

CERTIFIED CHILDREN'S HEALTH COUNSELOR ONLINE COURSE SESSION 4:

• Illnesses: Over-The-Counter, Prescription, or Alternative Treatments

There are so many childhood diseases. In order to list them all here would take hours and hundreds and hundreds of pages. We are listing a few common illnesses below.

ADHD & ADD

We will cover this information again in Session 11 and we thought it is important to cover it in this session as well.

Attention deficit disorder (ADD), and attention deficit hyperactivity disorder (ADHD) can cause serious disruptions in people's daily lives. Children are most often affected, with estimates that some form of ADD or ADHD affects millions of school children, keeping them from learning as effectively as they could. Here you'll find the necessary information to understand and cope with the effects of ADD or ADHD.



What Is It?

ADHD is one of the most common childhood developmental disorders, and the affects can continue into adulthood. ADD and ADHD are essentially the same condition, although ADD doesn't have the hyperactive component that ADHD does.

There are three subtypes of ADD/ADHD:

- Predominantly hyperactive-impulse
- Predominantly inattentive
- Combination hyperactive-impulse and inattentive

People with ADD or ADHD can have problems controlling their behavior and paying attention, leading to problems at school, home and work.

Symptoms

There are a few key symptoms of ADD or ADHD and while most children experience these symptoms, those with the disorder experience them with much more severity and for a much longer period of time. Children must exhibit these symptoms for six months or more to be diagnosed with ADD or ADHD:

Inattention:

- Easily distracted
- Problems concentrating
- Easily bored
- Has trouble completing school work or other tasks on time
- Loses items frequently
- Doesn't seem to listen when spoken to
- Daydreams frequently

Impulsivity:

- Very impatient
- Interrupts others when speaking
- Difficulty in waiting
- Shows emotion without restraint

Hyperactivity (this is not present in the case of ADD)

- Fidget or squirms in their seat
- Talks constantly
- Constantly in motion
- Plays with anything in their sight

Causes and Risk Factors

No one really knows what causes ADD or ADHD. It is thought that it is caused by a confluence of factors:

- Genetics and brain structure play a role in the development of ADD and ADHD. Research has found that there is a difference in the thickness of the walls of the brain in the area that scientists believe causes ADD or ADHD. The walls of the brain in that area are thinner in children with ADD or ADHD. However researchers have also found that the thickness reaches normal levels by adulthood and that ADD or ADHD symptoms resolve themselves in those patients. Brain injuries could also play a role as well.
- Environmental factors such as cigarette smoking and alcohol use during pregnancy as well as lead exposure could also play a role in the development of ADD and ADHD.
- Food additives like artificial colors and preservatives play a role, especially the color “red”.
- Sugar plays a role in increasing hyperactivity in children.
- Those whose parents exhibit some ADD or ADHD behaviors are more likely to be diagnosed with the condition themselves.
- Another theory is the mercury used in vaccinations.
- Gluten intolerance is a possibility as is Low Blood Sugar.

Diagnosis

Diagnosis is done by a specialized health care provider. Rather than being diagnosed in a single visit as most medical conditions are, diagnosis of ADD or ADHD takes several visits and the doctor will collect information about the child’s symptoms, environment, and behavior at home and school. The doctor will then interact with the child and the family to determine if family dynamics plays a role in the problems the child is having. Children are typically diagnosed between 3 and 6 years old, though it isn’t uncommon for the child’s teacher to notice some of the first signs of a problem.

Treatment

Treatment for ADD and ADHD are the same. It typically involves stimulant medications that are marketed under a variety of brand names. These medications typically work well and give the child the ability to focus more on the tasks at hand. Medications come in several different forms to make it easier for the child to take. They come in pill form as well as in liquid form and skin patches.

However, there are some drawbacks to stimulants that parents need to be aware of. Stimulant medications can be very habit forming and are often sold as street drugs by teenage patients. There is a withdrawal period as well when the medication wears off and children can experience symptoms such as headaches, weight loss and problems sleeping. Because of this doctors will typically put children on the lowest dose of medication possible and usually only for school hours to prevent the child from becoming dependent upon the medication.

ADD and ADHD is not the end of the world and in fact many children outgrow the condition as they get older. Though some don't and the condition sticks with them into adulthood. But with proper treatment to manage the symptoms people can go on to live normal, fulfilling, successful lives.

Alternatives to Medication

There are herbs and herbal combinations that can be used to help balance out the brain. BioFeedback is also a treatment that is very effective in helping with anxiety and focusing problems. Note the supplements listed at the end of this session. Most children with ADD and ADHD are allergic to the red food coloring so all foods with red food coloring should be eliminated from the diet. Also pay attention to mood swings and blood sugar changes. If your child eats starch be sure they eat a protein with it. Example would be pancakes for breakfast. Children with focusing issues should not have pancakes with syrup but should have pancakes with cream cheese peanut butter. If your child is allergic to peanut butter switch to almond butter or another form of protein to balance out the blood sugar. One of the tools that can be used in the classroom is a "stress ball". Your child can take a stress ball in the classroom and keep it in their lap to be touched and squeezed during class. Whenever the child finds themselves having trouble focusing they can use the ball. Also meditation before school while holding and squeezing the ball helps to ground the child before school.

Autism

We will cover this information again in Session 11 and we thought it is important to cover it in this session as well.

Once a very rare developmental disorder, affecting only five out of every 10,000 children, autism spectrum disorders have increased dramatically over the past few decades. The Centers for Disease Control (CDC) now estimate that one in every 110 children will be born with some form of autism. Though it is not known why, the number of boys diagnosed with autism spectrum disorders outnumbers girls, four to one. Here you'll find the necessary information needed to gain a basic understanding of autism spectrum disorders.



What Is Autism?

Autism spectrum disorders are a set of developmental disorders that are usually diagnosed in children between birth and three years old. Diagnosing autism spectrum disorders can be difficult and can require several trips to a pediatrician who specializes in child development. Autism spectrum disorders have similar symptoms, but can vary greatly in severity. Because of this children are often evaluated and tested extensively before they are officially placed "on the spectrum" as it is known.

The conditions on the spectrum range from mild to severe. In no particular order, they are:

- **Asperger's Syndrome** causes high functioning autism. These patients are able to maintain normal lives, but they have problems expressing emotions and interacting with others. Many people with Asperger's syndrome are not diagnosed until they are adults because their development appears normal. People with Asperger's Syndrome are frequently misdiagnosed with other conditions that produce similar symptoms such as obsessive compulsive disorder and social anxiety disorder.
- **Childhood Disintegrative Disorder** is a rare form of autism that reduces a child's will to interact with others. Children will stop playing and interacting with others. Their development will regress, and they will lose skills that they had previously developed.
- **Rett Syndrome** is a condition that affects young girls. The disease causes the muscles to become atrophied. Patients with Rett Syndrome will exhibit repetitive hand motions and will show signs of mental retardation. The girls with Rett Syndrome tend to be low functioning and will require care for their entire lives.
- **Pervasive Developmental Disorder** occurs among children. The symptomatic differences between Pervasive Developmental Disorder and general autism are minimal.

