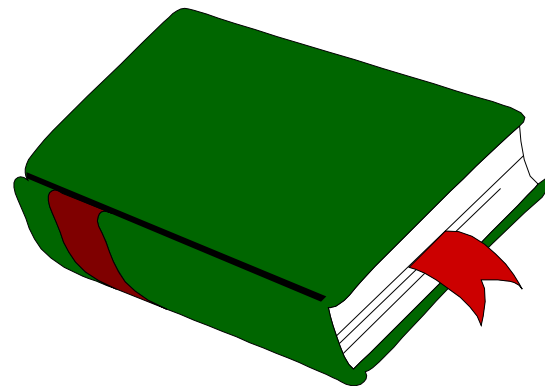
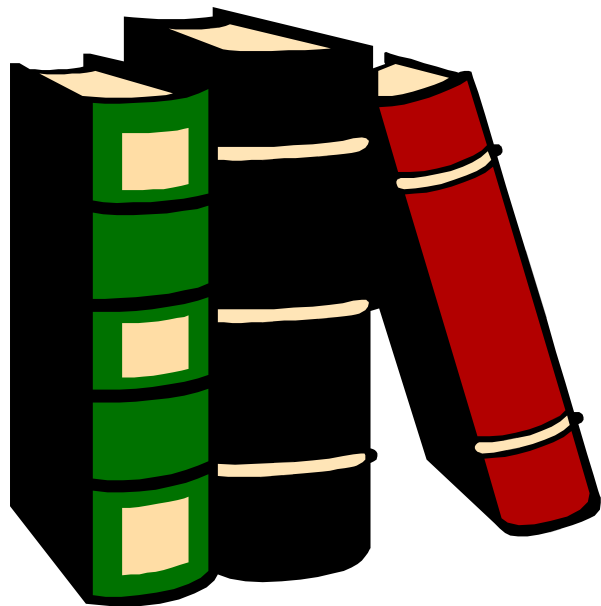
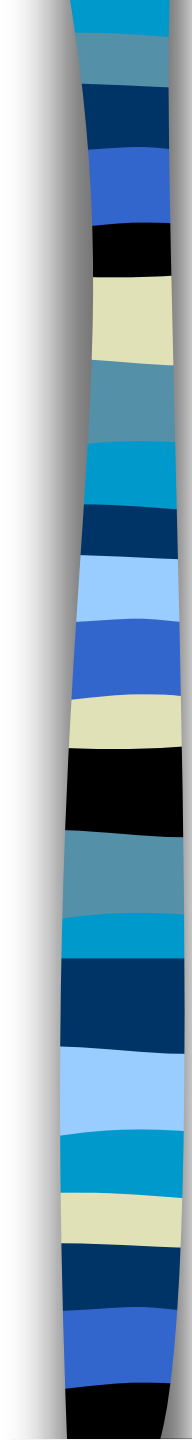


EVERYTHING WE KNOW ABOUT STUTTERING





Famous People Who Stutter

- **Moses**
- **Charles Darwin**
- **Clara Barton**
- **Marilyn Monroe**
- **Winston Churchill**
- **Somerset Maugham**
- **James Earl Jones**
- **Bruce Willis**
- **Greg Luganis**
- **Mrs. Annie Glenn**
- **Carly Simon**
- **Mel Tillis**
- **John Stossel**
- **Jimmy Stewart**
- **Anthony Quinn**
- **Sam Neal**

