

Chapter 1 : How to Prevent Cerebral Palsy

Mental health conditions. People with cerebral palsy may have mental health (psychiatric) conditions, such as depression. Social isolation and the challenges of coping with disabilities can contribute to depression. Lung disease. People with cerebral palsy may develop lung disease and breathing disorders. Neurological conditions.

Check new design of our homepage! How to Prevent Cerebral Palsy Cerebral palsy describes a group of brain and nervous system conditions, which affects every two to three children in As the exact cause behind this condition is unknown, it cannot be prevented. But few preventions may help to reduce the risk of this condition. The term cerebral palsy is used to denote a group of non-progressive and non-contagious motor conditions, which cause physical disability in the child. This condition usually occurs during pregnancy, childbirth, and early childhood. Movement of different parts of the body are affected due to this condition. When the motor control centers of the brain are damaged, the child may be affected with cerebral palsy. The exact cause behind this condition is still unknown. There are some possible causes or risk factors which may cause cerebral palsy in children. But the major concern is whether this condition is preventable. The answer is no, cerebral palsy cannot be prevented, but one can at least lessen the risk of this condition by following some preventive measures. Possible Causes of Cerebral Palsy Though in many cases the cause behind cerebral palsy is unknown, there are some known causes which may either increase the risk or can contribute to the occurrence of this condition. Following are some of them. Certain infections during pregnancy like rubella German measles , can cause brain damage further leading to cerebral palsy. Insufficient supply of oxygen to the fetus which may be caused due to improper functioning of placenta. Premature delivery may also lead to this condition, specially when the infant is less than 3 pounds. Lack of oxygen or asphyxia during labor or delivery. Incompatibility between the Rh factor between mother and her fetus. Severe jaundice if not taken care of in time, may pose high risk of permanent brain damage further resulting in cerebral palsy. Some children may acquire cerebral palsy after birth due to brain infections such as meningitis and due to some head injury. Methods to Prevent Cerebral Palsy There is no cure for cerebral palsy. The treatment options available can only decrease or minimize the disabilities and can improve the capabilities of the child. As the exact cause for this condition is still unknown, it cannot be prevented. But there are some risk factors that can be addressed and reduced in time. Following are some of the preventive measures which may not prevent cerebral palsy, but can reduce the chances of its occurrence- Rubella Vaccination Rubella virus, also known as German measles virus can cause birth defects, if expectant mothers are affected by it. If you are vaccinated against it, you will not acquire this virus again. However, it is important that the immunization happens at least 4 to 6 weeks before conceiving, so that it helps in preventing cerebral palsy. You can undergo a test to find out whether you need the vaccination or not. In most cases, this condition does not pose a big threat during the first pregnancy, but can be problematic during the subsequent pregnancies. To prevent any adverse situation, pregnant woman with Rh negative, should take appropriate care in the early stage of pregnancy. Treat all Infections Infections like cytomegalovirus a usually mild viral infection and toxoplasmosis a usually mild parasitic infection may cause brain damage which may further lead to cerebral palsy, hence measures should be taken to treat any such infections at the earliest. As far as possible, stay away from people who are infected, to protect the fetus from getting affected. Jaundice in Newborn Jaundice in newborn should be treated with utmost care. Care should be taken to avoid kernicterus so that bile pigments do not build up and pose a threat to the brain of the child. Newborns with jaundice are treated with photo therapy. Routine Vaccination of Babies Do not neglect even one routine vaccination given to the babies. Complete the course and give your child all the vaccinations on time. This will keep them healthy and their body will be ready to fight against any disease or infections. Protect your Child from Accidents While traveling with the child in the car, it is important that the baby is properly secured. Head injury can also be one of the causes of cerebral palsy, therefore, care should be taken about the same. The child should be placed in the child seat and strapped properly, while traveling. Provide your child bicycle helmet and get safety rails on beds. Lead Exposure Care should be taken to ensure that the child is not exposed to lead. Lead poisoning is one of the causes of brain

damage in small children. Along with lead, the child should also be protected from exposure to other harmful chemicals as well. Prenatal Care Regular visit to your doctor will help in the early diagnosis of infections and other problems. Early diagnosis and treatment will reduce the risk of cerebral palsy. Healthy Diet and Vitamins Although it has been emphasized upon everywhere that one must follow a healthy diet, most of us tend to neglect this advice. However, expectant mothers must overtly be cautious about what they eat. Balanced diet with the right vitamin and mineral supplements are important during pregnancy to avoid cerebral palsy. Discuss with your pediatrician if your child faces developmental problems like understanding, sitting, crawling, or walking. Take extra care of yourself when you are pregnant. Research has proved that children born to non-smoking mothers are healthier and have less chances of cerebral palsy. Along with smoking, alcohol and drugs also have to be kept off the radar. Though cerebral palsy cannot be cured or prevented, early detection of the condition and preventive measure to reduce the risk, might save your child from cerebral palsy. This article is for informative purposes only, and should not be used as a replacement for expert medical advice.

Chapter 2 : Cerebral Palsy | Answers to Top Questions and Financial Help

Cerebral Palsy affects muscle tone, gross and fine motor functions, balance, coordination, and posture. These are considered primary conditions of Cerebral Palsy. There are associative conditions, like seizures and intellectual impairment, that are common in individuals with Cerebral Palsy.

