How Sweden is leading the path to the reduction of smoking tobacco

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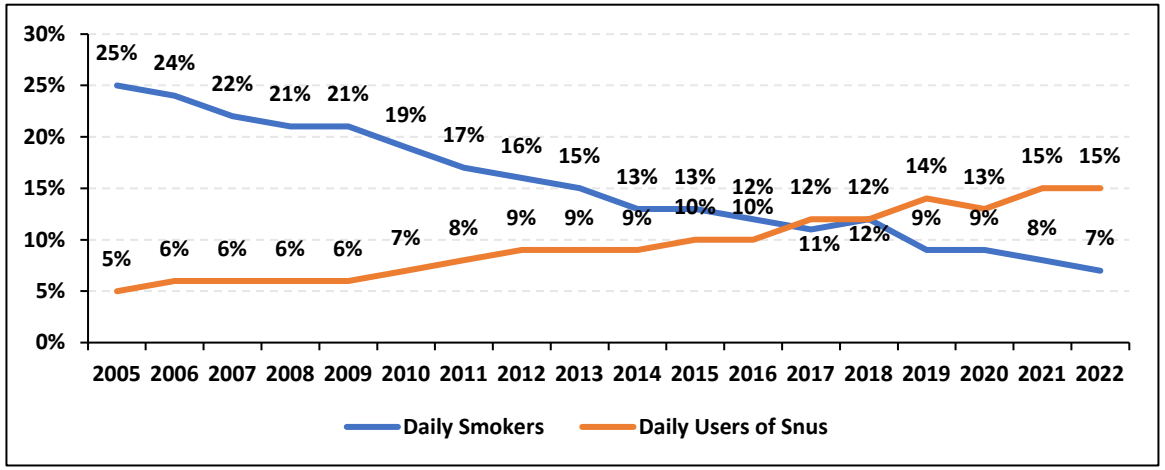
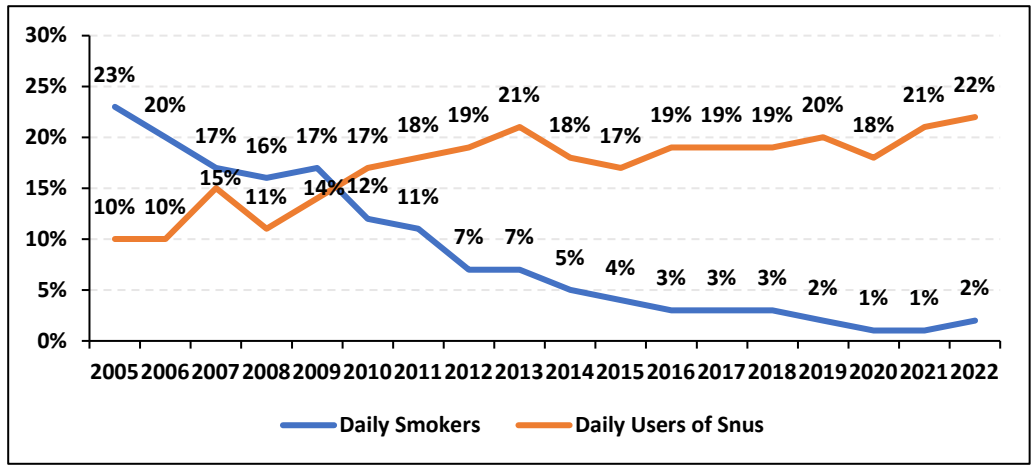
Tobacco Survey 2022 - Norway

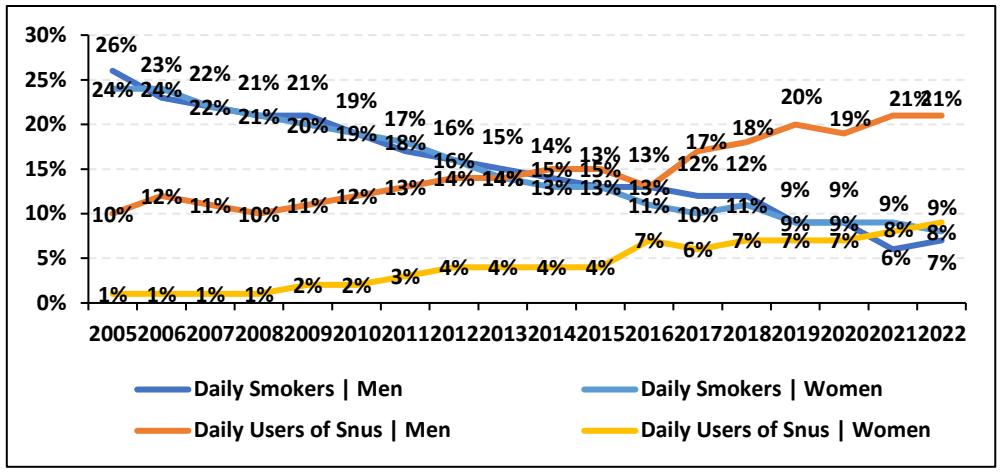
The proportion that smokes daily decreases, while the daily use of snus in 2022 is at the same level as it was in 2021.



