Supplemental Table 1. Unadjusted prevalence and multivariate-adjusted odds ratios for celiac disease and PWAG among NHANES participants **20+ years** (N=15,823), United States, 2009-2014

	Celiac disease				PWAG			
		Unadjusted prevalence (%)	Multivariate-adjusted*			Unadjusted prevalence (%)	Multivariate-adjusted*	
	N		OR†	95% CI	N		OR†	95% CI
Total population	79	0.71	--	--	184	1.23	--	--
Latitude (ºN)								
<35	7	0.12	1.0		51	0.90	1.0	
35-<40	21	0.64[1]	4.87	1.70-13.94	49	0.78	0.77	0.44-1.35
≥40	51	1.13[1]	7.20	2.66-19.46	84	1.77[1,2]	1.81	1.04-3.17
Age (years)								
20-39	26	0.70	1.0		63	1.27	1.0	
40-59	28	0.70	0.94	0.51-1.74	67	1.34	1.01	0.58-1.74
≥60	25	0.75	1.02	0.51-2.04	54	1.01	0.78	0.39-1.57
Sex								
Men	33	0.59	1.0		80	0.92	1.0	
Women	46	0.82	1.28	0.76-2.17	104	1.53[1]	1.73	1.19-2.52
Race-ethnicity								
Non-Hispanic white	57	0.94	1.0		75	1.27	1.0	
Non-Hispanic black	5	0.14[1]	0.22	0.07-0.67	44	1.29	1.39	0.87-2.22
Hispanic	11	0.28[1]	0.71	0.28-1.81	33	0.88	1.06	0.61-1.83
Other	6	0.30[1]	0.35	0.11-1.09	32	1.46	1.22	0.65-2.32
Education (years)								
<12	8	0.23	0.36	0.16-0.83	28	0.82	0.81	0.40-1.64
12	13	0.38	0.48	0.25-0.93	30	0.78	0.61	0.32-1.16
>12	58	0.96[1,2]	1.0		125	1.50[1,2]	1.0	
Income‡								
PIR 0-<1.7	25	0.58	1.02	0.51-2.03	57	0.81	0.48	0.28-0.83

PIR 1.7-<4.0	22	0.62	0.85	0.45-1.59	52	1.20	0.76	0.43-1.34
PIR ≥4.0	28	0.97	1.0		60	1.69[1]	1.0	
BMI (kg/m^2)								
<25	35	1.13	1.0		76	1.78	1.0	
25-<30	20	0.62[1]	0.52	0.29-0.94	45	0.96[1]	0.59	0.36-0.99
≥30	22	0.44[1]	0.45	0.23-0.88	58	0.99[1]	0.65	0.42-0.99

PWAG, people without celiac disease avoiding gluten; NHANES, National Health and Nutrition Examination Survey; OR, odds ratio; CI, confidence interval; PIR, poverty income ratio; BMI, body mass index.

[1]p<0.05 compared with first-listed group.
[2]p<0.05 compared with second-listed group.

*Adjusted for all other factors listed (N=14,317).
†Estimated using logistic regression analysis.
‡PIR is family income to poverty threshold ratio. Cut-points were tertiles.

Supplemental Table 2. Unadjusted prevalence and multivariate-adjusted odds ratios for celiac disease and PWAG **substituting region for latitude** among NHANES participants 6+ years (N=22,277), United States, 2009-2014

	Celiac disease				PWAG			
	N	Unadjusted prevalence (%)	Multivariate-adjusted* OR†	95% CI	N	Unadjusted prevalence (%)	Multivariate-adjusted OR	95% CI
Total population	109	0.72	--	--	213	1.11	--	--
Region								
Northeast	30	1.11	2.28	1.11-4.71	48	1.88	2.86	1.61-5.07
Midwest	26	0.94	1.79	0.84-3.79	39	0.97	1.49	0.64-3.43
South	22	0.37[1,2]	1.0		71	0.63[1]	1.0	
West	31	0.70	1.76	0.76-4.12	55	1.36	2.46	1.27-4.76
Age (years)								
6-19	30	0.74	0.86	0.53-1.38	29	0.60	0.48	0.27-0.84
20-39	26	0.70	1.0		63	1.27[1]	1.0	
40-59	28	0.70	0.93	0.50-1.76	67	1.34[1]	1.02	0.60-1.76
≥60	25	0.75	0.96	0.48-1.90	54	1.01	0.75	0.37-1.51
Sex								
Male	40	0.55	1.0		95	0.83	1.0	
Female	69	0.88	1.51	0.94-2.44	118	1.38[1]	1.71	1.17-2.48
Race-ethnicity								
Non-Hispanic white	75	0.97	1.0		84	1.18	1.0	
Non-Hispanic black	6	0.12[1]	0.17	0.06-0.46	53	1.13	1.32	0.85-2.05
Hispanic	19	0.31[1]	0.46	0.21-1.02	43	0.80	0.86	0.53-1.39
Other	9	0.28[1]	0.27	0.10-0.75	33	1.17	0.93	0.48-1.79
Education (years)‡								
<12	15	0.32	0.54	0.24-1.21	35	0.74	0.76	0.39-1.48
12	17	0.37	0.53	0.27-1.01	35	0.73	0.62	0.34-1.14
>12	77	0.95[1,2]	1.0		142	1.35[1,2]	1.0	

Income§								
PIR 0-<1.7	40	0.57	0.97	0.53-1.78	75	0.78	0.63	0.36-1.11
PIR 1.7-<4.0	28	0.62	0.80	0.48-1.33	59	1.11	0.86	0.50-1.48
PIR ≥4.0	35	1.01	1.0		64	1.52[1]	1.0	
BMI‖								
Normal weight	60	1.08	1.0		89	1.32	1.0	
Overweight	23	0.60[1]	0.52	0.30-0.91	51	0.94	0.68	0.40-1.15
Obese	24	0.42[1]	0.44	0.22-0.85	68	1.02	0.80	0.53-1.20

PWAG, people without celiac disease avoiding gluten; NHANES, National Health and Nutrition Examination Survey; OR, odds ratio; CI, confidence interval; PIR, poverty income ratio; BMI, body mass index.

[1]p<0.05 compared with first-listed group.
[2]p<0.05 compared with second-listed group.

*Adjusted for all other factors listed (N=20,178).
†Estimated using logistic regression analysis.
‡For persons 6-19 years, education level was the higher of the household reference person or that person's spouse.
§PIR is family income to poverty threshold ratio. Cut-points were tertiles.
‖For persons 6-19 years, BMI was defined in age- and sex-specific percentiles as normal weight, <85th, overweight, 85th-<95th, and obese, ≥95th; for persons 20+ years, BMI was defined in kg/m^2 as normal weight, <25, overweight, 25-<30, and obese, ≥30.