

Serious Laughs

Comedian Josh Blue gets serious—well, sort of—about his cerebral palsy and how he uses humor in the face of adversity.

BY OLGA RUKOVETS



Born in Cameroon, West Africa, Josh Blue—who made headlines when he won NBC's *Last Comic Standing* in 2006—began his life as a world traveler on his second day on the planet. Blue's father, a professor of romance languages, was teaching in a mission there at the time. In November 1978, Blue was medically evacuated to the United States after experiencing serious complications during childbirth. A year later, he was diagnosed with cerebral palsy (CP), a neurologic condition caused by injury or abnormal development in the immature brain, often before birth, that leads to problems with movement, muscle tone, or posture.

Cerebral palsy is the most common disability affecting movement during childhood. The Centers for Disease Control and Prevention (cdc.gov) estimate the prevalence of CP as 1 in 303 8-year-old children in the United States. (See box, "Cerebral Palsy: The Basics.")

"The most common cause of CP is prematurity. Roughly 20 percent of babies born before 32 weeks gestational age will have CP. Less frequent causes of CP include a complication of labor and delivery; a stroke or brain infection while inside the uterus, or disorders of brain development present at birth," says Barry S. Russman,

M.D., professor of pediatrics and neurology at Oregon Health and Science University and Shriners Hospital for Children, and a member of the American Academy of Neurology (AAN).

For the 33-year-old comedian, CP is such a familiar part of his existence that he doesn't notice it much, he tells *Neurology Now*. "I don't think I'd know I had cerebral palsy if other people didn't tell me," Blue says. "That's my viewpoint; I just tackle the world, whatever comes at me. This is just how I've grown up and how I live."

Blue even goes a step further, poking fun at his disability in stand-up routines. One of his comedy CDs is called *Good Josh, Bad Arm*, and he touts himself as the comedian who puts the "cerebral" in "cerebral palsy." He realizes "people are going to stare," so he "want(s) to give them something to stare at"—on his own terms.

LISTEN TO THE INTERVIEW!

To hear a podcast of the interview with Josh Blue, go to bit.ly/QliG9A. You can also hear the podcast on *Neurology Now* for the iPad.

PREVENTION AND DIAGNOSIS

The youngest of three children, Blue was raised in St. Paul, MN. His parents sensed that something was off when their son was not maturing at the same pace his siblings had. "I was a little delayed with sitting up and crawling and all that," he says. Around the age of one, Blue was diagnosed with CP.

“As I get older and mature and see the world, I think it’s really rewarding to have people take inspiration—I hate the ‘I’ word—but I think a lot of disabled people really thank me for putting disability out there in a positive way. That feels good.”

—JOSH BLUE

Although many causes of CP cannot be prevented, some steps can be taken before, during, and after pregnancy to reduce the baby’s risk.

“First, expectant parents can try to prevent premature delivery by recognizing and reporting signs to a health care provider early on. Second, there are some emerging data that the incidence of CP could be decreased by giving magnesium sulfate to women who go into labor prematurely,” says Dr. Russman.

Monitoring the mother’s lifestyle choices during pregnancy, such as making sure she’s not drinking alcohol or smoking and is taking folic acid, are all steps that can be taken to reduce CP incidence, adds Michael Goldstein, M.D., a child neurology specialist who practices with Western Neurological Associates in Salt Lake City, UT, and former vice president of the AAN.

As was the case with Blue, “CP is typically diagnosed because of a noted motor delay early in life—a child is not walking, not using an arm, not sitting up, not using the legs,” says Dr. Goldstein.

In order to diagnose a child with CP, the doctor typically takes a history of the patient’s development and then does a physical exam, according to Dr. Russman. “The history will tell you if the child is not developing at the normal rate—not standing at the right time, not walking at the right time—and yet is not *losing* milestones.” The key, he says, is the child is reaching these milestones—just at a much slower rate than expected; otherwise a different disorder may be indicated.

Although the diagnosis of CP is made from the history and physical examination, neuroimaging studies such as magnetic resonance imaging (MRI) or computed tomography (CT) scans may be performed afterward to try to determine the part of the brain that has been injured, Dr. Russman says.

“Occasionally imaging studies reveal treatable disorders such as hydrocephalus (water on the brain) or bleeding. When imaging shows an abnormality, the location and appearance of the abnormality may often be helpful in understanding the basis of the problems,” Dr. Goldstein adds. But, he says, for many patients the imaging tests are normal even when there are disabling symptoms.