Percentage of Daily Smokers and Daily Users of Snus. Population 16 to 74 years. 2005-2022



Percentage of Daily Smokers and Daily Users of Snus. Population 16 to 24 years. 2005-2022

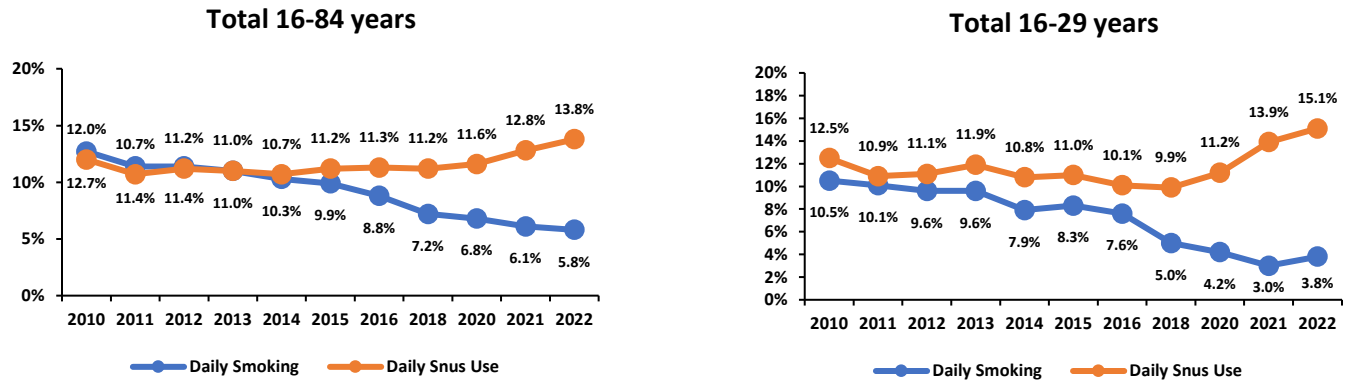


Percentage of Daily Smokers and Daily Users of Snus By Sex. Population 16 to 74 years. 2005-2022

National Public Health Survey 2022 – Sweden

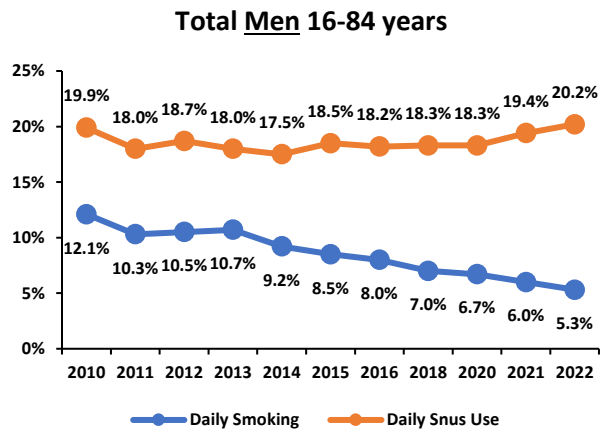
Use of Tobacco and Nicotine-Containing Products by Adults

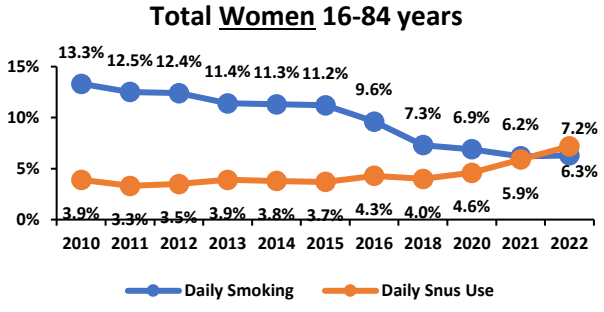
The proportion of people aged 16-84 years who smoke daily has decreased in Sweden since 2004.



