CRRN review Dysphagia and Communication Disorders Presented by: Karyn S Pingel, M.S. CCC-SLP and Stephanie Pocock, M.Ed. CCC-SLP from the James A. Haley Veteran's Hospital

(based on slides from Lisa Stanley, M.A., CCC-SLP from Tampa General Hospital)

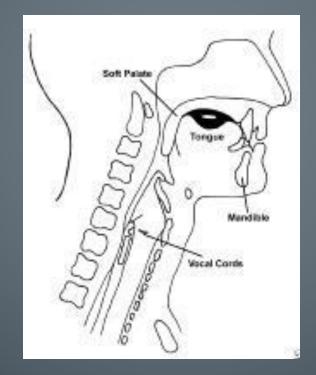
# Learning Objectives Swallowing

- Describe the normal process of swallowing
- Discuss the assessment process for a patient with a swallowing disorder
- Describe the interventions used in treating swallowing disorders
- Delineate team member roles in managing a swallowing disorder

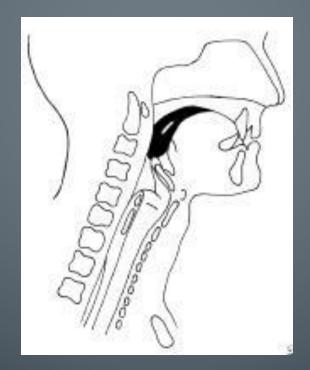
### Normal Swallow Function

- A complex physiologic act in which food and liquid passes from the mouth to the stomach.
- Consists of four stages
  - Oral Preparatory Stage
  - Oral Stage
  - Pharyngeal Stage
  - Esophageal Stage

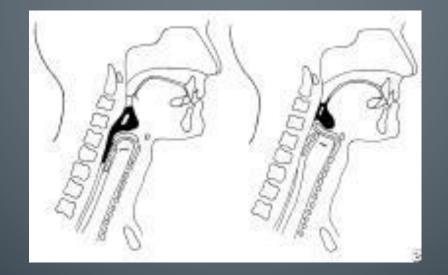
 1. Oral Prep Phase-Cognitive awareness or bolus presentation; ability to move bolus to mouth



 Oral Phase- Mastication-rotary chew; salivary glands soften bolus to cohesive texture. Bolus moves back to faucial arches to trigger swallow (3-5 seconds; up to 10 for elderly)



 3. Pharyngeal Phase- Hyoid moves larynx up and forward bringing the epiglottis down to cover airway. Closing of vocal cords adds extra protection to airway. Cricopharyngeal sphincter relaxes to allow food to go through esophagus(1 second).

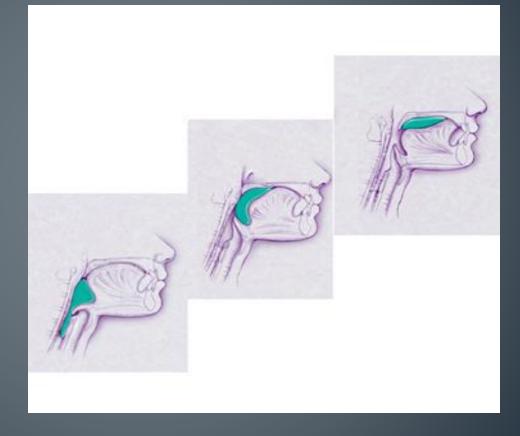


• 4. Esophageal Phase- Peristalsis moves food through the esophagus to the stomach (8-20 seconds).



# Physiology of swallowing

#### Normal swallow



# Dysphagia

- Dysphagia is the inability to swallow or a difficulty with swallowing. Dysphagia is most commonly associated with neurological or structural damage.
- Speech Pathologists evaluate and treat swallowing disorders

### Anatomy and Physiology of Swallowing

• Epiglottis

Cartilage covering the airway

• <u>Hyoid</u>

Brings larynx up and forward

<u>Valleculae</u>

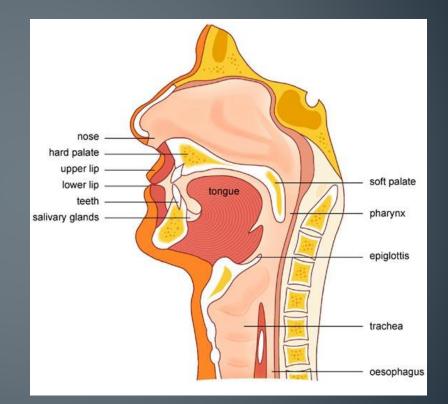
Space or pocket above epiglottis

• <u>Pyriform sinuses</u>

Pockets in pharynx around airway

<u>Cricopharyngeal sphincter</u>

Opens up the esophagus allowing food to pass through to the stomach



# **Cranial Nerves Involved in Swallowing**

- CN V- Trigeminal
- CN VII-Facial
- CN XII-Hypoglossal
- CN IX-Glossopharyngeal
- CN X-Vagus
- CN XI-Spinal Accessory