Stutterers in the movies

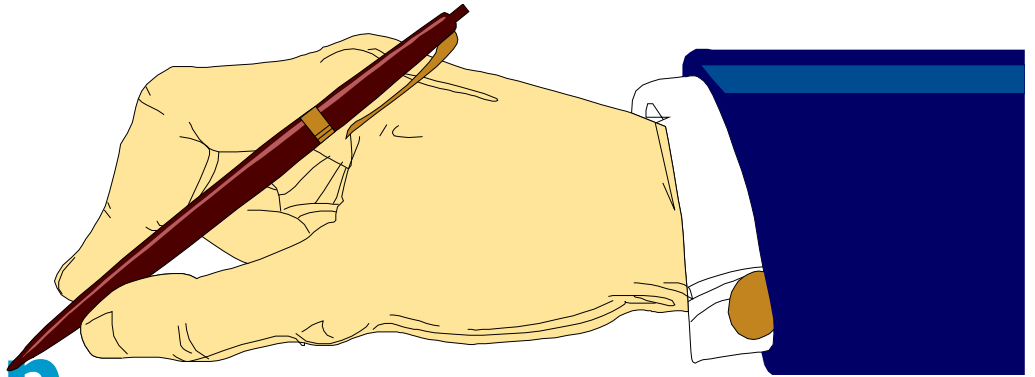


□ Do The Right Thing

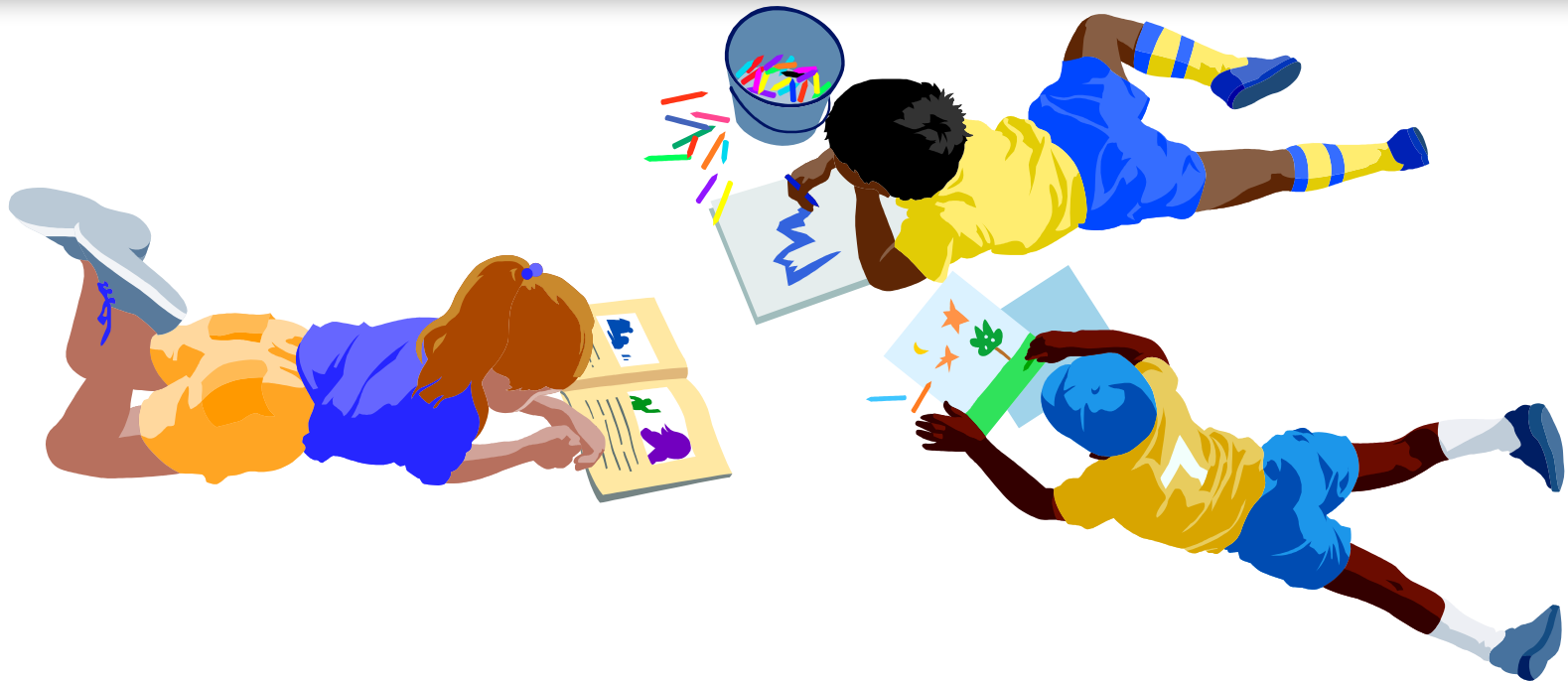
- Feeling Minnesota
- A fish Called Wanda
- Glory
- Harlem Nights
- Love/Valor/Compassion
- Maltese Falcon
- My Cousin Vinnie
- One Flew Over Cuckoo's Nest
- Primal Fear
- The Right Stuff
- Smilla's Sense of Snow
- Space Jam

Stutterers in Literature

□ The Loop



**Stuttering is primarily a
childhood disorder.**



**The prevalence of
stuttering worldwide is
approximately 1%**



**The incidence of stuttering
worldwide is approximately
4%**



**(how many people in a given
population were, are now, or will
become stutterers in the future)**

Familial Incidence

- incidence of stuttering among 1st degree relatives of stutterers is more than 3x that of general population.
- population.





