

**FASTEN YOUR
SEATBELTS**

ASHA Guidelines for Practice in Fluency Disorders



Desirable Goals

Management Goal #1

- Reduce the frequency with which stuttering behaviors occur without increasing the use of other behaviors that are not a part of normal speech production.

Management Goal #2

- Reduce the severity, duration and abnormality of stuttering behaviors until they are or resemble normal speech discontinuities.

Management Goal #3

- Reduce the use of defensive behaviors used to
 - prevent
 - avoid
 - escape from
 - minimize aversive eventswhether real or imagined

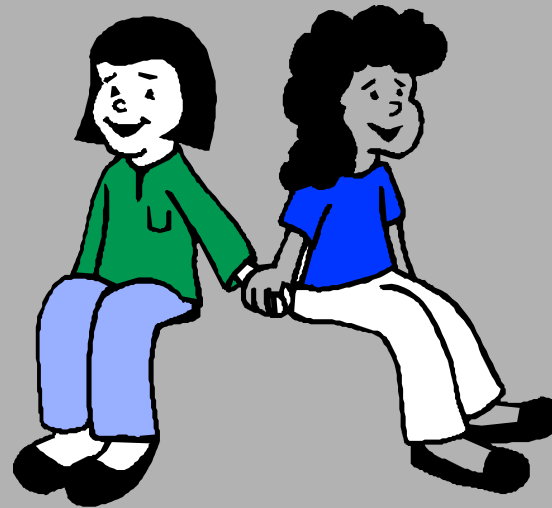
Management Goal #4

- Remove or reduce processes serving to create, exacerbate or maintain stuttering behaviors.
 - Parents reactions
 - listener's reactions
 - denial

Management Goal #5

- Help the person who stutters to make treatment decisions about how to handle speech and social situations in everyday life.
 - Telephone
 - ordering in a restaurant
 - changing words

PLANNING TREATMENT OF STUTTERING FOR YOUNG CHILDREN



Is treatment required?

- Frequency of disfluencies
- types of disfluencies
- duration of disfluencies
- secondary behaviors
- high risk environment
- high risk family history
- high risk fluent speech

NO?

- Educate the referral source and parents

Yes?

- Direct or indirect treatment?

Indirect?

- Young preschooler
- no family history
- recent onset
- minimal awareness/secondaries
- obvious changes to be made at home

- SHORT TERM TRIAL BASIS

- Treat the family
- clinician models during play
- modify family conversation patterns
- decrease comm. pressure

Direct?

- Child is aware
- secondaries
- is being teased
- high risk family history
- high risk environment

May need to work with child
AND
parents

With the child

- Level 1
 - experimenting
 - discovering new options
 - choices

- Level 2

- teaching easy speech
- smooth transition
- discrimination of others
- discrimination of self

- Level 3

- tension control therapy
- attitudes about speech and stuttering
- managing relationships

With the parents

- Focus on the message
- increase turntaking
- allow reinforcement opportunities
- increase reaction time
- lessen hectic schedule
- one-on-one time
- slowed pace

Decisions about treatment:

from: Blood, 1997

- **Decision 1: Explore your level of confidence in treating stuttering**
- **Decision 2: Establish the long-term goal of treatment**
- **Decision 3: Choose a philosophical approach to treatment**

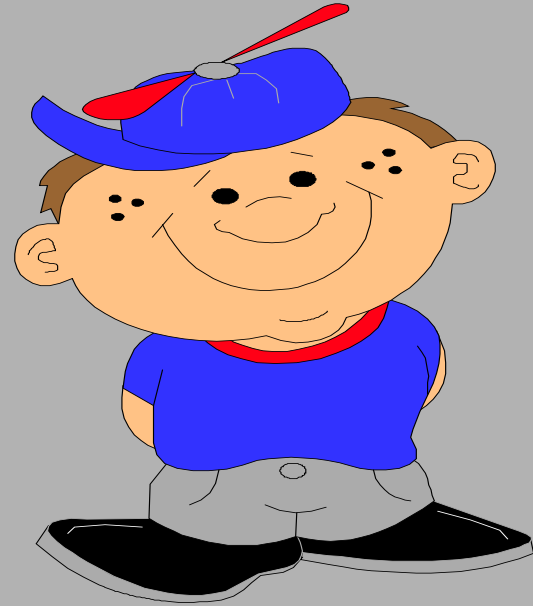
- **Decision 4: Design a system of documentation**

