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CARDIOVASCULAR

APPENDIX TABLES

TABLE A6.—Coronary heart disease morbidity and mortality—retrospective studies

(Actual number of cases shown in parentheses)<sup>1</sup>

[SM = Smokers NS = Nonsmokers EX = Ex-smokers]

Author, year, country, reference	Number and type of population	Data collection	Cases (percent)				Controls (percent)				Comments		
			Age	Percent Smokers			Percent Smokers						
English et al., 1940, U.S.A. (60).	1,000 males with manifest CHD, 40 yrs of age. Controls: 1,000 male non-CHD patients.	Case selection from Mayo Foundation files. Controls: same year of admission age-matched.	40-49	79.7 (187)			61.9 (302) (p<0.001)						
			50-59	71.7 (382)			73.9 (371) (not significant)						
			60 or over	63.8 (431)			61.8 (327) (not significant)						
			All ages	69.8			66.3 (p<0.05)						
Mills and Porter, 1967, U.S.A. (191).	474 white male coronary deaths. Controls: 606 white males.	Undefined.	40-49	50-59	60-69	70 or over	40-49	50-59	60-69	70 or over			
			(56)	(135)	(153)	(130)	(216)	(188)	(114)	(88)			
			NS	7.14			6.66	18.30	33.84	19.91	24.47	35.09	54.12
			All cigarettes	83.93			82.23	49.02	18.44	70.83	59.94	43.86	16.47
		Pipes, cigars	8.93			11.11	32.68	47.70	9.26	16.47	21.05	29.41	
Buechley et al., 1958, U.S.A. (33).	Males reporting CHD to California Health Survey with matched controls from same survey (included those surviving first myocardial infarction).	Questionnaire and interview.	NS	20.4 (23)			NS				42.1 (61)		
			≤20	61.1 (69)			≤20				46.3 (56)		
			>20	18.5 (21)			>20				11.6 (14)		

TABLE A6.—Coronary heart disease morbidity and mortality—retrospective studies (cont.)

(Actual number of cases shown in parentheses)<sup>1</sup>

[SM = Smokers      NS = Nonsmokers      EX = Ex-smokers]

Author, year, country, reference	Number and type of population	Data collection	Cases (percent)	Controls (percent)	Comments
Russek and Zohman, 1958, U.S.A. (165).	97 male and 3 female coronary patients. Controls: 100 healthy controls of similar age, sex, occupation, and ethnic origin.	Interviews by authors.	Tobacco usage >30 cigarettes/day 70 percent.	35 percent.	Patients included 89 with classical myocardial infarction and 11 with angina pectoris.
Spain and Nathan, 1961, U.S.A. (176).	269 males identified as having CHD by physical examination and history. Controls: 2,637/3,000 males identified as not having CHD.	3,000 males in New York City interviewed and examined by medical group.	NS ..... 30.0 (81) <40/day ..... 29.0 (78) >40/day ..... 13.0 (33) EX ..... 14.0 (39) Cigar, pipe ..... 14.0 (38) Total ..... 100.0 (269)	29.0 (772) 33.0 (870) 9.0 (234) (p<0.05) 14.0 (361) 15.0 (400) 100.0 (2,637)	
Mulcahy and Hickey, 1967, Ireland (155).	400 males less than 60 years of age with classical CHD. Data compared with male population consumption figures.	Interview.	Malta NS ..... 4.50 (18) SM ..... 90.75 (363) EX ..... 4.75 (19) Total ..... 100.00 (400)	Malta 18.2 (110) 70.6 (427) 11.2 (68) 100.0 (605)	Control smoking data obtained from estimated smoking habits of Irish population of same age group.
Schwartz et al., 1956, France (169).	612 male patients with angina or myocardial infarction. 612 age-matched controls.	Interview, laboratory, and clinical examinations.	Average amount per day as cigarettes ..... 18.6 All SM ..... 86.0 Inhalers ..... 59.0	15.5 (p<0.0001) 86.0 45.0 (p<0.00001)	Data apply only to those under 55 years of age.

TABLE A6.—Coronary heart disease morbidity and mortality—retrospective studies (cont.)

