APPENDIX

Both non-smoking youth and smoking adults like sweet and minty e-liquid flavors more than tobacco flavor

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Appendix Table A1: Survey questions and answer options that were combined, recoded, and presented into different answer categories (see Table 8.2 in the main text).

Survey item	Question	Answer options	Recoding scheme
Education level	What is your highest degree of education?	1 = Primary school 2 = Pre-vocational secondary education (in Dutch: VMBO), senior general secondary education (HAVO), middle school pre-university education (VWO onderbouw), secondary vocational education level 1 (MBO1) 3 = High school or secondary vocational education 4 = Bachelor's degree 5 = Master's or doctorate degree	Low = 1 + 2 Middle = 3 High = 4 + 5
Intention to start vaping	To what extent do you intend to start vaping?	1 = I don't want to start vaping 2 = I want to start, but don't know yet when 3 = I want to start, hopefully soon 4 = I really want to start, but don't know yet when 5 = I really want to start, planned to start in next three months 6 = I really want to start, planned to start in coming month 7 = I don't know	No = 1 Low = 2 + 3 High = 4 + 5 + 6 Don't know = 7
Intention to quit smoking	To what extent do you intend to quit smoking in the coming 6 months?	1 = I don't want to quit 2 = I think I should quit, but don't want to 3 = I want to quit, but don't know yet when 4 = I want to quit, hopefully soon 5 = I really want to quit, but don't know yet when 6 = I really want to quit, planned to quit in next three months 7 = I really want to quit, planned to quit in coming month 8 = I don't know	No = 1 + 2 Low = 3 + 4 High = 5 + 6 + 7 Don't know = 8

Questions not mentioned in the current table were presented in the main text with their actual answer options (no recoding needed).

Appendix Table A2: Mean liking ratings (± SE) for individual e-liquids (n=30) and for 4 groups of products with similar flavors (for classification, see Table A8.4), assessed by adolescent non-smokers (n = 41), young adult non-smokers (n = 42), and adult smokers (n = 56) on a 9-point labeled hedonic scale.

	Adolescent non-smokers		Young adult non-smokers		Adult smokers	
Peppermint	6.9	± 0.3	6.7	± 0.3	6.7	± 0.2
Wine gum	6.9	± 0.3	6.7	± 0.3	6.4	± 0.3
Menthol	6.9	± 0.3	6.7	± 0.3	6.1	± 0.3
Bubblegum	6.4	± 0.3	6.2	± 0.3	6.7	± 0.2
Anise	6.4	± 0.2	5.7	± 0.3	6.3	± 0.2
Watermelon	6.6	± 0.3	6.0	± 0.3	5.9	± 0.3
Citrus fruits	6.1	± 0.3	6.2	± 0.3	6.0	± 0.2
Raspberry	5.8	± 0.3	5.9	± 0.3	6.4	± 0.2
Mojito	6.2	± 0.3	5.9	± 0.3	6.0	± 0.3
Cola	6.4	± 0.3	5.9	± 0.3	5.7	± 0.3
Energy drink	6.2	± 0.3	5.7	± 0.3	5.9	± 0.2
Vanilla	5.1	± 0.3	5.8	± 0.3	5.9	± 0.2
Jasmine tea	5.3	± 0.3	5.3	± 0.3	5.8	± 0.2
Lavender	5.4	± 0.3	5.8	± 0.3	5.2	± 0.3
Pineapple	5.7	± 0.3	5.4	± 0.3	5.3	± 0.3
Unflavored	5.2	± 0.2	5.3	± 0.2	4.9	± 0.1
Syrup waffle	4.6	± 0.3	5.2	± 0.4	4.5	± 0.3
Cheesecake	4.0	± 0.3	4.8	± 0.4	4.6	± 0.3
Espresso	3.9	± 0.3	4.1	± 0.3	4.8	± 0.3
Caramel	3.9	± 0.3	4.6	± 0.3	4.4	± 0.3
American blend *	3.5^A	± 0.3	3.8^A	± 0.3	4.9^B	± 0.2
Clove	3.7	± 0.3	3.6	± 0.3	4.3	± 0.3
Oriental *	3.0^A	± 0.2	4.3^B	± 0.3	4.3^B	± 0.3
Tobacco_b	3.2	± 0.3	3.6	± 0.2	4.1	± 0.3
Hazelnut	3.1	± 0.3	3.8	± 0.3	3.6	± 0.3
Tobacco_a	3.2	± 0.2	3.2	± 0.2	3.7	± 0.3
Peanut	2.9	± 0.3	3.5	± 0.3	3.5	± 0.3
Tobacco_c	2.9	± 0.3	2.8	± 0.3	3.2	± 0.3
Cigar	2.9	± 0.3	2.9	± 0.3	3.1	± 0.2
Whiskey	2.4	± 0.3	2.1	± 0.2	2.4	± 0.2

