

Appendix S1

Additional analyses

In the study population as a whole, sex was identified as an effect modifier in the multivariate analyses of hand eczema in relation to tobacco use. The PPR=0.813 for exclusive snus users was significant in the multivariate model including both men and women. The interpretation, however, is that men who exclusively use snus have hand eczema to a lesser extent than men who do not use any tobacco. Since both men and women are included in the analysis of the entire group, results should be interpreted as such, i.e. not only on men or women separately. Therefore, *post-hoc* analyses were performed by estimating proportions divided by the tobacco variable, regardless of sex and exercise status, in order to test if exclusive smokers, snus users or dual users had more or less hand eczema compared to non-users of tobacco. Within the procedure used to calculate the prevalence proportion ratios it is possible to do *post-hoc* analyses between any 2 groups. In these situations SPSS uses the one-sample proportion *t*-test instead of PPR. It turned out that none of the 3 tobacco-user groups had hand eczema to a greater or lesser extent than the non-user group. In Fig. S1¹ this is illustrated by the bars representing the model including sex, exercise and the interaction term tobacco*sex.

In the model where the interaction term tobacco*sex is not included, exclusive smokers have significantly more hand eczema compared to non-tobacco-users while exclusive snus users did not have significantly less hand eczema compared to non-tobacco-users, PPRs= 1.14 and 0.90 respectively. Estimated proportions calculated from this model confirmed these results since the one-sample proportion *t*-tests rendered the *p*-values 0.001 and 0.116, respectively for the comparisons of exclusive smokers and exclusive snus users compared to non-tobacco-users. In Fig. S1¹ this is illustrated by the bars representing the model including sex and exercise. Tables SI¹ and SII¹ reveal large discrepancies between exclusive snus users and non-tobacco users regarding the distribution of sex, 40.7%, and between exclusive smokers and non-tobacco-users regarding the distribution of exercise, 23.0%. This explains why the *p*-value for exclusive snus users became non-significant in the multivariate model excluding the interaction term tobacco*sex.