# Other Neurologic Components

- Cerebral cortex:
  - controls voluntary movement needed for swallowing
- Brainstem:
  - controls involuntary movement needed for swallowing

# Who's at Risk?

- Neurological deficits:
  - brainstem strokes / tumors
  - cortical strokes / tumors
  - Acquired brain injury (anoxic, traumatic)
  - ALS
  - MS
  - CP
  - Parkinson's disease
  - Dementia/Alzheimer's Disease
- Head and Neck Cancer
- GERD
- Esophageal Stricture
- Burn victims

- Cardiac
  - CABG: damage to recurrent laryngeal nerve
- Respiratory:
  trach/vent/COPD-
- Deconditioning:
  - Transplant, ICU or long term patients
- Poisoning
- Burns
- Medication induced
- Normal aging

### Signs and Symptoms of Dysphagia

- Difficulty managing oral secretions, drooling
- Weak or absent volitional cough or swallow
- Weak mouth and tongue movements
- Frequent throat clearing
- Choking on food, liquid, saliva
- Food sticking in throat
- Weight loss and/or dehydration
- Frequent chest infections
- Loss of appetite
- C/o heartburn/acid reflux
- Pain when swallowing

# Signs and Symptoms of Dysphagia when eating or drinking

- Slow or delayed initiation of swallow
- Uncoordinated chewing or swallowing
- Leakage of food or liquid from lips
- Multiple swallows with each bite
- Coughing or choking (may be delayed)
- Wet or hoarse vocal quality
- Food left in the mouth after eating and/or pocketing food
- Nasal regurgitation of food or liquids
- Extra time to eat or drink
- Fatigue
- Shortness of breath or changes in respiratory patterns

# Signs/symptoms of Aspiration

- Aspiration:
  - When food or liquid goes BELOW the level of the vocal folds
- Overt clinical signs
  - Cough
  - Throat clear
  - Choking
- Signs of silent aspiration
  - Watery eyes
  - Nasal discharge
  - Wet vocal quality
  - Increased respiratory rate
  - Fevers of unknown origin, repeat pneumonia in right lower lobe

# **Consequences of Aspiration**

- Aspiration pneumonia
  - Most commonly in right lung
- Silent aspiration
  - NO obvious sign that food or liquid has entered the airway
- Respiratory failure
- Death

# What to look for during your Nursing Assessment

- Decreased level of alertness
- Impaired cognition
- Facial and oral motor movements, decreased strength, asymmetry, decreased sensation
- Voice and speech quality
- Strength of volitional cough
- Current medications
- History of swallowing or feeding problems
- History of pneumonia
- Current diet, inability to feed self
- Client complaints
- Reflexes (Gag)
  - Patient may have an absent gag reflex
  - This is NOT a predictor of dysphagia

### Patient Behaviors to Consider

- Excessive intake of food
- Holding food in mouth
- Swallowing without chewing solids adequately
- Improper bolus sizes
- Speaking or breathing with food in the mouth
- Not initiating eating
- Eating inappropriate items
- Loss of interest in food, refusal to eat or inability to feed self

# **Nursing Interventions**

- Refer to Speech Pathologist for evaluation
- Aspiration precautions
- Safe swallowing and feeding strategies
- Diet modification
- Compensatory strategies
- NPO, G-tubes, TPN

### **Evaluation of Swallowing**

#### **Bedside Swallow Evaluation**

- Patient appropriateness
  - Need to be alert, not head of bed flat, no O<sub>2</sub> mask, or ventimask
- Protocol
  - SLP evaluates each consistency (puree, soft & bite sized, regular, thin, mildly thick, moderately thick)
- Recommendations- SLP writes in progress notes.
  - If diet is recommended, must obtain order.
  - Please remember patients other restrictions (diabetic, cardiac)

### **Evaluation of Swallow**

- Modified Barium Swallow
- If SLP suspects silent aspiration or needs to further evaluate, SLP will ask for an order for an MBS
- MBS is done in radiology to visualize the swallow with different consistencies under fluoroscopy with barium
- Radiologist and SLP evaluate together

### **Modified Barium Swallow**

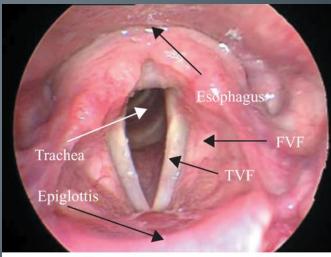
- Patient appropriateness
  - Able to sit in chair for a period of time, alert, able to follow commands
- Protocol
  - MD orders MBS
  - SLP evaluates appropriateness at bedside first
- Recommendations
  - SLP will write recommendations in progress notes
  - Determine appropriate food and liquid consistency
  - Different strategies to improve swallowing will by recommended if needed (chin tuck, no straw, head tilt/turn, etc.)

