

Differences in Gait Across the Menstrual Cycle and Their Attractiveness to Men

Meghan P. Provost, Vernon L. Quinsey, Nikolaus F. Troje

We investigated variations in gait between women at high and at low conception probability, and how men rated those variations. Women participated in a motion capture study where we recorded the kinematics of their walking patterns. Women who were not using hormonal contraception ($n = 19$) repeated the study during the late follicular stage and the luteal stage of their menstrual cycle. Using a discriminant function analysis, we found significant differences in walking behavior between naturally cycling women at their follicular and luteal phases, with 71% of the walks classified correctly. However, there was no difference between walks of women in their follicular stage and women using hormonal birth control ($n = 23$). We compared structural and kinematic characteristics of the women's walking patterns that appeared to be characteristic of women in the specific conception risk groups, but found no significant differences. In a second study, 35 men rated the walks of women not using hormonal contraception as slightly more attractive during the luteal stage of the cycle compared to the late follicular stage. Thus, for women not using hormonal birth control, it would appear that some information regarding female fertility appears to be encoded in gait.