

Types of CVA's, Behavioral Responses and Discharge Planning Considerations

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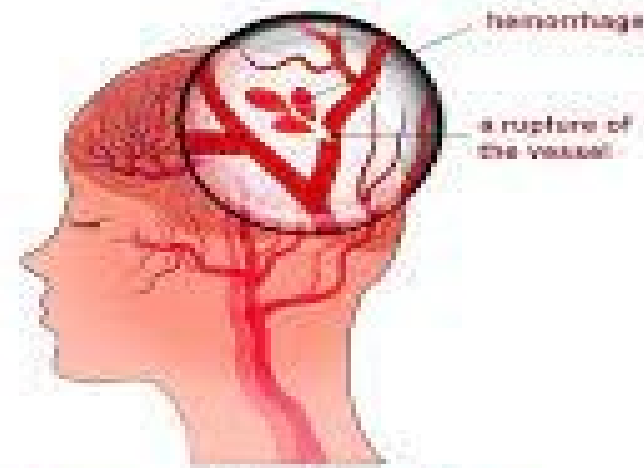
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Waltonwood Ashburn Senior Living

Two Types of Stroke



Ischemic Stroke



Hemorrhagic Stroke

Objectives

- **Upon completion of this presentation the participant will be able to:**
- **Discuss the Brains' anatomy**
- **Identify the two main types of CVA's.**
- **Identify Behavioral symptoms most likely to occur.**
- **Identify Post-Stroke Dementia (PSD) symptoms.**
- **Identify Pseudobulbar Affect (PBA) post stroke symptoms.**
- **Discuss interventions and communication strategies when working with families and patients who suffered a CVA.**
- **Identify Discharge Planning Strategies when working with a Stoke Patient and their families.**
- **Identify why Stroke patients often return to the hospital and interventions to assist**
- **with the patient living their best life at home.**

Stroke (CVA) Statistics in the United States

- Strokes accounted for about 1 of every 6 deaths in the US. According to the CDC 2021.
- Someone dies every 4 minutes from a stroke in the US.
- Every year, more than 795,000 people in the US have a stroke. About 610,000 of these are first or new strokes.
- Stroke ranks No. 5 among all causes of death in the US, causing 147,810 deaths in 2018.
- Stroke is a leading cause of serious long term disability in the US. 3 % of males and 2% of females reported that they were disabled because of a stroke.
- In 2019, there were 6.6 million deaths attributable to cerebrovascular disease worldwide (3.3 million deaths from Ischemic Stroke, 2.9 million deaths from Intracerebral hemorrhage (ICH), and 0.4 from Subarachnoid hemorrhage.
- Stroke related costs in the US came to nearly \$46 Billion between 2014-2015.

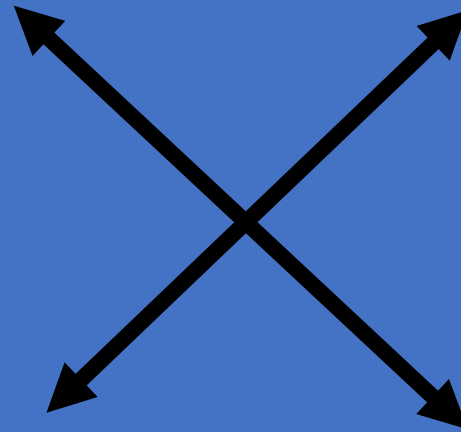
And yet...

In a recent survey,
40% of people
could not identify
a single symptom
of stroke!





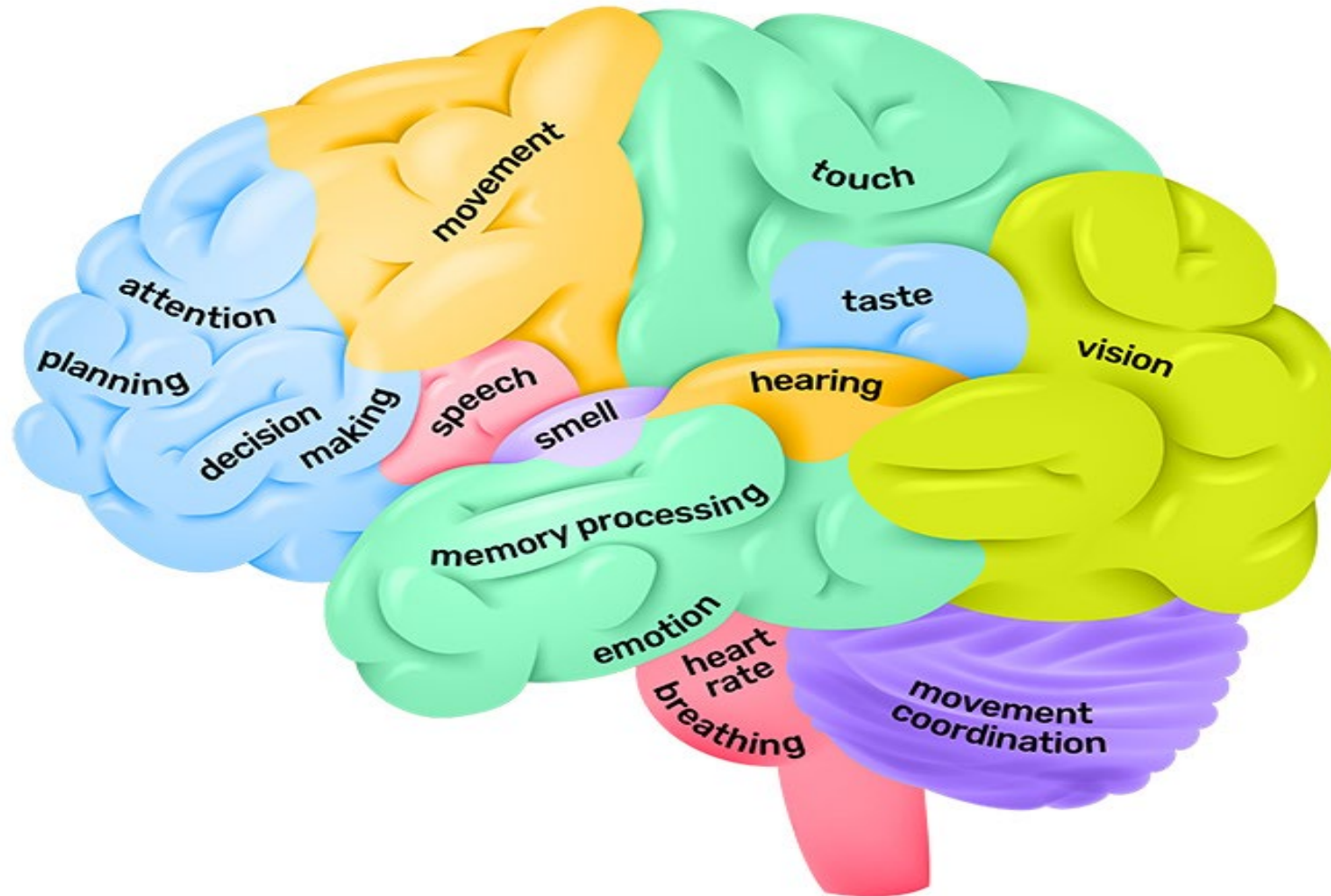
Where was the stroke?

