PRAXIS REVIEW COURSE IN SPEECH-LANGUAGE PATHOLOGY: *FLUENCY DISORDERS**

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*Information in this presentation was complied by Dr. Robert Mayo

FLUENCY DISORDERS
LIKELY QUESTION AREAS

FORMS OF NORMAL AND ABNORMAL DISFLUENCY

- Normal Developmental Nonfluencies
- Developmental Stuttering
- Neurogenic Stuttering
- Psychogenic Stuttering
- Cluttering

FLUENCY DISORDERS
LIKELY QUESTION AREAS

EPIDEMIOLOGY OF STUTTERING

- Incidence of stuttering (5-10%)
  Prevalence of stuttering (.08-1.0%)
- Spontaneous recovery* from stuttering (between 30 to 70%).
- Developmental stuttering begins between 2.6 – 4 years of age.

* Recovery is defined as cessation of stuttering for at least 12 months.

FLUENCY DISORDERS
LIKELY QUESTION AREAS

RISK FACTORS ASSOCIATED WITH PERSISTENT (i.e., chronic) STUTTERING

- Male
- Age at onset: related to the growing awareness of the problem
- Length of time since onset: persistent if four years or more in length
- Family history of chronic stuttering (40% of CWS have parents, or siblings who have stuttered)
- Slight or *no decrease* in overall frequency-type of stuttering during first 12 months
- Higher frequency of part-word or single syllable word repetitions
- Multiple repetitions or longer length of specific disfluency
- Dysrhythmic phonation: presence of sound prolongations and/or blocks

✶ **Any of the above factors made more complicated by:**

- Difficulties in the areas of language, phonology, and nonverbal skills
- Negative reactions to the problem

(Source: Yairi, 2004; Yairi, Ambrose & Cox, 1996)

FLUENCY DISORDERS
LIKELY QUESTION AREAS

DEVELOPMENT OF STUTTERING

- Guitar's five developmental/levels of stuttering. Next two slides.

CHARACTERISTICS OF STUTTERING

- Stuttering-Like Disfluencies (SLDs)
  - Part-word and Whole-word repetitions
  - Disrhythmic phonations – sound prolongations and blocks

Characteristics of Five Developmental/Treatment Levels of Stuttering (Guitar, 1998)

Developmental Level	Core Behaviors	Secondary Behaviors	Feelings & Attitudes	Underlying Processes
Normal disfluency	10 or fewer disfluencies per 100 words; one-unit repetitions; mostly repetitions, interjections, & revisions	None	Not aware, no concern	Stresses of speech/language and psychosocial developmental
Borderline stuttering	11 or more disfluencies per 100 words; more than 2 units in repetitions; more repetitions & prolongations than revisions or interjections	None	Generally not aware; may occasionally show momentary surprise or mild frustration	Stresses of speech/language and psychosocial development interacting with constitutional predisposition

Characteristics of Five Developmental/Treatment Levels of Stuttering (Guitar, 1998)

Developmental Level	Core Behaviors	Secondary Behaviors	Feelings & Attitudes	Underlying Processes
Beginning stuttering	Rapid, irregular, and tense repetitions may have fixed articulatory posture in blocks	Escape behaviors, such as eye blinks, increases in pitch or loudness as disfluency progresses	Aware of disfluency, may express frustration	Conditioned emotional reactions causing excess tension; instrumental conditioning resulting in escape behaviors
Intermediate stuttering	Blocks in which sound & airflow are shut off	Escape & avoidance behaviors	Fear, frustration, embarrassment, & shame	Above processes, plus avoidance conditioning
Advanced stuttering	Long tense blocks; some with tremor	Escape & avoidance behaviors	Fear, frustration, embarrassment, & shame; negative self-concept	Above processes, plus cognitive learning

