# the child who stutters: to the pediatrician

5th edition

STUTTERING FOUNDATION®
*A Nonprofit Organization*
*Since 1947— Helping Those Who Stutter*

publication no. 0023

www.StutteringHelp.org
www.tartamudez.org

## Risk Factor Chart

***Place a check next to each that is true for the child***

| Risk Factor | Elevated Risk | True for Child |
|---|---|---|
| Family history of stuttering | A parent, sibling, or other family member who still stutters | |
| Age at onset | After age 3½ | |
| Time since onset | Stuttering 6–12 months or longer | |
| Gender | Male | |
| Other speech production concerns | Speech sound errors or trouble being understood | |
| Language skills | Advanced, delayed, or disordered | |

*Please see pages 4 and 5 for more information.*



www.StutteringHelp.org • www.tartamudez.org
THE STUTTERING FOUNDATION®
800-992-9392

# the child who stutters: to the pediatrician

**5th edition**


Barry Guitar, Ph.D.
Professor,
Department of Communication Sciences and Disorders,
University of Vermont

Edward G. Conture, Ph.D.
Professor Emeritus,
Department of Hearing and Speech Sciences,
Vanderbilt University



Editorial assistance:

Stephen Contompasis, M.D.,
Associate Professor of Pediatrics,
University of Vermont Medical School
University of Vermont

Jane Fraser
President,
The Stuttering Foundation

Michael B. Grizzard, M.D.,
Medical Director,
The World Bank, Washington, D.C.

Ellen Kelly, Ph.D.,
Associate Professor,
Department of Hearing and Speech Sciences
Vanderbilt University School of Medicine

James McKay, M.D.,*
Professor Emeritus of Pediatrics,
College of Medicine,
University of Vermont

Peter Ramig, Ph.D.,
Professor Emeritus,
Department of Speech, Language, and Hearing Sciences
University of Colorado–Boulder

Patricia M. Zebrowski, Ph.D.,
Professor,
Department of Speech Pathology and Audiology,
University of Iowa

The Stuttering Foundation

Publication No. 0023

www.StutteringHelp.org • www.tartamudez.org

the child who stutters:
to the pediatrician

Publication No. 0023

First Edition—1991
Second Edition—2001
Third Edition—2004
Fourth Edition—2006
Revised Fourth Edition—2007
Fifth Edition—2013

*Published by*

Stuttering Foundation of America
P. O. Box 11749
Memphis, Tennessee 38111-0749

ISBN 978-0-933388-80-2



The Stuttering Foundation of America is a nonprofit charitable organization dedicated to the prevention and improved treatment of stuttering.

# The Child Who Stutters: To the Pediatrician

Most children go through periods of disfluency as they learn to speak. Some will experience mild stuttering, and for others the difficulty will become severe. Early intervention by the pediatrician can help parents understand and thus minimize the problem.

## Etiology

Although the etiology of stuttering is not fully understood, there is strong evidence to suggest that it emerges from a combination of constitutional and environmental factors. Geneticists have found indications that a susceptibility to stuttering may be inherited and that it is most likely to occur in boys.[1,6,9,17,18] Further support for inheritance comes from twin studies that have demonstrated a higher concordance for stuttering among both members of identical twin pairs than fraternal twin pairs. Congenital brain damage is also suspected to be a predisposing factor in some cases. For most children who stutter, however, there is no clear evidence of brain damage.[1,7,9,17,18]

Brain imaging studies conducted in many laboratories throughout the world indicate that adults who stutter show distinct anomalies in brain function.[10] In contrast with normal speakers, individuals who stutter show deactivation of left-hemisphere sensorimotor centers and over-activation of homologous right-hemisphere structures during both stuttered and nonstuttered speech. The essential defect is hypothesized to be a lack of sensorimotor integration necessary to regulate the rapid movements of fluent speech. Both temporary fluency (induced through singing or choral reading) and more permanent fluency (as a result of behavioral treatments) appear to normalize the activation patterns.[3,4,5,7,13]

The onset of stuttering is typically during the period of intense speech and language development as the child is progressing from 2-word utterances to the use of complex sentences, generally between the ages of 2 and 5 but sometimes as early as 18 months. The child's efforts at learning to talk and the normal stresses of growing up may be the immediate precipitants of the brief repetitions, hesitations, and sound prolongations that characterize early stuttering as well as normal disfluency*. These first signs of stuttering gradually diminish and then disappear in most children, but some children continue to stutter. In fact, they may begin to exhibit longer and more physically tense speech behaviors as they respond to their speaking difficulties with embarrassment, fear, or frustration. If referral to a speech-language pathologist for parent counseling and treatment is made before the

*The term "disfluency" means a hesitation, interruption, or disruption in speech. It may be normal or, as in the case of stuttering, it may be abnormal.

