

Name: _____

Differences in Left- and Right-Sided Strokes

(3 credits)

After completing this section, you should be able to:

1. Define the term "stroke" and describe the two major causes
2. Describe how stroke affects the brain and list helpful interventions for left-brain injury
3. Describe how stroke affects the brain and list helpful interventions for right-brain injury
4. Describe other complications resulting from right- and left-brain injuries and ways to assist with care

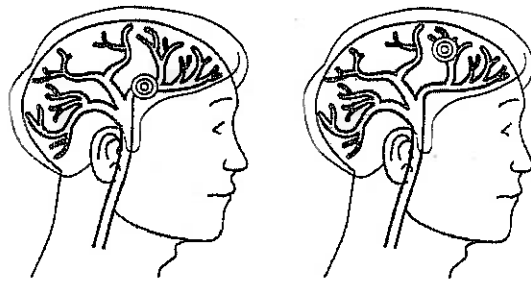
1. Define the term "stroke" and describe the two major causes

A stroke is caused by the interruption of the blood supply to the brain, which causes brain cells to die from lack of oxygen. The medical term for a stroke is a cerebrovascular accident (CVA). The effects of lack of oxygen can be either temporary or permanent.

- A **transient ischemic attack**, or TIA, is a warning sign of a stroke. TIA is also known as a "mini stroke." It is the result of a temporary lack of oxygen in the brain.
- Stroke is the result of permanent loss of oxygen supply.

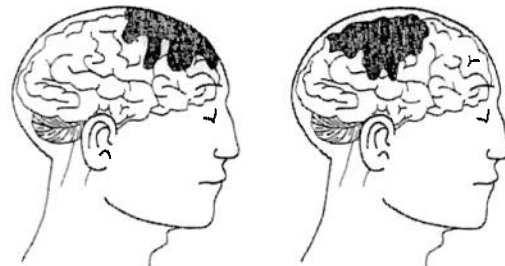
The potential damage of the stroke depends upon the size and location of the artery and the cause of the stroke. The two most common causes of stroke are obstruction and arterial bleeding (which is bleeding from a ruptured or broken artery).

Obstruction is caused by a plaque or blood clot which blocks circulation to the brain cells. A clot (also called a **thrombus**) can either form at the site or travel from another site and lodge in a blood vessel, blocking circulation and oxygen. A clot that travels is called an **embolus**.



Arterial bleeding occurs when a blood vessel ruptures at a weak spot in the artery wall. This is also called an aneurysm.

Aneurysms can occur on the surface of the brain or deeper within the brain. The patient's ability to recover depends upon the brain area affected and the severity of the bleeding. Younger people are more likely to experience aneurysms than older people. Damage in this case tends to be temporary, and the patient is likely to recover more fully after the stroke.



Bleeding on the surface of the brain Bleeding deep within the brain

Directions. Define the following terms.

1. Stroke: _____

2. TIA: _____

3. Thrombus: _____

4. Embolus: _____

5. Aneurysm: _____

Directions. From the information given, complete the following sentences:

6. A permanent loss of oxygen to the brain is a(n) _____
7. A temporary loss of oxygen to the brain is a(n) _____
8. The potential damage of the stroke depends upon the _____
and _____ of the artery and the _____
of the stroke.
9. Two common causes of stroke are _____
and _____

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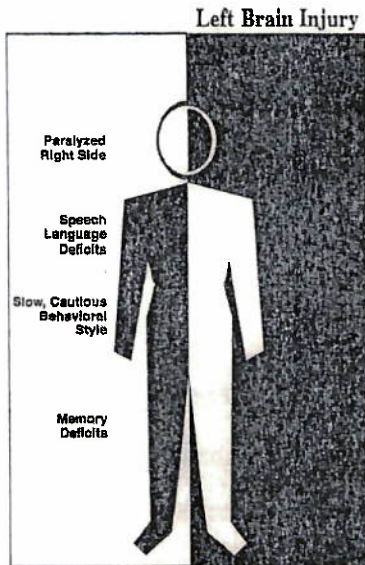
10. Obstruction is caused by a _____ or a _____
clot which blocks the circulation to the brain cells.
11. When a blood vessel ruptures, arterial _____ occurs.
12. The person's ability to recover depends upon the brain _____
affected and the _____
of the bleeding.

