

# Autism and Disfluencies

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# Intro

- ❑ As Autism Spectrum Disorder continues to rise, speech pathologists have been challenged to diagnose and treat an increasing number of stuttering cases within this population.
- ❑ The challenge is based on a necessity to not only consider the broad range of abilities presented within the Autistic Spectrum Disorder but also to differentiate the category of disfluencies, their concomitant and coexisting behaviors.

# AUTISM SPECTRUM DISORDER

	Profound/ Severe Autism	Moderate	Mild	Aspergers/ High Functioning
Cognitive	Severe Disability			Gifted
Social/Emotional	Aloof	Passive		Active/Different/ Odd
Communication	Non-Verbal			Verbal
Motor Skills	Uncoordinated			Coordinated
Sensory	Hypo			Hyper

# OBSERVABLE TYPES OF DISFLUENT BEHAVIORS

Typical

Atypical

Secondary Behaviors

# OBSERVABLE TYPES OF DISFLUENT BEHAVIORS

**Typical**

Atypical

Secondary Behaviors

# Typical Disfluencies

## □ Repetitions

- Sounds e.g. in my g...g...g...garden
- Syllables e.g. in my gar...gar...gar...garden
- Words e.g. in my...my...my...my garden
- Phrases e.g. in my... in my... in my garden

# Typical Disfluencies

## □ Hesitations

- Silent e.g. “so they went...(pause for 3 seconds)...home.”
- Filled e.g. the silence is filled with vocalizations such as mm, huh, erm, and oh.

For example: “so they went...(erm...mm)...home”

# Typical Disfluencies

- ❑ Blocks

For example: “so th...(stop)..ey went home”



# Typical Disfluencies

- ❑ Revisions

- ❑ Hey Joe, I'm going to the grocery store, wanna come?

For example: “Heeeey Joe, I’m going to the u--h gro - well I thought about - - maybe the supermarket. Wanna come?”

# OBSERVABLE TYPES OF DISFLUENT BEHAVIORS

Typical

**Atypical**

Secondary Behaviors

# Atypical Disfluencies

- ❑ Final part word repetition

e.g. “I’m going home ome“

e.g. “Wait ait ait for me”

- ❑ Mid word insertions e.g. “we-he”; see- hee you hou”

- ❑ Final sound prolongation e.g. “ I misssss you“

# OBSERVABLE TYPES OF DISFLUENT BEHAVIORS

Typical

Atypical

**Secondary Behaviors**

# Secondary Behaviors

- ❑ Eye blinks
- ❑ Head jerking
- ❑ Foot stomping
- ❑ Looking away from the listener
- ❑ Facial grimace
- ❑ Changes in pitch
- ❑ Changes in verbal loudness
- ❑ Reduced verbal output

# CATEGORIES OF DISFLUENT SPEECH

Normal Disfluencies

Stuttering

Cluttering

Neurogenic Stuttering

# CATEGORIES OF DISFLUENT SPEECH

## **Normal Disfluencies**

Stuttering

Cluttering

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# Disfluencies in fluent speech

- ❑ Fluent speech in conversation is not void of disfluencies.



# Disfluent behaviors in fluent speech

- Occasional prolongations
- Word and phrase repetitions
- Fillers
- Revisions
- Hesitations

# Developmental Disfluency

- ❑ Age of onset is typically 1.5 to 3.5 years old
- ❑ Cause: child is learning to use language in new ways
- ❑ Behaviors: whole word repetitions, phrase repetitions, fillers

