

TABLE E-1 Tanner Staging System of Secondary Sexual Characteristics⁴⁸

Tanner Stage		Male	Female
Stage 1 (Prepubertal)	Growth	5-6 cm/yr	5-6 cm/yr
	Development	Testes <4 mL or <2.5 cm; no pubic hair	No breast development; no pubic hair
Stage 2	Growth	5-6 cm/yr	7-8 cm/yr
	Development	Testes 4 mL or 2.5-3.2 cm; minimal pubic hair at base of penis	Breast buds; minimal pubic hair on labia
Stage 3	Growth	7-8 cm/yr	8 cm/yr
	Development	Testes 12 mL or 3.6 cm; pubic hair over pubis; voice changes; muscle mass increases	Elevation of breast; areolae enlarge; pubic hair of mons pubis; axillary hair; acne
Stage 4	Growth	10 cm/yr	7 cm/yr
	Development	Testes 4.1-4.5 cm; pubic hair as adult; axillary hair; acne	Areolae enlarge; pubic hair as adult
Stage 5	Growth	No growth	No growth
	Development	Testes as adult; pubic hair as adult; facial hair as adult; mature physique	Adult breast contour; pubic hair as adult
Other		Peak height velocity: 13.5 years	Adrenarche: 6-8 years Menarche 12.7 years Peak height velocity: 11.5 years