

Treating the School-Age Child Who Stutters

Some Intervention Ideas And Resources

- 12 Components
- Rationale for Approach
- Research
- Intervention Activities/Techniques
- Additional Parent/Teacher Resources

**Peter R. Ramig
Pamela Stewart
Patricia Ogrodnick-Walton
Ellen Bennett
Darrell Dodge**

Presented by:

**Peter R. Ramig, Ph.D., Professor
Department of Speech, Language, and Hearing Sciences**

**University of Colorado
Box 409
Boulder, Colorado 80309
(303) 492-3049**

Contents

TREATING THE SCHOOL-AGE CHILD WHO STUTTERS

Introduction: Treatment Philosophy	1
Therapy Paradigm	1
Basic Principles Underlying Therapy	1
12-Component Treatment Program	3
1. Establishing Fluency through Increasingly Long and Complex Linguistic Stimuli.....	3
2. Regulating and Controlling Breath Stream	8
3. Establishing Light Articulatory Contacts	11
4. Controlling Speaking Rate.....	14
5. Facilitation of Oral Motor Planning and Coordination.....	16
6. Desensitization Therapy	18
7. Modification of the Stuttering Moment	20
8. Reduction of (Word) Avoidance Behaviors	22
9. Facilitating Development of Self-Awareness and Self-Monitoring Skills, as they Relate to Fluency	24
10. Facilitating a Positive Attitude Toward Communication and Toward Him/Herself as a Communicator	26
11. Transfer and Maintenance of Fluency	28
12. Parental Involvement.....	30
 Recommended Booklets and Pamphlets	 33
Recommended Video Tapes	34
References and Recommended Reading	34

Introduction: Treatment Philosophy for the School Age Child Who Stutters

The purpose of this paper is to provide the clinician with a clinically comprehensive, yet functional source of therapy principles, goals, and activities for use with the dysfluent school-age child. This information is drawn from a wide source of research studies and treatment programs, which reflects our overall eclectic treatment philosophy.

Our treatment philosophy represents two separate philosophical schools of thought, traditional and operant, and is heavily based upon the developmental continuum of stuttering in children. Fluency shaping therapy, based upon operant conditioning principles, first establishes fluency in a controlled stimulus situation. This fluency is reinforced and gradually modified to approximate normal conversational speech. Traditional theorists take a more holistic approach looking at the individual child and characteristics of the problem when planning treatment. More recently, researchers are looking at possible contributing factors to the child's dysfluency, such as physiological, cognitive, and social/emotional processes which may underlie the symptoms. When these "processes" are strengthened, fluency is thought to be facilitated.

In our effort to provide you with a complete comprehensive approach, keep in mind that these goals and activities should be used discriminantly--considering each child's individual needs and characteristics. It is also essential to consider the severity of the disorder, and the child's age and maturity level. Some goals and activities may not be appropriate for some children, while others may only require small modifications for use with specific children. You may find some of these activities to be the foundation for many new ideas.

Therapy Paradigm

A major concern with the treatment of dysfluency in children is creating and maintaining fluency. We feel the following approach is especially successful in this regard because we teach the child how to cope with and modify his/her stuttering, as well as increase his/her fluency.

Basic Principles Underlying Therapy

1. Treatment is based upon a developmental continuum, as stuttering is a progressive disorder.
2. The client-clinician relationship is an important variable built upon trust, confidence and understanding,
3. Children and adolescents typically do not have intrinsic motivation to change their speech; therefore, it is important to make therapy enjoyable and rewarding.

4. Success with fluency is paramount and therapy activities are structured at a level at which the child is able to attain fluent speech. Single word and phrase level tasks are often continued long after the child achieves fluency at that level. Building self-confidence is important and is targeted throughout treatment by providing the child with successful speaking activities.
5. Treatment plans are highly flexible and are designed to meet each child's changing needs.
6. It is important to help the children express and understand their feelings about stuttering. The clinician should share other children's experiences and validate embarrassment, pain and/or frustration with understanding and support. Reflect to the child what he/she may have difficulty expressing.
7. During therapy, clinicians use a slow rate of speech with increased pause and response time, and maintain appropriate eye contact during both fluent and dysfluent episodes. In addition to these fluency-enhancing behaviors, the clinician also models appropriate modification techniques, as well as easy stuttering behaviors.
8. Incorporate parental and teacher involvement in the therapy process when appropriate and as much as possible.

12-Component Treatment Program for the School-Age Child Who Stutters

COMPONENT 1: ESTABLISHING FLUENCY THROUGH INCREASINGLY LONG AND COMPLEX LINGUISTIC STIMULI

Rationale:

To provide a hierarchically based framework for application of principles for breath stream management, decreased speaking rate, oral motor planning, light loose articulatory contacts, and self-monitoring.” As the child increases the length and complexity of his/her utterances, they also increase the motor planning required to say these utterances. The motor planning required to coordinate the respiratory, phonatory, and articulatory systems becomes increasingly complex. As the length of the sentences increase, we also see an increase in the semantic and syntactic complexity, as well as an increase in cognitive activity. For the beginning speaker, language is a part of a complex array of developing skills, including linguistic and speech motor, which are essential to the production of fluent speech.

Research:

- Couture (1990) -recommends intervention that moves from "simple" to "complex" behaviors along a continuum of speech behavior.
- Costello (1983) -developed an operant therapy approach based upon extended length of utterance (ELU). Costello also advocates using nonsyntactic word strings to effectively increase the length of utterances while building fluency.
- Perkins (1992) -reports that people who stutter are more likely to be fluent when using short, simple utterances.
- Starkweather
And Givens-
Ackerman (1997) -recommend that disfluent children whose language development is being over stimulated can be helped by asking their parents to look for ways they can have mutually satisfying interactions with less talking and by reducing the number of questions that require long, complex answers by the child.
- Peters (1991) -incorporates the use of linguistic hierarchies, moving from single word, to a carrier phrase + word, to a sentence, to two to four sentences, gradually moving into conversation. Manipulating clinician models, physical settings, and persons present are additional components to intervention with young school-age children.
- Riley and
Riley (1983) -noted that their clients stuttered more during longer and/or more complex sentences and that improving the child's sentence formulation skills through a gradual increased length of utterance program, proved successful in facilitating fluency.

- Ryan (1984) -developed an operant therapy program (GILCU) based upon gradually increasing the length and complexity of utterances. Ryan reports a 100% success rate for very young children using this approach.
- Shine (1980) -described stuttering as a discoordination of speech muscle and language encoding systems, such that muscle innervation is too slow to keep up with the language idea the child wishes to express. He feels that beginning therapy with simple responses and gradually moving toward the more complex aids the child in pre-organizing his motor-planning strategies.
- Stocker (1980) -found that dysfluency in children increases with increased level of communicative demand placed upon the speaker. Stocker developed both a diagnostic and therapeutic approach based upon these findings.

Activities/Techniques

1. Word Level:

- a. Memory games - useful in eliciting single word responses. The child names each picture upon turning it over. The clinician models the same behavior, reinforcing the child's fluency.
- b. Go Fish and Outburst games - using pictures or words, will elicit single word responses which can be modeled and reinforced by the clinician.
- c. Bingo/Concentration games - playing concentration/bingo games in which the client and clinician alternate turning over a card and naming the item can be successful at developing spontaneous fluency at the word level.
- d. Animal Farm - The clinician and the client take turns taking animals out of a box and putting them on a farm. The client names the animals as he/she puts them on the farm.
- e. Classification games - where the child is asked to classify a number of different pictures or words provides a more cognitively stimulating activity at the single word level. The clinician chooses a number of different categories, selected according to the child's age, and asks the child to put each response item into the correct category. Peabody language cards are helpful for this type of activity.
- f. Secret Grab Bag games - utilizing objects or picture cards, drawn from a box or a bag, are fun ways to elicit single word responses.
- g. Naming- opposites - The client is presented with picture cards and responds by naming the opposite.
- h. Sentence completion - The clinician presents incomplete sentences which the child completes using one word. For example:
 - 1) The leaves fall from the _____
 - 2) Turn the light _____
 - 3) Please tie my _____
 - 4) Open the _____
 - 5) The time is 6 o' _____

2. **Phrase Level:**

- a. Word Combinations - stringing words together in various ways is the beginning of phrasing activities. Word combinations, such as color + noun, noun + noun, and number + noun, can be easily elicited through Uno, Trouble, Bingo, Concentration/Matching, and sentence building games.
- b. Carrier phrases are easily elicited with games such as "Chutes and Ladders" and "Candy Land." The child is instructed to respond at each turn with "I have a ____." The clinician models this response throughout the game and reinforces the child for easy, fluent phrase responses.
- c. Memory games - Modify the child's response to include a carrier phrase such as "I have a ____." "I have a match." "There is a ____" or "This is a ____" may be substituted or used in addition to "I have a ____."
- d. Picture cards - (e.g. Winitz verb cards, Peabody Language Cards, activity pictures) can be used to elicit a wide variety of phrase level responses. For example, the clinician may have the client use the cards in a drill activity where a phrase response is required describing the activity in the picture. The level of difficulty may be increased by having the clinician ask questions such as "What is the boy doing?" to elicit a response.
- e. "Tell me what you do with it" names - By utilizing pictures or words, the clinician can have the client describe what a variety of things are used for.
- f. "Simon Says" can be modified to be used at a two-phrase level inserting a pause between "Simon Says" and "touch your toes". This activity is also helpful in modeling reduced linguistic complexity and appropriate pauses.
- g. Game boards - The clinician prepares a game board that has various colored squares. As the child lands on each color, he/she is to pick the same colored card and read the phrase written on the back of it.