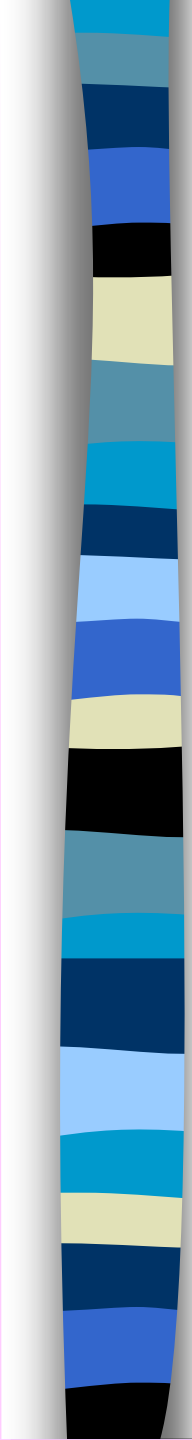
Incidence in Brain-injured population

- higher proportion of stuttering in cerebral palsy
- epileptics - 3.2% and higher
- brain-injured children - 19.3%



Incidence in Deaf Population

- low incidence
- they may scan more carefully, speak more slowly and controllably, feel less social pressure
- reports of some deaf showing repetitions and hesitations in their manual communication



Incidence in Mentally Retarded

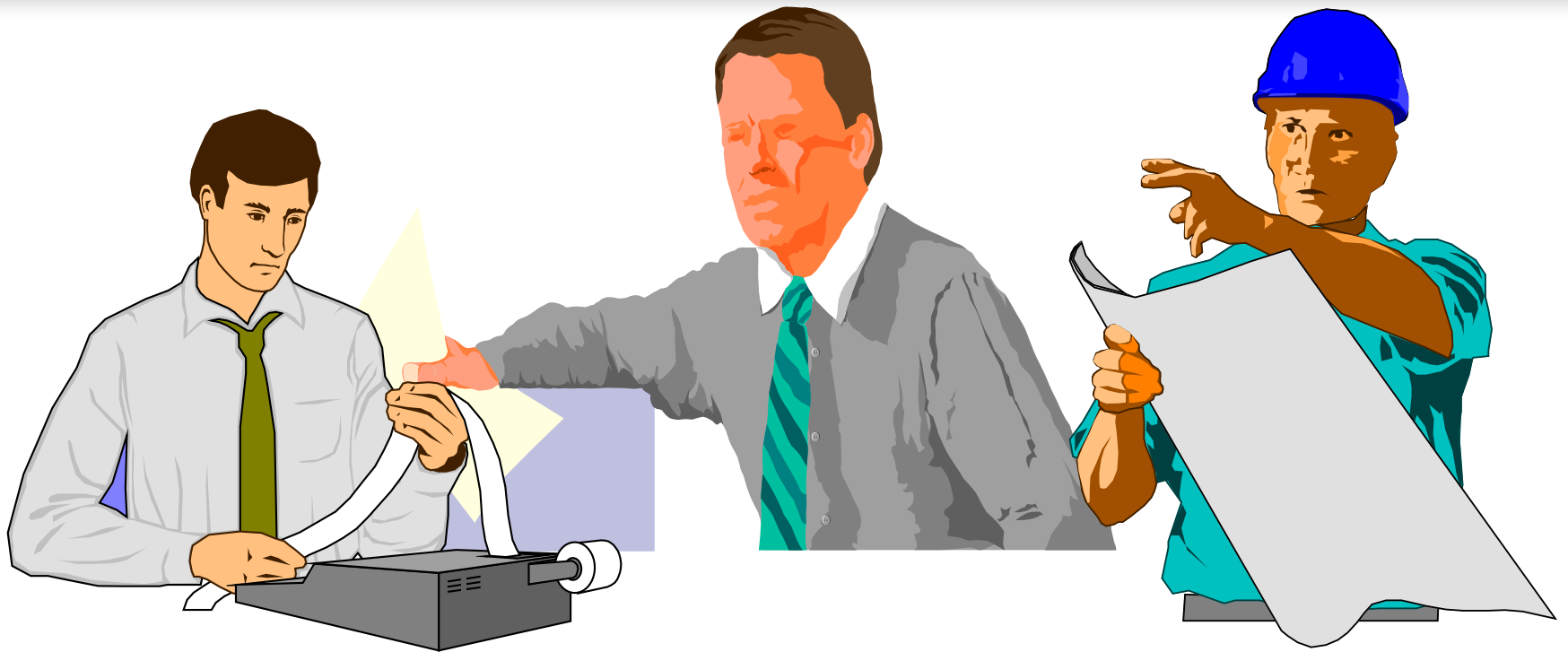
- 3x higher in MR populations
- related to severity of retardation
- may be higher in Mentally Retarded with organic etiology



