DOWNLOAD PDF APRAXIA OF SPEECH

Chapter 1 : Childhood Apraxia of Speech Resource Page - Speech And Language Kids

Apraxia of speech (AOS)â€"also known as acquired apraxia of speech, verbal apraxia, or childhood apraxia of speech (CAS) when diagnosed in childrenâ€"is a speech sound disorder. Someone with AOS has trouble saying what he or she wants to say correctly and consistently.

Types[edit] There are several types of apraxia including: These patients have deficits in their ability to plan or complete motor actions that rely on semantic memory. They are able to explain how to perform an action, but unable to "imagine" or act out a movement such as "pretend to brush your teeth" or "pucker as though you bit into a sour lemon. For example, they may not be able to pick up a phone when asked to do so, but can perform the action without thinking when the phone rings. Patients have an inability to conceptualize a task and impaired ability to complete multistep actions. Consists of an inability to select and carry out an appropriate motor program. For example, the patient may complete actions in incorrect orders, such as buttering bread before putting it in the toaster, or putting on shoes before putting on socks. There is also a loss of ability to voluntarily perform a learned task when given the necessary objects or tools. For instance, if given a screwdriver, the patient may try to write with it as if it were a pen, or try to comb their hair with a toothbrush. Non-verbal oral or buccofacial ideomotor apraxia describes difficulty carrying out movements of the face on demand. The inability to draw or construct simple configurations, such as intersecting shapes. The loss of ability to have normal function of the lower limbs such as walking. This is not due to loss of motor or sensory functions. For example, a person affected by limb apraxia may have difficulty waving hello. Difficulty moving the eye, especially with saccade movements that direct the gaze to targets. Apraxia of speech AOS: Difficulty planning and coordinating the movements necessary for speech e. It is also possible for apraxia to be caused by lesions in other areas of the brain including the non-dominant usually right hemisphere. It is frequently seen in patients with corticobasal degeneration. The localization of lesions in areas of the frontal and temporal lobes would provide explanation for the difficulty in motor planning seen in ideational apraxia as well as its difficulty to distinguish it from certain aphasias. The criticisms of past methods include failure to meet standard psychometric properties as well as research-specific designs that translate poorly to non-research use. In contrast to previous publications on apraxic assessment, the reliability and validity of TULIA was thoroughly investigated. However, there may not be a strong correlation between formal test results and actual performance in everyday functioning or activities of daily living ADLs. A comprehensive assessment of apraxia should include formal testing, standardized measurements of ADLs, observation of daily routines, self-report questionnaires and targeted interviews with the patients and their relatives. It has been stated that apraxia is so often accompanied by aphasia that many believe that if a person displays AOS; it should be assumed that the patient also has some level of aphasia. Additionally, the very nature of the automatic-voluntary dissociation of motor abilities that defines apraxia means that patients may still be able to automatically perform activities if cued to do so in daily life. Nevertheless, research shows that patients experiencing apraxia have less functional independence in their daily lives, [14] and that evidence for the treatment of apraxia is scarce. In addition to using gestures as mentioned, patients can also use communication boards or more sophisticated electronic devices if needed. However, one-on-one sessions usually work the best, with the support of family members and friends. Since everyone responds to therapy differently, some patients will make significant improvements, while others will make less progress. Research suggests that individuals with apraxia of speech should receive treatment that focuses on the repetition of target words and rate of speech. Research rerouted that the overall goal for treatment of apraxia should be to improve speech intelligibility, rate of speech and articulation of targeted words. With therapy, some patients improve significantly, while others may show very little improvement. Some individuals with apraxia may benefit from the use of a communication aid. However, many people with apraxia are no longer able to be independent. Occupational therapy, physical therapy, and play therapy may be considered as other references to support patients with apraxia. These team members could work along with the SLP to provide the best therapy for people with apraxia. However, because people with limb apraxia may have trouble directing their motor

movements, occupational therapy for stroke or other brain injury can be difficult. No medication has been shown useful for treating apraxia.

Chapter 2 : Apraxia of Speech - Understanding It In Simple Terms

Developmental apraxia of speech is also known as childhood apraxia of speech. This condition is present from birth, and it affects a child's ability to form sounds and words.