Decisions During Treatment

- **Decision 5: Consider factors over which you have minimal control**
- **Decision 6: Establish realistic short-term goals**

- **Decision 7: Examine reasons for slow progress or failure to achieve goals**
- **Decision 8: Examine the clinician's role in success of intervention**

- **Decision 9: Determine whether stabilization of progress has occurred.**
- **Decision 10: Examine motivations for termination of treatment when progress has plateaued.**



Preschool child who stutters

Intervening with the child's family

Multifaceted treatment goals

- ☐ provide family with accurate information
- ☐ help family modify environmental factors that may stress child's fluency
- ☐ help family learn new ways to communicate to better match child's current level of development

Individualized Intervention Program

- reflects respect for family lifestyle and preferences
- lets family know that they can be effective interveners
- considers family's unique needs
- incorporates available support system

Multi-modal procedures

- debrief
- identify successes and problem areas
- choose a target area
- brainstorm ways to address the target
- practice the skill
- utilize the skill with the child in the clinic
- carry over the skill to home and assess impact

Intervening with the preschool child who is excessively disfluent but shows little or no struggle

Utilize a Fluency Enhancing Model (FEM) to Meet Child's Needs

Facilitate a rate reduction in the child's speech

Reduce other potential demands

Set up talking time rules

Support/expand the child's positive image of self

Occasionally pseudo-stutter and model an unconcerned attitude

❓ Goals of Therapy

- Reduce negative reactions that lead to struggle



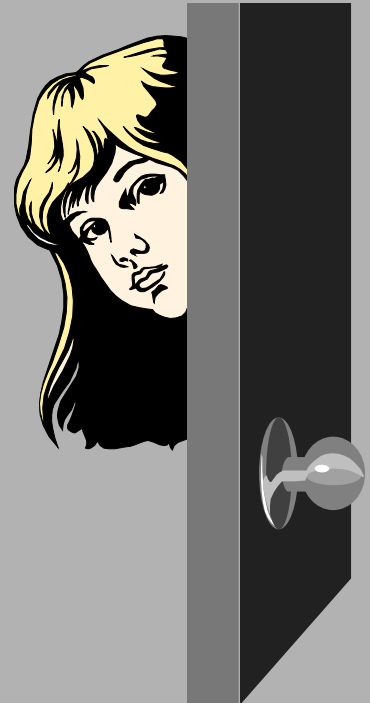
- modify stuttering by replacing it with less tense disfluencies
- provide fluency enhancing environment
- teach child the components of the fluency enhancing model

☐ Objectives of therapy

- Help child feel comfortable talking about stuttering
- show how stuttering can be changed to make talking easier
- teach child to 'slide' into difficult words
- teach child to 'keep their voices going' once they begin a sentence

❓ Procedures for therapy

- Reduce avoidance by reinforcing stuttering
- child is reinforced for communicating regardless of fluency



- child is reassured that speech is sometimes hard for everyone but that it is no big deal to have trouble once in a while
- child differentiates 'easy' speech from 'bumpy' or 'sticky' speech
- Child practices making the stuttered speech 'easy' by substituting a less tense, more normal disfluency

Additional strategies that may be useful:

- modeling normal disfluencies for child
- teaching child to use slow rate (Turtle Speech); more normal volume (Mama Bear Speech); easy vocal onset (Sleepy Time Speech; Baseball Speech); and continuous phonation (Keeping the Motor Going)

Sheryl Gottwald, Ph.D

Stuttering Modification vs. Fluency Shaping Therapy

Stuttering Mod

Attitudes, speech fears, avoidances

major interest/focus

Client analysis/eval. of stuttering behavior

major interest/focus

Modification of stuttering spasms

primary tx goal

Fluency Shaping

Attitudes, speech fears, avoidances

little/no attention

Client analysis/eval. of stuttering behavior

little/no attention

Modification of stuttering spasms

not dealt with

Stuttering Mod

Fluency shaping

Changing speech to establish fluency pattern

not dealt with

primary goal of tx

Stuttering Mod

Fluency shaping

Changing speech to establish fluency pattern

not dealt with

primary goal of tx

Development of self-monitoring skills

emphasize

de-emphasis varies

Stuttering Mod

Fluency shaping

Changing speech to establish fluency pattern

not dealt with

primary goal of tx

Development of self-monitoring skills

emphasize

de-emphasis varies

Establishment of baseline measures

in qualitative terms

in quantitative terms

Stuttering Mod

Fluency shaping

Changing speech to establish fluency pattern

not dealt with

primary goal of tx

Development of self-monitoring skills

emphasize

de-emphasis varies

Establishment of baseline measures

in qualitative terms

in quantitative terms

Measurement of Progress

in qualitative terms

in quantitative terms

Stuttering Mod

Fluency Shaping

Therapy Structure

emphasis on rapport, motivation, teaching counseling

emphasis on conditioning, or programming, use of punishment or reward contingencies