Groups of products with similar flavors

Tobacco flavors *	3.1^A	± 0.3	3.4^B	± 0.3	3.9^C	± 0.2
Minty flavors	6.9	± 0.3	6.7	± 0.3	6.4	± 0.2
Other non-sweet flavors *	3.2^A	± 0.3	3.4^{AB}	± 0.3	3.7^B	± 0.3
Sweet flavors	5.7	± 0.3	5.7	± 0.3	5.7	± 0.3

Products were ranked from highest to lowest mean liking score across all users (n = 139). The same data are visualized in Figure 1 (main text).
* Different letters in superscript indicate significant differences in a row (i.e., between user groups).

Appendix Table A3: Mean familiarity ratings (± SE) for individual e-liquids (n = 30) and for 4 groups of products with similar flavors (for classification, see Table A8.4), assessed by adolescent non-smokers (n = 41), young adult non-smokers (n = 42), and adult smokers (n = 56) on a 100-unit Visual Analog Scale.

	Adolescent non-smokers		Young adult non-smokers		Adult smokers	
Peppermint	82.9	± 3.3	89.7	± 1.5	80.1	± 3.3
Menthol	83.1	± 2.6	81.2	± 3.2	72.2	± 3.7
Anise	76.6	± 4.0	73.2	± 3.4	72.0	± 3.3
Watermelon	78.9	± 3.9	70.8	± 3.5	59.5	± 4.2
Energy drink	68.6	± 4.6	69.7	± 3.4	66.3	± 3.6
Mojito	65.1	± 4.3	67.8	± 3.9	66.3	± 3.4
Wine gum	76.6	± 3.6	64.3	± 3.4	58.9	± 3.5
Cola	71.7	± 3.4	62.7	± 3.9	63.3	± 3.9
Espresso	67.4	± 4.8	64.1	± 4.6	58.3	± 4.6
Bubblegum	68.7	± 3.8	61.0	± 3.5	58.6	± 3.6
Lavender	61.7	± 4.5	63.4	± 4.1	52.3	± 3.9
Citrus fruit	60.2	± 3.9	55.5	± 3.7	51.5	± 3.7
Raspberry	58.9	± 4.8	54.0	± 4.1	52.1	± 3.7
Jasmine tea	47.4	± 4.2	53.6	± 3.8	59.6	± 3.2
Syrup waffle	59.3	± 4.4	58.8	± 3.9	46.0	± 4.0
Pineapple	61.1	± 4.5	53.3	± 3.9	48.5	± 4.1
Vanilla	48.4	± 4.9	46.0	± 4.2	48.1	± 4.1
Hazelnut	40.1	± 4.7	51.3	± 5.2	47.7	± 4.1
Caramel	41.3	± 4.4	49.6	± 4.3	47.9	± 4.2
Clove	42.9	± 4.9	43.8	± 4.8	49.9	± 4.5
Cheesecake	41.8	± 4.7	50.2	± 4.0	44.8	± 3.9
Peanut	44.3	± 4.8	51.0	± 4.1	36.4	± 3.8
American blend	30.3	± 3.9	33.3	± 3.8	47.0	± 4.1
Oriental	30.7	± 3.8	35.8	± 4.1	41.8	± 4.1
Whiskey	34.4	± 5.0	34.7	± 3.9	39.6	± 4.0
Tobacco_b	31.4	± 3.9	33.5	± 3.8	38.5	± 3.8
Tobacco_a	30.3	± 4.1	29.8	± 3.2	36.6	± 4.0
Tobacco_c	25.6	± 3.8	28.9	± 3.7	34.8	± 3.8
Cigar	32.9	± 3.0	27.0	± 3.0	30.9	± 3.3
Unflavored	21.3	± 3.2	21.5	± 4.0	18.9	± 3.6

Groups of products with similar flavors

Tobacco flavors	30.2	± 3.7	31.4	± 3.6	38.3	± 3.8
Minty flavors	83.0	± 2.9	85.5	± 2.3	76.1	± 3.5
Other non-sweet flavors	45.8	± 4.9	49.0	± 4.5	46.4	± 4.2
Sweet flavors	61.6	± 4.2	59.6	± 3.8	56.0	± 3.8

Products were ranked from highest to lowest mean liking score across all users (n = 139). Familiarity did not significantly differ between user groups, for any of the e-liquids.