Prevalence of Daily Smoking and Daily Snus in Total 16-84 Years and in Total 16-29 Years

In 2022, 6% said they smoke daily. In terms of age, we see the lowest proportions of daily smoking, 4%, in the younger age groups 16-29 years.





Prevalence of Daily Smoking and Daily Snus in Total Men 16-84 Years and in Total Women 16-84 Years, Sweden

Is (pure) nicotine harmful?

A cross-over study of postprandial effects from moist snuff and red wine on metabolic rate, appetite-related hormones and glucose

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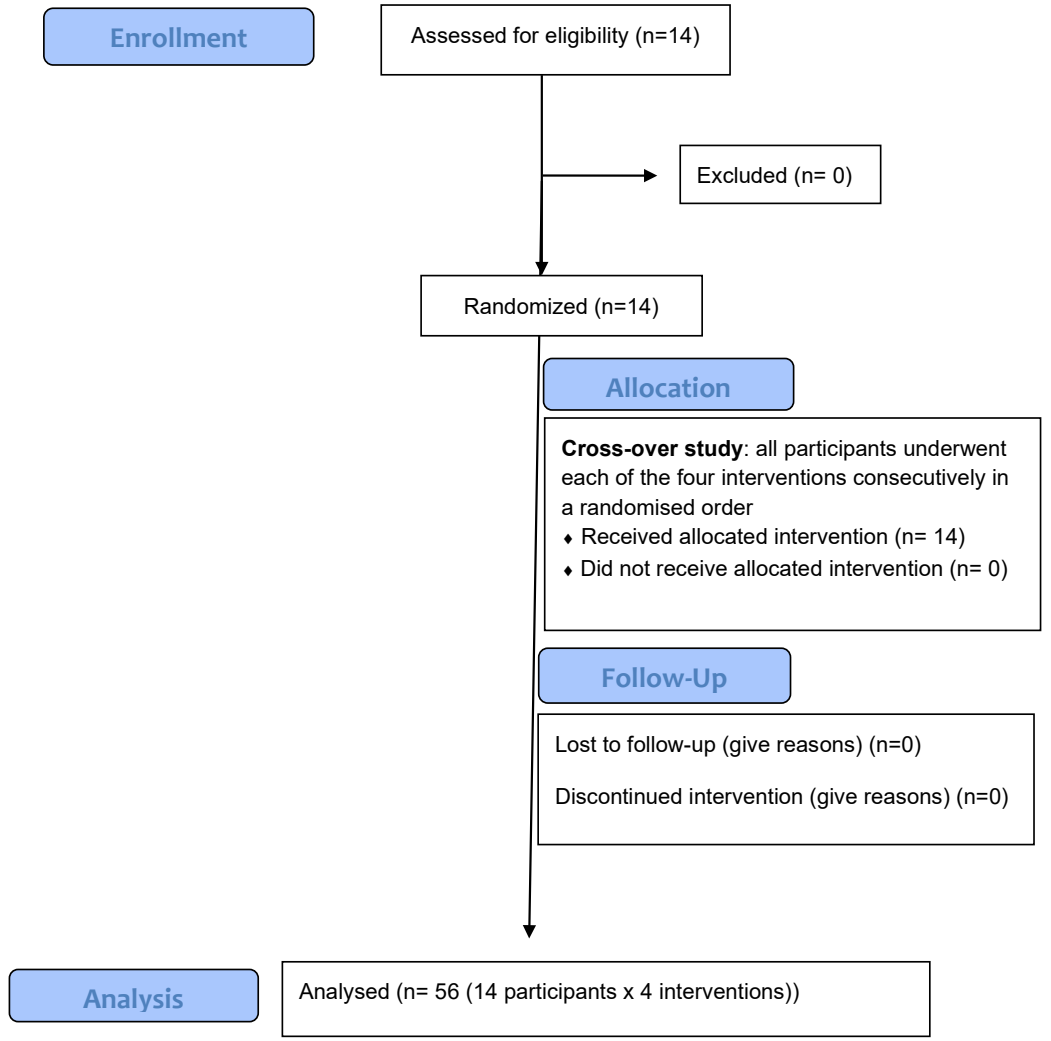
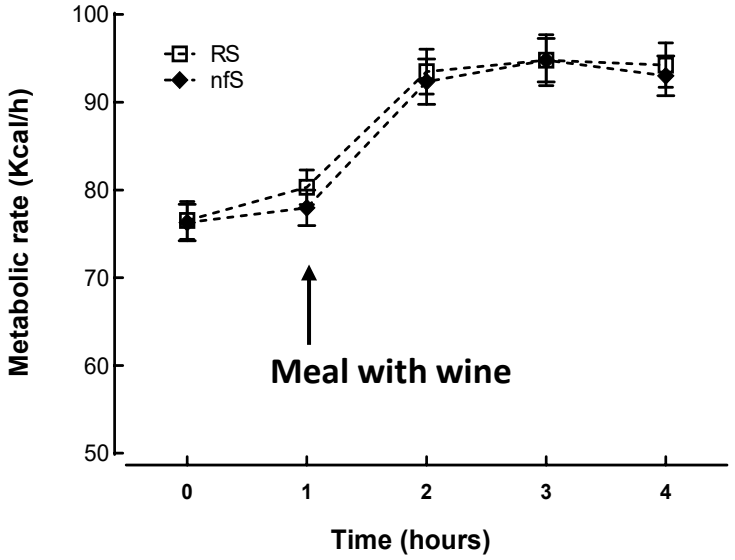
Drug Alcohol Depend. 2022 Jul 1;236:109479.