It depends on the pattern of problems that are seen. It can sometimes be difficult to diagnose CAS, especially when a child speaks very little or has difficulty interacting with the speech-language pathologist. Your child may be asked to name pictures to see if he or she has difficulty making specific sounds or speaking certain words or syllables. Treatment Speech-language pathologists may treat childhood apraxia of speech CAS with many therapies. When CAS is relatively severe, your child may need frequent speech therapy, three to five times a week. As your child improves, the frequency of speech therapy may be reduced. Children with CAS generally benefit from individual therapy. Individual therapy allows your child to have more time to practice speech during each session. Learning to say words or phrases takes children with CAS time and practice. Speech-language pathologists may use different types of cues in speech therapy. Your child will be asked to listen to the speech-language pathologist and to watch his or her mouth as he or she says the target word or phrase. Your child will most likely practice syllables, words or phrases, rather than isolated sounds, during speech therapy. Children with CAS need practice making the movements from one sound to another. For example, your child may be asked to say "hi," "mine" and "bite," or "out," "down" and "house. Each home practice session can be short, such as five minutes in length, and you may practice with your child twice a day. Children also need to practice words and phrases in real-life situations. Create situations where it will be appropriate for your child to say the word or phrase spontaneously. For example, ask your child to say "Hi, Mom" each time mom enters a room. Practicing words or phrases in real-life situations will make it easier for your child to say the practice words automatically. Alternative communication methods may include sign language or natural gestures, such as pointing or pretending to eat or drink. For example, your child could use signs to communicate he or she wants a cookie. Sometimes electronic devices, such as electronic tablets, can be helpful in communication. Using these methods may help your child become less frustrated when trying to communicate. It may also help your child to develop language skills such as vocabulary and the ability to put words together in sentences. As speech improves, these strategies and devices may no longer be necessary. Therapies for coexisting problems Many children with CAS also have delays in their language development, and they may need therapy to address their language difficulties. Children with CAS who have fine and gross motor movement difficulties in their arms or legs may need physical or occupational therapy. For example, there is no evidence to show that exercises to strengthen speech muscles will help improve speech in children with CAS. Request an Appointment at Mayo Clinic Lifestyle and home remedies You and your family can work with your child at home to improve his or her speech and language skills. Encourage and support your child as he or she practices speech and language skills. Your support can help your child feel that he or she is doing well and improving. Coping and support It can be difficult to have a child who has problems communicating. There are a number of support groups available for parents of children with childhood apraxia of speech. Support groups may offer a place for you to find people who understand your situation and who can share similar experiences. Preparing for your appointment Your child is likely to start by seeing a doctor trained in the general care and treatment of children pediatrician or a doctor trained in treating children with neurological conditions pediatric neurologist. Your child will then be referred to a specialist in speech and language conditions speech-language pathologist. What you can do Write down any symptoms your child is experiencing, including any that may seem unrelated to the reason for which you scheduled the appointment. Bring a list of all medications, vitamins or supplements that your child is taking. For childhood apraxia of speech CAS , some basic questions to ask the speech-language pathologist include: Does my child have CAS, or any other speech or language problems? How is CAS different from other types of speech disorders? What treatments are available, and which do you recommend? What can I do at home to help my child? Are there any brochures or other printed material that I can take home with me? What websites do you recommend? Did your child babble? For example, did your child produce cooing sounds and then produce syllables, such as

"ba-ba-ba" or "da-da-da"? If so, when did that start? When did your child say his or her first word? When did your child have five words in his or her vocabulary that he or she would use frequently? How many words does your child currently have in his or her vocabulary that would be understandable to most people? In what other ways does your child communicate? For example, does your child point, make gestures, make signs or act things out? Has anyone in your family had speech or language difficulties? Has your child had ear infections? About how many ear infections has he or she had? Was any hearing loss detected?

Chapter 3 : Childhood apraxia of speech - Symptoms and causes - Mayo Clinic

2 Children with apraxia of speech have great difficulty planning and producing the precise, highly refined and specific series of movements of the tongue, lips, jaw and palate that are necessary for intelligible speech.

