

Nighttime blood pressure may predict risk of kidney failure in children

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Monitoring blood pressure during the night may help identify children with kidney disease who are at risk of progressing to kidney failure, according to a study that will be presented at ASN Kidney Week 2017 October 31-November 5 at the Ernest N. Morial Convention Center in New Orleans, LA.

Hypertension is linked with both the development and progression of [kidney disease](#). Although [blood pressure](#) is usually monitored through measurements taken at a clinic or hospital, 24-hour ambulatory blood pressure monitoring (ABPM) provides valuable information regarding the importance of blood pressure control throughout the day and night.

Recent studies in adults indicate that night-time [high blood pressure](#), independent of daytime blood pressure, is linked with more severe end organ damage. To look at the issue in children, Mónica Guzmán-Limón, MD (McGovern Medical School at the University of Texas Health Science Center) and her colleagues analyzed information from 1195 24-hour ABP monitorings in children ages 1-16 with mild to moderately impaired kidney function. Children, all participants in the CKiD cohort study, were classified into 4 groups: 1) those with normal blood pressure throughout day and night, 2) those with high blood pressure only during the day, 3) those with high blood pressure only at night, and 4) those with high blood pressure during both day and night.

As in adults, children with high blood pressure at night experienced a faster time to kidney failure when compared with children with normal

blood pressure. This decline was even more pronounced in patients with high blood pressure during both day and night when compared with children with [normal blood pressure](#).

"Our study highlights the importance of normal night-time blood pressure in children with chronic kidney disease. Night-time control of blood pressure may be an important means to delay progression of kidney disease," said Dr. Guzmán-Limón. "This study highlights the importance of ambulatory blood pressure monitoring to aid in the management of patients with [chronic kidney disease](#)."

More information: Study: "Nocturnal hypertension is common and is associated with CKD progression in the chronic kidney disease" (Abstract 2756651)

Provided by American Society of Nephrology

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