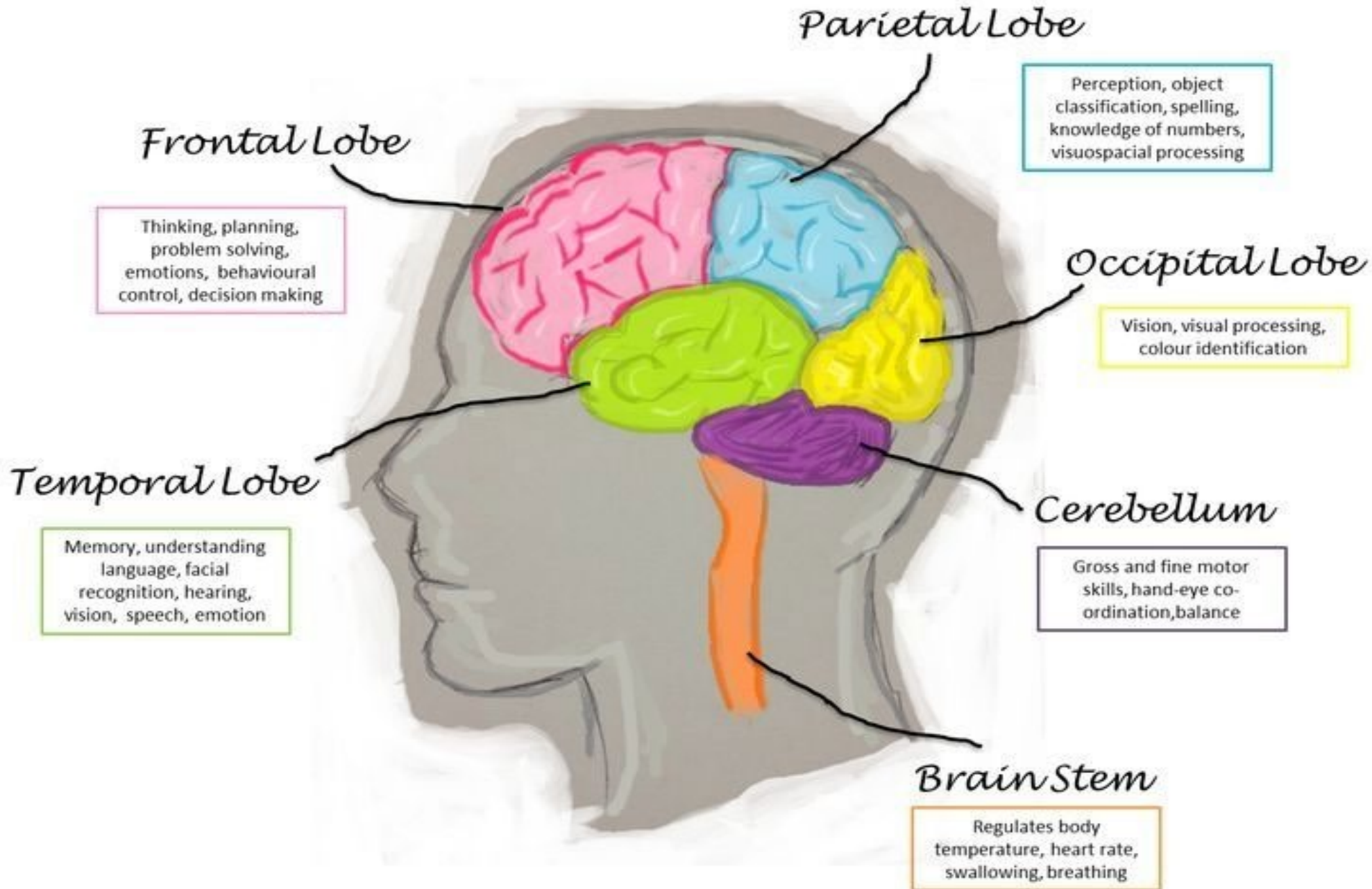


Left hemisphere of the brain controls the right side of the body

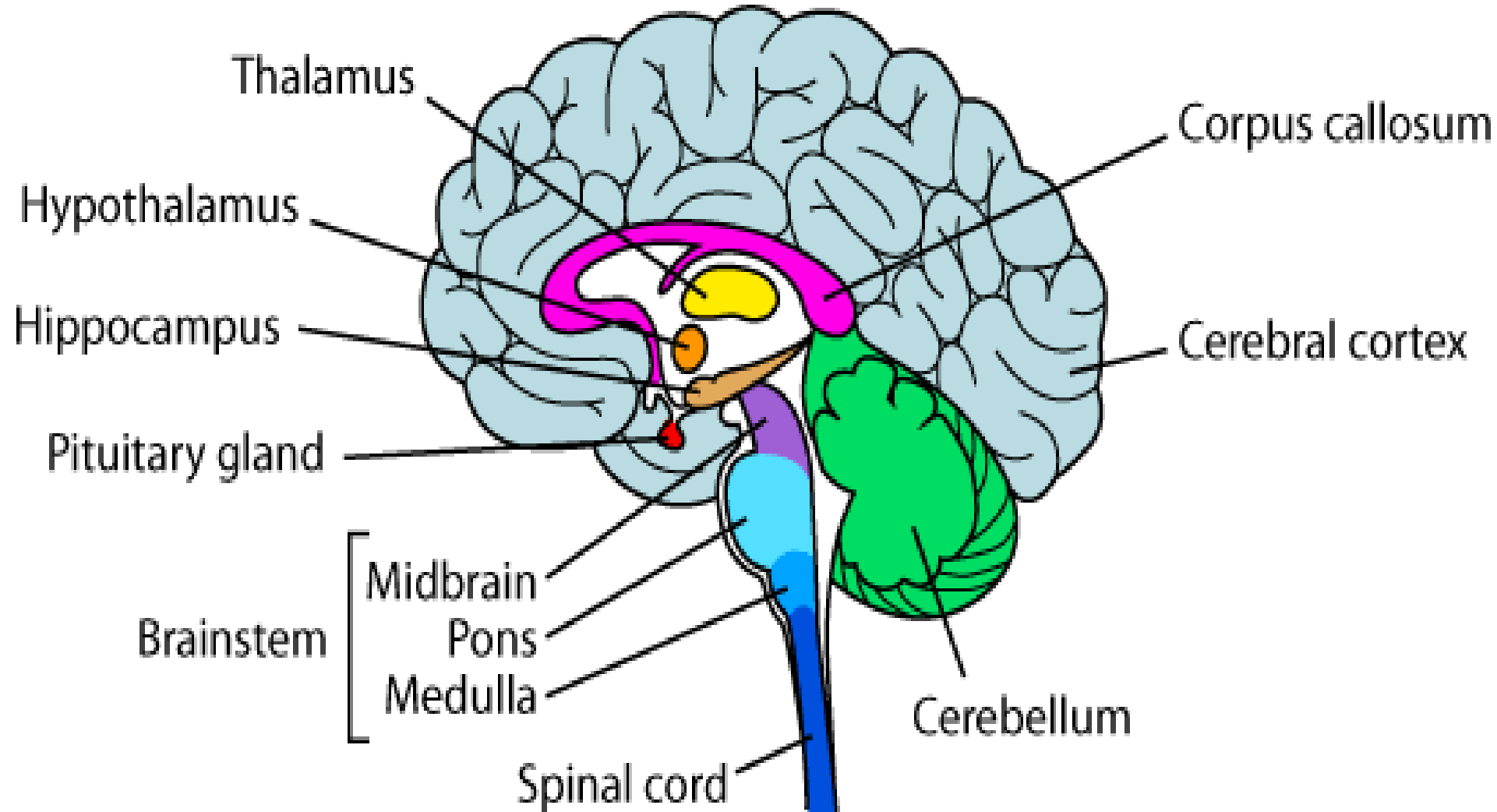
Right hemisphere of the brain controls the left side of the body