“LONG ROAD TO HOME”

Many people mistakenly assume that a child with physical disabilities also has cognitive disabilities, Blue says. Until the

fourth grade, he was in special education classes in school. But one or two periods a day, Blue and his classmates would attend lessons with the rest of their schoolmates. “By the time we got to fourth grade, they realized that we were just as smart—if not smarter—than the able-bodied kids, so they mainstreamed us,” he says.

Blue was moved into the non-specialized classes together with four or five of his peers, which he regards as a huge step in his life. The biggest challenges, according to Blue’s mom, came from the teachers, who were unsure of how to accommodate disabled students. “But really we just needed a little adaptive help, and we could do everything everyone else did,” Blue says.

“I am lucky in that the amount of palsy that I do have is bearable,” the comedian acknowledges. In addition, his thinking skills are unaffected. Two-thirds of individuals with CP will be intellectually impaired to some degree. “The reason is that many parts of the brain may be affected in CP,” says Dr. Goldstein.

The more movement problems a person experiences, the greater the likelihood of cognitive impairment, according to Dr. Russman.

In the classroom, children with associated cognitive difficulties should be evaluated for intellectual function independently of any motor or movement symptoms related to their CP, Dr. Russman adds. “And then educators can say, ‘Okay, how do we implement a program taking into consideration that the muscles don’t work well and/or the child cannot write very well?’ Many different aids to learning can be developed, especially in this age of computers,” says Dr. Russman. Since communication problems may occur with CP, assistance can include the use of sign language, communication boards (photographs, symbols, words/phrases, or a combination of all three—which make language visible), or verbal recognition software on a computer.

Blue never needed to learn how to spell growing up: “I just dictated to someone else and they wrote it down, so I’m still a horrible speller.” He now uses Dragon Dictate, a speech-enabled voice recognition software, on his iPhone. It’s been a huge breakthrough, Blue says, for helping him access sites like Twitter and Facebook. “I can actually put in things that I want to say instead of depending on somebody else. It’s pretty liberating,” Blue says.

While in transition from specialized to mainstream classes, humor became a welcome outlet for the young Blue. Some of



STILL STANDING Blue won NBC’s *Last Comic Standing* in 2006.

CHRIS HASTON/ NBC UNIVERSAL, INC.



“I don’t think I’d know that I had cerebral palsy if **other people** didn’t tell me.”

—JOSH BLUE

his friends had a harder time with the switch, he says, but at that age, people aren’t necessarily being mean, they’re just ignorant, Blue believes. “It just was a long road to home, letting people know that, ‘Yeah, I’m physically disabled, but I’m right there with you on everything else,’” he says.

In addition to humor, Blue relied on a tough, determined streak in his personality. “I’ve always been a ‘don’t mess with me’ kind of kid,” he laughs.

TEAM PLAYER

For many adolescents, junior high school is a complicated period of transition—and being cut from the school’s soccer team then was a particularly heartbreaking experience for Blue. “I just wanted to play soccer and be around my friends,” he says. “My feeling was, if you just let me come to practice, all I can do is get better!”

After graduating college, Blue bumped into a woman with CP who swam in the Paralympics. “I had never even heard of it [the Paralympics]. She saw me playing soccer, and said, ‘You know there’s a team for you, right?’”

She handed Blue the e-mail address for the Paralympic soccer coach on a tiny piece of paper—smaller than a gum wrapper, he recalls. Blue carried it with him for a few months before having the courage to send the e-mail. The note he finally wrote said: “Hi, my name is Josh Blue, I have cerebral palsy, and I’m a damn good soccer player.” A week later, Blue got a response: “Nice to meet you, Josh Blue. We’re always looking for damn

good soccer players.” Two weeks later, he was on the team.

Competitive sports can be a wonderful way of interacting with peers, gaining social skills, and improving motor skills for children with CP, Dr. Goldstein says, just as they are for children without CP. “One of the major benefits of children with disabilities playing sports is to show what they are able to do rather than highlighting what they are not able to do.”

Unfortunately, because of his busy comedy schedule, Blue can’t always join the team on the longer-distance games. “Just with my career and all these babies I have, it’s really hard to leave my wife alone for a month.”

GETTING SERIOUS ABOUT COMEDY

Blue turned to comedy both as a defense mechanism and as a way to pare away differences—real or perceived—between him and his able-bodied classmates at a young age.