Various neurological conditions may result from the condition and can benefit from monitoring and treatment. These include epilepsy, cognitive impairment, hearing or vision loss, and others. A child with cerebral palsy must be regularly evaluated for neurological health and treated for any resulting complications. A baby may suffer this kind of damage during pregnancy, during labor and delivery, or soon after birth. Exactly what causes a particular case of cerebral palsy may not be known, but there are several ways in which the brain damage occurs. Although it is not known exactly how it happens, the gaps that are sometimes seen in white matter in the brains of children with cerebral palsy is thought to occur between 26 and 34 weeks of gestation. Another cause is anything that disrupts the normal development of the brain in the womb, like infections or genetic factors. Bleeding in the brain, sometimes caused by a fetal stroke, can also cause significant damage. During childbirth, one of the most common ways in which the brain is damaged is by being deprived of oxygen. This results in cell death in the brain, and the longer oxygen is deprived, the worse the damage will be. The stress of a difficult delivery or complications of birth—such as detachment of the placenta or being strangled by the umbilical cord—have the potential to cause this to happen. Neurological Complications of Cerebral Palsy Seizures are common in children with cerebral palsy ; nearly half will suffer from some type of seizure disorder to some degree. If two or more unprovoked seizures occur, it becomes known as epilepsy. Autism is another condition often connected with cerebral palsy. Autism spectrum disorder may cause a variety of symptoms of varying degrees, including social impairment, difficulty communicating, and repetitive behaviors. Some children on the spectrum are severely disabled, while others are only slightly impaired. Cognitive impairment, or intellectual disability , is also fairly common in kids with cerebral palsy. It essentially means that a child has a lower than average intelligence. With a cognitive impairment, a child may struggle to socialize, to learn, to think and solve problems, and depending on the severity, to live an independent life as an adult. Other consequences of impaired neurological health in children with cerebral palsy include learning disabilities, apraxia, psychological and mental health disorders, developmental disorders, and difficulties with communication. These neurological conditions are often found to coexist with cerebral palsy, but the true connection, how one causes the other or if they have a common cause, is not always well understood. The original damage that causes cerebral palsy in a child is not progressive. It will not get worse with time and it will not be healed or corrected. On the other hand, the neurological complications or co-existing conditions can get worse over time. Because neurological health can deteriorate in a child with brain damage and cerebral palsy, regular evaluation is important. The sooner treatments and therapy are started, the better chance the child has of seeing benefits of those treatments. Early on, within the first few days of birth, surgical and other medical treatments may begin to repair some of the neurological damage a child has suffered. For instance, if it is known that a baby suffered brain damage or was deprived of oxygen a hypothermic treatment can be used to cool the baby and prevent much of the damage. Surgery to remove blood from the brain from a hemorrhage may also help reverse or prevent neurologic damage. For most children, however, the results of brain damage in childbirth will not be discovered until later. Even then, months, and sometimes years after birth, a child can benefit from neurologic evaluation and treatments. Educational interventions can help a child learn better in school. Medications can treat and reduce the frequency of seizures. Various types of behavioral therapies can help a child on the autism spectrum learn to communicate and socialize. If you have a child born with cerebral palsy, you will need to be aware of the issues related to neurologic health. To evaluate, monitor and treat neurologic health regularly is to give a child the best chance at living a life that is fulfilling and satisfying. Neurological problems can be devastating, but they can also be managed. You can give your child the best life by providing the best neurologic care.

Chapter 3 : Diagnoses Similar to Cerebral Palsy | My Child Without Limits

Familial cerebral palsy is uncommon, approximately 1% of people with cerebral palsy will have a sibling with the condition. It is even uncommon in twins - when one twin has cerebral palsy, 90% of co-twins will not have cerebral palsy.

Co-mitigating factors

Primary Conditions Primary conditions are the direct result of the brain injury or malformation that causes cerebral palsy. Primary conditions or symptoms of cerebral palsy include impaired motor control gross, fine and oral , impaired motor coordination and poor muscle tone, balance and posture.

Secondary Conditions Secondary conditions are the result of primary conditions and are only present because of the cerebral palsy. Secondary conditions often associated with CP include difficulty feeding and swallowing, poor nutrition and respiratory issues, among others.

Oral Motor Impairment Problems with Feeding, Swallowing and Drooling Children with cerebral palsy often have impaired oral motor control, which means they have difficulty controlling the muscles in their mouth and throat. This can lead to problems with feeding sucking, chewing, etc. In some cases, those with dysphagia may experience pain when swallowing or be unable to swallow at all. Gastroesophageal reflux disease GERD is common among those with cerebral palsy. GERD is a digestive disease in which stomach acid is regurgitated into the esophagus. Frequent aspiration can lead to respiratory problems, like aspiration pneumonia, and may be life-threatening. Those with impaired fine motor skills may also have trouble using their hands to transport food or drink to their mouth. These children may have to rely on a caretaker or assistive equipment to feed them. Feeding and swallowing problems can lead to poor nutrition, dehydration and low weight. Oral motor impairment also causes drooling in about 30 percent of cerebral palsy patients. Problems with feeding and swallowing, as well as drooling, can be improved through speech and occupational therapy.