| Risk Factor Chart<br>*Place a check next to each that is true for the child* | | |
|---|---|---|
| **Risk Factor** | **Elevated Risk** | **True for Child** |
| Family history of stuttering | A parent, sibling, or other family member who still stutters | |
| Age at onset | After age 3½ | |
| Time since onset | Stuttering 6–12 months or longer | |
| Gender | Male | |
| Other speech production concerns | Speech sound errors or trouble being understood | |
| Language skills | Advanced, delayed, or disordered | |



child has developed a serious social and emotional response to stuttering, prognosis for recovery is good.[3,17,18]

## Prevalence, Incidence, and Risk Factors for Chronicity*

About 5% of all children go through a period of stuttering that lasts six months or more. Three-quarters of those who begin to stutter will recover by late childhood, leaving about 1% of the population with a long-term problem. The sex ratio for stuttering appears to be almost equal at the onset of the disorder, but studies indicate that among those children who continue to stutter, that is, school-age children, there are three to four times as many boys who stutter as there are girls.[9,18]

Risk factors that predict a chronic problem rather than spontaneous recovery include the following:[16,17]

**• Family history**

There is now strong evidence that about 60 percent of all children who stutter have a family member who stutters. The risk that the child is actually stuttering instead of just having normal disfluencies increases if that family member is still stuttering. There is less risk if the family member outgrew stuttering as a child.

**• Age at onset**

Children who begin stuttering before age 3 1/2 are more likely to outgrow stuttering; if the child begins stuttering before age 3, there is a much better chance she will outgrow it within 6 months.

**• Time since onset**

Between 75% and 80% of all children who begin stuttering will begin to show improvement within 12 to 24 months without speech therapy. If the child has been stuttering longer than 6 months, or if the stuttering has worsened, he may be less likely to outgrow it on his own. If he has been stuttering longer than 12 months with no improvement, there is an even smaller likelihood he will outgrow it on his own.

**• Gender**

Girls are more likely than boys to outgrow stuttering. In fact, three to four boys continue to stutter for every girl who stutters. Why this difference? First, it appears that during early childhood, there are innate differences between boys' and girls' speech and language abilities. Second, during this same period, parents, family members, and others often react to boys somewhat differently than

girls. Therefore, it may be that more boys stutter than girls because of basic differences in boys' speech and language abilities and differences in their interactions with others.

**• Other speech and language factors**

A child who speaks clearly with few, if any, speech errors would be more likely to outgrow stuttering than a child whose speech errors make him difficult to understand. If the child makes frequent speech errors such as substituting one sound for another or leaving sounds out of words, or has trouble following directions, there should be more concern. The most recent findings dispel previous reports that children who begin stuttering have, as a group, lower language skills. On the contrary, there are indications that they are well within the norms or above. In fact, advanced language skills appear to be even more of a risk factor for children whose stuttering persists.[15,17,18]

At present, none of these risk factors appears, by itself, sufficient to indicate a chronic problem; rather it is the cumulative or additive nature of such factors that appears to differentiate children for whom stuttering comes and goes versus those for whom stuttering comes and stays.

## The Physician's Role

The physician is often the first professional to whom a parent turns for help. Knowing the difference between normal developmental speech disfluency and potentially chronic stuttering enables the physician to advise parents and refer when appropriate. Early intervention for stuttering—which may range from parent counseling and indirect treatment to direct instruction—can be a major factor in preventing a life-long problem.

Data from several different treatment programs indicate substantial recovery if treatment is initiated in the preschool years.[7,13,16,17,18]

## Differential Diagnosis

Normal developmental disfluency and early signs of stuttering are often difficult to differentiate. Thus, diagnosis of a stuttering problem is made tentatively. It is based upon both direct observation of the child and information from parents about the child's speech in different situations and at different times. The following section should help the physician make appropriate referrals as needed.

### Normal Disfluency

Between the ages of 18 months and 7 years, many children pass through stages of speech disfluency associated with their attempts to learn how to talk. *Children with normal disfluencies* between 18 months and 3 years will exhibit repetitions of sounds, syllables, and words, especially at the beginning of sentences. These occur usually about once in every ten sentences.

After 3 years of age, children with normal disfluencies are less likely to repeat sounds or syllables but will instead repeat whole words (I-I-I can't) and phrases (I want…I want…I want to go). They will also commonly use fillers such as "uh" or "um" and sometimes switch topics in the middle of a sentence, revising and leaving sentences unfinished.