Appendix Table A4: Mean sweetness ratings (± SE) for individual e-liquids (n = 30) and for 4 groups of products with similar flavors, assessed by adolescent non-smokers (n = 41), young adult non-smokers (n = 42), and adult smokers (n = 56) on a 100-unit Visual Analog Scale.

	Adolescent non-smokers		Young adult non-smokers		Adult smokers		Assigned group
Energy drink	78.6	± 3.2	83.6	± 2.4	77.4	± 2.7	Sweet
Wine gum	81.9	± 2.7	77.7	± 2.8	72.4	± 2.8	Sweet
Bubblegum	78.5	± 3.0	74.3	± 3.0	71.2	± 2.8	Sweet
Watermelon	79.1	± 3.2	76.1	± 2.8	63.4	± 3.7	Sweet
Raspberry	75.7	± 3.2	69.2	± 3.4	69.4	± 2.7	Sweet
Citrus fruit	75.8	± 2.4	70.1	± 3.2	66.3	± 3.3	Sweet
Pineapple	70.7	± 3.5	70.4	± 3.0	63.1	± 3.7	Sweet
Anise	62.5	± 3.4	57.2	± 2.9	62.0	± 3.1	Sweet
Cheesecake	55.4	± 4.1	62.0	± 4.1	52.4	± 3.5	Sweet
Vanilla	54.3	± 4.1	56.5	± 3.9	55.1	± 2.9	Sweet
Caramel	46.9	± 4.0	64.4	± 3.7	51.2	± 3.7	Sweet
Syrup waffle	51.8	± 4.3	53.8	± 4.2	53.6	± 3.9	Sweet
Cola	56.3	± 4.1	44.9	± 3.9	52.0	± 3.5	Sweet
Jasmine tea	47.9	± 3.7	43.0	± 4.0	57.8	± 3.4	Sweet
Mojito	52.2	± 3.4	44.8	± 3.5	46.9	± 3.3	Sweet
Lavender	50.2	± 3.2	41.0	± 3.3	44.0	± 3.5	Sweet
Peppermint	51.0	± 3.9	37.2	± 3.5	42.8	± 3.7	Minty
Menthol	53.0	± 4.0	35.6	± 3.9	37.5	± 3.6	Minty
Hazelnut	33.0	± 3.8	42.4	± 4.1	37.9	± 3.6	Non-sweet
Tobacco_b	41.2	± 4.4	40.3	± 3.9	31.7	± 3.6	Tobacco
Oriental	34.0	± 3.9	39.6	± 3.8	37.4	± 3.3	Tobacco
Peanut	33.5	± 4.5	40.4	± 3.9	34.8	± 3.8	Non-sweet
Clove	34.1	± 3.8	33.2	± 3.3	39.4	± 3.5	Non-sweet
American blend	30.9	± 3.5	35.4	± 4.0	37.7	± 3.6	Tobacco
Tobacco_a	27.8	± 3.4	34.8	± 3.4	34.1	± 3.8	Tobacco
Espresso	24.2	± 3.2	36.1	± 3.8	33.8	± 3.5	Non-sweet
Cigar	24.2	± 3.2	30.3	± 3.4	31.8	± 3.5	Tobacco
Tobacco_c	21.0	± 3.1	27.1	± 3.1	28.7	± 3.4	Tobacco
Whiskey	19.1	± 2.7	27.6	± 3.0	25.6	± 3.5	Non-sweet
Unflavored	29.3	± 4.1	22.9	± 3.9	17.2	± 3.0	N/A

Groups of products with similar flavors

Tobacco flavors	29.8	± 3.6	34.6	± 3.6	33.5	± 3.5	
Minty flavors	52.0	± 3.9	36.4	± 3.7	40.2	± 3.7	
Other non-sweet flavors	28.8	± 3.6	35.9	± 3.6	34.3	± 3.6	
Sweet flavors	63.6	± 3.5	61.8	± 3.4	59.9	± 3.3	

Products were ranked from highest to lowest mean liking score across all users (n = 139). Sweetness did not significantly differ between user groups, for any of the e-liquids. Categorization of the e-liquids (excluding unflavored) into 4 groups was based on similar flavor types and sweetness ratings (final column).