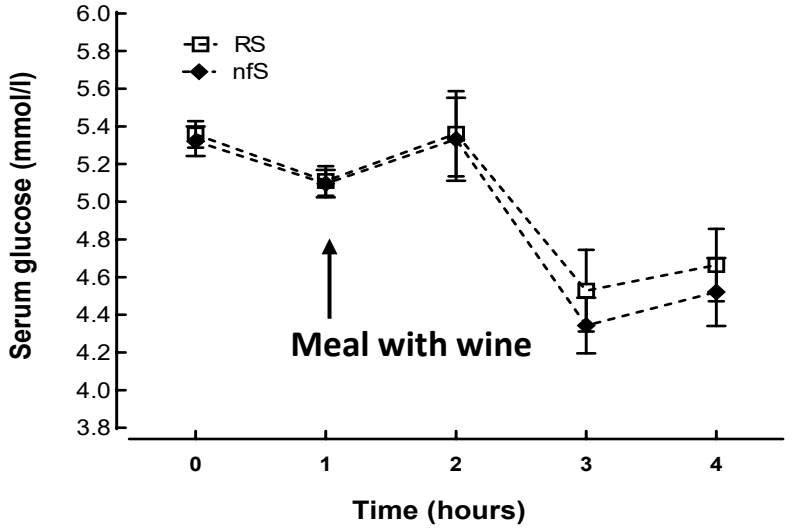
Two deciliters of wine, with or without alcohol, were taken together with a standardized supervised meal in 14 healthy women and men.

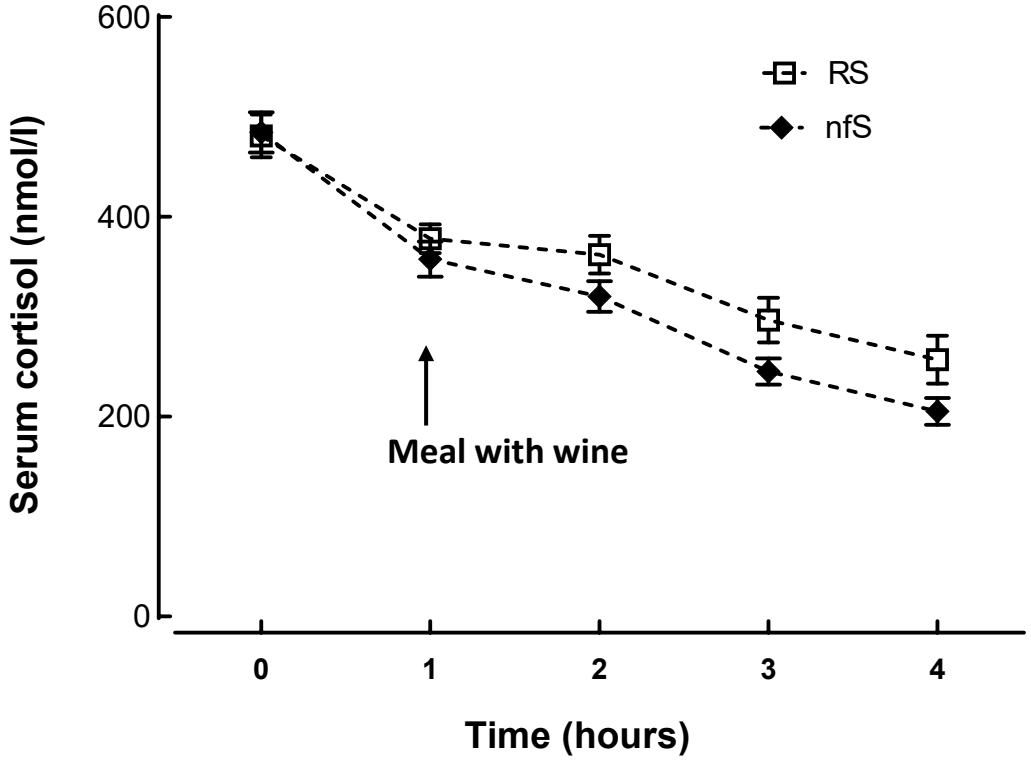
All participants also combined the meal with moist snuff (snus), with or without nicotine. The snuff was replaced hourly at each of the four settings.

