Appendix 1. Modeling Results for Random Intercept and Random Slope Models of Cycle Length (Days) From Three-Prevaccination-Cycle Average to First and Second Vaccination Cycle

		Model 1: 1st Dose		Model 2: 2nd Doses	
Variable		Coefficient	98.75% CI	Coefficient	98.75% CI
Timing-vaccination interaction	Pre – Unvaccinated	Referent	-	Referent	-
	Post – Unvaccinated	0.07	-0.22, 0.36	0.07	-0.23, 0.37
	Pre – Vaccinated	-0.28	-0.53, -0.04	-0.24	-0.50, 0.01
	Post – Vaccinated	0.64	0.27, 1.01	0.84	0.44, 1.24
Age group	18-24	1.00	0.64, 1.37	1.00	0.62, 1.38
	25-29	0.55	0.27, 0.82	0.48	0.18, 0.77
	30-34	Referent	-	Referent	-
	35-39	-0.68	-1.06, -0.31	-0.78	-1.18, -0.37
	40-45	-1.24	-1.82, -0.66	-1.24	-1.86, -0.61
Race/ethnicity	Non-white	Referent	-	Referent	-
	White	-0.20	-0.56, 0.16	-0.19	-0.58, 0.20
	No data	-0.25	-0.63, 0.13	-0.26	-0.67, 0.14
BMI	Underweight/Normal	Referent	-	Referent	-
	Overweight	0.18	-0.18, 0.53	0.19	-0.19, 0.58
	Obese	0.87	0.40, 1.34	0.95	0.44, 1.46
	No data	0.11	-0.14, 0.36	0.15	-0.12, 0.41
Education	< 4-year degree	Referent	-	Referent	-
	≥ 4-year degree	0.10	-0.24, 0.43	0.12	-0.23, 0.47
	No data	0.05	-0.38, 0.48	0.19	-0.26, 0.65
Parity	Nulliparous	Referent	-	Referent	-
	Parous	-0.11	-0.48, 0.25	-0.12	-0.51, 0.26
	No data	0.08	-0.30, 0.45	-0.03	-0.43, 0.37
In Steady Relationship	No	Referent	-	Referent	-
	Yes	0.17	-0.18, 0.52	0.16	-0.21, 0.54
	No data	0.09	-0.36, 0.55	0.03	-0.46, 0.52
Intercept		28.66	28.07, 29.25	28.67	28.04, 29.30

* Estimates are adjusted for age, race, body mass index, educational attainment, parity, and relationship status.