### **Examples of MBS**

- Normal Swallow
- https://www.youtube.com/watch?v=PwVreNrTKBw
- Abnormal Swallow
- https://www.youtube.com/watch?v=huZ6ymeKFd4

### Fiberoptic Endoscopic Evaluation of Swallowing FEES

- Provides high definition color video of soft tissue structures of the pharynx and larynx
- Can be completed at bedside
- No x-ray exposure
- Ability to observe secretions



Source: Usatine RP, Smith MA, Mayeaux EJ, Chumley HS: The Color Atlas of Family Medicine, Second Edition: www.accessmedicine.com Copyright © The McGraw-Hill Companies, Inc. All rights reserved.

# Example of FEES

• Flexible Endoscopic Evaluation of Swallowing - YouTube

### Safe Swallowing Strategies

& Other Strategies to Help Prevent Aspiration

# In addition to modifying the diet consistency, some additional recommendations may include:

- Pills may need to be placed in puree or thickened liquids
- Eat in a quiet room
- Minimize distractions (close door, turn off TV)
- Minimize conversations when individual has food in their mouth
- Position in upright position
- Cue individual to focus on swallowing
- Cue individual to eat slowly with small bites and sips
- Change head position (turn head, tuck chin)
- Cue for other swallowing strategies (breath hold/cough after swallow)
- Assist with tray set-up as needed (cut up foods, open containers)

# Positioning

- Whenever eating or drinking, the patient should be sitting upright.
- Head and trunk in midline.
- Head in neutral position with head slightly flexed.
- Head turned to weak side or head tilted to strong side (per SLP recommendation).
- The patient should remain as upright as possible for 30 minutes after the meal to aid digestion.

# Food and Liquid Consistencies

International Dysphagia Diet Standardization Initiative (IDDSI)

### • Diet:

- IDDSI 7 Regular
- IDDSI 7 ETC
- IDDSI 6 Soft and Bite Sized
- IDDSI 5 Minced and Moist
- IDDSI 4 Pureed

- Liquids
  - IDDSI 0 Thin
  - IDDSI 2 Mildly Thick
  - IDDSI 3 Moderately Thick
  - IDDSI 4 Extremely Thick

1. Complications of the oral phase of swallowing include:

- a) Inability to adequately chew food.
- b) Failure to form the food into a bolus in the middle of the mouth.
- c) Inability to move the bolus from the front of the mouth.
- d) All of the above.

2. For a patient without problems in the oral phase of swallowing, this phase of swallowing usually takes:

- a) 1.5-10 seconds
- b) 2. 10-20 seconds
- c) 3. 5-30 seconds
- d) 4.10-40 seconds

3. The pharyngeal phase is the second phase of swallowing. Which of the following is a successful outcome of this phase?

- a) Oral regurgitation
- b) Moving the bolus of food into the esophagus
- c) Constriction of the pharynx
- d) Trapping the food in the valleculae to prevent aspiration

4. During the second phase of swallowing, the role of the epiglottis is to protect:

- a) Nasal sinus
- b) Opening into the oral cavity
- c) Trachea
- d) Esophagus

5. The normal duration of the pharyngeal phase of swallowing is

- a) 1 second
- b) 5 seconds
- c) 10 seconds
- d) 15 seconds

6. If a swallowing problem is suspected, what interventions can nurses use?

- a) Hyper-elevate chin when swallowing.
- b) Sit upright for meals and meds.
- c) Place food in affected side of mouth.
- d) Avoid thickened liquids.

7. A patient with swallowing dysfunction may have "silent aspiration". This means that the patient might aspirate

- a) After coughing and gagging.
- b) Without coughing and gagging.
- c) In spite of coughing and gagging.
- d) None of the above.

#### Question

8. Which of the following substances is MOST likely to cause coughing or chocking on initial feeding trials?

- a) Water
- b) Milkshake
- c) Pudding
- d) Baked potato

#### **Communication:** Learning Objectives

- Define normal communication process
- Describe typical communication deficits for selected disorders
- Discuss interventions for facilitating communication for persons with aphasia
- Differentiate apraxia/dysarthria from aphasia
- Describe compensatory techniques

#### What is a Communication Disorder?

- Impairment in the ability to receive, send, process, and comprehend concepts or verbal, nonverbal and graphic symbol systems.
- May affect:





Language

American Speech-Language-Hearing Association. (1993). *Definitions of communication disorders and variations* [Relevant Paper]. Available from www.asha.org/policy.