Flow diagram for the trial:
A cross-over study of postprandial effects from moist snuff and red wine on metabolic rate, appetite-related hormones and glucose









Area under the curves for hormones and metabolic rate for snuff (snus) with (RS) or without nicotine (nfS). P values between the groups were calculated by general linear model, repeated measures. Total n=14 (28 comparisons).

Variable	AUC regular moist snuff	AUC snuff without nicotine	P
Metabolic rate (kcal)	354 ± 19	350 ± 17	0.483
Hunger (AU x hours)*	157 ± 27	173 ± 28	0.271
Satiety (AU x hours)*	202 ± 23	196 ± 24	0.735
B-glucose (mmol/l x hours)	20.0 ± 1.3	19.7 ± 1.1	0.682
Insulin (mIE/l x hours)	104 ± 29	99.5 ± 28	0.643
GLP-1 (pg/ml x hours)	81.6 ± 18	86.6 ± 17	0.535
Cortisol (pmol/l x hours)	1406 ± 149	1268 ± 119	0.005
Ghrelin (pg/ml x hours)	691 ± 189	764 ± 166	0.288

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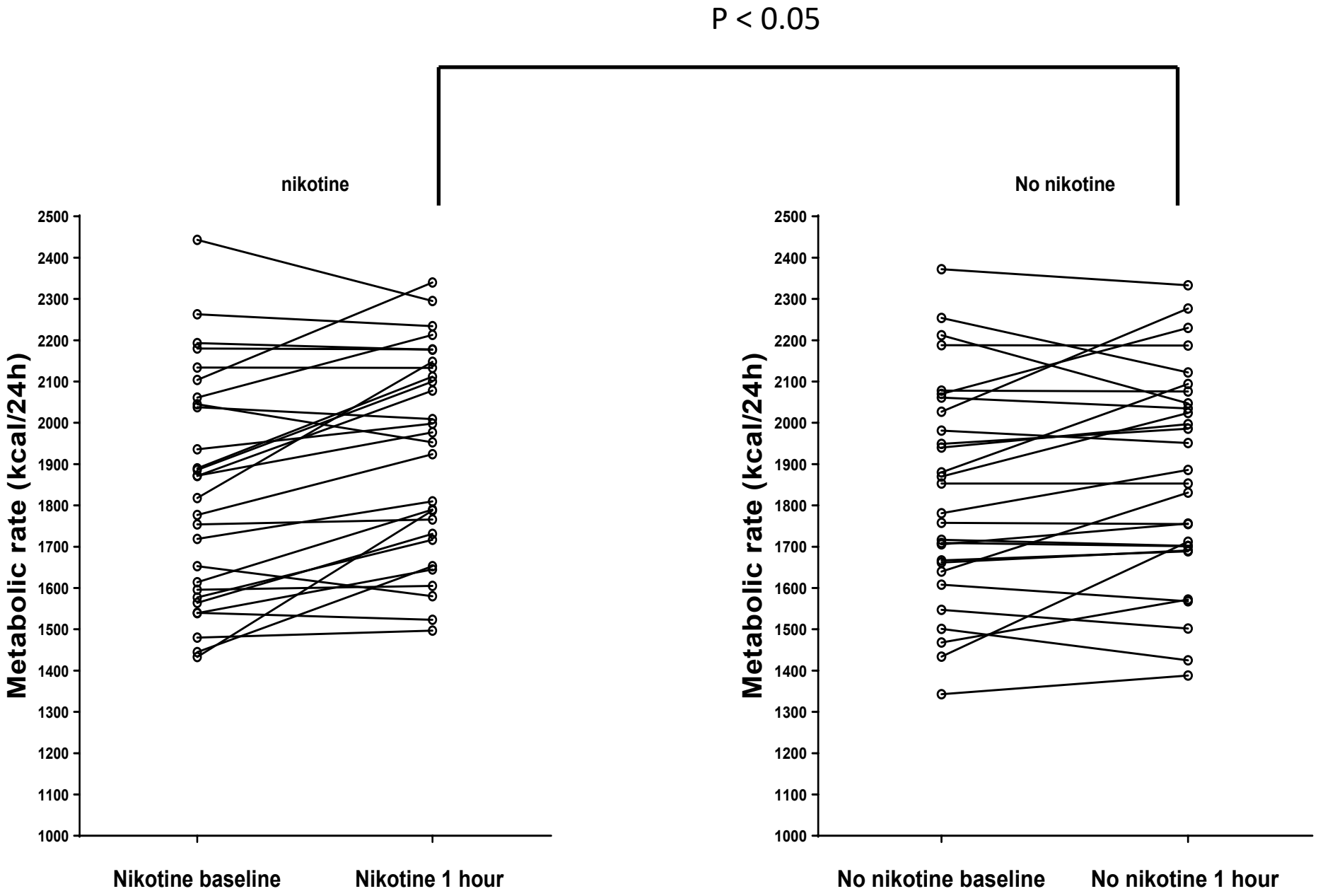
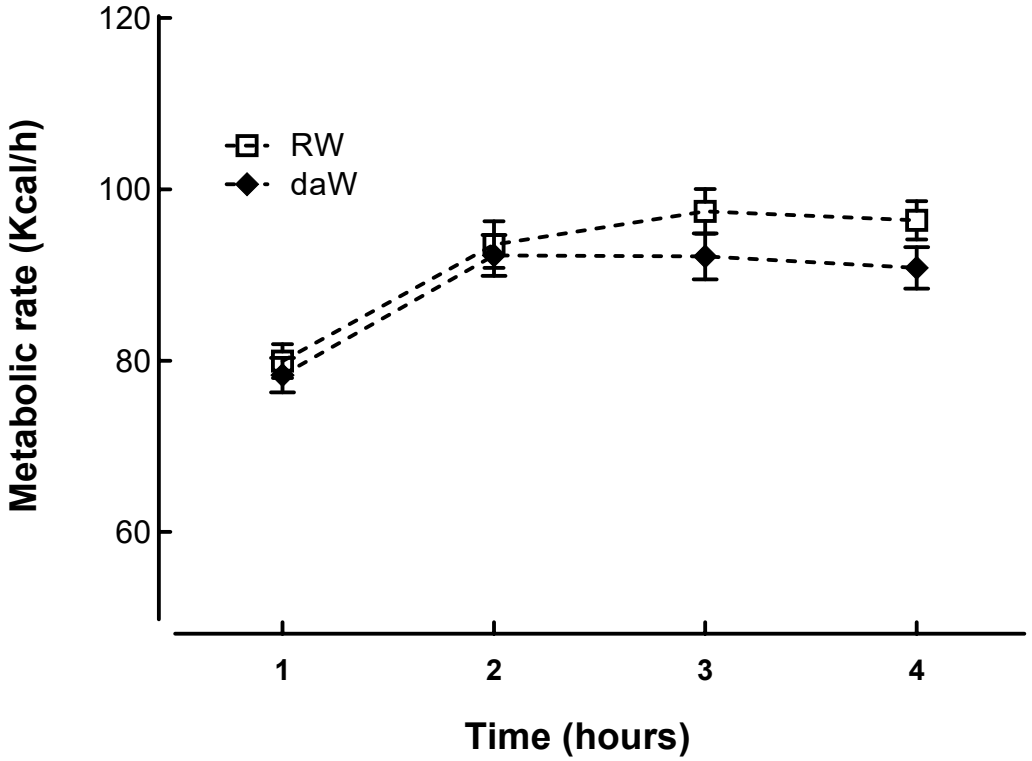
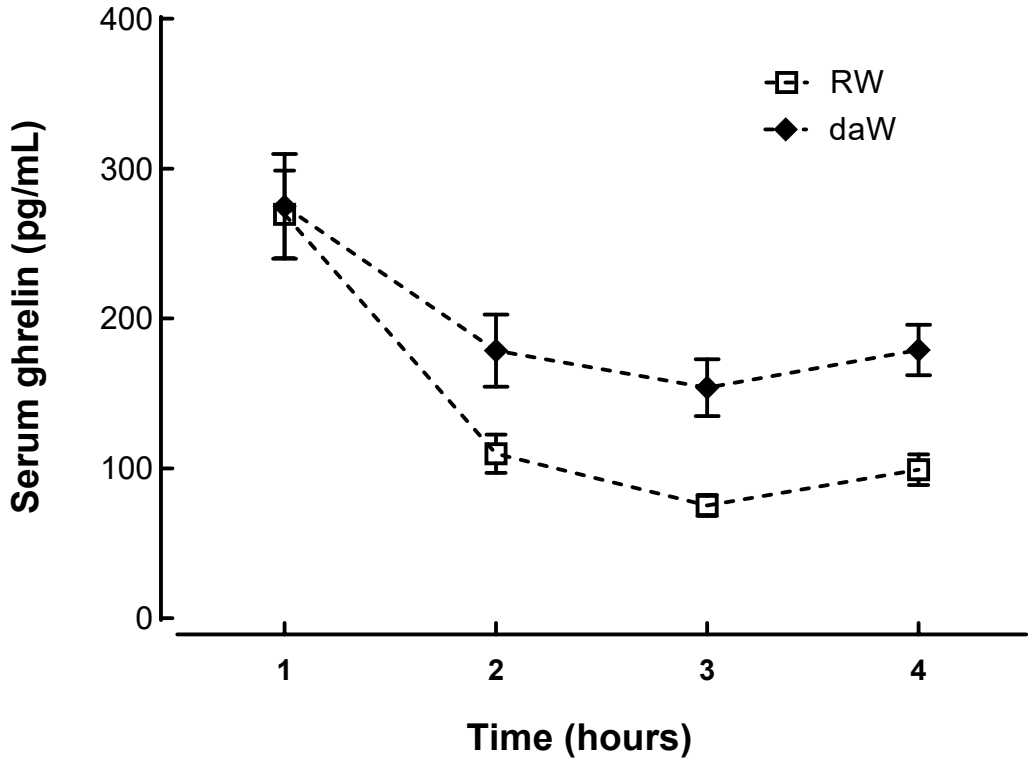