Causes and Risk Factors

There is no single known cause of autism. It is widely thought that a number of factors combine to cause autism. Some factors may be genetic, while some factors may be environmental, such as exposure to certain viral infections or environmental pollutants.

- There are some risk factors for developing autism, though they are fairly broad. Having a male child increases the risk of the child developing autism since boys develop autism four times more than girls.
- A family history of autism spectrum disorders makes a child more likely to develop a disorder themselves. It is not uncommon for parents to have some minor symptoms of autism as well.
- Children who have certain medical conditions such as Fragile X syndrome, Tourette's syndrome, tuberous sclerosis, and epilepsy have an increased risk of developing autism.
- Those children whose parents are over 40 years old at the time of their birth are also at a higher risk of developing autism, along with other medical problems. This is the reason that women over the age of 35 are monitored more closely and undergo additional testing throughout their pregnancies.
- Another theory is the mercury used in vaccinations.
- Gluten intolerance is a possibility as is Low Blood Sugar.

Symptoms

There is great variation in the symptoms of autism spectrum disorders. No two children with autism are the same, which contributes to the difficulty in treating the condition. There are three main areas in which children with autism have difficulties; social skills, language and behavior. Even though each child will have their own unique pattern of behaviors the most common symptoms of autism include;

Social Skills

- The child doesn't respond to their name when called
- The child doesn't make eye contact
- The child is tactile defensive (meaning they resist being touched)
- The child seems not to hear people when spoken to.
- The child seems unaware of the feelings of others, particularly family members
- The child prefers to be "in their own world", choosing solitary play over interacting with others.

Language Skills

- Begins speaking late
- May lose previously acquired speech abilities
- Speaks with an abnormal tone or rhythm
- Can't start or maintain conversations
- May repeat words or phrases, but doesn't know what they mean

Behavior

- Performs repetitive motions such as spinning, hand flapping, or rocking
- Sticks to specific routines of behavior and becomes quite upset if the routine is disrupted
- Moves constantly
- May be fascinated by a certain part of an object, such as spinning wheels
- Unusually sensitive to certain stimuli like light, sound or touch, but doesn't respond normally to pain
- As previously mentioned there is great variation between the different conditions on the autism spectrum. Asperger's syndrome for example doesn't have nearly as much of a language component of classic autism.

Treatment

There are a number of treatment options available for autism. The treatment of autism focuses on helping children live a more normal life, and treating individual symptoms. There is no one particular treatment, but rather the most effective treatments are multi-faceted and tailored to the individual child. These include:

- Behavioral and communication therapies to help children communicate more effectively with others, learn self care skills and to help retrain problem behaviors
- Educational therapies to help children learn effectively while receiving therapy in a school environment. Research shows that autistic children who receive intensive pre-school education services do very well as they get older.
- Medication therapy is used to treat certain symptoms such as the anxiety that autistic children feel at living in a world they don't understand and find disturbing.

There is a lot of hope and resources available for children with autism spectrum disorders. While a diagnosis of autism can be devastating to parents, it's important to remember that autism is not the end of the world, and that with treatment, many autistic children grow up to be happy, successful adults.

Alternative Treatments

The same treatments for ADD and ADHD can be used with autistic children. See the herbal section at the end of this session as well.

Diabetes

Diabetes is a condition in which too much sugar, or glucose, remains in the blood because the body doesn't properly convert it to energy. This happens when there's a lack of insulin — a hormone that allows sugar to enter cells to be converted into energy — or when insulin isn't working well.

During the normal digestion process, the pancreas senses the amount of sugar in the bloodstream and releases insulin to keep blood sugar in a normal range. With diabetes, the pancreas doesn't produce the right amount of insulin. Sugar accumulates in the blood and spills over into the urine, causing frequent urination, a symptom of diabetes.



Diabetes is the fifth deadliest condition in the United States, affecting children, teenagers and adults. If diabetes isn't managed properly, high blood sugar levels over many years can lead to complications, including blindness, kidney failure and loss of sensation in the extremities that could result in amputation. Maintaining near-normal blood sugar levels can delay or prevent these complications.

Types of Diabetes

There are several types of diabetes, which have different causes and symptoms. They include:

- **Type 1 Diabetes** — Type 1 diabetes most often affects children and adults under the age of 35, but older adults also can have the disease. In type 1 diabetes, the insulin-producing beta cells in the pancreas stop making insulin. Although the cause of the condition is unknown, research has shown that type 1 diabetes results from an underlying genetic risk coupled with one or more environmental exposures. In type 1 diabetes, the immune system attacks and destroys the insulin-producing cells, which is why the condition is referred to as an autoimmune disease. Although signs and symptoms seem to develop rapidly over weeks to months, the destruction of beta cells often occurs slowly over years.
- **Type 2 Diabetes** — This form of diabetes differs from type 1 in that the initial problem is thought to be the body's increased resistance to insulin. The body's fat, muscle and liver cells don't respond to insulin properly, making it difficult for sugar to enter the cells. Initially, the insulin-producing cells in the pancreas try to compensate by making more insulin, but may not be able to sustain this increased production over time. At that point, blood sugars start to rise and diabetes develops. Type 2 diabetes usually occurs in people over age 45, but can affect children and teenagers, especially those with family members who have type 2 diabetes. It is the most common form of diabetes, and is becoming even more common. The condition affects an estimated one in 20 people in the United States and occurs 10 times more often than type 1. Type 2 tends to run in families and in some cases appears to be inherited as a dominant trait.
- **Being overweight and inactive** increases the chances of developing type 2 diabetes. African Americans, Hispanic or Latino Americans, American Indians, Asian Americans and Native Hawaiians or other Pacific Islanders tend to be at a higher risk than Caucasians.

- **Gestational Diabetes** — Gestational diabetes refers to diabetes that is diagnosed during pregnancy. It occurs in about seven percent of all pregnancies. The condition usually develops in the second half of pregnancy due to insulin resistance. If gestational diabetes is not treated, the mother and fetus may experience complications. Gestational diabetes typically resolves after delivery, but women who experience gestational diabetes are at risk of developing type 2 diabetes later in life.
- **Maturity Onset Diabetes of the Young (MODY)** — The main characteristic of maturity onset diabetes of the young (MODY) is a diagnosis before the age of 35 in at least three generations of family members. Accounting for two to five percent of all cases of diabetes, this condition is due to a single gene that's passed down from generation to generation as a dominant trait. Several genetic defects affecting the beta cell and insulin production and secretion have been noted in relation to this condition. Some people with MODY are treated with insulin. Others can be treated with oral diabetes medications.

