

**Table S1.** Characteristics of the included studies

Study	Setting	No. of participants <sup>a)</sup>	Details of the intervention	Details of the control	Abstinence verification method	Intervention period/follow-up (mo)	Abstinence rate at follow-up (%)	
							Intervention	Control
Abroms et al., 2008 [1], US	University in Washington DC	83 (48/35)	X-Pack program: individual counseling for 15 min, self-help kit, individually tailored emails.	Clear The Air program, individual counseling for 15 min	Bioverified (salivary COT), 7-d PPA	6 / 6	10.2	5.7
Aveyard et al., 2001 [2], UK	Schools in West Midlands	1,090 (547/543)	6 Sessions of class-based & computer-based education.	Health education	Self-reported, 7-d PPA	12 / 12	26.6	21.4
Brown et al., 2003 [3], US	Psychiatric hospital	191 (116/75)	Motivational interview: 2 sessions of 45 min by a study therapist, relapse prevention manual and self-help material.	Brief advice session and self-help material	Bioverified (salivary COT, CO), 7-d PPA	6 / 1, 6	11.0 (1 mo) 13.3 (6 mo)	11.0 (1 mo) 8.5 (6 mo)
Colby et al., 2005 [4], US	Hospital outpatient or emergency departments in Rhode Island	85 (43/42)	Motivational interview: with a trained interventionist for 35 min and follow-up 15–20 min phone call in 1 wk.	5-min advice interview and pamphlet and brief phone call 1 wk after visit	Bioverified (salivary COT, CO), 7-d PPA	2 wk / 1, 6	2.0 (1 mo) 9.0 (6 mo)	0.0 (1 mo) 2.0 (6 mo)
Colby et al., 2012 [5], US	5 High schools, an emergency department, a hospital-based adolescent outpatient clinic, and a pediatrician's office	162 (79/83)	Individual counseling: with a trained interventionist for 45 min, follow-up 15–20-min telephone call in 1 wk 15–20-min discussion with parents	5-min advice interview and pamphlet and brief phone call 1 wk after visit, deliver a pamphlet to the parents	Bioverified (salivary COT, CO), 7-d PPA	2 wk / 1, 6	4.5 (1 mo) 4.9 (6 mo)	1.4 (1 mo) 2.8 (6 mo)
Dalum et al., 2012 [6], Denmark	22 Continuation high schools	1,147 (505/642)	Interactive sessions: weekly for 4 wk, expired CO measurement, short personal counseling, self-help materials, referrals to cessation program.	Waiting	Self-reported, 30-d PPA	1/6 wk / 14	4.8 (6 wk) 7.5 (14 mo)	1.5 (6 wk) 7.1 (14 mo)
Greenberg and Deputat, 1978 [7], US	High schools	100 (25/25/25/25)	Group A 'scare' education; group B 'fact'-based education, group C 'attitude' approach using affective strategies, weekly over 7 wk.	No smoking education, self-study for the same amount of time	Self-reported	7 wk / 7	24.0	4.0
Gungormuş and Erci, 2012 [8], Turkey	First and second years of a single high school in Turkey	60 (30/30)	Trans theoretical model-based education in 4 sessions at the 1st, 3rd, 6th and 12th mo.	None	Self-reported, action stage	12 / 12	33.3	0
Guo et al., 2014 [9], Taiwan	6 Vocational high schools in Taiwan (1=3; C=3)	143 (78/65)	Classroom-based smoking cessation sessions: 6 courses of two 45-min, self-study manual, a film teaching Chinese acupressure, telephone calls, 10 text messages.	Self-help material	Bioverified (urine COT), 30-d PPA	3 / 7	20.8	2.0