FLUENCY DISORDERS

LIKELY QUESTION AREAS

THEORIES AND MODELS OF STUTTERING

PATHOPHYSIOLOGICAL THEORIES

CEREBRAL DOMINANCE THEORY

GENETIC THEORY

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PSYCHOSOCIAL THEORIES

PSYCHODYNAMIC (PSYCHOANALYTIC) THEORY

DIAGNOSOGENIC THEORY **

ANTICIPATORY STRUGGLE HYPOTHESIS

LEARNING THEORY

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LINGUISTIC THEORIES

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INTEGRATIVE THEORIES

DEMANDS AND CAPACITIES MODEL**

Theories and Models of Stuttering

- The Diagnosogenic Theory of Stuttering** (Johnson et al. 1959)

  According to the diagnosogenic theory, there are three events that have to occur before a child will begin to stutter:

  1. The child repeats or otherwise hesitates while he/she speaks.
  2. A person with whom the child interacts "diagnosis" his/her repetitions and/or other hesitations as being abnormal and reacts to them accordingly. The person may make the child aware of the disfluencies by their verbal or non-verbal reactions.
  3. The child becomes concerned about the repetitions and/or hesitations and tries not to be disfluent.

Theories and Models of Stuttering

- ✶ The Capacities and Demands Model**

(Andrews et al. 1983; Starkweather & Gottwald, 1990)

- In this model, the deterioration of fluency is viewed as reflecting an imbalance between the child's current capacities or abilities for fluency and the demands placed on the child in his/her environment.

- There is no disorder, and certainly nothing that could be termed a deficit. However, if the demands of the environment continue to exceed the capacities of that particular child, stuttering is more likely to occur.

Theories and Models of Stuttering

- Capacities for Fluency
  - Motor Skill
  - Emotional Maturity
  - Language Skill
  - Cognitive development

Theories and Models of Stuttering

- Demands on Fluency
  - Demands on the motor system
    - Speech rate of parents
    - Turn-taking style in the home
    - Time pressure
  - Demands on the language system
    - Demand for speech
    - High level parental language
    - Language stimulation
    - Language therapy

