

**Supplementary Table S1** Distribution and variability of parent- and child-reported pubertal development markers over study visits in boys.

	Mid-childhood Median: 7.6y IQR: 7.3–7.9y n = 457 <sup>a</sup>	8y Median: 8.1y IQR: 8.0–8.2y n = 304	9y Median: 9.1y IQR: 9.0–9.4y n = 383	10y Median: 10.2y IQR: 10.0–10.4 n = 337	11y Median: 11.2y IQR: 11.1–11.4y n = 301	Early adolescent Median: 12.9y IQR: 12.5–13.8y n = 535	14y Median: 14.3y IQR: 14.1–14.7y n = 263	15y Median: 15.4y IQR: 15.2–15.7y n = 292	16y Median: 16.5y IQR: 16.2–16.8y n = 368
<b>Mean (SD) puberty score</b>	1.1 (0.3)	1.2 (0.3)	1.2 (0.3)	1.3 (0.4)	1.4 (0.5)	2.2 (0.7)	2.7 (0.6)	3.0 (0.5)	3.2 (0.4)
<b>Median (IQR) puberty score</b>	1.0 (0.0)	1.0 (0.4)	1.2 (0.4)	1.3 (0.5)	1.3 (0.8)	2.3 (1.2)	2.8 (0.8)	3.0 (0.4)	3.2 (0.4)
<b>Puberty score &gt; 1 (n, %)</b>	66 (14.5)	139 (45.9)	195 (50.9)	197 (58.5)	214 (71.1)	497 (92.9)	248 (98.4)	285 (100)	368 (100)
<b>Voice deepening (n, %)</b>									
Not yet started	439 (96.7)	291 (96.4)	358 (94.0)	307 (91.4)	260 (86.7)	194 (36.7)	22 (8.9)	5 (1.8)	1 (0.3)
Barely started	9 (2.0)	7 (2.3)	14 (3.7)	23 (6.8)	28 (9.3)	93 (17.6)	32 (12.9)	15 (5.3)	8 (2.2)
Definitely started	6 (1.3)	3 (1.0)	8 (2.1)	6 (1.8)	11 (3.7)	165 (31.2)	122 (49.2)	136 (48.1)	129 (35.1)
Seems complete	0 (0)	1 (0.3)	1 (0.3)	0 (0)	1 (0.3)	77 (14.6)	72 (29.0)	127 (44.9)	229 (62.4)
<b>Body hair growth (n, %)</b>									
Not yet started	394 (87.6)	270 (89.1)	331 (86.9)	276 (82.4)	202 (67.6)	127 (25.0)	19 (7.9)	8 (2.9)	2 (0.5)
Barely started	36 (8.0)	23 (7.6)	33 (8.7)	35 (10.4)	60 (20.1)	94 (18.5)	41 (17.0)	22 (7.9)	18 (4.9)
Definitely started	17 (3.8)	10 (3.3)	17 (4.5)	24 (7.2)	37 (12.4)	247 (48.6)	153 (63.5)	177 (63.9)	201 (55.2)
Seems complete	3 (0.7)	0 (0)	0 (0)	0 (0)	0 (0)	40 (7.9)	28 (11.6)	70 (25.3)	143 (39.3)
<b>Facial hair growth (n, %)</b>									
Not yet started	439 (96.7)	297 (98.0)	363 (94.8)	327 (97.0)	140 (90.9)	254 (47.7)	53 (21.4)	34 (12.0)	15 (4.1)
Barely started	13 (2.9)	6 (2.0)	18 (4.7)	7 (2.1)	12 (7.8)	144 (27.1)	80 (32.3)	66 (23.3)	69 (19.0)
Definitely started	2 (0.4)	0 (0)	2 (0.5)	3 (0.9)	2 (1.3)	123 (23.1)	111 (44.8)	165 (58.3)	230 (63.2)
Seems complete	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	11 (2.1)	4 (1.6)	18 (6.4)	50 (13.7)
<b>Acne (n, %)</b>									
Not yet started	–	273 (91.0)	324 (84.6)	259 (77.3)	185 (61.9)	126 (23.8)	16 (6.4)	6 (2.1)	6 (1.6)
Barely started	–	24 (8.0)	38 (9.9)	58 (17.3)	79 (26.4)	137 (25.8)	58 (23.1)	43 (15.2)	19 (5.2)
Definitely started	–	3 (1.0)	21 (5.5)	18 (5.4)	33 (11.0)	254 (47.9)	169 (67.3)	212 (75.2)	285 (77.7)
Seems complete	–	0 (0)	0 (0)	0 (0)	2 (0.7)	13 (2.5)	8 (3.2)	21 (7.4)	57 (15.5)
<b>Growth spurt (n, %)</b>									
Not yet started	–	172 (58.7)	212 (57.6)	162 (50.0)	141 (47.8)	90 (17.0)	13 (5.2)	7 (2.5)	3 (0.8)
Barely started	–	50 (17.1)	87 (23.6)	74 (22.8)	73 (24.7)	110 (20.8)	32 (12.9)	12 (4.3)	8 (2.2)
Definitely started	–	71 (24.2)	68 (18.5)	87 (26.9)	80 (27.1)	307 (58.1)	192 (77.4)	237 (84.3)	248 (68.5)
Seems complete	–	–	1 (0.3)	1 (0.3)	1 (0.3)	21 (4.0)	11 (4.4)	25 (8.9)	103 (28.5)
<b>Tanner pubic hair stage (n, %)</b>									
1	–	–	–	199 (56.5)	95 (31.9)	21 (4.3)	3 (1.9)	0 (0)	0 (0)
2	–	–	–	121 (34.4)	127 (42.6)	79 (16.2)	11 (6.9)	1 (0.5)	2 (0.7)
3	–	–	–	25 (7.1)	52 (17.4)	132 (27.1)	22 (13.8)	11 (5.8)	9 (3.0)
4	–	–	–	7 (2.0)	22 (7.4)	185 (38.0)	77 (48.1)	80 (42.3)	86 (29.0)
5	–	–	–	0	2 (0.7)	70 (14.4)	47 (29.4)	97 (51.3)	200 (67.3)

<sup>a</sup>Sample sizes restricted to subjects without missing exposure and covariate data, and with at least 1 pubertal outcome. IQR, interquartile range.