3. **Sentence Level: Complex multi-sentence level:**

- a. Verb cards - These can be used in several ways; the client can describe the action taking place in the picture, or two pictures can be placed side by side and a complex sentence may be elicited.
- b. Picture books - The client is requested to provide a sentence about each picture. Clinician modeling during this task may be necessary to obtain the desired response. This task may be introduced initially where the child simply repeats back a sentence produced by the clinician.
- c. Sequence pictures - The child is presented with sequence pictures and is asked to arrange them in the proper order while providing a sentence for each picture.
- d. Fokes Sentence Builder - An excellent tool that can be utilized to gradually increase the length and complexity of the client's sentences while providing visual stimuli. This may also be utilized to elicit nonsyntactic word strings of increasing length.
- e. Guessing Games - The clinician and client can play guessing games using pictures or ideas, where clues are given describing a person, place or thing. For example, "It's an animal" or "It's something you eat." The other person must guess the secret thought.
- f. Asking, and Answering Questions - Activities which assist the child in maintain fluency when asking and/or answering questions is pertinent to the school-age child who stutters. ("Brain Quest: Questions and Answers to Challenge the Mind" is an excellent, fun set of materials. Each box comes with two sets of questions and answers for preschool through

- 8th grade. Questions are divided into the categories of reading, math, vocabulary, social studies and science, and grab bag. These are a wonderful way to supplement the child's regular education curriculum while practicing fluency skills.)
- g. Description activities - Using picture cards, the child is asked to describe a variety of attributes of the picture. "What does it look like?" "What is it used for?" or "Where can it be found?" are questions which may elicit sentence length responses. ("Guess Who" is an excellent game for eliciting descriptive sentences using visual stimuli.)
 - h. Jobs/occupations - Provide the child with pictures of individuals depicting different occupations and instruct the child to explain what each does.
 - i. Sentence transformations - Instruct the child to form one sentence from two; e.g. "I have a coat. The coat is blue;" to, "I have a blue coat.

4. **Story Level:**

- a. Recount past events:
 "What happened on your last birthday?"
 "What did you do in school today?"
 "Tell me about Christmas?", etc..... use a topic that requires sequencing and specific people/experiences.
- b. Sequence cards
"What's Missing/Wrong Picture Cards" - The child describes in two to three sentences what is missing in the picture or what is wrong with the pictures. This language task, though higher level in complexity, still remains at a simpler level of complexity to ensure fluency success.
"What If Questions" - This task requires that the child propose answers to certain hypothetical situations requiring language reasoning skills ("What would you do if you saw smoke coming out of a building?")
- c. Books with no words - These are especially effective for the very young child and the dysfluent child who is exhibiting delays in reading development.
Reading Riddles, short poems - For some children who stutter, reading may be a fluency-facilitating task. Reading materials, which incorporate predictable rhyme patterns, can assist in learning how to phrase when speaking.
- d. Felt board stories - These are common everyday stories, which most children know. linguistic complexity is easily manipulated with this type of material.
- e. "All About Me Books" - Becoming more personal adds complexity to this sentence/story task.
- f. "Retell the Story" - Incorporating Rebus type stories in which the child retells a story facilitates ease in language formulation and linguistic complexity necessary for fluent speech production.
- g. Giving- directions - Obtain a variety of shapes or small objects, two of each. One set is for the child and one set is for the clinician. A barrier is needed to put between the clinician and the client. The clinician will ask the client to describe, in detail, sentence by sentence how to place the shapes or objects. Either a time limit or a certain number of sentences should be used. The clinician can make it more difficult for the client by shortening the time, increasing the number of sentences, or creating other fluency disrupters that would help the client use his tools for modification. For instance:

Clinician: "You need to make a picture with your objects. Now you need to tell me, step by step, how to put my shapes so that I can have a picture that looks exactly like yours."

Client: "Okay. First, put the circle at the top."

The client is expected to use his/her techniques throughout the game (i.e. stretching, easy onset of voicing, soft contacts). Response will be elicited through positive reinforcement by the clinician when the client uses his techniques.

5. Conversational Level:

- a. Role playing
- b. Problem solving
- c. Opinions and Refutations
Idioms, Proverbs, and Analogies
Telling Jokes
- d. General conversation about favorite activities, television shows, the family, what happened in school.

6. Storyline:

- a. When presented aloud with the first sentence or two of a story, the child will appropriately complete the storyline generating a story of several more fluent utterances. The clinician should consider the extent of emotionality included in the story line. Unemotional stories should be initiated prior to emotionally loaded story lines. ("Easy Does It: 1 and 2" provide good guidelines for addressing this component.)

COMPONENT 2: REGULATING AND CONTROLLING BREATH STREAM

Rationale:

Respiratory management and adequate breath support are important variables to be worked on with children and adolescents who stutter. Often times, in response to their stuttering, children will develop aberrant breathing patterns in an effort to control their stuttering. Behaviors such as talking on exhausted breath, quick, shallow inhalations, and talking on an inhalation, are common behaviors observed in dysfluent children. For those children who exhibit difficulty in initiating and/or maintaining airflow and voicing for speech production, direct techniques may be necessary to provide the child with tools for reducing tension and easing out of laryngeal blocks.

Research:

Adams (1980)

-states that teaching breath stream management within a linguistic complexity hierarchy maximizes the client's chances of competently executing intricate laryngeal behaviors.

Wall and Myers
(1995)

-caution that with older children, breathing exercises should only be used if the clinician detects an aberrant pattern. For example, clavicular breathing creates tension in the upper chest and laryngeal areas, and can be replaced with a thoracic-abdominal pattern.

Couture (1990)

-stresses the importance of the client understanding how respiration, phonation, and articulation work together to produce speech. He provides excellent analogies for use with school-age clients.

Costello (1983)

-agrees that breath stream regulation may facilitate the reduction of hard contacts, glottal stops, and "bombastic" initiation of phonation that characterize the dysfluent speech of some children.

Riley and
Riley (1983)

-recommend that the building of the speech support process, as airflow management, is an elementary goal in any fluency program.

Mallard (1982)

- found that, while people who stutter may not use easy on-sets of phonation, they are equally capable of learning how to produce speech in this manner as people who do not stutter.

Activities/Techniques:

1. Teach the client the concept of 'easy voice.' The clinician demonstrates a breathy initiation of phonation on a consonant-vowel (CV) combination. Instruct the client to 'feel' how easy his/her airflow lets his/her voice 'turn on.' The following hierarchy may be employed when teaching "easy voice:"
 - a. Passive breathing
 - b. Passive breathing with phonation. (Have client let out a small breath of air while beginning to move his/her articulators and then begin phonation on this breath stream.

