

Buzz off! A study comparing a 30% DEET spray with a 20% IR3535 lotion for repellent use in travellers

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Background: Mosquito-borne infections pose increasing risks for travellers, and repellents constitute a first line of defence. Key factors influencing the choice and successful use of repellents are the correct application, user tolerability and acceptability as well as the environmental impact. **Materials and Methods:** Two repellents were compared in a single-blinded, randomised study by recruiting travellers in a pre-travel setting. Participants were asked to apply either a 30% DEET (N,N-diethyl-3-methylbenzamide) spray or a 20% IR3535 (ethyl butylacetylaminopropionate) slow-release lotion formulation. The amount of repellent applied was measured to ascertain if protective levels of active ingredient were attained. Additionally, we utilized a questionnaire to assess the repellent knowledge, attitude and practices (KAP) of travellers regarding repellents. **Results:** Some 204 travellers participated. After repellent application, the mean amount of active ingredient on the skin was 0.2 mg/cm² for the DEET spray and 0.14 mg/cm² for the IR3535 lotion, both well below accepted protective levels of 0.66-0.84 mg/cm². The overall perceived tolerability and user acceptability was higher for the 20% IR3535 lotion. Across all age groups, the most important factors when choosing a repellent were duration of protection, ease of application and smell. Environmental impact was considered more important by participants aged ≥30 years. **Conclusion:** Neither repellent achieved the suggested protective amount of active ingredient on the skin indicating significant under-application among travellers. The IR3535 lotion demonstrated higher user acceptability, which may enhance adherence. Travel medicine consultations should incorporate clearer advice on repellents and emphasise correct and more copious application.