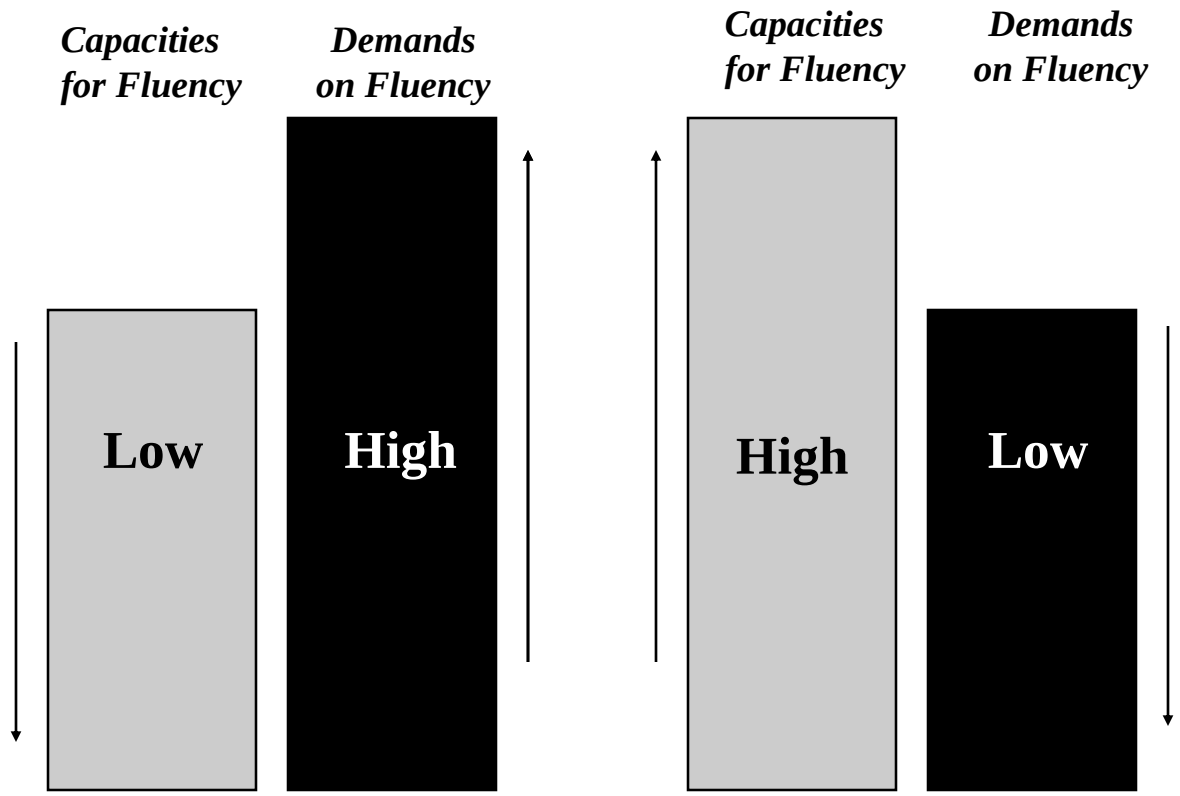
Theories and Models of Stuttering

- ✶ Demands on Fluency
  - – Demands on the emotional system
    - Punishment for stuttering
    - Confusion/instability in the home
    - Parental fear of stuttering

Theories and Models of Stuttering

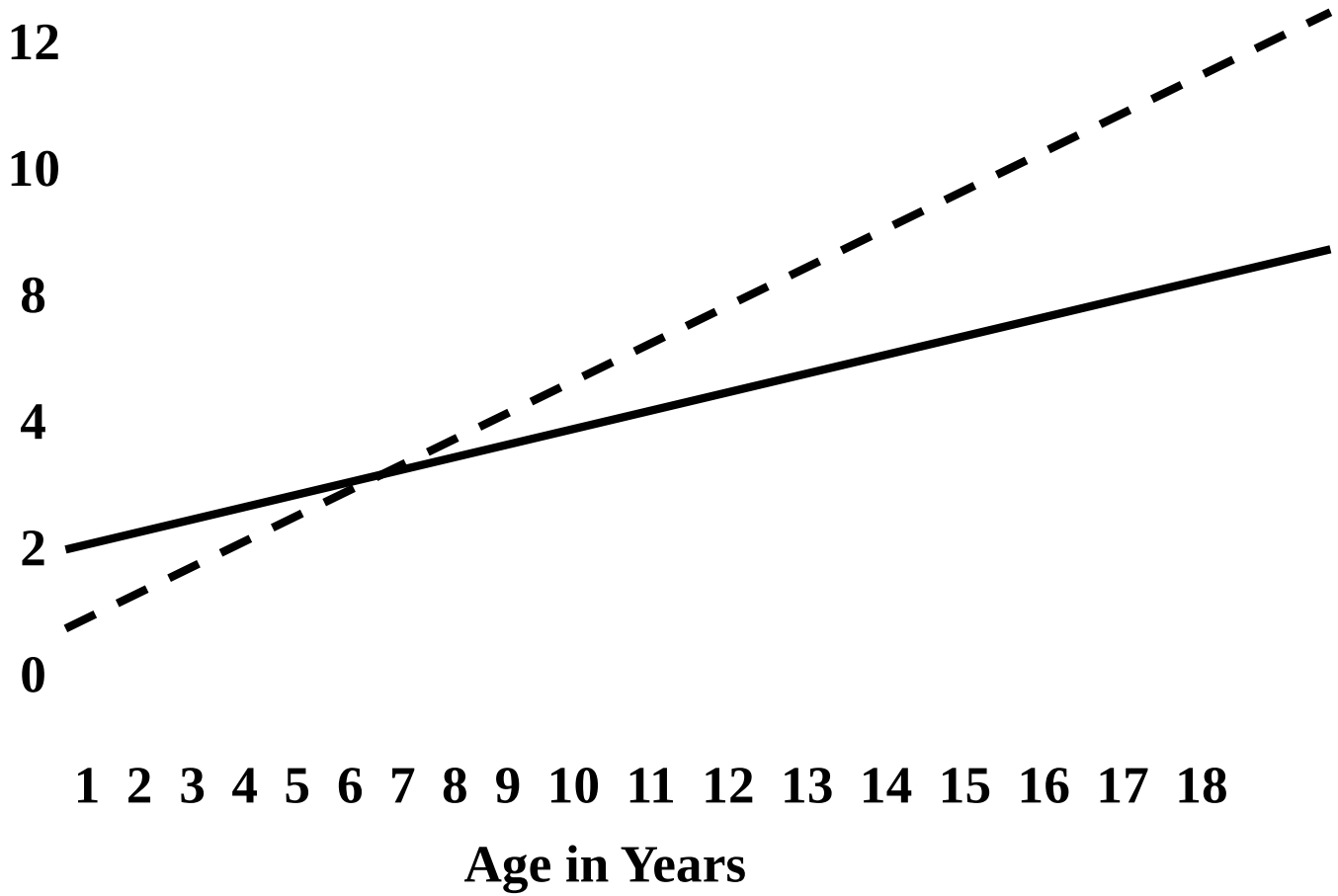
- Demands on Fluency
  - If the environment demands more fluency than the child can produce, stuttering will begin.
  - Whether the stuttering will continue or remediate depends on whether a growing capacity to produce fluent speech can catch up with the world's accelerating demands.