- c. Proceed to single word production.
 - d. Proceed to carrier phrase. (e.g. "I see a _____.")
 - e. Proceed to phrase and sentence level.
2. In language appropriate to the child's conceptual level, explain the anatomy and physiology involved in voice production and what "happens" during stuttering.
 - a. Conture's (1990) water hose analogy may be appropriate depending on the age of the child. Conture draws an analogy between a garden hose and the speech production system, comparing areas where the water and air are turned off and, what happens as a result.
 - b. Use models and pictures of the larynx.
 - c. Make a life-size drawing of a "Mr. Speech Man" who has an exaggerated nose, mouth, lips, teeth, jaw, and a cut-away body that shows the larynx, the lungs, and the diaphragm. The clinician and child can take turns modeling speech behaviors and pointing to the appropriate place on the model where speech is facilitated or blocked. See the drawing used by Ramig in the video "The School-Age Child Who Stutters."
 3. Instruct the client to feel the clinician's larynx during the production of tense vs. hard voice onset (vowels or CV combinations are appropriate). Then have the child feel his own larynx during tense and relaxed productions.
 4. The concept of "speaking on an /h/" can also facilitate adequate regulation of breath stream. The client begins with /h/ plus a variety of vowels with the clinician cueing the client to feel this "easy voice." Then, contrast with pairs such as "hold/old", "hat/at" to facilitate awareness of easy onset of voice.
 5. Identification of abnormal breathing patterns may be necessary if these behaviors have developed in response to the stuttering moment. Help the child become aware of quick, shallow breathing and talking on exhausted breath. (e.g. "Did you breathe deeply enough?", "Are you talking with no air?")
 6. Some children may exhibit poor timing of the respiratory cycle. The clinician should model appropriate "chunking" of words into phrases to facilitate adequate inhalatory and exhalatory cycles. Pre-marking breath groupings on reading material is a good activity to aid in increasing the child's awareness of appropriate breathing. (This premarking should indicate where the pauses and inhalations for speech should come.)
 7. For the child who forces words out using levels of their expiratory reserve volume, assist him/her in slowing down their rate of speech, prevent the rush of words, and encourage appropriate pauses in an utterance. Cueing the child to "pause for a second" may also facilitate more appropriate breathing.
 8. Healey (1995) has found that if a child needs help in understanding the concept of controlling the air stream, a simple line drawing of mountains or a playground slide provides an easy way to help him visualize a typical inhalation/exhalation curve for speech.

9. Modeling and instructing the client to use easy voluntary prolongations at the beginning of phrases facilitates easy onset of voice, continuous voice production, and reduces laryngeal tension as well as allows for a reduction of subglottal air pressure prior to voice production.
10. To teach and visually reinforce easy onset, the clinician may use blowing bubbles at the initiation of airflow in the production of single words. Words should be chosen where the initial phonemes require intra-oral air pressure. (e.g., p ---- ull, p ---- at, p---our). Instruct the child to begin saying a word using easy speech. As he/she builds up air in the oral cavity, they should exhale slowly into the bubble wand and then initiate phonation.
11. Wall and Meyers (1995) provide a step-by-step method for incorporating longer phrases, that begins with “a slow, easy sigh, something like a heavily aspirated *ah*. After trying this a few times, slowly and easily, we have them add voice, following our model, so that a breathy, but voiced *ah* with an exceptionally easy onset is the result. We shape that to a breathy *I* . . . and, maintaining a slight breathiness on the *I*, elicit short phrases such as “I’m Jimmy.” As shaping continues, “each child is helped to use the word *I* at the onset of increasingly long phrases and sentences, always, of course, within the confines of his or her linguistic ability. As the clinician reduces the breathiness of the modeled *I*, the child usually follows suit (pg. 257).

COMPONENT 3: ESTABLISHING LIGHT ARTICULATORY CONTACTS

Rationale:

Children and adolescents who stutter frequently produce consonants with hard articulatory contacts. Hard contacts are the source of a great deal of articulatory tension and may result in the impedance of airflow in the oral cavity. Teaching the client to produce soft, loose articulatory movements is helpful in reducing the articulatory tension. Light contacts are also helpful in providing the child with a tool to reduce tension during the stuttering moment.

Research:

- Couture (1990) -recommends making speech "visible" through learning easier onsets. He incorporates the use of the VU meter to demonstrate how one can "make appropriate vocal initiations and transitions" (pg. 196).
- Gregory (1991) -emphasizes the use of an easier initiation of speech with smooth movements from sound to sound.
- Rustin (1995) -asks her clients to "maintain the place and manner of normal articulation without slurring or omitting sounds" when they practice all or some of the consonants within a word using a lighter contact point between articulators, principally on plosive sounds (pg. 64).
- Irwin (1980) -uses the concept of lengthening or Plasticizing the first syllable of a dysfluent word in his treatment approach, asserting that it reduces the muscular tension in the speech organs.
- Peters and Guitar (1991) -use the fluency enhancing behavior of "soft contacts" for some clients. "By this, we mean that the movements of the articulators (tongue, lips, jaw) should be slow, prolonged, and relaxed. These articulatory movements should not be fast and tense" (pg. 231).
- Wall and Myers (1995) -find loose contacts a most useful technique. This technique requires reduction of muscle activity in the vocal tract, thereby preventing immobilizing tension and allowing smooth movement through a word.
- Van Riper (1973) -stresses the importance of reduced oral tension during light articulatory contacts, especially within the context of modifying stuttering behaviors.

Activities/Techniques:

1. Teach the child the concept of soft, loose sounds. Emphasizing the "feeling" of loose articulatory movements and smooth, continuous airflow. How relaxed does the tongue feel? "Soft sounds" can be taught at the phoneme level and incorporated into activities that follow a hierarchy of increased length and linguistic complexity up through conversation.

2. Use of a delayed auditory feedback unit (DAF) may be used with older children to facilitate light articulatory contacts through abnormally slowed rate at the single word through reading levels.
3. Voluntary stretches, accomplished by lengthening or prolonging the first syllable of a word, involve soft, slow articulation of the consonant and prolonged phonation of the vowel. These stretches may be incorporated in single words through conversational tasks.
4. To explain the concept of light articulatory contacts, Healy and Scott (1995) suggest inviting the child to think of things that touch lightly and softly, such as “leaves falling to the ground,” or “a butterfly landing on a flower.” Clapping the hands very lightly so that they just barely touch can be contrasted with a hard clapping motion.
5. Contrast drills are a helpful activity to increase the client's awareness of hard vs. soft articulatory contacts. Be sure to emphasize kinesthetic awareness. Have the child read from a list of words alternating hard and soft productions of each word. Encourage the client to feel the difference while the clinician explains why they are different. Negative practice drills (Gregory, 1989), in which the client produces a hard moment and then reduces the tension by 50%, provide an excellent way to demonstrate this concept of hard versus soft speech production.
6. The clinician may demonstrate several samples of the child's stuttering behaviors and then demonstrate how he/she can stutter more easily. The clinician may slow down a repetition, stretch out of a block, or do an easy repetition to ease out of laryngeal block. One way of facilitating comprehension of different ways of stuttering is through the use of "triad" drills. Each point of a triangle represents certain ways of stuttering: "hard bounce, easy bounce, and slide" and/or "easy bounce, slide, and easy onset (stretch)". Starting with the first triad (HB,EB,S), the client learns how to change his/her stuttering patterns and gradually works toward the second type of triad (EB,S,EO). Multiple repetitions of triad drills will facilitate the development of monitoring and proprioception skills. For the younger child, Westbrook (1989) uses the analogy of "Energy" to facilitate this concept. The child manipulates various levels of tension as a means of "conserving energy"; energy being on a continuum of 100% energy (hard speech) to 25% energy (easy speech).
7. The following excerpt is from Dell, "Treating The School-Age Stutterer," and describes a method of teaching light, loose articulatory contacts:

"When you are stuttering hard on it, you will feel your tongue jammed up against the alveolar ridge. You will also feel air pressure building up behind your tongue. The air wants to escape but you are forcing it back with your tongue. Now gradually loosen the pressure on your tongue by reducing the force of the air pressure pushing up against it. Then gradually begin to relax the tension you have purposely placed on your tongue. When you remove some of this lingual pressure, you will probably hear a little burst of air escaping between the tongue and the alveolar ridge. You then need to change these bursts into a small, steady stream of air. Once you have this steady stream of air, it is easy to add the voicing necessary and once again slide into the word but beware of prolonging the vowel. It should be 'ttable' not 'taaable'."

8. Cancellations may be employed to further facilitate awareness of light articulatory contacts. Immediately after the stuttering moment, the child should repeat the word with a light articulatory contact. "This technique allows the child to reattempt a word in which the articulatory gestures have not been smoothly produced" (Wall and Myers, pg. 260).
9. "With the very young child we use floppy rag dolls and puppets to convey relaxation. Clinicians, assuming a relaxed, floppy posture, make movements to suggest muscle looseness." "Having the child talk "easy" instead of "hard" or "bumpy" is another way of getting at loose contacts" (Wall and Meyers, pg. 259).

COMPONENT 4: CONTROLLING SPEAKING RATE

Rationale:

Use of a slowed-speaking rate enhances the spacing and timing of articulatory movement as well as the coordination and integration of the respiratory, phonatory and articulatory systems necessary for the production of fluent speech.

Research:

Healey and
Scott (1995)

-find that a slower-than-normal conversational pace has a physical and mental calming effect that is facilitated through both speech and non-speech behaviors. They believe it is "essential for the clinician to control the pace of the conversation and the session.

Conture (1990)

-agrees that changes in speech production behaviors that are conducive to modifying the client's physical tension and rates of production appropriate for their age should be incorporated into the treatment plans for children who stutter.

Gregory and
Hill (1980)

-recommends the use of a slower rate with easy initiations and smooth movements through the utterance may facilitate fluency development.

