

Supplementary Table S1. Mean normal head circumference by gestational age [2].

Gestational age (weeks)	Head circumference in cm (boys/girls)
24	22.7/22.1
26	24.6/23.8
28	26.3/25.7
30	28.3/27.7
32	30.1/29.6
34	31.9/31.5
36	33.5/33.1
38	34.6/34.0
40	35.2/34.6

Supplementary Table S2. Causes of macrocephaly [3,5,11,14–16].

Affected system (hypertrophic or hyperplastic structure)	Type of insult	Categories of diseases	Examples	
Increased brain size (megalencephaly)	Anatomic	Neurocutaneous diseases	Neurofibromatosis type I, OMIM # 162200	
			Legius syndrome, OMIM # 611431	
			Cardiofaciocutaneous syndrome 1, OMIM # 115150	
			Costello syndrome, OMIM # 218040	
			LEOPARD syndrome 2, OMIM # 611554	
			Noonan syndrome 2, OMIM # 605275< Noonan syndrome 5, OMIM # 611553	
			Nevoid Basal Cell Carcinoma Syndrome 1 (Gorlin-Goltz syndrome), OMIM # 109400	
			Sturge-Weber syndrome, OMIM # 185300	
			Tuberous sclerosis, OMIM # 191100	
		Overgrowth syndromes	Syndromes with skin or vascular features	CLOVES syndrome, OMIM # 612918
				Klippel-Trenaunay syndrome, OMIM 149000
				Proteus syndrome

			Syndromes without skin or vascular features	Megalencephaly-Polymicrogyria-Pigmentary Mosaicism syndrome
				Beckwith-Wiedemann syndrome
				Cowden syndrome 1, OMIM # 158350
				Pretzel syndrome, OMIM # 611087
				Simpson-Golabi-Behmel syndrome, OMIM # 312870
				Sotos syndrome, OMIM # 117550
				Weaver syndrome, OMIM # 277590
		Macrocephaly, dysmorphic facies, and psychomotor retardation (MDFPMR), OMIM # 617011		
		Hamartoma Tumor Syndrome, OMIM # 158350		
		Hemimegalencephaly (HMEG),		
		Megalencephaly-Capillary Malformation-Polymicrogyria syndrome, OMIM # 602501		
		Smith-Kingsmore Syndrome, OMIM # 616638		
		Fragile X syndrome, OMIM # 300624		
	Lujan-Fryns syndrome, OMIM # 309520			
	Opitz-Kaveggia syndrome, OMIM # 305450			
	Metabolic	Organic acid disorders	Glutaric acidemia type I (OMIM # 231670), type II (OMIM # 231680)	
			D2-hydroxyglutaric aciduria, OMIM # 600721	
		Lysosomal storage diseases	Mucopolysaccharidosis	
			Gangliosidosis	
			Krabbe disease, OMIM # 245200	
		Peroxisome biogenesis disorder	Zellweger/ cerebrohepatorenal Syndrome, OMIM # 614859	
		Leukoencephalopathies	Alexander disease, OMIM # 203450	
			Canavan disease, OMIM # 271900	
			Megalencephalic Leukoencephalopathy with Subcortical Cysts, OMIM # 604004	
			Vanishing White Matter Disease 5, OMIM # 620315	

CSF	Hydrocephalus	Obstructive	Brain tumours
			Chiari malformation, OMIM # 118420
			Dandy-Walker syndrome malformation, # 220200
			Aqueductal stenosis
		Communicating	Deficient resorption of CSF
			Altered blood circulation within the brain
	Benign enlargement of the subarachnoid space		
Blood	Haemorrhage		
Bone	Bone marrow	Thalassemia	
	Bone disorders	Rickets	
		Skeletal dysplasia	Achondroplasia, OMIM # 100800
			Cleidocranial dysostosis, OMIM # 119600
			Cole-Carpenter syndrome 1, OMIM # 112240 and Cole-Carpenter syndrome 2, OMIM # 616294
			Craniometaphyseal dysplasia, OMIM # 123000
			Hyperphosphatasia, OMIM # 616809
			Metaphyseal dysplasia, OMIM # 250400
			Osteopetrosis AR 1, OMIM # 259700
			Osteopathia striata with cranial sclerosis, OMIM # 300373
			Osteogenesis imperfecta type III, # 259420
			Robinow syndrome 1, OMIM # 268310