Children with CAS find it difficult to produce the sounds they want to make, because they cannot correctly plan the movement of the muscles that control the articulators lips, tongue, teeth, jaw, and velum. Note that poor motor planning is not referring to weakness or paralysis of the muscles. Typically, our brain sends the movement plan to our speech muscles once we have decided what to say. A short lesson on motor planning: Speech is a quick process, but a lot of motor planning is working behind the scenes. Think about the way we say consonants. You may be thinking of consonant letters, like B, C, D, and F. For stopping consonants, we stop the outgoing air by closing off the air stream with our lips, tongue, or velum. Say each of these consonants slowly: Notice how your tongue and mouth move for each letter compared to when you say the vowels A, E, I, O, and U. Vowel sounds require a lot less movement. Now imagine only being able to speak in vowel sounds. Say this sentence while skipping the consonant sounds: In fact, some children with apraxia struggle with saying vowel sounds as well as consonants. It is important to note that children with CAS may have a combination of other disorders, such as general apraxia that affects movement of the whole body, but they may also have otherwise normal language skills despite their troubles with producing speech. Causes Childhood Apraxia of Speech Causes CAS is not a very common disorder, but even more frustrating for parents, it is often diagnosed without a known cause. The following conditions are thought to cause, or at least contribute to CAS: Trauma during birth, stroke, or brain tumors may result in injured brain systems that interfere with sending speech signals to the appropriate muscles. In fact, adults can acquire apraxia as well, in which case the condition is simply called apraxia of speech AOS. A skilled speech-language pathologist SLP can determine the underlying speech disorder by ruling out similar disorders, like articulation or phonological disorders and dysarthria muscle weakness. The following symptoms are often seen in children with CAS: Between 6 months to 2 years. Children with CAS may not be vocalizing or verbalizing at all. Specific markers at these ages include: Quiet baby with limited cooing and babbling. Delayed first word, or unusual or missing sounds in first word. Very limited repertoire of sounds and spoken words. Sounds are limited to vowels and consonants, if any. All words may sound the same. Long pauses between sounds. May have problems with feeding chewing, swallowing, gagging. Between 2 and 4 years. These markers may be observed: Vowel and consonant distortions, unlike typical articulation disorders. Separation of syllables in words. Voicing errors, such as turning on the voice for a voiceless sound e. Sounds may be inconsistent, sometimes spot on and sometimes incorrect. This makes it hard for an SLP to determine the pattern of errors. In contrast, children with articulation or phonological disorders typically have a clear pattern of incorrect sounds. Difficulty imitating sounds or words they have said clearly before. Parents often report that they heard their child say a certain word correctly, but could not get them to repeat it. Older than 4 years. An older child with CAS may show: Difficulty producing many speech sounds. Omitted consonants at the beginning and end of words. Use of grunts, vowel sounds, or single syllables to communicate. The need for repeated attempts to pronounce words. Difficulty moving from one sound, syllable, or word to the next. Deliberate and forced movements of the jaw, lips, or tongue to make the correct sounds. Abnormal choppy rhythm of speech. The child may stress the wrong syllable or use pauses at inappropriate times during speech. Ability to say certain words or sounds sometimes but not other times. Difficulty with longer sentences and words. The child will opt for shorter alternatives. Difficulty imitating mouth movements. Increasingly more unintelligible speech when the child is anxious or nervous. An understanding of language that is better than he or she can talk. Other signs that an SLP will look for include: Co-existing conditions, such as language disorders or muscle weakness. Difficulty chewing and swallowing. Diagnosis Childhood Apraxia of Speech Diagnosis If CAS is suspected, it is imperative that your child receive a full speech-language evaluation from a qualified speech-language pathologist. At Kidmunicate, our speech-language pathologists will assess the following: We suggest that the child have a full evaluation by an audiologist to rule out hearing loss as a possible cause. All speech areas of

the head and neck will be examined, including the lips, tongue, teeth, velum, and jaw, to rule out cleft palate or tongue-tie. The articulators lips, tongue, teeth, velum, and jaw will be examined to rule out dysarthria muscle weakness. CAS is a coordination issue, not a strength problem. Move the tongue from side-to-side and up-and-down. Move the lips to smile, frown, blow, kiss, or lick. A technique called the diadochokinetic DDK rate overview, or the Fletcher Time-by-Count test, will be used to measure how quickly and clearly the child can repeat a series of sounds or tokens that contain one, two, or three syllables for example: Ability to repeat a word multiple times. Ability to recite short to long words, like power, powerful, powerfully. The SLP will listen for appropriate stress on syllables in a word and proper pauses between words and phrases. Ability to pronounce vowel and consonant sounds. The SLP might refer your child to a neurologist for additional testing. If your child has been diagnosed with Childhood Apraxia of Speech, you might want to read this post: The treatment of CAS takes time and commitment. ASHA recommends one-on-one therapy sessions with a licensed speech-language pathologist at 3 to 5 sessions per week. Group therapy is not recommended, especially in the early stages of therapy. We use multi-sensory feedback to improve muscle coordination and sequencing, which means the child will practice speech using tactile cues that can be felt, seen, and heard touch, visual, and auditory. This helps the child focus on how the speech movements sound and feel. The child will also touch his or her own face while producing sounds and words. To encourage increased lip rounding, we may use bubbles, whistles, and apraxia tubes from Talk Tools by Sara Rosenfeld Johnson. To encourage lip closure, we may also use the apraxia shapes from Talk Tools. We have also had a lot of success with whole body cues. Visual Cues We use a mirror so the child can watch the movements of the mouth while saying sounds and words. Our SLP also demonstrates the speech movements as a model. Auditory Cues The child will listen to a recording of the sounds he or she has made to provide auditory feedback. The child will learn to tap out syllables or words in sentences. The SLP will have the child imitate all vocalizations in their repertoire and selectively reinforce close productions approximations. Vowels, Consonants, Syllables, Sound Combinations and Word Production First, we concentrate on vowel production, which requires less motor coordination than consonant sounds. We have also found success with Moving Across Syllables to identify specific sound combinations that are difficult for the child. Training Articulatory Sound Sequences here. Read more about the technique here. We focus on repeated practicing of the movements of the articulators lips, mouth, teeth, and tongue to pronounce sounds, syllables, words, and phrases. Practice improves muscle memory, the ability to recall the oral motor movement. Rhythms or melodies We use auditory feedback to practice proper placement of stress and pauses in words and phrases. Pacing boards are also used for tapping out rhythms. Speech homework is very important for speech-language disorders. The child with CAS should practice the speech therapy words and phrases for 10 minutes per day, twice a day, every day.

