

**Supplementary Table S1.** Crude and adjusted odd ratios of chronic periodontitis (CP) for Parkinson's disease (PD) when participants are diagnosed with CP  $\geq 2$  within 1 year before index date.

	N of AD	N of Control	Odd ratios for PD (95% confidence interval)					
	(exposure/total, %)	(exposure/total, %)	Crude†	p	Model 1†‡	p	Model 2†§	p
Total (n = 43,970)								
No CP	8109/8794 (92.2%)	32,416/35,176 (92.2%)	1		1		1	
CP ≥ 2	685/8794 (7.8%)	2760/35,176 (7.9%)	0.99 (0.91–1.08)	0.858	0.99 (0.90–1.08)	0.782	1.00 (0.91–1.09)	0.937
Age < 65 years old (n = 8380)								
No CP	1549/1676 (92.4%)	6087/6704 (90.8%)	1		1		1	
CP ≥ 2	127/1676 (7.6%)	617/6704 (9.2%)	0.81 (0.66–0.99)	0.037*	0.81 (0.66–0.99)	0.039*	0.81 (0.66–0.99)	0.037*
Age ≥ 65 years old (n = 35,590)								
No CP	6560/7118 (92.2%)	26,329/28,472 (92.5%)	1		1		1	
CP ≥ 2	558/7118 (7.8%)	2143/28,472 (7.5%)	1.05 (0.95–1.15)	0.368	1.06 (0.96–1.16)	0.273	1.05 (0.95–1.16)	0.345
Men (n = 21,020)								
No CP	3834/4204 (91.2%)	15,352/16,816 (91.3%)	1		1		1	
CP ≥ 2	370/4204 (8.8%)	1464/16,816 (8.7%)	1.01 (0.90–1.14)	0.845	1.02 (0.91–1.16)	0.696	1.02 (0.91–1.16)	0.704
Women (n = 22,950)								
No CP	4275/4590 (93.1%)	17,064/18,360 (92.9%)	1		1		1	
CP ≥ 2	315/4590 (6.9%)	1296/18,360 (7.1%)	0.97 (0.85–1.10)	0.645	0.98 (0.86–1.11)	0.707	0.96 (0.84–1.09)	0.544
Low income (n = 18,740)								
No CP	3495/3748 (93.3%)	13,906/14,992 (92.8%)	1		1		1	
CP ≥ 2	253/3748 (6.8%)	1086/14,992 (7.2%)	0.93 (0.80–1.07)	0.294	0.94 (0.81–1.08)	0.363	0.94 (0.81–1.08)	0.377
High income (n = 25,230)								
No CP	4614/5046 (91.4%)	18,510/20,184 (91.7%)	1		1		1	
CP ≥ 2	432/5046 (8.6%)	1674/20,184 (8.3%)	1.04 (0.93–1.16)	0.535	1.04 (0.93–1.17)	0.451	1.03 (0.92–1.15)	0.608
Urban residents (n = 16,630)								
No CP	3035/3326 (91.3%)	12,058/13,304 (90.6%)	1		1		1	
CP ≥ 2	291/3326 (8.8%)	1246/13,304 (9.4%)	0.93 (0.81–1.06)	0.272	0.94 (0.82–1.07)	0.345	0.93 (0.81–1.07)	0.309
Rural residents (n = 27,340)								
No CP	5074/5468 (92.8%)	20,358/21,872 (93.1%)	1		1		1	
CP ≥ 2	394/5468 (7.2%)	1514/21,872 (6.9%)	1.04 (0.93–1.17)	0.457	1.05 (0.94–1.18)	0.390	1.04 (0.93–1.17)	0.488
Underweight (n = 1617)								
No CP	301/318 (94.7%)	1229/1299 (94.6%)	1		1		1	
CP ≥ 2	17/318 (5.4%)	70/1299 (5.4%)	0.99 (0.58–1.71)	0.976	1.00 (0.58–1.74)	0.990	1.04 (0.60–1.82)	0.887
Normal weight (n = 15,612)								
No CP	2838/3098 (91.6%)	11,579/12,514 (92.5%)	1		1		1	
CP ≥ 2	260/3098 (8.4%)	935/12,514 (7.5%)	1.13 (0.98–1.31)	0.085	1.14 (0.99–1.32)	0.069	1.13 (0.98–1.31)	0.091
Overweight (n = 11,480)								
No CP	2135/2308 (92.5%)	8413/9172 (91.7%)	1		1		1	
CP ≥ 2	173/2308 (7.5%)	759/9172 (8.3%)	0.90 (0.76–1.07)	0.221	0.90 (0.76–1.07)	0.253	0.91 (0.77–1.09)	0.309
Obese (n = 15,261)								
No CP	2835/3070 (92.4%)	11,195/12,191 (91.8%)	1		1		1	
CP ≥ 2	235/3070 (7.7%)	996/12,191 (8.2%)	0.93 (0.80–1.08)	0.349	0.94 (0.81–1.10)	0.447	0.92 (0.79–1.07)	0.281
Non-smoker (n = 32,525)								
No CP	6267/6765 (92.6%)	23,827/25,760 (92.5%)	1		1		1	
CP ≥ 2	498/6765 (7.4%)	1933/25,760 (7.5%)	0.98 (0.88–1.09)	0.693	0.98 (0.88–1.08)	0.647	0.97 (0.87–1.07)	0.520
Past smoker and current smoker (n = 11,445)								
No CP	1842/2029 (90.8%)	8589/9416 (91.2%)	1		1		1	
CP ≥ 2	187/2029 (9.2%)	827/9416 (8.8%)	1.05 (0.89–1.25)	0.533	1.07 (0.91–1.27)	0.399	1.07 (0.90–1.27)	0.433
Alcohol consumption < 1 time a week (n = 29,626)								
No CP	5756/6243 (92.2%)	21,617/23,383 (92.5%)	1		1		1	