Speech Impairment Many children with cerebral palsy have dysarthria, a motor speech disorder. People with dysarthria have difficulty controlling the muscles used for speech, such as the: Lips Vocal folds Diaphragm Apraxia of speech is another common motor speech disorder that affects children with cerebral palsy. The child knows what they want to say, but their brain is unable to plan and coordinate the muscle movements needed to do so. Children with cerebral palsy may also struggle with speech sound disorders. These include problems with articulation and phonological processes, or speech patterns used by children to simplify adult speech. Speech disorders can usually be improved through speech therapy. [Get your free case evaluation](#)

Associative Conditions Associative conditions are those that commonly co-occur with cerebral palsy, but are not caused by the same brain injury or malformation. Associative conditions of CP include vision and hearing impairment these can be secondary conditions in some cases , intellectual and learning disabilities, and epilepsy, among others.

Intellectual Disabilities Intellectual disability, formerly known as mental retardation, is characterized by below average intellectual functioning. A child with an intellectual disability will have limitations in both cognitive functioning—the thinking skills that lead to knowledge—and adaptive behavior—the ability to adapt to the environment and function in daily life. Intellectual disabilities are categorized as mild, moderate or severe. An estimated two-thirds of children with cerebral palsy have an intellectual disability. Of those children, half have a mild diagnosis and the other half have a moderate to severe intellectual disability.

Learning Difficulties Children with cerebral palsy sometimes have difficulty learning due to a number of factors. Some have learning disabilities, which are neurological processing problems that interfere with basic learning skills, like reading and writing. Learning disabilities can also affect higher level skills, such as organization and abstract reasoning. Motor planning difficulties, known as motor dyspraxia, are also common with CP. People with motor dyspraxia have a hard time understanding tasks and planning how to perform them, which makes executing the tasks even harder. A child who has motor planning difficulties knows what they want to do, but they have trouble understanding how to do it. This can make learning new skills a huge effort that requires a lot of concentration. Those with impaired fine motor and gross motor coordination, as well as language and communication problems, may also have trouble learning.

Visual Impairment and Blindness Visual impairment refers to any kind of vision loss not including blindness, which is when a person is completely visually impaired and can see no light at all. One in ten children with cerebral palsy have severe visual

impairment. Nearly half of all children with spastic cerebral palsy have strabismus, better known as cross-eye. As many as 75 to 90 percent of children with CP have a vision impairment, including: Amblyopia lazy eye Optic atrophy deterioration of the optic nerve due to damage Nystagmus repetitive, uncontrollable eye movements in a vertical or horizontal direction Visual field defects loss of one side of the visual field Refractive errors near and farsightedness and astigmatism or blurred vision Hearing Loss Hearing impairment, also known as hearing loss, refers to any degree of impairment of the ability to hear sound. There are three main types of hearing loss, including: Conductive Sensorineural Mixed Conductive hearing loss occurs when there is a problem in the outer or middle ear, which results in hearing only faint sounds. With this type of hearing impairment, sound is not properly carried conducted through the outer ear canal to the middle ear the eardrum and the ossicles or the tiny bones of the middle ear and inner ear. Conductive hearing loss can usually be corrected by medical or surgical intervention. Sensorineural hearing loss occurs when the inner ear cochlea or the auditory nerve are damaged. This type of hearing impairment reduces the ability to hear faint sounds and speech often sounds muffled. It usually cannot be corrected medically or surgically and is the most common type of permanent hearing loss. A person has mixed hearing loss if they have both conductive and sensorineural hearing loss in an ear. In this case, there is damage in the outer or middle ear and in the inner ear. Central hearing loss is a rare form of hearing impairment. With central hearing loss, the issue is in the central nervous system, not the ear. The person may be able to hear perfectly, but they cannot interpret or understand the language. An estimated 20 percent of children with cerebral palsy have a hearing impairment. Epilepsy, also known as seizure disorders, is not a disease. It is a spectrum condition characterized by unpredictable, recurrent seizures. Thirty to 50 percent of children with CP have co-occurring epilepsy. This is called sensory processing disorder. Children with sensory processing disorder can experience increased or decreased sensory reactions, which can lead to problems with development and behavior. For example, a child who has an increased sensitivity to touch known as hypersensitivity may not like the feeling of certain textiles and will act out or scream if they come in contact with one. On the other hand, a child with a decreased sensitivity to touch known as hyposensitivity may play aggressively or bump into things without showing pain. Sensory problems are common among children with other neurodevelopmental disorders, like autism. Co-mitigating Factors Co-mitigating factors are conditions that are unrelated to cerebral palsy. These conditions often coexist with cerebral palsy, but the reason why is not yet known. Co-mitigating factors of cerebral palsy include autism and ADHD. Children with ADHD may have a hard time staying focused and paying attention, which can make learning a challenge. They may also have trouble controlling their behavior and struggle with hyperactivityâ€”a higher than normal activity level. Children with ADHD often have issues in school and with social skills. Autism Autism spectrum disorder is an umbrella term that describes a group of brain development disorders. Autism is characterized by social impairments, verbal and nonverbal communication difficulties and repetitive patterns of behavior. Approximately one to two percent of American children have an autism spectrum disorder. An estimated seven percent of children with cerebral palsy have co-occurring autism. While it seems that autism is more common among children with cerebral palsy, the link between the two disorders is not yet known. Treatment for Coexisting Conditions Treatment for cerebral palsy is different in each case. Many of the symptoms associated with cerebral palsy and coexisting conditions can be managed or improved with a comprehensive treatment plan.

