

Perceived facial adiposity conveys information about women's health¹

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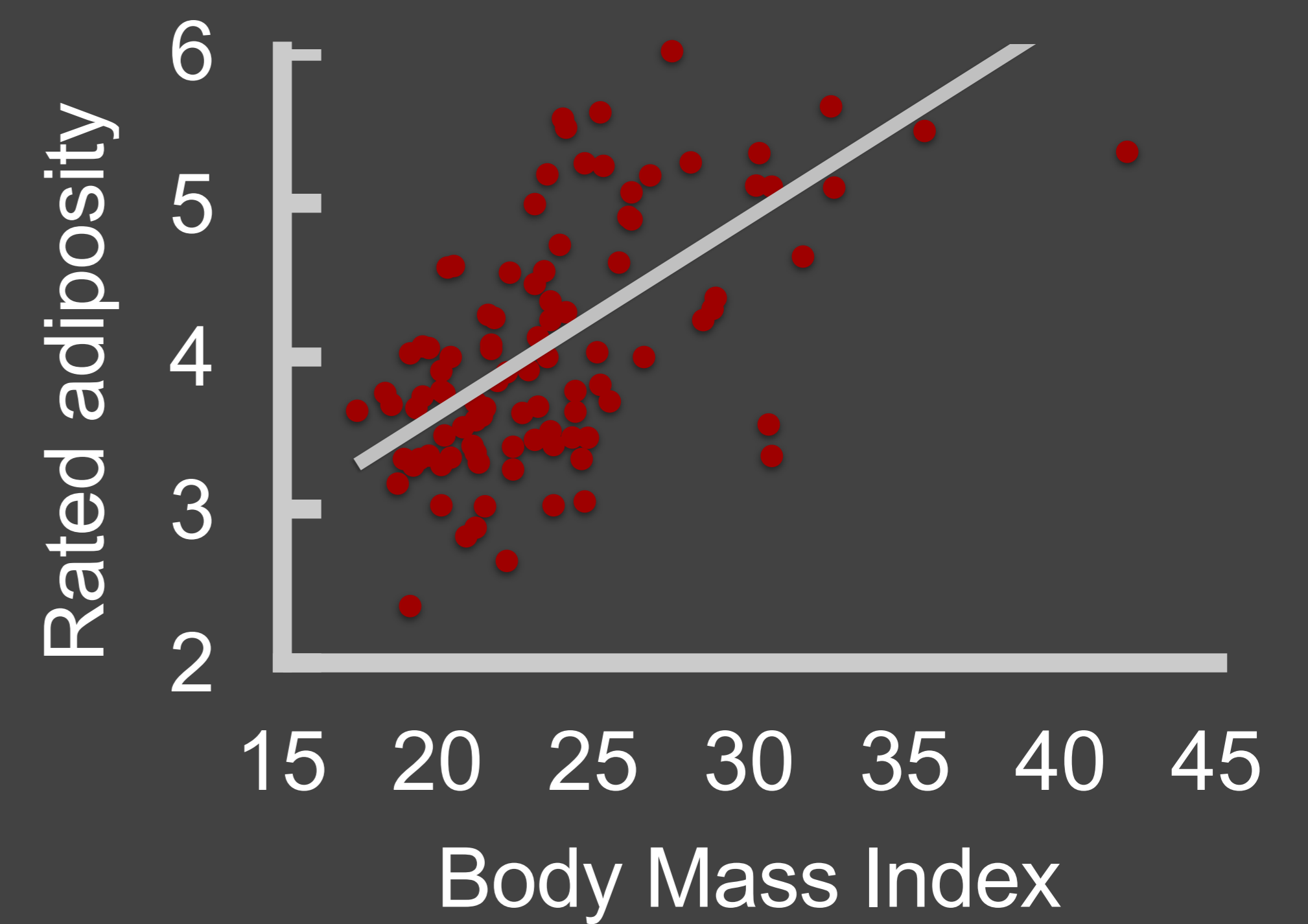
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Introduction: Perceived facial adiposity (i.e., the perception of weight in the face) is thought to be a valid health cue². We investigated this proposal by testing if ratings of women's facial adiposity were correlated with their BMI and WHR, responses on questionnaires assessing various aspects of health, and sex hormone levels.

