

Effects of Oral Ibuprofen and Loratadine on Social Anxiety and Facial Blushing

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This study investigated the effects of ibuprofen (an anti-inflammatory) and loratadine (an antihistamine) on facial blushing, heart rate and sweating during embarrassment. Subjective ratings of these symptoms, as measured by questionnaires throughout the experimental task, were also investigated, as was the relationship between various psychological constructs (assessed by the initial questionnaires) and fear of blushing.

In total, 61 people participated in the experiment, with a further 75 people from various countries completing an online version of the questionnaires only. Participants who completed the laboratory experiment were allocated to one of four conditions – taking either ibuprofen, loratadine, a placebo, or no medication.

It was found that participants in the loratadine condition had an increase in facial blood flow (blushing) and heart rate, but not sweating. Interestingly, participants also rated their heart rate as being faster or more noticeable in this condition, but did not do so for blushing. This increase in blood flow and heart rate was unexpected, as was the result of the ibuprofen condition. Ibuprofen was expected to inhibit the blushing response; however this was not the case in our study. Finally, the relationship between the psychological constructs measured by the online questionnaires and fear of blushing was also investigated. What was found is that people with a fear of blushing have attachment-related discomfort with closeness in relationships and that early maladaptive schemas, as defined by Young and colleagues, seem to play a role in the development of a fear of blushing.

Although many of our results were not what we hypothesised, they may help shed some light on the physiological mechanisms involved in the anxiety and blushing responses, as well as having implications in choosing appropriate treatment for people with a fear of blushing and physical anxiety symptoms.