CP ≥ 2	487/6243 (7.8%)	1766/23,383 (7.6%)	1.04 (0.93–1.15)	0.507	1.03 (0.93–1.15)	0.554	1.02 (0.92–1.14)	0.660
Alcohol consumption ≥ 1 time a week (n = 14,344)								
No CP	2353/2551 (92.2%)	10,799/11,793 (91.6%)	1		1		1	
CP ≥ 2	198/2551 (7.8%)	994/11,793 (8.4%)	0.91 (0.78–1.07)	0.269	0.93 (0.79–1.09)	0.384	0.93 (0.79–1.09)	0.371
SBP < 140 mmHg and DBP < 90 mmHg (n = 30,124)								
No CP	5216/5669 (92%)	22,452/24,455 (91.8%)	1		1		1	
CP ≥ 2	453/5669 (8%)	2003/24,455 (8.2%)	0.97 (0.88–1.08)	0.623	0.99 (0.89–1.10)	0.789	0.98 (0.88–1.09)	0.730
SBP ≥ 140 mmHg or DBP ≥ 90 mmHg (n = 13,846)								
No CP	2893/3125 (92.6%)	9964/10,721 (92.9%)	1		1		1	
CP ≥ 2	232/3125 (7.4%)	757/10,721 (7.1%)	1.06 (0.91–1.23)	0.488	1.05 (0.90–1.22)	0.553	1.04 (0.89–1.21)	0.660
Fasting blood glucose < 100 mg/dL (n = 24,375)								
No CP	4261/4613 (92.4%)	18,220/19,762 (92.2%)	1		1		1	
CP ≥ 2	352/4613 (7.6%)	1542/19,762 (7.8%)	0.98 (0.87–1.10)	0.696	0.98 (0.87–1.11)	0.764	0.98 (0.87–1.11)	0.804
Fasting blood glucose ≥ 100 mg/dL (n = 19,595)								
No CP	3848/4181 (92%)	14,196/15,414 (92.1%)	1		1		1	
CP ≥ 2	333/4181 (8%)	1218/15,414 (7.9%)	1.01 (0.89–1.14)	0.894	1.02 (0.90–1.16)	0.766	1.00 (0.88–1.14)	0.991
Total cholesterol < 200mg/dL (n = 25,115)								
No CP	4769/5169 (92.3%)	18,368/19,946 (92.1%)	1		1		1	
CP ≥ 2	400/5169 (7.7%)	1578/19,946 (7.9%)	0.98 (0.87–1.09)	0.683	0.98 (0.88–1.10)	0.769	0.98 (0.87–1.10)	0.678
Total cholesterol ≥ 200mg/dL (n = 18,855)								
No CP	3340/3625 (92.1%)	14,048/15,230 (92.2%)	1		1		1	
CP ≥ 2	285/3625 (7.9%)	1182/15,230 (7.8%)	1.01 (0.89–1.16)	0.838	1.03 (0.90–1.18)	0.662	1.02 (0.89–1.17)	0.737
CCI score = 0 (n = 19,473)								
No CP	2458/2649 (92.8%)	15,437/16,824 (91.8%)	1		1		1	
CP ≥ 2	191/2649 (7.2%)	1387/16,824 (8.2%)	1.01 (0.89–1.16)	0.838	1.03 (0.90–1.18)	0.662	0.85 (0.72–0.99)	0.040*
CCI score = 1 (n = 8885)								
No CP	1872/2030 (92.2%)	6335/6855 (92.4%)	1		1		1	
CP ≥ 2	158/2030 (7.8%)	520/6855 (7.6%)	1.03 (0.85–1.24)	0.767	1.01 (0.84–1.22)	0.931	1.01 (0.84–1.22)	0.897
CCI score ≥ 2 (n = 15,612)								
No CP	3779/4115 (91.8%)	10,644/11,497 (92.6%)	1		1		1	
CP ≥ 2	336/4115 (8.2%)	853/11,497 (7.4%)	1.11 (0.97–1.27)	0.122	1.11 (0.97–1.27)	0.121	1.11 (0.97–1.27)	0.129

