



Testing early
for cystic fibrosis

makes a
difference

Symptoms of CF:

- Failure to thrive
- Loose, oily stools
- Recurrent pneumonia, respiratory infections and/or sinus infections
- Persistent coughing
- Excess production of sputum
- Wheezing
- Shortness of breath

Cystic fibrosis
team members

(pediatric and adult)

- Pulmonologists
- Social workers
- Dietitians
- Nurse specialists
- Respiratory therapists
- Exercise physiologists
- Additional support is provided by gastroenterology, otolaryngology, infectious disease, genetics, surgery and neonatology.

Screening for cystic fibrosis (CF) is now a routine part of newborn care in South Carolina, a protocol adopted in large part due to the efforts of Michael Bowman, M.D., who heads the pediatric pulmonology division at MUSC Children's Hospital.

"The sooner this serious disease is detected, the sooner treatment can begin," says Dr. Bowman. "I can't emphasize enough the importance of early diagnosis."

The test became part of routine screening required by the S.C. Department of Health and Environmental Control in November. Isabel Virella-Lowell, M.D., a specialist in CF at Children's Hospital, echoes Dr. Bowman. "If you can control infection in the lungs, children with cystic fibrosis will live longer and healthier lives," she says.

CF is an inherited disease characterized by an abnormality in the glands that produce sweat and mucus. It affects the respiratory, digestive and reproductive systems. The disease is chronic,

progressive and usually fatal. Advancements in treatment have greatly improved the quality of life of those with CF, and many are now living into their 30s.

There are about 30,000 people in the U.S. who are affected with the disease, and about 2,500 babies are born with it each year. It occurs mainly in Caucasians, who have a northern European heredity, although it also can occur in African-Americans and Hispanics.

Because the clinical diagnosis of CF is based on symptoms which may mimic normal acute childhood illnesses, as well as chronic problems such as allergies, asthma and bronchitis, patients should be diagnosed and treated at a specialized CF treatment center. MUSC, recognized by the Cystic Fibrosis Foundation, is one of only three CF centers in the state.

"All CF patients need to be followed by a pulmonologist who can provide the most up-to-date therapies," Dr. Virella-Lowell said. CF is the second most common life-shortening, childhood-onset, inherited disorder in the United States.

Approximately one in 20 people in the U.S. are carriers of the CF gene. These people are not affected by the disease and usually do not know that they are carriers. CF can be identified before birth through prenatal screening, which is now offered to all pregnant women in South Carolina. Pre-conception testing for the CF gene is especially important for anyone who

has a family member with the disease, or whose partner is a known carrier of CF or affected with CF. Testing for the CF gene can be done from a small blood sample or from a cheek swab. The diagnosis is confirmed by a sweat chloride test.

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- Michael Bowman, M.D.



'What you don't take, won't help you'

A team approach to treating asthma

Pediatric asthma is the most common chronic disorder in children and adolescents. It often begins in childhood before age five, with 50-80 percent of children with asthma developing asthma symptoms, such as coughing, wheezing, shortness of breath or rapid breathing and chest tightness.

"With proper management of symptoms," says Michael Bowman, M.D., who heads the pediatric pulmonology division at MUSC Children's Hospital, "children with asthma can lead active lives, lives that can include competitive athletics."

Three factors make it work:

1. Regular evaluations
2. Controlling factors that contribute to symptoms, such as avoiding allergies
3. Proper use of medications, which includes educating the child, family and other caregivers

The MUSC pediatric pulmonology team is all about children. All members of the team have specialized training in caring for children and bring a broad range of skills in treating asthma and other lung and respiratory diseases.

Dr. Bowman is quick to point out that while the pulmonology team handles the most difficult and complex cases, it is not limited only to extreme cases. "We encourage referral of children with chronic respiratory problems," he said. "If a youngster has respiratory symptoms that last three weeks or more, it is worth considering a referral to the team."

One important component is education. The team provides detailed instruction to patients and their families. "A key to our success is patient education," says Dr. Bowman. "The point is, what you don't take, won't help you."



Kids are different!

Our motto is *All About Kids*. At MUSC Children's Hospital, we live and work by these words. That's what makes Children's Hospital different. Our doctors and nurses are specifically trained to care for children. Our equipment is kid sized. We don't see children as just small-sized adults. Their needs are different. So are their illnesses. Our experts know what the differences are and how best to handle them.

Built in 1987, Children's Hospital is South Carolina's largest and most comprehensive pediatric healthcare center. The hospital houses the only Level III neonatal intensive care unit in the region where the tiniest newborns are provided state-of-the-art care. Our Pediatric Intensive Care Unit, the only one in the region, is staffed exclusively by trained pediatric critical care physicians and nurses.

The world of Children's Hospital has been created through the eyes of children, from the decorations in the

rooms and hallways to the inviting Child Life atrium that lights up the eyes of all children who enter the play area. Every professional involved in the care of your child is driven by a commitment to excellence and providing the best care possible.

MUSC Children's Hospital has earned top ranking from *U.S. News & World Report*, *American Health Magazine* and *The Best Doctors in America*. *Child* magazine continues to rank MUSC Children's Hospital as one of the top pediatric facilities in the country.

Charleston is a better place and a safer place for children because of Children's Hospital.

To contact us, call MUSC Health Connection at 792-1414 or go to MUSCKids.com.



All about Kids

Charles P. Darby

Children's Research Institute



The Charles P. Darby Children's Research Institute, the largest and most comprehensive pediatric research facility in the Carolinas, opened in February with 150 state-of-the-art laboratory modules. The institute is headed by Bernard Maria, M.D., MBA, executive director, and Inderjit Singh, Ph.D., scientific director.

"It's more than a building," says Dr. Maria. "It will allow us to translate cutting-edge research into the latest treatments for the children of South Carolina."

The work being performed in these areas will raise the level of care not only at MUSC Children's Hospital, but also throughout the entire Medical University. Research conducted at the institute could potentially assist children throughout the world.

The institute is named for Charles P. Darby, M.D., retired head of Children's Hospital and the man who established the vision for the institute.