SUCCESSFUL AGING CONCERNING COMMUNICATION AND COGNITION
Department of Speech Pathology and Audiology

- Department offers a Bachelor’s degree in Speech Pathology and Audiology and a Master’s degree in Speech and Language Pathology

- Speech and Language Pathology (SLP) students achieved 100% pass rate on 2021 Praxis exam

- SLP program recently advanced from #69 to #55 in USN&WR rankings

- Bilingual English-Spanish Certificate and Intensive Aphasia Program
AGE RELATED HEARING LOSS
Presbycusis
What’s normal, what’s not?
Management
Cognition and Hearing Loss
What's Next?
Thank you!
Cognitive and Language Effects of Aging
Dr. Sarah Grace Dalton, Ph.D., CCC-SLP
Healthy Aging

May see changes in:
- Attention
- Some memory
  - Personal experiences
- Speed of Processing
- Procedural learning
- Word-finding
- Occasional math difficulty

Typically, won’t see changes in:
- Most memory
  - Recent events, “how-to”, personal experiences, past events
- Executive functions
- Social language use
- Language comprehension
  - Unless hearing impairment
Major changes in:
- Memory for essential information
- Memory for personal experiences
- Speed of processing
- Word-finding, especially of important names
- Math abilities, especially basics

Minor changes in:
- Short-term, personal important events, and how-to memory
- Social language use
- Mixing up words in conversation
- Executive functions
- Procedural learning
- Visual and/or auditory processing
Reconocer un ataque cerebral y llame al 911

¡A HORÁ!

ANDAR HABLAR OJOS ROSTRO AMBOS BRAZOS

For Stroke Warning Signs
BE·FAST

Balance Sudden loss of balance?

Vision loss in one or both eyes?

Smile! Does one side droop?

Hold both arms up. Does one drift downward?

Slurred speech or difficulty speaking?

If you observe any of these signs, call 9-1-1 immediately

THE SCIENCE THAT HEALS
DEMENTIA

Umbrella term for loss of memory and other thinking abilities severe enough to interfere with daily life.

- Alzheimer’s: 60–80%
- Lewy Body Dementia: 5–10%
- Vascular Dementia: 5–10%
- Frontotemporal Dementia: 5–10%
- Others: Parkinson’s, Huntington’s

Mixed dementia: Dementia from more than one cause

Brain changes in Alzheimer disease

Healthy
- Cerebral cortex
- Hippocampus

Severe Alzheimer disease
- Shrinkage of cortex
- Enlarged ventricles
- Shrinkage of hippocampus

Brain nerve cells
- Damaged and dying nerve cells
- Amyloid plaque
- Tau tangles
Tips for Healthy Aging
If concerned, seek therapy!

- MU SHC offers
  - In depth diagnostic sessions
  - Intensive therapy programming fall, spring, and summer semesters
  - Conversation groups fall and spring
  - Treatment research
Dysphagia: Statistics

- **Dysphagia (swallowing difficulties)** is a common consequence of many medical conditions:
  - Stroke (cerebrovascular accident – CVA)
  - Parkinson’s Disease,
  - Head and Neck Cancer
  - Alzheimer’s Disease
  - General Infections (urinary tract infection, pneumonia, sepsis)

- Patients having dysphagia are found to be at higher risk for other serious illnesses
- Affects approximately 10 to 33% of older adults.
  - 80% of people with Alzheimer’s disease have dysphagia
  - 60% of people with Parkinson’s disease have dysphagia
  - 33.2% of individuals with dysphagia are transferred to a post-acute care facility following hospitalization
Oral Phase
Pharyngeal Phase

Figure 4 A-E. Pharyngeal phase of swallowing.
Esophageal Phase
Impaired Swallow

Normal swallow

Aspiration
The Mechanics of the Swallow

• Apneic onset
• Oral bolus transit
• Hyoid excursion
• Laryngeal closure
• Maximum laryngeal closure
• PES opening
• Maximum hyoid excursion
• Laryngeal opening
• Swallowing inspiration
• Apnea onset
• Last PES opening
• Hyoid return
Aging and Swallowing

• The Oral Cavity
  • Impaired smell or taste due to changes in dentition, oral hygiene, or salivary flow
  • Reduced muscle mass and contraction leads to poor strength, range of motion, and coordination of the tongue, lips, velum, and jaw.
  • Tongue may become bulkier resulting in reduced mobility and ability to generate power.

• The Pharyngeal Region
  • Delay in initiation of the swallow reflex
  • Decreased movement to allow food to enter esophagus
  • Increased risk of aspiration

• The Esophagus
  • Transfer of food/liquid to stomach is delayed
  • Poor opening of sphincter which allows food/liquid to enter the esophagus
  • Reduced contraction of the esophageal muscles resulting in delayed esophageal emptying.
• Cognition
  • Delirium
  • Playing with food
  • Inappropriate sizes of sips of liquid or bites of food

• Eating Behavior
  • Increased amounts of food and liquid left over following each meal
  • Specific food avoidance
  • Prolonged mealtime
  • Laborious chewing
  • Repetitive swallowing
  • Food pocketing in cheeks
  • Increased need to clear throat
Warning Signs of Dysphagia

• Impairments
  • Wet, hoarse voice
  • Drooling
  • Slurred speech (dysarthria)
  • Facial asymmetry
  • Coughing
  • Choking
  • Runny nose

• Complaints and Observations
  • Sensation of food stuck in throat or chest
  • Regurgitation of food or acid
  • Unexplained weight loss
  • Impaired breathing during meals or immediately after eating
Dysphagia: Consequences

- Higher risk for serious illness and aspiration pneumonia
- Dehydration
- Malnutrition
- More likely to transfer to a post-acute care facility after discharge from the hospital
- Longer lengths of stay in the hospital
- Poor overall physical performance due to deconditioning
- Higher mortality rate
- Decreased quality of life
The Role of the Speech Pathologist

- Consult your physician should you have any of the warning signs of dysphagia.
- Consult your physician if your swallowing is adversely impacting your quality of life.
- Dysphagia should be evaluated by a speech-language pathologist to determine best course of action.
  - Clinical Bedside Swallow Evaluation
  - Modified Barium Swallow Study (Videoswallow Study or Videofluoroscopic Swallow Study)
  - Fiberoptic Endoscopic Evaluation of Swallowing (FEES)
The Role of the Speech Pathologist

• We can:
  • Evaluate the swallow with different consistencies of foods and liquids
  • Recommend dietary modifications
  • Provide suggestions for oral care
  • Provide strategies for safer swallow
  • Provide postural changes that may protect the airway
  • Determine whether rehabilitative interventions, such as exercises, may be beneficial
  • Determine whether an alternative source of food and nutrition needs to be recommended
  • Improve a person’s overall quality of life
Thank you so much for your time!

Heidi

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