

**UNITED STATES OF AMERICA (THE)**
**Last Updated: 2007-07-09**

Level	Date	Region and sample descriptor	Sex	Age (years)	Sample size	Haemoglobin (g/L)						Reference	Notes				
						Proportion (%) of population with haemoglobin below:							Mean	SD	Method	General	Line
						70	100	110	115	120	130						
S	2003	44 Contributors: Children: Total	B	0.50- 4.99	3118041								NS	5069	*	1	
		44 Contributors: Children by Haemoglobin/haematoc	B	0.50- 4.99	2838917											2	
		44 Contributors: Children by Haemoglobin/haematoc	B	0.50- 4.99	424530											3	
		44 Contributors: Children by age	B	0.50- 0.99	344132											4	
		44 Contributors: Children by age	B	1.00- 1.99	987063											5	
		44 Contributors: Children by age	B	2.00- 2.99	685020											6	
		44 Contributors: Children by age	B	3.00- 3.99	599869											7	
		44 Contributors: Children by age	B	4.00- 4.99	501957											8	
		44 Contributors: Children by State: Alabama	B	0.50- 4.99	9537											9	
		44 Contributors: Children by State: Arkansas	B	0.50- 4.99	49931											10	
		44 Contributors: Children by State: California	B	0.50- 4.99	500508											11	
		44 Contributors: Children by State: Colorado	B	0.50- 4.99	51116											12	
		44 Contributors: Children by State: Florida	B	0.50- 4.99	255639											13	
		44 Contributors: Children by State: Georgia	B	0.50- 4.99	150648											14	
		44 Contributors: Children by State: Hawaii	B	0.50- 4.99	16465											15	
		44 Contributors: Children by State: Idaho	B	0.50- 4.99	24904											16	
		44 Contributors: Children by State: Illinois	B	0.50- 4.99	106677											17	
		44 Contributors: Children by State: Indiana	B	0.50- 4.99	77646											18	
		44 Contributors: Children by State: Iowa	B	0.50- 4.99	23685											19	
		44 Contributors: Children by State: Kansas	B	0.50- 4.99	43683											20	
		44 Contributors: Children by State: Kentucky	B	0.50- 4.99	79078											21	
		44 Contributors: Children by State: Louisiana	B	0.50- 4.99	78656											22	
		44 Contributors: Children by State: Maine	B	0.50- 4.99	13412											23	
		44 Contributors: Children by State: Michigan	B	0.50- 4.99	134250											24	
		44 Contributors: Children by State: Minnesota	B	0.50- 4.99	74648											25	
		44 Contributors: Children by State: Missouri	B	0.50- 4.99	86726											26	
		44 Contributors: Children by State: Montana	B	0.50- 4.99	12821											27	
		44 Contributors: Children by State: Nebraska	B	0.50- 4.99	25792											28	
		44 Contributors: Children by State: Nevada	B	0.50- 4.99	27221											29	
		44 Contributors: Children by State: New Hampshire	B	0.50- 4.99	10490											30	
		44 Contributors: Children by State: New Jersey	B	0.50- 4.99	102762											31	
		44 Contributors: Children by State: New York	B	0.50- 4.99	274354											32	
		44 Contributors: Children by State: North Dakota	B	0.50- 4.99	8058											33	
		44 Contributors: Children by State: Ohio	B	0.50- 4.99	129607											34	
		44 Contributors: Children by State: Oregon	B	0.50- 4.99	42507											35	
		44 Contributors: Children by State: Pennsylvania	B	0.50- 4.99	162362											36	

**UNITED STATES OF AMERICA (THE)**

Last Updated: 2007-07-09

Level	Date	Region and sample descriptor	Sex	Age (years)	Sample size	Haemoglobin (g/L)						Mean	SD	Method	Reference	Notes	
						Proportion (%) of population with haemoglobin below:										General	Line
						70	100	110	115	120	130						
S	2003	44 Contributors: Children by State: South Carolina	B	0.50- 4.99	57388							NS	5069			37	
		44 Contributors: Children by State: South Dakota	B	0.50- 4.99	14018											38	
		44 Contributors: Children by State: Tennessee	B	0.50- 4.99	95067											39	
		44 Contributors: Children by State: Utah	B	0.50- 4.99	47406											40	
		44 Contributors: Children by State: Vermont	B	0.50- 4.99	10311											41	
		44 Contributors: Children by State: West Virginia	B	0.50- 4.99	34010											42	
		44 Contributors: Children by State: Wisconsin	B	0.50- 4.99	75448											43	
		44 Contributors: Children by State: Wyoming	B	0.50- 4.99	9058											44	
		44 Contributors: Children by area: District of Colomb	B	0.50- 4.99	10199											45	
		44 Contributors: Children by area: Puerto Rico	B	0.50- 4.99	168221											46	
		44 Contributors: Children by tribe: Cheyenne River S	B	0.50- 4.99	425											47	
		44 Contributors: Children by tribe: Chickasaw Nation	B	0.50- 4.99	2187											48	
		44 Contributors: Children by tribe: Inter Tribal Counc	B	0.50- 4.99	7706											49	
		44 Contributors: Children by tribe: Navajo Nation-AZ	B	0.50- 4.99	11700											50	
44 Contributors: Children by tribe: Rosebud Sioux-S	B	0.50- 4.99	1062									51					
44 Contributors: Children by tribe: Standing Rock Si	B	0.50- 4.99	652									52					
S	2002	25 States: NPW: Total	F	NS	518731							NS	5066		*	53	
		25 States: NPW by age	F	NS- 14.99	2397											54	
		25 States: NPW by age	F	15.00- 17.99	37275					40.6							
		25 States: NPW by age	F	18.00- 19.99	72392					38.1							
		25 States: NPW by age	F	20.00- 29.99	311414					34.5							
		25 States: NPW by age	F	30.00- 39.99	89528					32.7							
		25 States: NPW by age	F	40.00-NS	5725					33.9							
		25 States: NPW by state: Florida	F	NS	66317											55	
		25 States: NPW by state: Georgia	F	NS	49906											56	
		25 States: NPW by state: Hawaii	F	NS	5952											57	
		25 States: NPW by state: Idaho	F	NS	6872											58	
		25 States: NPW by state: Illinois	F	NS	49890											59	
		25 States: NPW by state: Indiana	F	NS	19501											60	
		25 States: NPW by state: Iowa	F	NS	15000											61	
25 States: NPW by state: Kansas	F	NS	14526									62					
25 States: NPW by state: Michigan	F	NS	45425									63					
25 States: NPW by state: Minnesota	F	NS	8993									64					
25 States: NPW by state: Missouri	F	NS	28673									65					
25 States: NPW by state: Montana	F	NS	4138									66					

**UNITED STATES OF AMERICA (THE)**

Last Updated: 2007-07-09

Level	Date	Region and sample descriptor	Sex	Age (years)	Sample size	Haemoglobin (g/L)						Mean	SD	Method	Reference	Notes	
						Proportion (%) of population with haemoglobin below:										General	Line
						70	100	110	115	120	130						
S	2002	25 States: NPW by state: Nebraska	F	NS	9452								NS	5066		67	
		25 States: NPW by state: New Hampshire	F	NS	3829											68	
		25 States: NPW by state: New Jersey	F	NS	30280											69	
		25 States: NPW by state: North Carolina	F	NS	40643											70	
		25 States: NPW by state: North Dakota	F	NS	2166											71	
		25 States: NPW by state: Ohio	F	NS	57676											72	
		25 States: NPW by state: Utah	F	NS	22432											73	
		25 States: NPW by state: Vermont	F	NS	2928											74	
		25 States: NPW by state: West Virginia	F	NS	13203											75	
		25 States: NPW by state: Wisconsin	F	NS	17926											76	
		25 States: NPW by tribe: AZ I/Tribal Council	F	NS	2150											77	
		25 States: NPW by tribe: Cheyenne River-SD	F	NS	132											78	
		25 States: NPW by tribe: Chickasaw Nation-OK	F	NS	721											79	
		25 States: PW by gestational age: 1st trimester	F	NS	196351			6.5								80	
		25 States: PW by gestational age: 2nd trimester	F	NS	186011											80	
		25 States: PW by gestational age: 3rd trimester: Tot	F	NS	100071			30.6								81	
		25 States: PW 3rd trimester by age	F	NS- 14.99	512			40.8									
		25 States: PW 3rd trimester by age	F	15.00- 17.99	7059			35.8									
		25 States: PW 3rd trimester by age	F	18.00- 19.99	13711			31.7									
		25 States: PW 3rd trimester by age	F	20.00- 29.99	61331			30.3									
		25 States: PW 3rd trimester by age	F	30.00- 39.99	16357			28.5									
		25 States: PW 3rd trimester by age	F	40.00-NS	1095			29.5									
		25 States: PW 3rd trimester by state: Florida	F	NS	16891			35.6									
		25 States: PW 3rd trimester by state: Georgia	F	NS	2536			40.9									
		25 States: PW 3rd trimester by state: Hawaii	F	NS	1209			26.5									
		25 States: PW 3rd trimester by state: Idaho	F	NS	1411			17.2									
		25 States: PW 3rd trimester by state: Illinois	F	NS	12018			29.4									
		25 States: PW 3rd trimester by state: Indiana	F	NS	5355			32.8									
		25 States: PW 3rd trimester by state: Iowa	F	NS	2464			26.0									
		25 States: PW 3rd trimester by state: Kansas	F	NS	2615			24.9									
		25 States: PW 3rd trimester by state: Michigan	F	NS	10444			30.4									
		25 States: PW 3rd trimester by state: Minnesota	F	NS	147			33.3									
		25 States: PW 3rd trimester by state: Missouri	F	NS	5125			36.4									
		25 States: PW 3rd trimester by state: Montana	F	NS	749			20.4									
		25 States: PW 3rd trimester by state: Nebraska	F	NS	1677			23.6									
		25 States: PW 3rd trimester by state: New Hampshire	F	NS	760			27.1									

**UNITED STATES OF AMERICA (THE)**

Last Updated: 2007-07-09

Level	Date	Region and sample descriptor	Sex	Age (years)	Sample size	Haemoglobin (g/L)						Reference	Notes				
						Proportion (%) of population with haemoglobin below:							Mean	SD	Method	General	Line
						70	100	110	115	120	130						
S	2002	25 States: PW 3rd trimester by state: New Jersey	F	NS	5493			31.9					5066				
		25 States: PW 3rd trimester by state: North Carolina	F	NS	7303			31.8									
		25 States: PW 3rd trimester by state: North Dakota	F	NS	488			24.6									
		25 States: PW 3rd trimester by state: Ohio	F	NS	11957			31.6									
		25 States: PW 3rd trimester by state: Utah	F	NS	3699			12.4									
		25 States: PW 3rd trimester by state: Vermont	F	NS	396			19.7									
		25 States: PW 3rd trimester by state: West Virginia	F	NS	2056			22.8									
		25 States: PW 3rd trimester by state: Wisconsin	F	NS	4619			31.0									
		25 States: PW 3rd trimester by tribe: AZ I/Tribal Cou	F	NS	517			25.3									
		25 States: PW 3rd trimester by tribe: Chickasaw Nati	F	NS	119			43.7									
S	2002	46 Contributors: Children: Total	B	0.50- 4.99	3421190							NS	5070	*	82		
		46 Contributors: Children by age	B	0.50- 0.99	383265											83	
		46 Contributors: Children by age	B	1.00- 1.49	655026												84
		46 Contributors: Children by age	B	1.50- 1.99	430311												85
		46 Contributors: Children by age	B	2.00- 2.99	748219												86
		46 Contributors: Children by age	B	3.00- 4.99	1204369												87
		46 Contributors: Children by state: Arizona	B	0.50- 4.99	NS												88
		46 Contributors: Children by state: Arkansas	B	0.50- 4.99	NS												89
		46 Contributors: Children by state: California	B	0.50- 4.99	NS												90
		46 Contributors: Children by state: Colorado	B	0.50- 4.99	NS												91
		46 Contributors: Children by state: Florida	B	0.50- 4.99	NS												92
		46 Contributors: Children by state: Georgia	B	0.50- 4.99	NS												93
		46 Contributors: Children by state: Hawaii	B	0.50- 4.99	NS												94
		46 Contributors: Children by state: Idaho	B	0.50- 4.99	NS												95
		46 Contributors: Children by state: Illinois	B	0.50- 4.99	NS												96
		46 Contributors: Children by state: Indiana	B	0.50- 4.99	NS												97
		46 Contributors: Children by state: Iowa	B	0.50- 4.99	NS												98
		46 Contributors: Children by state: Kansas	B	0.50- 4.99	NS												99
		46 Contributors: Children by state: Kentucky	B	0.50- 4.99	NS												100
		46 Contributors: Children by state: Louisiana	B	0.50- 4.99	NS												101
		46 Contributors: Children by state: Maine	B	0.50- 4.99	NS												102
		46 Contributors: Children by state: Maryland	B	0.50- 4.99	NS												103
		46 Contributors: Children by state: Michigan	B	0.50- 4.99	NS												104
		46 Contributors: Children by state: Minnesota	B	0.50- 4.99	NS												105
		46 Contributors: Children by state: Missouri	B	0.50- 4.99	NS												106

**UNITED STATES OF AMERICA (THE)**

Last Updated: 2007-07-09

Level	Date	Region and sample descriptor	Sex	Age (years)	Sample size	Haemoglobin (g/L)						Mean	SD	Method	Reference	Notes	
						Proportion (%) of population with haemoglobin below:										General	Line
						70	100	110	115	120	130						
S	2002	46 Contributors: Children by state: Nebraska	B	0.50- 4.99	NS							NS	5070		107		
		46 Contributors: Children by state: Nevada	B	0.50- 4.99	NS										108		
		46 Contributors: Children by state: New Hampshire	B	0.50- 4.99	NS										109		
		46 Contributors: Children by state: New Jersey	B	0.50- 4.99	NS										110		
		46 Contributors: Children by state: New Mexico	B	0.50- 4.99	NS										111		
		46 Contributors: Children by state: New York	B	0.50- 4.99	NS										112		
		46 Contributors: Children by state: North Dakota	B	0.50- 4.99	NS										113		
		46 Contributors: Children by state: Ohio	B	0.50- 4.99	NS										114		
		46 Contributors: Children by state: Oregon	B	0.50- 4.99	NS										115		
		46 Contributors: Children by state: Pennsylvania	B	0.50- 4.99	NS										116		
		46 Contributors: Children by state: South Carolina	B	0.50- 4.99	NS										117		
		46 Contributors: Children by state: South Dakota	B	0.50- 4.99	NS										118		
		46 Contributors: Children by state: Tennessee	B	0.50- 4.99	NS										119		
		46 Contributors: Children by state: Utah	B	0.50- 4.99	NS										120		
		46 Contributors: Children by state: Vermont	B	0.50- 4.99	NS										121		
		46 Contributors: Children by state: Washington	B	0.50- 4.99	NS										122		
		46 Contributors: Children by state: West Virginia	B	0.50- 4.99	NS										123		
		46 Contributors: Children by state: Wisconsin	B	0.50- 4.99	NS										124		
		46 Contributors: Children by state: Wyoming	B	0.50- 4.99	NS										125		
		46 Contributors: Children by area: District of Colomb	B	0.50- 4.99	NS										126		
46 Contributors: Children by area: Puerto Rico	B	0.50- 4.99	NS								127						
46 Contributors: Children by tribe: Cheyenne River S	B	0.50- 4.99	NS								128						
46 Contributors: Children by tribe: Chickasaw Nation	B	0.50- 4.99	NS								129						
46 Contributors: Children by tribe: Inter Tribal Counc	B	0.50- 4.99	NS								130						
46 Contributors: Children by tribe: Navajo Nation-AZ	B	0.50- 4.99	NS								131						
46 Contributors: Children by tribe: Rosebud Sioux-N	B	0.50- 4.99	NS								132						
46 Contributors: Children by tribe: Standing Rock-N	B	0.50- 4.99	NS								133						
N	1999 -2002	NPW: Total	F	15.00-NS	5415					7.0	C	4738	*				
		PW: Total	F	13.00-NS	615	5.7											
		Men: Total	M	15.00-NS	5600				2.8								
		Children: Total	B	1.00- 14.99	5280												
		NPW by age	F	15.00- 19.99	1206			6.4									
		NPW by age	F	20.00- 59.99	2660			7.2									
		NPW by age	F	60.00-NS	1549			6.6									
		Men by age	M	15.00- 19.99	1368			0.8									

