

## Urinary protein excretion—even in the normal range—raises diabetics' heart risks

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In individuals with type 2 diabetes, any degree of measurable urinary protein excretion—even in what is considered the normal range—increases their risk of experiencing heart problems, according to a study appearing in an upcoming issue of new study in the *Journal of the American Society of Nephrology (JASN)*. The findings could help identify patients who should be treated with cardioprotective medications.

Some patients with type 2 diabetes experience kidney problems that cause them to excrete increased amounts of the protein albumin in their urine, a condition called albuminuria. These patients have a considerably higher risk of developing [heart problems](#)—such as heart attacks, strokes, and [heart failure](#)—than other diabetic patients and people in the general population, who are "normoalbuminuric," with urinary albumin excretion levels of less than 20 µg/min.

Investigators have wondered if any level of albumin excretion—for example at a level that is the upper range of what is considered normal—might increase a diabetic patient's risk of developing heart problems. "It would be important to know whether there is a level for albuminuria that differentiates individuals in need of cardioprotective intervention from those with a low risk," said Giuseppe Remuzzi, MD, FRCP, (Mario Negri Institute for Pharmacological Research and Ospedali Riuniti, in Bergamo, Italy). "This is a major health issue since patients with normoalbuminuria account for at least 90% of the diabetic population," he added.

Through an extension of a clinical trial originally designed for other purposes, Dr. Remuzzi, along with Piero Ruggenti, MD, Esteban Porrini MD (Mario Negri Institute for [Pharmacological Research](#)), and others, evaluated the relationship between albumin excretion levels and heart problems in 1,208 normoalbuminuric patients with [type 2 diabetes](#) who were followed for an average of 9.2 years.

The researchers found that any degree of measurable albumin excretion bore significant heart risks:

- For each 1  $\mu\text{g}/\text{min}$  in albumin excretion at the start of the study, there was a progressive incremental risk of experiencing heart problems during follow-up.
- Even albuminuria of 1-2  $\mu\text{g}/\text{min}$  significantly associated with increased risk compared with albuminuria

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