All children may be disfluent at any time and are likely to increase their disfluencies when they are tired, excited, upset, or being rushed to

---

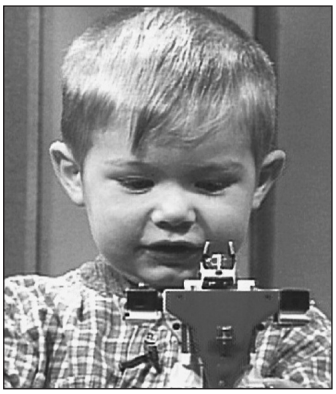
*Longitudinal research studies by Drs. Ehud Yairi and Nicoline G. Ambrose and colleagues at the University of Illinois provide excellent new information about the development of stuttering in early childhood. Their findings are helping speech-language pathologists determine who is most likely to outgrow stuttering versus who is most likely to develop a lifelong stuttering problem. Research reports include

Yairi, E. & Ambrose, N. (2005). *Early Childhood Stuttering: For Clinicians by Clinicians*, ProEd, Austin, TX.

Yairi, E. & Ambrose, N. (1999). Early childhood stuttering I: Persistence and recovery rates. *Journal of Speech, Language, and Hearing Research*, 42, 1097-1112.

Ambrose, N. & Yairi, E. (1999). Normative disfluency data for early childhood stuttering. *Journal of Speech, Language, and Hearing Research*, 42, 895-909.

Yairi, E. & Ambrose, N. (1992). A longitudinal study of stuttering in children: A preliminary report. *Journal of Speech, Language, and Hearing Research*, 35, 755-760.



Take-Home Message

**Parents don't cause stuttering, but there is a lot they can do to help.**

*Suggestions for parents can be found on page 14.*

speak. They also may be more disfluent when they ask questions or when someone asks them questions.

Their disfluencies may increase in frequency for several days or weeks and then be hardly noticeable for weeks or months, only to return again.

Typically, children with normal disfluencies appear to be unaware of them, showing no signs of surprise or frustration. Parents show a wider range of reactions to normal disfluencies than their children do. Most parents will not notice their child's disfluencies or will treat them as normal.

Some parents, however, may be extremely sensitive to speech development and will become unnecessarily concerned about normal disfluencies. These overly concerned parents often benefit from referral to a speech clinician for an evaluation and continued reassurance.

### Mild Stuttering

Mild stuttering may begin at any time between the ages of 18 months and 7 years but most frequently begins between 2 and 5 years, when language development is particularly rapid. Some children's stuttering first appears under conditions of normal stress, such as when a new sibling is born or when the family moves to a new home.

*Children who stutter mildly* may show the same sound, syllable, and word repetitions as children with normal disfluencies but may have a higher frequency of repetitions overall as well as more repetitions each time.

For example, instead of one or two repetitions of a syllable, they may repeat it four or five times, as in "Ca-ca-ca-ca-can I have that?"

They may also occasionally prolong sounds, as in "MMMM-MMMommy, it's mmmmmy ball." In addition to these speech behaviors, children with mild stuttering may show signs of reacting to their disfluency.

For example, they may blink or close their eyes, look to the side, or tense their mouths when they stutter.

Another sign of mild stuttering is the increasing persistence of disfluencies. As suggested earlier, normal disfluencies will appear for a few days and then disappear. Mild stuttering, on the other hand, tends to appear more regularly. It may occur only in specific situations, but it is more likely to occur in these situations, day after day. A third sign associated with mild stuttering is that the child may not be deeply concerned about the problem but may be temporarily embarrassed or frustrated by it. Children at this stage of the disorder may even ask their parents why they have trouble talking.

Parents' responses to mild stuttering will vary.[3] Most will be at least mildly concerned about it and wonder what they should do and whether they have caused the problem. These parents will need reassurance that they do not cause stuttering. A few will truly not notice it; still others may be quite concerned but deny their concern at first.

### Severe Stuttering

*Children with severe stuttering* usually show signs of physical struggle, increased physical tension, and attempts to hide their stuttering and avoid speaking. Although severe stuttering is more common in older children, it can begin anytime between ages 1½ and 7 years. In some cases, it appears after children have been stuttering mildly for months or years. In other cases, severe stuttering may appear suddenly from one day to the next.

Severe stuttering is characterized by speech disfluencies in

## Case Example: Sally, a child with **Mild Stuttering**

Sally's mother and father were concerned because Sally, age 3, was beginning to avoid speaking. The problem had begun several months earlier when Sally was repeating parts of words, like, "Ca-ca-ca-can I ha-ha-ha-have some?" Then a few weeks ago she had difficulty getting started making the first sound of a word. She would open her mouth, quite wide at times, but nothing would come out. Once she asked her mom, "Why can't I talk?"

Sally's speech and language development had been normal. She began using single words at an early age—9 months—and was speaking in 2–3 word sentences by 13 months. She talked fluently and enjoyed the family's fast-paced conversations and word games.

When Sally's father discussed her speech with Sally's pediatrician, she referred Sally to a speech-language pathologist in private practice who was known to have expertise in stuttering. Once-a-week treatment sessions consisted of parent counseling and play-oriented interactions between Sally, her parents, and her speech clinician. Over a period of six months the clinician's relaxed, accepting style, combined with Sally's parents' changes in the intensity of speech and language stimulation at home, worked to reduce Sally's avoidance of speaking and her inability to get sounds started. She continued to show a slightly greater than normal number of word repetitions and phrase repetition for several more years and gradually developed normal speech.