Study 1

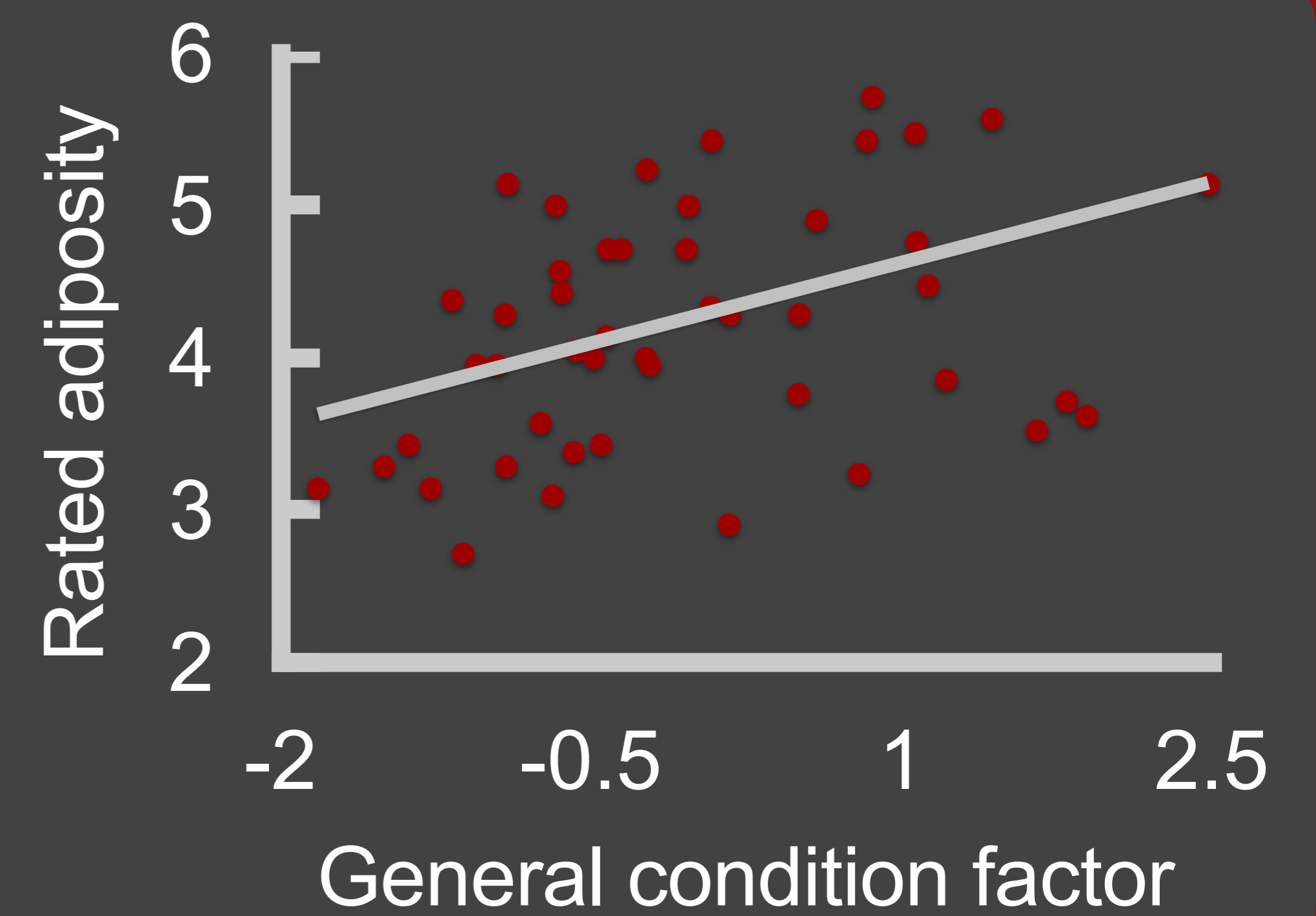
Full-face photographs of 101 young adult white women were rated for fatness by 160 raters using a 1 (very underweight) to 7 (very overweight) scale. BMI and WHR were measured from each photographed woman.

BMI and facial adiposity were positively correlated ($r = .63, p < .001$), as were WHR and facial adiposity ($r = .38, p < .001$). The correlation between BMI and facial adiposity was stronger than that between WHR and facial adiposity ($z = 2.72, p = .007$).