Chapter 4 : Cerebral Palsy Symptoms and Effects | Gillette Children's Specialty Healthcare

Conditions Associated with Cerebral Palsy. Cerebral palsy is caused by damage to or malformation of the areas of the brain that control motor function during fetal development. Children with CP often have coexisting conditions, which are health conditions that a person has in addition to cerebral palsy. These other conditions may be the result of having cerebral palsy or an unrelated, but common co-occurrence.

Mixed Cerebral Palsy Mixed cerebral occurs when the child has two or more types of the aforementioned types of cerebral palsy. Spastic-dyskinetic cerebral is the most common type of mixed cerebral palsy. When children have mixed cerebral palsy, they may exhibit a combination of symptoms, matching each type of the disorder they have. Early intervention is key when helping children with cerebral palsy. Also keep in mind that there is no need to panic. In other instances, parental instincts are spot-on, and treatment can begin shortly after.

What Causes Cerebral Palsy? In some instances, the cause of cerebral palsy remains unknown. Brain damage can occur from maternal illnesses and diseases, genetic factors, or using illegal drugs while pregnant. Cerebral palsy can also happen during childbirth. Infants born too early are at risk of developing the disorder. Premature infants run the risk of oxygen loss and a host of other medical issues that can lead to brain damage, which may eventually lead to cerebral palsy. In some instance, children may have an accident during childhood that can lead to brain damage and cerebral palsy. Additionally, babies or toddlers may develop a severe medical condition, such as meningitis, that can lead to brain damage and cerebral palsy. Another possible cause of cerebral palsy is brain damage caused by medical negligence. When the baby is deprived of oxygen during birth, the damage can be enough to cause cerebral palsy. Improper use of forceps and other tools during delivery can also cause damage. A doctor may also be at fault for failing to do something, like delaying a Cesarean section or failing to perform one altogether, not properly monitoring the health of the fetus, or not detecting and treating infections. Many parents have started lawsuits against doctors and hospitals when negligence was suspected in a cerebral palsy case.

Is Cerebral Palsy a Disease? Cerebral refers to the brain and palsy refers to movement. Not only is this myth untrue, but many children with cerebral palsy have above average intelligence. There are doctors, attorneys, teachers, and more, who live with cerebral palsy yet carry out demanding careers. Some children, however, will develop some form of cognitive impairment, due to the injury that caused CP in the first place. The degree of the impairment depends on individual circumstances. Healthcare professionals will be able to work with your child to determine what level, if any, of cognitive impairment exists.

How is Cerebral Palsy Diagnosed? In other instances, especially if a baby is born prematurely or has a heightened risk of developing the disorder, there is a chance that the infant will get a diagnose in the first few months of life. When diagnosing cerebral palsy, doctors look for poor coordination skills, spastic movements, uncontrolled muscle movements. Physicians will also perform development screenings on the infant or child. A development screening test will allow doctors to see if the patient has motor movement delays or any other type of developmental delays. It will take time to get a proper diagnosis, although premature infants may get a quicker diagnosis than a toddler. Most cases of cerebral palsy cannot be prevented because most causes of the disorder are still unknown. Unfortunately, no one knows when an infant will suffer brain damage at the hands of a physician. As mentioned earlier, pulling too hard on an infant, especially while using birth-assisting tools forceps can result in severe injuries, including brain damage. This includes making sure cleaning supplies and other toxic substances are out of reach. Therapy is common for almost all children with cerebral palsy as it helps them with the crucial aspects of growth and development. Therapy is usually started shortly after a diagnosis and can include both physical and speech therapy. Therapies help patients learn techniques for movements, stretching, hearing, eating, drinking, learning, speech, hearing, and social development. Medications Generally, medications are used to help control spastic movements, seizures, and control pain.

Cerebral palsy (CP) is a group of disabling neuromuscular disorders that are the result of injuries to a baby's brain that occur before, during, or after birth. Since CP is a disability that affects the cerebellum and other parts of the brain, it is closely linked to a variety of other medical conditions that have adverse effects on a baby's health and quality of life.