Incidence in Populations **with cerebral lesions**

- often see transient dysfluency which may persist if lesion is bilateral
- these lesions may reflect a specific type of motor speech disorder rather than typical forms of stuttering

**It is more common among
males than females.**





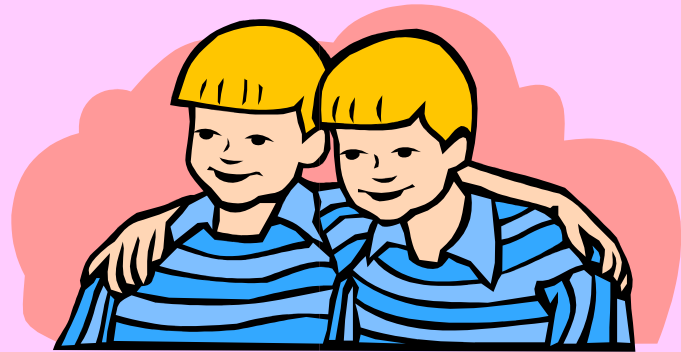
It is more common among males than females.

- **2:1 - 5:1 ratio males to females**
- **ratio increases with age**
- **-evidence suggests: boys remain vulnerable to onset of stuttering for longer period of time than girls**
- **may be due to environmental factors:**

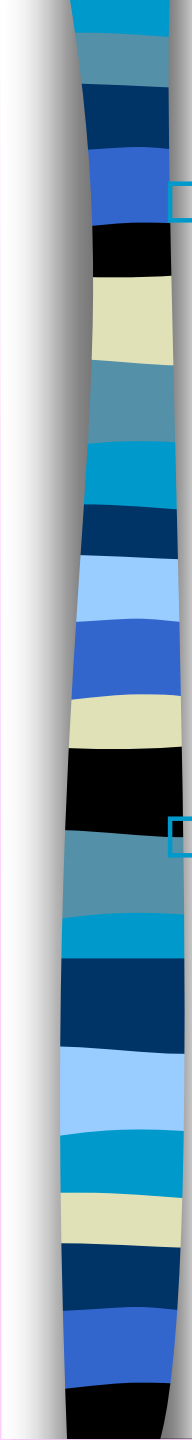
**It is more common among
twins than among
singletons**



It is 1.9-24% more common among twins than among singletons



- **Concordance of stuttering:**
 - when stuttering occurs in one member of a set of identical twins, it is likely to occur in the other
 - higher in monozygotic (9/10) than dizygotic twins (1/15)



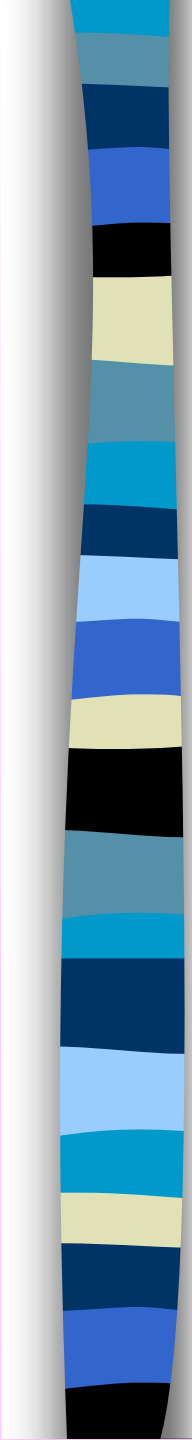
- **Average performance on intelligence tests falls between 1/2-1 standard deviation below mean of normal speakers...evident on both verbal and nonverbal intelligence tests.**