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**Table S1.** Continued

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Harris et al., 2010 [10], US	Midwestern university	452 (245/207)	Motivational interview: 4 individual sessions with a trained counselor for 20–30 min, self-help guide at first session.	Counseling focused on increasing consumption of fruit and vegetables	Bioverified (salivary COT), 30-d PPA	9 wk / 6	20.4	24.6
Haug et al., 2013 [11], Switzerland	Vocational schools in German-speaking regions of Switzerland	755 (372/383)	(1) Online assessment of smoking behavior and attitudes toward smoking cessation; (2) a weekly SMS text message assessment of smoking-related target behaviors; (3) 2 weekly text messages tailored to the assessments; (4) integrated quit day preparation and relapse-prevention program.	None	Self-reported, 4-wk PPA	3 / 6	6.3	5.5
Hoffman et al., 2008 [12], US	7 Public schools in Montgomery County, Maryland	105 (61/44)	ASCENT program: cognitive behavioral therapy tailored to stage of change (TTM), a student workbook, role play, discussion and games and video over 6 sessions of 1 h/wk.	Basic education	Self-reported, 30-d PPA	6 wk / 30 d, 12	16.0 (30 d) 31.0 (12 mo)	7.0 (30 d) 23.0 (12 mo)
Hollis et al., 2005 [13], US	7 Pediatrics and family practice departments in health maintenance organization medical centers in the US	448 (226/222)	3 Sequential interventions plus maximum of 2 boosters: (1) Clinical message encouraging quitting or not starting; (2) 10–12 min individual, multi-media interactive computer-delivered expert system tailored to individual; (3) 3–5 min of motivational counseling. Boosters were delivered at clinic attendance (computer program and motivation counseling) or by telephone.	3–5 min motivational counseling of 5-a-day fruit and vegetables	Self-reported, 30-d PPA	11 / 12	28.4	13.8
Horn et al., 2007 [14], US	Suburban emergency department	75 (40/34)	5-Stage motivational interview: (1) screening; (2) tailored interview of 15–30 min; (3) stage-sensitive homework book; (4) handwritten postcard within 3 d; (5) motivational phone calls at 1/12, 3/12 and 6/12.	Usual care	Self-reported	6 / 6	2.5	2.9

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**Table S1.** Continued

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Joffe et al., 2009 [15], US	4 High schools (I=2; C=2)	193 (104/89)	"Kickin' Butts": 15 lunchtime sessions of 25/30 min.	One-time simple education, self-help material	Bioverified (salivary COT), 30-d PPA	2 / 1, 6	9.0 (1 mo) 10.0 (6 mo)	6.0 (1 mo) 15.0 (6 mo)
Kelly and Lapworth, 2006 [16], Australia	3 State high schools in Brisbane	56 (30/26)	Motivational interview: 1 h with information targeted directly at reported experiences of smoking, additional reading following interview.	Standard care interview: Self-reported, 30-d use "quit kit" and review of general literature on effects of smoking for 1 h	Self-reported, 30-d PPA	1 h / 1, 6	20.0 (1 mo) 23.0 (6 mo)	15.0 (1 mo) 12.0 (6 mo)
Lipkus et al., 2004 [17], US	11 Shopping malls and an amusement park in the US	402 (209/193)	Telephone counseling, self-help materials and a video.	Self-help materials and a video	Bioverified (salivary COT), 7-d PPA	2 / 8	21.0	19.0
Joffe et al., 2009 [15], US	4 High schools (I=2; C=2)	194 (92/102)	Modified NoT intervention: 20 lunchtime sessions of 25/30 min.	One-time brief intervention, self-help material	Bioverified (salivary COT), 30-d PPA	10 wk / 1, 6	13.0 (1 mo) 5.0 (6 mo)	9.0 (1 mo) 9.0 (6 mo)
Horn et al., 2011 [18], US	99 Public high schools in the US	233 (170/63)	<ul style="list-style-type: none"> <li>NoT intervention: 50-min session once/week for 10 wk, same-gender small groups, same-gender facilitators, motivation, nicotine dependence, consequences of smoking, preparation for quitting, cravings, relapse prevention, stress management, family/peer pressure, healthy lifestyle</li> <li>4 Booster sessions offered post-program at 2 and 4 wk.</li> </ul>	Brief intervention	Self-reported, 7-d PPA	10 wk / 6	21.1	15.9
O'Neill et al., 2000 [19], US	University in the US	65 (31/34)	4 Individual computer sessions over 6 wk, intervention software was adapted from the Smoke Mall program.	4 Individual computer sessions dealing with health-related topics other than smoking over 6 wk	Self-reported continuous abstinence for 6 mo	6 wk / 1, 7	19.0 (1 mo) 19.0 (6 mo)	15.0 (1 mo) 14.0 (6 mo)
Patten et al., 2006 [20], US	3 Community-based locations in the US	139 (70/69)	<ul style="list-style-type: none"> <li>'Stomp out Smokes' (SOS) delivered by home-based internet and using as theoretical base social (cognitive) learning theory, health communication and decision-making theories.</li> </ul>	Brief intervention of 4 individual weekly sessions	Bioverified (CO), 30-d PPA	6 / 6	6.0	12.0