Anatomy of the Brain





Brain Physiology reviewed



The Limbic System

Regions of the brain most relevant to emotional intelligence

Hypothalamus

Controls body temperature, hunger, fatigue, sleep

Amygdala

Memory, decision-making, and emotional responses

Hippocampus

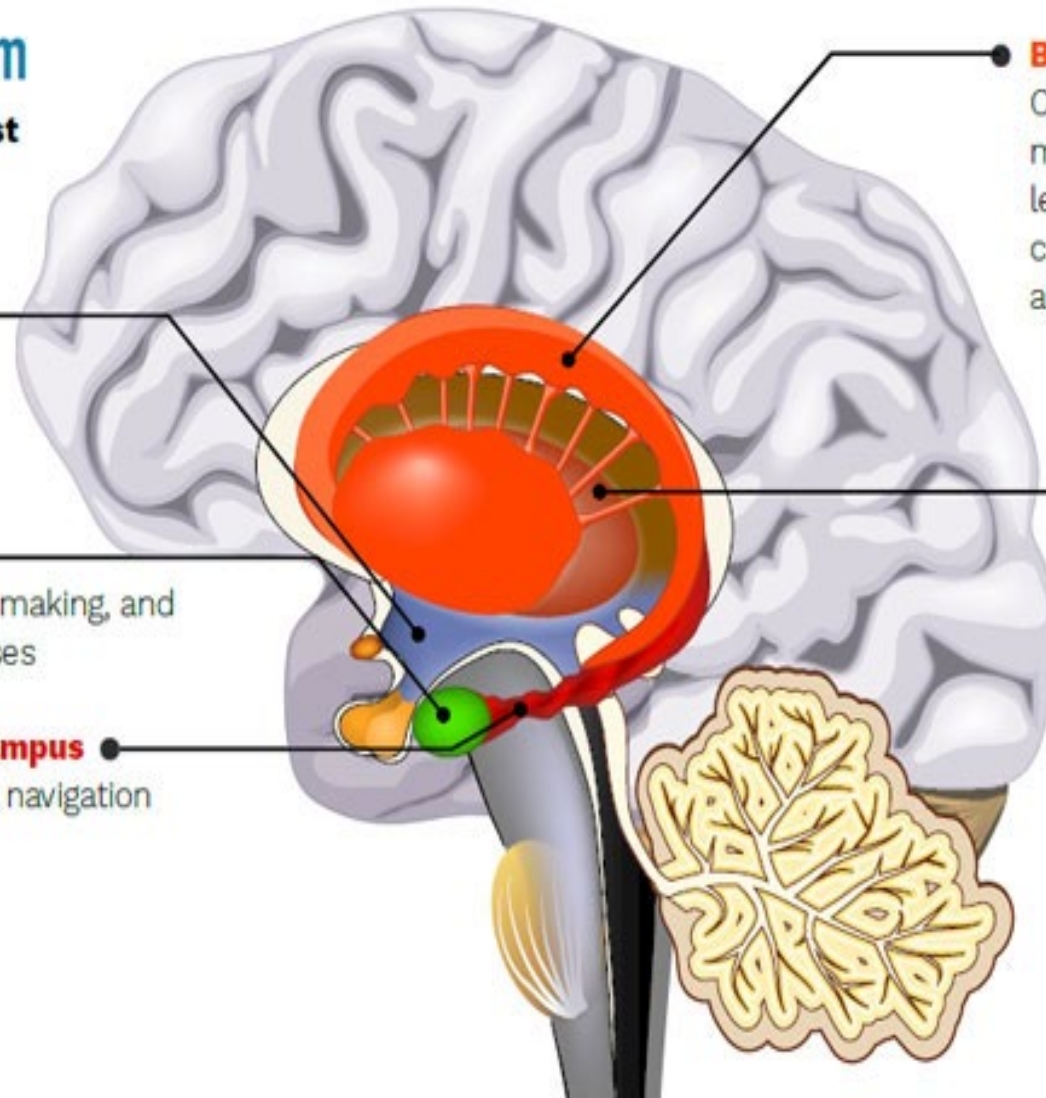
Memory, navigation

Basal ganglia

Control of movements, learning, habit, cognition, and emotion

Thalamus

Regulation of sleep, consciousness, and alertness



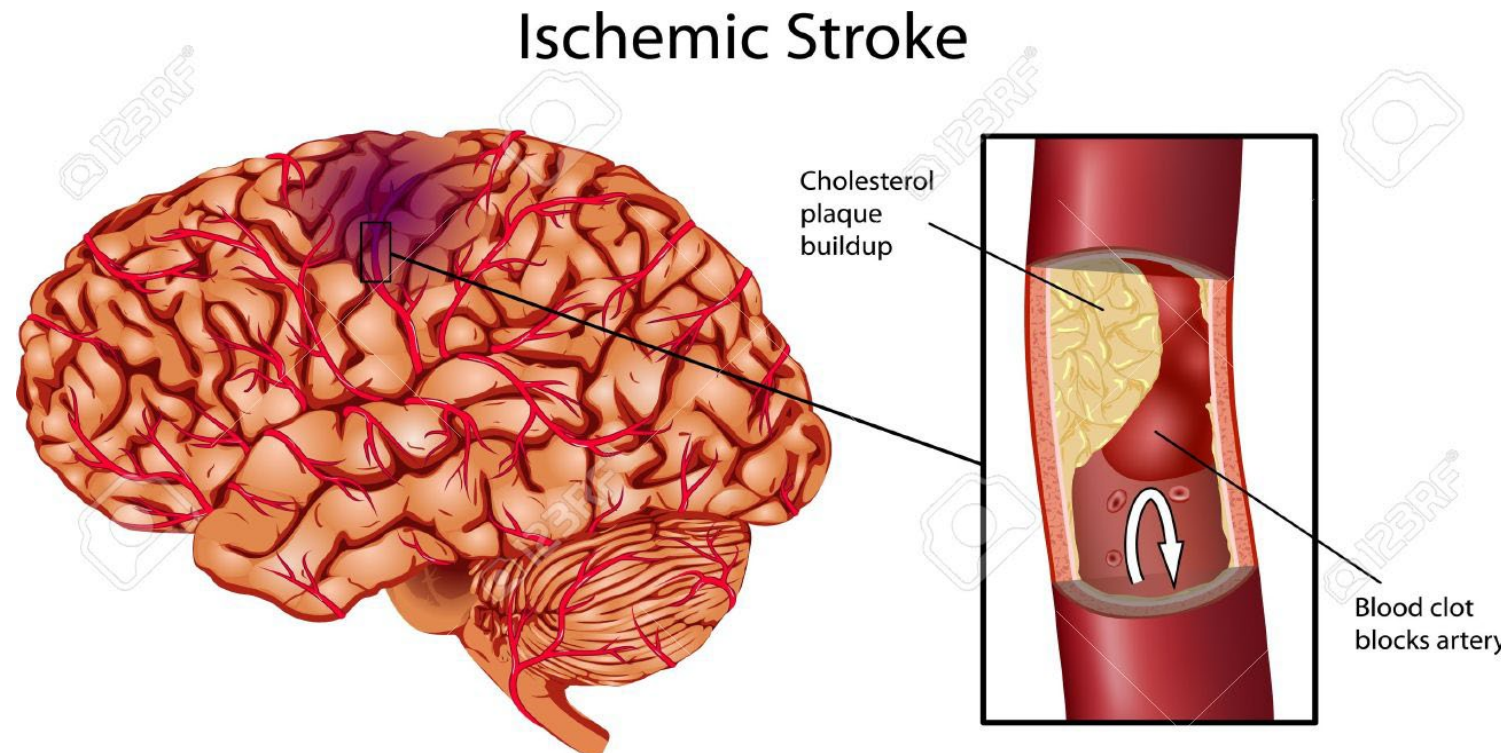
What is a CVA?

- There are two main types of a Cerebrovascular accident (CVA), or strokes:
- An ISCHEMIC STROKE caused by a blockage. CT Scan helpful.
- An HEMORRHAGIC STROKE caused by a rupture of a blood vessel.
- Both types of strokes deprive part of the brain of blood, oxygen, and nutrients causing brain cells to die.