2. Describe how stroke affects the brain and list helpful interventions for left-brain injury

The effects of a stroke depend on the location of the obstruction and the extent of the area affected. However, each side of the brain controls the opposite side of the body. So a stroke that occurs in the left side of the brain will cause the right side of the body to be affected. This can cause any of the following complications:

- Paralysis on the right side of the body (paralysis on one side of the body is called hemiplegia)
- Weakness on the right side of the body (weakness on one side of the body is called hemiparesis)
- Speech/language deficits, such as an inability to speak or speak clearly, called expressive aphasia and/or an inability to understand spoken or written words, called receptive aphasia
- Slow, cautious behavioral style
- Memory loss
- Right hemianopsia (loss of vision on right side of both eyes)

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For the complications listed above, use these guidelines to help a person affected by a left-brain injury:

- Never call the weaker side the “bad side,” or talk about the “bad” leg or arm. Use the term “weaker” or “involved” to refer to the side with paralysis or weakness.
- When assisting with transfers or walking, stand on the weaker side. Support the weaker (involved) side. Lead with the stronger (uninvolved) side.
- When assisting with dressing, dress the weaker side first. Place the weaker arm or leg into the clothing first. Undress the stronger side first.
- Keep questions and directions simple. Give directions one step at a time. Do not shout, change your voice, or make exaggerated lip movements.
- Phrase questions so they can be answered with “yes” or “no.” For example, when helping with meals, ask, “Would you like to start with some milk?”
- Agree on signals, such as shaking or nodding the head or raising a hand or finger for “yes” or “no.”

- Use pictures, gestures, or pointing. Use communication boards or special cards to aid communication (see next page to see a sample communication board).
- Give step-by-step encouragement to try new things and reinforce each step with praise. Help set up routines for activities.
- Provide frequent reminders and reinforcement for routines and tasks completed.
- For vision loss, teach person to scan, turning the head toward the right side and slowly rotating the head back to neutral, so that he or she can see the environment with the left side of both eyes.

Directions. List six bodily effects that can result from left-brain injury.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Directions. Briefly describe guidelines to help a person affected by a left-brain injury.

7. _____

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8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

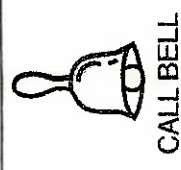
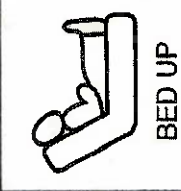
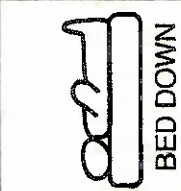
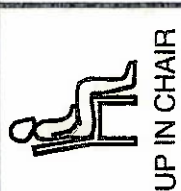



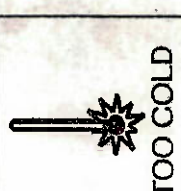
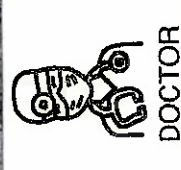
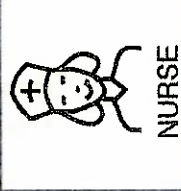






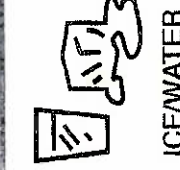
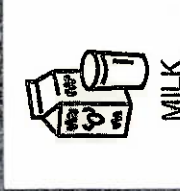



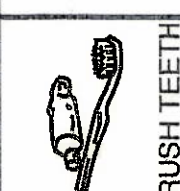
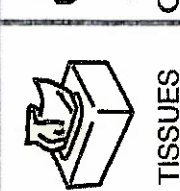
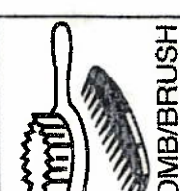

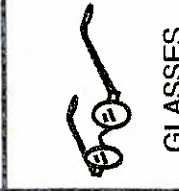
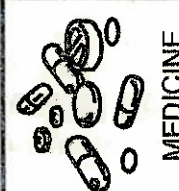

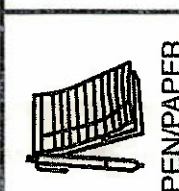
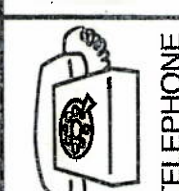
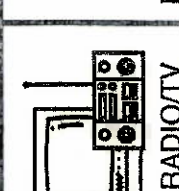

14. _____

15. _____

16. _____

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Communication Board

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
																															
CALL BELL	BED UP	BED DOWN	UP IN CHAIR	WHEELCHAIR	BACK TO BED	TOO HOT	TOO COLD	DOCTOR	NURSE	HUSBAND/SON	WIFE/DAUGHTER	CLERGY	HUNGRY	DRINK	TEA/COFFEE	ICE/WATER	MILK	BATHROOM	BEDPAN	URINAL	BRUSH TEETH	TISSUES	COMB/BRUSH	RAZOR/SHAVE	GLASSES	MEDICINE	WATCH/TIME	PEN/PAPER	TELEPHONE	RADIO/TV	MAGAZINE/NEWSPAPER

Directions. Looking at the communication board, list ten requests that your patient with left-brain injury could communicate to you by referring to pictures on the board.