Stuttering Mod

Fluency Shaping

Therapy Structure

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emphasis on conditioning, or programming, use of punishment or reward contingencies

Attention to general speech skills

minimal

minimal

Stuttering Mod

usually planned

Fluency Shaping

Transfer

usually planned

Stuttering Mod

usually planned

may be planned
but often left to
client

Fluency Shaping

Transfer

usually planned

Maintenance

may be left to the
client, but often
planned with
evaluation system
provided

Treatment of the School-Age Child Who Stutters

Direct treatment with children

- Stuttering Mod vs. Fluency shaping approaches
 - choose between pure forms of therapies OR
 - combined/integrated therapy approaches

Levels of Direct Treatment

– Experimentation

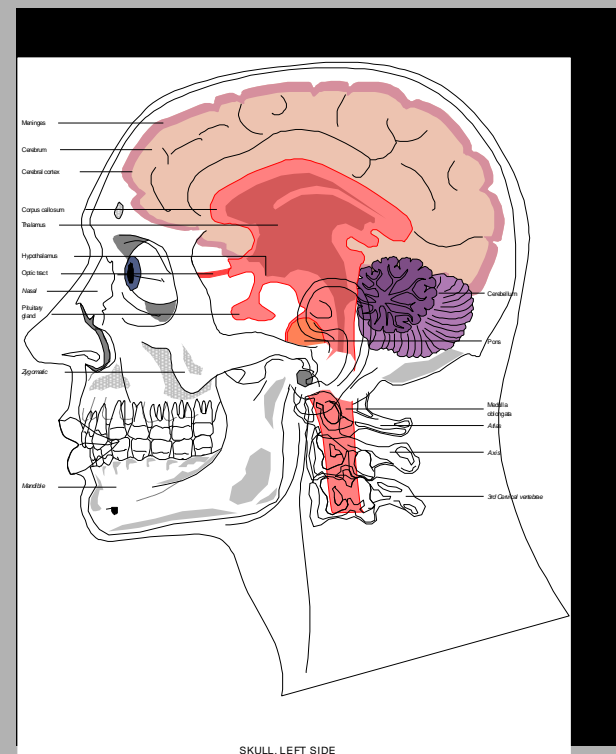
- dealing with frustration
- discovery of new options
- making choices

Easy Speech

- Easy onset
- smooth transition
- bumpy versus smooth distinction
- discrimination of others speech
- discrimination of own speech

Explanation of the speech production mechanism

- **ALL clients should understand the anatomy and physiology of the speech mechanism**



Normal Speaking Process Education

- Educate child on 4 primary ingredients necessary for initiation and maintenance of smooth speech
 - airflow



Normal Speaking Process Education

- Educate child on 4 primary ingredients necessary for initiation and maintenance of smooth speech
 - airflow
 - voicing



Normal Speaking Process Education

- Educate child on 4 primary ingredients necessary for initiation and maintenance of smooth speech
 - airflow
 - voicing
 - articulation



Normal Speaking Process Education

- Educate child on 4 primary ingredients necessary for initiation and maintenance of smooth speech
 - airflow
 - voicing
 - articulation
 - interaction of the three



Direct Strategies

(from Ramig & Bennett; Chapter 15: Clinical Management of Children: Direct Management Strategies, *Nature and Treatment in Stuttering*. Curlee and Seigel, Allyn & Bacon Publishers. 1997)

- **Increased length and complexity**
single word tasks > phrase > sentence >
multi-sentence > story > conversation