But it was only when he went to college that he realized comedy came more easily to him than to his peers. “When you’re a kid, you don’t know that other people aren’t as funny or quick as you. There was just a moment when other people said, ‘Man, you’re funny *all* the time!’”

Suddenly, it clicked. Blue gained momentum doing shows on the college circuit. Soon after, he hit the big time when he won NBC reality series *Last Comic Standing* in the summer of 2006. (See *Neurology Now*’s previous article on Blue’s feat at bit.ly/RRtIPY.)

In the beginning, Blue had a lot of explaining to do before

“I’m a **road warrior**. Not too many people do what I do, as many times a year as I do,” Blue says of his comedy career.

he could actually start his routine. “The whole audience had an idea of what they were going to see, and my job was to break that completely apart,” says Blue. This was the biggest initial challenge—having to make the audience comfortable with him and his disability. Now that more people recognize his name, Blue can dive right into what he does best: the jokes. Recently, he premiered a special on Showtime called *Sticky Change*.

The most rewarding part of being a comedian? “I don’t have to get a real job,” he quips. And then seriously: “As I get older and mature and see the world, I think it’s really rewarding to have people take inspiration—I hate the ‘T’ word—but I think a

lot of disabled people really thank me for putting disability out there in a positive way. That feels good.”

Blue admits that being a role model is difficult. People look up to you, and then you have to keep yourself in check and be “role model-like,” he says. He doesn’t actively consider himself an inspiration or assess the ramifications of that title every time he does a show—instead, he simply does what “feels right and good. The repercussion is that people do take inspiration and wisdom from what I’m doing.”

A GLOBAL PERSPECTIVE

Blue’s experiences in Africa over the course of his life have shaped his perspective on the world and on parenting. His dad was on a Fulbright scholarship when Blue was 15, which first brought him back to his birth country.

“It’s a weird perspective that I was lucky enough to get as a kid, seeing other parts of the world and how other people raise children. I’ve seen other countries where the whole family—six or seven people—live in one room and they are completely happy, and then I see in America how we all have these giant houses and many people are not happy. A child just needs a healthy place to grow up. They’re much more durable than you think they are.”

Blue—who has two little ones of his own with his wife, Yuko—says disabled kids get sheltered more than they should because parents want to protect them.” But at a certain point, you have to say, ‘You’re a person and you have to learn these things [for yourself].’”

Blue’s parents did not treat him differently from his other siblings, the comedian recalls. “Obviously there were some special needs that I had. But it was just ‘Oh, my brother has to go to basketball practice’ and ‘Josh has to go to therapy.’ [Physical and occupational therapy] were only activities I had to go to,” he says.

And the family similarities seem to outweigh the differences. For example, Blue and his family members share an extraordinary aptitude for language; he is fluent in both French and Wolof, the native language of Senegal. Blue’s dad speaks 13 languages. “All my siblings speak at least three—and they’re not the same languages,” he says. “It’s one of our weird gifts.”

Dr. Russman’s parenting advice echoes Blue’s experience. “When you are parenting children with varying physical or intellectual capabilities,” Dr. Russman says, “you treat a child with a disability as you would treat a child without a disability: If the child misbehaves, he or she gets time out. Yes, you have to address your child’s disability and minimize it with various interventions—physical and occupational therapy, adaptive equipment, muscle tone management, operative intervention, and so on. But then you must stress the importance of living as normal a life as possible.”



Cerebral Palsy: The Basics

According to the National Institutes for Neurological Disorders and Stroke (ninds.nih.gov), cerebral palsy (CP) is a group of disorders that can involve brain and nervous system functions such as movement, learning, hearing, seeing, and thinking.

Caused by either injuries or abnormalities in the brain, many of the effects occur while the baby is still in the mother’s womb. However, they can continue to occur within the first two years of life while the brain is still developing.

Infants who are born prematurely have a heightened risk of CP. The condition may also occur during early infancy as a result of other conditions, including:

- ▶ Bleeding in the brain
- ▶ Brain infections (encephalitis, meningitis, herpes simplex infections)
- ▶ Head injury
- ▶ Infections in the mother during pregnancy (rubella)
- ▶ Severe jaundice

Common symptoms of CP are:

- ▶ Very tight muscles that don’t stretch (spasticity)
- ▶ Abnormal way of walking (gait)
- ▶ Tight joints that do not open up all the way
- ▶ Muscle weakness or loss of movement in a group of muscles, or paralysis
- ▶ Seizures (in about half of patients)
- ▶ Uncontrollable body movements or tremors

The symptoms may affect just one arm or leg, one side of the body, both legs, or both arms and legs.