Nature of Stuttering

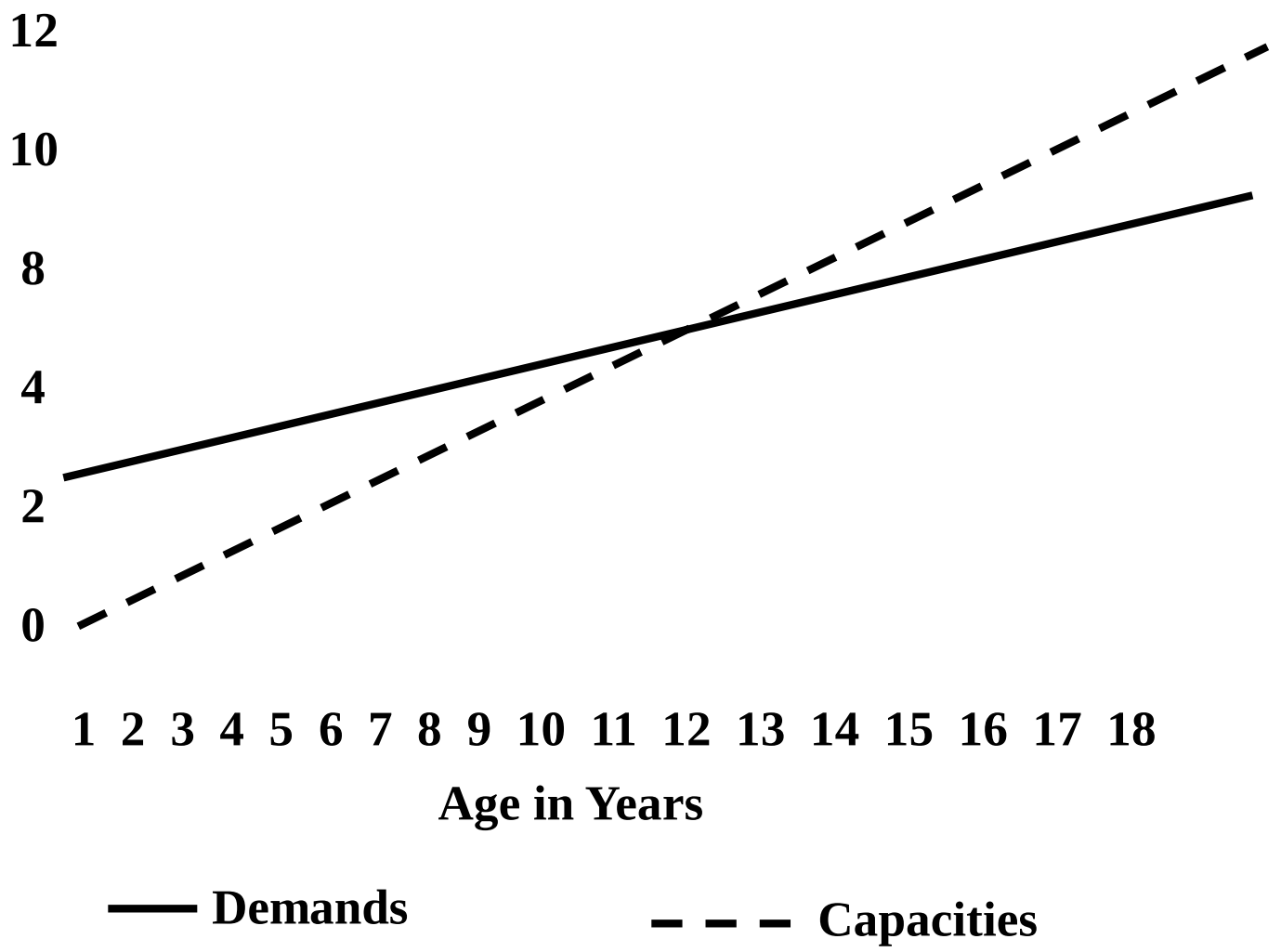


Guitar (1997)