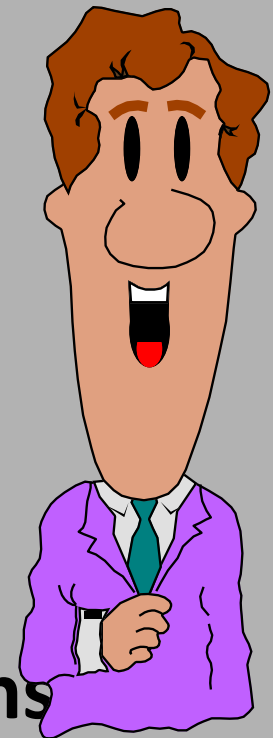
Regulate and control breath stream

May see

- Talking on exhausted breath
- quick-shallow inhalations
- talking on an inhalatory cycle

Work on

- easy initiation of phonation
- inserting easy, voluntary prolongations
beginning of utterance



Establishment of light articulatory contacts

- May see
 - muscular tension
 - forcing, pushing sounds
- Want to see
 - ‘soft contacts’: movements of the articulators (tongue, lips, jaw) which are slow, prolonged, related



Slow, smooth speech initiation

- Allows time to monitor speech



Controlling speaking rate

- **Want to see**
 - slowed speaking rate
 - enhanced spacing and timing of articulatory movement
 - **integration of respiratory, phonatory and articulatory systems**



- **Emphasize understanding of slow vs. fast speech (Turtle Talk vs. Rabbit Talk)**
- **Smooth articulatory transitions**
- **slightly prolonged consonants and vowels**
- **natural sounding intonation and stress patterns**

Facilitation of Oral-Motor Planning

- **May see**
 - reduced articulatory movement
 - reduced jaw opening
 - increased velocity of movement
- **Emphasis 3 areas**
 - accuracy of movement
 - smooth flow
 - rate



Phrasing, Chunking, Grouping

- **5-6 syllables together -> Pause and take new breath -> 5-6 syllables**
- **May sound unnatural to speaker at first**
- **More efficient use of respiratory system**



Continuous Phonation

- **Two skills**
- **modifying articulation to move easily from one word to the next**
 - **continuity of voicing within a phrase**



Increasing vowel duration (Prolongations)

- “slightly” lengthen vowels
- adds expression to voice



Teaching responsibility for change

- Teach the vocabulary



- “Why were you fluent just then?”

“Because I.....”

Desensitization

- **Client practices pseudo or voluntary stuttering in a supportive/caring environment**
- **contrast hard vs. easy contacts until child can feel, self-monitor what he/she's doing**
- **this may reduce fears and avoidance behaviors**

Systematic Desensitization

Negative Practice

- Practice undesired stuttering behavior to teach him/her to identify and change moment of stuttering
- (Adult is asked to stutter purposefully on a word and then repeat the word reducing the tension by 50%)

Hierarchy Analysis

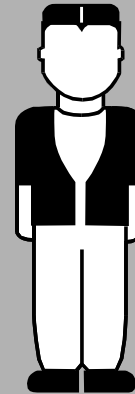
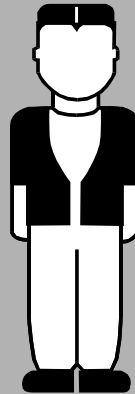
- **Gradual ordering of speaking tasks or stages**
- **Through careful problem solving child practices some techniques in 'easy' situations, working toward more difficult.**

Speech assertiveness and openness

- Establishment of assertive speech behaviors and openness in talking about stuttering
- want to
 - dissolve ‘mystery’ of stuttering & develop assertiveness around teasing, talking to teachers

May:

- **present a science project on stuttering**
conduct school survey
on awareness



Voluntary Stuttering

- Practice easy, voluntary stuttering on non-feared words throughout the day
- component of approach-avoidance conflict programs (Sheehan)
- easy stutter = 'slide' or easy prolongation on first sound of word with smooth transition into second sound

Cancellations

- **Person emits stuttered word**
- **Pauses deliberately**
- **Repeats utterance fluently**

Progressive Relaxation



Visualization



Auditory Feedback



Secondary Characteristics
Elimination

Tension Control Therapy

Susan Dietrich, Ph.D.

