Lou Gehrig's Disease (ALS)

Lou Gehrig's disease is a disorder that's also called **amyotrophic lateral sclerosis** or ALS. The official name comes from these Greek words:

-"a" for without -"myo" for muscle -"trophic" for nourishment -"lateral" for side (of the spinal cord)

-"sclerosis" for hardening or scarring

So, **amyotrophic** means that the muscles have lost their nourishment. When this happens, they become smaller and weaker. **Lateral** means that the disease affects the sides of the spinal cord, where the nerves that nourish the muscles are located; and **sclerosis** means that the diseased part of the spinal cord develops hardened or scarred tissue in place of healthy nerves.

ALS is often called Lou Gehrig's disease after Lou Gehrig, a hall-of-fame baseball player for the New York Yankees who was diagnosed with ALS in the 1930s. People in England and Australia call ALS Motor Neurone Disease (MND). The French refer to it as Maladie de Charcot, after the French doctor Jean-Martin Charcot, who first wrote about ALS in 1869.

What Is Lou Gehrig's Disease?

Lou Gehrig's disease damages **motor neurons** in the brain and spinal cord. Motor neurons are nerve cells that control muscle movement. **Upper motor neurons** send messages from the brain to the spinal cord, and **lower motor neurons** send messages from the spinal cord to the muscles. Motor neurons are an important part of the body's **neuromuscular system**. The neuromuscular system enables our bodies to move and is made up of the brain, many nerves, and muscles. Things that we do every day — like breathing, walking, running, lifting stuff, and even reaching for a glass of water — are all controlled by the neuromuscular system.

Here's how the neuromuscular system works: If you want to make a fist, your brain first sends signals through upper motor neurons to the area in your spinal cord that controls your hand muscles. Then lower motor neurons in your spinal cord signal the muscles in your hand to move and make a fist.

Over time, Lou Gehrig's disease causes these motor neurons in the brain and spinal cord to shrink and disappear, so that the muscles no longer receive signals to move. As a result, the muscles become smaller and weaker. Gradually the body becomes paralyzed , which means that the muscles no longer work. However, someone with ALS, even at an advanced stage, can still see, hear, smell, and feel touch. The nerves that carry feelings of hot, cold, pain, pressure, or even being tickled, are **not** affected by Lou Gehrig's disease. The parts of the brain that allow us to think, remember, and learn are also not affected by the disease.

Although this disease can strike anyone, it is extremely rare in kids. According to the ALS Association, most people who develop Lou Gehrig's disease are adults between 40 and 70. Only 2 out of every 100,000 people will get the disease each year. Because it is not contagious, you can't catch ALS from someone who has the disease.

Among ALS cases in the United States, 5% to 10% are hereditary, which means the disease runs in certain families. This is called **familial** ALS. At least 90% of cases are not inherited; this is called **sporadic** ALS.

How Is the Disease Diagnosed?

Lou Gehrig's disease doesn't always begin or become worse in the same way. The disease is different for every person who has it. In general, muscle weakness, especially in the arms and legs, is an early symptom for more than half of people with ALS. Other early signs are tripping or falling a lot, dropping things, having difficulty speaking, and cramping or twitching of the muscles. As the disease gets worse over time, eating, swallowing, and even breathing may become difficult.

It may take several months to know for sure that someone has Lou Gehrig's disease. The illness can cause symptoms similar to other diseases that affect nerves and muscles, including Parkinson's disease and stroke. A doctor will examine the patient and do special tests to see if it might be one of those other disorders. (It's like using the process of elimination to figure out the answer to a multiple-choice question on a test.)

One of the tests, an electromyogram (say: eh-lek-tro-**my**-uh-gram), or EMG, can show that muscles are not working because of damaged nerves. Other tests include X-rays, magnetic resonance imaging (MRI), a spinal tap, and blood and urine evaluations. Sometimes a muscle or nerve biopsy is needed. A biopsy is when a doctor takes a tiny sample of tissue from the body to study under a microscope. Examining this tissue can help the doctor figure out what's making someone sick.