P < 0.05
nikotine
No nikotine
Metabolic rate (kcal/24h)
2500
2400
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
Nikotine baseline
Nikotine 1 hour
No nikotine baseline
No nikotine 1 hour





Area under the curves for sense of satiety, hormones and metabolic rate when comparing red wine with or without alcohol. Values are means ± SEM corresponding to 3 hours, i.e., after the intake of red wine to the meal. P values between the groups were calculated by general linear model, repeated measures. Total n=14 (28).

Variable	AUC regular wine	AUC non-alcoholic red wine	P
Metabolic rate (kcal)	279 ± 16	269 ± 16	0.022
Hunger (AU x hours)*	104 ± 26	93.0 ± 23	0.514
Satiety (AU x hours)*	173 ± 24	179 ± 20	0.944
B-glucose (mmol/l x hours)	14.6 ± 1.3	14.7 ± 1.1	0.714
Insulin (mIE/l x hours)	102 ± 32	85.5 ± 22	0.130
GLP-1 (pg/ml x hours)	72.6 ± 17	76.8 ± 18	0.492
Cortisol (pmol/l x hours)	870 ± 107	953 ± 126	0.072
Ghrelin (pg/ml x hours)	370 ± 98	559 ± 154	<0.0001

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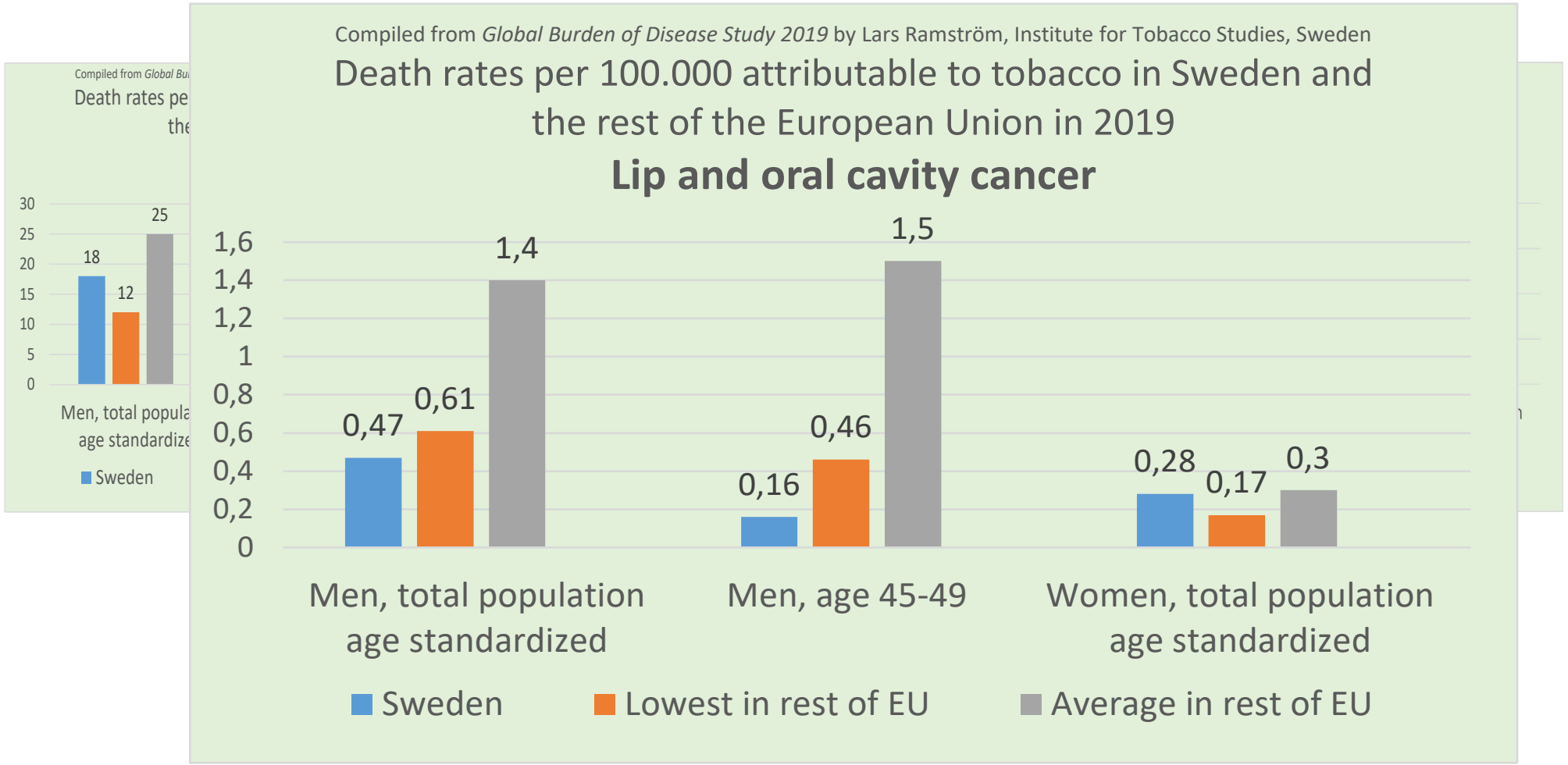
Death rates per 100,000 attributable to tobacco – Sweden and the rest of the EU in 2019

Compiled from **The Global Burden of Disease Study** https://vizhub.healthdata.org/gbd-compare/#
by Lars M. Ramström, Institute for Tobacco Studies, Sweden lr@tobaccostudies.com

KEY OBSERVATIONS:
Data in the left and right groups of bars indicate that Swedish men have EU's lowest tobacco related mortality in almost all of these causes of death, while Swedish women have mortality levels around EU average. This demonstrates that tobacco-related mortality in Sweden is influenced by some determining factor that differs between men and women. An obvious such factor is the difference in tobacco use patterns. While smoking is strongly dominating over snus use among women, snus use is strongly dominating over smoking among men. So, these gender differences suggest that the position of Swedish men as having EU's lowest level of tobacco-related mortality is associated with their practice of using snus instead of cigarettes.



New strategy for better outcomes:
Swedish experience of cardiovascular and pulmonary harm reduction

Switching source of nicotine from smoking to using snus is an exceptional method for harm reduction on a population level, as seen in the Swedish and Norwegian examples/experiences.

Nicotine per se is quite harmless:

The increase in BP is on par, or slightly less with that from coffee
And similarly, to coffee, the metabolic rate increases when the simulation takes hold, and it is likely linked with the increased focus and attention that follows.

And this increase in metabolic rate would also be helpful to avoid an increase in body weight.

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