Signs and Symptoms

Some of the common symptoms of all forms of diabetes include:

- Bedwetting in children who have been toilet trained
- Blurred vision
- Dry, itchy skin
- Extreme hunger
- Fatigue or low energy level
- Nausea
- Poorly healing wounds
- Thirst
- Tingling in the feet
- Urinating often, especially at night
- Weight loss
- Yeast infections

Diabetes often goes undiagnosed because these symptoms seem harmless or people aren't aware of them.

Diagnosis

In diagnosing diabetes, your child's doctor will conduct a thorough medical history and physical examination, making note of any symptoms that may be related to diabetes. If your child's doctor suspects diabetes, a series of tests will be recommended to make a definite diagnosis. These may include:

- **Blood Sugar Test** — Also known as a glucose test, this is the standard test for diagnosing type 1 and type 2 diabetes. In the test, blood is drawn to check blood sugar levels. For a fasting blood sugar test, your child must not eat or drink anything for at least eight hours prior to the test. A diagnosis of diabetes will be made if your child has a fasting blood sugar level of 126 milligrams per deciliter (mg/dl) or higher on two separate days. A normal fasting blood sugar level is between 70 to 100 mg/dl. The doctor may order a random blood sugar test. A diagnosis of diabetes will be made if your child has symptoms of diabetes and a random blood sugar level higher than 200 mg/dl, regardless of when your child last ate, on two occasions.

- **Glucose Tolerance Test** — This test measures the body's ability to metabolize glucose, the sugar the body uses for energy. After an overnight fast, your child will drink a solution containing a known amount of sugar. Blood is drawn before your child drinks the solution, and again every 30 to 60 minutes after, for up to three hours. Blood sugar levels above normal limits at the times measured may result in a diabetes diagnosis.

Treatment

Managing your child's diabetes is a group effort involving the whole family. At UCSF Benioff Children's Hospital, our team — including doctors, dietitians, nurses, educators and social workers — work closely with your family to provide treatment, information, support, guidance and help. Your doctor will help you and your child develop a daily diabetes treatment plan. Diabetes management is designed to keep your child's blood sugar levels in a near-normal range and prevent erratic swings. The treatment plan will also promote your child's normal physical and emotional development.

Treatment typically involves following a healthy meal plan, getting regular exercise, checking blood sugar levels, participating in regular screenings for long-term complications of diabetes and taking insulin or oral medication as prescribed. The treatment plan is reviewed and revised as necessary. It's generally recommended that patients visit the Pediatric Diabetes Program every three months.

Meal Planning

Healthy meal planning is an essential part of your diabetes treatment. Family support in following the plan and setting up regular meal times is key to success, especially if your child or teen is taking insulin. A registered dietitian will work with you and your child to develop a healthy meal plan that:

- Maintains targeted blood sugar levels based on your child's diet, exercise and diabetes medications
- Controls your child's weight
- Provides proper nutrition to promote normal physical and emotional growth

Your doctor and dietitian also will discuss food tips for managing diabetes. These include:

- Learning which foods contain carbohydrates and how much carbs should be included at meals and snacks. Carbohydrate intake will raise your child's blood sugar levels, so the amount of carbohydrates eaten must be matched with exercise and insulin and other medications to balance blood sugar levels.
- Correctly reading food labels
- Establishing correct portion size and caloric intake based on your child's age, weight and activity levels
- Timing of meals, medications and physical activity
- Tracking dietary fat, cholesterol and sodium, as needed
- Preventing and treating hypoglycemia

Carbohydrates and Diabetes

Foods that contain carbohydrates raise the body's blood sugar level. The body turns carbohydrates into sugar or glucose, which it uses as its main fuel source. Carbohydrates should be eaten in appropriate portions and not be severely restricted.

When choosing your child's food, be cautious of foods labeled "sugar-free." This can simply mean that no sugar has been added, but the food still may contain carbohydrates. Counting the amount of carbohydrates in your child's food will help manage diabetes by maintaining normal blood sugar levels and allowing more flexibility with food choices.

Foods Containing Carbohydrates

Carbohydrates are found in:

- Breads, tortillas, crackers and bagels
- Cereals and grains
- Corn, peas and potatoes
- Dried beans and lentils
- Fruit
- Milk and yogurt
- Pasta and rice



Counting Carbohydrates

To count how much carbohydrate is in a food:

- Learn to read food labels. Carbohydrates in foods are measured in grams. The two most important pieces of information for carbohydrate counting is the **servicing size** and the **grams of total carbohydrate**.
- Learn how to measure food portions.
- Learn about the exchange list from your child's dietitian. Foods on the list are called exchanges because they have a similar number of calories, protein, carbohydrates and fat content. Foods from the list can be traded or "exchanged" for other foods on the same list because they have similar exchange values.

Exercise

Regular physical activity is important for all children, especially those with diabetes. Exercise helps insulin work more efficiently, lowers blood sugar, burns calories and helps control weight. It also improves cholesterol levels, muscle tone and a person's sense of well-being.

If your child isn't used to regular physical activity, we recommend starting slowly and working up to 30 to 60 minutes each day. It's important that your child do something he or she likes, such as walking, dancing, swimming, sports or riding a bike. Before your child begins exercising, we suggest testing blood sugar. Ask if your child needs to test it during and after exercise as well, and if diabetes pills or insulin doses need to be reduced before beginning a regular exercise program.

Parents and family members can participate in a child's exercise program. It can be a great way for families to spend quality time together. Your diabetes educator can discuss ways to encourage exercise and participate in regular physical activity.

Blood Sugar Levels

All people with diabetes, including children and teens, need to regularly check blood sugar levels. Checking blood sugar levels tells us a number of important factors:

- The current state of your child's diabetes at a particular time
- How exercise, food and illness affects diabetes
- How well diabetes medication is working

You or your child should check blood sugar levels regularly with a blood glucose meter, preferably a meter with a built-in memory. We will teach you and your child how to use this meter. Blood glucose meter results indicate whether blood sugar levels are in the target range, too high or too low. Your child's team will recommend a target range for blood sugar and how often to test it.



We recommend that you or your child, depending on age, keep a journal or other records of blood sugar results. You should bring your glucose meter or glucometer and written records to all appointments. This information helps determine if we need to make any changes to your child's treatment plan. Keeping a written record makes it easier for you and your family to identify potential problems before your next scheduled visit. As soon as issues or problems are identified, you should discuss them.

Tips for Checking Blood Sugar

When to Check Blood Sugar Levels

Check your child's blood sugar level at the following times:

- Before meals and bedtime, a minimum of four times a day.
- If you suspect your child has a low blood sugar level.
- Before and after your child exercises.
- When your child is ill.
- Two hours after the start of a meal, if results from before the meal don't match HbA1c.
- During the night. This is particularly important if your child had a low blood sugar level during the day, exercised more than usual, made a change in the insulin dose or has been ill.