**UNITED STATES OF AMERICA (THE)**

Last Updated: 2007-07-09

Level	Date	Region and sample descriptor	Sex	Age (years)	Sample size	Haemoglobin (g/L)						Mean	SD	Method	Reference	Notes	
						Proportion (%) of population with haemoglobin below:										General	Line
						70	100	110	115	120	130						
N	1999-2002	Men by age	M	20.00- 59.99	2712						1.5	C	4738				
		Men by age	M	60.00-NS	1520						8.9						
		Children by age	B	1.00- 2.99	781			5.0									
		Children by age	B	3.00- 4.99	576			1.3									
		Children by age	B	5.00- 14.99	3923												
L	1999P	Children	B	0.50- 5.99	175						117	11	B	2414	*	136	
L	1999	Greenville: PW	F	NS	101		19.8				111	9	NS	3501	*	137	
L	1999P	Washington: Children	B	0.17- 18.99	341			7.3					C	5138	*		
L	1998	Houston: PW	F	17.00- 40.99	1000		8.6				118	14	A	2717	*		
L	1997-1999	Raleigh: PW	F	NS	497								NS	3531	*	138	
L	1997-1998	Baltimore City: Children	B	0.82- 2.57	282			35.0			114	10	C	3685	*	139	
L	1997-1998	Pennsylvania: PW	F	15.00- 40.99	173			22.0					NS	4797	*	140	
S	1996	12 States: NPW: Total	F	12.00- 49.99	59428								NS	3490	*	141	
		12 States: PW	F	12.00- 49.99	59428												142
		12 States: NPW by age	F	12.00- 15.99	1556												143
		12 States: NPW by age	F	16.00- 19.99	15208					29.9							144
		12 States: NPW by age	F	20.00- 29.99	33851					26.2							145
		12 States: NPW by age	F	30.00- 39.99	8400					25.2							146
		12 States: NPW by age	F	40.00- 49.99	413					23.7							147
L	1995-1997	Baltimore: Children	B	0.75- 3.07	1358			25.3					B	3019	*		
L	1995-1996	New York City: Children	B	1.00- 3.07	504			13.3					NS	2418	*	148	
L	1994-1996	Boston: Children by visit: 1	B	0.82- 3.57	1275						114	9	C	3635	*	149	
		Boston: Children by visit: 2	B	0.82- 3.57	1214						114	9					150
L	1993-1996	Boston: Children: Total	B	0.50- 4.57	4045			15.2					D	2417	*		



**UNITED STATES OF AMERICA (THE)**
**Last Updated: 2007-07-09**

Level	Date	Region and sample descriptor	Sex	Age (years)	Sample size	Haemoglobin (g/L)						Mean	SD	Method	Reference	Notes				
						Proportion (%) of population with haemoglobin below:										General	Line			
						70	100	110	115	120	130									
N	1988 -1994	Adults by sex and age	F	85.00-NS	NS					20.1			C	4968		162				
		Adults by sex and age	M	85.00-NS	NS					26.1						163				
		Children by sex	F	1.00- 16.99	NS															
		Children by sex	M	1.00- 16.99	NS															
L	1988 -1990	Framingham: Elderly: Total	B	67.00- 96.99	1016								A	4806	*	164				
		Framingham: Elderly by sex	F	67.00- 96.99	605					134		14				165				
		Framingham: Elderly by sex	M	67.00- 96.99	411					146		15				166				
S	1988 -1989	Alaska: Women: Total	F	18.00- 85.99	633					15.2			B	2419	*	167				
		Alaska: Men: Total	M	18.00- 85.99	584											168				
		Alaska: Children: Total	B	0.50- 11.99	355											169				
		Alaska: Adolescents: Total	B	12.00- 17.99	449															
		Alaska: Women by age	F	18.00- 44.99	415					17.3										
		Alaska: Women by age	F	45.00- 85.99	218					11.0										
		Alaska: Men by age	M	18.00- 44.99	410											170				
		Alaska: Men by age	M	45.00- 85.99	174											171				
		Alaska: Children by age	B	0.50- 5.99	51											172				
		Alaska: Children by age	B	6.00- 11.99	304											173				
		Alaska: Adolescents by sex	F	12.00- 17.99	222											174				
		Alaska: Adolescents by sex	M	12.00- 17.99	227											175				
		D	1987 -1989	East Boston, New Haven, Iowa and Washington Cou	B	71.00-NS	3946										C	4422	*	176
				East Boston, New Haven, Iowa and Washington Cou	F	71.00-NS	2540					12.6							134	
East Boston, New Haven, Iowa and Washington Cou	M			71.00-NS	1406						15.2		145							
East Boston, New Haven, Iowa and Washington Cou	F			71.00- 74.99	630					8.6			136							
East Boston, New Haven, Iowa and Washington Cou	M			71.00- 74.99	452						8.6		149							
East Boston, New Haven, Iowa and Washington Cou	F			75.00- 79.99	867					12.0			134							
East Boston, New Haven, Iowa and Washington Cou	M			75.00- 79.99	484						13.0		145							
East Boston, New Haven, Iowa and Washington Cou	F			80.00- 84.99	590					13.7			134							
East Boston, New Haven, Iowa and Washington Cou	M			80.00- 84.99	268						18.3		142							
East Boston, New Haven, Iowa and Washington Cou	F			85.00- 89.99	303					16.2			133							
East Boston, New Haven, Iowa and Washington Cou	M			85.00- 89.99	143						26.6		140							
East Boston, New Haven, Iowa and Washington Cou	F			90.00-NS	150					20.7			132							
East Boston, New Haven, Iowa and Washington Cou	M			90.00-NS	59						40.7		136							

**UNITED STATES OF AMERICA (THE)**

Last Updated: 2007-07-09

Level	Date	Region and sample descriptor	Sex	Age (years)	Sample size	Haemoglobin (g/L)						Mean	SD	Method	Reference	Notes		
						Proportion (%) of population with haemoglobin below:										General	Line	
						70	100	110	115	120	130							
R	1987	Bristol Bay Region: SAC: Total	B	6.00- 17.99	318									NS	2458a	*	179	
		Bristol Bay Region: SAC by age	B	6.00- 11.99	161				18.6									
		Bristol Bay Region: SAC by sex and age	F	12.00- 17.99	76					23.7								180
		Bristol Bay Region: SAC by sex and age	M	12.00- 17.99	81													
D	1986 -1989	Forsyth County, Jackson, Minneapolis and Washing	B	45.00- 64.99	14410							139		C	3511	*	181	
		Forsyth County, Jackson, Minneapolis and Washing	F	45.00- 64.99	8143					13.0			131					182
		Forsyth County, Jackson, Minneapolis and Washing	M	45.00- 64.99	6267						4.8		148					183
R	1986 -1987	Yukon-Kuskokwin Delta: SAC: Total	B	6.00- 17.99	876									NS	2458b	*	184	
		Yukon-Kuskokwin Delta: SAC by age	B	6.00- 11.99	352				4.3									
		Yukon-Kuskokwin Delta: SAC by sex and age	F	12.00- 17.99	243					14.4								185
		Yukon-Kuskokwin Delta: SAC by sex and age	M	12.00- 17.99	281													
L	1985 -NS	Camden: PW	F	12.00- 29.99	779									NS	4013	*	186	
L	1985 -1987	New York City: Infants	B	0.42- 0.65	719				55.1			115	9	C	912	*		
L	1984	New Haven: Children	B	0.75- 3.07	324							118	9	NS	2430	*	187	
L	1983P	Albuquerque: Elderly: Total	B	60.00- 93.99	280									C	3717	*	188	
		Albuquerque: Elderly by sex	F	60.00- 93.99	149					0.0			147	9				189
		Albuquerque: Elderly by sex	M	60.00- 93.99	131								160	10				190
L	1982 -1983	Bogalusa: Adults: Total	B	17.00- 24.99	981							148	16	A	5025	*	191	
		Bogalusa: Adults by sex	F	17.00- 24.99	515					6.4								
		Bogalusa: Adults by sex	M	17.00- 24.99	466													192
LR	1982P	Florida: Adolescents	B	11.00- 18.99	164					5.5				NS	925	*	193	
L	1981P	Connecticut: Adolescents: Total	B	NS- 21.99	440									C	2526	*	194	
		Connecticut: Adolescents by sex	F	NS- 21.99	240					8.3								
		Connecticut: Adolescents by sex	M	NS- 21.99	200													195
		Connecticut: Adolescents by group: 1	B	14.00- 21.99	159													196
		Connecticut: Adolescents by group: 2	B	NS	163													197
		Connecticut: Adolescents by group: 3	B	NS- 21.99	118													198

**UNITED STATES OF AMERICA (THE)**

Last Updated: 2007-07-09

Level	Date	Region and sample descriptor	Sex	Age (years)	Sample size	Haemoglobin (g/L)						Mean	SD	Method	Reference	Notes	
						Proportion (%) of population with haemoglobin below:										General	Line
						70	100	110	115	120	130						
L	1981 P	Little Rock: Elderly by sex	F	66.00-NS	196							130	12	C	3669	*	199
		Little Rock: Elderly by sex	M	66.00-NS	26							143	17			200	
L	1980 -1983	San Francisco: Children	B	1.00- 1.07	467				12.6					C	3727	*	201
L	1980 -1981	Syracuse: Infants	B	0.75- 1.07	278			14.0						C	4986	*	202
L	1978 -1980	San Francisco: Infants	B	0.96- 1.24	1128			10.9						C	3890	*	
L	1977 P	Boston: Elderly by sex and ethnicity: White	F	61.00-NS	495							125	12	NS	2439	*	
		Boston: Elderly by sex and ethnicity: White	M	61.00-NS	180							135	15				
		Boston: Elderly by sex and ethnicity: Black	F	61.00-NS	81							119	13				
		Boston: Elderly by sex and ethnicity: Black	M	61.00-NS	23							133	10				
L	1977 P	San Francisco: Children	B	0.50- 12.99	285									C	901	*	203
N	1976 -1980	Women: Total	F	18.00- 64.99	5099					8.1				D	5054	*	
		Men: Total	M	18.00- 64.99	4674						2.7						
		Children: Total	B	3.00- 14.99	4471												204
		Adolescents: Total	B	15.00- 17.99	965												205
		Elderly: Total	B	65.00- 74.99	2586												206
		Women by age	F	18.00- 24.99	1039						9.2	133	11				207
		Women by age	F	25.00- 44.99	1994						9.7						
		Women by age	F	45.00- 64.99	2066						6.1						
		Men by age	M	18.00- 24.99	974						1.2	153	10				208
		Men by age	M	25.00- 44.99	1795						1.7						
		Men by age	M	45.00- 64.99	1905						4.4						
		Children by sex and age	F	0.50- 0.99	109							120	10				209
		Children by sex and age	M	0.50- 0.99	98							116	8				210
		Children by sex and age	F	1.00- 2.99	461							120	10				211
		Children by sex and age	M	1.00- 2.99	518							120	10				212
		Children by sex and age	F	3.00- 5.99	919			4.6				123	9				213
		Children by sex and age	M	3.00- 5.99	1019			4.8				123	8				214
Children by sex and age	F	6.00- 11.99	771				5.1										
Children by sex and age	M	6.00- 11.99	814				5.2										

**UNITED STATES OF AMERICA (THE)**

Last Updated: 2007-07-09

Level	Date	Region and sample descriptor	Sex	Age (years)	Sample size	Haemoglobin (g/L)						Mean	SD	Method	Reference	Notes	
						Proportion (%) of population with haemoglobin below:										General	Line
						70	100	110	115	120	130						
N	1976 -1980	Children by sex and age	F	12.00- 14.99	463					8.9	132	9	D	5054		215	
		Children by sex and age	M	12.00- 14.99	485					3.1	138	11			216		
		Adolescents by sex	F	15.00- 17.99	437					10.5	133	11			217		
		Adolescents by sex	M	15.00- 17.99	528					6.1	147	10			218		
		Elderly by sex	F	65.00- 74.99	1397					5.9	137	12			219		
		Elderly by sex	M	65.00- 74.99	1189					8.1	148	14			220		
L	1974 P	Lansing: Children	B	0.33- 5.99	109			22.9					A	913	*	221	
L	1972 P	Philadelphia: SAC: Total	B	12.00- 15.99	1563								C	2440		222	
		Philadelphia: SAC by sex and age	F	12.00- 12.99	144				11.4						*		
		Philadelphia: SAC by sex and age	M	12.00- 12.99	136				13.1								
		Philadelphia: SAC by sex and age	F	13.00- 13.99	322				13.2								
		Philadelphia: SAC by sex and age	M	13.00- 13.99	203				9.8								
		Philadelphia: SAC by sex and age	F	14.00- 14.99	416				17.3								
		Philadelphia: SAC by sex and age	M	14.00- 14.99	271				18.8								
		Philadelphia: SAC by sex and age	F	15.00- 15.99	25			27.3									
		Philadelphia: SAC by sex and age	M	15.00- 15.99	46					18.4							
L	1972 P	Louisville: NPW	F	13.00- 41.99	167						119	13	NS	2451		223	
		Louisville: Newborns	B	0.00	167						161	17			*		
N	1971 -1974	NPW: Total	F	18.00- 64.99	6040					4.6			D	5053		224	
		Men: Total	M	18.00- 64.99	3437										*		
		Children: Total	B	1.00- 14.99	5759												
		Adolescents: Total	B	15.00- 17.99	944												
		Elderly: Total	B	65.00- 74.99	3309												
		NPW by age	F	18.00- 44.99	4613					4.9	137						
		NPW by age	F	45.00- 54.99	788					4.7	140						
		NPW by age	F	55.00- 64.99	639					2.0	141						
		Men by age	M	18.00- 44.99	2128						157						
		Men by age	M	45.00- 54.99	740						158						
		Men by age	M	55.00- 64.99	569						154						
		Children by sex and age	F	1.00- 1.99	254			12.6			120						
		Children by sex and age	M	1.00- 1.99	272			19.3			119						
		Children by sex and age	F	2.00- 3.99	535			8.3			124						