How Is the Disease Treated?

Currently, there's no way to prevent or cure Lou Gehrig's disease, but a number of treatments are available to people with the disease. Medicines can control symptoms, such as muscle cramping and difficulty swallowing, and other drugs can slow the development of the disease.

Physical therapy can help people with ALS cope with muscle loss and breathing problems. Special equipment is also provided when it becomes necessary. For instance, a power wheelchair can enable a paralyzed person with ALS to get around. A machine called a ventilator (say: **ven**-til-ay-ter) can help a someone breathe.

In addition, a nurse or other health assistant may come to the person's home to provide care that the family cannot handle alone. It's normal for family members to feel upset, overwhelmed, and sad if a loved one has ALS. Counseling, as well as support from other family members and friends, can make it easier to deal with the challenges they face.

What's Life Like for Someone With Lou Gehrig's Disease?

According to the ALS Association, about half of all people with ALS live at least 3 years after they find out they have the disease, and 20% (or 1 in five) live 5 years or more. As many as 10% will survive more than 10 years.

Stephen Hawking has been living with Lou Gehrig's disease for about 40 years — ever since his diagnosis at age 21. He is the most famous long-term survivor of the disease. Born in England, Hawking is a famous physicist who furthered our understanding of the universe. He has written a lot of books, including the bestseller *A Brief History of Time*. He has done these things despite being confined to a wheelchair for more than 20 years, being able to move only a few fingers, and needing a voice synthesizer and special computer to speak and write.

Hawking, who has a wife and three children, once said, "The prospect of a short life made me want to do more. I realized life was good, and there was a great deal I wanted to do."

Living with Lou Gehrig's disease is physically difficult, but it is reassuring to know that the mind is not affected. People with the disease can think as clearly as ever, are able to maintain relationships with friends and family, and should be treated respectfully and normally. Communication can be difficult because the disease affects the person's breathing and the muscles needed for speech and arm movement. With patience, the families of patients with ALS can learn to communicate effectively with their loved one.

Researchers continue to study ALS as they try to understand why it happens, and how the disease damages the motor neurons in the brain and spinal cord. As they learn more about the disease, researchers can continue to develop new and better treatments.

Stephen Hawking said, "[ALS] has not prevented me from having a very attractive family, and being successful in my work . . . I have been lucky that my condition has progressed more slowly than is often the case. But it shows that one need not lose hope."

Osteoporosis

"Drink your milk!" Why do grown-ups say this? One big reason is that milk contains **calcium**, an important ingredient in building strong bones. And if you start out with strong bones when you're a kid, those bones will serve you well your whole life.

You want bones that are dense, which means they're strong all the way through. Why? Because as people age, bones naturally become less dense. In other words, everyone's going to lose some bone density as he or she ages, so you want to start out with as much as possible. Your big chance to build bones is when you're young. The process is pretty much over by the time you're 19.

If someone has osteoporosis (say: **oss**-tee-oh-puh-ro-sis), the person's bones are now weakened because of this loss of bone density. Weak bones can break easier and the person may have other problems such as a stooped-over posture. Maybe you've seen an older woman who's a little hunched over. Older people — especially women, who are generally smaller and have bones that are lighter and less dense — are more likely to develop osteoporosis.

Types of Osteoporosis

The most common cause of osteoporosis is age. The older you get, the more bone loss you are likely to have, especially if you don't take in enough calcium.

Osteoporosis also can be caused by diseases or other factors, such as:

- hormone problems
- poor diet
- certain medications
- too much smoking or drinking

Signs and Symptoms

Many people don't realize they have osteoporosis until they fracture a bone. There are usually no other symptoms — although some older people may notice they are getting slightly shorter or have a hunched-over posture. Older people with osteoporosis are especially at risk of breaking a hip if they fall down.

What Does the Doctor Do?

If the doctor suspects osteoporosis, he or she will talk to the person and do an examination. The doctor will order X-rays of the patient's bones as well as a bone density test.