- **somewhat slower in speech and language development, educational placement and academic achievement lags behind non-stuttering children (approximately 6 month lag)**



Personality Adjustment

- **Fall within normal range on personality tests**
- **personality adjustment of mild vs. severe and older vs. young stutterers do not differ**
- **parents of stutterers are similar to parents of nonstutterers**

- 
- **differences between stutterers and non-stutterers in self-confidence and anxiety have been attributed to normal, secondary reactions to a communication problem**
 - **no differences in personality factors related to neuroticism**

Recent findings in

the research





Genetics

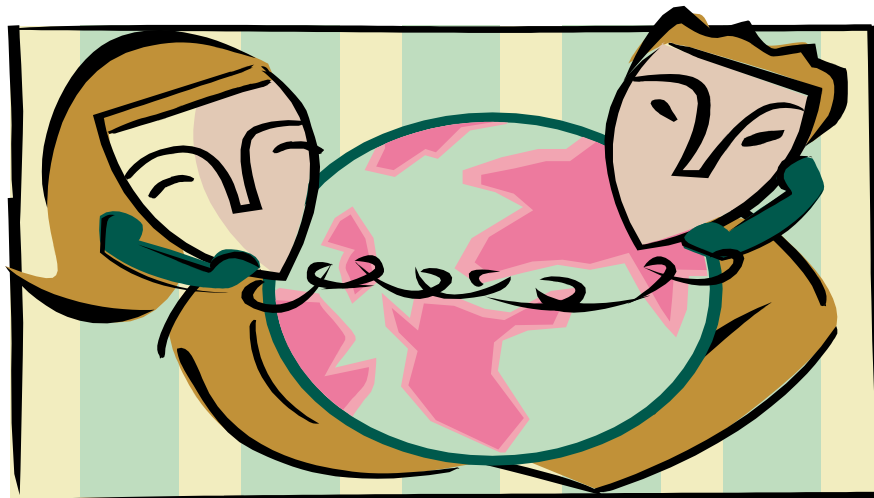
- **Family linkages with stuttering, chronicity & remission (Yairi, Ambrose & Cox, JSHR, 1996)**




**Based a recent familial
history, we can predict
stuttering with
80% accuracy**

Recent PET scan findings

- **Adults who stutter perform poorly on higher order (sophisticated) linguistic tasks**





**Lack of support
for underlying
muscle dysfunction
in stuttering**

Recent PET scan findings



**Adult PWS have more
trouble retrieving verbs
than nouns**

Best Predictors

of chronicity and

remission



More Concern

- Gender (males)
- Family history of persistence & recovery
- Time since onset
- Age at onset (over 36 mos)
- *Relatively* poor speech and language skills



Less Concern

- **No family hx or hx of recovered stuttering**
- **female**
- **decrease in dysfluency over 12 months**
- **early onset of symptoms**
- **strong speech & language skills**



Simplest definition of fluency disorder:

- “Abnormal fluency, rate, and rhythm of speech”
- **Two main types**
 - Stuttering
 - Cluttering



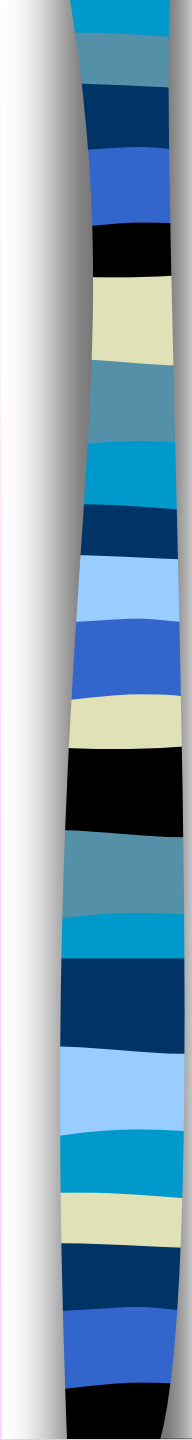
□ Bloodstein

- is about *perception*
- **Whatever is perceived as stuttering by a reliable observer who has relatively good agreement with others**



International Classification of Diseases (World Health Org):

- **Disorder of rhythm of speech...individual knows what he wants to say but cannot because of “an involuntary, repetitive prolongation or cessation of a sound”.**