(Actual number of cases shown in parentheses)<sup>1</sup>  
 [SM = Smokers NS = Nonsmokers EX = Ex-smokers]

Author, year, country, reference	Number and type of population	Data collection	Cases (percent)		Controls (percent)		Comments
			Males (72)	Females (23)	Males (72)	Females (23)	
Villiger and Heyden-Stucky, 1966, Switzerland (201).	100 cases with recent myocardial infarctions, 72 males, 28 females, 100 age-matched controls (72 male industrial employees and 28 females in hospital for other diagnoses).	Hospital history or interview.	NS ..... 6.04 Cigarettes ..... 66.7 1-19 cigarettes/day ..... 18.1 >20 ..... 48.6 Cigar, pipe ..... 44.4 EX ..... 4.2	71.4 28.6 10.7 17.9 ... ...	†26.0 45.8 23.6 †22.2 27.8 †15.3	82.1 14.3 10.7 3.6 ... 3.6	These are not pure smoking classes. †(p<0.01)
Dörken, 1967, Germany (52).	205 males up to 44 years of age with myocardial infarction or sudden death (139 deceased, 66 living). Controls—Hamburg age-matched citizens selected randomly.	Death certificate review. Interview of patient or kin.	NS ..... 1.0 (2) <i>Cigarette Units</i> 1-5 ..... 1.5 (3) 10-15 ..... 32.2 (62) 20-30 ..... 43.5 (84) >35 ..... 21.8 (42) 100.0 (193) (only 28 were mixed or cigar smokers)	...	18.4 (76) 10.4 (43) 46.5 (192) 22.5 (93) 2.2 (9) 100.0 (413) (62 were mixed or cigar smokers)	...	Ex-smokers listed under nonsmokers. Smoking information available only on 193/205. These cigarette categories include mixed or cigar smokers recalculated as to number of cigarettes. No patients or controls smoked pipes exclusively.
Dörken, 1967, Germany (53).	33 females up to 44 years of age with myocardial infarction or sudden death. Controls—133 females 27-44 years of age from clinic without CVD or lung cancer.	Death certificates, interviews.	<i>Cigarettes per day</i> 0 ..... 6.1 (2) 1-5 ..... 6-15 ..... 48.5 (16) 20-30 ..... 39.4 (13) >35 ..... 6.1 (2)	...	63.2 (84) (p<0.001) 17.3 (23) 16.5 (22) 3.0 (4) ...	...	...

TABLE A6.—Coronary heart disease morbidity and mortality—retrospective studies (cont.)

(Actual number of cases shown in parentheses)<sup>1</sup>

[SM = Smokers NS = Nonsmokers EX = Ex-smokers]

Author, year, country, reference	Number and type of population	Data collection	Cases (percent)	Controls (percent)	Comments
Hyama et al., 1967, Japan (37).	79 males surviving myocardial infarction. 157 age-matched controls hospitalized for non-CVD but include hypertensive disease.	Interviews by trained personnel.	NS .....10.1 (8)	21.0 (33)	
			1-9 cigarettes per day ..... 7.0 (5)	10.5 (13)	
			10-15 .....25.4 (18)	33.9 (42)	
			16-20 .....35.2 (25)	25.8 (32)	
			21-34 .....22.5 (16)	17.7 (22)	
>35 ..... 9.9 (7)	12.1 (15)				
All SM .....100.0 (71)	100.0(124)				
Mulcahy et al., 1967, Ireland (137).	100 female patients less than 60 years of age admitted to hospital with CHD.	Hospital interviews.	SM ..... 53.0 (63)	45.6(261)	Smoking on controls obtained from statistics of smoking in Irish Republic. Sudden death not included.
			NS .....33.0 (33)	45.3(259)	
			EX ..... 4.0 (4)	9.1 (52)	
			Total .....100.0(100)	100.0(572)	
Stejfa, 1967, Poland (179).	70 male and female patients with recent onset exertional angina pectoris. 54 controls of same age.	Direct interviews.	<i>Prevalence of risk factors</i>		Authors then followed the 70 patients for 3 years and noted that smoking significantly influenced the incidence of coronary occlusion.
			Angina patients 60.0	Control group 48.1 (p>0.1)	
Schimmler et al., 1968, Germany (167).	503 males with healed myocardial infarctions. 714 male controls of same age without detectable heart disease.	Hospital interviews.	NS ..... 9.0 (44)	26.0(187) (p<0.001)	
			EX .....12.0 (59)	20.0(142) (p<0.001)	
			Cigar, pipe .....12.0 (62)	11.0 (77)	
			<19 cigarettes .....25.0(129)	14.0(101) (p<0.001)	
			>20 ..... 42.0(209)	29.0(207) (p<0.001)	
Total .....100.0(503)	100.0(714)				

TABLE A6.—Coronary heart disease morbidity and mortality—retrospective studies (cont.)