Once the doctor is sure of osteoporosis, he or she will treat the patient to prevent more bone loss. Usually, someone with osteoporosis is placed on medications that help slow down bone loss and is also advised to take calcium supplements.

Diet and exercise are important parts of osteoporosis treatment. People need a variety of healthy, calcium-rich foods and regular exercise, such as walking or running, to strengthen bones. Weight training or special exercises may be recommended. The person also will need to be careful to avoid falls, so avoiding icy sidewalks and other hazards is a good idea.

Can Kids Get Osteoporosis?

Kids don't usually get osteoporosis, but they can do something to prevent it later in life.

- Eat a well-balanced diet, especially with foods rich in calcium (like milk, cheese, yogurt, green leafy vegetables, and citrus fruit).
- Be active. In other words, play a lot! Playing sports, running, jumping, dancing — whatever you like to do.
- Don't smoke.

Take these steps and your skeleton will thank you later!

Scoliosis

Your spine, or backbone, helps hold your body upright. Without it, you couldn't walk, run, or play sports. If you look at yourself sideways in the mirror or look at a friend from the side, you'll notice that the back isn't flat like a piece of board. Instead, it curves in and out between your neck and lower back. Despite that gentle curve, a healthy spine appears to run straight down the middle of the back. The trouble for someone with scoliosis is that the spine curves from side to side.

What Is Scoliosis?

The word **scoliosis** (say: sko-lee-**oh**-sus) comes from a Greek word meaning crooked. If you have scoliosis, you're not alone. About 3 out of every 100 people have some form of scoliosis, though for many people it's not much of a problem. For a small number of people, the curve gets worse as they grow and they may need a brace or an operation to correct it.

Someone with scoliosis may have a back that curves like an "S" or a "C." It may or may not be noticeable to others. While small curves generally do not cause problems, larger curves can cause discomfort. The X-ray image to the right shows what scoliosis looks like.

No one knows what causes the most common type of scoliosis called **idiopathic** (say: ih-dee-uh-**pa**-thik) **scoliosis**. (Idiopathic is a fancy word for *unknown cause*.) Doctors do know that scoliosis can run in families. So if a parent, sister, or brother had scoliosis, you might have it, too. Most types of scoliosis are more common in girls than boys, and girls with scoliosis are more likely to need treatment.

How Do Kids Find Out if They Have Scoliosis?

Sometimes scoliosis will be easily noticeable. A curved spine can cause someone's body to tilt to the left or right. Many kids with scoliosis have one shoulder blade that's higher than the other or an uneven waist with a tendency to lean to one side. These problems may be noticed when a kid is trying on new clothes. If one pant leg is shorter than the other, a kid might have scoliosis. It's also possible that the kid does **not** have scoliosis, but one leg may be slightly shorter than the other.

You might get examined for scoliosis at school or during a doctor visit. In the United States, about half of the states require public schools to test for scoliosis. It's an easy test called the forward-bending test, and it doesn't hurt at all. It involves bending over, with straight knees, and reaching your fingertips toward your feet or the floor. Then, a doctor or nurse will look at your back to see if your spine curves.

What if I Have It?

If a doctor says you have scoliosis, then the doctor and your parent can talk about whether treatment is necessary, and then talk to you about what happens next. If the doctor wants to get a better look, he or she may order X-rays of your spine. Sometimes the doctor will decide that the curve isn't serious enough to need treatment.

If you do need treatment, you'll go to a special doctor called an **orthopedist** (say: or-tho-**pee**-dist), or orthopedic surgeon, who knows a lot about bones and how to treat scoliosis. The orthopedist will probably start by figuring out how severe your spine's curve is. To do this, an orthopedist looks at X-rays and measures the spine's curve in degrees, like you measure angles in math class.

Someone who has a mild curve might just need regular checkups to make sure the curve isn't getting worse. Someone with a more severe curve may need to wear a brace or have an operation.

