RESEARCH

Regular Sauna Use Reduces Oxidative Stress

Repeated sauna therapy significantly reduces levels of urinary 8-Epi-Prostaglandin F_{2a}, a marker of oxidative stress, or destruction caused by free radicals, which may lead to diseases such as atherosclerosis, cancer and Alzheimer's disease, according to recent research.

"Repeated Sauna Therapy Reduces Urinary 8-Epi-Prostaglandin F_{2a}" was conducted by staff at the Kagoshima University Department of Cardiology, Respiratory and Metabolic Medicine, in Kagoshima, Japan.

Twenty-eight subjects with at least one coronary risk factor participated in the study. They were randomly assigned to either the sauna group or the non-sauna group. Subjects in the sauna group were placed supine in a 140-degree-Fahrenheit dry sauna for 15 minutes. After the sauna, they rested on a bed with a blanket for 30 minutes. This occurred once a day for two weeks.

Subjects in the non-sauna group were placed in supine position in a 75-degree-Fahrenheit room for 45 minutes a day for two weeks.

The coronary risk factors measured were body weight, heart rate, blood pressure, hematocrit, total cholesterol, HDL cholesterol, triglycerides, fasting plama glucose and urinary 8-Epi-Prostaglandin F_{2a}. All subjects were admitted to the same hospital and ate the same meals throughout the two-week study period.

On admission and after two weeks, urine samples were taken at 7 a.m. after an overnight fast, and the urinary 8-Epi-Prostaglandin F_{2a} levels were measured by enzyme immunoassay, a method that allows for the identification of a substance by causing a color reaction.

Results of the study showed that urinary 8-Epi-Prostaglandin F_{2a} levels had decreased significantly for the sauna group after two weeks and were significantly lower than the levels of subjects in the non-sauna group.

"This finding indicates that repeated sauna therapy may have the effect of reducing urinary 8-Epi-Prostaglandin F_{2a} levels," a marker of oxidative stress, state the study's authors. "Repeated sauna therapy can be used even for patients who are unable to exercise."

Systolic blood pressure in the sauna group had also decreased significantly after two weeks, and it was significantly lower than that of the non-sauna group after two weeks.

"We suggest that the combination of diet, exercise and repeated sauna therapy may be the best method for preventing lifestyle-related diseases, such as hypertension, hyperlipidemia, and diabetes mellitus," state the study's authors.

- **Source:** *Kagoshima University Department of Cardiology, Respiratory and Metabolic Medicine, in Kagoshima, Japan. Authors: Akinori Masuda, M.D.; Masaaki Miyata, M.D.; Takashi Kihara, M.D.; Shinichi Minagoe, M.D.; and Chuwa Tei, M.D. Originally published in Japanese Heart Journal, 2004, Vol. 45, pp. 297-303.*