(Actual number of cases shown in parentheses)<sup>1</sup>  
 (SM = Smokers      NS = Nonsmokers      EX = Ex-smokers)

Author, year, country, reference	Number and type of population	Data collection	Cases (percent)	Controls (percent)	Comments
Hood et al., 1969, Sweden (85).	230 males surviving early first myocardial infarction. Controls: 855 randomly selected males 50 years of age.	Interview and examination.	(230) Never smoked .....1.75 EX before infarction .....1.75 EX after infarction .....29.1 <15 cigarettes ...28.3 >15 cigarettes ...22.6 All .....80.0 Pipe .....16.5	(855) 24.2 19.7 .. 27.4 20.0 47.4 8.8	
Jouve et al., 1969, France (91).	1,229 CHD patients: 802 males, 427 females. Controls: 743 individuals of both sexes; age, sex, and social class matched.	Interview.	43.0	13.0 (p<0.0001)	
Kastl, 1969, Germany (92).	275 male railway employees up to 65 years of age surviving myocardial infarction. 275 control employees with minor circulatory disturbances.	Interview and examination.	NS .....20.0 (55) 2-20 cigarettes or up to 6 cigars....32.0 (88) >20 cigarettes or >6 cigars. ....48.0 (132)	29.8 (82) 63.3 (82) 6.9 (19)	

<sup>1</sup> Unless otherwise specified, disparities between the total number of cases and the sum of the individual smoking categories are due to the exclusion of either occasional, miscellaneous, mixed, or ex-smokers.



TABLE A7.—Differences in serum lipids between smokers and nonsmokers  
(Actual number of individuals shown in parentheses)<sup>1</sup>  
[SM = Smokers NS = Nonsmokers]

Author, year, country, reference	Number and type of population	Results	Comments		
Gofman et al., 1955, U.S.A., (72).	401 male employees 20-59 years of age.	<i>Difference between SM and NS</i>			
			<i>Ages 20-29</i>	<i>Ages 30-39</i>	<i>Ages 40-59</i>
		Lipid:	(NS 55, SM 37)	(NS 56, SM 67)	(NS 17, SM 44)
		†Sf 0-12	+59.9 p<0.001	+19.9 p<0.05	+ 3.9 p<0.05
		Sf 12-20	+ 9.4 p<0.001	+ 5.4 p<0.05	- 3.5 p<0.05
		Sf 20-100	+20.0 p<0.025	+ 9.1 p<0.05	+ 8.5 p<0.05
		Sf 100-400	+15.8 p<0.025	+12.1 p<0.05	- 4.5 p<0.05
	Cholesterol	+21.2 p<0.05	+ 9.0 p<0.05	- 4.8 p<0.05	
Thomas, 1958, U.S.A. (185).	521 medical students.	<i>Serum cholesterol mg. percent</i>			
			NS (264)	SM (257)	
			<i>Observed/Expected</i>	<i>Observed/Expected</i>	
		<250	170/157	149/161.6	
	>250	87/99.6	115/102.4		
		Chi Square Value = 5.2 p<0.025			
Dawber et al., 1959, U.S.A. (47).	2,253 males participating in the Framingham study 29-59 years of age.	<i>Serum cholesterol mg. percent</i>			
			29-44	45-59	
		NS	216.1 (149)	228.3 (131)	
		All cigarettes	224.8 (874)	229.5 (589)	
		<10	217.4 (75)	229.1 (76)	
		10-19	221.1 (134)	230.1 (96)	
		20-39	225.8 (651)	227.8 (350)	
		>40	229.0 (114)	238.5 (68)	
	Pipe and cigar	214.9 (128)	227.1 (166)		
Karvonen et al., 1959, Finland (97).	525 males in various occupations 20-59 years of age.	<i>Serum cholesterol mg. percent</i>			
			<i>West Finland</i>	<i>East Finland</i>	<i>Helsinki</i>
		NS	208.0 (64)	226.6 (39)	235.1 (62)
		SM	228.7 (91)	249.7 (103)	257.8 (166)
		The authors state that no trend was noted associating increasing amount smoked with increasing serum cholesterol, although smokers and nonsmokers did have different overall levels.			