**UNITED STATES OF AMERICA (THE)**

Last Updated: 2007-07-09

Level	Date	Region and sample descriptor	Sex	Age (years)	Sample size	Haemoglobin (g/L)						Mean	SD	Method	Reference	Notes	
						Proportion (%) of population with haemoglobin below:										General	Line
						70	100	110	115	120	130						
N	1971 -1974	Children by sex and age	M	2.00- 3.99	577			8.7				124		D	5053		238
		Children by sex and age	F	4.00- 5.99	571			1.9				128				239	
		Children by sex and age	M	4.00- 5.99	549			1.7				127				240	
		Children by sex and age	F	6.00- 11.99	974				3.2			131				241	
		Children by sex and age	M	6.00- 11.99	974				3.0			132				242	
		Children by sex and age	F	12.00- 14.99	534					3.4		135				243	
		Children by sex and age	M	12.00- 14.99	519							141				244	
		Adolescents by sex	F	15.00- 17.99	457					4.9		137				245	
		Adolescents by sex	M	15.00- 17.99	487						2.3	152				246	
		Elderly by sex	F	65.00- 74.99	1728					4.3		140				247	
		Elderly by sex	M	65.00- 74.99	1581							153				248	
		D	1971	Noxubee County: Pre-SAC	B	4.00- 5.07	150			29.3			113				A
L	1969	Los Angeles: Infants	B	0.75- 0.82	315			14.0			119		A	2453	*		
L	1969	Burlington: PW	F	12.00- 32.99	102								A	4045	*	250	
S	1968 -1971	Washington State: All: Total	B	5.00-NS	1564									C	887	*	251
		Washington State: Adults: Total	B	18.00-NS	990											252	
		Washington State: Children	B	5.00- 11.99	323					10.8						253	
		Washington State: Adolescents: Total	B	12.00- 17.99	251					6.0						254	
		Washington State: Adults by sex and age	F	18.00- 45.99	370					14.1						255	
		Washington State: Adults by sex and age	M	18.00- 45.99	240						4.2					256	
		Washington State: Adults by sex and age	F	46.00-NS	215					8.3						257	
		Washington State: Adults by sex and age	M	46.00-NS	165						9.1					258	
		Washington State: Adolescents by sex	F	12.00- 17.99	125					10.6						259	
		Washington State: Adolescents by sex	M	12.00- 17.99	126					1.6						260	
S	1968 -1970	36 States and District of Columbia: Pre-SAC: Total	B	1.00- 5.99	2139									NS	929	*	261
		36 States and District of Columbia: Pre-SAC by age	B	1.00- 1.99	349			14.9								262	
		36 States and District of Columbia: Pre-SAC by age	B	2.00- 2.99	424			5.4								263	
		36 States and District of Columbia: Pre-SAC by age	B	3.00- 3.99	469			4.3								264	
		36 States and District of Columbia: Pre-SAC by age	B	4.00- 4.99	443			4.7								265	
		36 States and District of Columbia: Pre-SAC by age	B	5.00- 5.99	454				10.1							266	

UNITED STATES OF AMERICA (THE)

Last Updated: 2007-07-09

Level	Date	Region and sample descriptor	Sex	Age (years)	Sample size	Haemoglobin (g/L)						Mean	SD	Method	Reference	Notes	
						Proportion (%) of population with haemoglobin below:										General	Line
						70	100	110	115	120	130						
S	1968	Iowa State: Children: Total	B	0.50- 3.07	583		4.1					120	11	A	924	*	267
		Iowa State: Children by sex	F	0.50- 3.07	265		3.8					119	10				
		Iowa State: Children by sex	M	0.50- 3.07	318		4.4					120	12				
		Iowa State: Children by age	B	0.50- 0.99	114		6.1					117	11				
		Iowa State: Children by age	B	1.00- 1.49	126		7.1					117	12				
		Iowa State: Children by age	B	1.50- 1.99	126		5.6					120	11				
		Iowa State: Children by age	B	2.00- 2.49	108		0.9					123	11				
		Iowa State: Children by age	B	2.50- 3.07	109		0.0					122	8				
		Iowa State: Children by area: Urban	B	0.50- 3.07	280		4.6										
		Iowa State: Children by area: Rural	B	0.50- 3.07	303		3.6										
S	1967 -1968	Mississippi State: Pre-SAC	B	1.00- 6.07	552		16.5						NS	894	*	268	
L	1965	Washington: Children	B	0.17- 6.99	460		28.9				104		A	2445	*	269	

## NOTES

### UNITED STATES OF AMERICA (THE)

Reference No: 5069

**General Notes:** *Analysis of records from the Centres for Disease Control and Prevention (CDC) Paediatric Nutrition Surveillance System (PedNSS) from 36 states, the District of Colombia, Puerto Rico and 6 tribal governments (Cheyenne River Sioux-SD, Chickasaw Nation-OK, Inter Tribal Council-AZ, Navajo Nation-AZ, Rosebud Sioux-SD and Standing Rock Sioux-ND); 81.2% of the records were from children enrolled in the special Supplemental Nutrition Program for Women, Infants, and Children (WIC), 10.6% from Early and Periodic Screening, Diagnosis and Treatment (EPSDT) Program; sampling: a total of 7 261 016 records from 5 091 536 children aged <5 yrs were reviewed; inclusion only of one record per child aged 0.5-4 yrs in the analysis; exclusion of records with unknown data or errors; adjustment for altitude; Hb cut-off level 2-4 yrs not according to WHO recommendations (please see 'Key to the data tables').*

- Line note 1** Prevalence of anaemia 12.8% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs); disaggregated data by ethnicity.
- Line note 2** Prevalence of anaemia 13.3% (Hb <110 g/L 0.5-1 yrs, Hb <111 g/L 2-4 yrs).
- Line note 3** Prevalence of anaemia 10.4% (Hct <32.9% 0.5-1 yrs, Hct <33.0% 2-4 yrs).
- Line note 4** Prevalence of anaemia 16.2% (Hb <110 g/L or Hct <32.9%).
- Line note 5** Prevalence of anaemia 14.4% (Hb <110 g/L or Hct <32.9%).
- Line note 6** Prevalence of anaemia 14.2% (Hb <111 g/L or Hct <33.0%).
- Line note 7** Prevalence of anaemia 10.7% (Hb <111 g/L or Hct <33.0%).
- Line note 8** Prevalence of anaemia 8.0% (Hb <111 g/L or Hct <33.0%).
- Line note 9** Prevalence of anaemia 22.7% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 10** Prevalence of anaemia 11.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 11** Prevalence of anaemia 13.7% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 12** Prevalence of anaemia 7.8% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 13** Prevalence of anaemia 14.8% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 14** Prevalence of anaemia 13.4% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 15** Prevalence of anaemia 10.4% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 16** Prevalence of anaemia 12.8% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 17** Prevalence of anaemia 10.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 18** Prevalence of anaemia 15.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 19** Prevalence of anaemia 10.1% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 20** Prevalence of anaemia 10.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 21** Prevalence of anaemia 11.5% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 22** Prevalence of anaemia 14.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 23** Prevalence of anaemia 12.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 24** Prevalence of anaemia 13.1% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 25** Prevalence of anaemia 9.8% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 26** Prevalence of anaemia 16.2% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 27** Prevalence of anaemia 8.8% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 28** Prevalence of anaemia 13.6% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 29** Prevalence of anaemia 10.4% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 30** Prevalence of anaemia 13.8% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 31** Prevalence of anaemia 16.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 32** Prevalence of anaemia 14.1% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 33** Prevalence of anaemia 7.7% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).

- Line note 34** Prevalence of anaemia 14.2% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 35** Prevalence of anaemia 11.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 36** Prevalence of anaemia 15.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 37** Prevalence of anaemia 10.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 38** Prevalence of anaemia 7.6% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 39** Prevalence of anaemia 7.1% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 40** Prevalence of anaemia 9.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 41** Prevalence of anaemia 9.0% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 42** Prevalence of anaemia 6.6% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 43** Prevalence of anaemia 12.2% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 44** Prevalence of anaemia 10.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 45** Prevalence of anaemia 21.0% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 46** Prevalence of anaemia 8.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 47** Prevalence of anaemia 11.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 48** Prevalence of anaemia 17.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 49** Prevalence of anaemia 12.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 50** Prevalence of anaemia 8.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 51** Prevalence of anaemia 17.8% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).
- Line note 52** Prevalence of anaemia 8.0% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).

**Reference No:** 5066

**General Notes:** *Analysis of records from the Centers for Disease Control and Prevention (CDC) Pregnancy Nutrition Surveillance System (PNSS) from 25 states; 98.9% of the records were from women attending the Special Supplemental Nutrition Program for Women, Infants and Children (WIC); sampling: 727 815 records were accepted including 477 377 complete records (both prenatal and postpartum data), 80 170 only prenatal records and 170 268 only postpartum records; exclusion of records with unknown data or errors; prenatal data (PW) were collected at the first prenatal visit at the clinic (inclusion only of one record for each pregnancy in the analysis) and postpartum data (NPW) at the postpartum visit after delivery; Hct values were converted to Hb values (Hb=Hct/3); adjustment for altitude and smoking; Hb cut-off levels NPW 12-14 yrs and PW 2nd trimester not according to WHO recommendations ( please see 'Key to the data tables').*

- Line note 53** Prevalence of anaemia 35.1% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs); disaggregated by ethnicity, maternal education.
- Line note 54** Prevalence of anaemia 40.5% (Hb <118 g/L).

- Line note 55** Prevalence of anaemia 38.0% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).
- Line note 56** Prevalence of anaemia 41.1% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).
- Line note 57** Prevalence of anaemia 43.2% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).
- Line note 58** Prevalence of anaemia 17.5% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).
- Line note 59** Prevalence of anaemia 36.4% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).
- Line note 60** Prevalence of anaemia 29.6% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).
- Line note 61** Prevalence of anaemia 28.3% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).
- Line note 62** Prevalence of anaemia 28.6% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).
- Line note 63** Prevalence of anaemia 43.5% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).
- Line note 64** Prevalence of anaemia 28.3% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).
- Line note 65** Prevalence of anaemia 34.0% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).
- Line note 66** Prevalence of anaemia 18.7% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).
- Line note 67** Prevalence of anaemia 25.9% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).
- Line note 68** Prevalence of anaemia 26.5% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).

**Line note 69** Prevalence of anaemia 55.2% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).  
**Line note 70** Prevalence of anaemia 40.1% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).  
**Line note 71** Prevalence of anaemia 28.8% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).  
**Line note 72** Prevalence of anaemia 32.3% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).  
**Line note 73** Prevalence of anaemia 13.4% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).  
**Line note 74** Prevalence of anaemia 21.8% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).  
**Line note 75** Prevalence of anaemia 20.7% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).  
**Line note 76** Prevalence of anaemia 26.5% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).  
**Line note 77** Prevalence of anaemia 24.4% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).  
**Line note 78** Prevalence of anaemia 34.1% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).  
**Line note 79** Prevalence of anaemia 41.5% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs).

**Line note 80** Prevalence of anaemia 10.3% (Hb <105 g/L).  
**Line note 81** Disaggregated data by ethnicity, maternal education.

**Reference No:** 5070

**General Notes:** *Analysis of records from the Centers for Disease Control and Prevention (CDC) Paediatric Nutrition Surveillance System from 38 states, the District of Colombia, Puerto Rico and 6 tribal governments (Cheyenne River Sioux-SD, Chickasaw Nation-OK, Inter Tribal Council-AZ, Navajo Nation-AZ, Rosebud Sioux-SD, Standing Rock Sioux-ND), 83% of the records were from children enrolled in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), 8% from the Early Periodic Screening, Diagnosis and Treatment (EPSDT) Program; sampling: records from 5 518 836 children aged <5 yrs were reviewed; inclusion only of one record per child aged 0.5-4 yrs in the analysis; exclusion of records with unknown data or errors; adjustment for altitude; Hb cut-off level 2-4 yrs not according to WHO recommendations (please see 'Key to the data tables').*

**Line note 82** Prevalence of anaemia 13.0% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs); disaggregated data by ethnicity.  
**Line note 83** Prevalence of anaemia 16.2% (Hb <110 g/L or Hct <32.9%).  
**Line note 84** Prevalence of anaemia 15.1% (Hb <110 g/L or Hct <32.9%).  
**Line note 85** Prevalence of anaemia 14.0% (Hb <110 g/L or Hct <32.9%).  
**Line note 86** Prevalence of anaemia 14.5% (Hb <111 g/L or Hct <33.0%).  
**Line note 87** Prevalence of anaemia 9.6% (Hb <111 g/L or Hct <33.0%).  
**Line note 88** Prevalence of anaemia 21.8% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 89** Prevalence of anaemia 10.5% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 90** Prevalence of anaemia 13.1% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 91** Prevalence of anaemia 7.4% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 92** Prevalence of anaemia 15.4% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 93** Prevalence of anaemia 12.7% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 94** Prevalence of anaemia 11.7% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 95** Prevalence of anaemia 11.0% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 96** Prevalence of anaemia 11.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 97** Prevalence of anaemia 15.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 98** Prevalence of anaemia 8.8% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 99** Prevalence of anaemia 10.0% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 100** Prevalence of anaemia 11.6% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 101** Prevalence of anaemia 14.6% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 102** Prevalence of anaemia 12.2% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).

**Line note 103** Prevalence of anaemia 23.4% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 104** Prevalence of anaemia 13.0% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 105** Prevalence of anaemia 9.0% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 106** Prevalence of anaemia 16.5% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 107** Prevalence of anaemia 12.2% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 108** Prevalence of anaemia 8.6% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 109** Prevalence of anaemia 15.0% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 110** Prevalence of anaemia 17.8% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 111** Prevalence of anaemia 5.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 112** Prevalence of anaemia 14.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 113** Prevalence of anaemia 7.2% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 114** Prevalence of anaemia 14.1% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 115** Prevalence of anaemia 11.4% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 116** Prevalence of anaemia 15.0% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 117** Prevalence of anaemia 10.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 118** Prevalence of anaemia 7.0% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 119** Prevalence of anaemia 7.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 120** Prevalence of anaemia 11.7% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 121** Prevalence of anaemia 12.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 122** Prevalence of anaemia 8.6% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 123** Prevalence of anaemia 5.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 124** Prevalence of anaemia 12.7% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 125** Prevalence of anaemia 9.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 126** Prevalence of anaemia 20.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 127** Prevalence of anaemia 10.0% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 128** Prevalence of anaemia 10.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 129** Prevalence of anaemia 17.3% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 130** Prevalence of anaemia 12.2% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 131** Prevalence of anaemia 6.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 132** Prevalence of anaemia 17.9% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).  
**Line note 133** Prevalence of anaemia 9.4% (Hb <110 g/L or Hct <32.9% 0.5-1 yrs, Hb <111 g/L or Hct <33.0% 2-4 yrs).

**Reference No:** 4738

**General Notes:** *Data from NHANES 1999-2000 and NHANES 2001-2002 with additional analysis provided by Division of Nutrition and Physical Activity, Centers of Disease Control and Prevention, Atlanta, USA; data on iron deficiency from NHANES 1999-2000 is presented in reference No. 4442.*

**Line note 134** Prevalence of anaemia 2.1% (Hb <110 g/L 1-4 yrs, Hb <115 g/L 5-11 yrs, Hb <120 g/L 12-14 yrs).

**Line note 135** Prevalence of anaemia 1.8% (Hb <115 g/L 5-11 yrs, Hb <120 g/L 12-14 yrs).

**Reference No:** 2414

**General Notes:** Facility based study (urban teen health center); sampling: participants were recruited from the waiting room of the clinic and thus represent a sample of opportunity; inclusion only of mothers (12-21 yrs) and their children who were enrolled in the Special Supplementary Food Program for Women, Infants and Children (WIC), were primarily of low socioeconomic status and had low literacy; location not specified; Hb cut-off level not according to WHO recommendations (please see 'Key to the data tables').

**Line note 136** Prevalence of anaemia 34.9% (Hb <112 g/L); mean (SD) age 1.7 (0.9) yrs; 82 boys+93 girls; disaggregated data by ethnicity, medical problems, nutritional education.

**Reference No:** 3501

**General Notes:** Facility based study (Pitt County Memorial Hospital); prospective observational study; sampling: first 101 consecutive eligible subjects had their postpartum charts reviewed; inclusion only of subjects who had a Hb or Hct measure between 26 and 28 wks gestation and a repeat Hb or Hct measure on admission to labour and delivery at term; exclusion of preterm deliveries (<37 wks) and pregnancies complicated by multiple gestations, hemoglobinopathies and hypertensive disorders; those found (n=20) to be anaemic at 26-28 wks gestation started iron therapy; Hb cut-off level not according to WHO recommendations ( please see 'Key to the data tables').

**Line note 137** Median Hb: 110 g/L; prevalence of severe anaemia 0.0% (Hb <80 g/L); mean (SD) age 24.0 (4.3) yrs; gestational age 26-28 wks.

**Reference No:** 5138

**General Notes:** Facility based study (private paediatric clinic); sampling: design not explained; Hb determination for 341 of the 361 enrolled children; inclusion only of children free of complaints and were seen for well-child check-up, preschool physical, or sports physical; same Hb cut-off level applied to different age groups; Hb cut-off level 6-18 yrs not according to WHO recommendations (please see 'Key to the data tables').