Treating Scoliosis With Braces

A brace will not permanently correct curves that are already there. A brace for scoliosis is meant to hold the spine in place so the curve doesn't get any worse. Some braces are made to be worn only at night and others are designed to be worn both day and night. If you need a brace, your doctor can discuss which type would be best for you. Braces are meant to be used while the spine is still growing, especially when it grows very fast during the "adolescent growth spurt." Therefore, a kid with scoliosis will spend less time in the brace as he or she gets older and gets closer to adult size. After the spine finishes growing, braces are no longer effective.

Doctors try to make better braces for kids with scoliosis, so braces now are lighter, more comfortable, and easier to wear than they used to be. There are many different types of braces. Kids with scoliosis often wear a brace called a **thoracolumbosacral orthosis** (say: tho-ra-ko-lum-bo-**say**-krul or-**thoh**-sus), or **TLSO** for short. This kind of brace comes up under the arms and is more comfortable than the bigger braces. Braces are usually named after the cities where they were invented and have names like the Boston brace, the Wilmington brace, the Providence brace, and the Charleston brace.

Treating Scoliosis With Surgery

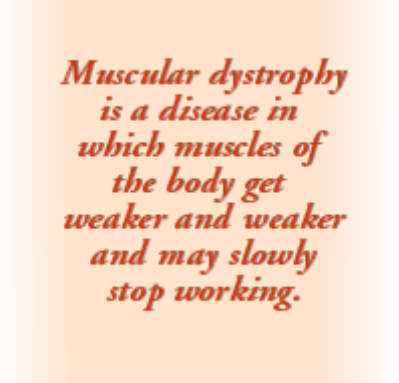
Braces often do the job, but some kids who have scoliosis eventually need an operation. Someone who gets this operation will be given anesthesia, a kind of medicine that puts a person to sleep and prevents pain during the operation. During the operation, the orthopedic surgeon fuses the bones in the spine together so that they can no longer continue to curve. The surgeon also uses metal rods, hooks, screws, and wires to correct the curve and hold everything in line until the bones heal. The metal parts are placed deep under the spine muscles, and in most cases can't be felt and do not hurt. They are meant to be left in the back permanently.

The operation takes several hours, depending on how big the curve is and how many bones need to be fused. Normally, a kid who has this operation will be able to get out of bed the next day and start to walk, doesn't need to wear a cast or brace, and can usually go home in less than a week. The kid can usually go back to school about a month after surgery, then return to some activities in 3 or 4 months, and most normal activities after 6 to 12 months. But keep in mind that each patient's surgery and recovery might be different, depending on the type of surgery and the patient's age.

A metal rod in a kid's back? It may sound strange, but that rod has an important job while the bones are growing together. It holds the spine in place during healing. The kid can still move to pet the dog, swim laps, or shoot hoops. After the bones fuse, the metal rod isn't needed anymore. But it's not hurting anything, so it isn't removed. To remove it would mean getting another operation. Before they used metal rods, a kid would have to wear a body cast for up to a year to keep the spine in place during the recovery period. No fun at all!

Over the years, the treatments have improved, so more and more kids with scoliosis live normal lives. There are no activity restrictions for patients with scoliosis unless they have to have surgery. There are no activities, including sports, that doctors know about that can make scoliosis worse. A kid with scoliosis who has to have surgery should talk to a doctor about how to participate safely in activities. Scoliosis may throw you a curve, but with the right care, a kid can grow up healthy and feeling fine.

The Meaning of Muscular Dystrophy



Over Labor Day, just as you were going back to school, you might have seen the Muscular Dystrophy Association telethon on TV. Every year on this show, Jerry Lewis and others raise money for research and treatment of muscular dystrophy (MD). You might wonder "What's this show about and what *is* muscular dystrophy?" Or maybe you know someone who has MD.

What Is Muscular Dystrophy?