How to Check Blood Sugar Levels

A health care professional will teach you and your child how to properly use a blood glucose meter.

- Clean hands with soap and water. Make sure the finger is dry before obtaining the blood sample — wet fingers can alter the value.
- Prick the side of the fingertip. The forearm also can be pricked with certain meters using a lancet device. Do not use the forearm if you suspect a low blood sugar or when the blood sugar is rapidly changing, such as after meals or exercise.
- Insert strip into meter.
- Obtain a drop of blood.
- Apply the drop of blood to a test strip.
- Read the result and enter it in a logbook.

Bring the meter and logbook to all visits.

Suggested Glucose Target Ranges

The American Diabetes Association (ADA) published a position statement in 2005 on the standard of care for children with type 1 diabetes. Below is a table with the ADA's recommendations on age-specific blood sugar goal ranges. Blood glucose goals should be higher than those listed in the table for children who have frequent cases of hypoglycemia (low blood sugar levels) and don't experience the associated signs and symptoms.

Your child's diabetes team will recommend an individualized target range for blood sugar levels. The general goal is to maintain as normal as possible blood sugar levels without causing frequent low blood sugar. Research has shown that in children under the age of 6, frequent, severe low blood sugar levels may result in neuro-cognitive deficits — problems related to intellectual ability — so target ranges are higher in this age group.

Adolescents should strive to achieve similar target ranges as adults. However, this may be difficult because of higher hormone levels, such as growth hormones, which counteract the effects of insulin. If your child's sugar levels are in the ranges listed below at least 50 percent of the time, then blood sugar control is considered reasonable. If sugar levels exceed the range more than 50 percent of the time, then sugar control is not optimal and the diabetes plan should be changed.

Plasma Blood Glucose Goal Range

Values by age (years)	Before Meals	Bedtime/overnight A1C
Toddlers and preschoolers (under age 6)	100-180 mg/dl	110-200 mg/dl — 7.5 to 8.5 percent
School age (6–12 years)	90-180 mg/dl	100-180 mg/dl — less than 8 percent
Adolescents and young adults (13–19 years)	90-130 mg/dl	90-150 mg/dl — less than 7.5 percent

This information is for educational purposes only and is not intended to replace the advice of your doctor or health care provider. We encourage you to discuss with your doctor any questions or concerns you may have.

Medications

There are two kinds of diabetes medicines: insulin, which is taken by injection, and pills that are taken orally. For type 1 diabetes, a child or teen takes insulin shots at regular times each day. Some patients use an insulin pump to deliver insulin. Some children or teens with type 2 diabetes need pills or insulin shots or both. In all cases, medications should be balanced daily with food and activity. It's important that children or teenagers take all their diabetes medication as prescribed. Parents, caregivers, school nurses and others can help a child or teen learn how to take medications properly.

Insulin

Insulin, a hormone made by beta cells in the pancreas, lowers the blood sugar level and is injected under the skin. A person with type 1 diabetes must take insulin injections or wear an insulin pump. Injections are usually taken three or more times a day. A variety of insulin preparations are available that have different properties.

Most people use a combination of intermediate or long-acting insulin with short-acting insulin. Many children and teens receive insulin through insulin pumps that provide greater flexibility in diets and sleep schedules as well as freedom to pursue activities



without worrying as much about their blood sugar levels. The insulin pump is a small device about the size of a pager or a deck of cards that can be clipped to the waistband. You, your child and your diabetes care team will decide if and when "the pump" is right for helping to manage your child's diabetes.

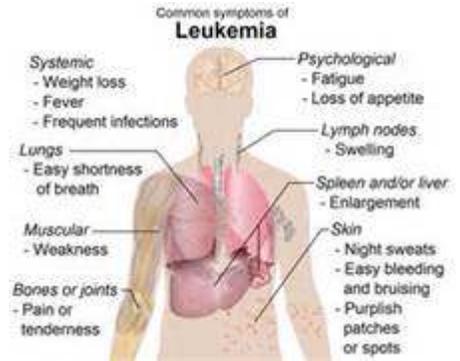
Oral Medications

Diabetes pills may be prescribed if you have type 2 diabetes. There are several types of oral medications:

- **Sulfonylureas such as glipizide (Micronase), glyburide (Glucotrol) and glimepiride (Amaryl)** — These medications help the pancreas release more insulin. Sulfonylureas usually are taken once or twice a day. They raise insulin levels for several hours. A low blood sugar is a possible side effect. People taking this medication should not skip meals. Mild weight gain, usually less than five pounds, may occur.
- **Meglitinides such as nateglinide (Starlix) and repaglinide (Prandin)** — These medications work in the same way as sulfonylureas, but don't last as long. They're taken right before a meal. People taking this medication should not skip meals. A low blood sugar is a possible side effect. Mild weight gain, usually less than five pounds, may occur.
- **Starch Blockers such as acarbose (Precose) and miglitol (Glyset)** — These medicines slow the digestion and absorption of starches and sugars. They're taken with the first bite of a meal. Gas and bloating are common side effects. When taking starch blockers, it's important that glucose tablets, not sugar candies, are used to correct a low blood sugar because starch blockers also block the absorption of sugar.
- **Biguanide such as metformin (Glucophage)** — This medication keeps the liver from releasing too much sugar. Metformin is usually taken twice or three times a day with a meal, although extended release forms are available that are taken only once daily. Metformin can cause diarrhea and stomach upset. To reduce diarrhea, metformin is taken with food. Diarrhea usually goes away over time.
- **Thiazolidinediones (TZDs) such as pioglitazone (Actos) and rosiglitazone (Avandia)** — Thiazolidinediones (TZDs) decrease insulin resistance and allow the body to use insulin better. They usually are taken once a day. TZDs can cause mild fluid retention, swelling and weight gain. A blood test to check liver function should be done every two months the first year of treatment and then every six to 12 months.

Leukemia

Leukemia, the most common form of childhood cancer, is cancer of the blood that develops in the bone marrow. It affects nearly 3,000 children annually in the United States, accounting for about 30 percent of cancer cases among children. Although leukemia can occur at any age, it is most commonly diagnosed in children between 2 and 6 years old. The disease occurs more frequently in males than in females, and is more common among Caucasians than those of other races.



The two primary types of childhood leukemia are acute lymphocytic leukemia (ALL) and acute myelogenous leukemia (AML). These two acute forms of leukemia can develop over a short period of days to weeks. A third chronic form, called chronic myelogenous leukemia (CML), is rare among children.