**Reference No:** 2717

**General Notes:** Facility based study (Hermann Hospital); sampling: 1000 subjects were sampled consecutively; inclusion only of women having an uncomplicated spontaneous or forceps/vacuum-assisted vaginal delivery; initial Hb determination upon admission to labour and delivery (antepartum Hb); value for other Hb cut-off level; Hb cut-off level not according to WHO recommendations ( please see 'Key to the data tables').

**Reference No:** 3531

**General Notes:** Facility based study (public prenatal clinic) in Raleigh, North Carolina; baseline values of an intervention study; sampling: design not explained, 867 women were enrolled at their first prenatal visit (<20 wks gestation); inclusion only in the study of women who were English speaking and carrying singletons; inclusion only in this analysis 497 women who delivered a live infant, returned for a postpartum visit and had a Hb determination at that visit; Hb cut-off levels 15-20 wks gestation not according to WHO recommendations (please see 'Key to the data tables').

**Line note 138** Prevalence of anaemia 4.0% (Hb <105 g/L 20 wks gestation, Hb <106 g/L 15 wks gestation, Hb <110 g/L 12 wks gestation); first prenatal visit.

**Reference No:** 3685

**General Notes:** Facility based study (inner-city, paediatric residency continuity clinic and 3 other inner-city clinics); sampling: all (n=542) eligible children were enrolled, of whom 131 refused to participate and 69 were missed by recruiters; inclusion only of children aged 9 to 30 months who had a scheduled appointment that included routine screening for anaemia; complete blood test for subsample only (n=282).

**Line note 139** Prevalence of iron deficiency anaemia 7.8% (Hb <110 g/L+serum ferritin <10 µg/L or mean corpuscular volume <70 fL+red cell distribution width >14.5%); prevalence of iron deficiency 14.9% (serum ferritin <10 µg/L or mean corpuscular volume <70 fL+red cell distribution width >14.5%); mean (SD) age 18.6 (6.0) months; 53% were girls; 91% were black; disaggregated data by age.

**Reference No:** 4797

**General Notes:** Facility based study (Lebanon Family Health Services); sampling: 173 out of all PW (n=182) entering at prenatal care during the study period were included.

**Line note 140** Anaemia at any time during pregnancy; prevalence of iron deficiency anaemia 11.6% (Hb <110 g/L+serum ferritin <12 µg/L; n=172).

**Reference No:** 3490

**General Notes:** Retrospective cohort analysis of records from the Centers for Disease Control and Prevention (CDC) Pregnancy Nutrition Surveillance System (PNSS) from 12 states; 97% of the records were from women attending the Special Supplemental Nutrition Program for Women, Infants and Children (WIC); sampling: all eligible records (n=81 431) were included, complete data for 59 428 records; inclusion only of women who entered WIC prenatally, delivered a live infant, contributed info on maternal Hb or Hct, age and smoking status and who had a postpartum visit during 4-26 wks after delivery; exclusion of records with missing data; Hct values were converted to Hb values (Hb=Hct/3); adjustment for altitude and smoking; Hb cut-off levels NPW 12-14 yrs and PW 2nd trimester not according to WHO recommendations ( please see 'Key to the data tables').

- Line note 141** Postpartum data; prevalence of anaemia 27.2% (Hb <118 g/L 12-14 yrs, Hb <120 g/L >14 yrs); disaggregated data by time of postpartum visit, ethnicity, prepregnancy body mass index, birth order, maternal education, marital status.
- Line note 142** Prenatal data; prevalence of anaemia 13.2% (Hb <105 g/L 2nd trimester, Hb <110 g/L 1st+3rd trimester).
- Line note 143** Postpartum data; prevalence of anaemia 33.2% (Hb <118 g/L 12-14 yrs, Hb <120 g/L 15 yrs).
- Line note 144** Postpartum data.
- Line note 145** Postpartum data.
- Line note 146** Postpartum data.
- Line note 147** Postpartum data.

**Reference No:** 3019

**General Notes:** *Facility based study (inner-city paediatric resident continuity clinic); retrospective cohort study using medical record review; sampling: all children were included, children with more than one Hb screening during the study period were counted only once; inclusion only of children aged 9-36 months who were screened for anaemia.*

**Reference No:** 2418

**General Notes:** *Facility based study (private offices of 4 paediatricians) in 4 different boroughs in the New York City area; sampling: all children were consecutively enrolled during their well-child visits; exclusion of children with histories of chronic illness, current febrile illness, blood dyscrasias or who were born prematurely; inclusion only of healthy children aged 12 to 36 months.*

**Line note 148** Prevalence of iron deficiency anaemia 9.5% (Hb <110 g/L+serum ferritin <10 µg/L+erythrocyte protoporphyrin >0.62 µmol/L); prevalence of iron deficiency 6.3% (serum ferritin <10 µg/L+erythrocyte protoporphyrin >0.62 µmol/); disaggregated data by age.

**Reference No:** 3635

**General Notes:** *Facility based study (Boston Children's Hospital's outpatient primary care clinics); retrospective analysis of screening data; Massachusetts State law mandates that all children must be screened for lead poisoning beginning at 9 to 12 months of age and annually thereafter until 4 yrs of age, routine annual screening for anaemia is also performed concurrently; sampling: all eligible children were enrolled; inclusion only of children followed for primary care who were seen for 2 consecutive visits whose blood was drawn simultaneously for screening of blood lead and complete blood counts.*

**Line note 149** Only mean Hb values; prevalence of iron deficiency 11.3% (mean corpuscular volume <70 fL <2 yrs, mean corpuscular volume <73 fL >=2 yrs+red blood cell distribution width >14.5; n=1245); mean (SD) age 1.7 (0.8) yrs.

**Line note 150** Only mean Hb values; prevalence of iron deficiency 9.5% (mean corpuscular volume <70 fL <2 yrs, mean corpuscular volume <73 fL >=2 yrs+red blood cell distribution width >14.5); mean (SD) age 2.6 (0.8) yrs.

**Reference No:** 2417

**General Notes:** *Facility based study (inner-city paediatric primary care center affiliated at the Boston Medical Center); method: Sysmex NE-8000; sampling: data were collected from the Immunization Database and the Laboratory Database of the Boston Medical Center, a total of 4045 Hb tests from 2672 children were available for study analysis; most children were enrolled in the Women, Infants and Children (WIC) Program and were required to undergo Hb testing at least once a year for the first 3 yrs of life or every 6 months after an abnormal test; inclusion only of children who had at least 3 immunizations in the immunization tracking system and at least 1 Hb or blood lead level screening test; the first Hb value obtained within 6 months of the child's birthday was used; values for other Hb cut-off levels.*

**Reference No:** 2420

**General Notes:** *Facility based study (2 public high schools and 2 private Catholic high schools) in Baltimore, Maryland; sampling: all girls (n=2000) who were enrolled at the four schools (grades 9-12) were asked to participate, 803 consented; Hb determination for 716 girls.*

**Line note 151** Prevalence of anaemia 4.9% (Hb <115 g/L African American girls, Hb <120 g/L white girls); prevalence of iron deficiency anaemia 2.0% (Hb <115 g/L African American girls, Hb <120 g/L white girls+serum ferritin <12 µg/L); prevalence of iron deficiency 13.7% (serum ferritin <12 µg/L).

**Reference No:** 4772

**General Notes:** *Facility based study (2 private paediatrician's offices and a tax-supported health care center in three urban settings and a private paediatric practice in a suburban setting); baseline values of intervention study; sampling: design not explained; inclusion only of subjects who were fullterm at birth, currently healthy, exclusively bottle fed and had a primary caregiver willing to comply with the protocol; location not specified; Hb cut-off level not according to WHO recommendations (please see 'Key to the data tables').*

- Line note 152** Prevalence of anaemia 0.0% (Hb <95 g/L); disaggregated data by intervention.
- Reference No:** 5001
- General Notes:** *Facility based study (1 private obstetric clinic); location not specified; sampling: retrospective study, design not explained; inclusion only of women with singleton pregnancies who had begun prenatal care before the 12th week of gestation and had been seen regularly throughout gestation; only mean Hb values.*
- Line note 153** Initial values before iron supplementation; gestation 11-13 weeks; mean (SD) age 26.3 (4.7) yrs.
- Reference No:** 5029
- General Notes:** *Facility based study (urban primary care clinic); method: Technicon H-1 analyzer; sampling: design not explained, records of eligible children were reviewed; exclusion of children who had medical conditions known to influence haematologic status.*
- Line note 154** Mean age 27.4 months; 172 boys+133 girls; 99% were African-American; disaggregated data by dietary history.
- Reference No:** 3844
- General Notes:** *Facility based study (prenatal clinics at the Kansas University Medical Center); method: automated cell counter ELT8/WS; sampling: design not explained; inclusion only of women in the 3rd trimester (26-40 wks) of their pregnancy; exclusion of women with multiple gestations.*
- Line note 155** Prevalence of iron deficiency 44.3% (serum ferritin <12 µg/L); disaggregated data by gestational age.
- Reference No:** 3858
- General Notes:** *Retrospective chart review of medical records of a cohort; facility based study (Maternity Center East Clinic affiliated with Johns Hopkins Hospital); sampling: 1214 charts were reviewed (96% of the entire pregnant adolescent population), 918 charts were included in the final analysis; exclusion of subjects who had an abortion, miscarriage, were lost to follow up or who were transferred to another clinic; inclusion only of African-American adolescents with singleton pregnancy and delivery at Johns Hopkins Hospital; Hb determination was typically done twice during pregnancy; all adolescents receiving care at the center were prescribed daily prenatal supplements; adjustment for smoking; Hb cut-off level 2nd trimester not according to WHO recommendations (please see 'Key to the data tables').*
- Line note 156** Prevalence of anaemia 20.3% (Hb <105 g/L).
- Reference No:** 2827
- General Notes:** *Retrospective cohort analysis of records from the Centers for Disease Control and Prevention (CDC) Pregnancy Nutrition Surveillance System from 11 states; 96% of the records were from women attending the Special Supplemental Nutrition Program for Women, Infants and Children; sampling: all eligible records (n=407 416) were included, complete data for 173 031; exclusion of records with missing data or probable errors in birth weight or gestational age; inclusion only of singleton pregnant women who entered the maternal child health program between 1 and 36 wks' gestation and who delivered a liveborn infant at 26 to 42 wks' gestation; Hct values were converted to Hb values (Hb=(Hct/2.97)\*10); Hb or Hct determination at first prenatal visit; adjustment for altitude and smoking; values for other Hb cut-off levels; Hb cut-off level gestation 12-40 wks not according to WHO recommendations (please see 'Key to the data tables').*
- Line note 157** Prevalence of anaemia 4.7% (Hb <110 g/L 6 wks gestation, Hb <104 g/l 12 wks gestation, Hb <99 g/L 18 wks gestation, Hb <98 g/L 24 wks gestation, Hb <101 g/L 30 wks gestation, Hb <107 g/L 36 wks gestation, Hb <111 g/L 40 wks gestation).
- Line note 158** Prevalence of anaemia 3.4% (Hb <110 g/L 6 wks gestation, Hb <104 g/l 12 wks gestation, Hb <99 g/L 18 wks gestation, Hb <98 g/L 24 wks gestation, Hb <101 g/L 30 wks gestation, Hb <107 g/L 36 wks gestation, Hb <111 g/L 40 wks gestation); mean gestational age 9.7 wks.
- Line note 159** Prevalence of anaemia 3.3% (Hb <110 g/L 6 wks gestation, Hb <104 g/l 12 wks gestation, Hb <99 g/L 18 wks gestation, Hb <98 g/L 24 wks gestation, Hb <101 g/L 30 wks gestation, Hb <107 g/L 36 wks gestation, Hb <111 g/L 40 wks gestation); mean gestational age 19.2 wks.
- Line note 160** Prevalence of anaemia 10.9% (Hb <110 g/L 6 wks gestation, Hb <104 g/l 12 wks gestation, Hb <99 g/L 18 wks gestation, Hb <98 g/L 24 wks gestation, Hb <101 g/L 30 wks gestation, Hb <107 g/L 36 wks gestation, Hb <111 g/L 40 wks gestation); mean gestational age 30.8 wks.
- Reference No:** 4317
- General Notes:** *Facility based study (clinic); sampling: design not explained; inclusion only of subjects who had been well, had received no medications for 3 wks prior to entry into the study and had been drinking either cow's milk or a milk based infant formula as the primary beverage for at least 3 months prior to entry into the study; Hb determination for 95 out of 100 subjects enrolled.*

- Reference No:** 4305  
**General Notes:** *Facility based study (public elementary school); sampling: all children (n=369) attending the 3rd and 4th grades were eligible to participate, 104 obtained parental consent (1 child refused to give blood); Hb cut-off level not according to WHO recommendations (please see 'Key to the data tables').*
- Line note 161** Prevalence of iron deficiency anaemia 1.0% (Hb <110 g/L+mean corpuscular volume <74 fL); median Hb: 121 g/L; 95% CI: 5.9%, 19.1%; mean (SD) age 9.6 (0.9) yrs; 60 girls+43 boys; all subjects were black.
- Reference No:** 4968  
**General Notes:** *Third National Health and Nutrition Examination Survey (NHANES III); sampling: stratified multistage probability design, 39.695 persons were selected, 86% were interviewed and 79% underwent examination; inclusion only of noninstitutionalized subjects; Hb determination only for 78% (n=26.372) of the total interviewed sample for phase 1 of the study; see also reference No. 1677, 2760, 3505, 3506, 3508, 4416, 4440, 4442, 5055; additional data on iron deficiency and iron deficiency anaemia in reference No. 1677, 5055.*
- Line note 162** Prevalence of anaemia 8.7% (Hb <110 g/L 1-5 yrs, Hb <120 g/L 6-16 yrs).  
**Line note 163** Prevalence of anaemia 6.0% (Hb <110 g/L 1-5 yrs, Hb <120 g/L 6-14 yrs, Hb <130 g/L 15-16 yrs).
- Reference No:** 4806  
**General Notes:** *Framingham Heart Survey, a longitudinal epidemiologic study which was initiated in 1948- 1950 and thereafter subjects were followed in 2-yr-cycles; this analysis reports on the 20th cycle of data collection; sampling: originally 5209 white subjects aged 30-62 yrs were randomly selected from a census list, 1401 surviving members participated in the 20th cycle; exclusion of 385 subjects with insufficient serum available to determine C-reactive protein or iron index; Hb cut-off levels not according to WHO recommendations (please see 'Key to the data tables'); see also reference No. 4881.*
- Line note 164** Prevalence of anaemia 8.7% (Hb <118 g/L females, Hb <124 g/L males); prevalence of iron deficiency 2.7% ( $\geq 2$  of 3 indicators: serum ferritin <12  $\mu$ g/L, transferrin saturation <15%, mean corpuscular volume <80 fL); prevalence of iron deficiency anaemia 1.2% (Hb <118 g/L females, Hb <124 g/L males+ $\geq 2$  of 3 indicators: serum ferritin <12  $\mu$ g/L, transferrin saturation <15%, mean corpuscular volume <80 fL); mean (SD) age 76.3 (5.0) yrs.
- Line note 165** Prevalence of anaemia 10.4% (Hb <118 g/L); prevalence of iron deficiency 2.6% ( $\geq 2$  of 3 indicators: serum ferritin <12  $\mu$ g/L, transferrin saturation <15%, mean corpuscular volume <80 fL); prevalence of iron deficiency anaemia 1.3 % (Hb <118 g/L+ $\geq 2$  of 3 indicators: serum ferritin <12  $\mu$ g/L, transferrin saturation <15%, mean corpuscular volume <80 fL); median Hb: 134 g/L; 95% CI: 109 g/L, 157 g/L.
- Line note 166** Prevalence of anaemia 6.1% (Hb <124 g/L); prevalence of iron deficiency 2.7% ( $\geq 2$  of 3 indicators: serum ferritin <12  $\mu$ g/L, transferrin saturation <15%, mean corpuscular volume <80 fL); prevalence of iron deficiency anaemia 1.0% (Hb <124 g/L+ $\geq 2$  of 3 indicators: serum ferritin <12  $\mu$ g/L, transferrin saturation <15%, mean corpuscular volume <80 fL); median Hb: 147 g/L; 95% CI: 102 g/L, 168 g/L.
- Reference No:** 2419  
**General Notes:** *Study in 19 villages of western Alaska; sampling: design not explained; prevalence figures provided by investigator; Hb cut-off levels both sexes 2-14 yrs, males >14 yrs not according to WHO recommendations (please see 'Key to the data tables').*
- Line note 167** Prevalence of anaemia 14.6% (Hb <136 g/L).  
**Line note 168** Prevalence of anaemia 10.7% (Hb <110 g/L 1 yr, Hb <112 g/L 2-4 yrs, Hb <114 g/L 5-7 yrs, Hb <116 g/L 8-11 yrs).  
**Line note 169** Prevalence of anaemia 12.2% (Hb <118 g/L females 12-14 yrs, Hb <120 g/L females 15-17 yrs, Hb <123 g/L males 12-14 yrs, Hb <126 g/L males 15-17 yrs).
- Line note 170** Prevalence of anaemia 7.3% (Hb <136 g/L).  
**Line note 171** Prevalence of anaemia 31.6% (Hb <136 g/L).  
**Line note 172** Prevalence of anaemia 17.6% (Hb <110 g/L 1 yr, Hb <112 g/L 2-4 yrs, Hb <114 g/L 5 yrs).  
**Line note 173** Prevalence of anaemia 9.5% (Hb <114 g/L 6-7 yrs, Hb <116 g/L 8-11 yrs).  
**Line note 174** Prevalence of anaemia 15.3% (Hb <118 g/L 12-14 yrs, Hb <120 g/L 15-17 yrs).  
**Line note 175** Prevalence of anaemia 9.3% (Hb <123 g/L 12-14 yrs, Hb <126 g/L 15-17 yrs).

