

NSAIDs and Chronic Kidney Disease

Nilka Rios Burrows, MPH | December 12, 2011

Hi. I am Nilka Rios Burrows, an epidemiologist with CDC's [Chronic Kidney Disease Initiative](#). Thanks for watching this [CDC Expert Commentary](#) on Medscape.

I would like to talk with you today about the use of nonsteroidal anti-inflammatory drugs (NSAIDs) by people with kidney disease. People with chronic kidney disease are generally advised not to take NSAIDs, with the exception of aspirin (for cardiovascular indications). NSAIDs have been associated with acute kidney injury in the general population and with progression of disease in those with chronic kidney disease. NSAIDs may also decrease the effectiveness of certain prescription medications that are often used by people with kidney disease, such as angiotensin-converting enzyme (ACE) inhibitors, angiotensin receptor blockers (ARBs), and loop diuretics.

Yet new research shows that people with chronic kidney disease, including people with moderate-to-severe kidney disease, are continuing to use NSAIDs at the same rate as the general population. For that reason, we encourage doctors to ask their patients about whether they use over-the-counter NSAIDs and to be aware of all current medications and the chronic kidney disease status of their patients. Healthcare professionals should make sure their patients with chronic kidney disease know that over-the-counter NSAIDs can damage kidneys, especially if taken with ACE inhibitors or ARBs.

Researchers found that 5% of people with moderate-to-severe kidney disease used over-the-counter NSAIDs regularly, and two thirds of them had used NSAIDs for more than a year. Many also had prescriptions for NSAIDs, including 11% of those with moderate-to-severe kidney disease and 8% of those with mild or no kidney disease.

Simple blood and urine tests can detect chronic kidney disease in patients who physicians suspect may be at risk. A patient's condition determines how often or if they should be screened.

Screen for chronic kidney disease if your patient meets 1 of the following criteria:

- Diabetes;
- Hypertension;
- Aged 60 or older; or
- Family history of chronic kidney disease or kidney failure.

The researchers also found that many people with NSAID prescriptions were taking other prescription medications, the effectiveness of which was decreased by this combination. The combination also increased the risk for kidney damage. About 16% were taking ACE inhibitors or ARBs, and about 20% were taking loop diuretics. Primary care clinicians and doctors who prescribe medicine for pain management need to be aware of the nephrotoxicity and potential interactions of NSAIDs -- including over-the-counter NSAIDs -- with ACE inhibitors, ARBs, and loop diuretics.

Some of the reasons that people with kidney disease continue to take NSAIDs could be that doctors aren't aware of the potentially harmful effects of NSAIDs in these patients; patients don't know they have kidney disease; or patients have other conditions, such as arthritis, that are competing indicators for NSAID use.

Major textbooks, as well as clinical practice guidelines, recommend avoiding NSAIDs for patients with kidney disease, but clinicians should still take an individual approach. That means weighing improvement of quality of life

with NSAID use against the potential risk for kidney disease progression and further kidney damage. Physicians should discuss the risks of NSAID use not only with patients who already have kidney disease but also with those who take NSAIDs regularly but do not have chronic kidney disease. For more information on chronic kidney disease, please visit www.cdc.gov and enter "kidney."

Thank you.

Web Resources

[CDC's Chronic Kidney Disease Initiative](#)

[National Kidney Disease Education Program](#)

Nilka Rios Burrows, MPH, received her Master of Public Health degree in 1989 from the University of Puerto Rico. She joined CDC in 1992 and has worked as an epidemiologist with CDC's Division of Diabetes Translation (DDT) since 1997. She is part of DDT's Surveillance Team, performing surveillance of diabetes and its complications.

During her first 10 years with DDT, Burrows worked with the Division of Diabetes Treatment and Prevention of the Indian Health Service on diabetes surveillance among American Indians and Alaska Natives. Currently, she is acting team lead of CDC's Chronic Kidney Disease Initiative, collaborating with partners on surveillance, screening, and cost studies. She has published several articles highlighting racial/ethnic disparities in diabetes. Her latest surveillance work documents progress in reducing the rate of new cases of kidney failure among people with diabetes. Burrows has received awards for her work in developing the National Diabetes Fact Sheet and in bringing national attention to the growing public health problem of diabetes and obesity in children and adolescents.

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