



Female Sexual Maturity Rating (SMR)					
Stage	1	2	3	4	5
<b>Age range</b> (mean $\pm$ 1 SD)		10.5-12.9 yrs	11.3 – 13.5 yrs	11.8 – 14.0 yrs	13.3 – 15.5 yrs
<b>Breasts</b>		Breast and papilla elevated as small mound, or breast bud, areolar diameter increased.	Breast and areola enlarged, no contour separation	Areola and papilla form secondary mound projecting from the contour of the surrounding breast	Adult size and contour. Areola returns to part of general breast contour, nipple projects
<b>Pubic Hair</b>		Hair is sparse, lightly pigmented and straight, located on medial border of labia majora	Hair is darker, more coarse, and beginning to curl, increased in amount and begins to extend laterally	Hair is coarse and curly as in the adult, hair extends across the pubis but spares the medial thighs	Adult hair – coarse and curly, spreads to medial surface of thighs
<b>Menarche</b> (10.8 – 14.5 yrs)		10%	30%	90%	100%
<b>Acne</b>			Mean age of onset – 13.2 years		

Male Sexual Maturity Rating (SMR)					
Stage	1	2	3	4	5
<b>Age range</b> (mean $\pm$ 1 SD)		12.4 - 14.5 yrs	12.9 – 14.9 yrs	13.3 – 15.4 yrs	14.1 – 16.3 yrs
<b>Penis</b>		Slight enlargement	Begins to lengthen	Increases in length and circumference	Adult
<b>Testes &amp; Scrotum</b>	Testicular Volume	volume less than 1.5 ml	1.6 – 6 ml	6 – 12 ml	12 - 20 ml
	Scrotal changes		Skin on scrotum- thins and reddens, scrotum enlarges	Further scrotal enlargement	Further scrotal enlargement, skin darkens
<b>Pubic Hair</b>		Small amount of long and slightly pigmented hair at base of the penis and scrotum	Hair is darker, starts to curl but small in amount	Hair is coarse and curly as in adult, extends across the pubis but spares the medial thighs	Adult hair – coarse and curly, distribution, spreads to medial surface of the thighs
<b>Acne</b>			Mean age of onset – 14.3 years		
<b>Facial Hair</b>				Facial hair develops	

Adapted from \*Tanner JM, Growth at Adolescence, Blackwell Scientific Publications, Oxford, 1962 \*Marshall WA, Tanner JM, Arch Dis Child 44 :291, 1969

<b>Precocious Puberty</b>	The appearance of physical signs of puberty before the age of 9 in boys & in girls before age 7 or 8.
<b>Delayed Puberty</b>	No pubertal development by 15 years in boys or 13 in girls (thelarche). Also no menarche by age 16. = 2 SD above the mean
<small>Details in Neinstein et al. <i>Adolescent Health Care: A Practical Guide 5th edition</i>. Philadelphia: Lippincott Williams and Wilkins; 2007          Precocious Puberty : <a href="https://emedicine.medscape.com/article/924002-overview?form=fpf">https://emedicine.medscape.com/article/924002-overview?form=fpf</a> Growth delay : <a href="https://emedicine.medscape.com/article/919677-overview?form=fpf">https://emedicine.medscape.com/article/919677-overview?form=fpf</a></small>	

Menstrual health – ask about:
Age of menarche – avg. is 12 to 13 years
Cycles and regularity – may take 2 to 3 years to establish regular cycles after menarche, initial cycles are 20 to 45 days vs 24 to 38 for adults
Length of periods – avg duration is 5 days, > 7 days is prolonged
Heavy bleeding or clotting – avg. volume is 40 mls, heavy is over 80 ml, a saturated pad or tampon absorbs 5 to 15 ml. Clots larger than a quarter are excessive. Menstrual chart available at <a href="https://www.betteryouknow.org/sites/default/files/2022-08/BetterYouKnow-Menstrual-Chart-Scoring-System.pdf">https://www.betteryouknow.org/sites/default/files/2022-08/BetterYouKnow-Menstrual-Chart-Scoring-System.pdf</a>
Symptoms related to cycle – mood, irregular bleeding, fatigue, shortness of breath,
Consider screening for anemia or iron deficiency for heavy, prolonged or frequent bleeding or for those with symptoms of fatigue or shortness of breath
<b>Dysmenorrhea</b>
Amenorrhea – primary – no period by age 16, secondary – no period for 6 mos

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**Disclaimer:** Given the evolving nature of evidence and changing recommendations, the Greig Health Record is meant to be used as a guide only.

ACOG, BMI, CDC, Graham, Pediatrics in review, Dec2018:39(12)588-600