Language

Disorders

Impairment in:

- Articulation 🖙 Dysarthria of Speech
- Motor sequencing 🗢 Apraxia of Speech
  - Voice 🗢 Aphonia, Dysphonia
  - Fluency I Stuttering

Impairment in:

- Comprehension and/or use of spoken,
  - written, and/or other symbol systems > APHASIA
- May affect social/interactional aspects of language (aka **Pragmatics**)

## Dysarthria

- Motor speech disorder
  - Damage to the central or peripheral nervous system
  - Weakness and/or incoordination of the muscle involved in speech production.
  - Most common feature: slurred speech.
- Types:
  - Flaccid, Spastic, Ataxic, Hypokinetic, Hyperkinetic, Mixed

#### Apraxia

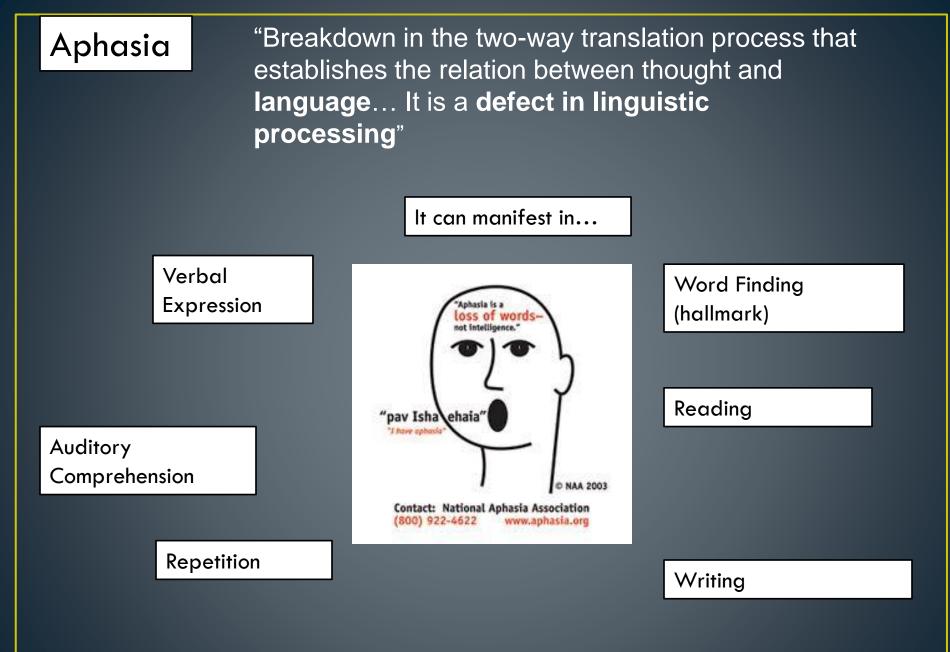
- Impairment in the ability to position muscles and to plan and sequence movements **volitionally**.
  - May be able to do the movements spontaneously or upon imitation
- Person knows what they want to say, but has difficulty coordinating muscle movements necessary to say what they want to say.

#### **Apraxia Characteristics**

- Difficulty imitating speech sounds
- Possible difficulty imitating non-speech movements, such as sticking out their tongue (oral apraxia)
- Grouping for sounds
- Verbal apraxia (severe cases); no sound produced
- Inconsistent errors
- Slow rate of speech
- Usually can produce some automatic speech
- Can occur in conjunction with aphasia and/or dysarthria

#### Dysarthria/Apraxia Management

- Words will be slurred and difficult to understand.
- What can you do to help? Ask the person to:
  - Speak at a slower rate and overarticulate
  - Say it in a different way
    - i.e. Find a similar, but easier word
  - Write down the message when you don't understand
  - Draw it
  - Add gestures
    - i.e. "Show me can you point to it?"
  - Use a communication device if available
    - i.e. Communication board, AAC
- Most importantly: Don't pretend you understand!



Damasio, H. (2001). Neural Basis of Language Disorders. In R. Chapey (Ed.), Language intervention strategies in aphasia and related neurogenic communication disorders (4th ed., pp. 18-36). Philadelphia: Lippincott Williams and Wilkins.

#### Aphasia

- Aphasia is an acquired communication disorder that impairs a person's ability to process language, but does not affect intelligence. (The National Aphasia Association, <u>http://www.aphasia.org</u>)
  - Depends on severity and lesion location
- Etiologies include CVA, TBI (penetrating and nonpenetrating), brain tumors, other neurogenic disorders.