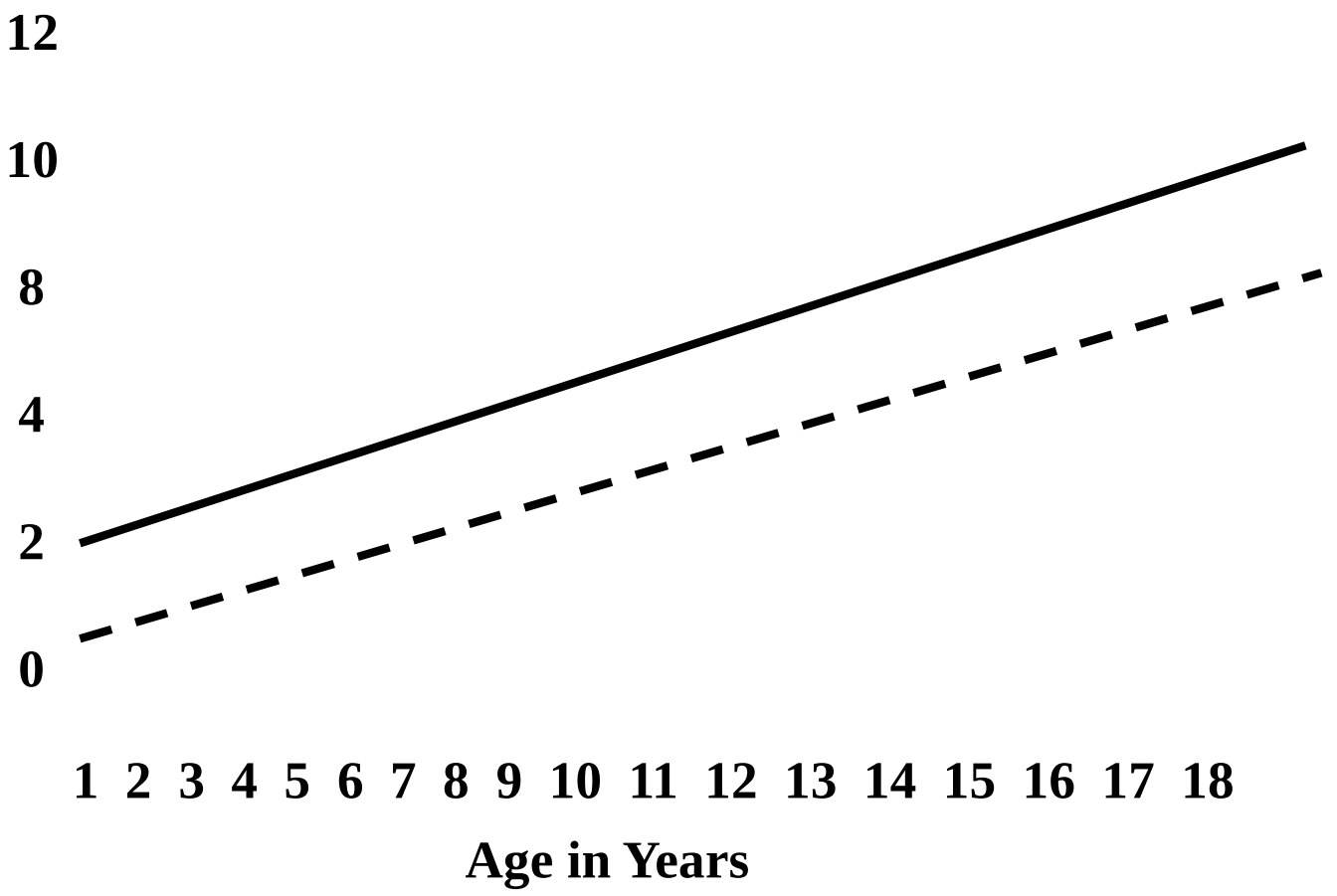
Demands and Capacities: Spontaneous Recovery