## Case Example: Barbara, a child with **Mild Stuttering**

When Barbara was 3, her pediatrician noticed she was repeating and prolonging sounds when he talked to her. He discussed this with her mother and father and found them to be aware of it. In fact, they had been instructing her to stop and start over again when she repeated sounds. He gave them guidance about speaking with their child in an unhurried manner, pausing frequently, and refraining from criticism.

When her parents brought Barbara to his office six months later for a minor illness the pediatrician inquired about her speech. Barbara's parents were frustrated by the lack of change in her speech and had begun to correct her again. Barbara herself seemed reluctant to talk to him. The pediatrician referred Barbara to a speech-language pathologist and continued to counsel the parents to ease conversational pressures on Barbara and refrain from direct correction.

A month later, the pediatrician received a copy of the speech-language pathologist's written evaluation of Barbara. This indicated that her stuttering had progressed from mild to severe and that the parents seemed willing to change some key variables in the home speaking environment. The plan for treatment included some direct treatment of Barbara's stuttering in the speech clinic.

Several months later, Barbara's parents brought her to the pediatrician for treatment of an infected insect bite. The pediatrician noticed that Barbara's speech seemed to be the same as before. The parents indicated that they didn't see the sense in using slower speech rates themselves and have continued to try to correct Barbara's stuttering by instructions. They had discontinued speech therapy because they were unable to afford it. At present the pediatrician has given them a copy of the Stuttering Foundation's *If Your Child Stutters: A Guide for Parents,* and *Stuttering and Your Child: Questions and Answers* and is counseling them to continue changes at home.

practically every phrase or sentence; often moments of stuttering are one second or longer in duration. Prolongations of sounds and silent blockages of speech are common.

The severely stuttering child may, like the milder stutterer, have behaviors associated with stuttering: eye blinks, eye closing, looking away, or physical tension around the mouth and other parts of the face. Moreover, some of the struggle and tension may be heard in a rising pitch of the voice during repetitions and prolongations. The child with severe stuttering may also use extra sounds like "um," "uh," or "well" to begin a word on which he expects to stutter.

This stuttering is more likely to persist, especially in children who have been stuttering for 18 months or longer, although even some of these children will recover spontaneously. The frustration and embarrassment associated with real difficulty in talking may create a fear of speaking. Children with severe stuttering often appear anxious or guarded in situations in which they expect to be asked to talk. While the child's stuttering will probably occur every day, it will probably be more apparent on some days than others.

Parents of children who stutter severely inevitably have some degree of concern about whether their child will always stutter and about how they can best help. Many parents also believe, mistakenly, that they have done something to cause the stuttering. Parents have not done anything to cause the stuttering, yet they may still feel responsible for the problem.

They will benefit from reassurance that their child's stuttering is a result of many causes and not simply the effect of something they did or didn't do.

Some guidelines are summarized in Table 1 on page 13.

Take-Home Message

**A child who stutters often feels that he is the only one to have the problem. He will appreciate hearing from his pediatrician that other children stutter, too.**

## Counseling Parents

### Counseling Parents of a Child with Disfluencies

If a child appears to be disfluent, parents should be reassured that these disfluencies are like the mistakes every child makes when he or she is learning any new skill, like walking, writing, or bicycling. Parents should be advised to accept the disfluencies without any discernable reaction or comment.

Particularly concerned parents may find it helpful to speak with their child in an unhurried way, use shorter, simpler sentences, and ask fewer direct questions.

They will also want to arrange times the child can talk to them in a quiet, relaxed environment without outside interference such as TV, phones, or other people. They should not instruct the child to talk more slowly or to say a disfluent word over again. Instead, they should concentrate on calmly listening to what their child is saying during that special time.

### Counseling Parents of a Child with Mild Stuttering

Parents of the child who has a mild stuttering problem should be advised not to show concern or alarm to the child but instead be as patient listeners as they can. Their goal is to provide a comfortable speaking environment and to minimize the child's frustration and embarrassment.

Parents are usually upset when their child repeats sounds or words, but they should be reassured that these are just slips and tumbles as the child is learning to match his ability to speak with the many ideas he wants to express.

If the parents let the child know that repetitive stuttering is acceptable to them, this can help the child's speech and language develop without increased physical tension and struggle.

