

Clinical Trials at ACH: Impacting Treatment of Pediatric Hypertension

Zach was having recurring headaches about twice a week. Each lasted all day and made it hard for him to concentrate. His mom Traci took him to their doctor. "Our doctor noticed that Zach's blood pressure was a little high and that he was a little overweight," says Traci. The doctors sent the family to ACH to have then 14-year-old Zach examined further. A nephrologist at ACH determined that Zach had pediatric hypertension and suggested that Zach and his family consider having him participate in a clinical trial for pediatric hypertension.

They spoke to Research Nurse Lee Howard, RN, CCRC, about the trial. She explained that the trial was to compare two antihypertensive drugs, drugs approved for use in adults but that have not yet had adequate dosing and safety information determined for children. Dr. Tom Wells is the principal investigator of the study, and he has been treating and researching pediatric hypertension for over 20 years at Arkansas Children's Hospital.

Pediatric hypertension is found in 1% to 3% of children. The primary cause of pediatric hypertension is unknown though it is possibly related to genetics, obesity, or other factors. Secondary, underlying causes can include kidney disease or vascular problems. "Many of these children may have headaches or sleep disorders," says Dr. Wells. He adds, "They generally go to school and aren't ill appearing."

Zach decided to join the trial to possibly improve his health and the health of other children. His participation included taking medication and 7 visits to ACH's Pediatric Clinical Research Unit over a 3- to 4-month period. The study procedures included physical examinations, blood draws, and an electrocardiogram. The research team provided Zach a home blood pressure monitor and taught him how to use it to monitor his blood pressure. Zach continued on the medication beyond his last visit after consulting with Dr. Wells. After a year, Zach says his headaches were gone.

Zach and his family adjusted his diet as well. The family has reduced salt in their meals; Zach has replaced soda with water and iced tea. In addition to reducing his blood pressure, Zach has also reduced his weight. Always athletic, Zach previously found it hard on occasion to run with the other players on his baseball team; now, the 16 year old easily keeps up with his teammates.

The study, which has already closed its enrollment, is an industry-sponsored, multi-center study being conducted by the Network of Pediatric Pharmacology Research Units (PPRUs), funded by the NIH. The PPRU at Arkansas Children's Hospital is one of 13 PPRUs in the nation established by the National Institute of Child Health and Human Development in response to the need for appropriate drug therapy for pediatric patients. Dr. Wells served as the principal investigator for the PPRU for 10 years; Dr. Laura James now leads the PPRU in this position.



Zach keeps his eye on the ball and on his blood pressure.

The family speaks highly of the research team. "They were really nice and do what they need to do," says Zach. He adds, "Dr. Wells is a top doctor." With the work of physicians through the ACHRI PPRU and the participation of families throughout the region, physicians everywhere will have safer dosing information for children.



Established in 1989, Arkansas Children's Hospital Research Institute provides an on-site research environment for faculty of the University of Arkansas for Medical Sciences working on the Arkansas Children's Hospital campus. Over 120 pediatric researchers with expertise and experience that span the breadth of medical disciplines comprise ACHRI's roster of investigators who work to fulfill its mission to improve children's health, development, and well-being through high quality research. For more information, visit <http://achri.archildrens.org>.