

The Effect of Localized Heat Therapy on Regional Oxygen Saturation

In what is believed to be the first experiment of its kind, infrared oximetry was used to record increased regional blood oxygen saturation (rSO₂) in a human leg treated with "localized heat therapy." A stunning 28% increase of blood oxygen saturation was measured in the calf of a healthy adult male who was treated with an application of 100°F and 105°F respectively. Researchers have long known that effective heat therapy (104°F to 113°F) will dilate blood vessels and therefore increase oxygen delivery. But the level of that increase has never been measured.

The test utilized a model HTP-1500 heat therapy system from Adroit Medical Systems, Inc., and a INVOS infrared oximetry unit from Somanetics Corporation. Encouraged by the preliminary findings, the companies intend to pursue clinical research with an emphasis on treatment for diabetic patients. Pending results of that study research may be expanded to wound care treatment.