#### **Aphasia Statistics**

- Most common cause of aphasia is stroke.
- 23-40 percent of stroke survivors acquire aphasia.
- Can occur at any age. Most people with aphasia are in their middle to late years.
- Approximately 80,000 individuals acquire aphasia each year.
- Estimated that approximately1million people in the United States have acquired aphasia (1 in 250 people).
- More common than Parkinson's disease, Cerebral Palsy or Muscular Dystrophy.
- About 1/3 or severely head injured individuals have aphasia.
   (Ref: strokeassociation.org; nih.gov)

#### **Aphasia Statistics**

- Most common cause of aphasia is stroke.
- 23-40 percent of stroke survivors acquire aphasia.
- Can occur at any age. Most people with aphasia are in their middle to late years.
- Approximately 80,000 individuals acquire aphasia each year.
- Estimated that approximately1million people in the United States have acquired aphasia (1 in 250 people).
- More common than Parkinson's disease, Cerebral Palsy or Muscular Dystrophy.
- About 1/3 or severely head injured individuals have aphasia.
   (Ref: strokeassociation.org; nih.gov)

## Where is language represented?

Table 3.1. Lateralization for Language in a Sample of 262 Subjects,Obtained by Means of the Sodium Amytal Test

Handedness	Number of	LANGUAGE REPRESENTATION (%)			
	Cases	Left	Bilateral	Right	
Right	140	96	0	4	
Left	122	70	15	15	

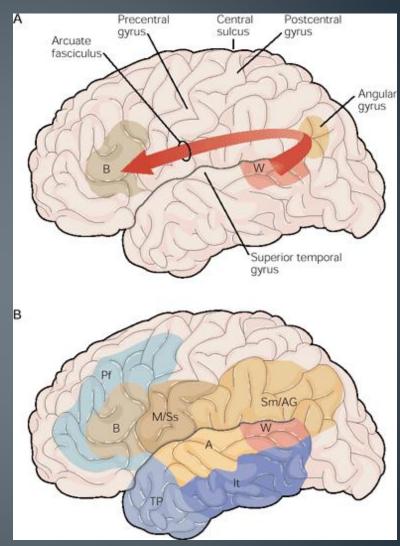
Adapted from Rasmussen and Milner, 1977.

Benson, D. F., & Ardila, A. (1996). Variations within aphasia Aphasia: A clinical perspective (pp. 29-45). New York, NY: Oxford University Press.

## Areas Involved in Language Processing

Sylvian Fissure and Perisylvian Region

- Sm = supramarginal gyrus
- AG = angular gyrus
- B = Broca's area
- W = Wernicke's area
- M = motor cortex
- SS = somatosensory cortex
- A = auditory cortex
- TP = temporal pole
- It = L inferotemporal cortex
- Pf = L prefrontal cortex



## **Blood Supply**

00

#### **Cerebral arteries-cortical distribution**

- Anterior cerebral artery (supplies anteromedial surface)
- Middle cerebral artery (supplies lateral surface)
- Posterior cerebral artery (supplies posterior and inferior surfaces)