Cerebral palsy can be confused with other medical conditions. It is especially important to consider other causes that might have different treatments. Clinical clues to consider carefully include: Is there an absence of difficulties at or around the time of birth that account for the developmental motor and associated abnormalities. One of the diagnoses that can appear like cerebral palsy is a progressive movement disorder called Dopa responsive dystonia DYT5. This rare genetic disorder occurs due to impaired production of a neurochemical called DOPA. This results in a progressive increase in muscle tone and physical limitations and can resemble cerebral palsy. Patients with this condition typically do not have cognitive challenges but may have progressive and severe spasticity or dystonia. A large number of these individuals also have variation in their tone during the day. These children and adults often respond to very low dose DOPA supplement and have significant improvement in their symptoms. Another genetic disorder that is confused with cerebral palsy early in the course of the disorder is Glutaric aciduria type 1. The distinguishing feature of this condition is progression of the movement disorder with the child developing chorea rapid random movements. Also imaging of the brain reveals a distinctive pattern of abnormalities in the temporal area. While reversal of the symptoms is not anticipated, specific medical interventions may limit further progression of the condition. Instability of the spinal column is also an important consideration. This possibility should be strongly considered if an individual has progressive spasticity, deterioration of motor function, sensory changes and progressive bowel and bladder abnormalities. The spinal cord can be injured directly by the increased movement of the bone vertebra. This may be as high as the cervical area or at any point along the spine. Intervention to stabilize the spine is critical to stop the progression. Reversal of the new neurological findings is frequently not possible but again the intervention may stop the deterioration. Other slowly progressive disorders are occasionally misdiagnosed as cerebral palsy. These are predominantly rare diagnoses that have other symptoms that help separate them from individuals with cerebral palsy. For example, several have an associated loss of cognitive skills. These patients do not have a stable, predominantly motor problem but instead deteriorate across several domains e. Imaging MRI preferably may reveal changes that are consistent with the diagnosis. Examples of such diagnoses include: Visit the My Child Without Limits support community and talk to fellow parents, caregivers, and experts about your attempt to prevent cerebral palsy in your child.

Chapter 6 : Cerebral Palsy and Neurological Health | Cerebral Palsy Guidance

Though Cerebral Palsy can be defined, having Cerebral Palsy does not define the person that has the condition. Definition of Cerebral Palsy While Cerebral Palsy (pronounced seh-ree-brel pawl-zee) is a blanket term commonly referred to as "CP" and described by loss or impairment of motor function, Cerebral Palsy is actually caused by brain damage.

Cerebral Palsy What is cerebral palsy? Cerebral palsy CP is a broad term that describes a group of nonprogressive neurological brain disorders that cause the loss of normal motor function. It is a lifelong condition that affects the communication between the brain and the muscles, causing a permanent state of weakness or abnormal movements. CP may result from several problems, such as lack of oxygen to the brain, genetic conditions, infections, brain hemorrhage, severe cases of jaundice, and injury to the head. Sometimes children with CP may also have other conditions, such as seizures, visual loss, or intellectual disability, but these are not features of CP. CP only refers to the motor dysfunction. What causes cerebral palsy? Many cases of CP have unknown causes. The disorder occurs when there is abnormal development or damage to areas in the brain that control motor function. Risk factors for CP include the following: What are the symptoms of cerebral palsy? The following are the most common symptoms of CP. However, each child may experience symptoms differently. The child may have muscle weakness, poor motor control, or have shaking, also called spasticity, of the arms or legs. Muscle stiffness in the form of stiff legs or clenched fists may also be seen. Cerebral palsy is classified according to the kind of motor function the child may have, including the following: Spasticity of the legs usually or sometimes the arms. Diplegia is also called paraplegia. Spasticity affecting one half, or side, of the body such as right arm and right leg Spastic double hemiplegia. Spasticity in both sides of the body, but the amount of spasticity is different when comparing the right side to the left side Athetoid or dyskinetic. Involuntary unable to control , purposeless, usually twisting, and rigid movement Ataxic. Affects balance, leading to an unsteady gait, and motions, which require fine coordination, such as writing Children with CP may have additional problems, including the following: Seizures Vision, hearing, or speech problems Learning disabilities and behavior problems Intellectual disability Respiratory problems Bowel and bladder problems Bone abnormalities, including scoliosis a lateral, or sideways, curvature and rotation of the back bones, giving the appearance that the person is leaning to one side Babies with CP are often slow to reach developmental motor milestones, such as learning to roll over, sit, crawl, or walk. They may also have certain reflexes present that normally disappear in early infancy. The symptoms of CP may resemble other conditions. How is cerebral palsy diagnosed? The diagnosis of CP is made with a physical examination. During the examination, the doctor obtains a complete prenatal and birth history of the child. The diagnosis of CP is not usually made until the child is at least 6 to 12 months old. This is the time when the child should be achieving developmental milestones, such as walking, and hand and head control. However, approximately half of the children suspected to have CP at 12 months appear to grow out of it by age 2. Diagnostic tests may include the following: This is to evaluate reflexes and brain and motor function. Magnetic resonance imaging MRI. A diagnostic procedure that uses a combination of large magnets, radiofrequencies, and a computer to produce detailed images of body structures and organs, such as the brain. This imaging test is commonly used to evaluate CP. Another diagnostic imaging test, which uses radiation beams to produce images of internal tissues. Feeding studies Blood tests Gait lab analysis. This is to evaluate the walking pattern of the child. A CT scan shows detailed images of any part of the body, including the bones, muscles, fat, and organs. CT scans are more detailed than general X-rays. Diagnostic tests that evaluate for conditions that have a tendency to run in families. Diagnostic tests that evaluate the absence or lack of a specific enzyme for example, amino acids, vitamins, carbohydrates that are necessary to maintain the normal chemical function of the body. A child is best treated with an interdisciplinary team that may include the following health care providers: A surgeon who specializes in conditions of the muscles, ligaments, tendons, and bones Neurologist. A doctor who specializes in conditions of the brain, spinal cord, and nerves Neurosurgeon. A surgeon who specializes in operating on the brain and spinal cord Ophthalmologist. A doctor