Chapter 4 : Childhood apraxia of speech - Diagnosis and treatment - Mayo Clinic

Childhood apraxia of speech (CAS) is an uncommon speech disorder in which a child has difficulty making accurate movements when speaking. In CAS, the brain struggles to develop plans for speech movement.

URL of this page: The request or command is understood They are willing to perform the task The muscles needed to perform the task work properly The task may have already been learned Causes Apraxia is caused by damage to the brain. When apraxia develops in a person who was previously able to perform the tasks or abilities, it is called acquired apraxia. The most common causes of acquired apraxia are: Brain tumor Condition that causes gradual worsening of the brain and nervous system neurodegenerative illness Dementia Stroke Traumatic brain injury Apraxia may also be seen at birth. Symptoms appear as the child grows and develops. The cause is unknown. Apraxia of speech is often present along with another speech disorder called aphasia. Depending on the cause of apraxia, a number of other brain or nervous system problems may be present. Symptoms A person with apraxia is unable to put together the correct muscle movements. At times, a completely different word or action is used than the one the person intended to speak or make. The person is often aware of the mistake. Symptoms of apraxia of speech include: Distorted, repeated, or left out speech sounds or words. The person has difficulty putting words together in the correct order. Struggling to pronounce the right word More difficulty using longer words, either all the time, or sometimes Ability to use short, everyday phrases or sayings such as "How are you? Buccofacial or orofacial apraxia. Inability to carry out movements of the face on demand, such as licking the lips, sticking out the tongue, or whistling. Inability to carry out learned, complex tasks in the proper order, such as putting on socks before putting on shoes. Inability to voluntarily perform a learned task when given the necessary objects. For instance, if given a screwdriver, the person may try to write with it as if it were a pen. Difficulty making precise movements with an arm or leg. It becomes impossible to button a shirt or tie a shoe. Exams and Tests The following tests may be done if the cause of the disorder is not known: CT or MRI scans of the brain may help show a tumor, stroke, or other brain injury. An electroencephalogram EEG may be used to rule out epilepsy as a cause of the apraxia. A spinal tap may be done to check for inflammation or an infection that affects the brain. Standardized language and intellectual tests should be done if apraxia of speech is suspected. Testing for other learning disabilities may also be needed. Treatment People with apraxia can benefit from treatment by a health care team. The team should also include family members. Occupational and speech therapists play an important role in helping both people with apraxia and their caregivers learn ways to deal with the disorder. During treatment, therapists will focus on: To help with communication, family and friends should: Avoid giving complex directions. Use simple phrases to avoid misunderstandings. Speak in a normal tone of voice. Speech apraxia is not a hearing problem. DO NOT assume that the person understands. Provide communication aids, if possible, depending on the person and condition. Other tips for daily living include: Maintain a relaxed, calm environment. Take time to show someone with apraxia how to do a task, and allow enough time for them to do so. DO NOT ask them to repeat the task if they are clearly struggling with it and doing so will increase frustration. Suggest other ways to do the same things. For example, buy shoes with a hook and loop closure instead of laces. If depression or frustration is severe, mental health counseling may help. Outlook Prognosis Many people with apraxia are no longer able to be independent and may have trouble performing everyday tasks. Ask the health care provider which activities may or may not be safe. Avoid activities that may cause injury and take the proper safety measures. Possible Complications Having apraxia may lead to: Learning problems Social problems When to Contact a Medical Professional Contact the provider if someone has difficulty performing everyday tasks or has other symptoms of apraxia after a stroke or brain injury. Prevention Reducing your risk of stroke and brain injury may help prevent conditions that lead to apraxia. Language and Motor Speech Disorders in Adults. Jones and Bartlett Learning. Dysarthria and apraxia of speech. Review provided by VeriMed Healthcare Network.

Chapter 5 : Apraxia: MedlinePlus Medical Encyclopedia

Apraxia of speech (AOS) is an acquired oral motor speech disorder affecting an individual's ability to translate conscious speech plans into motor plans, which results in limited and difficult speech ability.