- Transient Ischemic Attack (TIA) : A warning or “mini stroke”, TIA’s are different from a major stroke because the blood flow to the brain is blocked for only a short time, usually no more than 5 minutes. It is a medical emergency, just like a major stroke.
- Blood clots often cause a TIA.
- There is no way of knowing if a person is having a Major Stroke or a TIA.
- The risk of a Stroke within 90 days of a TIA may be as high as 17 %, with the greatest risk in the first week.
- Call 911.

Ischemic Stroke (CVA)

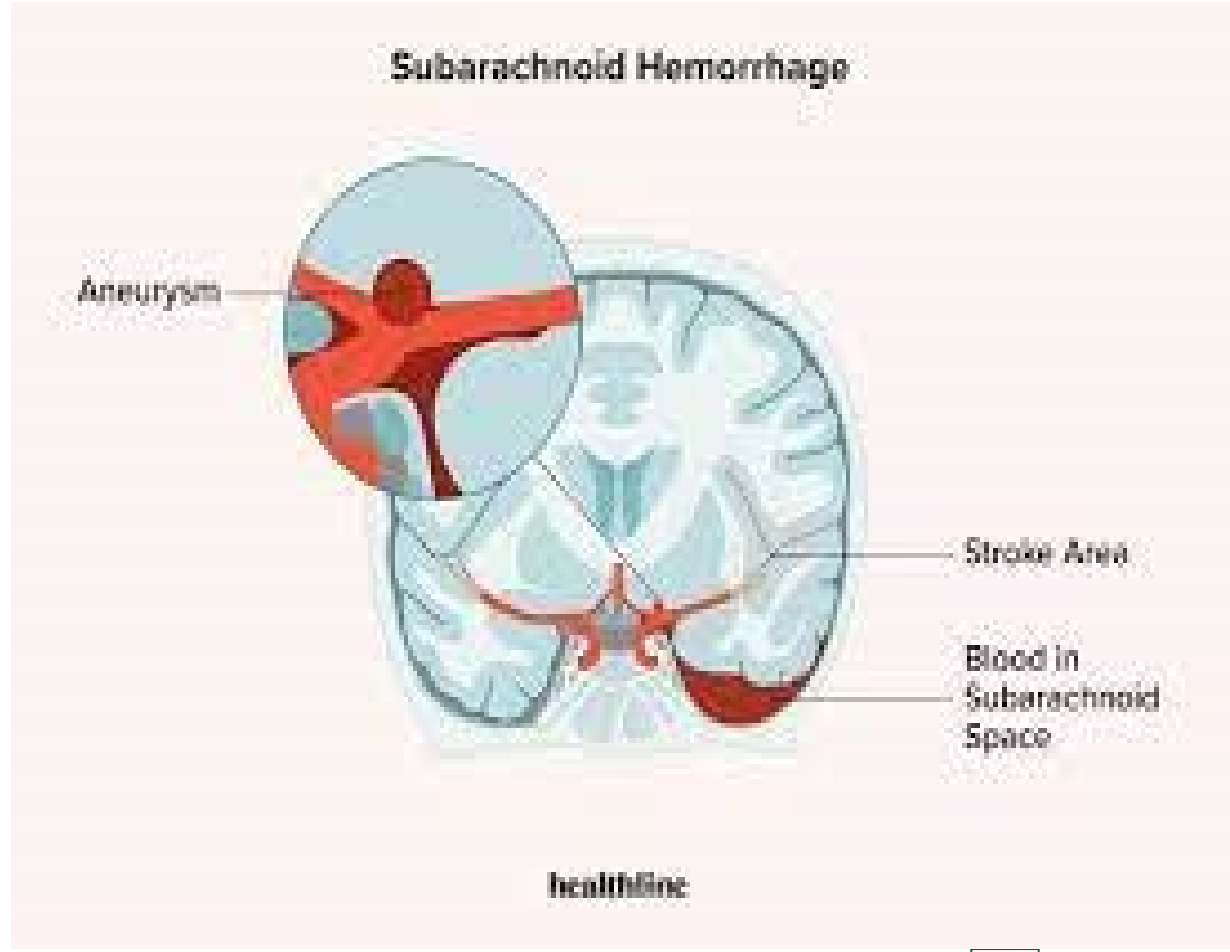
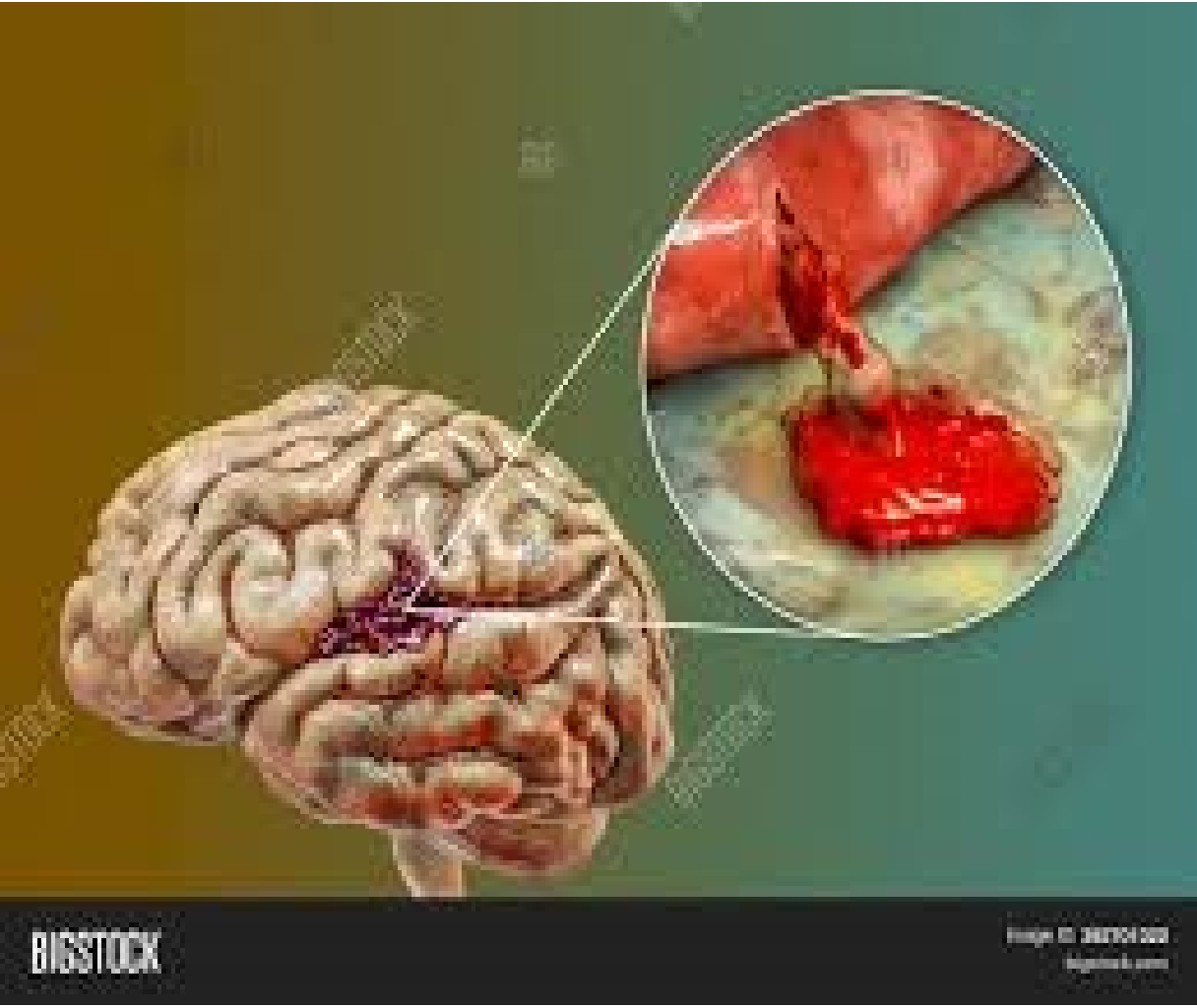
- 87% of Strokes are Ischemic Strokes.
- An Ischemic Stroke happens when blood flow through an artery that supplies oxygen-rich blood to the brain becomes blocked.
- Cryptogenic Stroke (CS) : Cerebral ischemia of obscure or unknown origin.
- Transitory and reversible. 1/3 of Ischemic strokes are Cryptogenic.