Meyers and
Woodford
(1992)

-incorporate the rule of "slow versus fast" in their fluency development program. Stressing the importance of conceptually-based therapy activities, children learn to experience "slow versus fast" through motor, language, reading, and speech activities.

Perkins (1986)

-stated that a reduced rate of speaking facilitated the coordination of phonation with articulation while maintaining normal prosody. Perkins advocates rate reduction by use of a prolongation tactic.

Shine (1980)

-discussed how reduced rate and intensity serve to modify physiologic and aerodynamic speaking variables which are compatible with fluency and incompatible with stuttering.

Wall and
Myers (1995)

-"Our experience is that the slow-normal rate of speech - perhaps incurring a simplification of motor timing - usually reduces the number of repetitions and prolongations of sounds in the young stutterer's speech."

Wall and
Myers (1995)

-say that coarticulation may occur more easily when the speech rate is slowed.

Activities/Techniques:

1. Introduce the concept of a reduced, controlled speaking rate by attaching a meaningful name to it. "Turtle talk" and "slow, easy speech" are popular names. "Slowed rate" and "slowed speech" are more appropriate for the older client.

2. The clinician provides frequent models of reduced speaking rate. Emphasis is placed on smooth articulatory transitions, slightly prolonged consonants and vowels, and natural sounding intonation and stress patterns.
3. The clinician can incorporate natural, language-based activities which allow the client to experience fast and slow through body movements, singing, coloring, writing, etc. Compiling a photo/picture album of fast and slow animals, and then imitating their body movements can be a fun learning experience for the young child.
4. Vehicles can provide useful analogies for slow speech. Barry Guitar's concept of slow "four wheel drive speech" rather than faster two wheel drive speech, can be a helpful analogy for demonstrating how children may negotiate "bumpy" speech passages. Playing "Traffic Cop" with young children is another way of demonstrating the consequences of "going fast" (both in the car and in one's speech). The child can issue the people in his environment tickets when they "speed in their speech", thus incorporating the home environment in the therapy process.
5. Delayed auditory feedback (DAF) can be used to facilitate a slowed rate of speech. The client may begin at a very slow rate and gradually increase to a level reasonable for fluency. The DAF is gradually faded and the slow rate is transferred to spontaneous speech.
6. Gestural cueing may be used during structured and unstructured activities to facilitate increased awareness and control over rate.
7. Starkweather and Givens-Ackerman advocate a three stage method of teaching rate control: The first stage is learning to talk in "super slow motion." The second stage (rate control) involves gaining increased control over speech rate and learning to vary it. In the third stage (cued rate control) the child learns to slow down and speed up at will when a difficult speech segment is past. They note that "with practice, children get very good at this and can slow down for a half second to get through a particular sound at the beginning of the word and then be back to a normal speech rate before the word is finished. Listeners will hardly be aware that the child is slowing." They suggest that the child verify this by interviewing several listeners.

COMPONENT 5: FACILITATION OF ORAL-MOTOR PLANNING AND COORDINATION

Rationale:

Current research supports targeting oral motor planning and coordination in stuttering therapy. Many people who stutter, both children and adults, speak with reduced articulatory movement, reduced jaw opening and increased velocity of movement. Slowing the speaking rate while increasing articulatory movement, facilitates increased spacing and timing of articulatory movement which enhances fluency.

Research:

Starkweather
and Givens-
Ackerman (1997)

-for younger children, recommend that the coordination, speed, and speech control that children need in order to speak fluently are best practiced during those circumstances where fluent speech is more likely to occur.

Ratner (1996)

-cautions that stuttering may coexist with other speech and language problems involving difficulties with verb phrases, words starting with particular sounds, or complex and coordinate constructions acquired later in the developmental sequence. She recommends strategies for dealing with these coexisting conditions.

Ingham (1984)

-cited Zimmerman's studies which state that the articulator(s) of the stutterer have a much less synchronous relationship during fluent and disfluent productions, than do the articulators of non-stutterers.

Riley and
Riley (1986)

-support the inclusion of an oral-motor planning goal in therapy if warranted through diagnostic procedures. A 1983 study by Riley and Riley revealed that 87% of dysfluent children experience difficulty timing laryngeal, articulatory, and respiratory events which support accurate syllable production.

Riley and
Riley (1985)

-state that some children do not master the necessary motor aspects of speech in time for normal fluency to develop, thus requiring intervention. They divide oral motor coordination to include three areas: accuracy, smooth flow, and rate.

Zimmerman
(et. al) (1983)

-concluded that inadequate central processing capacity is the "subsoil" of stuttering. They hypothesized that stutterers are limited in their abilities to deal with the relationship between motor speech output and its associated feedback.

Activities/Techniques:

1. Activities for slowed speaking rate may be used to target this goal.

2. Encourage and reinforce over-articulation during all speaking activities once the child has established a reasonable level of fluency. If over-articulation is introduced too early, clients have difficulty focusing on both fluency techniques and over-articulation.
3. If the client exhibits severe groping and posturing behaviors, or other behaviors which may be characteristic of developmental dyspraxia, more direct dyspraxic treatment may be warranted.
4. John Frick used four techniques for motor planning: structuring, developing the child's awareness of a breakdown in planning, becoming aware of fluency, and improving motor planning ability. Analogies from sports and dance are used to visualize the structure and movements of fluent speech. The child signals the clinician when stuttered speech is anticipated and performs a self-appraisal of how this anticipation is cued: through anticipation of movement, auditory monitoring, or vision. The awareness of fluency is taught by exaggerating and feeling the movements of fluency and viewing them in a mirror. Finally, the client practices formulating a fluent utterance, signals the clinician when ready, and carries out the fluent speech. To reinforce planning during continuous and spontaneous speech, Frick asked clients to practice cancellations of entire phrases when motor planning breakdowns occurred (described in Wall and Meyers, 1995).

COMPONENT 6: DESENSITIZATION THERAPY

Rationale: To desensitize the child to the fear and expectancy of the stuttering moment. Appropriate desensitization procedures will also be effective in reducing negative emotionality.

Research:

Ramig and Bennett (1997) -reiterate the observation that desensitization is aided when the child can practice pseudo-or voluntary stuttering in a supportive, accepting, and caring environment.

Dell (1979) -advocates three ways of teaching a child to say a word: the fluent way, the hard stuttering way, and the easy stuttered way.

Ham (1986) -defines desensitization in terms of client hypersensitivities to normal nonfluencies, stuttering, people, situations, and/or specific words. Therapy should incorporate activities which reduce one's fears and anticipatory behaviors.

Guitar (1997) -recommends that clinicians "teach the child a variety of ways in which to be open about stuttering, including humor about stuttering, sharing with classmates, and appropriate comments in difficult speaking situations."

Peters (1991) -emphasizes desensitization to fluency disrupting stimuli, such as interruptions, competition to speak, or excitement that may produce increased moments of stuttering. Reducing negative feelings and attitudes and eliminating avoidance needs to be incorporated for some children who stutter.

Van Riper (1973) -"Since the fears, avoidance and struggle which characterize advanced stuttering stem from its unpleasantness, an unpleasantness which tends to grow stronger, no therapy can hope for success unless it seeks directly to reduce it."

Van Riper (1973) -"Another essential and difficult thing to do... is to help the child to understand what he/she should do differently when he/she fears or experiences stuttering."

Activities/Techniques:

1. During therapy activities, model easy stuttering behaviors. By reacting to your dysfluencies without struggle and tension or negative emotionality, the child learns a new way of reacting to his/her own dysfluent speech.
2. While employing an increased length and complexity of utterance framework, encourage easy bouncing and stretching behaviors. Teach the child he/she can stutter without struggle and tension.

3. Structure therapy activities that provide the child with opportunities to "catch" the clinician bouncing. The clinician reacts to being caught in a positive manner, which facilitates increased acceptance of the stuttering, as well as providing an easy model of dysfluent speech.
4. Activity number three may be expanded to include the clinician catching the child bouncing, the child imitating the clinician's bounce, or the child providing an "easier" way to say the dysfluent word. By incorporating activity number three prior to the above, the child reacts more positively to his "being caught."

The following is an example of the dialogue associated with these activities:

Child: "I heard you bounce!"
 Clinician: "Good! What word did I bounce on?"
 Child: "Marshmallow"
 Clinician: "Good! Can you show me how it sounded?"
 Child: "M-m-marshmallow" '
 Clinician: "Good! Now show me an easy way to say that word."
 Child: "Marshmallow" (The child produces the word with a stretch on the first syllable).