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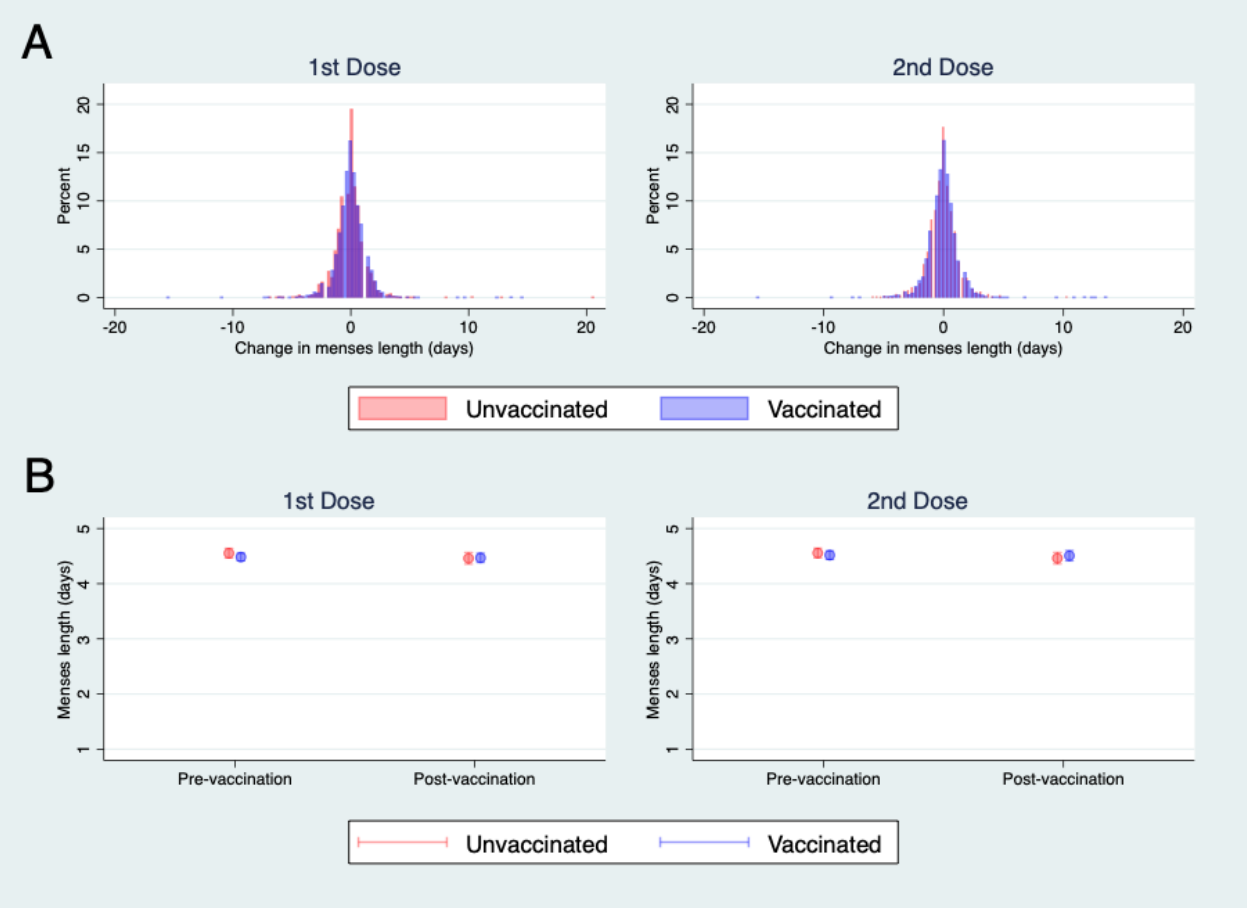
The authors provided this information as a supplement to their article.

Appendix 2. A. Overlayed histograms of the change in menses length (days) between the three prevaccination cycle average and the vaccination cycle for first dose (*left*) or second dose (*right*). Histograms for unvaccinated individuals are shown in *red*, vaccinated individuals are shown in *blue*, overlapping distributions appear as *purple*. B. Adjusted marginal means for menses length (days) for the three-prevaccination-cycle average and the vaccination cycle first dose (*left*) or second dose (*right*). Estimates are from mixed effects models with random intercepts and random slopes at the individual level, an interaction between vaccination status and prevaccination and postvaccination timing, and adjusted for age, race, body mass index, educational attainment, parity, and relationship status. Unvaccinated individuals are shown in *red*, vaccinated individuals are shown in *blue*, *error bars* represent 98.75% CIs.



Appendix 3. Modeling Results for Random Intercept and Random Slope Models of Menses Length (Days) From Three-Prevaccination-Cycle Average to First and Second Vaccination Cycle

