



Thermal Therapy Benefits Depressed Patients

Repeated thermal therapy may be useful for mildly depressed patients with appetite loss and subjective complaints, according to a recent study.

“Repeated Thermal Therapy Diminishes Appetite Loss and Subjective Complaints in Mildly Depressed Patients” was conducted by staff at the Psychosomatic Medicine, Respiratory and Stress Care Center at Kagoshima University Hospital, Japan.

Twenty-eight mildly depressed inpatients with general fatigue, appetite loss, and somatic and mental complaints were assigned randomly to a thermal-therapy group or a nonthermal-therapy group. Patients in the thermal-therapy group were treated with 60 C far-infrared dry sauna for 15 minutes and were then kept at bed rest for 30 minutes once a day, five days a week, for a total of 20 sessions in four weeks.

All patients were admitted to the hospital and fed identical meals totaling 2,000 calories a day. They were weighed before and after each sauna. Weight loss after thermal therapy was regarded as perspiration, and this water loss was replenished to prevent dehydration.

A far-infrared ray (> 4 μ m) dry sauna system was used for thermal therapy. Each patient in the thermal-therapy group, wearing a gown and underwear, was placed in a supine position on a bed for the 15-minute sauna session, then moved into a room maintained at 28 C (82.4 F) and wrapped in a blanket for the 30-minute bed rest. Patients in the nonthermal-therapy group were placed in a supine position on a bed in a temperature-controlled (24 C; 75.2 F) room for 45 minutes.

Somatic complaints, hunger and relaxation scores significantly improved, and mental-complaint scores slightly improved in the thermal-therapy group compared with the nonthermal-therapy group. Furthermore, plasma ghrelin concentrations and daily caloric intake in the thermal-therapy group increased significantly compared with the nonthermal-therapy group. (Ghrelin is a growth hormone-releasing peptide that stimulates food intake and body weight gain.) Norepinephrine levels were slightly lowered by thermal therapy.

The use of far-infrared rays in sauna bathing is known to increase skin temperature, blood flow and core body temperature. Increased blood temperature excites the warm neurons of the heat regulatory center in the hypothalamus and inhibits cold neurons. In addition, these warm neurons are projected to the neurons of the sympathetic/ parasympathetic centers in the hypothalamus, influencing the autonomic nervous system.

The use of elevated temperatures and repeated sauna/ postsauna warming may inhibit the sympathetic nerves (the fight or flight response), making the parasympathetic nerves (the resting and digesting system) predominant. Mild warming of the whole body has been known to exhibit sedative effects through sensory nerve endings, which would suggest that repeated thermal therapy might decrease the frequency of somatic and mental complaints by exhibiting psychosomatic relaxation and sedative effects.

In addition, an increase in core body and dermal temperatures enhances metabolism and increases energy consumption. This may be how repeated thermal therapy induces hunger via elevated ghrelin and epinephrine.

— Source: Psychosomatic Medicine, Respiratory and Stress Care Center, Kagoshima University Hospital, Kagoshima, Japan; the Department of Internal Medicine, Faculty of Medicine, Miyazaki University, Miyazaki, Japan; and Cardiovascular, Respiratory and Metabolic Medicine, Kagoshima University, Kagoshima, Japan. Originally published in Psychosomatic Medicine, 2005, Vol. 67, pp. 643–647.