5. The clinician instructs the child to read or speak using easy pseudo-stuttering. The client may be given general or specific instructions as to what words or place of the sentence to pseudo stutter. The child learns an easier, unforced form of stuttering while approaching his/her dysfluency.
6. After the child experiences success with easy stuttering, encourage him/her to use easy bouncing and stretching on real stuttering. Variation, such as slowing down, easing out of, or changing moments of real stuttering provides the child with feelings of increased control over their speech. For example, if the client is exhibiting silent laryngeal blocks with complete cessation of airflow, suggest (or model) that the child tries to "bounce out of the hard speech." Or, if the child exhibits multiple-part word repetitions, slowing them down and stretching them out may be particularly successful.
7. For the older client, Ham (1986) recommends two approaches to desensitization: " 1) desensitization to stuttering by repeated exposure to stuttering in a variety of modes and situations, and 2) desensitization to fears by exposure to a hierarchy of situations, ranked for their anxiety-causing, stuttering potentials" (pg. 134). This exposure to a "stuttering bath" reduces spasm frequency, severity, and complexity while increasing tolerance and objectivity.

COMPONENT 7: MODIFICATION OF THE STUTTERING MOMENT

Rationale: To teach the child to stutter easily and without struggling and to provide the child with techniques that can be used to modify stuttering outside the clinic.

Research:

- Starkweather and Givens-Ackerman (1997) -use the concept of "repair" to explain what happens when stuttering behavior is modified at the moment it is occurring, and the concept of "moving forward" to help the school-age child visualize moving from one sound to the next.
- Conture (1990) -has observed that stuttering patterns will begin to "change as children become more and more objectively aware of where and when in the speech utterance they begin to stutter" (pg. 174). "Changing rather than pushing or pulling on speech postures" only causes them to hesitate and stutter even harder.
- Dell (1979) -advocates teaching the child there are three ways of saying a word; the fluent way, the hard stuttering way and the easy stuttered way.
- Guitar and Peters (1991) -"the first aim of stuttering modification treatment for the elementary school-aged stutterer is to help him reduce the abnormality of his stuttering.
- Van Riper (1973) -advocates immediate attempts to get the child to substitute a new pattern of easy stuttering for the old one of struggle.

Activities/Techniques

1. Model for the child an easier form of stuttering. Teach him/her that by reacting to the stuttering moment with struggle and tension, the stuttering becomes harder. The clinician should contrast the hard stuttering with the easy stuttering, and then ask the child to imitate the production.
2. Drill activities (single word to reading level) are helpful in massing practice of pullouts. Model for the child examples of appropriate pull-outs prior to and during each exercise.
3. Carl Dell's approach discussed previously is an excellent way of teaching the child how to change their speech from hard stuttering to easy stuttering. Playing games in which the child classifies the clinician's production (hard, easy, or regular) and vice-versa, provides the child with examples of different speech patterns and empowers him to make "choices" regarding his stuttering.
4. During conversational or more unstructured activities, identify instances of hard stuttering for the child and model an easier way of saying the word. The child is then asked to

imitate the easier, modified form. One way of demonstrating this is by having the clinician clench his/her fist at the onset of a moment of stuttering, holding onto the moment, reducing its strength, and slowly open the fist as the stuttering moment is released. Then the client and clinician demonstrate this behavior together, talking about "getting stuck and getting unstuck". Gradually, the client cues himself during a moment of stuttering and slowly releases himself from that moment.

5. Wall and Meyer (1995) advocate the "pullout" as being "particularly useful" to help the school-age stutterer learn how to modify unanticipated blocks. For clinicians reluctant to use this technique, they suggest explaining it to the child in this way: "Pushing your way out of a block doesn't really help. It's a habit and it's uncomfortable. Instead of pushing, ease the word out and move gently onto the rest of the word. You need to loosen up—like a loose contact right there in the middle of the block. But don't forget to get moving and finish the rest of the word" (pp. 260-261).
6. Cancellations are another method of modification therapy. The child is asked to pause following a moment of stuttering and then say the word again in an easier way. The cancellation allows the frustration and pain of stuttering to be "erased."

COMPONENT 8: REDUCTION OF (WORD) AVOIDANCE BEHAVIORS

Rationale:

Avoidance behaviors must be eliminated because they facilitate the progressive growth of the fear of stuttering.

Research:

- Fawcus (1995) -stresses that “the effects of avoidance are insidious in maintaining word and situation fear.” Because the idea of eliminating avoidance can be “threatening” to the client, “we need to present a clear rationale” to encourage adolescents to work on this aspect of stuttering.
- Fawcus (1995) -says that in combating avoidance, and important step is to help the young person “build up a store of experiences of [actual rather than imagined] listener reaction so that he may more reliably predict how people will behave if he does stutter.”
- Bloodstein (1993) -suggests that the client who thinks of himself as a "stutterer" expects to stutter. This anticipation to stutter is, at times, enough to produce stuttering. "Almost every stutterer has his or her own private list of difficult words" (pg. 5).
- Perkins (1973) -stated that awareness of the specific stuttering behaviors that must be managed is crucial to the maintenance of fluent, "normal sounding" speech.
- Peters and Guitar (1991) -emphasize the importance of reducing the child's negative feelings about his speech and toward eliminating any avoidance behaviors.
- Van Riper (1973) -suggests that the clinician model an easier type of stuttering, and incorporate 11 easy" stuttering games into the speech play. Showing the child a different way of stuttering, without struggle and tension, helps to reduce expectancy, negative emotionality, and struggle and tension behavior. Van Riper cautions, however, not to make the dysfluent child sound or word conscious because each child demonstrates marked variation in the words and sounds he will have difficulty on at any given point in time.
- Williams (1971) -encourages the attitude that stuttering (getting stuck) is only a simple mistake and compares it to simple mistakes in everyday things.

Activities/Techniques:

1. The clinician and older client (ages 15-17) can discuss the characteristics of word and sound avoidance behaviors, as well as why the client feels it is necessary to avoid.
2. Have the older client (ages 15-17) keep a log book of specific words and sounds he/she avoids and in what situations these avoidances occurred.

3. Fawcus suggests that, once avoided situations are listed, it is useful to place them in rank order. "Although we may . . . decide to tackle the least feared and avoided situation, many clients cope well with starting much higher on their hierarchy list, particularly if the avoided situation is presenting problems." She also suggests having the young person acquire a list of actual reactions to his or her stuttering by walking up to people and asking the time or directions (pp. 82-83).
4. To eliminate "uh's and um's" used as avoidance behaviors, the clinician may use an abacus or counter to identify and count these behaviors. The client is then encouraged that he/she has the ability to say the word without the interjection and is requested to do so.
5. Playing games in which the client/clinician insert "uh" and "uhm" as often as possible while the other person "catches them" may assist the child in identifying this avoidance behavior. Once the child has identified this feature in their own speech, they are reading to practice eliminating the use of interjections. The client must become comfortable and "feel safe" with his stuttering through the use of voluntary stuttering, "triad" drills, and easy bounces and slides. As he confronts the moment of stuttering openly and without fear, the use of this type of avoidance behavior will gradually decline.
6. Discussing the consequences for using "avoidance behaviors" may also help the client to understand the importance of eliminating them. Problem solving with the client by noting all the possible outcomes of avoidance behaviors, regarding of their positive or negative affect. The clinician then lists these consequences, and together with the client, assigns a value to their impact on communication.
7. The clinician should observe any secondary or avoidance behavior specific to the child's pattern. All such behaviors should be eliminated through increasing the child's awareness of the behavior, discussing its occurrence, and demonstrating how the child doesn't need them to talk.
8. Any specific avoidance, such as the client's name, which the client reports, must be dealt with directly.

COMPONENT 9: FACILITATION OF DEVELOPMENT OF SELF-AWARENESS AND SELF-MONITORING SKILLS, AS THEY RELATE TO FLUENCY

Rationale: The client must be able to effectively identify, through adequate self-monitoring skills and self-awareness, those elements which are interfering with his/her fluency. Development of these skills is crucial to the attainment and maintenance of fluency.

Research:

Healey and Scott (1995) -say that "for those children who are unaware or fail to openly discuss their stuttering, it is beneficial to establish a level of awareness and some degree of openness regarding the stuttering before discussing the processes involved in fluent and stuttered speech."

Starkweather And Givens-Ackerman (1997) -advocate increasing the child's phonological awareness to increase self-awareness and organize the process of speech. They note that school-age children feel a genuine sense of power when they have learned how each of the sound categories are made.

Conture (1990) -has observed that as the client learns more about the "where" as well as the "when" of their stuttering patterns, they begin to learn more about how these behaviors interfere with speech.

Cooper and Cooper (1985) -strongly believe that school-age child who stutter must develop self-awareness of stuttering patterns and associated behaviors as part of their intervention program.

Ham (1986) -"elements of self-analysis should be available as part of the stutterer's own knowledge and be functional during any situation in which he or she participates" (pg. 69).