**Reference No:** 4422

**General Notes:** *Prospective cohort study (Established Populations for Epidemiologic Studies of the Elderly) in three communities (East Boston, Massachusetts; Iowa and Washington Counties, Iowa; New Haven, Connecticut); sampling: between 1981 and 1983, subjects aged 65 yrs and older were enrolled by full community surveys in East Boston and rural Iowa and by stratified random sampling in New Haven, initial interviews were completed with 10 294 subjects and thereafter six annual follow-up interviews; the 6th yr interview was the basis for this analysis; Hb determination only for subsample (East Boston 1281 (55%), Iowa 1939 (76%), New Haven 1051 (63%)); inclusion only of subjects (n=3946) with completed interviews and haematologic values; see also reference No. 3857, 4811.*

**Line note 176** Prevalence value calculated; prevalence of anaemia 13.5% (Hb <120 g/L females, Hb <130 g/L males).

**Line note 177** Disaggregated data by ethnicity, education, body mass index, smoking status, alcohol consumption, hospitalization, institutionalized, cancer, creatinine, albumin.

**Line note 178** Disaggregated data by ethnicity, education, body mass index, smoking status, alcohol consumption, hospitalization, institutionalized, cancer, creatinine, albumin.

**Reference No:** 2458a

**General Notes:** *Facility based study (school) in 7 villages in the Bristol Bay Region, Alaska; sampling: design not explained; Hb cut-off levels males 12-17 yrs not according to WHO recommendations (please see 'Key to the data tables').*

**Line note 179** Prevalence of anaemia 22.6% (Hb <115 g/L both sexes 6-11 yrs, Hb <120 g/L females 12-17 yrs, Hb <125 g/L males 12-17 yrs).

**Line note 180** Prevalence of anaemia 29.6% (Hb <125 g/L).

**Reference No:** 3511

**General Notes:** *Baseline values of a prospective cohort study of atherosclerosis and its risk factors in four US communities (Forsyth County, North Carolina; Jackson, Mississippi; the northwest suburbs of Minneapolis, Minnesota; and Washington County, Maryland); sampling: design not explained, 15 792 subjects were enrolled, 14 410 were included in this analysis; exclusion of subjects who had either prevalent coronary heart disease (CHD) or missing data on prevalent CHD or Hb levels; inclusion only of subjects without cardiovascular disease at baseline.*

**Line note 181** Prevalence of anaemia 9.4% (Hb <120 g/L females, Hb <130 g/L males); mean age 54.0 yrs; disaggregated data by ethnicity.

**Line note 182** Mean age 53.8 yrs.

**Line note 183** Mean age 54.4 yrs.

**Reference No:** 2458b

**General Notes:** *Facility based study (school) in 15 villages in the Yukon-Kuskokwin Delta; sampling: design not explained; inclusion only of Yupik Eskimo school children; Hb cut-off levels males 12-17 yrs not according to WHO recommendations (please see 'Key to the data tables').*

**Line note 184** Prevalence of anaemia 9.9% (Hb <115 g/L both sexes 6-11 yrs, Hb <120 g/L females 12-17 yrs, Hb <125 g/L males 12-17 yrs).

**Line note 185** Prevalence of anaemia 13.2% (Hb <125 g/L).

**Reference No:** 4013

**General Notes:** *Facility based study (2 prenatal clinics) in Camden, New Jersey; date of start of survey taken from reference No. 4645; sampling: design not explained, samples were balanced with respect to parity and included young (<18 yrs) and more mature (>=18 yrs) groups of pregnant women; exclusion in the analysis 49 subjects who didn't have their serum ferritin measured; Hb cut-off level 2nd trimester not according to WHO recommendations (please see 'Key to the data tables').*

**Line note 186** Prevalence of anaemia 27.9% (Hb <105 g/L 2nd trimester, Hb <110 g/L 1st+3rd trimester); prevalence of iron deficiency anaemia 12.5% (Hb <105 g/L 2nd trimester, Hb <110 g/L 1st+3rd trimester+serum ferritin <12 µg/L).

**Reference No:** 912

**General Notes:** *Facility based study (faculty practice at a teaching hospital); sampling: design not explained; screening of infants for anaemia at the time of their well-baby visit; Hb cut-off level not according to WHO recommendations (please see 'Key to the data tables').*

- Reference No:** 2430
- General Notes:** *Facility based study (Hill Health Center); retrospective analysis of records; sampling: design not explained; inclusion only of children aged 9-36 months who were enrolled in the Special Supplemental Food Program for Women, Infants and Children (WIC) in whom Hb had been measured at the time of a well-child examination; Hb cut-off level not according to WHO recommendations (please see 'Key to the data tables'); same study center as in reference No. 900.*
- Line note 187** Prevalence of anaemia 1.0% (Hb <98 g/L).
- Reference No:** 3717
- General Notes:** *Sampling: design not explained, 304 subjects were recruited; inclusion only of free-living subjects over the age of 60 with no known serious medical conditions; Hb determination only for 280 subjects; Hb cut-off level males not according to WHO recommendations (please see 'Key to the data tables').*
- Line note 188** Prevalence of anaemia 1.1% (Hb <120 g/L females, Hb <140 g/L males).
- Line note 189** Median age 72 yrs.
- Line note 190** Prevalence of anaemia 2.3% (Hb <140 g/L); median age 72 yrs.
- Reference No:** 5025
- General Notes:** *Follow-up study of the Bogalusa Heart Study that reported on anaemia in a paediatric population of a total community in 1973-1974; sampling: design not explained, of those examined as children, 1010 (65%) of the eligible young adult residents, ages 17-24 yrs, were re-examined; exclusion of pregnant women; Hb cut-off level males not according to WHO recommendations (please see 'Key to the data tables').*
- Line note 191** Prevalence of anaemia 6.4% (Hb <120 g/L females, Hb <140 g/L males); disaggregated data by ethnicity.
- Line note 192** Prevalence of anaemia 6.4% (Hb <140 g/L).
- Reference No:** 925
- General Notes:** *Facility based study (2 schools) in a rural Florida County; sampling: design not explained; inclusion only of paid volunteers who came from low-income households; Hb cut-off levels males 15-18 yrs not according to WHO recommendations (please see 'Key to data the tables').*
- Line note 193** Disaggregated data by ethnicity, sex.
- Reference No:** 2526
- General Notes:** *Facility based study (3 Greek Orthodox churches in Connecticut, 1 high school in Derby and Yale University in New Haven); sampling: design not explained, 3 groups of adolescents were studied (1. 159 persons aged 14-21 yrs who participated in a thalassemia minor screening program; 2. 163 students from the highschool; 3. 118 Yale University undergraduates aged <22 yrs); exclusion of black subjects and subjects with thalassemia trait; contradictory results in text and tables; Hb cut-off level males not according to WHO recommendations ( please see 'Key to the data tables').*
- Line note 194** Prevalence of anaemia 5.9% (Hb <120 g/L females, Hb <125 g/L males).
- Line note 195** Prevalence of anaemia 3.0% (Hb <125 g/L).
- Line note 196** Prevalence of anaemia 5.7% (Hb <120 g/L females, Hb <125 g/L males); disaggregated data by sex.
- Line note 197** Prevalence of anaemia 4.3% (Hb <120 g/L females, Hb <125 g/L males); mean age males 16.0 yrs, females 16.2 yrs; disaggregated data by sex.
- Line note 198** Prevalence of anaemia 8.5% (Hb <120 g/L females, Hb <125 g/L males); disaggregated data by sex.
- Reference No:** 3669
- General Notes:** *Sampling: 222 out of 572 persons who attended community activities designed for the elderly in the greater Little Rock area, Arkansas; exclusion of subjects who had no history of hospitalization within the last 12 months, no diagnosis of cancer or inflammatory disorder known to effect haematopoiesis, no evidence of chronic disease associated with anaemia and who didn't take drugs known to alter marrow function; inclusion only of apparently healthy individuals over the age of 65 yrs who volunteered.*
- Line note 199** Mean (SD) 74.6 (5.9) yrs; only mean Hb values; disaggregated by ethnicity.
- Line note 200** Only mean Hb values.

- Reference No:** 3727
- General Notes:** Facility based study (David Grant Medical Center, Travis Air Force Base); sampling: design not explained; inclusion only of healthy term infants who were seen for routine 1-yr health maintenance examination, who were dependents of military personnel and had access to free medical care; exclusion of preterm infants and those for whom an appointment was scheduled for an illness; Hb cut-off level not according to WHO recommendations (please see 'Key to the tables').
- Line note 201** Prevalence of iron deficiency anaemia 2.6% (Hb <115 g/L+serum ferritin <15 µg/L).
- Reference No:** 4986
- General Notes:** Facility based study (Paediatric Outpatient Department of the State University Hospital) in Syracuse, New York; sampling: all eligible subjects were enrolled; inclusion only of healthy infants aged 9 to 12 months born at term.
- Line note 202** Prevalence of iron deficiency anaemia 8.2% (n=280, Hb <110 g/L+serum ferritin <12 µg/L+erythrocyte protoporphyrin >300 µg/L+mean corpuscular volume <70 fL); disaggregated by age, ethnicity.
- Reference No:** 3890
- General Notes:** Facility based study (Travis Air Force Base Medical Center); sampling: design not explained, 1128 infants aged 11.5-14 months were enrolled during their routine well-baby visit; age range children adapted from reference No. 2435; location of the study adapted from reference No. 1294; values for other Hb cut-off levels.
- Reference No:** 2439
- General Notes:** Partly facility-based study (retirement homes); sampling: design not explained, of the 779 persons aged >60 yrs, 520 lived in 8 Boston public housing projects for the elderly or in private housing near a Jewish community center in the Mattapan section of Boston and 259 lived in retirement homes; inclusion only of healthy subjects; only mean Hb values.
- Reference No:** 901
- General Notes:** Facility based study (Paediatric Clinic of the University of California Medical Center); sampling: design not explained; Hb cut-off level 6 yrs and 12 yrs not according to WHO recommendations (please see 'Key to the data tables').
- Line note 203** Prevalence of iron deficiency anaemia 2.8% (Hb <110 g/L 0.5-6 yrs, Hb <115 g/L 6-12 yrs+mean corpuscular volume <70 fL 0.5-2 yrs, mean corpuscular volume <74 fL 2-6 yrs, mean corpuscular volume <76 fL 6-12 yrs+serum ferritin <12 µg/L; prevalence of iron deficiency 23.5% (serum ferritin <12 µg/L).
- Reference No:** 5054
- General Notes:** Second National Health and Nutrition Examination Survey (NHANES II); method: Coulter haemoglobinometer; sampling: multistage stratified probability design (1. county; 2. census enumeration districts; 3. cluster of households; 4. households; 5. eligible persons; 6. subjects); 27 801 persons were selected of whom 20 322 (73.1%) were interviewed and examined; Hb determination only for 93.4% of the sample; inclusion only of non-institutionalized subjects; see also reference No. 928, 1898, 2423, 2428, 2429, 2457, 2459, 3314, 4291, 4457, 4510, 4997.
- Line note 204** Prevalence of anaemia 5.1% (Hb <110 g/L 3-5 yrs, Hb <115 g/L 6-11 yrs, Hb <120 g/L 12-14 yrs).
- Line note 205** Prevalence of anaemia 8.1% (Hb <120 g/L females, Hb <130 g/L males).
- Line note 206** Prevalence of anaemia 6.9% (Hb <120 g/L females, Hb <130 g/L males).
- Line note 207** Standard error mean: 0.6 g/L.
- Line note 208** Standard error mean: 0.4 g/L.
- Line note 209** Only mean Hb values; standard error mean: 1.3 g/L.
- Line note 210** Only mean Hb values; standard error mean: 1.4 g/L.
- Line note 211** Only mean Hb values; standard error mean: 0.5 g/L.
- Line note 212** Only mean Hb values; standard error mean: 0.7 g/L.
- Line note 213** Standard error mean: 0.5 g/L.
- Line note 214** Standard error mean: 0.4 g/L.

**Line note 215** Standard error mean: 0.6 g/L.  
**Line note 216** Standard error mean: 0.5 g/L.  
**Line note 217** Standard error mean: 0.6 g/L.  
**Line note 218** Standard error mean: 0.6 g/L.  
**Line note 219** Standard error mean: 0.4 g/L.  
**Line note 220** Standard error mean: 0.6 g/L.

**Reference No:** 913

**General Notes:** *Facility based study (Ingham County Health Department child health clinic); sampling: design not explained; inclusion only of children who were considered to have generally good health, had no major congenital anomalies, chronic illness nor obvious neurological defects and were from low-income families; values for other Hb cut-off levels.*

**Line note 221** Prevalence of iron deficiency 22.9% (transferrin saturation <17%); disaggregated data by age.

**Reference No:** 2440

**General Notes:** *Facility based study (Strawberry Mansion Junior High School); sampling: all students (n=2425) were asked to participate, 1807 obtained parental approval; complete data for 1563 children; Hb cut-off levels both sexes 12-13 yrs, females 14-15 yrs not according to WHO recommendations (please see 'Key to the data tables'); values for other Hb cut-off levels; all but one of the children surveyed were black.*

**Line note 222** Prevalence value calculated; prevalence of anaemia 15.0% (Hb <115 g/L females 12-15 yrs, males 12-13 yrs, Hb <120 g/L males 14 yrs, Hb <130 g/L males 15 yrs).

**Reference No:** 2451

**General Notes:** *Facility based study (clinic) in Louisville, Kentucky; sampling: design not explained, 203 mothers and their newborns were enrolled; inclusion only of women who had not received any intramuscular iron preparations but only vitamins with iron; exclusion of infants who were premature or small for gestational age; blood was drawn from the mother within 30 minutes of delivery and from the cord at the delivery of the placenta; only mean Hb values.*

**Line note 223** Mean (SD) age: 20.8 (4.8) yrs; disaggregated data by parity.

**Reference No:** 5053

**General Notes:** *First National Health and Nutrition Examination Survey (NHANES I); method: coulter haemoglobinometer; sampling: three-stage stratified probability sampling of loose clusters of persons by geographical location, 28 043 persons were selected from 65 sample areas, of whom 20 749 (74%) were examined; exclusion of pregnant women; inclusion only of non-institutionalized subjects; Hb cut-off levels males 12-14 yrs, males 18-74 yrs not according to WHO recommendations (please see 'Key to the data tables'); see also reference No. 2433, 3527, 4306.*

**Line note 224** Prevalence value calculated.

**Line note 225** Prevalence value calculated; prevalence of anaemia 6.5% (Hb <140 g/L).

**Line note 226** Prevalence value calculated; prevalence of anaemia 5.5% (Hb <110 g/L both sexes 1-5 yrs, Hb <115 g/L both sexes 6-11 yrs, Hb <120 g/L females 12-14 yrs, Hb <125 g/L males 12-14 yrs).

