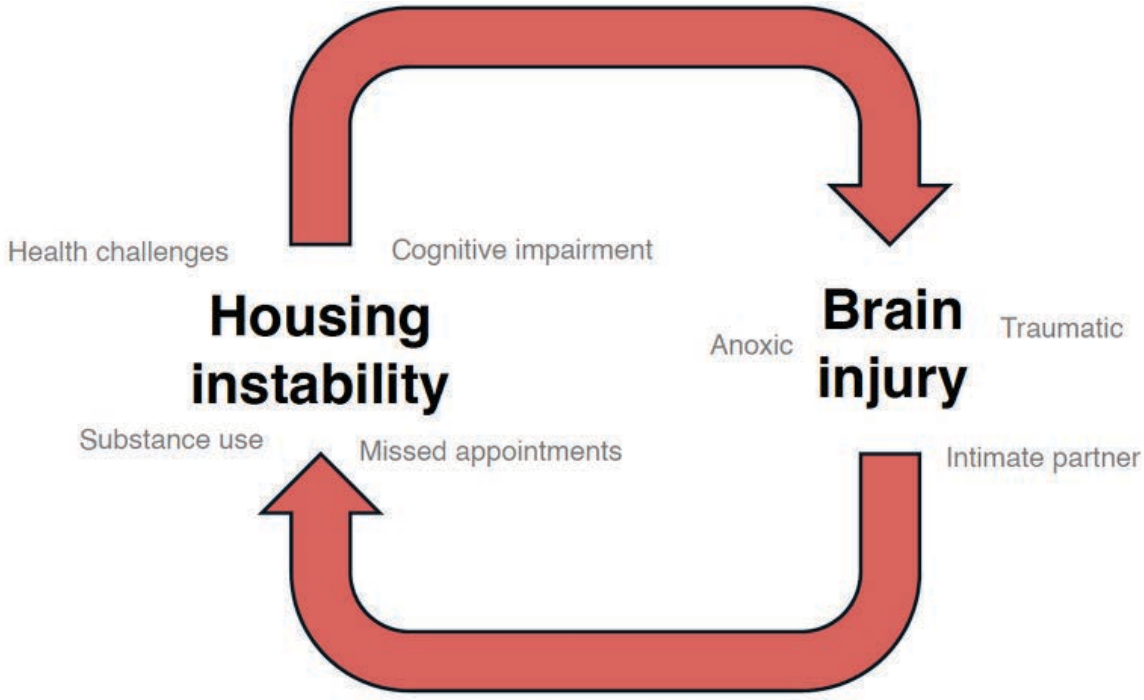
8 HOMELESSNESS AND ABI

The Hotel Study: Long Term Consequences

Risk factors associated with decline in brain tissue are:

- Substance use (including alcohol)*
- IV drug use
- Viral illness
- Cardiovascular risk*
- History of TBI*

*Steepest decline in tissue associated with these risk factors



Housing instability is both a risk and consequence of brain injury

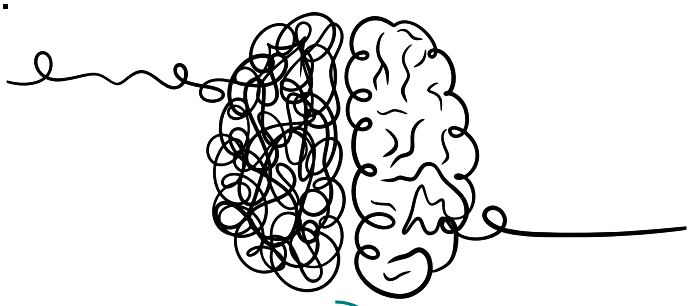
How to interrupt the cycle of housing instability and brain injury:

- Education about health challenges, mental health, and brain injury.
- Ensure that housing is safe (handrails, no trip hazards, etc.).
- Have a process to screen for brain injuries.
- Ask healthcare providers to screen for brain injuries.

8 HOMELESSNESS AND ABI
The Link

How does brain injury lead to homelessness?

- Judgement and impulse control: increased likelihood of engaging in risk-taking behaviour (impulsive spending, vulnerable to scams, physical violence, etc.).
- Job loss: low income leading to missed rent/mortgage payments.
- Mental health issues: increased risk of poor mental health and personality disorders.
- Social isolation: changes to personality, social skills and emotional regulation leading to relationship breakdowns.
- Substance use: increased likelihood of substance use to deal with physical, emotional, and cognitive symptoms of brain injury.
- Cognitive challenges: difficulties with memory, planning and sequencing leading to missed appointments, payments, application deadlines and an inability to navigate a challenging system.
- Behavioural concerns: increased likelihood of eviction, job loss, criminal justice system involvement and lower education levels.
- Communication: difficult to access support and housing due to issues with speech, reading, writing or understanding complex instructions.