Perkins (1973) -states that awareness of the specific stuttering behaviors that must be managed is crucial.

Van Riper (1973) -strongly advocates teaching the dysfluent child to identify his/her own primary and secondary stuttering behaviors.

Activities/Techniques:

1. Initially, Healey and Scott (1995) invite the child to identify imitated stuttering moments from their speech. They also ask the child to recognize imitations of secondary behaviors the child exhibits in order to avoid or conceal the stuttering.
2. Tape record - Use of audio taped speech samples is helpful in initial identification of primary or audible secondary behavior(s) as well as continued identification of inappropriate rate and audible tension. Audio taping is also helpful during the later

stages of therapy to improve self-monitoring skills. The client may be asked to assess a sample of his/her speech for effectiveness of technique use.

3. On-line identification - The clinician first identifies primary and secondary behaviors or easy and hard speech for the child. Then the child gradually begins the identification of these behaviors himself/herself. It is helpful to contrast the identified behaviors with easier forms of saying the word or describing what made the word hard. Cooper and Cooper (1985) developed the "Apple Core" worksheet that provides a visual demonstration of one's stuttering (the apple core) and what one does because they stutter (the seeds).
4. Identifying behaviors in the clinician's speech is a helpful way to initially increase the child's awareness.
5. Contrast drills - Using word lists, the client is instructed to produce each word - first hard, then easy. The clinician aids the client in identifying what made each word hard or easy.
6. For the later stages of therapy, the clinician must cue the client to monitor those aspects of his/her speech that may be interfering with fluency. Gestural cues may be adequate; however, verbal cueing such as "Did that feel hard?" "Is your mouth open enough?" and "Did you feel that you had no air for speech?" may be more helpful.

COMPONENT 10. FACILITATION OF A POSITIVE ATTITUDE TOWARD COMMUNICATION, AND TOWARD HIMSELF/HERSELF AS A COMMUNICATOR

Rationale:

It is beneficial for the child to develop a positive attitude toward himself/herself as a communicator. The child needs to approach communicating without fear and apprehension, and to experience successful speaking situations.

Research:

- Blood (1995) -says that “one way to increase client satisfaction with [newly acquired] behavior skills is by training clients to attribute the acquisition of these skills to themselves and not some magic pill.”
- Andrews and Cutler (1974) -noted that change in the person's self-concept as a speaker is imperative for therapeutic success.
- Ramig and Bennett (1995) -discuss the importance of addressing attitudes and feelings of the school-age child who stutters.
- Bennett, Ramig, and Reveles (1993) -found that children attending a summer fluency camp exhibited negative communication attitudes which consisted of both interpersonal and personal components.
- Bloodstein (1987) -encourages parents to provide successful speaking situations for children-nursery rhymes, choral speaking, etc.
- Daly (1988) -incorporates both mental imagery and positive self-talk strategies into the treatment paradigm for adolescents and adults who stutter.
- DeNil and Brutten (1991) -investigated the communication attitudes children and found that the child who stuttered exhibited greater negative communication attitudes when compared with 'their fluent peers.
- Starkweather, et al. (1990) -states the child's concern about his/her speech may result from parental reactions toward his/her stuttering.
- Guitar (1976) -found that pre-therapy attitudes may predict therapy outcomes. Subjects who exhibited high pre-treatment speech avoidance exhibited significantly higher post-treatment stuttered speech.
- Guitar and Bass (1978) -found that changes in clients' communicative attitudes seemed to be related to long-term improvements in fluency.
- Van Riper (1973) -stresses the importance of making speech a pleasant experience.

Activities/Techniques:

1. "All About Me Book." Encourage and reinforce the child's strong areas, i.e., singing, coloring, artwork. Make the child feel good about the things he/she does well.
2. Employ hierarchically based therapy activities that provide maximum success with fluency. Make therapy fun and enjoyable for the child as well as successful.
3. Always encourage an open line of communication. The child must feel trust and confidence in the clinician's ability to help him/her, and the clinician should be supportive throughout the therapy.
4. The clinician is encouraged to talk openly about stuttering and reduce the "conspiracy of silence" which often surrounds the disorder. Talking about talking and talking about stuttering will convey an atmosphere of total acceptance and will enhance the client's self esteem.
5. Activities about "Ways of Becoming a Good Communicator" will help the client see that communication is more than just "how" one speaks but also includes "what" one has to say. Talking about turn taking, interruptions, and reaching the client various coping mechanisms will enhance the development of "speech assertiveness.
6. Discussing the "global attributions" of the clients is very important to the process of attitudinal change. Catch the client when he/she says a "can't" or "never" comment and spend a few moments talking about how one talks to oneself does affect one's behavior. Changing "negative self-talk" into "positive self-talk" are viable tasks for the clinician and client to undertake.
7. Bennett (1996) discusses the importance of handling the situational shame that children who stutter experience. She points out that "shame subsides when an individual can explain a chance behavior in terms of a logical consequence to one's own habits." Therapy activities help resolve shame when they:
 - a. provide specific terminology to describe moments of stuttering so that it is demystified
 - b. eliminate deficiency messages from the self and significant others.
 - c. include for the child a glimpse of alternative modes of behavior
 - d. reinforce positive self-talk and speech assertiveness
 - e. encourage openness, melting away the conspiracy of silence around the disorder of stuttering.

COMPONENT 11. TRANSFER AND MAINTENANCE OF FLUENCY

Rationale: Fluent speech is generally easily achieved within the clinical environment. However, this fluency is of little value unless the speaker is able to transfer his/her new skills into his/her normal communication environment. Transfer should be encouraged throughout the intervention process as the child learns strategies to facilitate his/her fluency.

Research:

- Blood (1995) -stresses that management of relapse “should include phases that teach the client to approach, understand, and solve problems.”
- Bennett (1996) -compares maintenance to the “roof of fluency,” citing the need for a regular maintenance plan, the need to understand the phenomenon of relapse, and the need to revisit earlier stages of therapy to do “touch-up jobs.”
- Ramig and Bennett (1995) -say that it is the clinician’s job to discuss the occurrence of “relapse” in the disorder of stuttering. They assert that comprehending relapse and developing coping strategies to deal with it are essential to successful therapy.
- Adams (1991) -transfer activities should be conducted systematically and must involve active participation of the clinician and significant adults in the child’s environment.
- Gregory (1991) -the school environment is an excellent place for extending the use of improved speech. This transfer of speech skills is facilitated early on in the therapy process.
- Peters and Guitar (1991) -the goal of this phase of therapy is to transfer the child’s fluency from the therapy situation to a wide variety of other settings and other people.
- Ryan & Van Kirk (1974) -are convinced that those clients who are enrolled in maintenance programs have better fluency than those clients who are not enrolled.

Activities/Techniques:

1. The clinician and client can work together to identify potential factors associated with relapse and develop coping strategies. Blood (1995) suggests that these strategies can include expressing negative emotion, developing appropriate assertiveness responses, and bouncing back after a stuttering episode.
2. For Transfer:
 - a. Use ongoing strategies.
 - b. Define a hierarchy of situations from easy to difficult.

- c. Use different physical environments.
 - d. Increase audience size and encourage "guests" in therapy.
3. For Maintenance:
- a. Weekly or monthly telephone checks with the parents.
 - b. Sessions are reduced to weekly, biweekly, monthly, etc.
 - c. Intermittent home practice in structured and unstructured activities.
 - d. Have the client make a tape of several conversations at home. Have him/her grade their performance on several areas such as rate, soft contacts, and stretches; and then bring the tape to therapy so the clinician can give his/her feedback.
4. Bennett's "House that Jack Built" (Ramig and Bennett 1995) incorporates fluency shaping and stuttering modification techniques in an ongoing activity that lays the groundwork for transfer and maintenance of more fluent speech. The activity incorporates all steps included in this intervention summary in three processes:
- a. Laying the Foundation of Knowledge – Activities designed to increase the child's cognitive awareness of the stuttered and normal speaking process.
 - b. Installing the Plumbing – Exploring the dynamics of stuttering to increase perceptual awareness and facilitate desensitization. The child identifies the "clogs" that represent the moments of stuttering and learns how to unclog them.
 - c. Building Rooms and Walls – Encouraging the child to build his/her own "House of Fluency," incorporating various elements and practices (rooms and walls) that facilitate better speech communication, including "rooms" for self-intervention and the handling of relapse.
 - d. Building the Roof of Fluency – Fluent speech is envisioned as a roof that needs regular maintenance. Continual attention to the foundation, rooms, and walls is required to hold up the roof.
5. Westbrook (1994) describes a transfer and maintenance activity called "Jacob's Secret Speech Bracelet." The child makes a beaded bracelet, and each bead represents a particular strategy to be implemented. The child decides what each bead represents and shares this with someone else. This reminder, worn throughout the day, serves as a subtle cue to transfer speech skills to different settings.