TABLE A7.—Differences in serum lipids between smokers and nonsmokers (cont.)

(Actual number of individuals shown in parentheses)<sup>1</sup>

[SM = Smokers NS = Nonsmokers]

Author, year, country, reference	Number and type of population	Results		Comments						
Acheson and Jessop, 1961, Ireland (1).	221 randomly chosen pensioners 65-85 years of age.	Mean serum cholesterol mg. percent		Mean Beta/Alpha lipoprotein ratio						
		NS	214 (38)	2.0 (36)						
		5 cigarettes/day	201 (12)	2.1 (11)						
		10	213 (34)	1.9 (33)						
		20	201 (33)	1.9 (35)						
	>30	206 (8)	1.8 (8)							
Bronte-Stewart, 1961, South Africa (31).	Approximately 600 healthy males 25-55 years of age.	Cholesterol mg. percent				Beta/Alpha lipoprotein ratio				No data given on numbers in each group. †A—African. ‡E—European.
		25-39		40-55		25-39		40-55		
		†A	‡E	A	E	A	E	A	E	
NS	179	197	222	246	2.80	3.34	3.76	4.09		
"Heavy" SM	186	223	204	236	3.82	4.40	4.07	5.40		
Kontinen, 1962, Finland (119).	314 male military recruits 18-25 years of age.	Serum cholesterol mg. percent		Serum phospholipids mg. percent		No serum lipid differences found among the various smoking groups.				
		NS	(145)	203.8	218.0					
		(Cigarettes per day) 1-10	(53)	206.8	222.3					
		11-19	(54)	213.1	224.7					
	>20	(62)	202.3	210.5						
Blumstrand and Lundman, 1966, Sweden (26).	76 monozygotic twin pairs and *7 dizygotic twin pairs obtained from Swedish Twin Registry.	I. Monozygotes discordant for smoking: Smokers showed slightly lower levels of cholesterol, triglycerides, and phospholipids than nonsmokers.				The authors conclude from the differing MZ and DZ results that constitutional factors are probably more important than smoking in determining lipid levels.				
II. Dizygotes discordant for smoking: Smokers showed significantly higher levels of phospholipids. No differences for cholesterol and triglycerides.										

TABLE A7.—Differences in serum lipids between smokers and nonsmokers (cont.)  
 (Actual number of individuals shown in parentheses)<sup>1</sup>  
 [SM = Smokers NS = Nonsmokers]

Author, year, country, reference	Number and type of population	Results				Comments	
Fidanza et al., 1966, Italy (62).	111 male prisoners 34-60 years of age.	Serum cholesterol mg. percent				No statistically significant differences found between SM and NS.	
			Age <39	40-49	50-59		60-69
		NS	..	195 (12)	189 (10)		176 (7)
		<20 cigarettes/day	203 (5)	201 (16)	202 (13)		195 (10)
		>20 cigarettes/day	197 (5)	175 (7)	171 (7)		..
		Serum triglycerides mg. percent					
NS	..	84.7	71.9	85.0			
<20 cigarettes/day	84.5	99.4	101.9	89.8			
>20 cigarettes/day	91.0	86.0	66.7	..			
Kedra and Dmowski, 1966, Poland (22).	200 clinically healthy males 20-50 years of age.	Serum cholesterol mg. percent		Phospholipids mg. percent	Total lipids mg. percent	Serum cholesterol also noted to increase with increasing intensity and duration of smoking.	
		NS (100)	170.2	268.1	1,234.8		
		SM 100	224.9	257.5	1,362.1		
			p<0.01	p>0.05	p<0.01		
		Total fatty acids mg. percent		Beta-lipoproteins percent of total lipoproteins			
		NS (100)	797.8	43.1			
SM 100	860.9	49.9					
		p<0.01	p<0.01				
Harian et al., 1967, U.S.A. (72).	657 former naval aviation cadets 48 years of age (average).	Serum cholesterol		Serum triglycerides	Lipoproteins		
		Found to be related to cigarette smoking p<0.05.		Found not to be related to cigarette smoking.	Sf 0-12 related. p<0.05		
					Sf 20-100 unrelated.		
				Sf 100-400 unrelated.			
Heyden-Stucky and Schibler-Reich, 1967, Switzerland (22).	500 plant workers 30-60 years of age.	Serum cholesterol mg. percent		Serum triglycerides mg. percent	No statistically significant difference found between SM and NS.		
		<10 cigarettes/day	210.0 (334)	110.0			
		>10 cigarettes/day	280.0 (166)	180.0			

TABLE A7.—Differences in serum lipids between smokers and nonsmokers (cont.)