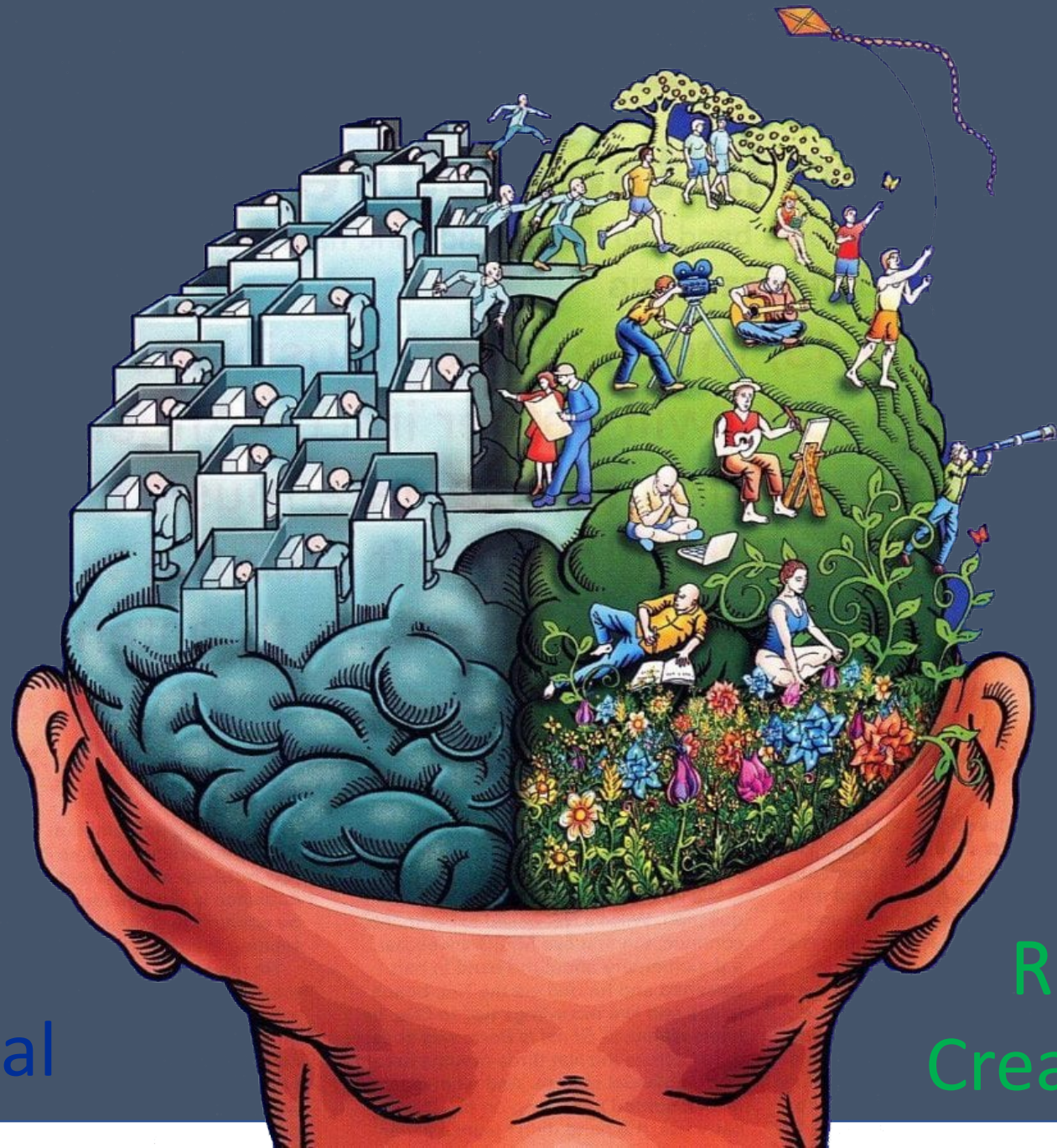


Hemorrhagic Stroke

- Hemorrhagic Stroke happens when an artery in the brain leaks blood or ruptures (breaks open). The leaked blood puts too much pressure on brain cells, (Increased intracranial pressure), which damages the brain cells.
- High blood pressure and aneurysms (balloon-like bulges in an artery that can stretch and burst) are two examples that cause Hemorrhagic Strokes.
- There are TWO types of HEMORRHAGIC STROKES.
- A. Intracerebral Hemorrhage: most common type. Occurs when an artery in the brain bursts, flooding the surrounding tissue with blood.
- B. Subarachnoid Hemorrhage: This type is a less common type of hemorrhagic stroke. It refers to bleeding in the area between the brain and the thin tissues that cover it.