Signs and Symptoms

Like all blood cells, leukemia cells travel throughout the body. Depending on the number of abnormal cells and where these cells collect, patients with leukemia may have a number of symptoms, including:

- **Anemia** — Children with leukemia often have fewer than normal healthy red blood cells and platelets. They lack enough red blood cells to carry oxygen through the body, which causes a condition called anemia. Children with anemia may look pale, feel weak and tired and bleed and bruise easily.
- **Recurrent Infections** — Although children with leukemia may have a high number of white blood cells, these white blood cells are immature and don't fight infection. Children may experience repetitive viral or bacterial infections. They often have symptoms of infection such as fever, runny nose and cough.
- **Bone and Joint Pain** — Pain in bones and joints is another common symptom of leukemia. This pain is usually a result of the bone marrow being overcrowded and "full."
- **Abdominal Distress** — Abdominal pain also may be a symptom. Leukemia cells can collect in the kidney, liver and spleen, enlarging these organs. Pain in the abdomen may cause a loss of appetite and weight.
- **Swollen Lymph Nodes** — Lymph nodes under the arms, in the groin, chest and neck may become swollen when leukemia cells collect in the nodes. Lymph nodes are small bean-shaped structures that filter the blood.
- **Difficulty Breathing or Dyspnea** — With T-cell acute lymphocytic leukemia, leukemia cells tend to clump together around the thymus gland. This mass of cells present in the middle of the chest can cause pain and difficulty breathing. Wheezing, coughing or painful breathing requires immediate medical attention.

Diagnosis

A number of diagnostic procedures may be performed, including:

- **Blood tests** — Blood tests are done frequently to monitor the possible side effects of chemotherapy and radiation therapy. Because the results can influence treatment decisions, these tests often are done before treatment.
- **Cultures** — If your child has a fever or other signs of infection, one or more samples of blood, urine or stool, throat secretion or pus may be taken to check for infection. To confirm an infection, any organisms contained in these samples are allowed to grow in a culture for several days. To get a head start at fighting the infection, however, antibiotics may be prescribed before your child's doctor has the final results of the culture.
- **Bone Marrow Biopsy** — Cells are removed from the spongy network of tissues inside the bones, called bone marrow, to check for signs of cancer. Depending on the diagnosis, this procedure may be done periodically throughout your child's treatment to determine if cancerous cells have spread to the bone marrow. Leukemia is the most common type of cancer found in the bone marrow. A bone marrow aspiration and biopsy usually takes 15 to 20 minutes to complete. Understandably, bone marrow aspirations may be frightening to you and your child. But a local anesthetic is injected deep under the skin to numb the puncture site and takes effect quickly, helping to control the pain.
- **Spinal Tap** — A clear fluid called cerebrospinal fluid (CSF) surround the brain and spinal cord. Sometimes a sample of this fluid is removed and examined for cancer cells or signs of infection. Another name for a spinal tap is lumbar (lower spine) puncture or LP. This procedure takes about 15 minutes.
- **Bone Scan, Gallium Scan and MIBG Scan** — Evaluation and treatment of a child with cancer may involve specialized nuclear medicine scans of organs, tissues or bones to check for disease or infection. The three most common types of scans are bone scans, gallium scans and MIBG scans. MIBG stands for meta-iodobenzylguanidine. Both gallium and MIBG are radioactive substances that enable doctors to detect cancerous cells in the scans. A nuclear medicine scan requires the injection of a small amount of a radioactive substance into the blood about two to three hours before a bone scan, 48 to 72 hours before the gallium scan and 24 hours before the MIBG scan. Registration and the injection of the radioactive substance should take no more than 15 minutes.
- **Computerized Tomography (CT or CAT) Scan** — CT scans use computers and X-rays to create pictures with more detail than conventional X-rays. X-rays are sent through the body in thin cross sections to create images. These scans often supplement other diagnostic X-rays.
- **Magnetic Resonance Imaging (MRI)** — MRI uses magnets, rather than X-rays, to produce detailed images of the body. An MRI machine sends radio waves into the body and then measures the response with a computer. The computer makes an image or picture of the body's internal organs. MRIs are used for certain types tumors in certain locations of the body because they can produce a better image than X-rays.

- **Echocardiogram** — Because certain types of chemotherapy can affect heart muscle, tests may be done periodically to detect changes in your child's heart to help identify problems before they become serious. An echocardiogram is used to record the echoes of sounds sent through the heart. This test shows the size of the four heart chambers, as well as how the heart muscle functions. Your child may need to remove clothing above the waist for this test.
- **Ultrasound** — An ultrasound exam or sonogram uses high frequency sound waves to create images of organs in the body. No radiation is used. Sound waves bounce off tissue using the same principles as sonar. The echoes that return to a transducer are used to draw the images on the screen.

Treatment

Your child may undergo the following four types of treatment:

Chemotherapy - Chemotherapy involves drugs to kill cancer cells. These drugs may be taken orally or may be injected by a needle into a vein or muscle. This type of therapy is called a systemic treatment because the drug enters the bloodstream, travels through the body and can kill cancer cells throughout the body. For acute lymphocytic leukemia (ALL), chemotherapy drugs may be injected through the spine into the fluid that surrounds the brain and spinal cord. This is known as intrathecal chemotherapy.

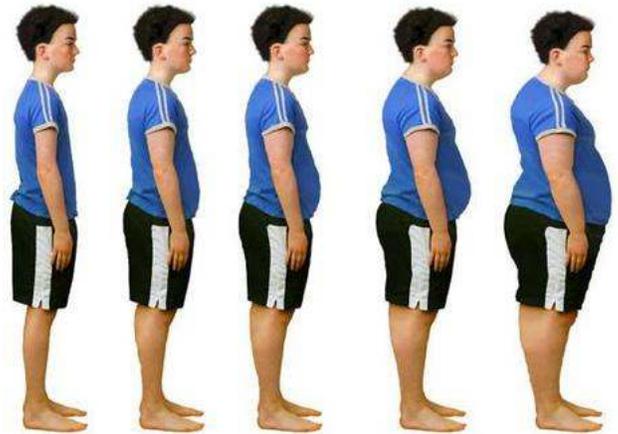
Radiation Therapy - Radiation therapy uses X-rays or other high-energy rays to kill cancer cells and shrink tumors. Radiation for acute lymphocytic leukemia (ALL) usually comes from a machine outside the body, called external beam radiation therapy.

Bone Marrow Transplant - The first step of bone marrow transplant (BMT) involves high doses of chemotherapy, sometimes with radiation, to destroy all of your child's bone marrow. Healthy marrow from a donor, whose tissue is the same as or almost the same as your child's, is transplanted into your child. The donor may be a twin, who is the best match; a brother or sister; or other person not related. The healthy marrow from a donor is given to your child intravenously through a needle in a vein to replace the marrow that was destroyed. This process, involving marrow from a donor, is called an allogeneic bone marrow transplant. Another type of bone marrow transplant, called an autologous transplant, is being studied in clinical trials. The marrow is taken from your child and treated with drugs to kill cancer cells. The marrow is frozen and saved. Your child then is given high-dose chemotherapy, sometimes with radiation, to destroy all of your child's bone marrow. The frozen marrow that was saved is thawed and transplanted back into your child, injected intravenously through a needle in a vein. For the most part, autologous bone marrow transplants have not been effective in treating acute myelogenous leukemia.