Demands and Capacities: Remediable Stuttering



Demands and Capacities: Irremediable Stuttering



FLUENCY DISORDERS
LIKELY QUESTION AREAS

ASSESSMENT OF STUTTEIRNG

- ✶ If this area is covered, usually test takers are asked about the sequence that they would use in the assessment of a person who stutters.
  - – Case history
  - – Adaptation, Consistency
  - – Measurement of stuttering
    - Quantitative (e.g., *SSI*)
    - Qualitative?/Quality of life (e.g., *ACES*, *OASES*)

FLUENCY DISORDERS LIKELY QUESTION AREAS

TREATMENT OF STUTTERING

- May ask you to determine if an individual is in need of formal stuttering treatment vs. a prevention program (e.g., educating the parents, teachers). *Indirect vs. Direct therapy*.

Treatment of Stuttering

- Indirect and Direct Therapy with Children
  - Indirect therapy is generally used for the child whose fluency is characterized by relatively easy breaks with low levels of tension or struggle and who is usually unaware of any speaking difficulty (even if he/she is producing frequent fluency breaks).
  - With indirect intervention, the clinician takes no direct action to modify specific features of a child's speech.
  - Parents and significant others are counseled and provided with information concerning the developmental nature of language and fluency. The focus is on *changing the child's home environment*.
  - The SLP will spend as much or more time working with the parents as with the child.

Treatment of Stuttering

- Indirect and Direct Therapy with Children
  - Direct therapy is more likely to be used if the child is experiencing tension and struggle behavior or fragmenting multisyllabic or, especially, monosyllabic words. Also, the child may be exhibiting the nonverbal characteristics of more developed stuttering such as breaking eye contact with the listener. Direct therapy may by be the intervention choice if the child is aware of and/or frustrated by his/her difficulty with speaking.

  - For these children, the SLP will be more straightforward in demonstrating specific activities for enhancing fluency and modifying moments of stuttering and the child's emotional reactions to stuttering. Whether fluency shaping or stuttering modification techniques are used, the SLP will select the most appropriate activities along a continuum of directness according to the needs of the child and his response to treatment.

FLUENCY DISORDERS
LIKELY QUESTION AREAS

TREATMENT OF STUTTERING

– May give you a list of therapy approaches and ask you which treatment approach they are generally associated with (i.e., *Stuttering modification vs. Fluency Shaping*).