Hemorrhagic Strokes: Intracerebral and Subarachnoid Types



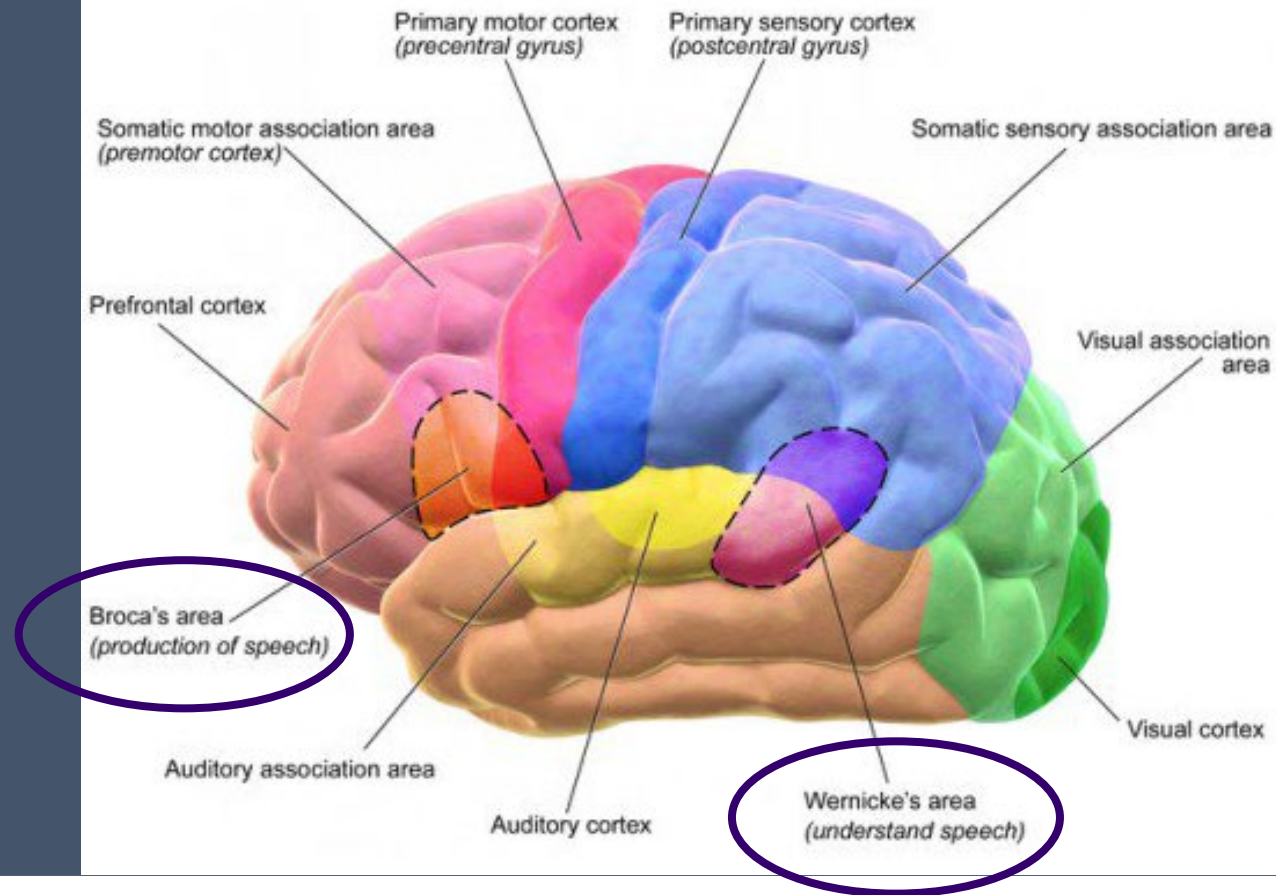


Left:
Logical

Right:
Creative

Left hemisphere is also home to LANGUAGE

Motor and Sensory Regions of the Cerebral Cortex



Aphasia Facts

- Approximately 2 million Americans have aphasia.
- There are over 250,000 new cases each year; the numbers are expected to rise.
- Aphasia is more common than cerebral palsy and muscular dystrophy, yet most people have never heard of it.

CVA (Stroke) Signs and Symptoms for Men and Women

- **FAST treatment, every minute counts to lessen the brain damage that a stroke can cause.**
- **Sudden numbness: face, arm, leg, especially on one side of body.**
- **Sudden confusion: Trouble speaking, difficulty understanding speech.**
- **Sudden trouble seeing, in one or both eyes.**
- **Sudden trouble walking, dizziness, loss of balance, lack of coordination.**
- **Sudden severe headache with no known cause.**

Know the signs of stroke and BE FAST

B

BALANCE

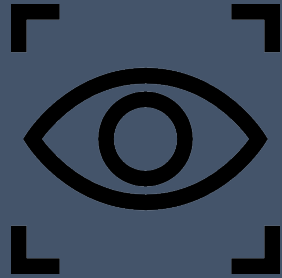
Difficulties



E

EYES

Vision changes



F

FACE

Drooping



A

ARM

Weakness



S

SPEECH

Difficulty



T

TIME

To call 911



Time is brain! Every 10 minutes can save up to 20 million brain cells.

What to do if you recognize a symptom of stroke

- ▶ **CALL 9-1-1**
- ▶ DO NOT DRIVE YOURSELF OR A LOVED ONE TO THE HOSPITAL
- ▶ NOTE WHAT TIME THE SYMPTOMS STARTED
- ▶ DO NOT TAKE AN ASPIRIN
- ▶ NEVER WAIT TO SEE WHAT HAPPENS, CALL IMMEDIATELY:
 - ▶ LOST TIME = LOST BRAIN



Risk Factors for Stroke

- Health Factors and Behaviors that increase the risk for stroke and heart disease according to the American Heart Association.
- Smoking: 8.7 million deaths in 2019
- Physical Inactivity: only 19.9 % to 25.7 % of Americans were physically active each day.
- Poor Nutrition: diets in the US have improved somewhat due to more whole grains, nuts, legumes, and seeds being consumed.
- Overweight/Obesity: Increased in the US from 30.5% to 42.4% in 2018.
- Cholesterol: 93.9 million US Adults, or 38.1 % adults had a total Cholesterol of 200 mg/dl or higher.
- Diabetes: 26 million, or 9.8% of American Adults had a diagnosis of Diabetes Type 2.,
- 91.8 million, or 37.6% of American Adults had prediabetes.
- High Blood Pressure(HBP): 47.3% of US adults have hypertension in 2018.
- There were 95,876 deaths due to HBP.
- Increasing Age:

Acting FAST is the Key for Stroke

- **Within 3 hours of the first symptoms treatment is critical to preserve brain cells.**
- **Strokes must be recognized and treated within 3 hours, critical window of time.**
- **Act FAST if you think someone is having a stroke. Assess for the following:**
- **F-FACE: Ask the person to smile. Does one side of face droop?**
- **A-ARMS: Ask the person to raise both arms. Does one arm drift downward?**
- **S-SPEECH: Ask the person to repeat a simple phrase. Is the speech slurred or strange?**
- **T-TIME: If you see any of these signs, call 911 right away.**
- **EMT's can begin life saving treatment. Do Not Drive Them to the Hospital.**

Brunnstrom stages of stroke recovery

1	Flaccidity	The muscles aren't able to move and they might feel limp and floppy.
2	Spasticity appears	The muscles may begin to tighten reflexively and have difficulty relaxing.
3	Increased spasticity	Certain muscles might tighten more and can be more difficult to relax.
4	Decreased spasticity	The involuntary muscle tightness (spasticity) starts to decrease.
5	Spasticity continues to decrease	The spasticity is minimal, allowing your affected side to move more complexly.
6	Spasticity disappears & Coordination reappears	The muscles may begin to tighten reflexively and have difficulty relaxing.
7	Normal function returns	The muscles may begin to tighten reflexively and have difficulty relaxing.

Stroke Treatment

- You are seen faster in the hospital if you enter by ambulance.
- Treatment for CVA begins in the ambulance.
- Do not drive yourself or allow someone else to drive you to the hospital.
- Do NOT take Aspirin.

- If you get to the hospital within 3 hours of the first symptoms of an ischemic stroke, a medication called THROMBOLYTIC will be given to break up the blood clot (thrombus).
- Tissue Plasminogen Activator (tPA) is a thrombolytic.
- Endovascular Procedures: Used to treat some hemorrhagic strokes. Long tube is inserted into the artery in the arm or leg and a coil is placed to repair the damage and to stop the bleeding.
- Surgical Treatment: Hemorrhagic strokes may be treated with surgery. If the bleeding is caused by a ruptured aneurysm, a metal clip may be put in place to stop
- the blood loss.

Diagnosis and Tests Continued

- **Carotid Ultrasound Imaging**
- **Catheter Angiography**
- **Cranial Ultrasound/Head Ultrasound**
- **CT Perfusion of the Head**
- **Lipoprotein Blood Test**
- **Magnetic Resonance, functional (MRI)**

What to Expect After a Stroke

- **Paralysis, weakness, on one or both sides of the body.**
- **Trouble with thinking, awareness, attention, learning, judgment, and memory**
- **Problems understanding or forming speech (aphasia)**
- **Trouble controlling or expressing emotions**
- **Numbness or strange sensations**
- **Pain in hands, feet that worsens with movement and temperature changes.**
- **Trouble with chewing and swallowing**
- **Problems with bladder and bowel control**

- **These residual symptoms should be considered when creating**
- **your Discharge Care Plan and Goals of Care (GOC).**

Aphasia



Aphasia is the communication disorder that affects a person's ability to use LANGUAGE

4 components of language:

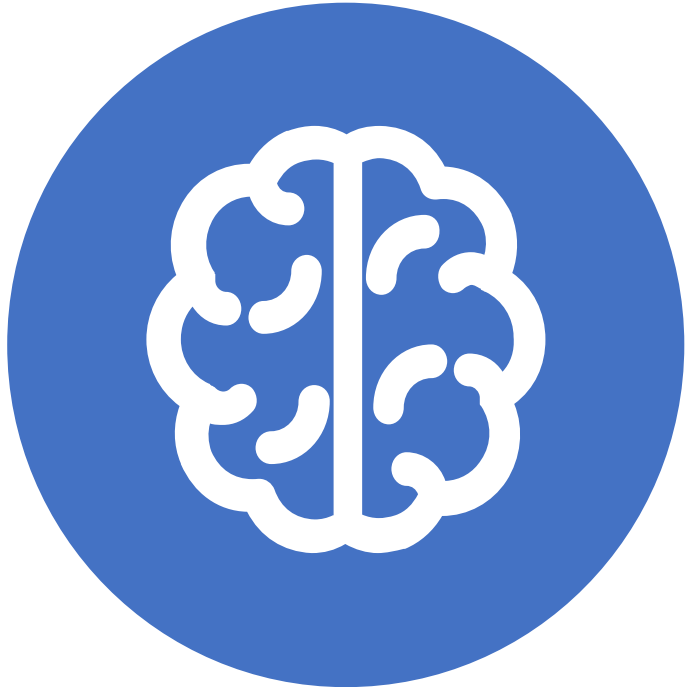
- **Listening**
- **Reading**
- **Speaking**
- **Writing**