Biological Therapy - Biological therapy attempts to stimulate or restore the ability of your child's immune system to fight cancer. It uses substances produced by your child's body, or made in a laboratory, to boost, direct or restore the natural defenses against disease. Biological therapy is sometimes called biological response modifier therapy or immunotherapy.

Obesity

There are an alarming number of overweight children in the U.S. today. In fact, most studies show that about 20 percent of children ages 6 to 11 are overweight, while the number of obese children has nearly doubled in the last 20 years. Worst of all, it can be very difficult for children to shed their bad eating habits and extra weight as they get older, resulting in more overweight and obese adults in the long run. As a parent, it's important to set good examples as far as ways to eat healthier and selecting nutritious foods. Below are some helpful tips for parents who want to get their children on the right track and prevent childhood obesity.



Choose Healthy Foods

This is the most obvious way for parents to help their children reach a healthy weight, but in some cases, it can be the most difficult. It's important to include all family members when focusing on healthy food choices so that every child sees the importance of this lifestyle. It's also helpful to get involved by asking your child to try new things or by taking steps to make their favorite dishes healthier. Here are a few of the best food choices for developing healthy eating habits in children:

- **Fruits and vegetables:** Utilizing fruits and veggies as snack items can be a great way to get your children eating healthier. Make a point to keep your fridge stocked with things like broccoli, spinach, carrots, apples **and** oranges.
- **Whole grains:** Look for breads, pastas and cereals made with whole grains. In many cases, you can also find products in this category that have also been fortified with calcium and fiber.
- **Lean proteins:** Choose lean meats that are healthier for your children and will also help keep them full. Chicken breasts, turkey breasts, fish and seafood are all excellent selections in this category. Additionally, you can add egg whites, beans or tofu to meals for an extra protein boost.
- **Water and milk:** It's best to stick to water and skim or non-fat milk when looking for beverage choices. Fruit juices, sodas and most other drinks contain tons of sugar and calories. Even worse, these liquid calories are digested more quickly, so kids can drink a ton of soda or juice without feeling full at all.
- **Low-Fat dairy:** Once a child is about two years old, they no longer need whole-milk dairy products. Instead, look for fat-free and low-fat dairy products like yogurt, sliced cheese and string cheese. These make for great healthy snack options.

Develop Good Eating Habits

While choosing healthy foods is the best step to prevent childhood obesity, it's also important to set up boundaries and routines that encourage healthy eating. Getting your kids involved is a great way to show them the importance of these habits. Here are a few ways you can develop healthy eating habits in your children:

- **Opt for healthy snacks:** Don't buy a ton of calorie-rich and high-sugar snacks for your home, even if they are more convenient. Instead, chop up fresh veggies and make them available to your kids at all times. Make sugary snacks a special treat that kids can look forward to but don't always have access to.
- **Involve your kids in the cooking:** Make dinner time a family affair by getting your kids involved in the cooking. Whether it's setting the table, chopping up vegetables or tossing a salad, it's important to show children that cooking is not only a part of a normal routine, but that it's also fun.
- **Never skip breakfast:** There are numerous health benefits for eating breakfast, so make sure your child isn't skipping out on the most important meal of the day. Just make sure to choose healthy options, like oatmeal with fruit or a whole grain cereal.

Get Active

Children also need to stay active in order to avoid becoming overweight or obese. As a parent, it's especially helpful if you set a good example by being active yourself. Get your kids active for a minimum of one hour a day. Place restrictions on when they are allowed to watch TV or play video games in order to get them motivated to exercise outside. Here are some great ways to get active with your kids on a regular basis:

- Go for a bike ride.
- Fly kites in a park.
- Take a walk around your neighborhood.
- Play hide-and-seek.
- Jump rope or play hop-scotch.
- Create a scavenger hunt in your house or yard.
- Sign them up for after-school sports.

Consult your physician before making any major changes in your child's diet. Also, keep in mind that a doctor should be consulted before determining that a child is overweight. In some cases, a certain disease or condition could be the cause of weight gain rather than food choices. It's important to explore all of these options before deciding on the best way to help your child reach a healthy weight.

Childhood Diseases

Here is the list of childhood diseases:

A

- [Acquired Hydrocephalus](#)
- [Acute Disseminated Encephalomyelitis \(ADEM\)](#)
- [Aneurysms](#)
- [Aortic Coarctation](#)
- [Aortic Valve Stenosis](#)
- [Aplastic Anemia](#)
- [Apnea](#)
- [Arrhythmia](#)
 - [Atrial Fibrillation](#)
 - [Atrial Flutter](#)
 - [Atrial Tachycardia](#)
 - [Heart Block](#)
 - [Long QT Syndrome](#)
 - [Sinus Node Dysfunction](#)
 - [Supraventricular Tachycardia](#)
 - [Syncope](#)
 - [Ventricular Fibrillation](#)
 - [Ventricular Tachycardia](#)
 - [Wolff-Parkinson-White Syndrome](#)
- [Arterial Dissection](#)
- [Arteriovenous Malformations](#)
- [Astrocytoma \(see \[Cerebellar Low-Grade Astrocytoma\]\(#\) or \[High-Grade Astrocytoma\]\(#\)\)](#)
- [Atrial Fibrillation](#)
- [Atrial Flutter](#)
- [Atrial Septal Defect](#)
- [Atrial Tachycardia](#)
- [Autism Spectrum Disorders](#)

B

- [Beckwith-Wiedemann Syndrome](#)
- [Bedwetting](#)
- [Birth Asphyxia](#)
- [Blood Diseases](#)
 - [Aplastic Anemia](#)
 - [Fanconi Anemia](#)
 - [Hemolytic Anemia](#)
 - [Hemophilia](#)
 - [Histiocytosis](#)
 - [Leukemia](#)
 - [Myelodysplastic Syndromes](#)
 - [Neutropenia](#)
 - [Sickle Cell Anemia](#)
- [Blood and Marrow Transplant \(BMT\)](#)
- [Bone Sarcoma](#)
- [Bow Legs and Knock Knees](#)
- [Brain Mapping](#)
- [Brain Tumors](#)
 - [Brainstem Glioma](#)
 - [Cerebellar Low-Grade Astrocytoma](#)