Abbreviations: CP, chronic periodontitis; PD, Parkinson's disease; SBP, systolic blood pressure; DBP, diastolic blood pressure; CCI, Charlson Comorbidity Index.

\* Conditional or unconditional logistic regression analysis, Significance at  $p < 0.05$ .

† Stratified model for age, sex, income, and region of residence.

‡ Model 1 was adjusted for smoking, alcohol consumption, obesity and CCI scores.

§ Model 2 was adjusted for model 1 plus total cholesterol, systolic blood pressure, diastolic blood pressure, and fasting blood glucose.

**Supplementary Table S2.** Crude and adjusted odd ratios of chronic periodontitis (CP) for Parkinson's disease (PD) when participants are diagnosed with CP  $\geq 3$  within 1 year before index date.

	N of PD	N of Control	Odd ratios for PD (95% confidence interval)						
	(exposure/total, %)	(exposure/total, %)	Crude†	p	Model 1†‡	p	Model 2†§	p	
Total (n = 43,970)									
No CP	8395/8794 (95.5%)	33,671/35,176 (95.7%)	1		1		1		
CP ≥ 3	399/8794 (4.5%)	1505/35,176 (4.3%)	1.06 (0.95–1.19)	0.285	1.05 (0.94–1.18)	0.360	1.06 (0.95–1.19)	0.314	
Age < 65 years old (n = 8380)									
No CP	1601/1676 (95.5%)	6378/6704 (95.1%)	1		1		1		
CP ≥ 3	75/1676 (4.5%)	326/6704 (4.9%)	0.92 (0.71–1.18)	0.506	0.91 (0.71–1.18)	0.495	0.90 (0.70–1.17)	0.452	
Age ≥ 65 years old (n = 35,590)									
No CP	6794/7118 (95.5%)	27,293/28,472 (95.9%)	1		1		1		
CP ≥ 3	324/7118 (4.6%)	1179/28,472 (4.1%)	1.10 (0.97–1.25)	0.123	1.11 (0.98–1.26)	0.106	1.10 (0.97–1.25)	0.145	
Men (n = 21,020)									
No CP	3980/4204 (94.7%)	15,987/16,816 (95.1%)	1		1		1		
CP ≥ 3	224/4204 (5.3%)	829/16,816 (4.9%)	1.09 (0.93–1.26)	0.290	1.09 (0.94–1.27)	0.256	1.09 (0.93–1.27)	0.275	
Women (n = 22,950)									
No CP	4415/4590 (96.2%)	17,684/18,360 (96.3%)	1		1		1		
CP ≥ 3	175/4590 (3.8%)	676/18,360 (3.7%)	1.04 (0.88–1.23)	0.672	1.04 (0.88–1.23)	0.662	1.02 (0.86–1.21)	0.827	
Low income (n = 18,740)									
No CP	3593/3748 (95.9%)	14,413/14,992 (96.1%)	1		1		1		