(Actual number of individuals shown in parentheses)<sup>1</sup>

[SM = Smokers NS = Nonsmokers]

Author, year, country, reference	Number and type of population	Results			Comments	
Higgins and Kjelsberg, 1967, U.S.A. (83).	5,030 male and female residents of Tecumseh, Michigan, 16-79 years of age.	<i>Males</i>			<i>Females</i>	
		NS	209.9 (360)	210.1 (1,439)		
		Cigarette	212.5 (1,428)	212.4 (910)		
Pincherly and Wright, 1967, England (150).	2,000 men participating in executive health examinations 28-70 years of age.	<i>Serum cholesterol mg. percent</i>			<i>Percentage with serum cholesterol &gt;270 mg. percent</i>	
		NS (677)	236.2	19.0		
		Ex-smoker (388)	246.0	28.0		
		1-19 cigarettes/day (424)	239.2	24.0		
		>20 cigarettes/day (511)	249.4	30.0		
Van Buchem, 1967, Netherlands (199).	918 randomly chosen males 40-59 years of age for entry into prospective study.	<i>Serum cholesterol</i>			<i>&gt;250 mg. percent</i>	
		NS	12.4 (32)	14.0 (44)		14.2 (41)
		Cigarette SM	71.6 (184)	67.8 (213)		68.2 (197)
		Other	16.0 (41)	18.2 (57)		17.6 (51)
Boyle et al., 1968, U.S.A. (24).	1,104 male factory employees 20-64 years of age.	<i>Serum cholesterol mg. percent</i>			<i>Serum Beta-lipoprotein mg. percent</i>	
		NS	243 (519)	0.325		0.325
		SM	251 (576)	0.351	0.351	
Caganova et al., 1968, Czechoslovakia (36).	49 males living in youth hostel, 21.6 average age.	<i>Serum cholesterol mg. percent</i>			<i>Serum Beta-lipoprotein mg. percent</i>	
		NS (34)	188.20	359.80		359.80
		SM (15)	214.20	498.40		498.40
		<i>Beta/alpha lipoprotein ratio</i>				
		NS (34)	1.16	1.16		
		SM (15)	1.55	1.55		

TABLE A7.—Differences in serum lipids between smokers and nonsmokers (cont.)

(Actual number of individuals shown in parentheses)<sup>1</sup>

[SM = Smokers NS = Nonsmokers]

Author, year, country, reference	Number and type of population	Results			Comments
Modzelewski and Malec, 1969, Poland (133).	140 males 20-68 years of age.	Serum-cholesterol NS (20) p<0.01 Heavy smokers	Serum Beta-lipoproteins NS p<0.01 Heavy smokers	Serum free fatty acids NS p<0.01 Heavy smokers	
Kjeldsen, 1969, Denmark (113).	934 employees of various firms in Copenhagen.	Serum cholesterol mg. percent			
		NS (196) .....	236	} p<0.01	
		SM (738) .....	247		
Pozner and Billimoria, 1970, England (151).	64 male and female healthy volunteers 19-30 years of age.	Serum cholesterol mg. percent	Serum triglycerides mg. percent	Total phospholipids mg. percent	Significant figures refer to heavy smokers as compared with nonsmokers.
		NS (20) .....	176.3	68.6	193.4
		Light SM (17) .....	172.1	68.4	188.9
		(Over 7.3 cigarettes/day)			
		Heavy SM (27) .....	200.0 p<0.05	87.6 p>0.05	215.0 p<0.001
		(Over 22.5 cigarettes/day)			

<sup>1</sup> Unless otherwise specified, disparities between the total number of cases and the sum of the individual smoking categories are due to the exclusion of either occasional, miscellaneous, mixed, or ex-smokers.