**Line note 227** Prevalence value calculated; prevalence of anaemia 3.5% (Hb <120 g/L females, Hb <130 g/L males).

**Line note 228** Prevalence value calculated; prevalence of anaemia 9.4% (Hb <120 g/L females, Hb <140 g/L males).

**Line note 229** Standard error mean: 0.4 g/L.

**Line note 230** Standard error mean: 0.6 g/L.

**Line note 231** Standard error mean: 0.6 g/L.

**Line note 232** Prevalence of anaemia 5.2% (Hb <140 g/L); standard error mean: 0.5 g/L.

**Line note 233** Prevalence of anaemia 5.3% (Hb <140 g/L); standard error mean: 0.5 g/L.

**Line note 234** Prevalence of anaemia 13.1% (Hb <140 g/L); standard error mean: 0.6 g/L.

**Line note 235** Standard error mean: 0.6 g/L.

**Line note 236** Standard error mean: 0.8 g/L.

**Line note 237** Standard error mean: 0.9 g/L.

**Line note 238** Standard error mean: 0.8 g/L.  
**Line note 239** Standard error mean: 0.7 g/L.  
**Line note 240** Standard error mean: 0.7 g/L.  
**Line note 241** Standard error mean: 0.5 g/L.  
**Line note 242** Standard error mean: 0.5 g/L.  
**Line note 243** Standard error mean: 0.7 g/L.  
**Line note 244** Prevalence of anaemia 7.6% (Hb <125 g/L); standard error mean: 0.5 g/L.  
**Line note 245** Standard error mean: 0.7 g/L.  
**Line note 246** Standard error mean: 0.9 g/L.  
**Line note 247** Standard error mean: 0.5 g/L.  
**Line note 248** Prevalence of anaemia 14.9% (Hb <140 g/L); standard error mean: 0.4 g/L.

**Reference No:** 899

**General Notes:** *Sampling: birth records of all 329 black children born in 1966 in the county were obtained, 150 children could be located; values for other Hb cut-off levels.*

**Line note 249** Standard error mean: 0.9 g/L.

**Reference No:** 2453

**General Notes:** *Facility based study (private clinic); sampling: all 9 month-old infants seen over a period of 3 months for their well-baby visit were enrolled; inclusion only of members of the Kaiser Health Plan in Panorama City (are primarily Caucasian, working middle-class people); values for other Hb cut-off levels.*

**Reference No:** 4045

**General Notes:** *Sampling: design not explained, subjects were referred to the research staff by members of the Department of Obstetrics and Gynaecology of the University of Vermont College of Medicine, by other practicing obstetricians, by school nurses and guidance counsellors of nearby high schools, by the low-cost clinic of the Medical Center Hospital of Vermont and by the home for unwed mothers; Hb determination was done 8 times at 4-wk intervals up to delivery time and 3 times postpartum; Hb cut-off level not according to WHO recommendations (please see 'Key to the data tables').*

**Line note 250** Prevalence of anaemia 16.7% (Hb <105 g/L); anaemia at any time during antepartum period.

**Reference No:** 887

**General Notes:** *Study was a component of the Ten State Nutritional Survey; sampling: of the original surveyed population (n=5692), a total of 1564 individuals were selected; exclusion of pregnant or lactating women; Hb cut-off levels children 5 yrs, males 15-17 yrs not according to WHO recommendations (please see 'Key to the data tables').*

**Line note 251** Prevalence of anaemia 8.3% (Hb <120 g/L both sexes 5-17 yrs, females >17 yrs, Hb <130 g/L males >17 yrs); prevalence of iron deficiency anaemia 4.2% (Hb cut-off levels+>=2 of the indicators: serum ferritin <12 µg/L or transferrin saturation <15% or erythrocyte protoporphyrin >100 µg/L).

**Line note 252** Prevalence value calculated; prevalence of anaemia 9.6% (Hb <120 g/L females, Hb <130 g/L males); prevalence of iron deficiency anaemia 4.3% (Hb cut-off levels+>=2 of the indicators: serum ferritin <12 µg/L or transferrin saturation <15% or erythrocyte protoporphyrin >100 µg/L).

**Line note 253** Prevalence of iron deficiency anaemia 5.0% (Hb <120 g/L+>=2 of the indicators: serum ferritin <12 µg/L or transferrin saturation <15% or erythrocyte protoporphyrin >100 µg/L); median Hb: 129 g/L.

**Line note 254** Prevalence value calculated; prevalence of iron deficiency anaemia 2.4% (Hb <120 g/L+>=2 of the indicators: serum ferritin <12 µg/L or transferrin saturation <15% or erythrocyte protoporphyrin >100 µg/L).

**Line note 255** Prevalence of iron deficiency anaemia 8.4% (Hb <120 g/L+>=2 of the indicators: serum ferritin <12 µg/L or transferrin saturation <15% or erythrocyte protoporphyrin >100 µg/L); median Hb: 132 g/L.

**Line note 256** Prevalence of iron deficiency anaemia 1.3% (Hb <130 g/L+>=2 of the indicators: serum ferritin <12 µg/L or transferrin saturation <15% or erythrocyte protoporphyrin >100 µg/L); median Hb: 152 g/L.

**Line note 257** Prevalence of iron deficiency anaemia 2.3% (Hb <120 g/L+>=2 of the indicators: serum ferritin <12 µg/L or transferrin saturation <15% or erythrocyte protoporphyrin >100 µg/L); median Hb: 134 g/L.

**Line note 258** Prevalence of iron deficiency anaemia 2.4% (Hb <130 g/L+>=2 of the indicators: serum ferritin <12 µg/L or transferrin saturation <15% or erythrocyte protoporphyrin >100 µg/L); median Hb: 148 g/L.

**Line note 259** Prevalence of iron deficiency anaemia 4.8% (Hb <120 g/L+>=2 of the indicators: serum ferritin <12 µg/L or transferrin saturation <15% or erythrocyte protoporphyrin >100 µg/L); median Hb: 133 g/L.

**Line note 260** Prevalence of iron deficiency anaemia 0.0% (Hb <120 g/L+>=2 of the indicators: serum ferritin <12 µg/L or transferrin saturation <15% or erythrocyte protoporphyrin >100 µg/L); median Hb: 141 g/L.

**Reference No:** 929

**General Notes:** *Preschool Nutritional Survey in 36 states and the District of Columbia; sampling: 3423 children were selected in 74 primary sample areas; values for other Hb cut-off levels; Hb determination only for 2139 children; see also reference No. 4550.*

**Line note 261** Prevalence value calculated; prevalence of anaemia 7.6% (Hb <110 g/L 1-4 yrs, Hb <115 g/L 5 yrs); disaggregated data by socioeconomic status.

**Line note 262** Prevalence value calculated; disaggregated data by socioeconomic status.

**Line note 263** Prevalence value calculated; disaggregated data by socioeconomic status.

**Line note 264** Prevalence value calculated; disaggregated data by socioeconomic status.

**Line note 265** Prevalence value calculated; disaggregated data by socioeconomic status.

**Line note 266** Prevalence value calculated; disaggregated data by socioeconomic status.

**Reference No:** 924

**General Notes:** *Facility based study (42 mobile clinics from all areas of the State); sampling: all eligible children 0.5-3 yrs were included; inclusion only of children who were not referred primarily for haematologic problems; exclusion of children who had been hospitalized before because of low birth weight or other perinatal abnormalities or who had cyanosis; Hb cut-off level not according to WHO recommendations (please see 'Key to the data tables').*

**Line note 267** Disaggregated data by ethnicity, family social position, birth weight, birth order, multiple birth, milk intake, iron supplementation, iron intake, height, weight, primary diagnosis of diseases.

**Reference No:** 894

**General Notes:** *Sampling: multistage random selection, 1250 children 1-6 yrs old were targeted (response rate about 60%); Hb cut-off level not according to WHO recommendations (please see 'Key to the data tables').*

**Line note 268** Prevalence value calculated; disaggregated data by income.

**Reference No:** 2445

**General Notes:** *Facility based study (Child Health Center of Children's Hospital); sampling: 460 of the approximately 800 children who attended the center for a well-baby care visit were enrolled; inclusion only of children who had no record on their charts of a previous Hb determination, who were Negro children from low income families and lived in the environs of the center; values for other Hb cut-off levels; Hb cut-off level not according to WHO recommendations (please see 'Key to the data tables').*

**Line note 269** Disaggregated data by age.

## REFERENCES

### UNITED STATES OF AMERICA (THE)

---

- Reference 887** Cook JD, Finch CA, Smith NJ. Evaluation of the iron status of a population. *Blood*, 1976, 48 :449-455.
- Reference 894** Owen GM, Garry PJ, Kram KM, Nelsen CE, Montalvo JM. Nutritional status of Mississippi pre-school children: a pilot study. *American Journal of Clinical Nutrition*, 1969, 22 :1444-1458.
- Reference 899** Johnson CC, Futrell MF. Anemia in black preschool children in Mississippi: dietary and hematologic findings. *Journal of the American Dietetic Association*, 1974, 65 :536-541.
- Reference 901** Koerper MA, Dallman PR. Serum iron concentration and transferrin saturation in the diagnosis of iron deficiency in children: normal developmental changes. *Journal of Pediatrics*, 1977, 91 :870-874.
- Reference 912** Irigoyen M, Davidson LL, Carriero D, Seaman C. Randomized, placebo-controlled trial of iron supplementation in infants with low hemoglobin levels fed iron-fortified formula. *Pediatrics*, 1991, 88 :320-326.
- Reference 913** Haddy TB, Jurkowski C, Brody H, Kallen DJ, Czajka-Narins DM. Iron deficiency with and without anemia in infants and children. *American Journal of Diseases of Children*, 1974, 128 :787-793.
- Reference 924** Kripke SS, Sanders E. Prevalence of iron-deficiency anemia among infants and young children seen at rural ambulatory clinics. *American Journal of Clinical Nutrition*, 1970, 23 :716-724.
- Reference 925** Bailey LB, Wagner PA, Christakis GJ, Davis CG. Folic acid and iron status of adolescents from low-income rural households (1-3). *Nutrition Research*, 1982, 2 :397-407.
- Reference 929** Owen GM, Lubin AH, Garry PJ. Preschool children in the United States: who has iron deficiency?. *Journal of Pediatrics*, 1971, 79 :563-568.
- Reference 2414** Gupta S, Venkateswaran R, Gorenflo DW, Eyer AE. Childhood iron deficiency anemia, maternal nutritional knowledge, and maternal feeding practices in a high-risk population. *Preventive Medicine*, 1999, 29 :152-156.
- Reference 2417** Adams WG, Geva J, Coffman J, Palfrey S, Bauchner H. Anemia and elevated lead levels in underimmunized inner-city children. *Pediatrics*, 1998, 101 :e6.
- Reference 2418** Eden AN, Mir MA. Iron deficiency in 1- to 3-year-old children: a pediatric failure?. *Archives of Pediatrics & Adolescent Medicine*, 1997, 151 :986-988.
- Reference 2419** Petersen KM, Parkinson AJ, Nobmann ED, Bulkow L, Yip R, Mokdad A. Iron deficiency anemia among Alaska Natives may be due to fecal loss rather than inadequate intake. *Journal of Nutrition*, 1996, 126 :2774-2783.
- Reference 2420** Bruner AB, Joffe A, Duggan AK, Casella JF, Brandt J. Randomised study of cognitive effects of iron supplementation in non-anaemic iron-deficient adolescent girls. *Lancet*, 1996, 348 :992-996.
- Reference 2430** Vazquez-Seoane P, Windom R, Pearson HA. Disappearance of iron-deficiency anemia in a high-risk infant population given supplemental iron. *New England Journal of Medicine*, 1985, 313 :1239-1240.
- Reference 2439** Gershoff SN, Brusis OA, Nino HV, Huber AM. Studies of the elderly in Boston, I: the effects of iron fortification on moderately anemic people. *American Journal of Clinical Nutrition*, 1977, 30 :226-234.
- Reference 2440** Brown K, Lubin B, Smith R, Oski F. Prevalence of anemia among preadolescent and young adolescent urban black Americans. *Journal of Pediatrics*, 1972, 81 :714-718.

## REFERENCES

### UNITED STATES OF AMERICA (THE)

---

- Reference 2445** Gutelius MF. The problem of iron deficiency anemia in preschool Negro children. *American Journal of Public Health and the Nation's Health*, 1969, 59 :290-295.
- Reference 2451** Shott RJ, Andrews BF. Iron status of a medical high-risk population at delivery. *American Journal of Diseases of Children*, 1972, 124 :369-371.
- Reference 2453** Fuerth JH. Incidence of anemia in full-term infants seen in private practice. *Journal of Pediatrics*, 1971, 79 :560-562.
- Reference 2458** Thiele M, Geddes ME, Nobmann E, Petersen K. High prevalence of iron deficiency anemia among Alaskan native children. *MMWR. Morbidity and Mortality Weekly Report*, 1988, 37 :200-202.
- Reference 2526** Pastides H. Iron deficiency anemia among three groups of adolescents and young adults. *Yale Journal of Biology and Medicine*, 1981, 54 :265-271.
- Reference 2717** Swaim LS, Perriatt S, Andres RL, Paradissis J, Watson MN. Clinical utility of routine postpartum hemoglobin determinations. *American Journal of Perinatology*, 1999, 16 :333-337.
- Reference 2827** Scanlon KS, Yip R, Schieve LA, Cogswell ME. High and low hemoglobin levels during pregnancy: differential risks for preterm birth and small for gestational age. *Obstetrics and Gynecology*, 2000, 96 :741-748.
- Reference 3019** Bogen DL, Krause JP, Serwint JR. Outcome of children identified as anemic by routine screening in an inner-city clinic. *Archives of Pediatrics & Adolescent Medicine*, 2001, 155 :366-371.
- Reference 3490** Bodnar LM, Scanlon KS, Freedman DS, Siega-Riz AM, Cogswell ME. High prevalence of postpartum anemia among low-income women in the United States. *American Journal of Obstetrics and Gynecology*, 2001, 185 :438-443.
- Reference 3501** Sherard GB 3rd, Newton ER. Is routine hemoglobin and hematocrit testing on admission to labor and delivery needed?. *Obstetrics and Gynecology*, 2001, 98 :1038-1040.
- Reference 3511** Sarnak MJ, Tighiouart H, Manjunath G, MacLeod B, Griffith J, Salem D, Levey AS. Anemia as a risk factor for cardiovascular disease in the Atherosclerosis Risk in Communities (ARIC) study. *Journal of the American College of Cardiology*, 2002, 40 :27-33.
- Reference 3531** Bodnar LM, Siega-Riz AM, Miller WC, Cogswell ME, McDonald T. Who should be screened for postpartum anemia?: an evaluation of current recommendations. *American Journal of Epidemiology*, 2002, 156 :903-912.
- Reference 3635** Wright RO, Tsaih SW, Schwartz J, Wright RJ, Hu H. Association between iron deficiency and blood lead level in a longitudinal analysis of children followed in an urban primary care clinic. *Journal of Pediatrics*, 2003, 142 :9-14.
- Reference 3669** Lipschitz DA, Mitchell CO, Thompson C. The anemia of senescence. *American Journal of Hematology*, 1981, 11 :47-54.
- Reference 3685** Bogen DL, Duggan AK, Dover GJ, Wilson MH. Screening for iron deficiency anemia by dietary history in a high-risk population. *Pediatrics*, 2000, 105 :1254-1259.
- Reference 3717** Garry PJ, Goodwin JS, Hunt WC. Iron status and anemia in the elderly: new findings and a review of previous studies. *Journal of the American Geriatrics Society*, 1983, 31 :389-399.
- Reference 3727** Reeves JD, Yip R, Kiley VA, Dallman PR. Iron deficiency in infants: the influence of mild antecedent infection. *Journal of Pediatrics*, 1984, 105 :874-879.
- Reference 3844** Carriaga MT, Skikne BS, Finley B, Cutler B, Cook JD. Serum transferrin receptor for the detection of iron deficiency in pregnancy. *American Journal of Clinical Nutrition*, 1991, 54 :1077-1081.