CP ≥ 3	155/3748 (4.1%)	579/14,992 (3.9%)	1.07 (0.90–1.29)	0.440	1.08 (0.90–1.30)	0.402	1.07 (0.89–1.29)	0.441	
High income (n = 25,230)									
No CP	4802/5046 (95.2%)	19,258/20,184 (95.4%)	1		1		1		
CP ≥ 3	244/5046 (4.8%)	926/20,184 (4.6%)	1.06 (0.91–1.22)	0.454	1.06 (0.92–1.23)	0.430	1.04 (0.90–1.21)	0.559	
Urban residents (n = 16,630)									
No CP	3139/3326 (94.4%)	12,601/13,304 (94.7%)	1		1		1		
CP ≥ 3	187/3326 (5.6%)	703/13,304 (5.3%)	1.07 (0.90–1.26)	0.438	1.07 (0.91–1.27)	0.411	1.06 (0.90–1.26)	0.480	
Rural residents (n = 27,340)									
No CP	5256/5468 (96.1%)	21,070/21,872 (96.3%)	1		1		1		
CP ≥ 3	212/5468 (3.9%)	802/21,872 (3.7%)	1.06 (0.91–1.24)	0.462	1.06 (0.91–1.24)	0.437	1.05 (0.90–1.23)	0.545	
Underweight (n = 1617)									
No CP	311/318 (97.8%)	1257/1299 (96.8%)	1		1		1		
CP ≥ 3	7/318 (2.2%)	42/1299 (3.2%)	0.67 (0.30–1.51)	0.340	0.71 (0.31–1.59)	0.402	0.74 (0.33–1.69)	0.479	
Normal weight (n = 15,612)									
No CP	2944/3098 (95.0%)	12,003/12,514 (95.9%)	1		1		1		
CP ≥ 3	154/3098 (5.0%)	511/12,514 (4.1%)	1.23 (1.02–1.48)	0.029*	1.22 (1.01–1.47)	0.036*	1.21 (1.01–1.46)	0.044*	
Overweight (n = 11,480)									
No CP	2202/2308 (95.4%)	8753/9172 (95.4%)	1		1		1		
CP ≥ 3	106/2308 (4.6%)	419/9172 (4.6%)	1.01 (0.81–1.25)	0.960	1.01 (0.81–1.26)	0.916	1.01 (0.81–1.26)	0.920	
Obese (n = 15,261)									
No CP	2938/3070 (95.7%)	11,658/12,191 (95.6%)	1		1		1		
CP ≥ 3	132/3070 (4.3%)	533/12,191 (4.4%)	0.98 (0.81–1.19)	0.861	0.99 (0.82–1.21)	0.945	0.97 (0.79–1.18)	0.733	
Non-smoker (n = 32,525)									
No CP	6478/6765 (95.8%)	24,731/25,760 (96%)	1		1		1		
CP ≥ 3	287/6765 (4.2%)	1029/25,760 (4.0%)	1.06 (0.93–1.22)	0.357	1.05 (0.92–1.21)	0.442	1.04 (0.91–1.19)	0.563	
Past smoker and current smoker (n = 11,445)									
No CP	1917/2029 (94.5%)	8940/9416 (94.9%)	1		1		1		
CP ≥ 3	112/2029 (5.5%)	476/9416 (5.1%)	1.10 (0.89–1.36)	0.390	1.11 (0.89–1.37)	0.356	1.09 (0.88–1.36)	0.414	
Alcohol consumption < 1 time a week (n = 29,626)									