Muscular dystrophy (say: **mus**-kyoo-lur **dis**-troh-fee) is a disease in which the muscles of the body get weaker and weaker and slowly stop working. Muscles and membranes need many different kinds of proteins to stay healthy. When you hear the word "protein" you might think of food because food, such as meat and peanut butter, contains protein. But we're talking about another kind of protein - the kind your body actually creates. Your genes tell your body how to make the proteins your muscles need. But in people with MD, these genes have wrong information or leave out important information, so the body can't make these proteins properly.

Without these proteins, the muscles break down and weaken over time. As this happens to muscles, people with MD begin to have problems with the way their bodies work.

Different Types of MD

There are thirty types of MD. In some types, muscle problems start when the person is very young. With other types, symptoms of MD start later, sometimes not until the person is a grown-up. This article talks about two types: Duchenne and Becker MD. Generally, only boys get Duchenne MD and Becker MD, but girls are affected by these types in rare cases and they may get other forms of MD.

Most kids with MD have **Duchenne** (say: due-**shen**) MD. Kids with Duchenne MD look and act just like other kids when they're babies. But when they're between 2 and 6 years old, the muscles in their arms, legs, and pelvis (hips) begin to get weaker. First signs of weakness may be difficulty running, getting up stairs, or up off of the floor. A boy with Duchenne MD will have trouble walking and eventually will stop walking. The boy may have also trouble feeding himself, difficulty breathing, and trouble with his heart, which is a muscle.

Becker MD is very similar to Duchenne, except kids with Becker MD may not have problems until much later, when they're teenagers or adults. It takes a long time for their muscles to become weak.

How Does a Kid Get Muscular Dystrophy?

MD is not **contagious** (say: con-**tay**-juss), which means you can't catch it from another person. MD happens because of a problem with a person's genes. Your genes are passed down to you from parents and they contain information about all kinds of stuff. They determine your eye color, hair color, height, and also whether you will have certain medical problems.

What Does MD Feel Like?

When they're young, kids with MD don't look any different from other kids. Later on, they may need wheelchairs or leg braces to get around. It's hard to imagine what it might feel like if you had trouble getting up from a chair, playing sports, or even walking. The weakness that kids with MD feel in their muscles isn't the same kind of weakness you feel after you run really far and feel like you can't go another step. If you don't have MD, your muscle weakness from exercise will go away after a short time. But for kids with MD, muscle weakness is always there - when they wake up and when they go to sleep. MD can also affect a person's brain, which can cause learning problems, but most kids with MD can go to school in a regular classroom with other kids.

What Does the Doctor Do?

When kids begin to have muscle problems and weakness, they go to the doctor. The doctor can do tests to see if a kid has MD. The doctor will examine the weak muscles and test the kid's blood. The doctor can sometimes tell just by a blood test if a kid has Becker or Duchenne MD. Or the doctor might take a small piece of the muscle and look at it under a microscope to help tell whether a kid has MD. Other tests measure the work that nerves are doing in the muscles and can help doctors figure out if something else is causing the muscle weakness.

Helping Kids With MD

There are things kids with MD do to help their muscles. Certain exercises help keep their muscles as strong as possible. Also, special braces help keep the **tendons** flexible. Tendons are like very strong rubber bands that keep your muscles attached to your bones. If the tendons get tight, your muscles can't work as well, so the braces keep the tendons from tightening up too much.

Kids with MD also do breathing exercises, such as blowing into a tube to make a ball go up. This helps fill their lungs with air and helps prevent them from getting pneumonia (say: new-**mo**-nyuh), an infection of the lungs.

Some kids with MD take medications to keep their muscles stronger. For some kids, medications called **steroids** (say: **ster**-oyds) may slow down the weakening of the muscles. A side effect of steroids is that they can cause a kid to gain weight.

Many scientists are working on ways to help people with MD. In fact, that Labor Day telethon raises money for research. Some scientists are trying to fix the genes so they will make the right proteins. Other scientists are trying to make chemicals that will act like these proteins. They hope that this will help the muscles work better in people with MD.