Key Principles in Stuttering Modification and Fluency Shaping Therapy *(Source Guitar, 1998)*

	Stuttering Modification	Fluency Shaping
Goal	To manage and modify the moment of stuttering (i.e., controlled stuttering) and reduce fear and anxiety associated with stuttering.	To increase the amount of fluent speech and eliminate moments of stuttering (i.e., controlled fluency).
Focus	To teach how to modify disfluencies using cancellations and pull-outs, to reduce escape and avoidance behaviors, and to reduce anxiety and fear.	To establish fluent speech by using a slower speech rate, more relaxed breathing, easy onsets into speech, and soft contact while speaking.
Approach	Involves counseling; loosely structured; practice with different techniques in clinic and then in different settings.	Highly structured; practice with different techniques in clinic and then in different settings.

Treatment of Stuttering

Stuttering Modification Techniques	Fluency Shaping Techniques
Loose contacts	Easy onset
“Bounce”	“Airflow” therapy
Cancellations	Continuous phonation
Pull-outs	Slow speaking rate
Preparatory sets	
Voluntary stuttering	

Treatment of Stuttering

Rankings are based on the
data of Burnett (2000)

Stuttering Therapy Techniques Preferred by Adult Clients	**Stuttering Therapy Techniques <u>Not</u> Preferred by Adult Clients**
Rate control	Drug therapy
Auditory feedback	GILCU
Continuous phonation	Systematic desensitization
Changing attitude	Secondary characteristics elimination

Electronic Fluency Enhancement Devices

Behind the Ear

In the Canal

Completely in the Ear

Comfort Fit

Advantages:

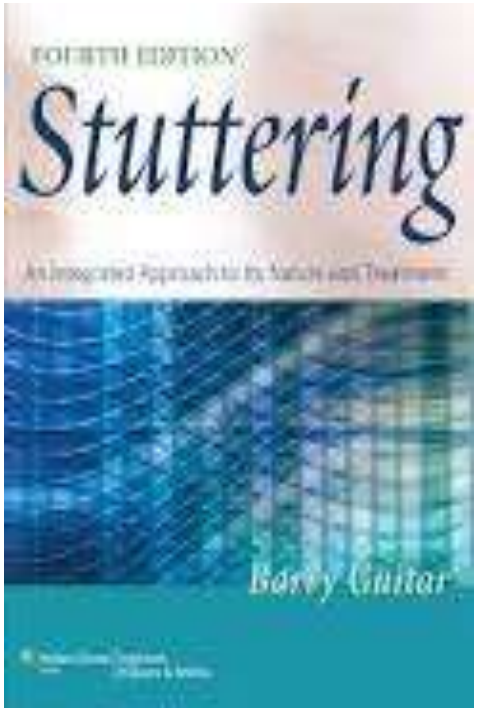
- The SpeechEasy is another option for the consumer to consider when deciding on possible stuttering treatments.
- The SpeechEasy has helped some who stutter in ways that traditional treatments that were tried previously did not.
- There are many clinically documented cases that have reported a successful and satisfying experience over several years of use.
- Past research documents that the DAF and FAF technology are helpful in facilitating a reduction in stuttering.
- Due to the very small size of the device, it is mostly inconspicuous.
- The device has given some people living in outlying areas their only reasonable treatment alternative, especially those having no other nearby therapy options.
- Some clients selectively employ the SpeechEasy in those situations that tend to be more of a speaking challenge; in other settings, traditional management is utilized.
- There are examples of success cases from all age ranges, from children to older adults.
- The SpeechEasy comes with a one-year warranty and a guarantee of a return of 90 percent of the cost of the unit if returned within 60 days post-fitting.
- The manufacturer of the SpeechEasy provides excellent technical support.