- [Choroid Plexus Tumors](#)
 - [Craniopharyngioma](#)
 - [Ependymoma](#)
 - [High-Grade Astrocytoma](#)
- [Brainstem Glioma](#)
- C
- [Cancer](#)
 - Bone Marrow Transplant (see [Blood and Marrow Transplant](#))
 - [Bone Sarcoma](#)
 - [Brainstem Glioma](#)
 - [Desmoid Tumor](#)
 - [Ewing's Sarcoma](#)
 - [Germ Cell Tumors](#)
 - [High-Grade Astrocytoma](#)
 - [Histiocytosis](#)
 - [Hodgkin's Lymphoma](#)
 - [Leukemia](#)
 - [Liver Cancer](#)
 - [Myelodysplastic Syndromes](#)
 - [Neuroblastoma](#)
 - [Non-Hodgkin's Lymphoma](#)
 - [Soft Tissue Sarcoma](#)
 - [Wilm's Tumor](#)
- [Cardiomyopathy](#)
- [Cavernous Malformations](#)
- [Cerebellar Low-Grade Astrocytoma](#)
- [Cerebral Palsy and Spasticity](#)
- [Chiari Malformation](#)
- [Choroid Plexus Tumors](#)
- [Chronic Lung Disease](#)
- [Cleft Lip](#)
- [Cleft Lip and Palate](#)
- [Cleft Palate](#)
- [Cleidocranial Dysostosis](#)
- [Clubfoot](#)
- [Cluster Headache](#)
- [Coarctation of the Aorta](#)
- [Coarctation Stent Repair](#)
- [Coblation for Tonsillectomy](#)
- [Cochlear Implant](#)
- [Collateral Vessel Closure](#)
- [Congenital Cystic Adenomatoid Malformation](#)
- [Congenital Diaphragmatic Hernia](#)
- [Congenital Hydrocephalus](#)
- [Craniofacial Anomalies](#)
 - [Cleft Lip](#)
 - [Cleft Lip and Palate](#)
 - [Cleft Palate](#)
 - [Craniosynostosis Syndromes](#)
 - [Ectodermal Dysplasia](#)
 - [Hemifacial Microsomia](#)
 - [Pierre Robin Sequence](#)

- [Velocardiofacial Syndrome](#)
- [Craniopharyngioma](#)
- [Craniosynostosis Syndromes](#)
- [Critically Ill Infants](#)
 - [Apnea](#)
 - [Birth Asphyxia](#)
 - [Chronic Lung Disease](#)
 - [Congenital Diaphragmatic Hernia](#)
 - [Intraventricular Hemorrhage](#)
 - [Jaundice](#)
 - [Meconium Aspiration Syndrome](#)
 - [Necrotizing Enterocolitis](#)
 - [Periventricular Leukomalacia](#)
 - [Persistent Pulmonary Hypertension of the Newborn](#)
 - [Retinopathy of Prematurity](#)
 - [Spina Bifida](#)

D

- [CyberKnife](#)
- [Deep Brain Stimulation](#)
- [Dermatology](#)
- [Desmoid Tumor](#)
- [Developmental Dysplasia of the Hip](#)
- [Devic's Disease](#)
- [Diabetes](#)
- [Digestive, Nutritional & Liver Disorders](#)
 - [Gastroesophageal Reflux Disease](#)
 - [Hirschsprung's Disease](#)
 - [Imperforate Anus](#)
 - [Inflammatory Bowel Disease](#)
 - [Intestinal Failure](#)
 - [Intestinal Transplant](#)
 - [Pyloric Stenosis](#)
 - [Spleen Disorders](#)
- [Disorders of Sex Development](#)

E

- [Ear, Nose and Throat](#)
- [Ectodermal Dysplasia](#)
- [Electrophysiology Study and Catheter Ablation](#)
- [Endocarditis](#)
- [Endocrinology](#)
 - [Diabetes](#)
 - [Disorders of Sex Development](#)
 - [Obesity](#)
- [Ependymoma](#)
- [Epilepsy](#)
- [Ewing's Sarcoma](#)
- [Eye Conditions](#)

F

- Fainting (see [Syncope](#))
- [Fanconi Anemia](#)
- [Fetal Disorders](#)
 - [Amniotic Band Syndrome](#)

- [Congenital Diaphragmatic Hernia](#)
 - [Congenital High Airway Obstruction Syndrome](#)
 - [Fetal Bowel Obstruction](#)
 - [Gastroschisis](#)
 - [Omphalocele](#)
 - [Pulmonary Sequestration](#)
 - [Sacroccygeal Teratoma](#)
 - [Spina Bifida](#)
 - [Twin Reversed Arterial Perfusion \(TRAP\) Sequence](#)
 - [Twin-To-Twin Transfusion Syndrome](#)
 - [Unequal Placental Sharing](#)
 - [Fibrodysplasia Ossificans Progressiva](#)
 - [Flat Feet](#)
- G**
- [Gamma Knife Radiosurgery](#)
 - [Gastroesophageal Reflux Disease](#)
 - [Germ Cell Tumors](#)
- H**
- [Headache](#)
 - [Cluster Headache](#)
 - [Migraine](#)
 - [Tension-Type Headache](#)
 - [Hearing Loss](#)
 - [Heart Block](#)
 - [Heart Care](#)
 - [Aortic Valve Stenosis](#)
 - [Arrhythmia](#)
 - [Atrial Fibrillation](#)
 - [Atrial Flutter](#)
 - [Atrial Septal Defect](#)
 - [Atrial Tachycardia](#)
 - [Cardiomyopathy](#)
 - [Coarctation of the Aorta](#)
 - [Coarctation Stent Repair](#)
 - [Endocarditis](#)
 - [Heart Block](#)
 - [Hypoplastic Left Heart Syndrome](#)
 - [Kawasaki Disease](#)
 - [Long QT Syndrome](#)
 - [Patent Ductus Arteriosus](#)
 - [Patent Foramen Ovale](#)
 - [Pulmonary Artery Stenosis](#)
 - [Pulmonary Atresia](#)
 - [Pulmonary Valve Stenosis](#)
 - [Rheumatic Heart Disease](#)
 - [Sinus Node Dysfunction](#)
 - [Supraventricular Tachycardia](#)
 - [Tetralogy of Fallot](#)
 - [Transposition of the Great Ateries](#)
 - [Truncus Arteriosus](#)
 - [Ventricular Fibrillation](#)
 - [Ventricular Septal Defect](#)

- [Ventricular Tachycardia](#)
- [Wolff-Parkinson-White Syndrome](#)
- [Hemifacial Microsomia](#)
- [Hemolytic Anemia](#)
- [Hemophilia](#)
- [Hernia \(see \[Inguinal Hernia\]\(#\)\)](#)
- [High-Grade Astrocytoma](#)
- [Hirschsprung's Disease](#)
- [Histiocytosis](#)
- [Hodgkin's Lymphoma](#)
- [Hydrocephalus \(see \[Acquired Hydrocephalus\]\(#\) or \[Congenital Hydrocephalus\]\(#\)\)](#)
- [Hydronephrosis](#)
- [Hypodontia](#)
- [Hypoplastic Left Heart Syndrome](#)
- [Hypospadias](#)