Living With MD

Kids with MD may use crutches, walkers, and leg braces to help them walk. They may even use wheelchairs when their muscles get weaker. Some kids have specially trained dogs to open doors for them and carry stuff, like books or toys. But kids with MD like to do the same things as other kids. They like to be outside, play games, and watch TV. Kids who have MD can even go to special summer camps.

Although they need some special attention, kids who have MD want to be treated just like other kids. If you know someone with MD, offer help when the person needs it, but don't make a big deal about the MD. Be a friend and make the most of all the activities you can enjoy together.

Juvenile Rheumatoid Arthritis

You may have heard about **arthritis** (say: ar-**thry**-tus), which is a disease that causes swelling and pain in a person's joints. But isn't it something that only old people get? Actually, kids can get a kind of arthritis called juvenile rheumatoid arthritis, or JRA for short. "Juvenile" means young. It's also called **juvenile idiopathic arthritis** or JIA, to highlight that it is different than the arthritis that adults get. Kids can have many different types of arthritis, but JRA is the most common.

Joints are the places where bones meet. Arthritis can prevent people from moving their joints properly. **Juvenile rheumatoid arthritis** (say: **joo**-vuh-nil **roo**-muh-toid ar-**thry**-tus) affects kids under age 16. These kids have arthritis in one or more joints. Many problems can cause pain and swelling of the joints, so a doctor will want to know how long these problems have been going on. To be considered JRA, a kid must have swelling and pain for at least 6 weeks.

Although it has a similar name, juvenile rheumatoid arthritis is not the same as the kind of arthritis that affects adults. Although some of the symptoms may be similar, JRA doesn't damage bones as quickly as the rheumatoid arthritis that affects older people.

Three Kinds of JRA

Three different types of juvenile rheumatoid arthritis can affect kids:

1. **Oligoarticular** (say: awl-li-go-ar-**tik**-yoo-lur) **JRA.** Oligoarticular JRA is the name that's used when four or fewer joints are affected. (Oligo means few and articular means having to do with the joints, so oligoarticular means having to do with few joints.) Usually larger joints such as a knee or ankle are affected by this type of JRA.
2. **Polyarticular** (say: pah-lee-ar-**tik**-yoo-lur) **JRA.** Poly means many, so polyarticular means having to do with many joints. This kind of JRA affects five or more joints. Although this kind of JRA usually involves large joints, such as knees, wrists, elbows, and ankles, small joints of the hands and feet are also often involved. Additionally, the joints of the neck (cervical spine) and jaw (temporomandibular joints) may also be affected.

   Polyarticular JRA is often **symmetrical** (say: sih-**met**-rih-kul). Symmetrical means that something is the same on each side, kind of like a butterfly's wings. In polyarticular JRA, the same joints on both sides of the body are involved. For example, a kid with polyarticular JRA might have problems with the joints in both the left and right hands.
3. **Systemic** (say: sis-**teh**-mik) **JRA.** Systemic means it affects many parts of the body, rather than just a few specific places. A kid with this type of JRA may have swelling, pain, and limited motion in joints, as well as other symptoms. Rashes and high fevers that come and go can happen for weeks at a time. Other organs, such as the heart, lungs, and liver, can be affected.

Why Do Kids Get JRA?

No one really knows what causes JRA. Something in the environment such as a virus may trigger the disease in kids that already have certain genes that make it more likely for them to get JRA. JRA is not contagious, so you can't catch it from someone else.

JRA is an autoimmune (say: **aw**-toh-i-**myoon**) disease. Normally, a kid's immune system sends out white blood cells to protect the body and fight outside invaders like bacteria and viruses that can make a kid sick. With JRA, the immune system makes a mistake and targets healthy cells as if they were harmful.

Instead of recognizing the healthy cells and saying, "Hi, nice to see you," the immune system thinks the healthy cells need to be destroyed and releases chemicals to fight the healthy cells. The chemicals the immune system releases cause the pain and swelling that a kid with JRA experiences.

What Do Doctors Do?