No CP	2445/2551 (95.8%)	11,223/11,793 (95.2%)	1		1		1	
CP ≥ 3	106/2551 (4.2%)	570/11,793 (4.8%)	1.18 (1.03–1.35)	0.015*	1.17 (1.02–1.34)	0.024*	1.15 (1.01–1.32)	0.042*
Alcohol consumption ≥ 1 time a week (n = 14,344)								
No CP	5406/5669 (95.4%)	23,369/24,455 (95.6%)	1		1		1	
CP ≥ 3	263/5669 (4.6%)	1086/24,455 (4.4%)	0.85 (0.69–1.06)	0.143	0.87 (0.70–1.07)	0.189	0.87 (0.70–1.08)	0.197
SBP < 140 mmHg and DBP < 90 mmHg (n = 30,124)								
No CP	2989/3125 (95.7%)	10,302/10,721 (96.1%)	1		1		1	
CP ≥ 3	136/3125 (4.4%)	419/10,721 (3.9%)	1.05 (0.91–1.20)	0.510	1.05 (0.92–1.21)	0.452	1.05 (0.91–1.20)	0.524
SBP ≥ 140 mmHg or DBP ≥ 90 mmHg (n = 13,846)								
No CP	4409/4613 (95.6%)	18,947/19,762 (95.9%)	1		1		1	
CP ≥ 3	204/4613 (4.4%)	815/19,762 (4.1%)	1.12 (0.92–1.36)	0.266	1.09 (0.89–1.33)	0.387	1.07 (0.88–1.31)	0.488
Fasting blood glucose < 100 mg/dL (n = 24,375)								
No CP	4409/4613 (95.6%)	18,947/19,762 (95.9%)	1		1		1	
CP ≥ 3	204/4613 (4.4%)	815/19,762 (4.1%)	1.08 (0.92–1.26)	0.362	1.08 (0.92–1.27)	0.333	1.09 (0.93–1.27)	0.309
Fasting blood glucose ≥ 100 mg/dL (n = 19,595)								
No CP	3986/4181 (95.3%)	14,724/15,414 (95.5%)	1		1		1	
CP ≥ 3	195/4181 (4.7%)	690/15,414 (4.5%)	1.04 (0.89–1.23)	0.601	1.05 (0.89–1.24)	0.540	1.02 (0.87–1.21)	0.776
Total cholesterol < 200mg/dL (n = 25,115)								
No CP	4935/5169 (95.5%)	19,069/19,946 (95.6%)	1		1		1	
CP ≥ 3	234/5169 (4.5%)	877/19,946 (4.4%)	1.03 (0.89–1.20)	0.683	1.04 (0.90–1.21)	0.604	1.03 (0.89–1.20)	0.708
Total cholesterol ≥ 200mg/dL (n = 18,855)								
No CP	3460/3625 (95.5%)	14,602/15,230 (95.9%)	1		1		1	
CP ≥ 3	165/3625 (4.6%)	628/15,230 (4.1%)	1.11 (0.93–1.32)	0.248	1.12 (0.94–1.34)	0.204	1.11 (0.93–1.33)	0.251
CCI score = 0 (n = 19,473)								
No CP	2552/2649 (96.3%)	16,074/16,824 (95.5%)	1		1		1	
CP ≥ 3	97/2649 (3.7%)	750/16,824 (4.5%)	0.81 (0.66–1.01)	0.062	0.80 (0.65–1.00)	0.046*	0.81 (0.65–1.00)	0.049*
CCI score = 1 (n = 8885)								
No CP	1935/2030 (95.3%)	6582/6855 (96.0%)	1		1		1	
CP ≥ 3	95/2030 (4.7%)	273/6855 (4.0%)	1.18 (0.93–1.50)	0.167	1.17 (0.92–1.49)	0.203	1.17 (0.92–1.49)	0.207
CCI score ≥ 2 (n = 15,612)								
No CP	3908/4115 (95.0%)	11,015/11,497 (95.8%)	1		1		1	
CP ≥ 3	207/4115 (5.0%)	482/11,497 (4.2%)	1.21 (1.02–1.43)	0.025*	1.20 (1.02–1.42)	0.032*	1.20 (1.01–1.42)	0.034*