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Pbert et al., 2011 [21], US	35 High schools (I=16; C=19)	1,068 (486/582)	• Calling It Quits counseling intervention: one 30-min session/wk with the school nurse for 2 wk before quit date, one 15-min session/wk for 2 wk after quit date.	4 Weekly visits with the school nurse, where self-help materials were delivered	Bioverified (CO), 30-d PPA	4 wk / 12	10.7	6.8
Peterson et al., 2009 [22], US	High schools in the US	790 (403/387)	Quit kit, tailored telephone counseling, supportive website, and school-wide cessation health promotion campaign.	Normal school-based activity	Self-reported, 7-d PPA	10 / 12	47.5	40.0
Sussman et al., 2001 [23], US	18 Continuation high schools in the US	335 (259/76)	• (Arm 1) Project Ex: 8 sessions or 'clinics' over a 6-wk period, 4 sessions were preparation for quitting over 2 wk, next 4 were weekly during the first month post-quit. • (Arm 2) School-as-community (SAC): student body organized service, recreational and job training functions, produced a project newsletter, to enable expression of anti-tobacco attitudes.	Usual care	Bioverified (CO), 30-d PPA	6 wk / 6	17.0	8.0
Sussman et al., 2007 [24], US	12 Continuation high schools in the US	457 (244/213)	Project EX: 8 sessions over a 6-wk period.	Routine school smoking cessation activities	Bioverified (CO), 30-d PPA	6 wk / 6	30.6	24.8
Espada et al., 2015 [25], Spain	9 Schools in Spain	211 (112/99)	Project EX.	Waiting	Self-reported 30-d PPA	6 wk / 6	4.9	0.0
Gonzalez et al., 2015 [26], Spain	Schools in Spain	212 (100/112)	Project EX.	Waiting	Bioverified (CO) 30-d PPA	6 wk / 12	22.2	15.2
Redding et al., 2015 [27], US	4 Family planning clinics (2 in teaching hospitals, 2 in community health centers)	166 (77/89)	Computer-based information and feedback, plus counseling, participants could attend ≤4 sessions.	Non-tailored computerized information and advice plus contraceptive educational counseling	Self-reported action & maintenance stage	9 / 6	23.7	18.4

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Sherbot, 2005 [28], Canada	Baseline assessment carried out in schools, outcome data submitted via internet	39 (26/13)	<ul style="list-style-type: none"> <li>Group A: motivational enhancement therapy, 1 individual session/wk for 4 wk</li> <li>Group B: completion of "Quit 4 life" booklet, 9 sessions for 4 wk.</li> </ul>	Waiting	Self-reported	1 / 6	23.1	7.7
Skov-Ettrup et al., 2014 [29], Denmark	Young people having substance abuse problems (drugs, alcohol, and gambling but not tobacco)	2,030 (1,055/975)	Customized text messaging.	Non-customized text messaging	Self-reported, 30-d PPA	2 / 12	17.9	14.5
Woodruff et al., 2007 [30], US	Online, participants were members of Xhale.dk	136 (77/59)	<ul style="list-style-type: none"> <li>Web-based virtual reality world based on sky mall with students as avatars.</li> <li>Chat possible with other students.</li> <li>Students also offered 1-to-1 counseling sessions with a smoking cessation professional.</li> </ul>	Online survey	Self-reported, 7-d PPA	2 / 12	37.0	38.0
Pbert et al., 2020 [31], US	Public high schools	146 (48/98)	<ul style="list-style-type: none"> <li>(Group A) C2Q (Craving to Quit): Mindfulness training-based smoking cessation application.</li> <li>(Group B) NCIQuit!START: smoking cessation application that did not use mindfulness training.</li> </ul>	Self-help material	Bioverified (salivary COT), 7-d PPA	4 wk / 6	14.3	16.7

US, United States; COT, cotinine; CO, exhaled carbon monoxide; PPA, point prevalence abstinence; SMS, short message service; ASCENT, adolescent smoking cessation escaping nicotine and tobacco; TTM, transtheoretical model.

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