Just because a joint hurts doesn't mean a kid has JRA. A joint might hurt for a lot of different reasons, which is why it's important to see a doctor to figure out what the problem is.

The doctor will ask a lot of questions. How long has the kid had joint problems? Does he or she feel stiff when getting up or after resting? Are the joints swollen? Was there an injury? Could another problem be causing arthritis, such as Lyme disease? Is there a family history of arthritis or other autoimmune diseases?

Knowing these answers and doing a physical exam, blood tests, and X-rays will help the doctor figure out if it is JRA. If your doctor suspects that you may have JRA, he or she may send you to see a doctor who specializes in the diagnosis and treatment of arthritis. This kind of doctor is called a **rheumatologist** (say: roo-muh-**tol**-oh-jist).

How Is JRA Treated?

Some kids who have JRA may take medicine such as ibuprofen to help control pain and inflammation. If the arthritis is more severe, they may need to take additional medicines to decrease pain and inflammation and to slow the progression of the disease. Some of these medicines are pills, but others are shots.

It is important that kids with JRA keep their joints moving. Often a kid will see a physical therapist or occupational therapist. In addition to working with children to move their joints and strengthen their muscles, these therapists can help create special exercise programs for home or school that can help a kid with JRA stay active.

In addition to joint problems, JRA may cause **uveitis** (say: yoo-vee-**eye**-tus), an inflammation of the eye that can lead to problems with vision if it's not treated. It is more common in children with oligoarticular arthritis but all children diagnosed with JRA should get their eyes checked by an ophthalmologist, a doctor who specializes in diagnosing and treating eye problems. If the eyes are affected, they may be treated with eyedrops.

There are some things a kid can do to reduce the symptoms of JRA in addition to taking medicines. Keeping joints warm and staying active can help maintain mobility. Warm baths can make a kid's joints hurt less. An electric blanket on a timer that turns on 1 hour before a child wakes up can help warm the joints so he or she can move better. Some kids dip their hands in a special warm wax called paraffin that helps their joints ache less.

Living With Juvenile Rheumatoid Arthritis

Kids with JRA can have a lot of stiffness when they first wake up in the morning. Once their joints warm up, they can usually move more easily. That's why you might notice that someone with JRA has trouble moving early in the day, but seems better later on.

It's important for kids with JRA to find a good balance between activity, which helps them stay flexible, and rest, which everyone needs. Swimming is a great exercise for someone with JRA. It stretches a lot of different muscles and tendons and helps keep the person moving and flexible. It's important for kids with JRA to stay active even when they are not having symptoms.

Sometimes kids with JRA can go a long time, even months or years, without the disease bothering them. Then it comes back. This is called a **flare-up** or **flare**. Flare-ups just happen and can't be prevented. It can be frustrating if a flare-up happens on a day when the kid would like to be doing something fun, like attending a birthday party. If you know someone with JRA, you may offer to carry books or give other help, if needed. It's also OK if the person doesn't want help.

The good news is that many kids with JRA will outgrow it. Kids with oligoarticular JRA generally do better than kids with polyarticular arthritis, but as many as 7 out of 10 kids with polyarticular JRA may not require treatment as adults. And although the arthritis is active, almost all kids with JRA can control it with medicine and other treatments, which means they can do most things that other kids can do.

Cerebral Palsy

Have you ever heard a family member talk about your first step or the first word you spoke? For kids with cerebral palsy, called CP for short, taking a first step or saying a first word is not as easy. That's because CP is a condition that can affect the things that kids do every day.

Some kids with CP use wheelchairs and others walk with the help of crutches or braces. In some cases, a kid's speech may be affected or the person might not be able to speak at all.

Cerebral palsy (say: seh-**ree**-brel **pawl**-zee) is a condition that affects thousands of babies and children each year. It is not contagious, which means you can't catch it from anyone who has it. The word **cerebral** means having to do with the brain. The word **palsy** means a weakness or problem in the way a person moves or positions his or her body.