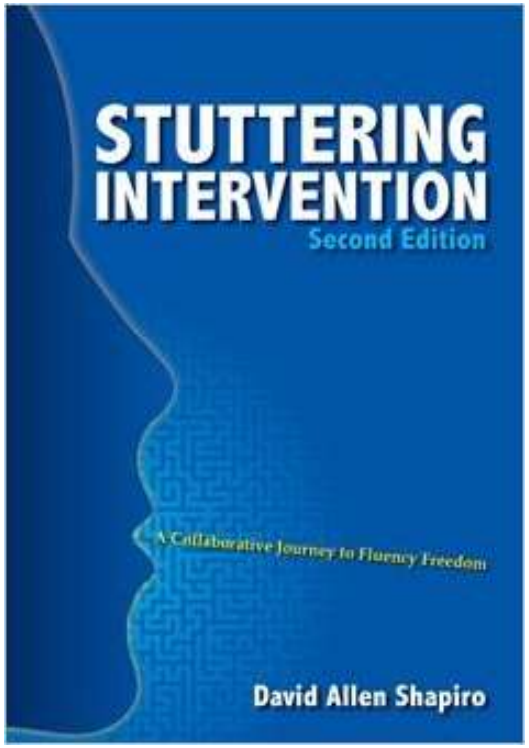
Disadvantages:

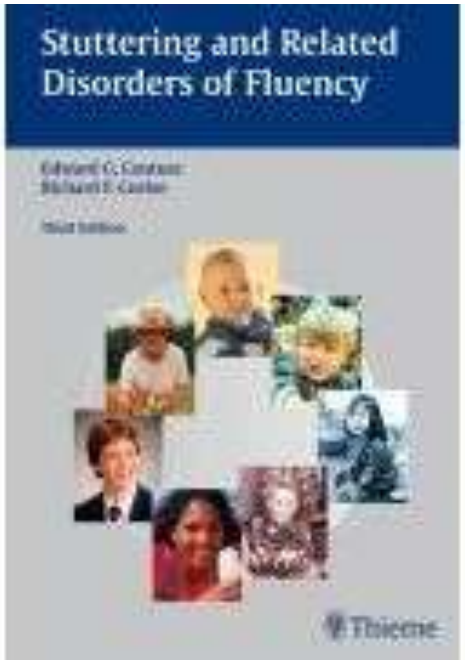
- The device cannot be purchased by many due to the high cost.
- For some clients, its fluency-enhancing effects reportedly diminish over time.
- The device can be easily lost or damaged.
- Background noise generated by the SpeechEasy can be irritating to some.
- Some clients report difficulty hearing normal speech when wearing the device.

FIGURE 15.2 Advantages and Disadvantages of the SpeechEasy Device
Source: Delmar/Cengage Learning

STUDY RESOURCES







Review Recap

- Typical development and performance across the lifespan
- Etiology
- · Genetic
- · Developmental
- · Disease processes
- · Auditory problems
- · Neurological
- · Structural and functional
- · Psychogenic

Review Continues

- Epidemiology and characteristics of the disorder
- Wellness and prevention
- Screening Procedures
- Assessment Procedures
- Treatment Procedures

FLUENCY DISORDERS SAMPLE QUESTION

- The diagnosogenic theory of stuttering states that stuttering is caused by:
  a. A diagnosed articulation or language disorder
  b. Repeated communication failure
  c. Inappropriate diagnosis of normal disfluencies as stuttering
  d. Inappropriate change of handedness
  e. Inappropriate cerebral dominance

FLUENCY DISORDERS
SAMPLE QUESTION

- A five-year old boy has been stuttering since three years of age. He exhibits stuttering-like disfluencies that have increased over the last two years. He has a family history of stuttering. It is likely that this child:

a. Will spontaneously recover from stuttering
b. Will get better if not pushed by his parents
c. Will persist with his stuttering
d. Will do well with indirect therapy

FLUENCY DISORDERS
SAMPLE QUESTION

- A six-year-old boy exhibits part-word repetitions, tense pauses, frustration when speaking and he is aware of his speech difficulty. He has been referred to you by his school teacher. His parents are concerned about his disfluencies. The best course of action would be:

a. Direct stuttering therapy and parental counseling
b. Indirect stuttering therapy and parental counseling
c. Indirect therapy without parental involvement
d. Do nothing