COMUNITY RESOURCES

Brain Injury Organizations

BC Brain Injury Association www.brainstreams.ca

BrainTrust Canada www.braintrustcanada.com
Toll-free 1-800-762-3233

Bulkley Valley Brain Injury Association www.bvbia.ca
250-877-7723

Campbell River Head Injury Support Society www.crhead.ca
250-287-4323

Cariboo Brain Injury Association www.cariboobraininjury.com
604-202-1630

Comox Valley Head Injury Society www.cvhis.org
250-334-9225

Cowichan Brain Injury Society www.cowichanbraininjury.org
250-597-4662

Fraser Valley Brain Injury Association www.fvbia.org
604-557-1913

Kamloops Brain Injury Association www.kbia.ca
250-372-1799

COMMUNITY RESOURCES

Brain Injury Organizations Continued

Nanaimo Brain Injury Society www.nbis.ca
250-753-5600

Northern Brain Injury Association Okanagan http://nbia.ca
Toll-free 1-866-979-4673

Powell River Brain Injury Society www.braininjurysociety.com
Toll-free 1-866-499-6065

Prince George Brain Injured Group Society www.pgbig.ca
Toll-free 1-877-564-2447

South Okanagan Similkameen Brain Injury Society www.sosbis.com
250-490-0613

Victoria Brain Injury Society www.vbis.ca
250-598-9339

Kootenay Brain Injury Association www.kootenaybia.ca
778-460-4500

COMMUNITY RESOURCES

Brain Injury Support Groups

Delta/Surrey Brain Injury Support Group
- 604-540-9234

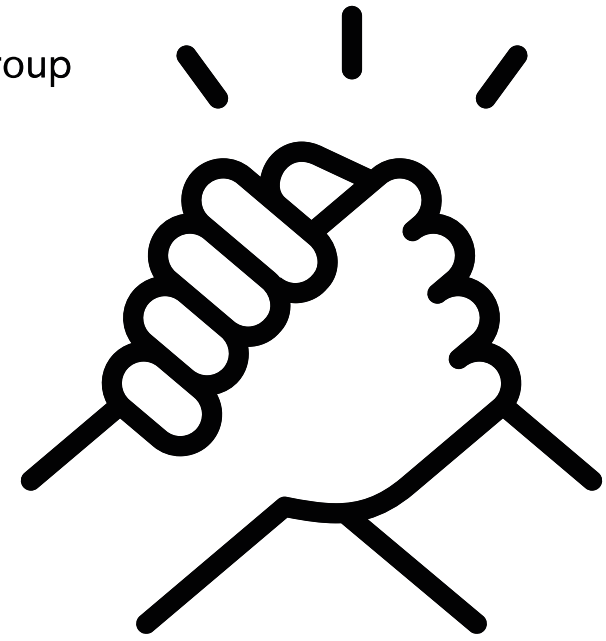
Rewired Tri-Cities Brain Injury
- 604-873-2385

Richmond Brain Injury Support Group
- 604-540-9234

Sechelt (Sunshine Coast) Brain Injury Support Group
- 604-885-8524 or 604-989-8524
- Email: susan.goddard@vch.ca

Tri-Cities Brain Injury Support Group
- 778-216-0788

Vancouver Brain Injury Support Group
- 604-873-2385



CAREGIVER RESOURCES

Online Courses

Brain Injury Canada has developed a variety of courses for family caregivers of people with brain injury.

There are courses designed to be accessible and focused on topics that caregivers have said are important to them.

These courses are free of charge and self-guided, so you can learn on your own time. Some examples are:

- Planning for the future
- Introduction to brain injury
- Caregiver health and wellness

Webinars

Brain Injury Canada hosts educational webinars on a variety of topics featuring speakers from across Canada. They host a mix of pre-recorded and live webinars. Pre-recorded webinars are posted on Brain Injury Canada's YouTube.

Some topics include:

- Healthy boundaries
- Respond rather than react
- Making hidden disabilities visible
- Caring for the caregiver
- Self-advocacy for caregivers

www.braininjurycanada.ca

INTIMATE PARTNER VIOLENCE

Resources For Anyone

Fraser Health Crisis Line
604-951-8855 | 1-877-820-7444

- VictimLinkBC
  - Toll-free, confidential, multilingual service available 24/7 in B.C. Staff can connect you to community, social, health, justice and government resources, including victim services, transition houses and counselling resources. If you need help, please call or text 1-800-563-0808 or email VictimLinkBC@bc211.ca.
- Archway Community Services https://archway.ca
  - Offers 90+ programs that provide a variety of services, activities and educational information in a non-judgemental and safe space to support you in finding your path forward.
- Chilliwack Community Services www.comserv.bc.ca
- Chinese community policing centre https://www.chinesecpc.com
- DiverseCITY (Multicultural Services) www.dcrs.ca
- Family Services of Greater Vancouver https://fsgv.ca
  - Offers programs and services designed to help people develop the skills, knowledge, and confidence to create positive change in their lives.
- Fraser Region Aboriginal Friendship Centre Association https://frafca.org
- PACE Society www.pace-society.org
  - Provides confidential, non-judgmental services for sex workers, including occupational health and safety education, support, advocacy, outreach, and drop-in services from a harm reduction and rights-based model.
- Senior's First BC https://seniorsfirstbc.ca