A kid with CP has trouble controlling the muscles of the body. Normally, the brain tells the rest of the body exactly what to do and when to do it. But because CP affects the brain, depending on what part of the brain is affected, a kid might not be able to walk, talk, eat, or play the way most kids do.

The Types of CP

There are three types of cerebral palsy: **spastic** (say: spass-tick), **athetoid** (say: **ath**-uh-toid), and **ataxic** (say: ay-**tak**-sick). The most common type of CP is spastic. A kid with spastic CP can't relax his or her muscles or the muscles may be stiff.

Athetoid CP affects a kid's ability to control the muscles of the body. This means that the arms or legs that are affected by athetoid CP may flutter and move suddenly. A kid with ataxic CP has problems with balance and coordination.

A kid with CP can have a mild case or a more severe case — it really depends on how much of the brain is affected and which parts of the body that section of the brain controls. If both arms and both legs are affected, a kid might need to use a wheelchair. If only the legs are affected, a kid might walk in an unsteady way or have to wear braces or use crutches. If the part of the brain that controls speech is affected, a kid with CP might have trouble talking clearly. Another kid with CP might not be able to speak at all.

For some babies, injuries to the brain during pregnancy or soon after birth may cause CP. Children most at risk of developing CP are small, premature babies (babies who are born many weeks before they were supposed to be born) and babies who need to be on a ventilator (a machine to help with breathing) for several weeks or longer. But for most kids with CP, the problem in the brain occurs before birth. Often, doctors don't know why.

What Do Doctors Do?

Doctors who specialize in treating kids with problems of the brain, nerves, or muscles are usually involved in diagnosing a kid with cerebral palsy. These specialists could include a pediatric **neurologist** (say: nyoo-**ral**-uh-jist), a doctor who deals with problems of the nervous system and brain in kids.

Three other kinds of doctors who can help kids with CP include a pediatric **orthopedist** (say: or-tho-**pee**-dist), who handles problems with bones or joints, a **developmental pediatrician**, who looks at how a kid is growing or developing compared with other kids the same age, and a **pediatric physiatrist**, who helps treat children with disabilities of many kinds.

There is no special test to figure out if a kid has cerebral palsy. Doctors may order X-rays and blood tests to find out if some other disease of the brain and nervous system may be causing the problem. To diagnose CP, doctors usually wait to see how a kid develops to be sure.

A case of cerebral palsy often can be diagnosed by the age of 18 months. For example, if a child does not sit up or walk by the time most kids should be doing these things, the kid might have CP or some other problem that is causing development to go more slowly. Doctors follow infant and child development closely and look for problems with muscle tone and strength, movement, and reflexes.

How Is CP Treated?

For a kid with CP, the problem with the brain will not get any worse as the kid gets older. For example, a kid who has CP that affects only the legs will not develop CP in the arms or problems with speech later on. The effect of CP on the arms or legs can get worse, however, and some kids may develop dislocated hips (when the bones that meet at the hips move out of their normal position) or scoliosis (curvature of the spine).

That is why therapy is so important. Kids with CP usually have physical, occupational, or speech therapy to help them develop skills like walking, sitting, swallowing, and using their hands. There are also medications to treat the seizures that some kids with CP have. Some medications can help relax the muscles in kids with spastic CP. And some kids with CP may have special surgeries to keep their arms or legs straighter and more flexible.

Living With CP

Cerebral palsy usually doesn't stop kids from going to school, making friends, or doing things they enjoy. But they may have to do these things a little differently or they may need some help. With computers to help them communicate and wheelchairs to help them get around, kids with CP often can do a lot of stuff that kids without CP can do.

Kids with cerebral palsy are just like other kids, but with some greater challenges that make it harder to do everyday things. More than anything else, they want to fit in and be liked. Be patient if you know someone or meet someone with CP. If you can't understand what a person with CP is saying or if it takes a person with CP longer to do things, give him or her extra time to speak or move. Being understanding is what being a good friend is all about, and a kid with CP will really appreciate it.