Aphasia is not a loss of intelligence

Aphasia

- **Wide variation in the severity of symptoms**
- **Aphasia may be accompanied by a weakness in the muscles of speech (dysarthria)**
- **Or also accompanied by an inability to coordinate mouth movements (apraxia)**

Broca's Aphasia (Nonfluent)



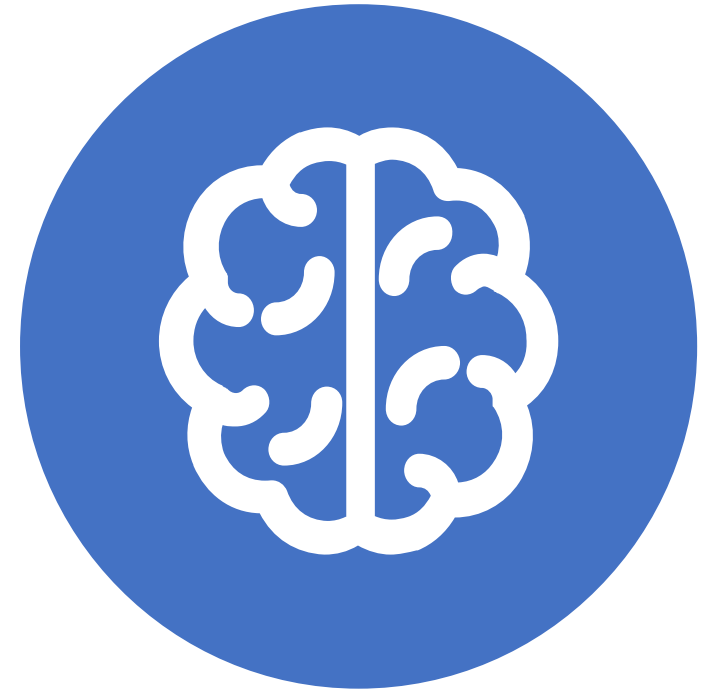
Speech output is reduced to mainly short utterances of the main content words

Halting and effortful quality of speech

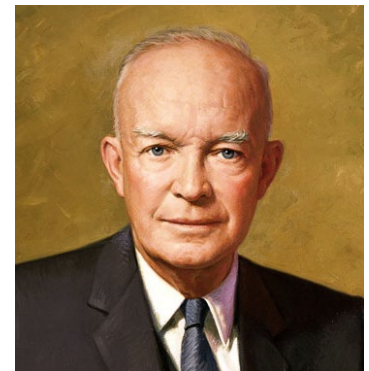
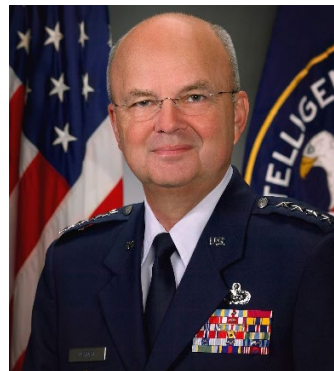
Wernicke's Aphasia (Fluent)

Speech is produced easily, but often does not make sense.

Because of fluent nonsensical speech and comprehension difficulties, may be confused with mental illness or other problems.



Famous Faces with Aphasia



SPEAKING AND LANGUAGE

- ▶ The most obvious consequence of aphasia
- ▶ “Tip of the tongue” syndrome
- ▶ May be agrammatical, lacking content, or containing misused words
- ▶ Extremely frustrating for the speaker and the listener
- ▶ Speech vs. language difficulties:
 - ▶ Speech - impacted by muscle weakness or apraxia;
 - ▶ Language - impacted by the inability to find the right word
 - ▶ *But they can sound alike!*



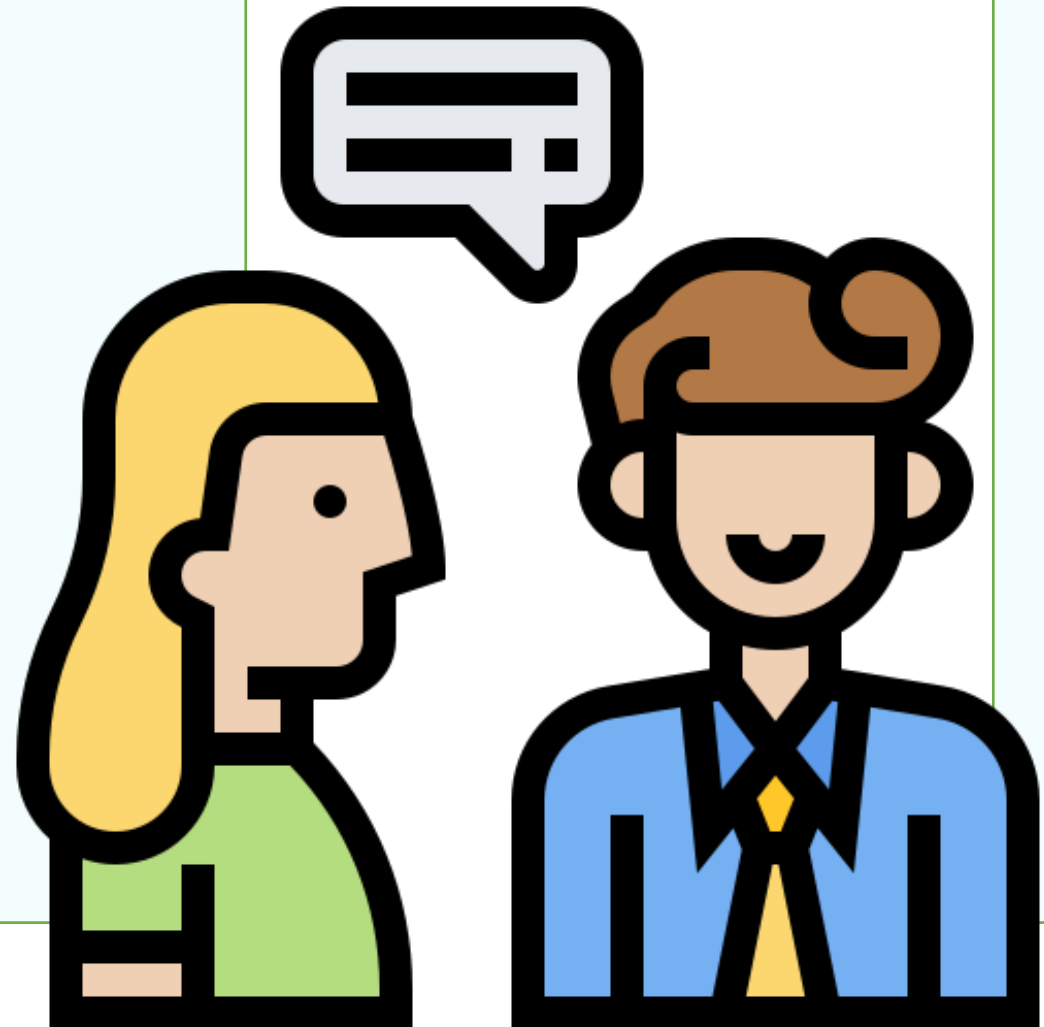
Communicating with people with aphasia

- A Ask simple questions
- P Provide choices
- H Help communicate if asked
- A Acknowledge frustration
- S Speak slowly and clearly
- I If you don't understand, say so
- A Allow extra time



Ways to help with speaking

- Give choices
- Use support: pictures, objects
- Allow extra time
- Do not fill-in-the-blanks unless requested
- Restate what you understood and verify accuracy
- Acknowledge frustration
- NEVER speak over or around the person with aphasia



Listening and Comprehension Challenges



→ **Too much content**

→ **Too rapid speech**

→ **Too many people!**

→ **Use of idioms or figurative language**



Reading

Changes can vary from simply reading slower to words looking “scrambled” or foreign

Writing

Difficulties range from spelling and grammar errors to being unable to copy simple geometric designs or letters





Recovery from Stroke and Aphasia

Spontaneous recovery: Period of rapid recovery of symptoms in the first few weeks to about 6 months after stroke

Long term recovery: Research has shown that recovery continues indefinitely

Stroke Recovery and Insurance



Here is the contradiction...

