

Bonemarker normal values for children

Bone marker	Cat. No.	Sex	Unit	Range/Age group						reference	
BAP (serum) bone specified alkaline phosphatase	8012	m	U/L (3 rd -97 th percentile)	77-168 <1 y.	68-157 2-4 y.	59-165 5-11 y.	46-192 12-15 yr.	46-192 12-15 yr.		[13]	
		f	U/L (3 rd -97 th percentile)	79-178 <1 y.	79-178 <1 y.	70-200 5-11 y.	36-146 12-15 yr.	11-56 16-19 yr.			
		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					
CIGP/PICP (serum) c-terminal propeptid of type I collagen	8003	m/f	ng/ml	16-19 yr.		295-365 4.0-12.9 y.	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.		[5]	
NTX (serum) N-terminal telopeptide of type I collagen	9021	Tanner Stage		Tanner I	Tanner II-IV	Tanner V				[6]	
				≤ 11 y.	12-14 y.	≥ 15 y.					
		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	9006			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)			
Osteocalcin N-MID	KT-809				Mean		Range			[14]	
		m/f (23)	ng/ml	bis 2.5 y	42.8	29.8 - 65.9					
		m/f (29)	ng/ml	2.5-5.5 y	40.3	25.5 - 60.2					
		m/f (93)	ng/ml	5.5-11.5 y	47.5	11.1 - 76.2					
		m/f		11.5-15.5 y							
		m (29)	ng/ml		56.7	16.9 - 107					
		f (32)	ng/ml		42.95	18.7 - 62.8					
		m/f (72)		≥ 15.5 y							
		m (36)	ng/ml		30.45	11 - 65.2					
		f (36)	ng/ml		20.75	3.37 - 52.2					
Deoxyypyridinolin (urine) free DPD	8007	Tanner Stage		Tanner I	Tanner II-III	Tanner IV-V				[9]	
		m	nmol/mml 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/mml Creatinin	22.5 ± 1.4	28.7 ± 3.2	28.0 ± 6.2					
FGF-23 C-terminal C terminal fragment fibroblast growth factor-23	60-6100	m/f	RU/mL (3 rd -97 th percentile)	43-324 <1 y.	36-197 2-4 y.	35-132 5-11 y.	36-138 12-15 yr.	27-107 16-19 yr.		[13]	
Helicale peptide (urine) Helicale peptide 620 - 633 from the alpha-I-chain of type I collagen	8007	m/f	ug/mmol Creatinin			804- 11305 4-12.9 y.				[5]	

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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]
TRAP5b (serum) Tartrate-Resistant Acid Phosphatase active isoform 5b	8036	m	U/L (3 rd -97 th percentile)	10-25 <1 y.	9-22 2-4 y.	9-23 5-11 y.	6-26 12-15 yr.	2-12 16-19 yr.		[13]
		f	U/L (3 rd -97 th percentile)	13-23 <1 y.	11-24 2-4 y.	9-26 5-11 y.	4-17 12-15 yr.	2-6 16-19 yr.		

Bonemarker normal values for children – Literature References

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