3 levels of stuttering

World Health Organization (WHO)

□ impairment:

- **neuropsychological and neurophysiological events that immediately precede and accompany the audible and visible events of stuttering**



□ **disability:**

- **the audible /visible events that are the behavioral manifestations of stuttering**



□ handicap:

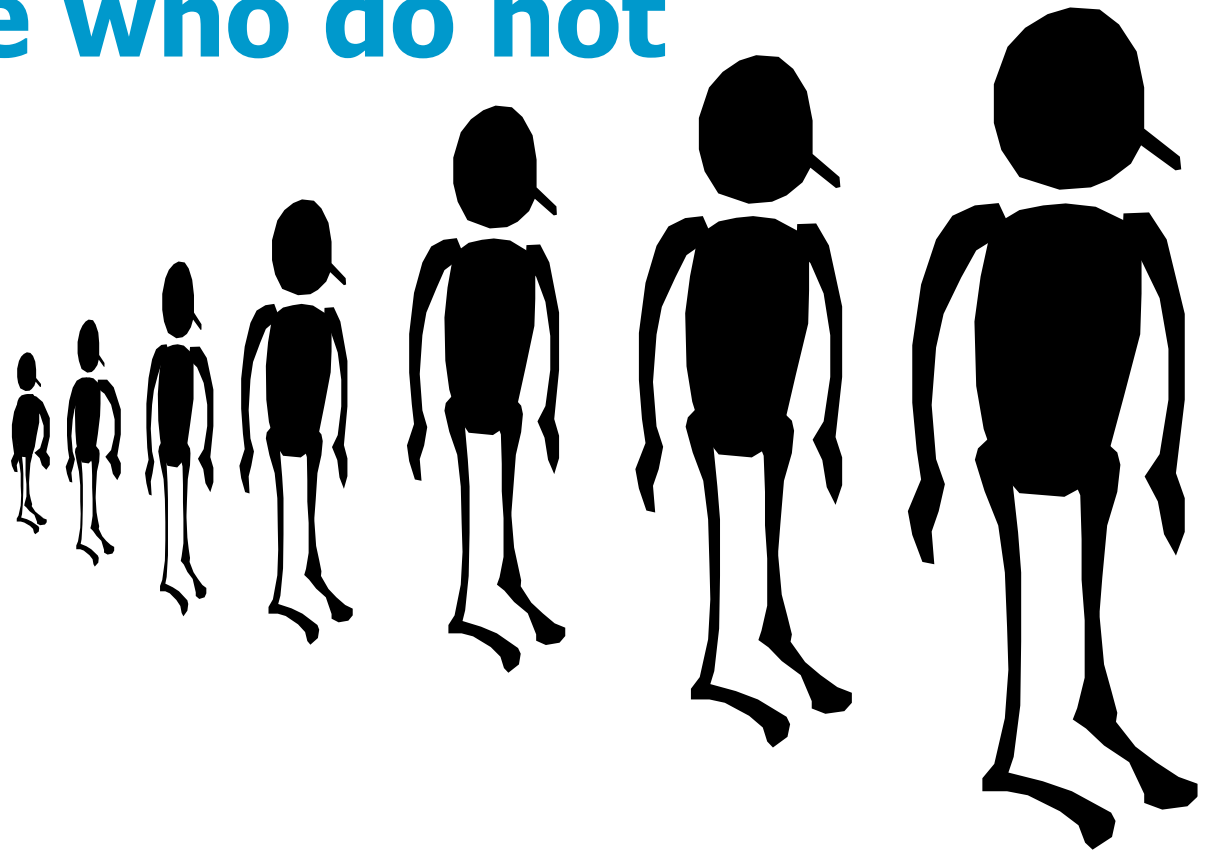
–the disadvantages resulting from reactions of PWS and listener to the audible and visible events of a person's stuttering

