

**Basic and neurohormonal asses of hot and cold temperaments proposed in Iranian traditional medicine****Maryam Kazemzadeh Hemmesi**

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**Background:** Energy is essential for life sustainment. Much of this energy is consumed as the Basal Metabolic Rate (BMR) the amount of which is variable in different people and also influenced by many factors. Temperament is one of the core concepts in Iranian Traditional Medicine (ITM) that may be altered by variant factors and its regulations of vital importance to life sustainment of every individual. The aim of this study is to evaluate the BMR and activity of the sympathetic-parasympathetic nervous system and thyroid function in hot and cold temperament people.

**Methods:** This study is a repeated cross-sectional study which was implemented in two stages on 45 healthy volunteers. BMR was assessed by indirect calorimetry. Sympathetic-parasympathetic nervous system activity, thyroid function, body composition and nutrition status were also assessed. We used independent T test for data analysis by SPSS ver. 16.

**Results:** Totally, 45 patients aged 18-40 participated in this study. The results showed that the mean of BMRs were respectively 1909.48 kcals and 1664.09 kcals in hot and cold temperament individuals ( $P<0.3$ ). Heart rate, systolic and diastolic blood pressure and peripheral temperature of individuals with hot temperament were significantly higher ( $P<0.05$ ), While no statistically significant difference was seen in core temperature, norepinephrine to epinephrine and norepinephrine to cortisol ratio. TSH and T3 levels were respectively 1.40 and 1.38 in hot temperament individuals and 1.26 and 1.99 in cold temperament individuals ( $P<0.05$ ).

**Conclusion:** It seems that there is a relationship between the BMR and neurohormonal system and body temperament meaning hot temperament people have higher BMR, sympathetic nervous system activity and thyroid function in comparison to others. Human health is negatively affected by BMR fluctuations. Regarding this correspondence, arrangement of a pattern for better BMR regulation is crucial.

**Notes:**