



**A Study of the Health Benefits of Far Infrared Sauna Therapy  
Conducted by the University of Missouri, Kansas City  
Becky Edwards, M.D., Heather Kort D.O  
Faculty Staff Advisor: Dr. John Foxworth, PharmD  
Overview by Sunlight Saunas**

### **Purpose**

Evaluate the effects of far infrared sauna therapy on blood pressure, cholesterol, weight, pain, and the amount of heavy metals (such as mercury) in the body. Change in blood pressure will be the primary outcome measure.

### **Materials and Methods**

- Subjects were randomly assigned to receive sauna sessions in either the far infrared sauna or a control sauna that will emit heat, however not far infrared heat. The saunas looked identical. The subjects had a 30-minute sauna session 3 days a week for 6 weeks at Sunlight Saunas Corporate Headquarters in Lenexa, Kansas. Study conducted June and July 2005.
- Subjects: Included generally healthy subjects between the ages of 21-65 years.
- Exclusion criteria were as follows:
  - Anyone on nitrates or prior heart attack or coronary artery disease
  - Pregnancy (urine pregnancy test will be performed on any woman with child-bearing potential)
  - Lupus
  - MS
  - Hemophilia
  - Sickle cell disease
  - Weight > 220 pounds
  - Breast Implants
  - Changes in medication in the last month or during our study
  - Already using saunas
- A power analysis was performed to determine the number of subjects necessary to detect a statistically significant change in the primary outcome measure, mean blood pressure;  $\alpha = 0.05$  power=0.80.



- Descriptive statistics were used to summarize study measures. Student's tests were used to compare the groups with regard to mean change in BP, pulse, weight, waist circumference, total cholesterol, LDL and urinary concentrations of mercury.
- At all sauna sessions a registered nurse measured and record the subject's blood pressure, pulse, weight, and waist circumference. The subject rated their pain on a standard pain scale. At the first and last sauna session the nurse drew blood for a fasting lipid profile. Also the subjects will provided a 12-hour urine collection at the first and last visit for analysis of mercury, lead, and cadmium.

## Results

- Blood pressure: The far infrared sauna did lower both systolic and diastolic blood pressure. The diastolic blood pressure in the far infrared group was statistically significant with a p value of .001. In the far infrared group the systolic blood pressure decreased from an average of 130.5 before the study to 124 at the completion of the study.