INTIMATE PARTNER VIOLENCE

Resources For Women

- Atira https://atira.bc.ca
  - Accessible to anyone who identifies and lives full time as a woman and who experience gendered violence and misogyny.
- Battered Women's Support Services www.bwss.org
  - Provides education, advocacy, and support services to assist all victims and survivors in our aim to work towards the elimination of gender-based violence and to work from a feminist perspective that promotes gender equity.
- Downtown Eastside Women's Centre (DEWC) https://dewc.ca
  - Provides a safe, non-judgmental environment for self-identifying women, from all walks of life, who live and/or work in the Downtown Eastside.
- SARA For Women www.saraforwomen.ca
  - A feminist non-profit society providing safe refuge and community-based resources for women in the Fraser Valley. They promote and support women's efforts to achieve domestic, political, and social equality.

Resources For Men

- British Columbia Society for Male Survivors of Sexual Abuse (BCSMSSA)
  - BCSMSSA is a non-profit society that provides therapeutic services for male-identifying persons who have been sexually abused at some time in their lives.
  - Email: victimservices@bc-malesurvivors.com
- Men's Therapy Centre https://menstherapycentre.ca
  - Support for any man who has experienced emotional, physical or sexual trauma in childhood or as an adult.

FRASER VALLEY BRAIN INJURY ASSOCIATION

About FVBIA

The Fraser Valley Brain Injury Association is a charitable organization that has been offering support and services to people with acquired brain injuries and their families since 1997.

FVBIA provides a variety of programs throughout the Fraser Valley from Langley to Boston Bar.

Some programs include*:

- Drop-in Programs (weekly/ monthly)
- Walking Groups
- Cooking Classes
- Art/ Photography/ Crafting
- Health and Wellness Groups
- Case Management

* Programs are subject to change.
Speak with FVBIA staff about the latest programs.

Contact FVBIA for more details about any of the following:

- Resources and information.
- General information on acquired brain injury (ABI).
- Presentations on prevention and awareness of brain injury.
- Education for family members, including children and siblings of survivors.
- Training and education for professionals.

www.fvbia.org

Eligibility For FVBIA Services

To be eligible for services, you must have proof of a diagnosis of an acquired brain injury. This must be confirmed by medical and/or rehabilitation documentation. Proof would be considered any of the following:

- CT Scan, Neurologist Report, Physiatrist Report, or MRI Report
- Medical and Rehabilitation documentation includes the following:
  - Psychiatric reports with DSM IV diagnosis of acquired brain injury.
  - Neuropsychological assessments clearly indicating acquired brain injury.
  - Hospital records clearly indicating acquired brain injury.
  - Medical/Rehabilitation or Hospital discharge reports clearly indicating acquired brain injury.

Additional eligibility criteria for ongoing services include:

- Residency and citizenship requirements.
- Currently living within the boundaries of Fraser Valley Brain Injury Association (Langley to Boston Bar).

WORKSHEET: ANTS
CHALLENGING AUTOMATIC NEGATIVE THOUGHTS

TRIGGER	AUTOMATIC THOUGHT	NEW THOUGHT
EXAMPLE: I MADE A MISTAKE AT WORK.	I AM PROBABLY GOING TO GET FIRED. I AM SO BAD AT THIS JOB. I ALWAYS MESS UP.	I MADE A MISTAKE AND THAT IS OKAY. I WILL WORK THROUGH IT LIKE I ALWAYS DO.

WORKSHEET: ADVOCACY

THE ISSUE:

IDENTIFY THE ISSUE YOU WANT TO ADDRESS

THE GOAL:

LONG TERM GOAL I WANT TO CONTRIBUTE TOWARDS

Who is my audience?	
Who can help or support me?	
What challenges am I facing?	
What do I need?	
What do I need them to do for me?	

WORKSHEET: BREATHING

If you are feeling anxious, angry, or stressed, find a quiet place and practice some breathing.

Before practicing your breathing exercises, record the date and time, plus your anxiety level, both before and after. You may find some helpful trends.

DATE/ TIME	ANXIETY 1-10	BREATHING DURATION	ANXIETY 1-10	METHOD

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