

ABSTRACT

It was previously proposed that expression of secondary sexual characteristics may provide cues to individual's immunocompetence. Body odour could partly serve as one of such characteristics, which provides crucial information about potential partner even in humans. The main aim of the diploma thesis was to test a relationship between body odour quality and reactivity of immune system. In empirical part of the study we collected body odour samples from 21 men aged between 18-40 years before and two weeks after the vaccination against hepatitis A and B (Twinrix) and meningococcus (Menveo). The participant's blood samples were obtained three times to determine levels of IgG and IgM antibodies (markers of reactivity of immune system), testosterone, cortisol and CRP levels. In the second part of the study, a panel of 88 female raters aged 18–40 assessed body odour samples for their attractiveness, intensity and healthiness. In contrast to our expectations, we found no significant association between levels of antibodies induced by vaccination and perceived body odour attractiveness and health. Simultaneously, there were no significant changes in body odour ratings, neither in levels of testosterone and cortisol ratings, before and after the vaccination. However, we found a negative association between CRP and rated body odour attractiveness and health. Results of this study suggest that body odour may not reflect the adaptive component of the immune response. Therefore, future studies on this topic should aim on other components of the immune system and in particular to assess the immune response and to take body scent shortly after vaccination, or after other stimulation of immunity.

Keywords

olfaction, body odour, health status, attractiveness, immune system