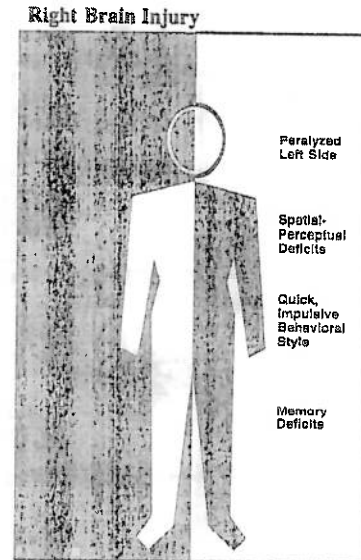
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____
26. _____

3. Describe how stroke affects the brain and list helpful interventions for right-brain injury

If the stroke occurs in the right side of the brain, the left side of the body will be affected. This can cause any of the following complications:

- Paralysis on the left side of the body
- Weakness on the left side of the body
- Spatial-perceptual problems (can't judge distance, size, position, rate of movement, form and relation of parts to a whole)
- Does not know limits; does not realize that there is anything wrong; sometimes cannot identify own body parts
- Quick, impulsive behavioral style
- Cannot focus easily on tasks, easily distracted
- Memory loss
- Left hemianopsia (loss of vision on left side of both eyes)

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For the complications listed above, use these guidelines to help a person affected by a right-brain injury:

- Never call the weaker side the "bad side," or talk about the "bad" leg or arm. Use the term "weaker" or "involved" to refer to the side with paralysis or weakness.
- When assisting with transfers or walking, stand on the weaker side. Support the weaker (involved) side. Lead with the stronger (uninvolved) side.
- When assisting with dressing, dress the weaker side first. Place the weaker arm or leg into the clothing first. Undress the stronger side first.
- Reorient person to environment constantly. Establish fixed routines so that the person does not get lost traveling from place to place and does not misjudge distance or space.
- Remind frequently that he or she is presently unable to perform certain tasks. Help person to relearn those tasks in small steps. Protect body parts from injury.

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- Slow down and break instructions into small steps. Keep messages simple.
- Eliminate environmental distractions. When giving resident/client specific information, position the wheelchair with the strong side away from the action so that he or she can concentrate on what you are saying.
- For vision loss, teach person to scan, turning the head toward the left side and slowly rotating the head back to neutral, so that he or she can see the environment with the right side of both eyes.

Directions. What are eight bodily effects from right-brain injury?

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

Directions. Briefly describe guidelines to help a person affected by a right-brain injury.

9. _____

10. _____

11. _____

12. _____

13. _____

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14. _____

15. _____

16. _____

- Poor judgment
- Loss of cognitive abilities
- Tendency to ignore the paralyzed or weaker side of the body, called **one-sided neglect**
- Laughing or crying without any reason, or when it is inappropriate, called **emotional lability**
- Difficulty swallowing, called **dysphagia**

Use the following guidelines to help assist with care:

- Experiencing confusion or memory loss is upsetting. People often cry for no apparent reason after suffering a stroke. Be patient and understanding. Your positive attitude will be important. Keeping a routine may help residents/clients feel more secure.
- Encourage independence and self-esteem. Let the person do things for him- or herself whenever possible, even if you could do a better or faster job. Make tasks less difficult for the person to do. Appreciate and acknowledge efforts to do things for him- or herself even when the person is unsuccessful. Praise even the smallest successes to build confidence.
- Always check the person's body alignment. Sometimes an arm or leg can be caught and the person is unaware.
- Pay special attention to skin care and observe for changes in the skin if a person is unable to move.
- If residents/clients have a loss of touch or sensation, check for potentially harmful situations (for example, heat and sharp objects).
- If residents/clients are unable to sense or move a part of the body, assist with changing positions to prevent pressure sores.

4. Describe other complications resulting from right- and left-brain injuries and ways to assist with care

Other complications that are common to both right- and left-brain injuries include the following:

- Loss of sensations such as temperature or touch
- Loss of bowel or bladder control
- Confusion

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- Diminished sensation or paralysis causes lack of awareness about such things as water temperature and sharpness of razors. Take care so that injury does not occur.
- Follow bowel and bladder retraining schedules as ordered. Offer positive words for successes or for attempts to control bowel or bladder. However, do not talk to residents/clients as if they are children. Keep your voice low and do not draw attention to any aspect of retraining. Never show frustration or anger with retraining efforts.
- For one-sided neglect, help improve awareness of neglected side. Approach the person from the neglected side. Talk to him or her from that side and use touch on that side, if appropriate. For example, hold the person's hand on the neglected side.
- Place often-used items on the neglected side, such as eyeglasses, tissues, phone, and other items.
- Gently remind the person of objects or item on the neglected side without embarrassing him or her. For example, "Your glass of water is here."

When assisting with eating, do the following to help prevent dysphagia:

- Have the person sit upright at a 90-degree angle.
- Watch for signs of choking.
- Serve soft foods and thickened liquids, as ordered, for swallowing problems.
- Always place food in the unaffected (stronger), or nonparalyzed, side of the mouth.
- Make sure food is swallowed before offering more bites.
- Do not use straws.
- Provide mouth care after eating.

Directions. Answer the following questions.

1. How are two ways you could encourage a person recovering from stroke to be independent?

2. Give examples of how you could encourage independence with two tasks.

3. What are three ways you can help improve awareness of a neglected side?