Preparing for an appointment Overview Childhood apraxia of speech CAS is an uncommon speech disorder in which a child has difficulty making accurate movements when speaking. In CAS, the brain struggles to develop plans for speech movement. Symptoms Children with childhood apraxia of speech CAS may have many speech symptoms or characteristics that vary depending on their age and the severity of their speech problems. CAS can be associated with delayed onset of first words, a limited number of spoken words, or the ability to form only a few consonant or vowel sounds. These symptoms usually may be noticed between ages 18 months and 2 years, and may indicate suspected CAS. As children produce more speech, usually between ages 2 and 4, characteristics that likely indicate CAS include vowel and consonant distortions; separation of syllables in or between words; and voicing errors, such as "pie" sounding like "bye. Many children with CAS also have language problems, such as reduced vocabulary or difficulty with word order. Some symptoms may primarily be seen in children with CAS and can be helpful to diagnose the problem. However, some symptoms of CAS are also symptoms of other types of speech or language disorders. Some characteristics, sometimes called markers, help distinguish CAS from other types of speech disorders. Those particularly associated with CAS include: Characteristics seen in both children with CAS and in children with other types of speech or language disorders include: Reduced amount of babbling or vocal sounds from ages 7 to 12 months old Speaking first words late after ages 12 to 18 months old Using a limited number of consonants and vowels Frequently leaving out omitting sounds Difficult to understand speech Other speech disorders sometimes confused with CAS Some speech sound disorders often get confused with CAS because some of the characteristics may overlap. These speech sound disorders include articulation disorders, phonologic disorders and dysarthria. Articulation and phonologic disorders are more common than CAS. Articulation or phonologic speech errors may include: Substituting sounds, such as saying "fum" instead of "thumb," "wabbit" instead of "rabbit" or "tup" instead of "cup" Leaving out omitting final consonants, such as saying "duh" instead of "duck" or "uh" instead of "up" Stopping the airstream, such as saying "tun" instead of "sun" or "doo" instead of "zoo" Simplifying sound combinations, such as saying "ting" instead of "string" or "fog" instead of "frog" Dysarthria is a motor speech disorder that is due to weakness, spasticity or inability to control the speech muscles. People with dysarthria may also have a hoarse, soft or even strained voice, or slurred or slow speech. Dysarthria is often easier to identify than CAS. However, when dysarthria is caused by damage to certain areas of the brain that affect coordination, it can be difficult to determine the differences between CAS and dysarthria. CAS may be the result of brain neurological conditions or injury, such as a stroke, infections or traumatic brain injury. CAS may also occur as a symptom of a genetic disorder, syndrome or metabolic condition. For example, CAS occurs more frequently in children with galactosemia. CAS is sometimes referred to as developmental apraxia. In many children with delayed speech or developmental disorders, children follow usual patterns in development of speech and sounds, but they develop more slowly than usual. They need speech therapy to make maximum progress. The FOXP2 gene may be involved in how certain nerves and pathways in the brain develop. Researchers continue to study how abnormalities in the FOXP2 gene may affect motor coordination and speech and language processing in the brain. Complications Many children with childhood apraxia of speech CAS have other problems that affect their ability to communicate. Symptoms or problems that are often present along with CAS include: Delayed language, such as difficulty understanding speech, reduced vocabulary, or difficulty using correct grammar when putting words together in a phrase or sentence Delays in intellectual and motor development and problems with reading, spelling and writing Difficulties with gross and fine motor movement skills or coordination Hypersensitivity, in which the child may not like some textures in clothing or the texture of certain foods, or the child may not like tooth brushing Prevention Diagnosing and treating childhood apraxia of speech at an early stage may reduce the risk of long-term persistence of the problem. It depends on the pattern of problems that are seen. It can sometimes

be difficult to diagnose CAS, especially when a child speaks very little or has difficulty interacting with the speech-language pathologist. Your child may be asked to name pictures to see if he or she has difficulty making specific sounds or speaking certain words or syllables. Treatment Speech-language pathologists may treat childhood apraxia of speech CAS with many therapies. When CAS is relatively severe, your child may need frequent speech therapy, three to five times a week. As your child improves, the frequency of speech therapy may be reduced. Children with CAS generally benefit from individual therapy. Individual therapy allows your child to have more time to practice speech during each session. Learning to say words or phrases takes children with CAS time and practice. Speech-language pathologists may use different types of cues in speech therapy. Your child will be asked to listen to the speech-language pathologist and to watch his or her mouth as he or she says the target word or phrase. Your child will most likely practice syllables, words or phrases, rather than isolated sounds, during speech therapy. Children with CAS need practice making the movements from one sound to another. For example, your child may be asked to say "hi," "mine" and "bite," or "out," "down" and "house. Each home practice session can be short, such as five minutes in length, and you may practice with your child twice a day. Children also need to practice words and phrases in real-life situations. Create situations where it will be appropriate for your child to say the word or phrase spontaneously. For example, ask your child to say "Hi, Mom" each time mom enters a room. Practicing words or phrases in real-life situations will make it easier for your child to say the practice words automatically. Alternative communication methods may include sign language or natural gestures, such as pointing or pretending to eat or drink. For example, your child could use signs to communicate he or she wants a cookie. Sometimes electronic devices, such as electronic tablets, can be helpful in communication. Using these methods may help your child become less frustrated when trying to communicate. It may also help your child to develop language skills such as vocabulary and the ability to put words together in sentences. As speech improves, these strategies and devices may no longer be necessary. Therapies for coexisting problems Many children with CAS also have delays in their language development, and they may need therapy to address their language difficulties. Children with CAS who have fine and gross motor movement difficulties in their arms or legs may need physical or occupational therapy. For example, there is no evidence to show that exercises to strengthen speech muscles will help improve speech in children with CAS. Lifestyle and home remedies You and your family can work with your child at home to improve his or her speech and language skills. Encourage and support your child as he or she practices speech and language skills. Your support can help your child feel that he or she is doing well and improving. Coping and support It can be difficult to have a child who has problems communicating. There are a number of support groups available for parents of children with childhood apraxia of speech. Support groups may offer a place for you to find people who understand your situation and who can share similar experiences. Preparing for an appointment Your child is likely to start by seeing a doctor trained in the general care and treatment of children pediatrician or a doctor trained in treating children with neurological conditions pediatric neurologist. Your child will then be referred to a specialist in speech and language conditions speech-language pathologist. What you can do Write down any symptoms your child is experiencing, including any that may seem unrelated to the reason for which you scheduled the appointment. Bring a list of all medications, vitamins or supplements that your child is taking. For childhood apraxia of speech CAS , some basic questions to ask the speech-language pathologist include: Does my child have CAS, or any other speech or language problems? How is CAS different from other types of speech disorders? What treatments are available, and which do you recommend? What can I do at home to help my child? Are there any brochures or other printed material that I can take home with me? What websites do you recommend? Did your child babble? For example, did your child produce cooing sounds and then produce syllables, such as "ba-ba-ba" or "da-da-da"? If so, when did that start? When did your child say his or her first word? When did your child have five words in his or her vocabulary that he or she would use frequently? How many words does your child currently have in his or her vocabulary that would be understandable to most people? In what other ways does your child communicate? For example, does your child point, make gestures, make signs or act things out? Has anyone in your family had speech or language difficulties? Has your child had ear infections? About how many ear infections has he or she had? Was any

