



# *The Controversies of Hyperuricemia And its Role in Renal Disease and Hypertension*

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An elevated uric acid is common in patients with cardiovascular disease and/or hypertension, but rarely is it used in the evaluation or management of patients. In this session, we will review the epidemiology, physiology, potential toxicity and proposed management of hyperuricemia in the hypertensive patient. We will review the data examining the relationship of hyperuricemia to hypertension, coronary artery disease and cardiovascular mortality, including recent data from the NHANES I worksite and SHEP trials. We will then discuss the pathogenesis of the hyperuricemia, which is primarily due to decreased renal excretion secondary to an increase in net tubular reabsorption. We will then discuss the great controversy of whether hyperuricemia represents a true mediator of cardiovascular disease, or

whether it is simply a marker for other associated cardiovascular risk factors. If uric acid is a mediator of cardiovascular disease, one of the most likely sites for injury is the kidney, where intrarenal uric acid crystalline deposition is frequently associated with tubulointestinal damage and hypertension.

We will present some experimental data examining the crystalline and noncrystalline effects of uric acid in the kidney. Finally, we will discuss the evidence as to whether uric acid lowering drugs can benefit the renal damage. While clearly more studies are necessary to examine the role of hyperuricemia in cardiovascular disease, we will end the session by providing suggested guidelines for the management of the hypertensive patient with hyperuricemia.