Abbreviations: CP, chronic periodontitis; PD, Parkinson's disease; SBP, systolic blood pressure; DBP, diastolic blood pressure; CCI, Charlson Comorbidity Index.

\* Conditional or unconditional logistic regression analysis, Significance at  $p < 0.05$ .

† Stratified model for age, sex, income, and region of residence.

‡ Model 1 was adjusted for smoking, alcohol consumption, obesity and CCI scores.

§ Model 2 was adjusted for model 1 plus total cholesterol, systolic blood pressure, diastolic blood pressure, and fasting blood glucose.

**Supplementary Table S3.** Crude and adjusted odd ratios of chronic periodontitis (CP) for Parkinson's disease (PD) when participants are diagnosed with CP  $\geq 1$  within 2 years before index date.

	N of PD	N of Control	Odd ratios for PD (95% confidence interval)					
	(exposure/total, % )	(exposure/total, %)	Crude†	<i>p</i>	Model 1†‡	<i>p</i>	Model 2†§	<i>p</i>
Total (n = 43,970)								
No CP	6415/8794 (73.0%)	25,743/35,176 (73.2%)	1		1		1	
CP ≥ 1	2379/8794 (27.1%)	9433/35,176 (26.8%)	1.01 (0.96–1.07)	0.653	1.01 (0.96–1.07)	0.727	1.02 (0.96–1.07)	0.573
Age < 65 years old (n = 8380)								
No CP	1177/1676 (70.2%)	4660/6704 (69.5%)	1		1		1	
CP ≥ 1	499/1676 (29.8%)	2044/6704 (30.5%)	0.97 (0.86–1.09)	0.570	0.97 (0.86–1.09)	0.557	0.98 (0.87–1.10)	0.730
Age ≥ 65 years old (n = 35,590)								
No CP	5238/7118 (73.6%)	21,083/28,472 (74.1%)	1		1		1	
CP ≥ 1	1880/7118 (26.4%)	7389/28,472 (26.0%)	1.02 (0.97–1.09)	0.427	1.03 (0.97–1.10)	0.305	1.02 (0.97–1.09)	0.422
Men (n = 21,020)								
No CP	2983/4204 (71%)	11,984/16,816 (71.3%)	1		1		1	
CP ≥ 1	1221/4204 (29%)	4832/16,816 (28.7%)	1.02 (0.94–1.09)	0.692	1.03 (0.96–1.11)	0.431	1.03 (0.95–1.11)	0.478
Women (n = 22,950)								
No CP	3432/4590 (74.8%)	13,759/18,360 (74.9%)	1		1		1	
CP ≥ 1	1158/4590 (25.2%)	4601/18,360 (25.1%)	1.01 (0.94–1.09)	0.813	1.01 (0.93–1.09)	0.865	1.00 (0.93–1.08)	0.998
Low income (n = 18,740)								
No CP	2781/3748 (74.2%)	11,189/14,992 (74.6%)	1		1		1	