who specializes in eye problems Dentist. A doctor who specializes in physical medicine and rehabilitation. Management of CP includes nonsurgical and surgical options. Nonsurgical interventions may include: Rehabilitation Positioning aids used to help the child sit, lie, or stand Braces and splints used to prevent deformity and to provide support or protection Medications used to help decrease spasticity in the muscles; the medications may be given by mouth or as an injection Surgical interventions may be used to manage the following conditions: Positive reinforcement will encourage the child to strengthen his or her self-esteem and promote as much independence as possible. The full extent of the problems is usually not completely understood immediately after birth, but may be revealed as the child grows and develops.

Chapter 7 : Conditions Related to Cerebral Palsy | Birth Injury Guide

Cerebral Palsy Alliance is a non-profit that provides services to thousands of people with a disability and their families. Cerebral palsy (CP) is a physical disability that affects the way that a person moves.

Cerebral palsy is caused by brain injury or atypical brain development that happens around the time of birth or early in life. In some infants, symptoms are evident soon after birth. In others, diagnosis comes in later infancy or toddlerhood. More Contact Options If your child has been diagnosed with cerebral palsy, you have time to learn how cerebral palsy will affect them. Every child who has cerebral palsy has a unique combination of strengths and challenges. No one can predict where your child will fall within this diagnosis. Only 30 to 50 percent of children who have cerebral palsy have some level of cognitive impairment, ranging from mild to severe. Most people who have cerebral palsy live long, fulfilling and active lives. Early intervention and appropriate treatment can help your child improve their abilities and ease cerebral palsy symptoms. Explore cerebral palsy diagnosis and treatment options. The Centers for Disease Control and Prevention report that an average of one in children in the U. Types of Cerebral Palsy There are three common types of cerebral palsy, depending on what part of the brain is affected: Spastic Cerebral Palsy Spastic cerebral palsy is often associated with injury to or developmental differences in the part of the brain called the cerebral cortex. People who have spastic cerebral palsy experience unusually tight and stiff muscles, which can affect movement and growth. Spastic cerebral palsy accounts for about 80 percent of all cases of cerebral palsy. Spastic cerebral palsy affects different areas of the body: Diplegia affects the legs more than the arms. This type of cerebral palsy is most common in premature babies. Hemiplegia affects one side of the body. Quadriplegia affects the entire body—the legs and the arms. This type of cerebral palsy is most common in babies who experience a lack of oxygen. Dyskinetic Cerebral Palsy Dyskinetic cerebral palsy is often associated with damage to the parts of the brain called the basal ganglia and the cerebellum. People who have dyskinetic cerebral palsy experience involuntary movements, such as tremors, or have difficulty balancing and making coordinated movements. They might also experience other types of complex movement disorders. Mixed cerebral palsy describes people who experience features of spastic and dyskinetic cerebral palsy. This type of cerebral palsy is associated with damage to multiple areas of the brain. What Causes Cerebral Palsy? Developing fetuses and infants up to age 1 can develop cerebral palsy if they experience brain injury or disruptions in brain development caused by: Bleeding in the brain before, during or after birth. Infections of the brain, including meningitis or encephalitis. Seizures at birth or in the first month following birth. Older children can develop symptoms similar to those of cerebral palsy if they sustain traumatic brain injuries, experience a lack of oxygen, or contract an infection such as meningitis. Children whose injuries occur when they are older receive a diagnosis of brain injury rather than cerebral palsy. Risk Factors Cerebral palsy occurs in 1. In some cases, infants who are born at typical weights and experience no known brain injuries can still have cerebral palsy. Babies born before 37 weeks have a greater risk of having cerebral palsy. Twins and other multiple-birth siblings are at particular risk because they tend to be born earlier and at lower birth weights. Infants who experience serious illnesses, strokes or seizures around the time of birth are at greater risk of also having cerebral palsy. Such illnesses might include: Seizures during the 48 hours after birth. Infections of the brain, such as meningitis or encephalitis. Strokes caused by broken or clogged blood vessels or abnormal blood cells. Cerebral palsy is more common in children whose mothers: Have coagulation clotting disorders or experience blood clots during pregnancy. Receive excessive exposure to harmful substances during pregnancy. Have thyroid problems, seizure disorders or other serious health concerns. Pregnancy and Birth Complications Difficulties during pregnancy and birth—including not enough nutrition through the placenta or a lack of oxygen during labor and birth—can increase the risk of cerebral palsy. Cerebral palsy also is more common when babies and mothers have incompatible blood types the mother is Rh positive and the baby is Rh negative, or vice versa.

Chapter 8 : A Comprehensive Guide To Cerebral Palsy

Cerebral palsy (CP) is a group of permanent movement disorders that appear in early childhood. Signs and symptoms vary among people. Often, symptoms include poor coordination, stiff muscles, weak muscles, and tremors. There may be problems with sensation, vision, hearing, swallowing, and speaking.