I

- [Imperforate Anus](#)
- [Implantable Cardioverter Defibrillator](#)
- [Incontinence](#)
- [Inflammatory Bowel Disease](#)
- [Inguinal Hernia](#)
- [Intensity Modulated Radiation Therapy \(IMRT\)](#)
- [Intestinal Failure](#)
- [Intestinal Transplant](#)
- [Intraventricular Hemorrhage](#)
- [Irregular Heartbeat \(see \[Arrhythmia\]\(#\)\)](#)

J

- [Jaundice](#)

K

- [Kawasaki Disease](#)
- [Kidney Disease](#)
- [Kidney Transplant](#)

L

- [Legg-Calve-Perthes Disease](#)
- [Leukemia](#)
- [Liver Cancer](#)
- [Liver Transplant](#)
- [Living Donor Kidney Transplant](#)
- [Living Donor Liver Transplant](#)
- [Long QT Syndrome](#)

M

- [Magnetic Mini-Mover Procedure](#)
- [Mandibulofacial Dysostosis](#)
- [Meconium Aspiration Syndrome](#)
- [Microtia](#)
- [Migraine](#)
- [Moyamoya](#)
- [Multiple Sclerosis](#)
- [Muscular Dystrophy](#)
- [Myelodysplastic Syndromes](#)

N

- [Nager Syndrome](#)

- [Necrotizing Enterocolitis](#)
- [Neuroblastoma](#)
- [Neurofibromatosis 1](#)
- [Neurological Disorders](#)
 - [Acquired Hydrocephalus](#)
 - [Acute Disseminated Encephalomyelitis \(ADEM\)](#)
 - [Aneurysms](#)
 - [Arterial Dissection](#)
 - [Arteriovenous Malformations](#)
 - [Autism Spectrum Disorders](#)
 - [Brain Tumors](#)
 - [Cavernous Malformations](#)
 - [Cerebral Palsy and Spasticity](#)
 - [Chiari Malformation](#)
 - [Congenital Hydrocephalus](#)
 - [Devic's Disease](#)
 - [Epilepsy](#)
 - [Moyamoya](#)
 - [Multiple Sclerosis](#)
 - [Muscular Dystrophy](#)
 - [Optic Neuritis](#)
 - [Spinal Muscular Atrophy](#)
 - [Stroke](#)
 - [Vein of Galen Malformation](#)

- [Neutropenia](#)
- [Nighttime Enuresis \(see \[Bedwetting\]\(#\)\)](#)
- [Non-Hodgkin's Lymphoma](#)

O

- [Obesity](#)
- [Ophthalmology \(see \[Eye Conditions\]\(#\)\)](#)
- [Optic Neuritis](#)
- [Organ Transplants](#)
 - [Intestinal Transplant](#)
 - [Kidney Transplant](#)
 - [Liver Transplant](#)
- [Orthopedic Conditions](#)
 - [Bow Legs and Knock Knees](#)
 - [Clubfoot](#)
 - [Developmental Dysplasia of the Hip](#)
 - [Fibrodysplasia Ossificans Progressiva](#)
 - [Flat Feet](#)
 - [Legg-Calve-Perthes Disease](#)
 - [Pectus Excavatum](#)
 - [Scoliosis](#)
 - [Torsion \(In-toeing and out-toeing\)](#)
- [Otolaryngology \(see \[Ear, Nose and Throat Conditions\]\(#\)\)](#)

P

- [Pacemaker Procedure](#)
- [Patent Ductus Arteriosus](#)
- [Patent Foramen Ovale](#)
- [Pectus Excavatum](#)
- [Periventricular Leukomalacia](#)

- [Persistant Pulmonary Hypertension of the Newborn](#)
- [PET-CT Scanning](#)
- [Pierre Robin Sequence](#)
- [Positional Plagiocephaly](#)
- [Pulmonary Artery Stenosis](#)
- [Pulmonary Atresia](#)
- [Pulmonary Medicine](#)
 - [Congenital Cystic Adenomatoid Malformation](#)
- [Pulmonary Valve Stenosis](#)
- [Pyloric Stenosis](#)

R

- [Retinopathy of Prematurity](#)
- [Rheumatic Heart Disease](#)

S

- Sarcoma (see [Soft Tissue Sarcoma](#))
- [Scoliosis](#)
- [Sickle Cell Anemia](#)
- [Sinus Node Dysfunction](#)
- [Soft Tissue Sarcoma](#)
- [Spina Bifida](#)
- [Spinal Fusion Surgery for Scoliosis](#)
- [Spinal Muscular Atrophy](#)
- [Spleen Disorders](#)
- [Stickler Syndrome](#)
- [Stroke](#)
- [Supraventricular Tachycardia](#)
- [Syncope](#)

T

- [Tension-Type Headache](#)
- [Tetralogy of Fallot](#)
- [Torsion](#) (In-toeing and out-toeing)
- [Transposition of the Great Ateries](#)
- [Truncus Arteriosus](#)

U

- [Undescended Testicle](#)
- [Urinary Tract Infection](#)
- [Urology](#)
 - [Bedwetting](#)
 - [Disorders of Sex Development](#)
 - [Hydronephrosis](#)
 - [Hypospadias](#)
 - [Incontinence](#)
 - [Inguinal Hernia](#)
 - [Undescended Testicle](#)
 - [Urinary Tract Infection](#)
 - [Vesicoureteral Reflux](#)

V

- [Vagal Nerve Stimulation](#)
- [Van der Woude Syndrome](#)
- [Vein of Galen Malformation](#)
- [Velocardiofacial Syndrome](#)
- [Ventricular Fibrillation](#)

- [Ventricular Septal Defect](#)
- [Ventricular Tachycardia](#)
- [Vertebral Body Stapling](#)
- [Vesicoureteral Reflux](#)
- [von Willebrand Disease](#)

W

- [Wilm's Tumor](#)
- [Wolff-Parkinson-White Syndrome](#)

**CERTIFIED CHILDREN'S HEALTH COUNSELOR ONLINE COURSE - SESSION 4
QUESTION & ANSWERS**

NAME: _____

ADDRESS: _____

CITY, STATE, ZIP, PC: _____

PHONE: _____

FAX: _____

E-MAIL: _____

Please be sure to fill out the information above, complete the test and e-mail or mail it back to us at iridology@netzero.net or P.O. Box 485, Weimar, CA, 95736-0485. We will grade your question & answer session and will let you know if we have any questions or concerns. **Please use a separate sheet to do this assignment.**

All information will be kept private. If you would like comments and suggestions let us know and we will respond to you.

1. Pick a childhood disease that you are not familiar with and research it on the web. Write a paper about the disease, how it is diagnosed and treated, and what types of alternative treatments are available for it.