

FACIAL ATTRACTIVENESS IS RELATED TO WOMEN'S CORTISOL AND BODY FAT, BUT NOT WITH IMMUNE RESPONSIVENESS

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The growing field of evolutionary psychology reports a large body of evidence to suggest that standards of beauty are not arbitrary cultural conventions, pointing to, for example, cross cultural agreement in preferences for cues to health and fertility (Langlois et al. 2000). Evolutionary psychologists interpret preferences as strategies evolved owing to the selective benefits accrued to those who chose their mates based on these criteria (Rhodes 2006). To argue that such preferences are adaptive, however, it is necessary to show that preferred traits serve as cues to fecundity, health or other traits that enhance fitness, and contribute to higher reproductive success.

Here, we photographed young Latvian women, vaccinated them against hepatitis B and measured the amount of specific antibodies produced, cortisol levels and percentage body fat. Latvian men rated the attractiveness of the women's faces. Interestingly, in women, immune responsiveness (amount of antibodies produced) did not predict facial attractiveness. Instead, plasma cortisol level was negatively associated with attractiveness, indicating that stressed women look less attractive. Fat percentage was curvilinearly associated with facial attractiveness, indicating that being too thin or too fat reduces attractiveness.

Our study suggests that in contrast to men, facial attractiveness in women does not indicate immune responsiveness against hepatitis B, but is associated with two other aspects of long-term health and fertility: circulating levels of the stress hormone cortisol and percentage body fat.

References:

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2. Rhodes G. 2006 The evolutionary psychology of facial beauty. *Ann. Rev. Psychol.* 57, 199–226.