speechreading

audiological rehabilitation

lipreading vs. speechreading

- lipreading:
  - relies only on ______ cues

- speechreading:
  - visual cues
  - ________ cues
  - facial expressions
  - ________
  - setting
  - prior discussions
Who Speechreads?

- **Everyone**
  - Babies to elderly
- _____ people rely more on visual cues
- More _____ the hearing loss, more speechreading reliance

Good Speechreader?

- **Prediction- NO!!**
  - Education
  - IQ
  - _____ of deafness
  - Age of onset
  - SES
  - Amount of _____
- **Prediction- YES**
  - Gender (conflicting studies)
  - _____
  - Motivation (weak)
  - _________ and world knowledge
Difficulty of Speechreading Tasks

- Visibility of _______
- Rapidity of _______
- Coarticulation
- Talker _______
- Visemes
- Homophones

Visibility of Sounds

- Only ___ % of sounds are readily visible
- Some consonant tend to be more visible (/f,v/, /p,b,m,w/, /th/) than others (/k,g/, /t,d/, /n/)
- As a rule, vowels are considered to be _______ to speechread, but are better able to be detected by ________
Rapidity of Speech

- Conversational speech
  - _____ - ____ words per minute
  - Approximately ___ - ___ syllables per sec.

- Visual ability
  - Can only register approximately ___ - ___ mouth movements per second
    - Speaking at a rate of ~___ phonemes per second

Coarticulation & Stress Effects

- Sounds look different depending on the _______ they are said in
  - “B” – Looks different in “boot” and “beet”
    - These are __________ effects

- Words that are ________ in a sentence can also look different
Visemes & Homophones

- **Visemes** (table 9-2)- _______ that look alike on the lips/face
- **Homophones**- _______ that look alike on the lips/face (40-60%)
  - Aunt – Hand
  - Pass – Ban
  - Situational, linguistic and ________ cues should help distinguish words

Talker Effects

- Same sound/word may look different when spoken by two different people.
- _______ play a role in distinguishing what is being said
Auditory – Visual Integration

- We integrate information from the visual and auditory systems to "decode" what is being said.

- ______ Effect
  - What we _____ influences what we _____ and visa versa.
  - Hear one thing, see another, and ______ a word/syllable different from the 2
  - Hear /ba/, see /ga/, report /da/

UCR Audiovisual Speech Web-Lab

http://www.faculty.ucr.edu/~rosenblu/lab-index.html
Difficulties with the Speechreading Process

- The 4 sources of communication difficulty - AGAIN (Table 9-5)
  - Message
  - _________
  - _________
  - Listener/Speechreader

The Talker

- Talker behaviors (Table 9-6)
- Familiarity
- Gender
  - __ easier to read that __ in vision tasks
  - F may not be easier in AV tasks due to higher ______ in voice
Message

- Structure
  - ______ of Use
  - ______ Neighbors (words that are phonemically or visually similar)
    - Bat- _____ lexical neighbors
    - Telephone- _____ lexical neighbors
- Context

Environment

- Viewing Angle
- ______ from Talker
- Room Conditions (_______ noise, lighting, seating, acoustics, etc.)
  - Table 9-7
- Background noise
Speechreader/Listener

- ______ Skills
- Hearing ______
- ______ of hearing loss
- Emotional/Physical state
- Attention

Oral Interpreters

- A person who sits in clear view of the HOH person and silently repeats the words being said by the talker
- Work by a _____ of ______:
  - Keep message confidential
  - Do not add _________
  - Do not change the meaning of the message
Speechreading Training

- _____ popular today
- Rarely the sole component of a group
- Due to advances in __________________________
technology

Candidates

- _______
- ______ with a recent change in hearing status
Analytic

- Develop _____ and ________ recognition
- Increase patients reliance on ________ cues while they are speechreading (both vision and ________).

Synthetic

- Compared to AT, the beginning materials in speechreading training are more ________
  - Patient is able to combine auditory with visual
- Like AT, synthetic speechreading training focuses on understanding ________ and overall meaning.
Efficacy

- Standardized lipreading tests show only ___ - ___% improvement
- _________ improves, but could be a practice effect
- Patient reports are generally _______, even if test scores show ______ improvement