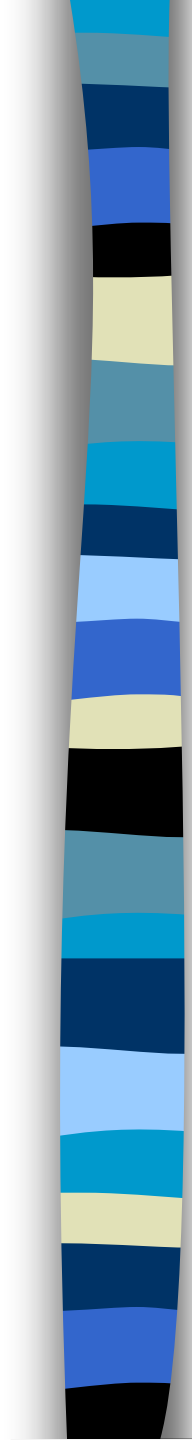


Wendell JOHNSON

- **“Stuttering is an anticipatory, apprehensive, hypertonic, avoidance reaction”...meaning stuttering is what a speaker does when he expects it to happen, dreads it, tenses, and tries to avoid it...**

□ **Those who stutter are not essentially different than those who do not**



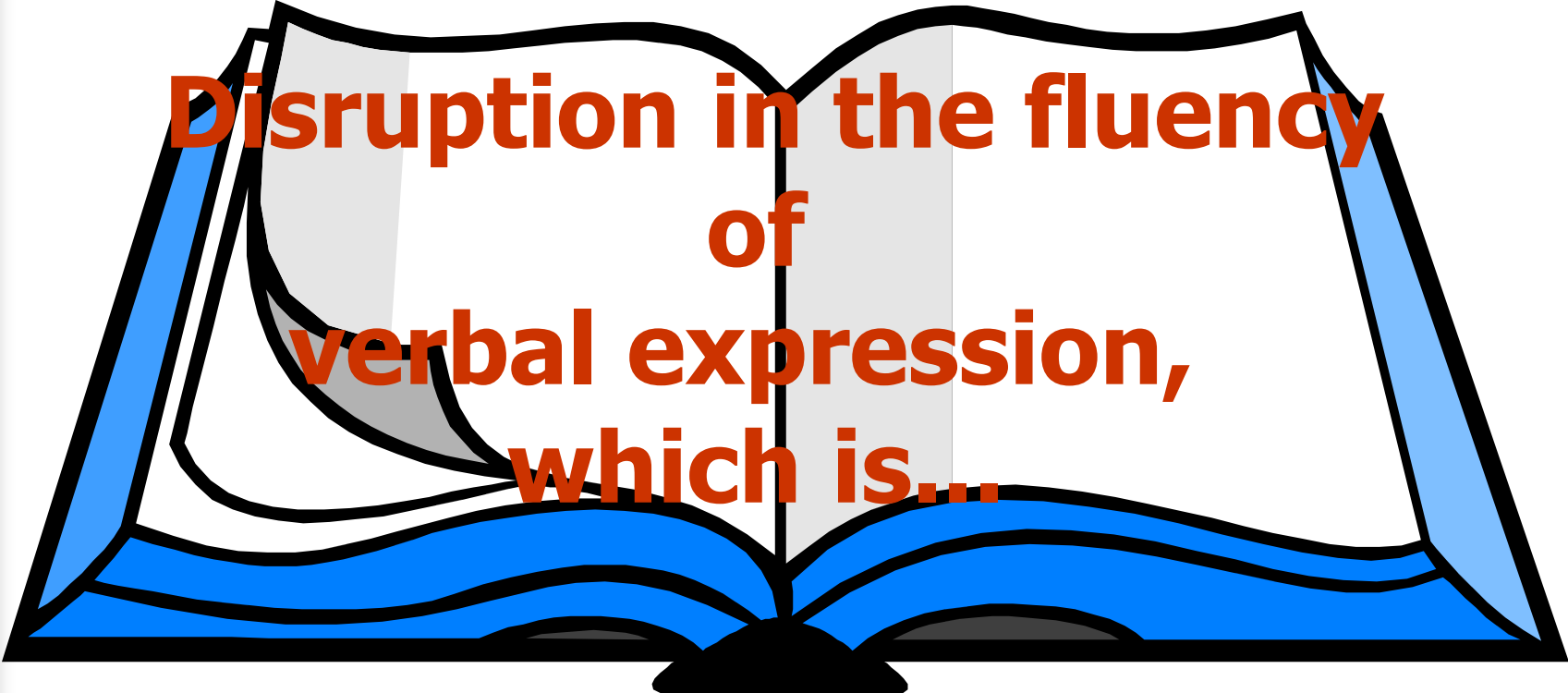
- 
- **Stutterers do what normal speakers do when they are dysfluent, which can include repeating phrases, words, syllables, and sounds; prolonging sounds and hesitating before speaking**