Cerebral palsy What is Cerebral palsy? Cerebral palsy CP is a physical disability that affects movement and posture. It is a permanent life-long condition, but generally does not worsen over time. It is due to damage to the developing brain either during pregnancy or shortly after birth. It affects body movement, muscle control, muscle coordination, muscle tone, reflex, posture and balance. People who have cerebral palsy may also have visual, learning, hearing, speech, epilepsy and intellectual impairments. For more information about cerebral palsy and the wonderful research being done, visit our Cerebral Palsy Alliance Research Foundation website.

Symptoms There are some signs that may indicate a child has cerebral palsy. Not all signs are visible at birth and may become more obvious as babies develop. Depending on the level of severity of cerebral palsy, toddlers and children may experience difficulties with physical development such as: In NSW, questions relating to developmental milestones are described in the Personal Health Record book Blue Book provided to families when their child is born. The parts of the body affected by cerebral palsy, the level of severity and combination of symptoms can differ for each person. For example, one person may have a weakness in one hand and find tasks like writing or tying shoelaces challenging. Another person may have little or no control over their movements or speech and require 24 hour assistance. People with cerebral palsy may experience uncontrolled or unpredictable movements, muscles can be stiff, weak or tight and in some cases people have shaky movements or tremors. People with severe cerebral palsy may also have difficulties with swallowing, breathing, head and neck control, bladder and bowel control, eating and have dental and digestive problems.

The main types of cerebral pals The main types of cerebral palsy are: Quadriplegia a form of bilateral cerebral palsy where both arms and legs are affected. The muscle of the trunk, face and mouth are often also affected. Diplegia a form of bilateral cerebral palsy where both legs are affected. The arms may be affected to a lesser extent. Hemiplegia a form of unilateral cerebral palsy where one side of the body one arm and one leg is affected. There are other classifications for severity. This is the most common form of cerebral palsy where muscles feel stiff and tight. Mixed type " where there is a combination of damage to the brain. Causes Cerebral palsy CP is a physical disability that affects movement and posture. It is due to damage to the developing brain either during pregnancy or shortly after birth For most people with cerebral palsy, the cause is unknown and there is no single cause. Researchers have determined that only a very small percentage of cases of cerebral palsy are due to complications at birth e. Today, it is accepted that cerebral palsy usually arises from a series of causal pathways, i. Although prematurity is the largest risk factor for cerebral palsy, it is the sequence of events causal pathways that led to the premature birth that may have caused the cerebral palsy, rather than the premature birth itself. In 13 out of 14 cases of cerebral palsy in Australia, the brain injury leading to cerebral palsy occurs either in the uterus while the mother is pregnant or before 1 month of age. Stroke is the most common cause in babies who acquire cerebral palsy after 1 month of age. The stroke may occur spontaneously or arise from surgical or heart complications. Risk factors Risk factors do not cause cerebral palsy. However, the presence of some risk factors may lead to an increased chance of a child being born with cerebral palsy. Some risk factors for cerebral palsy have been identified. Who is at greatest risk? The Australian Cerebral Palsy Register Report has identified four groups that, statistically, have a greater risk of cerebral palsy. This may be a result of prematurity or slow intrauterine growth. However small these statistics, they are enough to suggest that there might be some genetic factors involved in cerebral palsy. Researchers generally believe that a genetic disposition to certain characteristics, i. Diagnosis Cerebral palsy is a complex disability and diagnosis is not always an easy process. Doctors may suspect cerebral palsy if a baby has slow motor development, has tight or floppy muscle tone, or displays unusual postures. The period of time parents may have to wait before their child is given an official diagnosis of cerebral palsy can vary. Very premature babies are usually watched carefully and may have an early MRI scan magnetic resonance imaging.

However, most children with cerebral palsy are not born prematurely. Most are born at full term and it is not until they do not meet the usual infant milestones that any form of disability is considered. A MRI might show that they have an injury to the brain, but at that stage it is often too early to predict the impact. The General Movements Assessment can be conducted from birth until 5 months of age. It is a strong predictor of cerebral palsy, particularly when certain changes to the brain are seen on an MRI. However, General Movements Assessment cannot predict the severity of cerebral palsy. How do doctors diagnose cerebral palsy? Some children may have very relaxed, floppy muscles, while others have stiff, tight muscles. Doctors will also look for any unusual postures or if the child favours one side over the other. One of the frustrations for parents is that sometimes a diagnosis can take a long time, with repeated tests and visits to specialists. This may be because the child has a mild form of cerebral palsy, but it could also be because the doctor needs to make sure it is not another type of movement disorder that may be progressive get worse over time. What is the General Movements Assessment? The General Movements Assessment is a non-invasive and cost-effective way to identify neurological issues which may lead to cerebral palsy and other developmental disabilities. The assessment can be completed from birth to 20 weeks of age corrected for prematurity. Infants whose general movements are absent or abnormal are at higher risk of neurological conditions, in particular cerebral palsy. Intervention can start very early, with potentially better outcomes, if an infant is diagnosed as at risk of cerebral palsy using the General Movements Assessment. How is the assessment done? General movements are assessed with the awake infant lying on their back while they are calm and alert. The infant should not have any toys or pacifiers and parents could be watching nearby but not interacting with their baby. The baby is videoed for minutes and the assessment is scored from the video. In Australia, a growing number of allied health and medical personnel have been trained to observe and score General Movements Assessments. Should my child have the General Movements Assessment? The assessment is not currently used as a screening tool for healthy babies. Please speak to your medical practitioner or therapist if you have any concerns about your baby. Who can do the assessment? A growing number of tertiary hospitals across Australia also have staff who are able to use the assessment. Videos taken by parents and others can be used by assessors. To take a video, the baby should be lying on their back, lightly dressed no socks and in a calm state. Do not interact with the baby. Babies should not be sucking a dummy or playing with a toy. Living with Cerebral palsy Sources: Recommendations from the SCPE collaborative group for defining and classifying cerebral palsy. *Developmental Medicine and Child Neurology*, 49 Suppl 1 , Brain Development, 31 7 , *Developmental Disability Research Reviews*, 17 2 , Establishing the diagnosis of cerebral palsy. *Clinical Obstetrics and Gynecology*, 51 4 ,