COMPONENT 12: PARENTAL INVOLVEMENT

Rationale:

As the child is in therapy only two-three times weekly, the parents must involve themselves in the treatment process to assure maximum progress. Parental communicative style and communicative feelings of guilt, fear and anger must be dealt with through the therapeutic process.

Research:

- Ramig (1993) -suggests three stages of parent involvement in the treatment process: 1) subjects of educational counseling, 2) facilitators of communicative interaction with the child, and 3) observers and participants in the treatment process.
- Guitar (1996) -cautions that parents should be supportive of child and therapy, “but should be parents, not function as clinicians.”
- Ramig and Bennett (1995) - say that “the child experiencing the daily negative impact of stuttering can be helped to cope more effectively if the parents have a better understanding of the problems adversely affecting the child and family.”
- Conture (1990) -"All the good that is done in therapy can be offset, in a relatively short time, by parents who cannot, or will not, understand their role in their child's speech development."
- Gregory (1991) -feels strongly that parents need to understand the stuttering problem, its variability, factors associated with this variability, and how the child responds to fluency disruptions.
- Gregory and Hill (1993) -success of the therapy depends to a great extent on the commitment of the parents.
- Kelly and Conture (1991) -stuttering results from a complex interactions of constitutional and environmental factors. Intervention with children who stutter should include attention to these factors. Therefore, establishment of parent-child fluency groups may provide an opportunity for clinicians to assist parents in better understanding the disorder and ways they can help their child.
- Perkins (1992) -implies that parents are part of the environment that maintains the child's dysfluent speech; therefore, their direct involvement in working with the child is critical to effective treatment.
- Ramig (1993) -"Involving parents in the intervention process is an important step toward facilitating the changes for improvement in the young child who stutters" (pg.226).
- Botterill, Kelmaii and Rustin (1991) -stuttering arises out of a complex interplay between the child's environment and the skills and abilities the child brings to this environment. Intervention programs should incorporate a dimension of environmental change that will facilitate fluency development.

Van Riper (1973)	-“parents feel a profound sense of guilt”.
Wall and Myers (1995)	-“It's important to assure parents they did not cause the stuttering; also, there are many things they can do to enhance fluency”.
Zebrowski and Schum (1993)	-Discuss the counseling aspects involved when working with children who stutter and their families. Acknowledging the attitudes, beliefs, and feelings of the family unit is an important component of the intervention process.
Manning (1996)	-cautions that parents can quickly become overwhelmed. He advises the clinician to avoid lecturing the parents and to “follow their lead” by listening to their concerns and providing information on the questions they have. Once they become informed, “they will be much more likely to provide insightful ideas and suggestions.”

Activities/Suggestions/Parent-Teacher Information:

1. Several parent-clinician conferences should be scheduled. During these conferences, parental fears, guilt and anger should be assessed and managed appropriately. Parents must be given the time and freedom to express their feelings.
2. Discuss normal dysfluency and normal language development, focusing upon the following developmental areas necessary for the production of fluent speech:
 - a) Motor coordination and timing
 - b) Linguistic and cognitive knowledge
 - c) Emotional maturity
3. View the film "The School-Age Child Who Stutters" (Speech Foundation of America, 1997) with the parents, providing feedback and answers to any questions which may result.
4. Ask parents to assess how they are responding to their child's dysfluencies. Present Cooper's Parent Attitudes Toward Stuttering Checklist (Cooper, 1986) or Zwitman's Child Management Questionnaires and Checklist (Zwitman, 1978). These checklists are helpful to facilitate parental awareness and change.
5. Explain the importance of parental involvement. Be sure to provide concrete examples of how parents can become effectively involved in the therapeutic process.
6. View the film "Prevention of Stuttering - Part II" (Stuttering Foundation of America). When their child stutters, he/she can detect the listener's reaction through both their words and their non-verbal actions. If the child detects negative feelings, the result may be a negative attitude about himself/herself, their speech, or both. This may cause the child to stutter more severely and more frequently. Therefore, it is important for the parent to react the same for both fluent as well as dysfluent utterances from the child. An increase in attentiveness when the child stutters may reinforce the behavior.

7. The clinician can assist the parents in structuring a "talking time" (Botterill, Kelman, & Rustin, 1991) in which the parents make a commitment to spend three, four or five minutes; four, five, or six times per week playing with their child. This should be done in a quiet room so as to not allow for any interruptions. During this "talking time", the parents do not make any demands or comments on the child's speech. Listening to the content of the child's message is the primary emphasis. If parents are unable to complete this assignment (over a two week period), the clinician should discuss with them their role in the therapy process and factors which influence speech change.
8. Early in the intervention process, the parents should become familiar with the speech model used with their child. Often, the clinician will instruct the parents to slow their speaking rate. However, this task is not as easy as it appears. Parents also need to practice with the clinician as to ensure consistency between the therapy model and home model. This inclusion, even if brief or periodic, assists in increasing the parents understanding of how difficult changing speech patterns can be and will aide in therapy program.
9. Establishing evening "Parent Support Group" meetings for parents of child who stutter is one-way to reach out to parents who cannot attend in-school therapy sessions. Bennett (1990) discussed how one school district organized such meetings, with babysitters and translators, in order to train parents on issues around the disorder of stuttering, environmental factors which influence one's speech, and treatment considerations. This atmosphere also provides parents with an opportunity to share their feelings and attitudes with other parents in an accepting, warm environment.
9. Provide the parents with information they can take home. Booklets, pamphlets, and videotapes are invaluable sources of information (see recommendations below).

Recommended Booklets and Pamphlets

- | | | |
|-----|--|--|
| (a) | If Your Child Stutters:
A Guide for Parents | Stuttering Foundation of America
P.O. Box 11749
Memphis, Tennessee 38111
(800) 992-9392 |
| (b) | Stuttering and Your
Child: Questions and
Answers | Stuttering Foundation of America
P.O. Box 11749
Memphis, Tennessee 38111
(800) 992-9392
stuttersfa@aol.com |
| (c) | A Brochure for
Parents of Children
Who Stutter | National Stuttering Project
5100 E. La Palma Ave. Suite 208
Anaheim Hills, CA 92807
(800) 364-1617
NSPMail@aol.com |
| (d) | The Stutterer in the
Classroom | Ellin S. Rind, M.S.
Stuttering Resource Foundation
123 Oxford Road
New Rochelle, New York 10804
(914) 632-3925 |
| (e) | To the Parents of the
Nonfluent Child
& To the Teacher of the
Nonfluent Child | Peter R. Ramig, Ph.D.
Dept. of Speech, Language
and Hearing Science
University of Colorado
Campus Box 409
Boulder, Colorado 80309
(303) 492-3049 |
| (f) | Does Your Child Stutter? | “ |

Recommended Video Tapes

- | | | |
|-----|--|---|
| (a) | Stuttering and Your Child
A Videotape for Parents | Stuttering Foundation of America
3100 Walnut Grove Road, Suite 603
P.O. Box 11749
Memphis, TN 38111-0749
(800) 992-9392 |
| (b) | Do You Stutter: Straight
Talk for Teens | “ |
| (c) | The School-Age Child
Who Stutters | “ |
| (d) | Speaking of Courage | Suncoast Media
12551 Indian Rocks Rd., #15
Largo, FL 34644
(800) 899-1008 |

References and Recommended Readings

Adams, M.R. (1980). The young stutterer: Diagnosis, treatment, and assessment of progress. *Seminars in Speech, Language, and Hearing, 1*, 289-300.

Adams, M.R. (1991). The assessment and treatment of the school-age stutterer. *Seminars in Speech and Language, 12*, 279-290.

Andrews, G. & Cutler, J. (1974). Stuttering therapy: The relationship between changes in symptom level and attitudes. *Journal of Speech and Hearing Disorders, 34*, 312-319.

Bennett-Mancha, E. (1990, April). Parent support groups: For parents of children who stutter. Paper presented at the Texas Speech-Language-Hearing Association Convention, Houston, Texas.

Bennett, E.M. (1996). Building houses of fluency. In *Stuttering therapy: practical ideas for the school clinician*. Memphis: Stuttering Foundation of America.

Bennett, E.M., Ramig, P.R., & Reveles, V.N. (1993, November). Speaking attitudes in children: Summer fluency camps. Poster session presentation, ASHA Convention, Anaheim, CA.

Blood, G.W., (1995). POWER²: Relapse management with adolescents who stutter, *Language, Speech, and Hearing Services in Schools, 26*, 169 – 179.

Bloodstein, O. (1987). *A Handbook of Stuttering*. Chicago, IL: National Easter Seals Society.