CP ≥ 1	967/3748 (25.8%)	3803/14,992 (25.4%)	1.02 (0.94–1.11)	0.585	1.03 (0.95–1.12)	0.508	1.02 (0.94–1.11)	0.608
High income (n = 25,230)								
No CP	3634/5046 (72.0%)	14,554/20,184 (72.1%)	1		1		1	
CP ≥ 1	1412/5046 (28.0%)	5630/20,184 (27.9%)	1.00 (0.94–1.08)	0.899	1.01 (0.94–1.08)	0.772	1.01 (0.94–1.08)	0.870
Urban residents (n = 16,630)								
No CP	2338/3326 (70.3%)	9301/13,304 (69.9%)	1		1		1	
CP ≥ 1	988/3326 (29.7%)	4003/13,304 (30.1%)	0.98 (0.90–1.07)	0.667	0.99 (0.91–1.08)	0.861	0.99 (0.91–1.08)	0.870
Rural residents (n = 27,340)								
No CP	4077/5468 (74.6%)	16,442/21,872 (75.2%)	1		1		1	
CP ≥ 1	1391/5468 (25.4%)	5430/21,872 (24.8%)	1.03 (0.97–1.11)	0.347	1.04 (0.97–1.11)	0.314	1.03 (0.96–1.10)	0.445
Underweight (n = 1617)								
No CP	237/318 (74.5%)	1023/1299 (78.8%)	1		1		1	
CP ≥ 1	81/318 (25.5%)	276/1299 (21.3%)	1.27 (0.95–1.68)	0.104	1.23 (0.92–1.65)	0.154	1.24 (0.92–1.66)	0.157
Normal weight (n = 15,612)								
No CP	2271/3098 (73.3%)	9262/12,514 (74.0%)	1		1		1	
CP ≥ 1	827/3098 (26.7%)	3252/12,514 (26.0%)	1.04 (0.95–1.13)	0.420	1.04 (0.95–1.14)	0.379	1.04 (0.95–1.14)	0.387
Overweight (n = 11,480)								
No CP	1669/2308 (72.3%)	6619/9172 (72.2%)	1		1		1	
CP ≥ 1	639/2308 (27.7%)	2553/9172 (27.8%)	0.99 (0.90–1.10)	0.887	1.00 (0.90–1.11)	0.973	1.01 (0.91–1.12)	0.868
Obese (n = 15,261)								
No CP	2238/3070 (72.9%)	8839/12,191 (72.5%)	1		1		1	
CP ≥ 1	832/3070 (27.1%)	3352/12,191 (27.5%)	0.98 (0.90–1.07)	0.662	0.99 (0.90–1.08)	0.782	0.97 (0.88–1.06)	0.476
Non-smoker (n = 32,525)								
No CP	4995/6765 (73.8%)	18,980/25,760 (73.7%)	1		1		1	
CP ≥ 1	1770/6765 (26.2%)	6780/25,760 (26.3%)	0.99 (0.93–1.05)	0.796	0.98 (0.93–1.05)	0.615	0.98 (0.92–1.04)	0.534
Past smoker and current smoker (n = 11,445)								
No CP	1420/2029 (70.0%)	6763/9416 (71.8%)	1		1		1	
CP ≥ 1	609/2029 (30.0%)	2653/9416 (28.2%)	1.09 (0.98–1.21)	0.096	1.12 (1.00–1.24)	0.044	1.11 (1.00–1.24)	0.053
Alcohol consumption < 1 time a week (n = 29,626)								