		Model 1: 1st Dose		Model 2: 2nd Doses	
Variable		Coefficient	98.75% CI	Coefficient	98.75% CI
Timing-vaccination interaction	Pre – Unvaccinated	Referent	-	Referent	-
	Post – Unvaccinated	-0.09	-0.18, 0.00	-0.09	-0.18, 0.00
	Pre – Vaccinated	-0.07	-0.19, 0.05	-0.04	-0.16, 0.09
	Post – Vaccinated	0.08	-0.04, 0.19	0.08	-0.04, 0.20
Age group	18-24	0.49	0.32, 0.66	0.48	0.31, 0.66
	25-29	0.26	0.13, 0.39	0.23	0.09, 0.37
	30-34	Referent	-	Referent	-
	35-39	-0.15	-0.32, 0.03	-0.15	-0.34, 0.04
	40-45	-0.24	-0.51, 0.03	-0.33	-0.62, -0.04
Race/ethnicity	Non-white	Referent	-	Referent	-
	White	-0.05	-0.22, 0.11	-0.03	-0.21, 0.15
	No data	-0.24	-0.41, -0.06	-0.21	-0.40, -0.02
BMI	Underweight/Normal	Referent	-	Referent	-
	Overweight	0.00	-0.17, 0.16	0.02	-0.16, 0.20
	Obese	0.08	-0.14, 0.30	0.11	-0.13, 0.35
	No data	0.02	-0.10, 0.13	0.04	-0.08, 0.17
Education	< 4-year degree	Referent	-	Referent	-
	≥ 4-year degree	0.11	-0.05, 0.26	0.10	-0.06, 0.27
	No data	0.02	-0.18, 0.22	0.04	-0.17, 0.26
Parity	Nulliparous	Referent	-	Referent	-
	Parous	0.27	0.10, 0.44	0.28	0.10, 0.46
	No data	-0.08	-0.25, 0.10	-0.07	-0.26, 0.12
In Steady Relationship	No	Referent	-	Referent	-
	Yes	0.08	-0.08, 0.25	0.04	-0.14, 0.21
	No data	-0.05	-0.26, 0.16	-0.10	-0.32, 0.13
Intercept		4.35	4.08, 4.63	4.37	4.08, 4.66

* Estimates are adjusted for age, race, body mass index, educational attainment, parity, and relationship status.

Appendix 4, Mean Within-Individual Unadjusted Change in Cycle Length and Menses Length (Days; 98.75% Confidence Intervals) From Three-Prevaccination-Cycle Average to First or Second Vaccination Cycle, and Adjusted Difference in Change Compared to Unvaccinated After 500 Iterations of Imputation and Weighting With Covariate Balancing Propensity Scores and Bootstrapped Standard Errors

		Cycle length		Menses length	
	n	Change in length	Adjusted difference in change compared to unvaccinated*	Change in length	Adjusted difference in change compared to unvaccinated
1st dose					
Unvaccinated	1,556	0.11 (-0.39, 0.62)	-	-0.13 (-0.30, 0.04)	-
Vaccinated	2,403	0.54 (-0.10, 1.18)	0.52 (-0.13, 1.17)	0.12 (-0.09, 0.32)	0.09 (-0.11, 0.29)
2nd dose					
Unvaccinated	1,556	0.04 (-0.50, 0.57)	-	-0.22 (-0.38, -0.06)	-
Vaccinated	1,919	0.85 (0.17, 1.53)	0.88 (0.13, 1.63)	0.14 (-0.08, 0.36)	0.12 (-0.11, 0.34)

Appendix 5. Unadjusted Change in Cycle Length From Three-Prevaccination-Cycle Average to Coronavirus Disease 2019 (COVID-19) Vaccination Cycle, and Adjusted Difference in Change Compared to Unvaccinated, for First and Second Doses Received in Separate Cycles and for Both Doses Received in the Same Cycle

	n	Change in cycle length	Adjusted difference in change compared to unvaccinated
1st dose: 1 dose/cycle			
Unvaccinated	1,556	0.12 (-0.39, 0.62)	-
Vaccinated	2,045	0.28 (-0.40, 0.95)	0.24 (-0.43, 0.90)
2nd dose: 1 dose/cycle			
Unvaccinated	1,556	0.04 (-0.50, 0.57)	-
Vaccinated	1,561	0.56 (-0.15, 1.27)	0.58 (-0.18, 1.35)
1st and 2nd dose in same cycle			
Unvaccinated	1,556	0.11 (-0.39, 0.62)	-
Vaccinated	358	2.03 (0.77, 3.29)	1.99 (0.73, 3.25)

Estimates include 98.75% confidence intervals after 500 iterations of imputation and weighting with covariate balancing propensity scores and bootstrapped standard errors.

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