- Average length of acute hospital stay - less than 5 days
- Average length of stay in a rehab hospital: 2-3 weeks
- Typical insurance coverage for outpatient speech therapy is 30 sessions

Therapy Options following a Stroke and discharge from Hospital

- Most likely the following options will be offered after a Stroke.
- In-Patient Acute Rehabilitation. Offers PT, OT, ST and Nursing oversight. Must be able to tolerate 3 hours of therapy a day. Covered by some insurances. Must meet criteria for admission. Pre-authorization required.
- Skilled Nursing Rehabilitation (SNF): Less intense, offers 1-2 hours of therapy a day, 6 days a week. PT, OT, ST. Covered by insurance. Pre-Authorization required.
- Assisted Living Senior Living Options(ALF): Offers PT, OT, ST, once a day for 6 days, 1 hour sessions per therapy. Room and Board not covered by insurance. Only Skilled Services covered by insurance. Many offer Respite stays, rent apt. month to month.
- Discharge Home with Home Therapy: PT, OT, ST and RN Oversight. Insurance covers.
- Outpatient Therapy in a Clinic or Center: PT, OT, ST is offered on designated days.
- Covered by insurance, may have a co-pay. Must have your own transportation.

Personality Changes Related to Strokes

- **Post-Stroke Dementia (PSD)**
- **Pseudobulbar Affect (PBA)**
- **Depression**
- **Anxiety**
- **Agitation**
- **Anger**

Strokes Link to Dementia

- 1 in 4 people who have had a Stroke will go on to develop signs of dementia.
- Vascular Dementia is most common in older people.
- With both silent and apparent strokes the risk of vascular dementia increases with the number of strokes over time.

- Signs and Symptoms of Stroke–Related Dementia:
- Memory loss, especially remembering recent events.
- Inattention, poor concentration, difficulty following instructions.
- Difficulty planning and organizing tasks.
- Confusion.
- Wandering, getting lost in familiar surroundings.
- Poor judgement.
- All of these signs and symptoms will impact your Discharge planning with the patient.

POST-STROKE DEMENTIA (PSD)

- Post Stroke Dementia (PSD) is a term used to define any dementia occurring after a stroke irrespective if the leading cause is vascular, degenerative, or mixed.
- PSD is a frequent condition after a stroke and its prevalence ranges from 6-32%.
- Early Signs of vascular dementia can include mild:
 - Slowness of thought
 - Difficulty with planning
 - Trouble understanding
 - Problems with concentration
 - Changes in mood or behavior
 - Problems with memory and language, but not common signs.
 - Vascular dementia will get worse over time.

What is Pseudobulbar Affect (PBA) ?

- **Pseudobulbar Affect (PBA) can be caused by a Stroke.**
- **PBA can also be caused by other neurological disorders like Amyotrophic Lateral Sclerosis (ALS) , Parkinson's, Traumatic Brain Injury (TBI), Multiple Sclerosis, Dementia, Wilson's disease, or Brain Tumors.**
- **PBA is a neurological condition that often occurs secondary to a insult to the brain.**
- **PBA is a manageable condition and is real.**
- **PBA is often mistaken for depression.**
- **PBA is often treated with :**
- **Tricyclic antidepressants (TCA's)**
- **Selective Serotonin Reuptake Inhibitors (SSRIs)**
- **Dextromethorphan Hydrobromide and Quinidine sulfate (Nuedexta)**
- **These medications help reduce the frequency and severity of the PBA episodes.**

Tips for Communicating with a Person who has had a Stroke

- **Ask permission to have the GOC/discharge planning discussion with family members prior to meeting.**
 - **Set a positive mood for GOC discussion. Offer chairs for all family members to sit.**
 - **Get the person's attention, use their name and ask their permission to begin.**
 - **State your message/purpose clearly.**
 - **Ask simple, answerable questions.**
 - **Listen with your ears, eyes, and heart.**
 - **Break down conversation on discharge planning into steps.**
 - **If the meeting gets tough, distract and redirect with a different question.**
 - **Summarize the meeting's, GOC, and Discharge Plan.**
- Offer Discharge plan in writing with all details listed clearly.**

Reasons for Readmissions to the Hospital

- Residual physical or emotional symptoms of client's stroke become too difficult for family to handle.
- Cost of care (care giver, medications, therapies) too high for family or individual.
- Non-compliance to diet, medication, therapies and life style changes.
- Lack of transportation for follow up with PCP, therapies, etc.
- Anxiety, fear, and depression .
- Care giver fatigue.
- Isolation of individual during the pandemic.
- Open for discussion

Discharge Planning Considerations: Transitional Care Management (TCM)

- **Communication**
- **Education**
- **Family/Caregiver included in discharge planning meeting with patient. May have to meet several times. Must be set up within days of admission to hospital.**
- **Discussion and education of Life Style Changes**
- **Discussion of Therapy and its importance**
- **GOC and how attainable for the patient and caregiver.**
- **Resources, Resources and Resources.**
- **Provide TCM and Pathways for Continuum Plan of Care.**
- **Provide the discharge plan with all information in a concise, readable, format.**
- **TCN must follow up with patient after discharge from the hospital.**

Summary of our discussion today

- In summary we discussed the following;
- **Types of Strokes.**
- **Risks for having a Stroke.**
- **Prevention of Stokes.**
- **Treatment for Strokes.**
- **Transitional Care Management for Stroke patients and their caregivers.**
- **Behaviors seen with Stroke patients.**
- **Goals of Care Discussion, TCM and Discharge Planning Considerations.**



Stroke Comeback
Center.®

Opening the door to a brighter tomorrow

A long-term solution for survivors and their families.

- ▶ A 501(c)(3) organization
- ▶ Opened in January 2005
- ▶ One community, three centers:
 - ▶ Vienna, Virginia
 - ▶ Rockville, Maryland
 - ▶ Virtual Stroke Comeback Center

Stroke Comeback Center

Stroke Comeback Center

- ▶ Small group classes to address all components of language, cognition, technology, and fitness
- ▶ Individuals are welcome regardless of time since stroke, communication or physical ability, and ability to pay
- ▶ Uses a Life Participation Approach
- ▶ Offers a community of support for the whole family



- ▶ Explicit goal of increased life participation
- ▶ Everyone affected by aphasia is eligible for services
- ▶ Success measures include documented life enhancement changes
- ▶ Both personal and environmental are intervention targets
- ▶ Emphasis on availability of services needed at all stages of recovery

(American Speech-Language Hearing Association. The LPAA Project Group. (2000))



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- Associated Podcast, Dana Foundation, July 2020. <https://dana.org/article/emotional-intelligence-comes-of-age>.
- Stroke Come Back Center (SCC) Suzanne Coyle Executive Director, LSP.

Thank you for spending time with me today.

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