## Case Example: Jeremy, a child with **Severe Stuttering**

Jeremy's speech and language developed more slowly than that of his older sister. He didn't start to speak until he was two; until then, he would point to what he wanted. When he started to speak, he was difficult to understand. Jeremy's parents often had to ask him to repeat what he had said. His speech became a little clearer at age 3 when he was using 2–3 word sentences. But at about that time he began to repeat initial sounds of words and soon he was prolonging sounds and opening his mouth extra wide when he couldn't get sounds started. Jeremy's cousin had also been late in developing speech, but never stuttered, so Jeremy's parents assumed he would just outgrow it in time. Unfortunately, the stuttering worsened. Soon Jeremy was saying "um" several times just before a word to get it started, in addition to using facial grimaces and wide mouth postures when he got stuck. When he made several attempts to get a word started without success, Jeremy would say "Oh, never mind" and give up. He was gradually becoming more and more reluctant to talk.

By this time, Jeremy's parents became concerned enough to ask their physician for advice. After talking to Jeremy, the physician referred them to a speech-language pathologist in a local pre-school program. The speech-language pathologist soon determined that immediate treatment was needed and worked with Jeremy and his family in their home for a year with good initial success. Following this, Jeremy entered first grade and was seen twice a week by the school speech clinician and continues to make good progress. Although he still gets hung up on a word occasionally, his language development is normal and he participates fully in class and in social situations.

They should also be encouraged to talk opening about talking just as they would any other topic.

While parents may provide models of a more relaxed way of speaking, they should refrain from criticizing, showing annoyance, or telling the child to "slow down."

It is also important for parents to provide daily opportunities for one-on-one conversations with the child in a quiet setting, starting with a "special time" of 5 to 10 minutes.

These are times when the child has chosen the activity and can experience the feeling of talking about anything he or she wants.

If the child asks about the problem, parents should talk about it matter of factly: "Everyone has difficulty learning to talk. It takes time, and lots of people get stuck. It's okay; it's a lot like learning to ride a bike. It's a little bit tricky at first."

The parent may mention casually that going slowly can sometimes help or that the child need not hurry if he seems to be asking for help.

If the child's stuttering persists for four to six weeks or more despite these efforts on the parents' part, or if the parents are unable to follow these suggestions, the child should be referred to a speech-language pathologist (see later section on referral).

Treatment of the child with mild stuttering may be indirect and focused on creating an environment in which the child feels fairly relaxed about speaking, both at home and in the treatment setting.

If more direct treatment is needed, the speech-language pathologist may show the child how to produce speech more easily, without increased physical tension and struggle, so that stuttering gradually diminishes into something more like normal speech.[4,5,7] Some may choose to train the parents to work more directly with the child to recognize those times when the child is more fluent and increase these times.[7,13]

### Counseling Parents of a Child with Severe Stuttering

The child with severe stuttering should be referred immediately to a qualified speech-language pathologist for an evaluation, further counseling, and direct treatment of the child. Because severe stuttering frequently seems to develop when a child struggles or becomes afraid of or concerned with speaking in response to his milder stuttering, anything that helps the child react less negatively and take his or her disfluencies in stride will be of benefit.

Parents should model a slower rate of speaking. They should try to convey acceptance of the child regardless of the stuttering by paying attention to what the child is saying rather than to the stuttering. The speech-language pathologist working with the child might also encourage the parents to nod or comment on the child's courage for "hanging in there," when the child has a particularly hard time on a word. In addition, the child with severe stuttering would benefit from being able to share his or her frustration with his or her parents. This may be difficult in some families and may be best handled with the help of a speech-language pathologist experienced with the management of stuttering.

Professional treatment of severe stuttering often consists of helping the child overcome the fear of stuttering and, at the same time, teaching the child to speak, regardless of stuttering, in a slower, more relaxed fashion. In addition, treatment is focused on helping the child's family create an atmosphere of acceptance of stuttering and conducive to ease in speaking.[4,5,7,17]

Take-Home Message

**Talk openly about stuttering, acknowledging that "sometimes words are hard to say."**

As mentioned earlier, some speech-language pathologists may choose to train the parents to provide some aspects of therapy in the home. Parents will want to keep careful records of the child's responses to treatment the times when the child is fluent, and will closely monitor the therapy.[3,4,5]

During a period of a year or more, the child's stuttering will often gradually decrease in frequency and duration. In some cases, the child may recover completely. Treatment results depend on the nature of the child's problem, the presence of other strengths, the skills of the therapist, and the ability of the family to provide support.

## When to Refer to a Speech-Language Pathologist

Children with severe stuttering problems should be referred immediately. Children who have mild stuttering problems that have not shown marked improvement within six to eight weeks, depending on the child, should also be referred. These children should be given direct treatment if it is warranted, and their parents will receive support and guidance, and they will be followed carefully.

Some children with mild problems may receive direct treatment, but it should be carefully planned so as not to make the child feel apprehensive or self-conscious about the problem. As Table 1 suggests, children with normal disfluency do not need to be referred unless the parents are so concerned that they need reassurance about the normalcy of their child's speech. They may also be followed by the speech clinician to provide additional guidance if needed.

