Online Supporting Material

Supplemental Table 1: Association between mandatory folic acid fortification and low serum vitamin B_{12} status with and without anemia or macrocytosis among US adults age >50 years in NHANES[1]

	Pre-fortification		Post-fortification			
	N	% (95% CI)	N	% (95% CI)	Crude PR (95% CI)	Adjusted PR (95% CI)
Total	2,911	–	4,946	–	–	–
Serum vitamin B_{12} deficiency[3]	133	4.5 (3.2, 5.8)	181	4.2 (3.3, 5.2)	0.80 (0.55, 1.14)	0.95 (0.65, 1.38)
+ No anemia	110	4.0 (2.8, 5.2)	164	3.9 (3.0, 4.8)	0.83 (0.57, 1.20)	0.98 (0.67, 1.44)
+ Anemia[4]	23	0.5 (0.2, 0.8)	17	0.3 (0.1, 0.6)[2]	0.54 (0.25, 1.17)	0.68 (0.29, 1.59)
+ No macrocytosis	127	4.2 (2.9, 5.6)	171	4.1 (3.1, 5.0)	0.81 (0.55, 1.2)	0.96 (0.65, 1.43)
+ Macrocytosis[4]	6	–[2]	10	–[2]	–	–
Marginal deficiency[3]	772	26.2 (23.1, 29.4)	1041	21.8 (20.3,23.4)	0.75 (0.66, 0.87)	0.83 (0.73, 0.96)
+ No anemia	714	25.1 (22.0, 28.1)	946	20.7 (19.1, 22.2)	0.74 (0.64, 0.86)	0.82 (0.72, 0.95)
+ Anemia[4]	58	1.2 (0.7, 1.6)	95	1.1 (0.8, 1.5)	0.97 (0.63, 1.50)	0.99 (0.61, 1.59)
+ No macrocytosis	760	25.9 (22.9, 28.8)	1009	21.3 (19.7, 23.0)	0.75 (0.65, 0.85)	0.82 (0.72, 0.94)
+ Macrocytosis[4]	12	–[2]	32	0.5 (0.2, 0.8)	–	–
Serum vitamin B_{12} >258 pmol/L	2,006	69.3 (66.4, 72.2)	3,724	73.9 (72.0, 75.9)	1.12 (1.06, 1.17)	1.07 (1.02, 1.12)

[1]Values are percentages (95% confidence interval). Pre-fortification data were from NHANES III Phase 2 1991–1994 and post-fortification data were from NHANES 2001–2006. Analyses were weighted to account for the complex sampling design of NHANES and excluded participants with liver disease, renal dysfunction, heavy alcohol use, and treatment of anemia less than 3 months prior to survey participation. Prevalence and prevalence ratios (PR) were estimated using multinomial logistic regression adjusted for age, sex, race/ethnicity, BMI, CRP, smoking, and oral vitamin B_{12} supplement use.
[2]Estimates with relative standard errors (RSE) $\geq$30% were considered statistically unreliable. Estimates were reported for RSE = 30–39% and were not reported for RSE $\geq$40%.
[3]Serum vitamin B_{12} concentrations for deficiency was defined as <148 pmol/L; marginal deficiency was defined as 148–258 pmol/L.
[4]Anemia was defined as hemoglobin <130 g/L for men and <120 g/L for women. Macrocytosis was defined as mean corpuscular volume >100 fL.