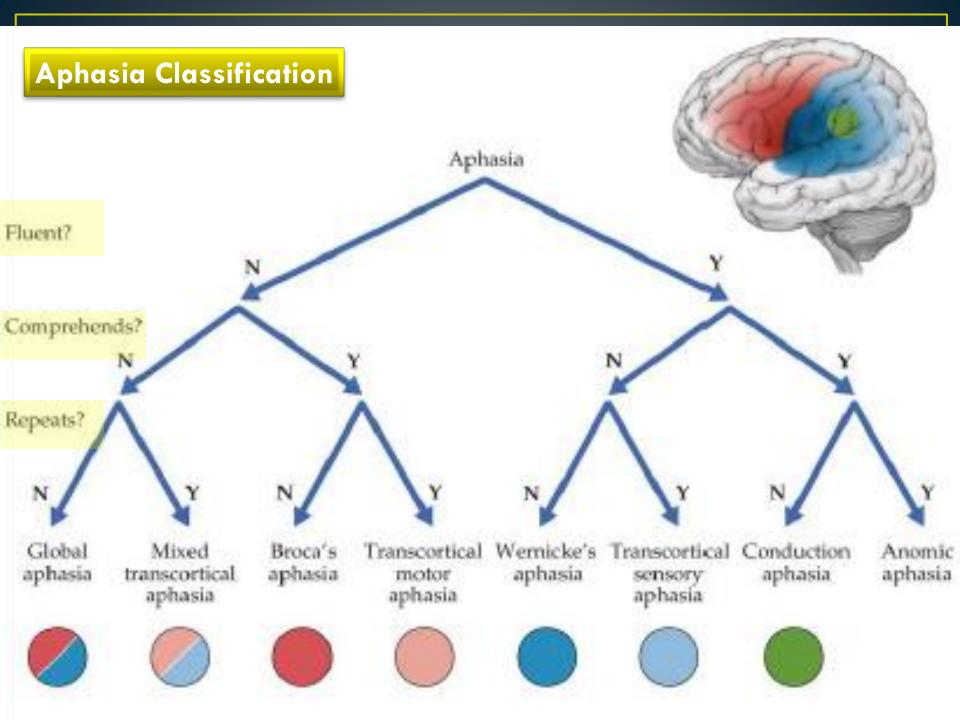
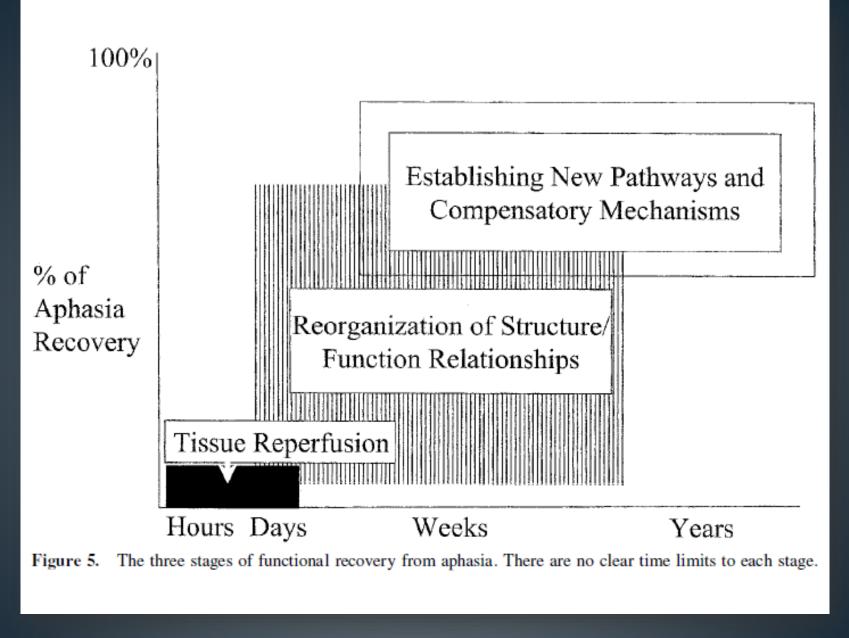


TABLE 4. EVOLUTION OF APHASIA

Classification	9/	Recovered
Initial	Endstage	completely
Globals (22) $\longrightarrow$	2 Broca's	
	1 Transcortical motor	
	1 Conduction	
	1 Anomic	
Broca's (17) →	1 Transcortical motor	
	3 Anomic	
Conduction (8)	2 Anomic	
	5 Non-aphasic	- (62.5)
Wernicke's (13)	1 Global	
	1 Transcortical sensory	
	4 Anomic	
Isolation (2) $\longrightarrow$	1 Anomic	
Transcortical motor $3 \longrightarrow$	2 Anomic	
Transcortical motor 5 (6)	<ul> <li>2 Anomic</li> <li>1 Non-aphasic</li> <li>2 Non-aphasic</li> </ul>	(50.0)
Transcortical sensory 3 $\longrightarrow$		
-	1 Anomic	
Anomic (25) $\longrightarrow 1$	2 Non-aphasic	(48.0)
Total 9	3	21.0

Evolution from initial to endstage classification in each aphasic category is on the left. Percentages of complete recovery on the right.

Kertesz, A., & McCabe, P. (1977). Recovery patterns and prognosis in aphasia. *Brain: a journal of neurology, 100, 1-18.* 



Hillis, A. E., & Heidler, J. (2002). Mechanisms of early aphasia recovery. *Aphasiology, 16(9), 885-895. doi:* 10.1080/0268703

## Broca's Aphasia

#### https://www.youtube.com/watch?v=f2liMEbMnPM

Areas	Description
Lesion location	Posterior-inferior frontal lobe. Usually present with motor deficits in contralateral side (right hemiparesis or hemiplegia). May also present with apraxia of speech
Spontaneous speech	Nonfluent. May be limited to single words. Telegraphic, Effortful production
Auditory comprehension	Relatively spared. Can follow simple commands, but may have difficulties with commands that are syntactically complex. Aware of deficits.
Repetition	Poorer than spontaneous productions
Naming	Poor. Significant word finding difficulties, but no neologisms. May have frequent perseverations, difficulties switching