Speech-language pathologists

should have a Certificate of Clinical Competence (CCC-SLP) from the American Speech-Language-Hearing Association, and should also be licensed by the state in which they practice. Certification requires a master's degree from an accredited university, a national examination, and a year of supervised internship.

Because stuttering is no longer required as an area in which speech-language pathologists must have hands-on experience to obtain their CCC-SLP, you will want to make sure you refer to a therapist who has had extensive experience working with the disorder.

The Stuttering Foundation provides referrals to qualified speech-language pathologists in most areas of the country. Their toll-free telephone number is 800-992-9392 and web site is *www.StutteringHelp.org*. They also provide books and DVDs for parents.

## Conclusion

Pediatricians are often the first professionals to whom parents turn for advice about their child's disfluencies and can help in the prevention of stuttering.

Early identification of children at risk for chronic stuttering and appropriate referral are critical.

Moreover, effective parent counseling can often create an environment conducive for children to outgrow their disfluencies and for all children to communicate effectively.

The authors of this booklet too often meet adults who stutter whose parents were told "Don't worry, he'll outgrow it" so that the opportunity for therapy when the disorder is most treatable has been missed. We have repeatedly found that when children are referred early, treatment is most effective, even in cases of severe stuttering.

Early intervention can prevent childhood stuttering from becoming a chronic problem that interferes with social, academic, and occupational success.

## References

1. Bloodstein, O. & Ratner, N. (2010). *A handbook on stuttering* (6th Ed). Clifton Park, NY: Thompson Delmar Learning.

2. Brown, S., Ingham, R., Ingham, J., Laird, A., & Fox, P. (2005). Stuttered and fluent speech production: An ALE meta-analysis of functional neuroimaging studies. *Human Brain Imaging*, 25, 105-117.

3. Conture, E., Kelly, E., & Walden, T. (2013). Temperament, speech and language: An overview. *Journal of Communication Disorders*, 46, 125-142.

4. Gottwald, S. (2010). Stuttering Prevention and Early Intervention: A Multidimensional Approach. In B. Guitar and R. McCauley (Eds.), *Treatment of Stuttering: Conventional and Controversial Interventions* (pp 91-117). Baltimore: Lippincott, Williams & Wilkins.

5. Guitar, B. (2014). *Stuttering: An Integrated Approach to Its Nature and Treatment* (4th Ed.) Baltimore, Lippincott, Williams & Wilkins.

6. Kang, C., Riazuddin, S., Mundorff, J., Krasnewich, D., Friedman, P., Mullikin, J., & Drayna, D. (2010). Mutations in the lysosomal enzyme-targeting pathway and persistent stuttering. *New England Journal of Medicine*, 362, 677-685.

*7. Kelman, E. & Nicholas, A. (2011). Practical Intervention for Early Childhood Stammering: Palin PCI Approach*. Milton Keynes, UK: Speechmark.

8. Kefalianos, E., Onslow, M., Block, S., Menzies, R., & Reilly, S. (2012). Early stuttering, temperament and anxiety: Two hypotheses. *Journal of Fluency Disorders*, 37, 151–163.

9. Kraft, S. & Yairi, E. (2012). Genetic bases of stuttering: the state of the art, 2011. *Folia Phoniatrica Logopedics*, 64, 34-47.

10. Neumann, K. and Euler, H. (2010). Neuroimaging and Stuttering. In B. Guitar and R. McCauley (Eds.), *Treatment of Stuttering: Conventional and Controversial Interventions* (pp 355-377). Baltimore: Lippincott, Williams & Wilkins.

11. Ntourou,K., Conture, E., & Lipsey, M. (2011) Language abilities of children who stutter: a meta-analytical review. *American Journal of Speech-Language Pathology*, 20, 163-79.

12. Olander, L., Smith, A., Zelaznik, H. (2010). Evidence that a motor timing deficit is a factor in the development of stuttering. *Journal of Speech, Language, & Hearing Research,* 53, 876-886.

13. Onslow, M. & O'Brian, S. (2013). Management of childhood stuttering. *Journal of Paediatrics and Child Health,* 49, 2, pp. 112-115.

14. Raza, M., Gertz, E., Mundorff, J., Lukong, J., Kuster, J., Schaffer, A., & Drayna, D. (2013). Linkage analysis of a large African family segregating stuttering suggests polygenic inheritance. *Human Genetics*, 132, 385-396.

15. Reilly, S., Onslow, M., Packman, A., Cini, E., Conway, L., & Wake, M. (2013). Natural history of stuttering to 4 years of age: A prospective community-based study. *Pediatrics,* 152(5), 460-467.

16. Richels, C. & Conture, E. (2010) Indirect treatment of childhood stuttering: Diagnostic predictors of treatment outcome. In B. Guitar and R. McCauley (Eds.), *Treatment of Stuttering: Conventional and Controversial Interventions* (pp 18-71). Baltimore: Lippincott, Williams & Wilkins.

