Research:

Shantala Massage Affects Cortisol Levels in Infants

Infants who receive Shantala massage, an ancient form of infant massage from India, experience diminished distress. “Salivary Cortisol as an Indicator of Adrenocortical Function in Healthy Infants, Using Massage Therapy” evaluated the effect of this massage technique on the hypothalamic-pituitary-adrenal axis (HPA axis), part of the system that controls reactions to stress.

Researchers in Sao Paulo, Brazil, used salivary cortisol levels as a marker of stress in 11 four- to six-month-old infants receiving massage in a public nursery. The treatment consisted of massage of the face, legs, arms, back and shoulders by a researcher. On the face, the researcher used the fingertips to make circular movements, starting in the middle of the forehead and moving toward the temples; then slid from the temples to the mandible region; and again using the fingertips, slid toward the nose, cheek, jawbone, and chin. Then each leg was held with the hands, and synchronized movements were made from the hip to the foot, pressing lightly and using spiral movements, sliding from the hip to the foot; then, each toe was massaged, using the thumbs. The arms were massaged by sliding the hands from the shoulders to the fingertips, as done for the legs. The back and shoulders were stroked with the palms open, sliding along the whole back from neck to hip, with alternate hands going backwards and forwards, sliding from the neck to the hip and vice-versa.

The infants received two 15-minute massages on two consecutive days. Massage was administered once in the morning and once in the afternoon. Saliva was collected before and after each massage and once again several hours after treatment. The procedure was repeated after a one-week interval.

Cortisol values at different times of the day were compared. The mean cortisol values during the two-day treatment were highest in the afternoon. After a one-week interval, cortisol levels were highest in the morning. The lowest levels were observed in the nighttime measures of cortisol. These results suggest that the stress-reducing effects of Shantala massage may be delayed, and that this modality can influence the reactivity of the HPA axis.

The primary purpose of this study was to gain understanding of the effects of massage in the role that the HPA axis plays in relation to stress. The authors conclude, “There was a modification in the salivary cortisol values following massage, thus reflecting possible adaptation of the HPA axis.”
