

HEART DISEASE? JUST SAY NO

By Harry Elwardt, N.D., Ph.D.

A consensus that boosting nitric oxide production might benefit patients with cardiovascular disease has some new support, following the presentation of clinical data presented at the American Heart Association's 69th annual Scientific Sessions.

In a clinical study, eight people, four with coronary artery disease and four without, underwent tests to stimulate their sympathetic nervous system before and while receiving arginine to determine if the abnormal blood vessel response is caused in part by a defect in the signaling pathways of nitric oxide. The amino acid arginine is utilized by the body to make nitric oxide for many tasks, including regulating blood pressure and transmitting messages along signal pathways between cells. The arginine treatment restored the blood vessels' normal response in the four people with coronary artery disease.

Normally, nitric oxide produced by cells lining the inside of blood vessels causes coronary arteries to widen to increase blood flow to the heart and other muscles during times of stress, but the arteries constrict in people with coronary artery disease, limiting blood flow and possibly contributing to ischemia and heart attack.

"These findings suggest that inappropriate coronary responses to sympathetic stimulation in people with coronary artery disease may be related to changes in the arginine-nitric oxide pathway and may be improved by increasing production of nitric oxide," says Joel Gellman, M.D., of Johns Hopkins University.

The researchers subjected study participants to a rudimentary stress test, putting their hands in ice water, which activated the sympathetic nervous system. This system increases heart and breathing rates and blood flow to the muscles, stimulating the stress or "fight or flight" response.