17. Yairi & Ambrose (2005). *Early Childhood Stuttering: For Clinicians by Clinicians.* Austin, TX: Pro-Ed.

18. Yairi, E. & Ambrose, N. (2013). Epidemiology of stuttering: 21st century advances, *Journal of Fluency Disorders* 38, 66-87.

## Table 1: Physician's Checklist for Referral

| | The Child With Normal Disfluencies | The Child With Mild Stuttering | The Child With Severe Stuttering |
|---|---|---|---|
| **Speech behavior you may see or hear:** | ☐ Occasional (not more than once in every 10 sentences), brief, (typical ½ second or shorter) repetitions of sounds, syllables or short words, e.g., li-li-like this. | ☐ Frequent (3% or more of speech), long (½ to 1 second) repetitions of sounds, syllables, or short words, e.g., li-li-li-like this. Occasional prolongations of sounds. | ☐ Very frequent (10% or more of speech), and often very long (1 second or longer) repetitions of sounds, syllables or short words. Frequent sound prolongations and blockages. |
| **Other behavior you may see or hear:** | ☐ Occasional pauses, hesitations in speech or fillers such as "uh," "er," or "um," changing of words or thoughts. | ☐ Repetitions and prolongations begin to be associated with eyelid closing and blinking, looking to the side, and some physical tension in and around the lips. | ☐ Similar to mild stutterers only more frequent and noticeable; some rise in pitch of voice during stuttering. Extra sounds or words used as "starters." |
| **When problems most noticeable:** | ☐ Tends to come and go when child is: tired, excited, talking about complex/new topics, asking or answering questions or talking to unresponsive listeners. | ☐ Tends to come and go in similar situations, but is more often present than absent. | ☐ Tends to be present in most speaking situations; far more consistent and non-fluctuating. |
| **Child reaction:** | ☐ None apparent | ☐ Some show little concern, some will be frustrated and embarrassed. | ☐ Most are embarrassed and some are also fearful of speaking. |
| **Parent reaction:** | ☐ None to a great deal | ☐ Most concerned, but concern may be minimal. | ☐ All have some degree of concern. |
| **Referral decision:** | ☐ Refer when parents moderately to overly concerned. | ☐ Refer if continues for 6 to 8 weeks or if parental concern justifies it. | ☐ Refer as soon as possible. |



www.StutteringHelp.org • www.tartamudez.org
THE STUTTERING FOUNDATION®
800-992-9392

# Suggestions for Parents of Children Who Stutter

*Experts agree that most children who stutter benefit from taking time to speak at a rate that promotes fluency. These guidelines represent a number of ways that adults can help promote the child's fluency.*

**1. Reduce the pace.** Speak with your child in an unhurried way, pausing frequently. Wait a few seconds after your child finishes before you begin to speak. Your own easy relaxed speech will be far more effective than any advice such as "slow down" or "try it again slowly. For some children, it is also helpful to introduce a more relaxed pace of life for awhile.

**2. Full listening.** Try to increase those times that you give your child your undivided attention and are really listening. This does not mean dropping everything every time she speaks.

**3. Asking questions.** Asking questions is a normal part of life – but try to resist asking one after the other. Sometimes it is more helpful to comment on what your child has said and wait. Starting a question with "I wonder" takes the pressure off the child to respond quickly.

**4. Turn taking.** Help all members of the family take turns talking and listening. Children find it much easier to talk when there are fewer interruptions.

**5. Building confidence.** Use descriptive praise to build confidence. An example would be "I like the way you picked up your toys. You're so helpful," instead of "that's great." Praise strengths unrelated to talking as well such as athletic skills, being organized, independent, or careful.

**6. Special times.** Set aside a few minutes at a regular time each day when you can give your undivided attention to your child. This quiet calm time – no TV, iPad or phones - can be a confidence builder for young children. As little as five minutes a day can make a difference.

**7. Normal rules apply.** Discipline the child who stutters just as you do your other children and just as you would if he didn't stutter.

* * *

For more information on stuttering and ways to help your child, write or call the nonprofit
The Stuttering Foundation
P.O. Box 11749, Memphis, TN 38111-0749
(800) 992-9392 • info@stutteringhelp.org
www.StutteringHelp.org • www.tartamudez.org

The following books are available for a nominal cost:
*If Your Child Stutters: A Guide for Parents,* 8th edition, Publication No. 0011, 64 pages,
*Stuttering and Your Child: Questions and Answers,* 4th edition, Publication No. 0022, 64 pages,
*Do You Stutter: A Guide for Teens,* 4th edition, Publication No. 0021, 72 pages.