hearing loss detected?

Chapter 6 : Childhood apraxia of speech Disease Reference Guide - blog.quintoapp.com

Childhood apraxia of speech (CAS) is a speech disorder in which a child's brain has difficulty coordinating the complex oral movements needed to create sounds into syllables, syllables into words, and words into phrases.

Apraxia, Oculomotor General Discussion Apraxia is a neurological disorder characterized by the inability to perform learned familiar movements on command, even though the command is understood and there is a willingness to perform the movement. Both the desire and the capacity to move are present but the person simply cannot execute the act. Patients with apraxia cannot use tools or perform such acts as tying shoelaces or button shirts etc. The requirements of daily living are difficult to meet. Patients whose ability to speak is interrupted aphasia but who are unaffected by apraxia are able to live a relatively normal life; those with significant apraxia are almost invariably dependent. Apraxia comes in several different forms: Limb-kinetic apraxia is the inability to make precise or exact movements with a finger, an arm or a leg. An example is the inability to use a screwdriver notwithstanding that the person affected understands what is to be done and has done it in the past. Ideomotor apraxia is the inability to carry out a command from the brain to mimic limb or head movements performed or suggested by others. Conceptual apraxia is much like ideomotor ataxia but infers a more profound malfunctioning in which the function of tools is no longer understood. Ideational apraxia is the inability to create a plan for a specific movement. Buccofacial apraxia, sometimes called facial-oral apraxia is the inability to coordinate and carry out facial and lip movements such as whistling, winking, coughing etc on command. This form includes verbal or speech developmental apraxia, perhaps the most common form of the disorder. Oculomotor apraxia is a condition in which patients find it difficult to move their eyes. Apraxia is believed to be caused by a lesion in the neural pathways of the brain that contain the learned patterns of movement. It is often a symptom of neurological, metabolic, or other disorders that can involve the brain. Commands to move are understood, but cannot be executed. When movement is initiated, it is usually very clumsy, uncontrolled and inappropriate. In some cases, movement may occur unintentionally. Specific types of Apraxia are characterized by an inability to perform particular movements on command. In Constructional Apraxia, an individual is unable to reproduce simple patterns or copy simple drawings. Causes Apraxia is caused by a defect in the brain pathways that contain memory of learned patterns of movement. The lesion may be the result of certain metabolic, neurological or other disorders that involve the brain, particularly the frontal lobe inferior parietal lobule of the left hemisphere of the brain. In this region, complex, 3-dimensional representations of previously learned patterns and movements are stored. Patients with apraxia cannot retrieve these models of stored skilled movements. Oculomotor apraxia is a dominant genetic trait. The gene for this condition has been mapped to chromosome 2p Chromosomes are further sub-divided into many bands that are numbered. The numbered bands specify the location of the thousands of genes that are present on each chromosome. Genetic diseases are determined by two genes, one received from the father and one from the mother. Dominant genetic disorders occur when only a single copy of an abnormal gene is necessary for the appearance of the disease. The abnormal gene can be inherited from either parent, or can be the result of a new mutation gene change in the affected individual. Tissue or cellular damage lesions to other specific parts of the brain, whether as a result of stroke or wounds, tumors, or dementias, may also cause apraxia. These other locations include the so-called supplementary motor area premotor cortex or corpus callosum. If apraxia is the result of a stroke it usually abates within weeks. Some cases of apraxia are congenital. When a child is born with apraxia it is usually the result of malformations of the central nervous system. At the other extreme, individuals with deteriorating intellectual functioning degenerative dementia may also develop apraxia. Individuals with a condition of deteriorating intellectual functioning degenerative dementia may also develop Apraxia. Affected Populations There is little data available on the incidence of apraxia. Since apraxia may accompany dementia or stroke, it is more frequently diagnosed among older persons. Related Disorders The following disorder may be associated with Apraxia as a secondary characteristic. It is not necessary for a differential diagnosis: Aphasia is a disturbance in the ability to comprehend or use language. It usually occurs as a result of injury to the language centers of the brain cerebral cortex. Affected individuals may select the

