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The smartphone application ClimApp (freely available in Google Play and App Store) has been developed to integrate climate service data (weather forecasts) with individual physiological characteristics to provide personalized alerts and advice during challenging thermal conditions. This presentation will provide an overview of the implementation of an adaptive feedback system that has been integrated in ClimApp application to optimize the level of individualization and improve accuracy in the alert-advice system based on feedback from the user.

ClimApp combines individual user characteristics, human thermal models and weather forecast data in a mobile application with the goal to provide protective strategies for an individual. The decisions are made based on output from models for heat (WBGT ISO7243 or something, PHS ISO7933), comfort (PMV ISO7730) and cold (IREQ ISO11079). By calculating the recommended alert limit (RAL), a heat risk indicator is provided to the user in to indicate the severeness of the exposure accompanied by textual advice on how to act in the current situation. The expected thermal strain caused may vary between individuals due to differences in anthropometric characteristics such as height, weight and gender but also as a consequence of different levels of adaptation. Therefore, to fully customize advice to the individual, population averaged output from models will be insufficient, and feedback could be used to tune the advice to the individual demand. Examples of individualization at higher resolution will be presented and discussed along with the benefits of prompting users for feedback in situations that were perceived as more extreme than what the app advice may have indicated on a particular day. This is expected to allow for assessment and updating of individualized adaptation strategies suggested by the ClimApp application to promote better coping strategies and further improve individual health and performance of people exposed to thermally stressful conditions.