## Wernicke's Aphasia

http://www.youtube.com/watch?v=aVhYN7NTIKU

Areas	Description
Lesion location	Posterior-superior temporal lobe. Usually present with no motor deficits
Spontaneous speech	Fluent, hyperverbal. Adequate syntactic structure, but poor informational content. Usually present with jargon (make no sense)
Auditory comprehension	Poor for words and sounds. Poor awareness of deficit. Benefit from visual cues and context
Repetition	Poor
Naming	Poor, characterized by frequent phonemic and semantic paraphasias as well as neologistic errors

## Anomic Aphasia

#### http://www.youtube.com/watch?v=xx03Jocla6w

Areas	Description		
Lesion location	Angular gyrus. Usually not accompanied by hemiparesis. Often end stage, evolving from other aphasia types		
Spontaneous speech	Fluent, but with word finding difficulties, pauses		
Auditory comprehension	Relatively well preserved		
Repetition	Good		
Naming	Word finding difficulties present, with hesitations and circumlocutions		

#### **Global** Aphasia

#### <u>http://www.youtube.com/watch?v=6CJWo5TDHLE</u>

Areas	Description
Lesion location	Large lesion affecting perisylvian region (i.e. area around sylvian fissure). Usually related to left middle cerebral artery infarction (in ischemic strokes)
Spontaneous speech	Nonfluent, little or no verbal output. May have stereotypical language, perseverations, automatisms
Auditory comprehension	Poor
Repetition	Poor
Naming	Poor; stereotypical expressions and automatisms

#### **Conduction** Aphasia

http://www.youtube.com/watch?v=gVTrva4mwTw

Areas	Description
Lesion Location	Arcuate fasciculus (connection between Broca's and Wernicke's area); supramarginal gyrus; may co-occur with apraxia
Spontaneous speech	Fluent, with phonemic paraphasias
Repetition	Poor
Naming	Poor, with phonemic paraphasias

## **Transcortical Motor Aphasia**

Area	Description
Lesion location	Anterior and superior to Broca's area; supplementary motor area (SMA)
Auditory comprehension	Relatively spared
Repetition	Excellent
Naming	Poor

## **Transcortical Sensory Aphasia**

Area	Description
Lesion location	Border area between middle cerebral artery and posterior cerebral artery, sparing Wernicke's area (usually associated with watershed strokes)
Auditory comprehension	Poor
Repetition	Excellent
Naming	Poor

## Transcortical Mixed Aphasia – Mixed Nonfluent

Areas	Description
Lesion Location	Variable –usually entire watershed areas, sparing Broca's and Wernicke's areas
Spontaneous speech	Nonfluent
Repetition	Better as compared with spontaneous speech
Auditory comprehension	Poor
Naming	Poor

## Types of Aphasia

	Fluency	Aud Comp	Repetition	Naming
Global	Nonfluent	Poor	Poor	Poor
Broca's	Nonfluent	RelSpared	Poor	Poor
T. Motor	Nonfluent	RelSpared	Excellent	Poor
Wernicke's	Fluent	Poor	Poor	Poor
T.Sensory	Fluent	Poor	Excellent	Poor
Conduction	Fluent	Good	Impaired	Poor
Anomic	Fluent	Good	Good	Poor

Syndrome	Spontaneous speech	Fluency	Comprehension	Repetition	Naming	Other signs	Lesion localization
Broca's aphasia	Poor, effortful, with paraphasias and agrammatism	Impaired	Normal	Impaired	Impaired	Hemiparesis, mouth and hand apraxia	Posterior-inferior frontal (areas 44, 45, sometimes 46)
Wernicke's aphasia	Logorrheic, with paraphasias and neologisms	Normal	Impaired	Impaired	Impaired	Homonymous hemianopia, apraxia, anosognosia	Posterior-superior temporal (area 22)
Conduction aphasia	Normal (phonetic mistakes)	Normal	Normal	Impaired	Normal	Hemi-hypoesthesia, apraxia, hemianopia	Arcuate fasciculus - supramarginal gyrus
Global aphasia	Poor (mutism), with verbal stereotypes	Impaired	Impaired	Impaired	Impaired	Hemiparesis, hemianopia, hemi-hypoesthesia, apraxia	Perisylvian region (middle cerebral artery territory)
Anomic aphasia or amnestic aphasia	Normal (difficulty finding words)	Normal	Normal	Normal	Impaired	Homonymous hemianopia	Inferior parietal (angular gyrus)
Transcortical motor aphasia	Poor (mutism), with great latency to respond, echolalia, perseveration	Impaired	Normal	Normal	Impaired	Eventually hemiparesis (crural involvement) and grasp reflex	Anterior and superior to broca's area (supplementary motor area)
Transcortical sensory aphasia	Normal (semantic jargon)	Normal	Impaired	Normal	Impaired	Eventually hemianopia and visual agnosia	Watershed areas of middle cerebra artery and posterior cerebral artery
Mixed transcortical aphasia	Mutism	Impaired	Impaired	Normal	Impaired	Eventually hemianopia, visual agnosia and hemiparesis	Watershed areas of middle cerebral, anterior cerebral and posterior cerebral arteries

Oliveira, F. F. d., & Damasceno, B. P. (2011). A topographic study on the evaluation of speech and language in the acute phase of a first stroke. Arquivos de Neuro-Psiquiatria, 69(5). doi: 10.1590/S0004-282X2011000600013

#### Expressive vs. Receptive

NO SUCH THING

 A person with aphasia has impairments in BOTH!!!