## REFERENCES

### UNITED STATES OF AMERICA (THE)

---

- Reference 3858** Chang SC, O'Brien KO, Nathanson MS, Mancini J, Witter FR. Hemoglobin concentrations influence birth outcomes in pregnant African-American adolescents. *Journal of Nutrition*, 2003, 133 :2348-2355.
- Reference 3890** Driggers DA, Reeves JD, Lo EYT, Dallman PR. Iron deficiency in one-year-old infants: comparison of results of a therapeutic trial in infants with anemia or low-normal hemoglobin values. *Journal of Pediatrics*, 1981, 98 :753-758.
- Reference 4013** Scholl TO, Hediger ML, Fisher RL, Shearer JW. Anemia vs iron deficiency: increased risk of preterm delivery in a prospective study. *American Journal of Clinical Nutrition*, 1992, 55 :985-988.
- Reference 4045** Morse EH, Clarke RP, Keyser DE, Merrow SB, Bee DE. Comparison of the nutritional status of pregnant adolescents with adult pregnant women, I: biochemical findings. *American Journal of Clinical Nutrition*, 1975, 28 :1000-1013.
- Reference 4305** Tershakovec AM, Weller SC. Iron status of inner-city elementary school children: lack of correlation between anemia and iron deficiency. *American Journal of Clinical Nutrition*, 1991, 54 :1071-1076.
- Reference 4317** Penrod JC, Anderson K, Acosta PB. Impact on iron status of introducing cow's milk in the second six months of life. *Journal of Pediatric Gastroenterology and Nutrition*, 1990, 10 :462-467.
- Reference 4422** Salive ME, Cornoni-Huntley J, Guralnik JM, Phillips CL, Wallace RB, Ostfeld AM, Cohen HJ. Anemia and hemoglobin levels in older persons: relationship with age, gender, and health status. *Journal of the American Geriatrics Society*, 1992, 40 :489-496.
- Reference 4738** Centers for Disease Control and Prevention. National Health and Nutrition Examination Survey 1999-2000, 2001-2002 [personal communication]. 2002
- Reference 4772** Fuchs GJ, Farris RP, DeWier M, Hutchinson SW, Warriar R, Doucet H, Suskind RM. Iron status and intake of older infants fed formula vs cow milk with cereal. *American Journal of Clinical Nutrition*, 1993, 58 :343-348.
- Reference 4797** Alper BS, Kimber R, Reddy AK. Using ferritin levels to determine iron-deficiency anemia in pregnancy. *Journal of Family Practice*, 2000, 49 :829-832.
- Reference 4806** Fleming DJ, Jacques PF, Tucker KL, Massaro JM, D'Agostino RB Sr, Wilson PWF, Wood RJ. Iron status of the free-living, elderly Framingham Heart Study cohort: an iron-replete population with a high prevalence of elevated iron stores. *American Journal of Clinical Nutrition*, 2001, 73 :638-646.
- Reference 4968** Guralnik JM, Eisenstaedt RS, Ferrucci L, Klein HG, Woodman RC. Prevalence of anemia in persons 65 years and older in the United States: evidence for a high rate of unexplained anemia. *Blood*, 2004, 104 :2263-2268.
- Reference 4986** Sadowitz PD, Oski FA. Iron status and infant feeding practices in an urban ambulatory center. *Pediatrics*, 1983, 72 :33-36.
- Reference 5001** Mitchell MC, Lerner E. Maternal hematologic measures and pregnancy outcome. *Journal of the American Dietetic Association*, 1992, 92 :484-486.
- Reference 5025** Cresanta JL, Croft JB, Webber LS, Nicklas TA, Berenson GS. Racial difference in hemoglobin concentration of young adults. *Preventive Medicine*, 1987, 16 :659-669.
- Reference 5029** Boutry M, Needlman R. Use of diet history in the screening of iron deficiency. *Pediatrics*, 1996, 98 (6 Pt 1):1138-1142.

## REFERENCES

### UNITED STATES OF AMERICA (THE)

---

- Reference 5053** National Center for Health Statistics, Singer JD, Granahan P, Goodrich NN, Meyers LD, Johnson CL. Diet and iron status, a study of relationships: United States, 1971-74. Vital and Health Statistics, 1982 11 :1-83.
- Reference 5054** National Center for Health Statistics, Fulwood R, Johnson CL, Bryner JD, Gunter EW, McGrath CR. Hematological and nutritional biochemistry reference data for persons 6 months-74 years of age: United States, 1976-80. Vital and Health Statistics, 1982 11 :1-173.
- Reference 5066** Centers for Disease Control and Prevention. 2002 Pregnancy nutrition surveillance system [data tables]. Atlanta, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2002.
- Reference 5069** Polhamus B, Dalenius K, Thompson D, Scanlon K, Borland E, Smith B, Grummer-Strawn L. Pediatric nutrition surveillance 2003 [report]. Atlanta, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2004.
- Reference 5070** Polhamus B, Dalenius K, Thompson D, Scanlon K, Borland E, Smith B, Grummer-Strawn L. Pediatric nutrition surveillance 2002 [report]. Atlanta, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2004.
- Reference 5138** Rettmer RL, Carlson TH, Origenes ML, Jack RM, Labb RF. Zinc protoporphyrin/heme ratio for diagnosis of preanemic iron deficiency. Pediatrics, 1999, 104 :e37.

## ADDITIONAL REFERENCES

### UNITED STATES OF AMERICA (THE)

---

- Reference 37 Culhane-Pera KA, Naftali ED, Jacobson C, Xiong ZB. Cultural feeding practices and child-raising philosophy contribute to iron-deficiency anemia in refugee Hmong children. *Ethnicity & Disease*, 2002, 12 :199-205.
- Reference 808 Life Sciences Research Office, Federation of American Societies for Experimental Biology. Third report on nutrition monitoring in the United States: executive summary. Washington, DC, U.S. Government Printing Office, 1995.
- Reference 881 Bailey L, Ginsburg J, Wagner P, Noyes W, Christakis G, Dinning J. Serum ferritin as a measure of iron stores in adolescents. *Journal of Pediatrics*, 1982, 101 :774-776.
- Reference 882 Bailey LB, Mahan CS, Dimperio D. Folic acid and iron status in low-income pregnant adolescents and mature women. *American Journal of Clinical Nutrition*, 1980, 33 :1997-2001.
- Reference 883 Burks JM, Siimes MA, Mentzer WC, Dallman PR. Iron deficiency in an Eskimo village: the value of serum ferritin in assessing iron nutrition before and after a three-month period of iron supplementation. *Journal of Pediatrics*, 1976, 88 :224-228.
- Reference 884 Coulson KM, Cohen RL, Coulson WF, Jelliffe DB. Hematocrit levels in breast-fed American babies: a preliminary study suggesting that nutritional anemia may not develop. *Clinical Pediatrics*, 1971, 16 :649-651.
- Reference 888 Duncan B, Schifman RB, Corrigan JJ Jr, Schaefer C. Iron and the exclusively breast-fed infant from birth to six months. *Journal of Pediatric Gastroenterology and Nutrition*, 1985, 4 :421-425.
- Reference 890 Fitzpatrick SB, Chacko MR, Heald FP. Iron deficiency in black females during late adolescence. *Journal of Adolescent Health Care*, 1984, 5 :71-74.
- Reference 891 Miller V, Swaney S, Deinard A. Impact of the WIC program on the iron status of infants. *Pediatrics*, 1985, 75 :100-105.
- Reference 893 O'Neal RM, Abrahams OG, Kohrs MB, Eklund DL. The incidence of anemia in residents of Missouri. *American Journal of Clinical Nutrition*, 1976, 29 :1158-1166.
- Reference 897 Yip R, Reeves JD, Lönnerdal B, Keen CL, Dallman PR. Does iron supplementation compromise zinc nutrition in healthy infants?. *American Journal of Clinical Nutrition*, 1985, 42 :683-687.
- Reference 900 Katzman R, Novack A, Pearson H. Nutritional anemia in an inner-city community: relationship to age and ethnic group. *JAMA: Journal of the American Medical Association*, 1972, 222 :670-673.
- Reference 908 White HS. Iron deficiency in young women. *American Journal of Public Health and the Nation's Health*, 1970, 60 :659-665.
- Reference 910 Shank RE, Burch HB, Lowry OH, Bessey OA. Evaluation of iron deficiency as a cause of mild anemia in adolescent girls. *Enzyme*, 1974, 18 :240-252.
- Reference 915 Andelman MB, Sered BR. Utilization of dietary iron by term infants: a study of 1048 infants from a low socioeconomic population. *American Journal of Diseases of Children*, 1966, 111 :45-55.
- Reference 927 Zee P, DeLeon M, Roberson P, Chen CH. Nutritional improvement of poor urban preschool children: a 1983-1977 comparison. *JAMA: Journal of the American Medical Association*, 1985, 253 :3269-3272.
- Reference 928 Yip R, Johnson C, Dallman PR. Age-related changes in laboratory values used in the diagnosis of anemia and iron deficiency. *American Journal of Clinical Nutrition*, 1984, 39 :427-436.
- Reference 1294 Reeves JD, Driggers DA, Lo EYT, Dallman PR. Screening for iron deficiency anemia in one-year-old infants: hemoglobin alone or hemoglobin and mean corpuscular volume as predictors of response to iron treatment. *Journal of Pediatrics*, 1981, 98 :894-898.

## ADDITIONAL REFERENCES

### UNITED STATES OF AMERICA (THE)

---

- Reference 1528     Worthington-Roberts BS, Breskin MW, Monsen ER. Iron status of premenopausal women in a university community and its relationship to habitual dietary sources of protein. *American Journal of Clinical Nutrition*, 1988, 47 :275-279.
- Reference 1677     Looker AC, Dallman PR, Carroll MD, Gunter EW, Johnson CL. Prevalence of iron deficiency in the United States. *JAMA: Journal of the American Medical Association*, 1997, 277 :973-976.
- Reference 1790     Miller LC, Hendrie NW. Health of children adopted from China. *Pediatrics*, 2000, 105 :e76.
- Reference 1898     Dallman PR, Yip R, Johnson C. Prevalence and causes of anemia in the United States, 1976 to 1980. *American Journal of Clinical Nutrition*, 1984, 39 :437-445.
- Reference 1918     Jim RTS. Red blood count and hemoglobin level in healthy student nurses of oriental extraction in Hawaii. *Hawaii Medical Journal*, 1981, 40 :329.
- Reference 1923     Hsia YE, Yuen J, Hunt JA, Rattamanasay P, Hall J, Takaesu N, Titus EAB, Fujita J, Ford CA. The different types of alpha-thalassemia: practical and genetic aspects. *Hemoglobin*, 1988, 12 :465-484.
- Reference 2299     Hurst D, Tittle B, Kleman KM, Embury SH, Lubin BH. Anemia and hemoglobinopathies in Southeast Asian refugee children. *Journal of Pediatrics*, 1983, 102 :692-697.
- Reference 2415     Unsworth DJ, Lock FJ, Harvey RF. Iron-deficiency anaemia in premenopausal women. *Lancet*, 1999, 353 :1100.
- Reference 2416     Farrell RJ, LaMont JT. Rational approach to iron-deficiency anaemia in premenopausal women. *Lancet*, 1998, 352 :1953-1954.
- Reference 2421     Kazal LA Jr. Failure of hematocrit to detect iron deficiency in infants. *Journal of Family Practice*, 1996, 42 :237-240.
- Reference 2422     Sargent JD, Stukel TA, Dalton MA, Freeman JL, Brown MJ. Iron deficiency in Massachusetts communities: socioeconomic and demographic risk factors among children. *American Journal of Public Health*, 1996, 86 :544-550.
- Reference 2423     Johnson-Spear MA, Yip R. Hemoglobin difference between black and white women with comparable iron status: justification for race-specific anemia criteria. *American Journal of Clinical Nutrition*, 1994, 60 :117-121.
- Reference 2424     Ratcliffe SD, Lee J, Lutz LJ, Woolley FR, Baxter S, Civish F, Johnson M. Lead toxicity and iron deficiency in Utah migrant children. *American Journal of Public Health*, 1989, 79 :631-633.
- Reference 2425     Dallman PR. Has routine screening of infants for anemia become obsolete in the United States?. *Pediatrics*, 1987, 80 :439-441.
- Reference 2426     Yip R, Walsh KM, Goldfarb MG, Binkin NJ. Declining prevalence of anemia in childhood in a middle-class setting: a pediatric success story?. *Pediatrics*, 1987, 80 :330-334.
- Reference 2427     Stockman JA 3rd. Iron deficiency anemia: have we come far enough?. *JAMA: Journal of the American Medical Association*, 1987, 258 :1645-1647.
- Reference 2428     Cook JD, Skikne BS, Lynch SR, Reusser ME. Estimates of iron sufficiency in the US population. *Blood*, 1986, 68 :726-731.
- Reference 2429     Expert Scientific Working Group. Summary of a report on assessment of the iron nutritional status of the United States population. *American Journal of Clinical Nutrition*, 1985, 42 :1318-1330.

## ADDITIONAL REFERENCES

### UNITED STATES OF AMERICA (THE)

---

- Reference 2432 Hayman CR, Probst JC. Health status of disadvantaged adolescents entering the Job Corps program. *Public Health Reports*, 1983, 98 :369-376.
- Reference 2433 Meyers LD, Habicht JP, Johnson CL, Brownie C. Prevalences of anemia and iron deficiency anemia in black and white women in the United States: estimated by two methods. *American Journal of Public Health*, 1983, 73 :1042-1049.
- Reference 2434 Lynch SR, Finch CA, Monsen ER, Cook JD. Iron status of elderly Americans. *American Journal of Clinical Nutrition*, 1982, 36 (5 Suppl):1032-1045.
- Reference 2435 Reeves JD, Driggers DA, Lo EYT, Dallman PR. Screening for anemia in infants: evidence in favor of using identical hemoglobin criteria for blacks and Caucasians. *American Journal of Clinical Nutrition*, 1981, 34 :2154-2157.
- Reference 2436 Kalchthaler T, Tan MER. Anemia in institutionalized elderly patients. *Journal of the American Geriatrics Society*, 1980, 28 :108-113.
- Reference 2437 Karp RJ. Nutritional anemia during infancy [letter]. *JAMA: Journal of the American Medical Association*, 1979, 241 :563.
- Reference 2438 Owen GM, Yanochik-Owen A. Should there be a different definition of anemia in black and white children?. *American Journal of Public Health*, 1977, 67 :865-866.
- Reference 2446 Filer LJ Jr. The USA today - is it free of public health nutrition problems?: anemia. *American Journal of Public Health and the Nation's Health*, 1969, 59 :327-338.
- Reference 2447 Hutcheson RH Jr. Iron deficiency anemia in Tennessee among rural poor children. *Public Health Reports*, 1968, 83 :939-943.
- Reference 2449 Corbett TH. Iron deficiency anemia in a Pueblo Indian village [letter]. *JAMA: Journal of the American Medical Association*, 1968, 205 :136.
- Reference 2450 Burroughs AL, Huenemann RL. Iron deficiency in rural infants and children. *Journal of the American Dietetic Association*, 1970, 57 :122-128.
- Reference 2452 Hutcheson RH Jr, Hutcheson JK. Iron and vitamin C and D deficiencies in a large population of children. *Health Services Reports*, 1972, 87 :232-235.
- Reference 2454 Pearson HA, McLean FW, Brigety RE. Anemia related to age: study of a community of young black Americans. *JAMA: Journal of the American Medical Association*, 1971, 215 :1982-1984.
- Reference 2455 Pearson HA, Abrams I, Fernbach DJ, Gyland SP, Hahn DA. Anemia in preschool children in the United States of America. *Pediatric Research*, 1967, 1 :169-172.
- Reference 2456 Scott DE, Pritchard JA. Iron deficiency in healthy young college women. *JAMA: Journal of the American Medical Association*, 1967, 199 :897-900.
- Reference 2457 Centers for Disease Control. CDC criteria for anemia in children and childbearing-aged women. *MMWR. Morbidity and Mortality Weekly Report*, 1989, 38 :400-404.
- Reference 2459 Looker AC, Johnson CL, McDowell MA, Yetley EA. Iron status: prevalence of impairment in three Hispanic groups in the United States. *American Journal of Clinical Nutrition*, 1989, 49 :553-558.
- Reference 2480 Partington S, Nitzke S, Csete J. The prevalence of anemia in a WIC population: a comparison by homeless experience. *Journal of the American Dietetic Association*, 2000, 100 :469-471.
- Reference 2481 Leshan L, Gottlieb M, Mark D. Anemia is prevalent in an urban, African-American adolescent population. *Archives of Family Medicine*, 1995, 4 :433-437.

