

## Web Material

### **Associations between childhood obesity and pubertal timing stratified by sex and race/ethnicity**

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**Web Table 1. Comparison of Characteristics Between Subjects With Complete and Incomplete Data: KPNC Puberty Study (2008-2021)**

	Complete (n=129,824)		Incomplete (n=3,384)		<i>P</i> value
	N	%	N	%	
<b>Sex</b>					0.46
Girl	61,253	47.2	1,575	46.5	
Boy	68,571	52.8	1,809	53.5	
<b>Birth year</b>					<0.001
2003	12,599	9.7	461	13.6	
2004	13,639	10.5	412	12.2	
2005	14,563	11.2	200	5.9	
2006	15,003	11.6	163	4.8	
2007	15,669	12.1	326	9.6	
2008	15,302	11.8	298	8.8	
2009	15,513	11.9	419	12.4	
2010	14,573	11.2	435	12.9	
2011	12,963	10.0	670	19.8	
<b>Race/ethnicity</b>					<0.001
White	46,453	35.8	976	28.8	
Black	9,066	7.0	473	14.0	
Hispanic	32,533	25.1	939	27.7	
Asian/Pacific Islander	29,375	22.6	623	18.4	
Other/Unknown	12,397	9.5	373	11.0	
<b>Childhood BMI<sup>a,b</sup></b>					0.02
Severe Obesity	3,772	2.9	98	2.9	
Obese	12,928	10.0	382	11.3	
Overweight	18,924	14.6	530	15.7	
Normal weight	89,304	68.8	2,259	66.8	
Underweight	4,896	3.8	115	3.4	

<sup>a</sup>Ages 5-6 years

<sup>b</sup>Weight (kg)/height (m)<sup>2</sup>

**Web Table 2. Unadjusted Associations Between Childhood BMI Category and Timing of Puberty in Boys: KPNC Puberty Study (2008-2021)**

Childhood BMI <sup>a,b</sup>	Gonadarche					Pubarche				
	N	TR	95% CL	HR	95% CL	N	TR	95% CL	HR	95% CL
Severely Obese	2,171	0.97	0.97, 0.98	1.28	1.19, 1.37	2,194	0.96	0.95, 0.97	1.48	1.38, 1.59
Obese	7,177	0.98	0.97, 0.98	1.25	1.20, 1.30	7,232	0.97	0.96, 0.97	1.37	1.31, 1.42
Overweight	9,730	0.98	0.98, 0.99	1.17	1.13, 1.21	9,799	0.98	0.97, 0.98	1.25	1.21, 1.29
Normal	46,226	1.00	Referent	1.00	Referent	46,540	1.00	Referent	1.00	Referent
Underweight	2,654	1.02	1.01, 1.03	0.83	0.78, 0.88	2,680	1.02	1.01, 1.02	0.84	0.79, 0.90

CL: confidence limit; HR: hazard ratio; KPNC: Kaiser Permanente Northern California; TR: time ratio

<sup>a</sup>Ages 5-6 years

<sup>b</sup>Weight (kg)/height (m)<sup>2</sup>

**Web Table 3. Unadjusted Associations Between Childhood BMI Category and Timing of Puberty in Girls: KPNC Puberty Study (2008-2021)**

Childhood BMI <sup>a,b</sup>	Thelarche					Pubarche					Menarche <sup>c</sup>		
	N	TR	95% CL	HR	95% CL	N	TR	95% CL	HR	95% CL	N	OR	95% CL
Severely Obese	1,553	0.94	0.93, 0.95	1.73	1.60, 1.88	1,535	0.92	0.92, 0.93	1.98	1.83, 2.15	855	2.95	2.57, 3.39
Obese	5,606	0.95	0.95, 0.96	1.52	1.46, 1.59	5,551	0.95	0.94, 0.95	1.60	1.54, 1.68	3,241	2.41	2.23, 2.60
Overweight	9,003	0.96	0.96, 0.97	1.36	1.31, 1.40	8,918	0.97	0.96, 0.97	1.32	1.27, 1.37	5,312	1.70	1.60, 1.82
Normal	42,214	1.00	Referent	1.00	Referent	41,778	1.00	Referent	1.00	Referent	25,114	1.00	Referent
Underweight	2,189	1.03	1.02, 1.03	0.81	0.75, 0.86	2,172	1.02	1.01, 1.03	0.84	0.78, 0.90	1,251	0.64	0.55, 0.75

CL: confidence limit; HR: hazard ratio; KPNC: Kaiser Permanente Northern California; TR: time ratio

<sup>a</sup>Ages 5-6 years

<sup>b</sup>Weight (kg)/height (m)<sup>2</sup>

<sup>c</sup>Probability modeled is menarche <12