

# Complications of chronic kidney disease occur earlier in children

October 4 2011

---

(Medical Xpress) -- In what may lead to a shift in treatment, the largest prospective study of children with chronic kidney disease (CKD) has confirmed some experts' suspicions that complications occur early. The findings suggest the need for earlier, more aggressive management of blood pressure, anemia and other problems associated with kidney disease, according to Dr. Marva Moxey-Mims, a pediatric kidney specialist at the NIH.

Results of the [Chronic Kidney Disease](#) in Children (CKiD) Study are in the September issue of the *Clinical Journal of the American Society of Nephrology*.

Growth failure, metabolic abnormalities and cardiovascular disease risk factors such as high blood pressure occur even at a glomerular filtration rate (GFR) of 50 milliliters per minute in children with CKD. GFR is a measure of [kidney function](#), and a GFR of 50 is approximately half of normal function. Despite therapy, these complications increased in prevalence two- to four-fold with decreasing GFR, concluded the study, funded primarily by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) at the National Institutes of Health.

Dr. Moxey-Mims noted that many experts previously thought that complications of kidney disease, such as anemia, acidosis and elevated potassium and phosphate, did not usually happen until kidney function was much worse than a GFR of 50.

"Metabolic abnormalities and cardiovascular disease risk factors have rarely been systematically assessed in children with CKD," said Dr. Susan Furth, a researcher at The Children's Hospital of Philadelphia and lead study author. "We sought to identify the point along the GFR spectrum at which various common consequences of CKD become more prevalent." Metabolic abnormalities include high phosphorus and potassium levels, acidosis (too much acid in the blood), anemia and high cholesterol.

"Considering that a lot of kids may not be diagnosed with kidney disease until they are at that lower level of kidney function, this is important. Even above a GFR of 50, some of the abnormalities are already there," Dr. Moxey-Mims said. "Indeed, they get worse as kidney function drops, but the study shows that issues start to develop sooner than many thought."

Moxey-Mims added that the findings support what some in the pediatric nephrology community have known anecdotally. "It's showing us little snippets of things that are putting kids at risk among those who we previously thought were not at risk for the morbidities of chronic [kidney disease](#)," she said. "Now we know that maybe those who are down to a GFR of 50 are the kids to start watching more closely. That's the main lesson from these findings."

**More information:** For more information on the CKiD Study (NCT00327860) visit [www.clinicaltrials.gov](http://www.clinicaltrials.gov)

Provided by National Institutes of Health

Citation: Complications of chronic kidney disease occur earlier in children (2011, October 4) retrieved 20 March 2024 from <https://medicalxpress.com/news/2011-10-complications-chronic->

[kidney-disease-earlier.html](http://kidney-disease-earlier.html)

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.