ADVOCACY BY EXAMPLE

Where advocacy is concerned, Blue's approach is hands-on. "I think there's a lot more to doing something than just talking about it. I can tell you all about the triumphs that I had, or I can have more triumphs."

Blue has done shows for United Cerebral Palsy (an international advocacy group that educates and provides support services for children and adults with a spectrum of disabilities) and appeared at neurology conferences. Most recently, he recorded a public service announcement for the American Brain Foundation, formerly known as the American Academy of Neurology Foundation, on the need to raise money to support research to cure brain diseases such as cerebral palsy (bit.ly/sSkdUe). "Having a physical disability, I realized at a pretty young age that if there was ever anything that I didn't accomplish in my life, it wasn't because of my cerebral palsy, it was because I was just being lazy," Blue says in the video.

What's great about speaking out on behalf of disabled people is that different organizations are eager to listen, regardless of their main cause, he says: ultimately, "adversity is adversity; it's just how you figure out how to deal with it."

In his own life, Blue gathers support and advice from the compassionate people who surround him. "My management team cares for me on a level that goes beyond business, and my wife and kids are a tremendous support. They would like me home more, and I love being home, but I'm a road warrior. Not too many people do what I do, as many times a year as I do—on the road, doing shows, and traveling," Blue says.

Dr. Goldstein is a big fan. "To be out there as a public figure and to talk candidly about [his cerebral palsy]—I think it's great," he says of Blue.

So, what's Blue's take-home message for readers? "Tell them I'm stunningly handsome," he jokes. "But really, I love what I do, and I want people to know that... it's a great way to connect to people and share what I've learned. Instead of saying, 'You need to listen to what I'm saying,' people want to listen. And when it's funny, they are able to learn more from it," he says. NN

Treatments and Research

TREATMENTS AND ASSISTIVE DEVICES

The most common treatments for cerebral palsy (CP) include physical and occupational therapy. "We really can't tell whether it's therapy or time or both that causes improved function in movement. We think the therapy gets the child ready, but only when the brain develops physically can that improved function occur—so it's likely a combination of the two," says Barry S. Russman, M.D., of the Oregon Health and Science University and Shriners Hospital for Children.

For improving communication, learning, and movement symptoms often associated with CP, glasses, hearing aids, orthoses (braces), walking aids, and/or wheelchairs may be helpful. Many children with CP—especially when impairment is minimal or mild—do not require any pharmacological treatment, says Michael Goldstein, M.D., a child neurology specialist.

However, as many as half of all children with CP experience seizures and may take anticonvulsants to prevent or reduce the frequency. "In some children with CP, one class of muscles is much stronger than the other. If there's an imbalance of muscle, botulinum toxin (Botox) can help, but I think that's a very specialized treatment," says Dr. Goldstein. In 2010, the American Academy of Neurology and the Child Neurology Society published an evidence-based review of the pharmacologic treatment of spasticity in children and adolescents with CP (bit.ly/RMkkCP), which found that botulinum toxin is effective in reducing localized (affecting small muscles or localized to 1 limb) spasticity.

In addition, muscle relaxants (baclofen) may be prescribed to reduce tremors and spasticity. For severe cases of CP, surgery may also be indicated, including dorsal rhizotomy—a procedure where certain nerves are severed at the root where they branch off from the spinal cord—in order to reduce spasticity.

RESEARCH

Extensive research has been conducted on why premature babies are prone to developing CP, but no breakthroughs in terms of clinical trials are available as of yet, says Dr. Russman. Researchers are looking at ways to prevent damage to certain parts of the brain from occurring, specifically in white matter in the brain (made up of nerve fibers that carry information from one area of the central nervous system to another) because that's where a lot of the damage in CP occurs, he adds.

Some strides are also being made with the use of stem cell therapies for CP. Pediatric neurologist James Carroll, M.D., is the lead investigator of a new clinical trial at the Georgia Health Sciences University that will look at whether the infusion of stem cells from a child's own umbilical cord blood can improve quality of life in children with cerebral palsy, but this is still in very early stages (cpirf.org/stories/2721, clinicaltrials.gov/ct2/show/NCT01072370).