TABLE A8.—Blood pressure differences between smokers and nonsmokers  
 (Actual number of individuals shown in parentheses)<sup>1</sup>  
 [SM = Smokers NS = Nonsmokers]

Author, year, country, reference	Number and type of population	Results	Comments			
Dawber et al., 1959, U.S.A. (47).	1,253 male and female residents of Framingham.	<i>Systolic blood pressure</i>		No association found between systolic blood pressure and smoking.		
			<i>Age 29-44</i>		<i>45-59</i>	
		NS (149)	138.8		143.0	
		Cigarettes (874)	132.5		140.3	
		<10 (75)	134.7		144.0	
		10-19 (134)	129.4		141.6	
		20-39 (551)	132.2		138.9	
>40 (114)	136.1	141.6				
Pipe and cigar (128)	135.0	141.9				
Edwards et al., 1959, England (56).	1,737 male patients of general practitioners over 60 years of age.	<i>Proportion of males with "Hypertension" (<math>\geq 200/\geq 100</math> mm. Hg.)</i>				
		NS	27.2 percent (151)			
		Cigarettes	20.5 percent (780)			
		Pipe	25.9 percent (341)			
Karvonen et al., 1959, Finland (97).	525 males in various regions of Finland 20-59 years of age.	<i>Systolic blood pressure</i>			No data on pipe and cigar smokers. No statistical significance noted.	
			<i>West Finland</i>	<i>East Finland</i>		<i>Helsinki</i>
		NS	139.2 (64)	142.6 (39)		132.8 (62)
		SM	133.2 (91)	135.4 (103)		129.8 (166)
			<i>Diastolic blood pressure</i>			
		NS	84.7	86.8		89.6
SM	81.9	84.1	86.8			
Clark et al., 1967, U.S.A. (43).	1,859 male civil servants.	<i>Mean systolic blood-pressure</i>		<i>Mean diastolic blood-pressure</i>	Nonsmoker and smoker groups were of similar average age.	
		NS (728)	137.0	83.9		
		SM (407)	133.6	82.5		
		(p $\leq$ 0.05)		(p $\leq$ 0.05)		

TABLE A8.—Blood pressure differences between smokers and nonsmokers (cont.)

(Actual number of individuals shown in parentheses)<sup>1</sup>

(SM = Smokers NS = Nonsmokers)

Author, year, country, reference	Number and type of population	Results				Comments	
Higgins and Kjelsburg, 1967, U.S.A. (83).	5,030 male and female residents of Tecumseh, Michigan, 16-79 years of age.	Age adjusted mean systolic blood pressure		Age adjusted mean diastolic blood pressure		} (p<0.001)	
		Males	Females	Males	Females		
		NS ..... 137.9 (360)	84.5 (1439)	136.6 (360)	82.1 (1439)		
		Cigarette ... 136.4 (1426)	81.4 (910)	131.6 (1426)	79.0 (910)		
Reid et al., 1967, England (155).	676 male British and 626 male American postal workers 40-59 years of age.	Mean systolic blood pressure (adjusted for difference in weight)		Mean diastolic blood pressure		The author did note SM-NS blood pressure differences prior to controlling for weight, but not after such control.	
		UK		U.S.A.			
		NS ..... 128.2 (45)	124.8 (89)	70.3	81.0		
		1-14 grams 130.2 (27)	133.0 (60)	79.4	82.1		
		16-24 grams 128.5 (232)	127.7 (169)	78.5	77.3		
>25 grams 127.9 (70)	128.1 (218)	77.5	77.1				
	All amounts 129.1 (619)	128.6 (447)	78.7	77.8			
Tibblin, 1967, Sweden (187).	895 males in Göteborg, Sweden, born in 1913.	Blood pressure		115-145/	150-170/	Numbers in parentheses represent total in blood pressure group. The author noted a stepwise decrease with level of blood pressure as smoking increased.	
		≤110/≤70 (89)		75-95 (468)	100-110 (220)		>175/>115 (75)
		NS ..... 18:0	23.0	25.5	34.7		
		1-14 cigarettes ..... 29.2	29.2	26.5	18.7		
>16 cigarettes ..... 28.1	20.9	15.5	17.3				
Pipe and cigar ..... 11.2	8.6	10.0	4.0				

<sup>1</sup> Unless otherwise specified, disparities between the total number of individuals and the sum of the individual smoking categories are due to the exclusion of either occasional, miscellaneous, mixed, or ex-smokers.