

Bonemarker normal values for children

Bone marker	Cat. No.	Sex	Unit	Age group					References	
BAP (serum) bone specified alkaline phosphatase	8012	m	U/l ± SD		104 ± 21 0–2 y.	94 ± 17 3–9 y.	114 ± 21 10–14 y.		59 ± 19 15–18 y.	[1]/[2]
		f	U/l ± SD		122 ± 19 0–2 y.	106 ± 16 3–8 y.	112 ± 16 9–12 y.		39 ± 23 13–17 y.	
		Tanner Stage		Tanner I	Tanner II–III	Tanner IV–V				[3]
		m	U/l ± SD	95 ± 22	114 ± 35	121 ± 37				
		f	U/l ± SD	84 ± 23	113 ± 43	79 ± 46				
CICP/PICP (serum) c-terminal propeptid of type I collagen	8003	m/f	ng/ml			295–365 4.0–12.9y.	444 ± 192 13 y.	449 ± 123 14 y.	347 ± 145 15–18 y.	[4]
		m	ng/ml		211–1.310 0–2 y.	147–830 3–9 y.	123–618 10–14 y.	127–189 15–19 y.	77–183 20–50 y.	[1]
		f	ng/ml		230–1.104 0–2 y.	155–568 3–8 y.	122–373 9–12 y.	74–167 13–17 y.	37–133 20–50 y.	
		m/f	ng/ml				113–426 4–13 y.		110–443 14–18 y.	
NTX (serum) N-terminal telopeptide of type I collagen	504836	Tanner Stage		Tanner I	Tanner II–IV	Tanner V				[6]
		m	BCE nmol/l	50.6 (37.2–88.9)	71.7 (32.7–126.0)	18.0 (11.3–50.4)				
		f	BCE nmol/l	53.6 (31.2–90.9)	50.2 (12.9–79.8)	12.8 (9.6–22.2)				
NTX (urine) N-terminal telopeptide of type I collagen	504837			0–1 y.	2–5 y.	6–10 y.	11–15 y.	16–20 y.		
		m/f	BCE nmol/l Creatinin	1639 (102-4769)	689 (34-1752)	497 (90-1356)	429 (34-2158)	192 (34-780)		
Deoxypyridinolin (urine) free DPD	8007	Tanner Stage		Tanner I	Tanner II–III	Tanner IV–V				[9]
		m	nmol/mmol Creatinin	23.5 ± 1.9	25.6 ± 4.0	31.1 ± 9.5				
		f	nmol/mmol Creatinin	21.0 ± 2.1	33.0 ± 5.1	23.2 ± 7.0				
		m/f	nmol/mmol Creatinin	22.5 ± 1.4	28.7 ± 3.2	28.0 ± 6.2				
Helicale peptide (urine) Helicale peptide 620 - 633 from the alpha-I-chain of type I collagen	8022	m/f	ug/mmol Creatinin			804–11305 4–12.9 y.				[5]
Pyridinolin (urine) free Pyd & DPD	8010	m/f	nmol/mmol Creatinin			45.7–85.1 4–12.9 y.				[10]
		m/f	nmol/mmol Creatinin			55.5 ± 6.5 4–12.9 y.	40.8 ± 6.4 13–18 y.			[11]
Pyridinolin (serum)	8019	m/f	nmol/l			2.49 ± 0.12 4–12.9 y.	1.6 ± 1.0 13–18 y.			[11]

Bone marker	Cat. No.	Sex	Unit	Age group						References
				Pre-Pubertal	Early Adolescence	Late Adolescence				
TRAP5b (Serum) Tartrate-Resistant Acid Phosphatase active isoform 5b	8036	status								
		f	U/l	8.1±3.8 1-9 y.	10.0±2.7 10-13 y.	2.3±0.7 14-17 y.				[12]
		m	U/l	6.6±3.6 1-10 y.	9.9±3.3 11-13 y.	3.4±1.4 14-17 y.				[12]

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