wrong words in conversing and may have problems interpreting verbal messages. Children born with Aphasia may not talk at all. A speech therapist may assess the quality and extent of the Aphasia, and help to educate those people who most commonly interact with the affected individual in methods to help communication. Standard Therapies When Apraxia is a symptom of an underlying disorder, that disease or condition must be treated. Physical and occupational therapy may be of benefit to stroke and head injured patients. When Apraxia is a symptom of another neurological disorder, the underlying condition must be treated. In some cases, children with apraxia may learn to compensate for deficits as they grow older with the help of special education and physical therapy programs. Speech therapy and special education may be particularly helpful in treating patients with developmental apraxia of speech. Investigational Therapies Information on current clinical trials is posted on the Internet at www. All studies receiving U.

Chapter 7 : Apraxia - NORD (National Organization for Rare Disorders)

Apraxia of speech information is limited because it is an inconsistent and uncommon disorder. This simplified information and explanations will help you understand the disorder better.

Apraxia What is Apraxia? The term apraxia is used to describe the inability to perform particular purposeful actions despite normal muscle strength and tone. People who suffer from apraxia are usually unable to perform common expressive gestures on request, such as waving good-bye, beckoning, or saluting, or to pantomime drinking, brushing teeth, etc. Apraxia may also affect oral, non-speech movements, like pretending to cough or blow out a candle. What is Apraxia of Speech? Apraxia of speech AOS is an impaired ability to perform speech movements. It is differentiated from dysarthrias in that it is not due to problems in strength, speed, and coordination of the articulatory musculature. The primary behavioral characteristics of AOS are slowed speech, abnormal prosody, distortions of speech sounds such as sound substitutions and highly inconsistent errors. Individuals with AOS often appear to be groping for the right way to position their mouth, tongue and lips articulators when producing words and sounds. Apraxia of Speech AOS can be divided into two types based on what caused the condition: Acquired AOS typically results from brain injury in people who have already learned how to speak. Damage to a wide range of brain areas has been associated with the disorder, mostly in the left hemisphere. Developmental AOS begins very early in life and in many cases may be genetic. As a result, developmental AOS is characterized not only by symptoms seen in acquired AOS, but also by a multitude of other developmental issues. At present, the diagnosis of AOS remains purely behavioral, based primarily on perceptual evaluation of speech characteristics without evaluation of brain tissue damage. This sometimes may result in confounding disorders with shared behavioral symptoms. However, in future apraxia evaluation may change as more is understood about what type of brain damage causes AOS and diagnosis may rely more heavily on evaluation of specific damage to brain regions important for speech. How does Apraxia relate to Aphasia? Both aphasia and apraxia are speech disorders, and both can result from brain injury most often to areas in the left side of the brain. However apraxia is different from aphasia in that it is not an impairment of linguistic capabilities but rather of the more motor aspects of speech production. People with aphasia who also have apraxia may be further limited in their ability to compensate for the speech impairment by using informative gestures.

Chapter 8 : Childhood Apraxia of Speech

A person with apraxia of speech might also have oral apraxia. Other speech-related difficulties found together with apraxia of speech include aphasia, an impaired ability to speak and understand language, and dysarthria, or slurred speech.