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Cerebral palsy, or CP, is a group of disorders that affect balance, movement, and muscle tone. "Cerebral" means the disorder is related to the brain, and "palsy" refers to weakness or a.

Others[edit] Infections in the mother, even those not easily detected, can triple the risk of the child developing cerebral palsy. A general movements assessment, which involves measuring movements that occur spontaneously among those less than four months of age, appears most accurate. Abnormal muscle tone, delayed motor development and persistence of primitive reflexes are the main early symptoms of CP. When abnormal, the neuroimaging study can suggest the timing of the initial damage. Furthermore, an abnormal neuroimaging study indicates a high likelihood of associated conditions, such as epilepsy and intellectual disability. Additionally, there is a mixed type that shows a combination of features of the other types. These classifications reflect the areas of the brain that are damaged. Cerebral palsy is also classified according to the topographic distribution of muscle spasticity. This damage impairs the ability of some nerve receptors in the spine to receive gamma-Aminobutyric acid properly, leading to hypertonia in the muscles signaled by those damaged nerves. In any form of spastic CP, clonus of the affected limbs may sometimes result, as well as muscle spasms resulting from the pain or stress of the tightness experienced. The spasticity can and usually does lead to a very early onset of muscle stress symptoms like arthritis and tendinitis, especially in ambulatory individuals in their mids and earlys. Occupational therapy and physical therapy regimens of assisted stretching, strengthening, functional tasks, or targeted physical activity and exercise are usually the chief ways to keep spastic CP well-managed. If the spasticity is too much for the person to handle, other remedies may be considered, such as antispasmodic medications, botulinum toxin, baclofen, or even a neurosurgery known as a selective dorsal rhizotomy which eliminates the spasticity by reducing the excitatory neural response in the nerves causing it. Ataxic cerebral palsy is known to decrease muscle tone. This symptom gets progressively worse as the movement persists, making the hand shake. As the hand gets closer to accomplishing the intended task, the trembling intensifies, which makes it even more difficult to complete. Athetoid cerebral palsy Athetoid cerebral palsy or dyskinetic cerebral palsy sometimes abbreviated ADCP is primarily associated with damage to the basal ganglia in the form of lesions that occur during brain development due to bilirubin encephalopathy and hypoxic-ischemic brain injury. Mixed CP is the most difficult to treat as it is extremely heterogeneous and sometimes unpredictable in its symptoms and development over the lifespan. Mothers who received magnesium sulphate could experience side effects such as respiratory depression and nausea. Treatment may include one or more of the following: Surgical intervention in CP children mainly includes orthopaedic surgery and neurosurgery selective dorsal rhizotomy. A person with the disorder may improve somewhat during childhood if he or she receives extensive care, but once bones and musculature become more established, orthopedic surgery may be required. People with CP can have varying degrees of cognitive impairment or none whatsoever. The full intellectual potential of a child born with CP is often not known until the child starts school. People with CP are more likely to have learning disorders, but have normal intelligence. Intellectual level among people with CP varies from genius to intellectually disabled, as it does in the general population, and experts have stated that it is important not to underestimate the capabilities of a person with CP and to give them every opportunity to learn. Some individuals with CP require personal assistant services for all activities of daily living. Others only need assistance with certain activities, and still others do not require any physical assistance. PCAs facilitate the independence of their employers by assisting them with their daily personal needs in a way that allows them to maintain control over their lives. Puberty in young adults with cerebral palsy may be precocious or delayed. Delayed puberty is thought to be a consequence of nutritional deficiencies. Gynecological examinations may have to be performed under anesthesia due to spasticity, and equipment is often not accessible. Breast self-examination may be difficult, so partners or carers may have to perform it. Women with CP reported higher levels of spasticity and urinary incontinence during menstruation in a study. Men with CP have higher levels of cryptorchidism at the age of Self-care activities, such as bathing, dressing, grooming, can be difficult

for children with CP as self-care depends primarily on use of the upper limbs. Productivity can include, but is not limited to, school, work, household chores or contributing to the community. Many children with CP have the capacity to learn and write in the school environment.