No CP	4617/6243 (74%)	17,454/23,383 (74.6%)	1		1		1	
CP ≥ 1	1626/6243 (26.1%)	5929/23,383 (25.4%)	1.04 (0.97–1.11)	0.265	1.03 (0.97–1.10)	0.367	1.02 (0.95–1.09)	0.611
Alcohol consumption ≥ 1 time a week (n = 14,344)								
No CP	1798/2551 (70.5%)	8289/11,793 (70.3%)	1		1		1	
CP ≥ 1	753/2551 (29.5%)	3504/11,793 (29.7%)	0.99 (0.90–1.09)	0.845	1.01 (0.92–1.11)	0.835	1.00 (0.91–1.10)	0.947
SBP < 140 mmHg and DBP < 90 mmHg (n = 30,124)								
No CP	4108/5669 (72.5%)	17,673/24,455 (72.3%)	1		1		1	
CP ≥ 1	1561/5669 (27.5%)	6782/24,455 (27.7%)	0.99 (0.93–1.06)	0.766	0.99 (0.93–1.06)	0.783	0.99 (0.92–1.05)	0.686
SBP ≥ 140 mmHg or DBP ≥ 90 mmHg (n = 13,846)								
No CP	2307/3125 (73.8%)	8070/10,721 (75.3%)	1		1		1	
CP ≥ 1	818/3125 (26.2%)	2651/10,721 (24.7%)	1.08 (0.99–1.18)	0.100	1.08 (0.99–1.19)	0.094	1.08 (0.98–1.18)	0.116
Fasting blood glucose < 100 mg/dL (n = 24,375)								
No CP	3376/4613 (73.2%)	14,499/19,762 (73.4%)	1		1		1	
CP ≥ 1	1237/4613 (26.8%)	5263/19,762 (26.6%)	1.01 (0.94–1.09)	0.799	1.02 (0.95–1.09)	0.633	1.02 (0.95–1.10)	0.556
Fasting blood glucose ≥ 100 mg/dL (n = 19,595)								
No CP	3039/4181 (72.7%)	11,244/15,414 (73%)	1		1		1	
CP ≥ 1	1142/4181 (27.3%)	4170/15,414 (27.1%)	1.01 (0.94–1.09)	0.736	1.02 (0.94–1.10)	0.675	1.00 (0.92–1.08)	0.994
Total cholesterol < 200mg/dL (n = 25,115)								
No CP	3738/5169 (72.3%)	14,579/19,946 (73.1%)	1		1		1	
CP ≥ 1	1431/5169 (27.7%)	5367/19,946 (26.9%)	1.04 (0.97–1.11)	0.260	1.04 (0.97–1.12)	0.252	1.04 (0.97–1.12)	0.268
Total cholesterol ≥ 200mg/dL (n = 18,855)								
No CP	2677/3625 (73.9%)	11,164/15,230 (73.3%)	1		1		1	
CP ≥ 1	948/3625 (26.2%)	4066/15,230 (26.7%)	0.97 (0.90–1.06)	0.506	0.98 (0.91–1.07)	0.697	0.97 (0.89–1.06)	0.513
CCI score = 0 (n = 19,473)								
No CP	1966/2649 (74.2%)	12,180/16,824 (72.4%)	1		1		1	
CP ≥ 1	683/2649 (25.8%)	4644/16,824 (27.6%)	0.91 (0.83–1.00)	0.051	0.90 (0.82–0.99)	0.024*	0.90 (0.82–0.99)	0.027*
CCI score = 1 (n = 8885)								
No CP	1486/2030 (73.2%)	5034/6855 (73.4%)	1		1		1	
CP ≥ 1	544/2030 (26.8%)	1821/6855 (26.6%)	1.01 (0.90–1.13)	0.834	1.00 (0.89–1.12)	0.976	1.00 (0.89–1.12)	0.980
CCI score ≥ 2 (n = 15,612)								
No CP	2963/4115 (72.0%)	8529/11,497 (74.2%)	1		1		1	
CP ≥ 1	1152/4115 (28.0%)	2968/11,497 (25.8%)	1.12 (1.03–1.21)	0.007*	1.11 (1.02–1.20)	0.012*	1.11 (1.02–1.20)	0.012*

Abbreviations: CP, chronic periodontitis; PD, Parkinson's disease; SBP, systolic blood pressure; DBP, diastolic blood pressure; CCI, Charlson Comorbidity Index.

\* Conditional or unconditional logistic regression analysis, Significance at  $p < 0.05$ .

† Stratified model for age, sex, income, and region of residence.

‡ Model 1 was adjusted for smoking, alcohol consumption, obesity and CCI scores.

§ Model 2 was adjusted for model 1 plus total cholesterol, systolic blood pressure, diastolic blood pressure, and fasting blood glucose.