- Bloodstein, O. (1993). *Stuttering: The Search for a Cause and Cure*. Needham Heights, MA: Allyn and Bacon.
- Botterill, W., Kelman, E., & Rustin, L. (1991). Parents and their pre-school stuttering child. In L. Rustin (ed.), *Parents, Families, and the Stuttering Child*, San Diego, CA: Singular Publishing Group, Inc.
- Couture, E.G. (1990). *Stuttering*. (2nd ed.) Englewood Cliffs, NJ: Prentice-Hall.
- Cooper, E.B. & Cooper, C.S. (1985). *Personalized fluency control therapy*. Allen, TX: DLM.
- Costello, J.M. (1983). Current behavioral treatments of children. In D. Prins and R.J. Ingham (Eds.), *Treatment of stuttering in early childhood: Methods and issues*. San Diego, CA: College-Hill Press.
- Daly, D.A. (1988). *Freedom of fluency*. Tucson, AZ: LinguiSystems, Inc.
- Daly, D.A., Simon, C.A., and Burnett-Stolnach, M., (1995). Helping adolescents who stutter focus on fluency, *Language, Speech, and Hearing Services in Schools*, 26, 162 – 168.
- Dell, C.W., Jr. (1979). *Treating the school age stutterer: A guide for clinicians*. Memphis, TN: Stuttering Foundation of America.
- DeNil, L.F. and Brutton, G.J. (1991). Speech-associated attitudes of stuttering and nonstuttering children. *Journal of Speech and Hearing Research*, 34, 60-66.
- Fawcus, M. (Ed.) (1995). *Stuttering: From Theory to Practice*. London: Whurr Publishers, Ltd.
- Gregory, H. (1989, July). *Stuttering therapy: A workshop for specialists*. Unpublished manuscript, Northwestern University and The Stuttering Foundation of America, Evanston, Ill.
- Gregory, H.H. (1991). Therapy for elementary school-age children. *Seminars in Speech and Language*, 12, 323-335.
- Gregory, H.H. & Hill, D. (1980). Stuttering therapy for children. *Seminars in Speech, Language, and Hearing*, 1, 351-364.
- Gregory, H.H., & Hill, D. (1993). Differential evaluation- differential therapy for stuttering children. In R.F. Curlee (ed.), *Stuttering and Related Disorders of Fluency*, New York, NY: Thieme Medical Publishers, Inc.
- Guitar, B. (1997) Therapy for children's stuttering and emotions. In Curlee, R.F. and Siegel, G.M. (Eds.) *Nature and Treatment of Stuttering, New Directions*. Boston: Allyn and Bacon, pp. 280-291.
- Guitar, B. (1976). Pretreatment factors associated with the outcome of stuttering therapy. *Journal of Speech and Hearing Research*, 19, 590-600.

- Guitar, B. & Bass, C. (1978). Stuttering therapy: The relation between attitude change and long-term outcome. *Journal of Speech and Hearing Disorders*, 15, 393-2-400.
- Ham, R. (1986). *Techniques of Stuttering Therapy*. Englewood Cliffs, NJ: Prentice Hall, Inc.
- Healey, C.E. & Scott, L.A. (1995). Strategies for treating elementary school-age children who stutter: an integrative approach. *Language, Speech, and Hearing Services in Schools*, 26, 151-161.
- Heinze, B.A. & Johnson, K.L. (1985). *Easy does it-1: Fluency activities for young children*. East Moline, IL: LinguSystems, Inc.
- Heinze, B.A. & Johnson, K.L. (1987). *Easy does it-2: Fluency activities for school-aged stutterers*. East Moline, IL: LinguSystems, Inc.
- Ingham, R.J. (1984). *Stuttering and Behavior Therapy: Current Status and Experimental Foundations*, San Diego, CA: College-Hill Press.
- Irwin, A. (1980). *Stammering: Practical Help for All Ages*. Harmondsworth: Penguin.
- Kelly, E. & Conture, E., (1991). Intervention with school-age stutterers: A parent-child fluency group approach. *Seminars in Speech and Language*, 12, 310-322.
- Mallard AR, Hicks, DM, Riggs, DE (1982), A comparison of stutterers and nonstutterers in a task of controlled voice onset, *Journal of Speech and Hearing Research*, 25, 287-290.
- Manning, W.H. (1996). *Clinical decision-making in the diagnosis and treatment of fluency disorders*. Albany, New York: Delmar Publishers
- Meyers, S. & Woodford, L. (1992). *The fluency development system for young children*. Buffalo, NY: United Educational Services.
- Perkins, W.H. (1973). Replacement of stuttering with normal speech: 1. Rationale, *Journal of Speech and Hearing Disorders*, 38, 283-294.
- Perkins, W. H. (1986). Postscript: Discoordination of phonation with articulation and respiration. In G. Shames and H. Rubin (Eds.), *Stuttering: Then and Now*. Ohio: Charles E. Merrill Publishing Co.
- Perkins, W.H. (1992). *Stuttering prevented*. San Diego, CA: Singular Publishing Group, Inc.
- Peters, T.J. (1991). An integration of contemporary therapies with school-age children, *Seminars in Speech and Language*, 12, 301-308.
- Peters, T.J. & Guitar, B. (1991). *Stuttering: An integrated approach to its nature and treatment*. Baltimore, MD: Williams and Wilkins.
- Ramig, P.R. (1993). Parent-clinician-child partnership in the therapeutic process of the preschool- and elementary-aged child who stutters, *Seminars in Speech and Language*, 14, 3, 226-237.

Ramig, P.R. & Bennett, E.M. (1995). Working with 7-12 year old children who stutter: Ideas for intervention in the public schools. *Language, Speech, and Hearing Services in Schools*, 26, 138-150.

Ramig, P.R. & Bennett, E.M. (1997). Clinical management of children: Direct management strategies. In Curlee, R.F. and Siegel, G.M. (Eds.) *Nature and Treatment of Stuttering, New Directions*. Boston: Allyn and Bacon, pp. 292-312.

Ratner, N.B., (1995). Treating the child who stutters with concomitant language or phonological impairment. *Language, Speech, and Hearing Services in Schools*, 26, 180-186.

Riley, G.D. & Riley, J. (1983). Evaluation as a basis for intervention. In D. Prins & R.J. Ingham (eds.), *Treatment of Stuttering in Early Childhood: Methods and Issues*. San Diego, CA: College-Hill Press.

Riley, G.D. & Riley, R. (1985). *Oral Motor Assessment and Treatment: Improving Syllable Production*. Austin, TX: Pro-Ed.

Riley, G. & Riley, J. (1986). Oral motor discoordination among children who stutter, *Journal of Fluency Disorders*, 11, 335-344.

Rustin, L., Cook, F., Spense, R., (1995). *The Management of Stuttering in Adolescence. A Communication Skills Approach*. San Diego: Singular Publishing Group, Inc.

Ryan, B.P. (1984) Treatment of stuttering in school children. In W.H. Perkins (ed.), *Stuttering Disorders*, New York, NY: Thieme-Stratton, Inc.

Ryan, B.P., & Van Kirk, B. (1974). The establishment, transfer, and maintenance of fluent speech in 50 stutterers using delayed auditory feedback and operant procedures, *Journal of Speech and Hearing Disorders*, 39, 3-10.

Shine, R.E. (1980). *Systematic fluency training for young children*. Tigard, Oregon: C.C. Publications, Inc.

Starkweather, C.W., Gottwald, S.R., & Halfond, M.M., *Stuttering Prevention: A Clinical Method*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Starkweather, C.W., and Givens-Ackerman, J., (1997). *Stuttering*. Austin, Texas: PRO-ED, Inc.

Stocker, B. (1980). *The Stocker Probe Technique: For Diagnosis and Treatment of Stuttering in Young Children*, Tulsa, OK: Modern Education Corporation.

Van Riper, C. (1973). *The Treatment of Stuttering*. Englewood Cliffs, NJ: Prentice Hall, Inc.

Wall, M.J. & Myers, F.L. (1995). *Clinical management of childhood stuttering. Second edition*. Austin TX: Pro-Ed, Inc.

Westbrook, J. (1994). Jacob's secret speech bracelet. *Staff*. Aaron's Associates, 6114 Waterway, Garland, Texas 75043.

Williams, D.E. (1971). Stuttering therapy for children. In L.E. Travis (ed.) *Handbook of Speech Pathology and Audiology*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Zebrowski, P.M., & Schum, R.L. (1993). Counseling parents of children who stutter. *American Journal of Speech-Language Pathology*, 2, 65-73.

Zimmermann, G.N. & Hanley, J.M. (1983). A cinefluorographic investigation of repeated fluent productions of stutterers in an adaptation procedure, *Journal of Speech and Hearing Research*, 26, 35-42.