 One may be more impaired than the other, but these terms are very confusing! Facilitating Communication

 Supported Communication for Adults

 USE MULTI-MODAL communication Gesture, Point, Pantomime, Write, Draw, Talk...

## **Facilitating Communication**

- Make sure you have the person's attention before communicating.
- Reduce environmental distractions.
- Try to keep conversation geared to immediate needs and surroundings (SHOW THEM what you are talking about).

## Facilitating Communication with Clients with Aphasia

- Speak slowly and simply, but naturally.
- Gesture, WRITE KEY words, have the object with you.
- Don't speak to the person as if they were a child or deaf.
- Simplify or rephrase your wording without shouting.

#### **Communicating with PWA**

- Allow extra time for responses
- Give directions one at a time
- Avoid open ended questions
- Don't finish the speaker's sentence for him/her
- Encourage person to respond in whatever way he/she can. Accept all communication attempts!

#### **Communicating with PWA**

- Be prepared for inaccurate use of language or swearing. Accept this without amusement, embarrassment or anger.
- They can think, they just can't say what they think.
- Talk to your speech pathologist and learn that pt's communication strategies. Not all people with aphasia have the exact same problems!

# How does Aphasia impact what YOU do??

- When explaining a diagnosis, testing procedures/purposes, possible treatment options, etc., you will be forced to use language to explain yourself.
- Keep in mind their aphasia type/severity and MODIFY your word choice/sentence structure accordingly.
- Just b/c they are nodding their head does NOT mean they understand you! (social communication)

## How does Aphasia impact what YOU do??

- Think about Aphasia as a foreign language.
- Can you understand Japanese?
  - If I place you in Japan and have people give you directions, or tests in Japanese only, how will you do?
  - Does the inability to speak, understand, read or write another language make you incompetent?
  - Will you rely on gestures/facial expressions?

Mrs. Y has dysarthric speech as a result of a stroke. Dysarthria occurs due to neurological damage to:

- a) the left frontal lobe
- b) the left temporal lobe
- c) both the left frontal and left temporal lobes
- d) the brainstem and/or cranial nerves

Mr. T has impaired verbal communication as a result of a left hemisphere stroke. A therapeutic nursing intervention to assist Mr. T with communication is to:

- a) increase voice volume when speaking
- b) finish sentences when he is unable to do so
- c) use short simple sentences
- d) consistently correct his speech errors

P.T. is just emerging from coma following a brain injury. Which of the following interventions in MOST appropriate to begin establishing communication with P.T.?

- a) Use communication or alphabet board
- b) Use a head nod or eye blink to communicate
- c) Use a voice activated computer system
- d) Talk to him frequently to facilitate communication

Mr. D has recently had a left hemisphere stroke. He has right sided weakness and Broca's Aphasia. This type of aphasia is characterized by:

- a) fluent speech with many mispronounced words
- b) Slow, effortful speech with long pauses between words
- c) speech that alternates between clear and not understandable
- d) nasal voice quality and problems with voice loudness and pitch

The primary communication deficit experienced by a person with Wernicke's aphasia is:

- a) inability to understand verbal or written language
- b) problems with forming and articulating words
- c) problems with using correct grammar
- d) inability to speak rapidly

Which of the following instructions would be MOST appropriate for a person with Wernicke's aphasia?

- a) "Show me where you're having pain"
- b) "Tell me what the doctor said to you"
- c) "Sit down"
- d) "Stand up and walk to the door"

Which of the following interventions would be least helpful in communicating with a patient who has Wernicke's aphasia?

- a) Gesturing
- b) Pantomiming
- c) Altering tone of voice
- d) Using word repetition

#### Remember...

 "A person with aphasia may have difficulty retrieving words and names, but the person's intelligence is basically intact. For people with aphasia it is the ability to access ideas and thoughts through language - not the ideas and thoughts themselves- that is disrupted." (The National Aphasia Association, http://www.aphasia.org)

 When unable to express their wants/needs or understand, people become frustrated, irritable, and can be difficult to manage. Take your time and be kind. Try your best to communicate with them. They will certainly appreciate it!