# Disfluent Behavior



# CATEGORY OF DISFLUENT SPEECH

Normal Disfluencies

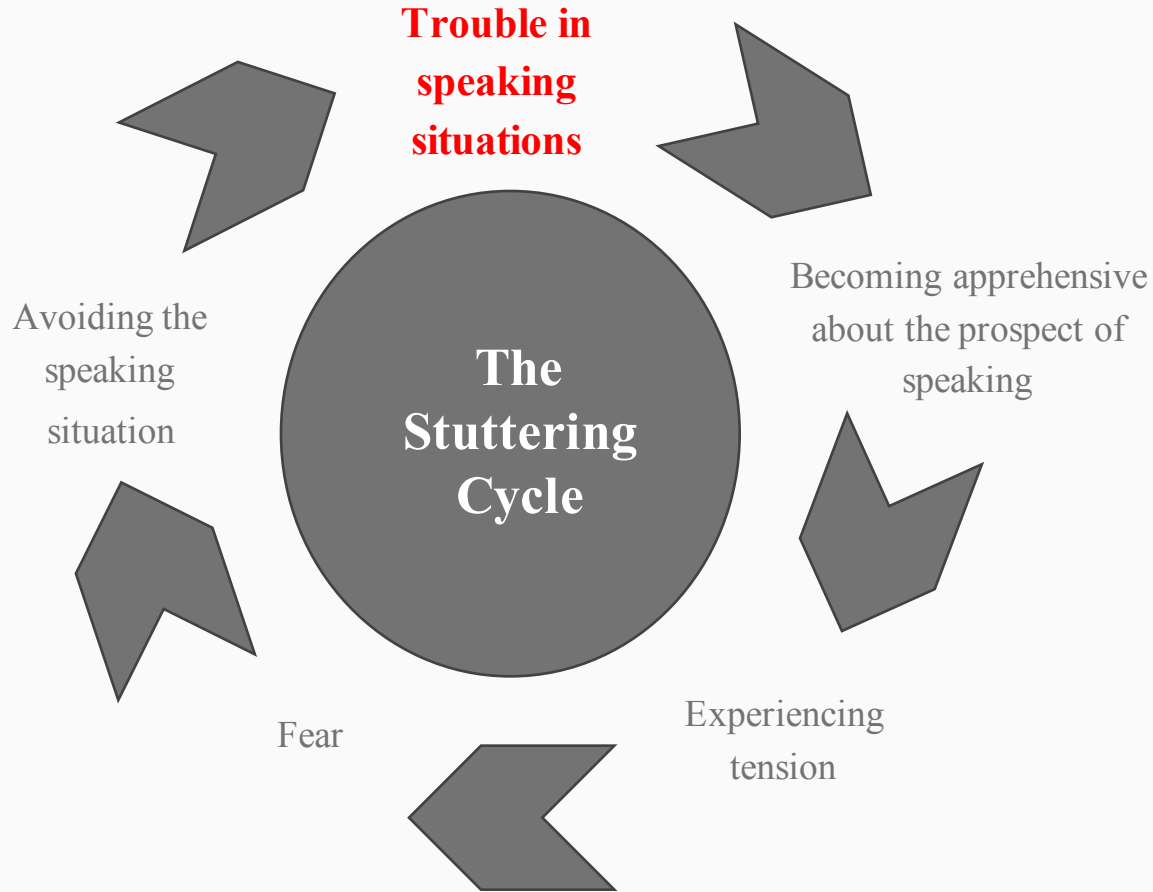
**Stuttering**

Cluttering

Neurogenic Stuttering

## Stuttering/Fright or Flight





# Stuttering

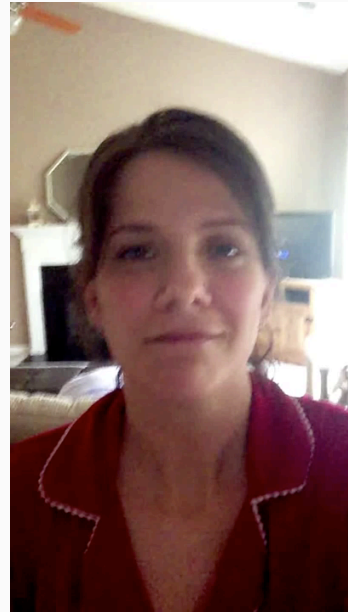
- ❑ An avoidance of speaking which entails an anticipatory, apprehensive, and hypertonic avoidance reaction resulting in an occurrence of typical, atypical, and/or disfluent behaviors



**Making Bumpy Words Smooth**

# Stuttering

- ❑ Another example





# CATEGORIES OF DISFLUENCIES

Normal Disfluencies

Stuttering

**Cluttering**

Neurogenic Stuttering

# Cluttering

- ❑ A disorder of fluency with underlying language and thought disabilities
  
- ❑ Possible Causes:
  - Nonspecific
  - Conditions that affect concentration
  - Drugs
  
- ❑ Disfluent behaviors:
  - excessive number of whole word or phrase

# Essential Signs of Cluttering

- ❑ Speak before clarifying thoughts
- ❑ Short attention span and poor concentration
- ❑ Rapid, dysrhythmic, sporadic, unorganized and frequently unintelligible speech
- ❑ An impairment in formulating language
- ❑ Lack of complete awareness of the problem

Example: “I s efa” | *I saw the elephant.* or “Many thinkle peepso” | *Many people think so.*



# CATEGORY OF DISFLUENT SPEECH

Normal Disfluencies

Stuttering

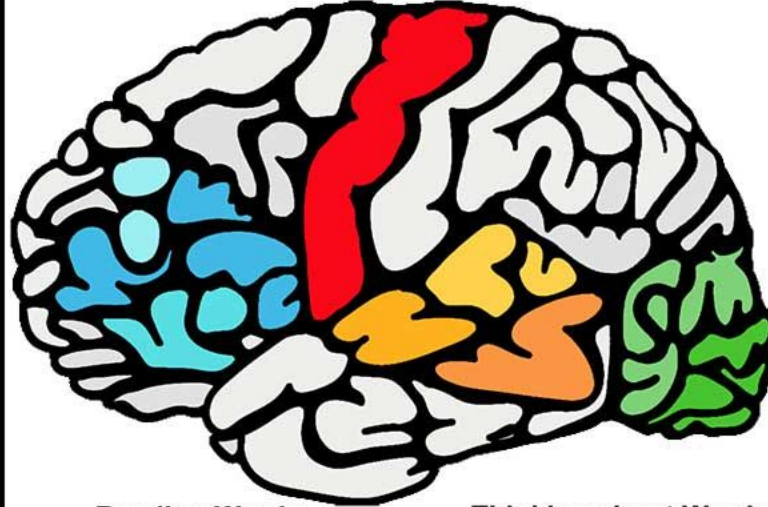
Cluttering

**Neurogenic Stuttering**

# Neurogenic Stuttering

- ❑ Typically appears following some sort of injury or disease to the central nervous system affecting language areas of the brain
- ❑ The central nervous system controls most functions of the body and mind
- ❑ Possible Causes:
  - Cerebral vascular accident (stroke)
  - Degenerative disease
  - Genetic disorders or syndromes