**Stuttering is what the
stutterer does when he
attempts not to stutter.**



Wingate

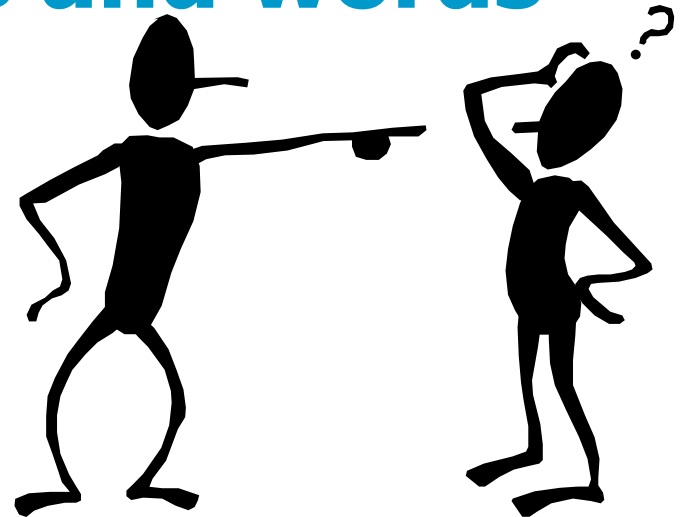
TRADITIONAL DEFINITION OF STUTTERING



**Disruption in the fluency
of
verbal expression,
which is...**

Characterized by:

involuntary, audible or silent repetitions or prolongations in the utterance of short speech elements, namely sounds, syllables and words of one syllable.





These disruptions usually

- occur frequently

OR

- are marked in character

OR

- are not readily controllable



Sometimes the disruptions are accompanied by

- **accessory activities involving the speech apparatus, related or unrelated body structures, or stereotyped speech utterances.**

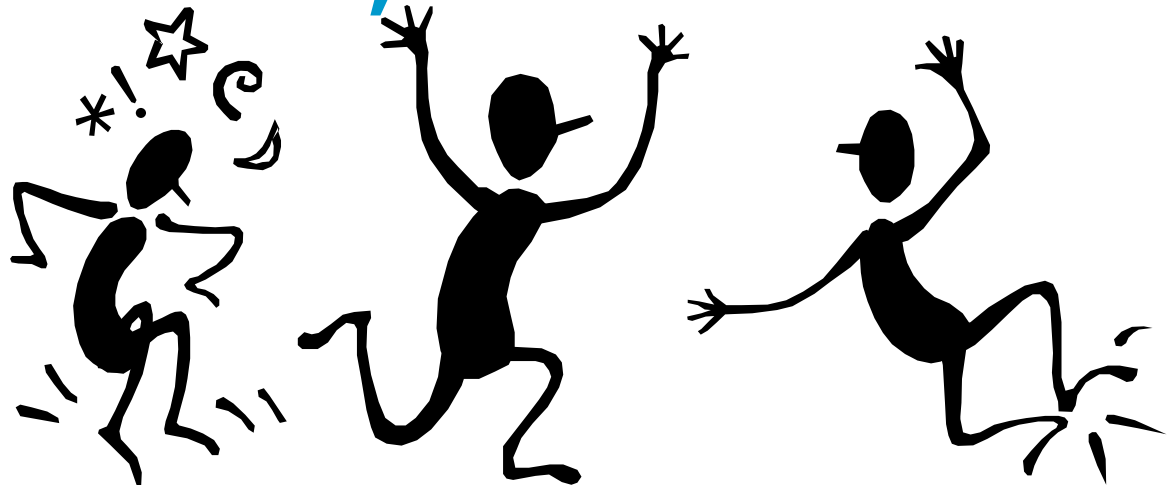


Sometimes the disruptions are accompanied by

- **accessory activities involving the speech apparatus, related or unrelated body structures, or stereotyped speech utterances.**
- **these activities give the appearance of being speech-related struggle.**

Also, frequently

–presence of an emotional state, ranging from a general condition of “excitement” or “tension” to more specific emotions of a negative nature such as fear, embarrassment, irritation or the like.





The immediate source

- some incoordination expressed in the peripheral speech mechanism;
- the ultimate cause is presently unknown and may be complex or compound. (Wingate, 1964, A standard definition of stuttering. JSHD 29: 484-89)