The following DVDs are available in English and Spanish free online at www.StutteringHelp.org:
*Stuttering and Your Child: Help for Parents,* DVD 0073, 30 minutes
*Stuttering: For Kids, By Kids,* DVD 9172, 12 minutes
*Stuttering: Straight Talk for Teens,* DVD 1076, 30 minutes

Please see the Stuttering Foundation's catalog at *www.StutteringHelp.org* for these and other resources.





www.StutteringHelp.org • www.tartamudez.org
THE STUTTERING FOUNDATION®
800-992-9392

## Table 2. Questions to Ask Parents

Note: These questions are listed in order of the seriousness of the problem. If a parent answers "yes" to any question other than number 1, it suggests the possibility of stuttering rather than normal disfluency.

1. Does the child repeat parts of words rather than whole words or entire phrases? (For example, "a-a-a-apple")

2. Does the child repeat sounds more than once every 8 to 10 sentences?

3. Does the child have more than two repetitions? ("a-a-a-a-apple" instead of "a-a-apple")

4. Does the child seem frustrated or embarrassed when he has trouble with a word?

5. Has the child been stuttering more than six months?

6. Does the child raise the pitch of his voice, blink his eyes, look to the side, or show physical tension in his face when he stutters?

7. Does the child use extra words or sounds like "uh" or "um" or "well" to get a word started?

8. Does the child sometimes get stuck so badly that no sound at all comes out for several seconds when he's trying to talk?

9. Does the child sometimes use extra body movements, like tapping his finger, to get sounds out?

10. Does the child avoid talking or use substitute words or quit talking in the middle of a sentence because he might stutter?

The Stuttering Foundation of America is a tax-exempt organization under section 501(c)(3) of the Internal Revenue Code and is classified as a private operating foundation as defined in section 4942(j)(3). Charitable contributions and bequests to the Foundation are tax-deductible, subject to limitations under the Code.

If you wish to help this worthwhile cause, please send a donation to


THE STUTTERING FOUNDATION®

*A Nonprofit Organization*
*Since 1947—Helping Those Who Stutter*

P.O. Box 11749 • Memphis, TN 38111-0749

**800-992-9392**

info@stutteringhelp.org

www.StutteringHelp.org • www.tartamudez.org

# Suggestions for Parents of Children Who Stutter

*Experts agree that most children who stutter benefit from taking time to speak at a rate that promotes fluency. These guidelines represent a number of ways that adults can help promote the child's fluency.*

**1. Reduce the pace.** Speak with your child in an unhurried way, pausing frequently. Wait a few seconds after your child finishes before you begin to speak. Your own easy relaxed speech will be far more effective than any advice such as "slow down" or "try it again slowly. For some children, it is also helpful to introduce a more relaxed pace of life for awhile.

**2. Full listening.** Try to increase those times that you give your child your undivided attention and are really listening. This does not mean dropping everything every time she speaks.

**3. Asking questions.** Asking questions is a normal part of life – but try to resist asking one after the other. Sometimes it is more helpful to comment on what your child has said and wait. Starting a question with "I wonder" takes the pressure off the child to respond quickly.

**4. Turn taking.** Help all members of the family take turns talking and listening. Children find it much easier to talk when there are fewer interruptions.

**5. Building confidence.** Use descriptive praise to build confidence. An example would be "I like the way you picked up your toys. You're so helpful," instead of "that's great." Praise strengths unrelated to talking as well such as athletic skills, being organized, independent, or careful.

**6. Special times.** Set aside a few minutes at a regular time each day when you can give your undivided attention to your child. This quiet calm time – no TV, iPad or phones - can be a confidence builder for young children. As little as five minutes a day can make a difference.

**7. Normal rules apply.** Discipline the child who stutters just as you do your other children and just as you would if he didn't stutter.

* * *

For more information on stuttering and ways to help your child, write or call the nonprofit

The Stuttering Foundation
P.O. Box 11749, Memphis, TN 38111-0749
(800) 992-9392 • info@stutteringhelp.org
www.StutteringHelp.org • www.tartamudez.org

The following books are available for a nominal cost:

*If Your Child Stutters: A Guide for Parents,* 8th edition, Publication No. 0011, 64 pages,
*Stuttering and Your Child: Questions and Answers,* 4th edition, Publication No. 0022, 64 pages,
*Do You Stutter: A Guide for Teens,* 4th edition, Publication No. 0021, 72 pages.

The following DVDs are available in English and Spanish free online at www.StutteringHelp.org:

*Stuttering and Your Child: Help for Parents,* DVD 0073, 30 minutes
*Stuttering: For Kids, By Kids,* DVD 9172, 12 minutes
*Stuttering: Straight Talk for Teens,* DVD 1076, 30 minutes

Please see the Stuttering Foundation's catalog at *www.StutteringHelp.org* for these and other resources.

THE
STUTTERING
FOUNDATION®

*A Nonprofit Organization*
*Since 1947— Helping Those Who Stutter*

**800-992-9392**

www.StutteringHelp.org
www.tartamudez.org

**ISBN 978-0-933388-80-2**