- Integration of stuttering modification and fluency shaping
- focus on empowering the child
- teaching family and school how to support child
- transfer through teaching others

**Goal #1 *Becoming comfortable
with and knowledgeable about
your own therapy***

First Stage: Identification

- Identification of tension vs. relaxation on a
- 1-10 scale
 - tension on a continuum 1:totally relaxed and 10 totally tense
 - Identification of tension in oral and laryngeal muscles
 - during rest
 - during fluency
 - during stuttering events

- **Identification of breathing pattern**
 - shallow or tense
 - clavicular vs. thoracic vs. diaphragmatic
 - relaxation of stomach muscles for deep inhalation at rest

- **Identification of feelings**
 - recognition of avoidance behaviors
 - confrontation of feelings about stuttering

- **Identification of the consequences to alternative actions**
 - identifying reaction of self/others to stuttering
 - identifying reaction of self/others to pseudostuttering
 - identifying reaction of self/others to speech under stress

2nd Stage: Acceptance

- Accepting stuttering as a disorder of timing which is affected by numerous variables
- Accepting that some people misunderstand the nature of stuttering
- Accepting that you may need to speak differently to not trigger stuttering
- Accepting that you may occasionally stutter

Third Stage: Modification

- Lengthening/shortening the stuttering event
- Changing the manner of stuttering
 - block to prolongation
 - prolongation to repetition, etc.

**Continue Goal #1: Mastery of stuttering as
you begin to work on Goal 2**

Goal 2: Reducing the frequency and severity
of the stuttering events

Stage 3: Modification continued

- Modification of the onset of speech
 - conditioned relaxation of speech muscles prior to speech onset
 - begin speech onset with tension levels 1-3-4 for easy onset voicing

- Begin voicing with relaxed airflow then gentle
- Use 1-3-4 beginning each speech segment (i.e. after pause, breath etc)
- Use 1-3-4 beginning each feared word
- Modification of the duration of the moment of stuttering
 - pull-out
 - identify the tension level of the stuttering spasm
 - continuing the airflow and sound stuttered while decreasing tension of targeted speech muscles and adjacent muscular areas

(Stage 3: Modification continued)

- Modification of the onset of speech
 - conditioned relaxation of speech muscles prior to speech onset
 - begin speech onset with tension levels 1-3-4 for easy onset
 - Drop tension level below normal tension for fluent speech before continuing speech

Exploration and modification of responses to situations

- Modification of response to stress
 - conditioned response of relation of speech musculature
 - client directed exploration and goal setting
- Modification of response to time pressure
 - use of body language to control conversational pace
 - indirectly teaching the conversational partner turn-taking behaviors
- client directed exploration and goal-setting

Modification of response to teasing, mockery and pity

- client directed exploration of alternatives
 - development of an internal “big brother” or “big sister” to protect the inner child
 - goal setting
 - regarding challenging situations as opportunities to appraise client-developed strategies

Stage 4: Transfer

- Client as the instructor
 - establish client as proficient in modified speech
 - client teaches speech modification to a second speech pathologist
 - client teaches speech modification to family, friends
 - easy onset of speech 1-3-4
 - slowed pace, increase of pauses
 - turn-taking behaviors

- Client teaches speech modification to others who stutter
- Client as self-therapist
 - client develops long-term goals for fluency and acceptable dysfluency or stuttering

- Client develops plan to continue desensitization of stuttering
- Client develops plan to challenge self with more stress with maintained modified speech

Stage 5: Maintenance

- Therapy sessions decrease in length and frequency
- client develops a system of self-monitoring
- client develops a system of assisted-monitoring
 - family members, school therapist, teacher
 - Client assists with leading therapy sessions for younger children

THE ADOLESCENT STUTTERER



- 1. What is stuttering?
- 2. Feelings you may have about stuttering
- 3. You can be helped
- 4. Final Suggestions

Thinking about stuttering as a chronic disease state

Bringing up subject of chronicity is
tough but necessary

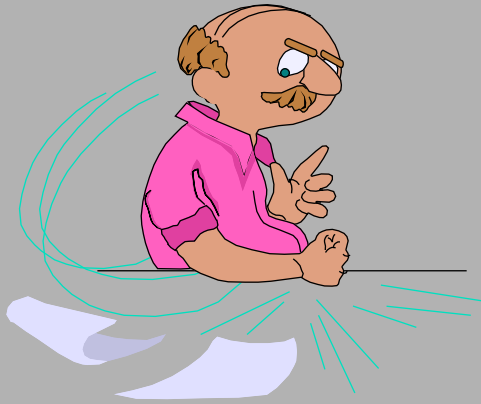
Questions the adolescent (or adult) asks

- Why me?
- Why won't it go away?...I did everything you asked me to.
- Is it my fault or your fault that I still stutter
- Is therapy forever? Why should I do this?