Study 2

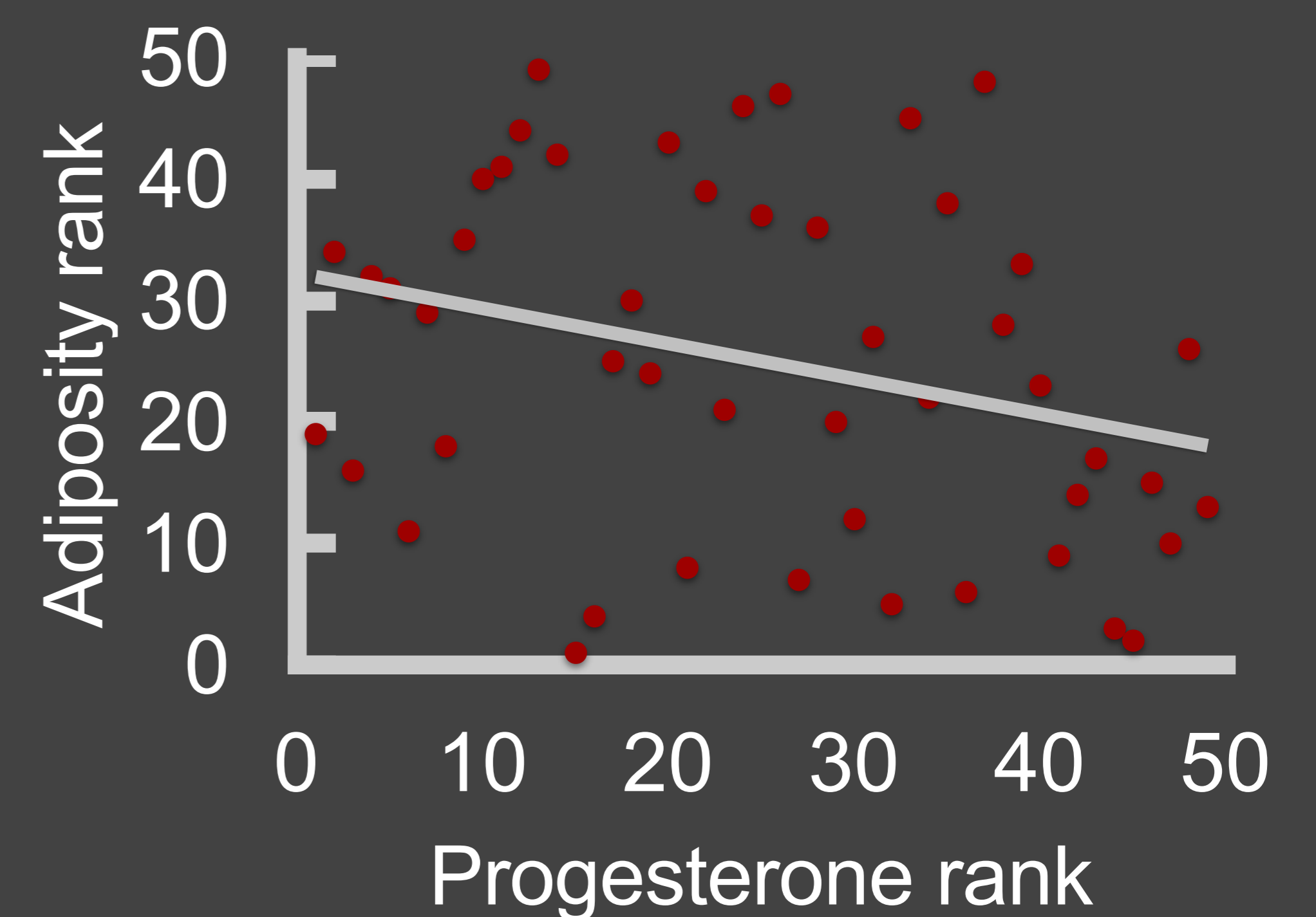
Face photographs of 50 young adult white women were rated for fatness by 21 raters. Each photographed woman also completed questionnaires assessing past health problems, anxiety, stress, and depression. Responses on the questionnaires loaded on to a single *general condition* factor (high scores = poor health), which was correlated with facial adiposity ($r = .41, p = .003$), even when we controlled for a possible social desirability reporting bias (partial $r = .39, p = .007$).



Study 3

Face photographs of 49 young adult white women were rated for fatness by 52 raters. Each photographed woman also provided four weekly saliva samples, which were used to measure their average progesterone and estradiol levels.

Facial adiposity was negatively correlated with salivary progesterone ($\rho = -.30, p = .038$), but not estradiol ($\rho = -.18, p = .22$). There were no curvilinear relationships.



Conclusions: Our results suggest that ratings of women's facial adiposity are better predicted by BMI (i.e., body weight) than by WHR (i.e., body shape) and are correlated with measures of both general condition and reproductive health. These findings present new evidence that women's perceived facial adiposity is a valid health cue.

References: [1] Tinlin et al. (in press). *British Journal of Psychology*. [2] Coetzee et al. (2009). *Perception*, **38**, 1700–1711.

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