

# Can charcoal fight heart disease in kidney patients?

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Charcoal may provide a new approach to managing the high rate of heart disease in patients with advanced kidney disease, according to preliminary research being presented at the American Society of Nephrology's 42nd Annual Meeting and Scientific Exposition in San Diego, CA.

Patients with advanced [kidney disease](#) have high rates of atherosclerosis ("hardening of the arteries") and death from heart disease. Oral activated charcoal—a product called AST-120—has traditionally been used as an emergency treatment for certain types of poisoning. Recent studies have suggested that AST-120 may exert beneficial effects in kidney disease.

"We found that oral activated charcoal lessens atherosclerotic lesions in experimental mice with [kidney damage](#)," comments Valentina Kon, MD (Vanderbilt University). "This is especially important because there is no effective treatment to reduce the high rate of cardiovascular mortality in patients with end-stage renal disease."

The researchers studied the effects of AST-120 in mice genetically engineered to develop atherosclerosis. The effects were assessed in mice with different levels of kidney mass.

In mice with profoundly reduced renal mass, treatment with AST-120 led to a dramatic decrease in atherosclerosis. This was so even when charcoal treatment was delayed. The improvement in atherosclerosis was unrelated to changes in blood pressure or [cholesterol](#) levels. Rather, the

effect appeared related to reduced inflammation in the blood vessels.

In mice, oral activated charcoal appears to reduce atherosclerosis associated with kidney disease. The effect is present at different levels of [kidney function](#), in very advanced atherosclerosis, and even when treatment is delayed. More research is needed to see if AST-120 offers similar benefits in humans with kidney disease.

Source: American Society of Nephrology ([news](#) : [web](#))

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