## WORDS AND THE BRAIN



■ Reading Words  
(Occipital Lobe -  
Vision)

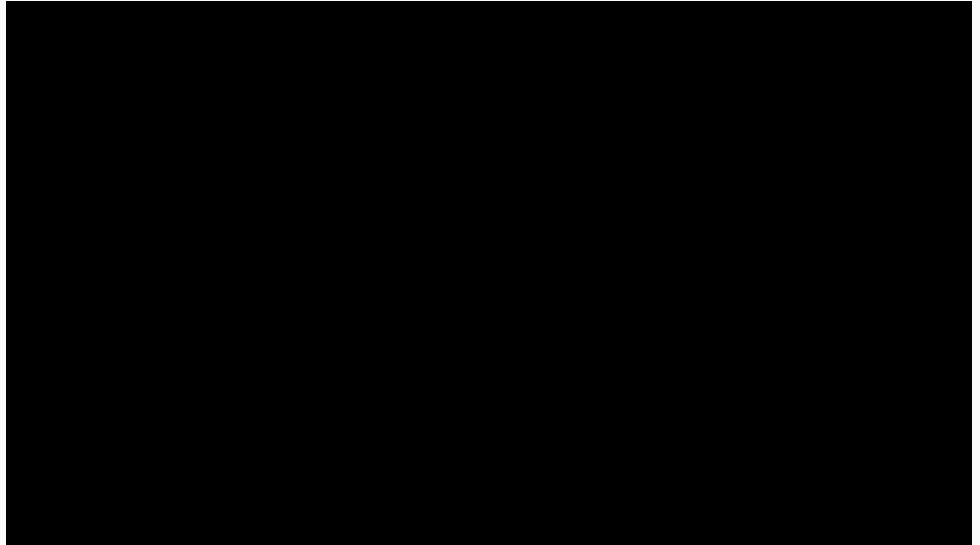
■ Thinking about Words  
(Broca's Area -  
Language production)

■ Hearing Words  
(Wernicke's Area -  
Language  
Comprehension)

■ Saying Words  
(Motor cortex)

# Neurogenic Stuttering

- ❑ Aphasia is a neurologically based language disorder



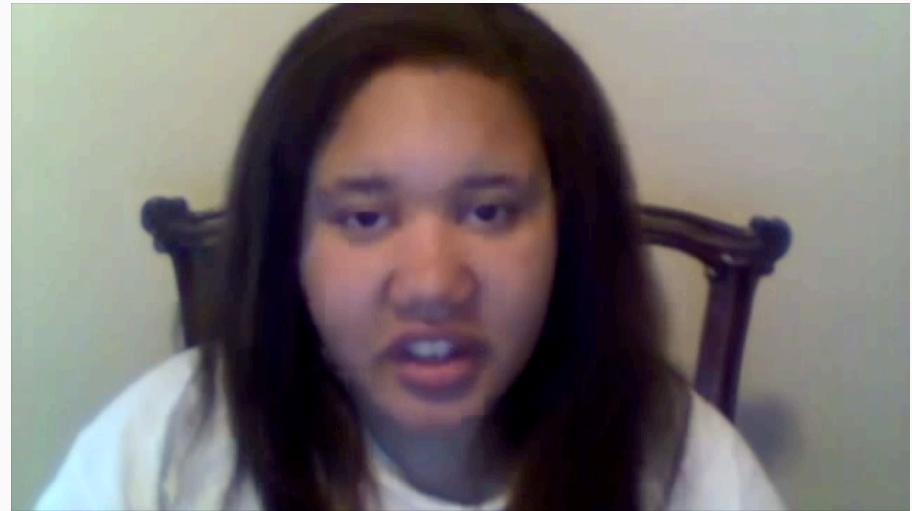


# Typical Injuries and Diseases Associated with Neurogenic Stuttering

- ❑ Apraxia - motor planning disorder
- ❑ Traumatic Brain Injury
- ❑ Ischemic Attack - temporary obstruction of blood
- ❑ Cysts, Tumors
- ❑ Aphasia
- ❑ Tourette Syndrome
- ❑ Degenerative Diseases: Alzheimers, Parkinson's, Dementia
- ❑ Drug Toxicity: asthma, depression, anxiety
- ❑ Meningitis, Aids

# Tourette Syndrome

- ❑ Characterized by multiple motor tics
- ❑ Tics are involuntary, sudden, rapid, brief, repetitive, stereotyped movements or vocalizations



# Autism Spectrum Disorder and Stuttering

- ❑ Incidence
- ❑ Types of disfluencies
- ❑ Tips for parents and teachers

# Thank you!

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## References:

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[www.stutteringhelp.org](http://www.stutteringhelp.org)

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