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4

BROTHERS' ASTHMA MEANS A LIFE OF 'LITTLE SCARES'

Gabriel Roosevelt-Jackman was a tiny three-week-old baby when he made his first ambulance trip to the hospital emergency department. Parents Daniel and Ann thought it was a bad cold but Gabriel actually had a serious respiratory infection -- and severe allergic asthma.

Now 13 years old, Gabriel's asthma is so difficult to control that it often prevents him from participating in his favourite sports -- basketball, soccer and football -- something that doesn't usually happen to children with less severe asthma. His seven-year-old brother Solomon's asthma is less problematic but even he knows that he'll have to miss out on gym if he doesn't have his emergency inhaler. "Sometimes, I really want to have the chance to grow out of it," says Solomon.

For the Roosevelt-Jackman family, having two children with asthma means visits to the respiratory clinic

at SickKids every two weeks, lots of medication and lots of uncertainty about when the next asthma flare-up might occur.

It also means keeping a close eye on the weather forecast. "If I go outside and it's really hot, it will affect my breathing and then I'll have to go to an emergency room," Gabriel explains. Cold weather has the same effect.

Solomon's case is different. He was fine until the age of two when mould in the family's apartment triggered the onset of asthma symptoms. At recess re-

cently, Solomon started to have difficulty breathing -- and he had forgotten his inhaler. Ann was stuck on the train, feeling helpless. "But he said he drank some water and he breathed in and out and it calmed him down." It's incidents like this that Ann describes as the "little scares."

The boys' biweekly visits to SickKids are for tests that measure how well the lungs are functioning. Gabriel also gets two injections because of the severity of his chronic asthma and other allergies.



The Roosevelt-Jackman family (from left) Lahreena, Daniel, Gabriel, Ann, Solomon and Callista.

Ann says she worries about Gabriel taking so much medication but she realizes that there are no viable alternatives, especially since he also has multiple food allergies including soya, kiwi, seafood and nuts. Daniel and Ann have no respiratory problems and neither do their two daughters, Lahreena, 10, and Callista, 16.

"It's heartbreaking," says Daniel. "We are actively doing everything, the doctors are actively doing everything but...there are so many sources that can cause a flare-up. It's so tough to control."

Still, through the years of treatment and visits to the clinic and the emergency department, the members of the Roosevelt-Jackman family have learned to cope, to support each other and to be happy. "Despite the challenges, we are blessed," says Daniel.

Helping researchers to pick winners

Predicting whether potential new asthma drugs will be effective is all in a day's work for Dr. Paul O'Byrne, principal investigator for the AllerGen Clinical Investigator Collaborative (CIC).

He leads a nationwide network of researchers who use a specific clinical model of "allergen-induced, airway responses" to try to understand the way asthma develops, including the role of environmental allergens. That model has also proved highly effective in evaluating the effectiveness of new asthma medications.

"It's particularly useful to large pharmaceutical companies as well as small biotech companies who are trying to decide whether to invest the huge sums involved in getting a new drug to market," says Dr. O'Byrne, who is also executive director of the Firestone Institute for Respiratory Health at St. Joseph's Healthcare in Hamilton.

With six sites across Canada and one in Stockholm, the project is part of the federally-funded Allergen NCE, the Allergy, Genes and Environment Network, established in 2004 in response to the fact that one in three Canadians lives with allergic disease.

Dr. O'Byrne says that although Canada is still a leader in asthma research, new funding priorities are creating challenges for the research community. "Ten to 15 years ago, companies were interested in understanding the basic mechanisms of disease and would invest in studies to find out what was going on in the airways of people with asthma," he explains. "Their funding is much more directed these days."

Still, he's very optimistic about the future of asthma research and treatment in this country. He recalls, as a young physician, seeing asthma patients on ventilators in the intensive care unit. "That hardly ever happens now. And knowing that we've made a difference as a group of scientists and physicians is very rewarding."



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