Working with teens & adults

- Make the client a full partner in therapy.
- Clarify locus of control & responsibility
- Make sure your goals are mutual
- Develop real world practice targets

- Increasing emphasis on stuttering modification and cognitive analysis
- Resources: Blood's POWERR
- Consideration of intensive placements
- Make hard decisions if the client cannot be motivated



Counseling

A major emphasis with this
population

Voluntary Stuttering

- Imitate own stuttering behavior

OR

- Produce a relatively effortless repetition of the initial sounds of words (bounce)

OR

- Simulate stuttering that is more severe than usual for them (Van Riper, 1973)

“Light” consonant contact
(ventriloquism speech)

Goal is to voluntarily reduce (rather
than increase) stuttering severity

Cancellations, Pull-Outs, Preparatory Sets

- Cancellation: after stuttering moment
- Pull-out: during stuttering moment
- Preparatory Set: immediately before moment of stuttering (getting ready for high frequency work coming up)



Relaxation

Direct or Indirect

- **Direct:** specifically intended to either cause clients to be more relaxed than usual in speaking situations or to train them to relax parts of their speech musculature when they then feel tension in them
- **Examples:** Progressive relaxation
Suggestion (hypnosis)
electromyographic biofeedback
instrumentation

- **Indirect:** Suggestions that reduce tension while speaking that does not involve use of hypnosis

Slow-Prolonged Speech

- DAF
 - optimum is 250-millisecond delay

Rate Reduction

Rhythmic Speech

- Metronome-timed speech
 - pacing boards
 - miniature electronic metronome worn behind the ear
 - (one word or syllable per beat)



Masking

- Speaking while listening to loud masking noise
- turned on when person begins to phonate
- turned off when phonation ceases



Reducing abnormalities in breathing

- Teach smooth breathing
- pause at natural juncturing points
- breathe deeply
- plan ahead for content of speech
- relax chest and neck muscles

Reducing anomalies in laryngeal functioning

- Problems with initiating phonation
- problems with sustaining phonation in relaxed manner with adequate breath support
- airflow techniques
- easy onset

Punishing stuttering/positively reinforcing fluency

- Operant conditioning techniques
- response-contingent presentation of stimuli (shock, noise, verbal disapproval, response cost, time-out procedures)

OR

- reinforce periods of fluency and ignore moments of stuttering

Systematic Desensitization

- Premise: each time a person does not become highly anxious in presence of a stimulus that ordinarily elicits a high level of anxiety, the link between that stimulus and the “old” response is weakened a little

Emotional Flooding (Implosive Therapy)

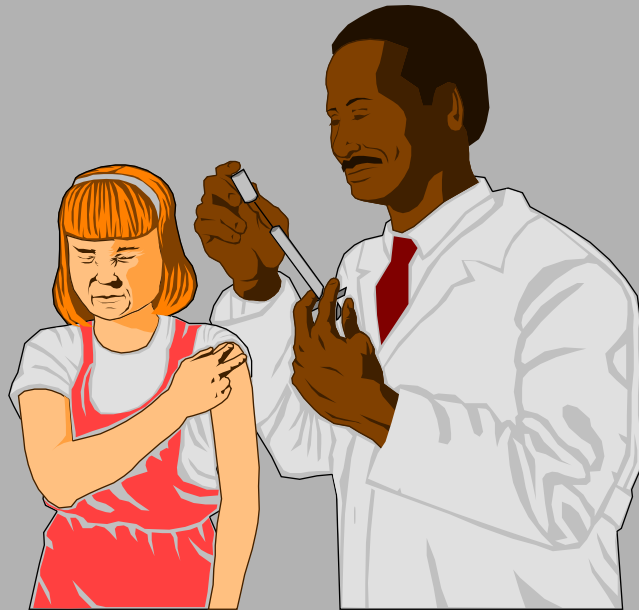
- Behavioral therapy that involves having clients enter or imagine themselves in highly disturbing situations
- produces an emotional “flood”
- Example: voluntary stuttering

Medications/Drug Treatments

- Bethanechol
- carbamazepine
- clomipramine
- meprobamate
- verapamil
- haloperidol
- Appear to make some PWS more fluent, but most eventually discontinue because of unacceptable side effects such as drowsiness and nausea

Acupuncture

- Reported to be effective as a component of a therapy program for reducing stuttering severity



Surgery
Botox Injections