Usage patterns of personal care products: important factors for exposure assessment

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Introduction
To assess potential health risks for consumers, it is necessary to conduct aggregate exposure assessments. A common approach is to aggregate deterministic worst case assessments for all sources and routes, which results in unrealistic and conservative exposure levels. Refined information is needed, such as frequency and amount of use of single personal care products (PCPs), as well as specific information about the circumstances of use.

Objective
To create a database containing information regarding the patterns and circumstances of individual PCP use.

Methods
Study population: A random sample of 2700 Dutch adults 18-70 years of age were invited for the study.
Data collection: Web-based questionnaires containing questions on a broad range of PCPs used in the last six months were filled out by 516 respondents.
Data analysis: Frequency distributions, Chi-square tests and Cohen’s kappas using SPSS version 18.0.

Results
Highlight:
- Young users (age 18-39) use shaving foam/gel/soap less frequently compared to senior users (age 55-71).

Fig 3. Frequency of use among respondents (n=516) for the majority of PCPs studied.

Discussion & Conclusion
This study is the first comprehensive study providing information on the patterns and circumstances of individual PCP use. Despite the relatively low response rate (19.3%), the results are fairly representative for the Dutch adult population. Therefore, the database yields important personalized exposure factors which can be used in aggregate consumer exposure assessment for substances that are components of PCPs.

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