Childhood Apraxia of Speech or CAS as we refer to it as , is a type of speech disorder that occurs in children, although it is rather uncommon. It is different than other speech disorders because it is neurologically-based, meaning it has to do with problems with the nervous system. Though it is important to keep in mind that this is not a problem that can be seen by a neurologist on a scan. Childhood Apraxia of Speech cannot be diagnosed by typical neurological scans. It is more of a hidden disorder. Children with CAS have a different type of speech problem. You know that you need to turn on your left blinker so you tell your car to turn on the blinker by pushing that little stick down. But, for some reason, the wiring in your car is all mixed up so instead of your blinker turning on, your clock starts flashing instead true story: I had a car that did that once. You planned for the car to do one thing turn on the blinker but it did something else instead flashed the clock. So you try again. This time, when you hit the blinker your headlights turn off. Every time you turn on your blinker, something different happens. Can you imagine how frustrating that would be? That means children with CAS have trouble with the precision and consistency of speech movements even though the muscles and reflexes in their mouths are working just fine. Think about our car analogy again: However, young children with CAS are also lacking in the knowledge of how to move their mouths to create the different sounds because they have never been able to do it consistently before. This feedback helps the brain figure out which paths to strengthen for the wiring and where to put the articulators lips, tongue, etc. What Causes Childhood Apraxia of Speech? Childhood Apraxia of Speech can be caused by a number of different causes or by seemingly nothing at all! Some CAS cases have been attributed to brain damage, such as a traumatic head injury or a near drowning. These include attention deficit disorder and autism spectrum disorders. And then again, many cases of CAS have no known cause. The problem with CAS is that no one has really been able to nail down a definite description of the disorder. Research on the topic is still rather limited so there is no formal definition of the disorder or even diaganostic criteria. For that reason, diagnosis of this disorder can be very tricky and two professionals may disagree on if a child does or does not have the disorder. Plus, many therapists feel ill-equipped to diagnose and treat CAS due to this confusion. The 3 Criteria for Childhood Apraxia of Speech That being said, there are three criteria which are gaining some consensus among investigators at the time that I am writing this Summer of Hopefully there will be more definite criteria in the future, but the most commonly-accepted features currently are: In addition to the three features mentioned above, there is a less commonly-agreed on set of characteristics that have been reported in some children with CAS. These characteristics are not always there and children without CAS can also have them, but the presence of many items from this list may point to CAS being the more likely diagnosis. How is Childhood Apraxia of Speech Diagnosed? A childhood apraxia of speech diagnosis should be given cautiously. There is still much unknown about this disorder and diagnosis can be very tricky. This condition is very rare and many children are being given this diagnosis when they really just have a severe phonological or articulation disorder. A certified speech-language pathologist is capable of making a CAS diagnosis but you want to make sure that they have special training and experience with this population. What are the Treatments for Childhood Apraxia of Speech? Children with CAS benefit immensely from speech therapy from a certified speech-language pathologist. The following video will give you a brief overview of what we would include in therapy for a child with CAS. Click the link below to learn how motor learning theory can help children with CAS: These alternative means of communication can help reduce frustration and allow a child to communicate even though he cannot speak.

Chapter 9 : What Causes Childhood Apraxia of Speech and Is It Preventable? - Apraxia Kids

Childhood Apraxia of Speech (or CAS as we refer to it as), is a type of speech disorder that occurs in children, although it is rather uncommon. It is different than other speech disorders because it is neurologically-based, meaning it has to do with problems with the nervous system.

Parents often wonder why their child has apraxia of speech and whether or not they did something "wrong". It is not about how much you talked to your child or whether or not you had them in daycare, for example. Your child does not have apraxia because you separated from your spouse or because you moved to a new city. CAS occurs in the following 3 conditions: Neurological impairment caused by infection, illness, or injury, before or after birth or a random abnormality or glitch in fetal development. In this category would be Childhood Apraxia of Speech that occurs with Autism, Fragile X, Galactosemia, some forms of Epilepsy, and Chromosome translocations involving duplications and deletions. Children do not have observable neurological abnormalities or easily observed neurodevelopmental conditions. Parents often ask if their child may have apraxia due to medical complications during pregnancy or childbirth. There are currently no studies that suggest a direct relationship between complications of pregnancy or childbirth and a specific increase in risk for apraxia of speech. For example, an umbilical cord wrapped around the neck of a fetus could theoretically cut off oxygen supply and possibly lead to neurological injury, eventually resulting in a CAS diagnosis. Some children are born just fine even though there was some complication during pregnancy or birth. So, while it is possible that a complication could result in neurological damage that might contribute toward a motor speech disorder like CAS, research has not told us when or how this would occur. Some speculate that some forms of CAS and other childhood conditions may be a result, in part, of environmental conditions such as exposure to pollutants and toxins before or after birth. Others speculate that nutritional deficits or malabsorbtions cause CAS. We do know that, generally, toxins and nutritional deficits do cause some developmental problems, but to date these theories, as they relate specifically to CAS, are only speculations. A child who is healthy is more fully capable of taking advantage of opportunities to learn. Children who are sick frequently with ear and sinus infections, enlarged tonsils and adenoids, asthma, allergies or have sleep disturbances, poor diets, attention and behavioral difficulties are going to find it much more difficult to benefit from the help provided. Most likely in the future we will learn that CAS is caused by multiple factors and conditions, not one. To the extent that research evidence becomes available that CAS is caused by some factor s that can be manipulated to reduce or eliminate it, will determine whether or not it is preventable. Until then, we do know that appropriate speech therapy provided frequently and in consideration of motor-speech treatment principles offers the single most important opportunity for children with CAS to improve their speech capacity. Children who are able to maintain optimum health will most likely directly benefit the most from appropriate help.