## ADDITIONAL REFERENCES

### UNITED STATES OF AMERICA (THE)

---

- Reference 2483 Francis EE, Williams D, Yarandi H. Anemia as an indicator of nutrition in children enrolled in a Head Start program. *Journal of Pediatric Health Care*, 1993, 7 :156-160.
- Reference 2496 Jackson E, Mathur K. Adolescent pregnancy: effects of nutrients on hematocrit and birth weight in Orangeburg County. *Journal of the South Carolina Medical Association*, 1991, 87 :8-11.
- Reference 2525 Charlton RW, Bothwell TH. Definition, prevalence and prevention of iron deficiency. *Clinics in Haematology*, 1982, 11 :309-325.
- Reference 2544 Siegel RM, LaGrone DH. The use of zinc protoporphyrin in screening young children for iron deficiency. *Clinical Pediatrics*, 1994, 33 :473-479.
- Reference 2581 Yip R, Binkin NJ, Fleshood L, Trowbridge FL. Declining prevalence of anemia among low-income children in the United States. *JAMA: Journal of the American Medical Association*, 1987, 258 :1619-1623.
- Reference 2624 Sherry B, Mei Z, Yip R. Continuation of the decline in prevalence of anemia in low-income infants and children in five states. *Pediatrics*, 2001, 107 :677-682.
- Reference 2628 Roe DA. Iron deficiency and its control in U.S. population. *New York State Journal of Medicine*, 1973, 73 :2162-2167.
- Reference 2714 Siega-Riz AM, Adair LS, Hobel CJ. Maternal hematologic changes during pregnancy and the effect of iron status on preterm delivery in a West Los Angeles population. *American Journal of Perinatology*, 1998, 15 :515-522.
- Reference 2722 Chek K, Kerr GR. Factors associated with fetal mortality in the triethnic population in Texas, 1993 through 1995. *Texas Medicine*, 1999, 95 :78-83.
- Reference 2723 Rainville AJ. Pica practices of pregnant women are associated with lower maternal hemoglobin level at delivery. *Journal of the American Dietetic Association*, 1998, 98 :293-296.
- Reference 2760 Frith-Terhune AL, Cogswell ME, Khan LK, Will JC, Ramakrishnan U. Iron deficiency anemia: higher prevalence in Mexican American than in non-Hispanic white females in the third National Health and Nutrition Examination Survey, 1988-1994. *American Journal of Clinical Nutrition*, 2000, 72 :963-968.
- Reference 2956 Pehrsson PR, Moser-Veillon PB, Sims LS, Sutor CW, Russek-Cohen E. Postpartum iron status in nonlactating participants and nonparticipants in the Special Supplemental Nutrition Program for Women, Infants, and Children. *American Journal of Clinical Nutrition*, 2001, 73 :86-92.
- Reference 3314 Perry GS, Byers T, Yip R, Margen S. Iron nutrition does not account for the hemoglobin differences between blacks and whites. *Journal of Nutrition*, 1992, 122 :1417-1424.
- Reference 3488 Petersen LA, Lindner DS, Kleiber CM, Zimmerman MB, Hinton AT, Yankowitz J. Factors that predict low hematocrit levels in the postpartum patient after vaginal delivery. *American Journal of Obstetrics and Gynecology*, 2002, 186 :737-744.
- Reference 3489 Ioannou GN, Spector J, Scott K, Rockey DC. Prospective evaluation of a clinical guideline for the diagnosis and management of iron deficiency anemia. *American Journal of Medicine*, 2002, 113 :281-287.
- Reference 3491 Kazal LA Jr. Prevention of iron deficiency in infants and toddlers. *American Family Physician*, 2002, 66 :1217-1224.
- Reference 3505 Bodnar LM, Cogswell ME, Scanlon KS. Low income postpartum women are at risk of iron deficiency. *Journal of Nutrition*, 2002, 132 :2298-2303.

## ADDITIONAL REFERENCES

### UNITED STATES OF AMERICA (THE)

---

- Reference 3506 Ramakrishnan U, Frith-Terhune A, Cogswell M, Kettel Khan L. Dietary intake does not account for differences in low iron stores among Mexican American and non-Hispanic white women: Third National Health and Nutrition Examination Survey, 1988-1994. *Journal of Nutrition*, 2002, 132 :996-1001.
- Reference 3508 Hsu CY, McCulloch CE, Curhan GC. Epidemiology of anemia associated with chronic renal insufficiency among adults in the United States: results from the Third National Health and Nutrition Examination Survey. *Journal of the American Society of Nephrology*, 2002, 13 :504-510.
- Reference 3510 Chaves PHM, Ashar B, Guralnik JM, Fried LP. Looking at the relationship between hemoglobin concentration and prevalent mobility difficulty in older women: should the criteria currently used to define anemia in older people be reevaluated?. *Journal of the American Geriatrics Society*, 2002, 50 :1257-1264.
- Reference 3522 Semba RD, Shah N, Klein RS, Mayer KH, Schuman P, Vlahov D for the Human Immunodeficiency Virus Epidemiology Research Study Group. Prevalence and cumulative incidence of and risk factors for anemia in a multicenter cohort study of human immunodeficiency virus-infected and -uninfected women. *Clinical Infectious Diseases*, 2002, 34 :260-266.
- Reference 3524 Kahn JL, Binns HJ, Chen T, Tanz RR, Listernick R. Persistence and emergence of anemia in children during participation in the Special Supplemental Nutrition Program for Women, Infants, and Children. *Archives of Pediatrics & Adolescent Medicine*, 2002, 156 :1028-1032.
- Reference 3527 Ioannou GN, Rockey DC, Bryson CL, Weiss NS. Iron deficiency and gastrointestinal malignancy: a population-based cohort study. *American Journal of Medicine*, 2002, 113 :276-280.
- Reference 3551 Geltman PL, Radin M, Zhang Z, Cochran J, Meyers AF. Growth status and related medical conditions among refugee children in Massachusetts, 1995-1998. *American Journal of Public Health*, 2001, 91 :1800-1805.
- Reference 3633 Georgieff MK, Wewerka SW, Nelson CA, deRegnier RA. Iron status at 9 months of infants with low iron stores at birth. *Journal of Pediatrics*, 2002, 141 :405-409.
- Reference 3651 Cook JD, Flowers CH, Skikne BS. An assessment of dried blood-spot technology for identifying iron deficiency. *Blood*, 1998, 92 :1807-1813.
- Reference 3653 Bogen DL, Whitaker RC. Anemia screening in the Special Supplemental Nutrition Program for Women, Infants, and Children: time for change?. *Archives of Pediatrics & Adolescent Medicine*, 2002, 156 :969-970.
- Reference 3695 Fuerth JH. Iron supplementation of the diet in full-term infants: a controlled study. *Journal of Pediatrics*, 1972, 80 :974-979.
- Reference 3716 Garn SM, Keating MT, Falkner F. Hematological status and pregnancy outcomes [letter]. *American Journal of Clinical Nutrition*, 1981, 34 :115-117.
- Reference 3750 Timiras ML, Brownstein H. Prevalence of anemia and correlation of hemoglobin with age in a geriatric screening clinic population. *Journal of the American Geriatrics Society*, 1987, 35 :639-643.
- Reference 3765 Cogswell ME, Parvanta I, Ickes L, Yip R, Brittenham GM. Iron supplementation during pregnancy, anemia, and birth weight: a randomized controlled trial. *American Journal of Clinical Nutrition*, 2003, 78 :773-781.
- Reference 3766 Rasmussen KM, Stoltzfus RJ. New evidence that iron supplementation during pregnancy improves birth weight: new scientific questions. *American Journal of Clinical Nutrition*, 2003, 78 :673-674.
- Reference 3824 Beard JL. Iron deficiency: assessment during pregnancy and its importance in pregnant adolescents. *American Journal of Clinical Nutrition*, 1994, 59 (2 Suppl):502S-510S.

## ADDITIONAL REFERENCES

### UNITED STATES OF AMERICA (THE)

---

- Reference 3832 Viteri FE, Ali F, Tujague J. Long-term weekly iron supplementation improves and sustains nonpregnant women's iron status as well or better than currently recommended short-term daily supplementation. *Journal of Nutrition*, 1999, 129 :2013-2020.
- Reference 3857 Penninx BWJH, Guralnik JM, Onder G, Ferrucci L, Wallace RB, Pahor M. Anemia and decline in physical performance among older persons. *American Journal of Medicine*, 2003, 115 :104-110.
- Reference 3885 Greger JL, Higgins MM, Abernathy RP, Kirksey A, DeCorso MB, Baligar P. Nutritional status of adolescent girls in regard to zinc, copper, and iron. *American Journal of Clinical Nutrition*, 1978, 31 :269-275.
- Reference 4040 Yadrick MK, Kenney MA, Winterfeldt EA. Iron, copper, and zinc status: response to supplementation with zinc or zinc and iron in adult females. *American Journal of Clinical Nutrition*, 1989, 49 :145-150.
- Reference 4080 Knight EM, Spurlock BG, Edwards CH, Johnson AA, Oyemade UJ, Cole OJ, West WL, Manning M, James H, Laryea H, Westney OE, Jones S, Westney LS. Biochemical profile of African American women during three trimesters of pregnancy and at delivery. *Journal of Nutrition*, 1994, 124 (6 Suppl):943S-953S.
- Reference 4291 Looker AC, Sempos CT, Johnson CL, Yetley EA. Comparison of dietary intakes and iron status of vitamin-mineral supplement users and nonusers, aged 1-19 years. *American Journal of Clinical Nutrition*, 1987, 46 :665-672.
- Reference 4293 Siimes MA, Addiego JE Jr, Dallman PR. Ferritin in serum: diagnosis of iron deficiency and iron overload in infants and children. *Blood*, 1974, 43 :581-590.
- Reference 4297 Rios E, Lipschitz DA, Cook JD, Smith NJ. Relationship of maternal and infant iron stores as assessed by determination of plasma ferritin. *Pediatrics*, 1975, 55 :694-699.
- Reference 4306 Liao Y, Cooper RS, McGee DL. Iron status and coronary heart disease: negative findings from the NHANES I epidemiologic follow-up study. *American Journal of Epidemiology*, 1994, 139 :704-712.
- Reference 4333 Serfass RE, Liu JF. Assessing iron status during the last trimester of pregnancy: erythrocyte protoporphyrin and serum ferritin determinations. *Nutrition Reports International*, 1983, 28 :1171-1178.
- Reference 4338 Lubin AH, Bonner JL, Shrock RO, Caffo AL. Effect of maternal iron status on the subsequent development of iron deficiency in the infant [abstract]. *Journal of Pediatrics*, 1980, 96 :1114-1115.
- Reference 4356 Zhu YI, Haas JD. Iron depletion without anemia and physical performance in young women. *American Journal of Clinical Nutrition*, 1997, 66 :334-341.
- Reference 4360 Ilich-Ernst JZ, McKenna AA, Badenhop NE, Clairmont AC, Andon MB, Nahhas RW, Goel P, Matkovic V. Iron status, menarche, and calcium supplementation in adolescent girls. *American Journal of Clinical Nutrition*, 1998, 68 :880-887.
- Reference 4409 Cook JD, Lipschitz DA, Miles LEM, Finch CA. Serum ferritin as a measure of iron stores in normal subjects. *American Journal of Clinical Nutrition*, 1974, 27 :681-687.
- Reference 4416 Halterman JS, Kaczorowski JM, Aligne CA, Auinger P, Szilagyi PG. Iron deficiency and cognitive achievement among school-aged children and adolescents in the United States. *Pediatrics*, 2001, 107 :1381-1386.
- Reference 4440 Looker AC, Cogswell ME, Gunter EW. Iron deficiency - United States, 1999-2000. *JAMA: Journal of the American Medical Association*, 2002, 288 :2114-2116.

## ADDITIONAL REFERENCES

### UNITED STATES OF AMERICA (THE)

---

- Reference 4442 Centers for Disease Control and Prevention. Iron deficiency - United States, 1999-2000. *MMWR. Morbidity and Mortality Weekly Report*, 2002, 51 :897-899.
- Reference 4457 Looker AC, Gunter EW, Cook JD, Green R, Harris JW. Comparing serum ferritin values from different population surveys. *Vital and Health Statistics*, 1991, 2 :1-19.
- Reference 4503 Hammad TA, Sexton M, Langenberg P. Relationship between blood lead and dietary iron intake in preschool children: a cross-sectional study. *Annals of Epidemiology*, 1996, 6 :30-33.
- Reference 4510 Kim I, Yetley EA, Calvo MS. Variations in iron-status measures during the menstrual cycle. *American Journal of Clinical Nutrition*, 1993, 58 :705-709.
- Reference 4549 Kenney MA. Factors related to iron nutrition of adolescent females. *Nutrition Research*, 1985, 5 :157-166.
- Reference 4550 Owen GM, Nelsen CE, Garry PJ. Nutritional status of preschool children: hemoglobin, hematocrit, and plasma iron values. *Journal of Pediatrics*, 1970, 76 :761-763.
- Reference 4555 Ritchey AK. Iron deficiency in children: update on an old problem. *Postgraduate Medicine*, 1987, 82 :59-69.
- Reference 4626 Geltman PL, Meyers AF, Bauchner H. Daily multivitamins with iron to prevent anemia in infancy: a randomized clinical trial. *Clinical Pediatrics*, 2001, 40 :549-554.
- Reference 4627 Hale WE, Stewart RB, Marks RG. Haematological and biochemical laboratory values in an ambulatory elderly population: an analysis of the effects of age, sex and drugs. *Age and Ageing*, 1983, 12 :275-284.
- Reference 4628 Swensen AR, Harnack LJ, Ross JA. Nutritional assessment of pregnant women enrolled in the Special Supplemental Program for Women, Infants, and Children (WIC). *Journal of the American Dietetic Association*, 2001, 101 :903-908.
- Reference 4645 Scholl TO. High third-trimester ferritin concentration: associations with very preterm delivery, infection, and maternal nutritional status. *Obstetrics and Gynecology*, 1998, 92 :161-166.
- Reference 4805 Sahyoun NR, Otradovec CL, Hartz SC, Jacob RA, Peters H, Russell RM, McGandy RB. Dietary intakes and biochemical indicators of nutritional status in an elderly, institutionalized population. *American Journal of Clinical Nutrition*, 1988, 47 :524-533.
- Reference 4811 Corti MC, Guralnik JM, Salive ME, Ferrucci L, Pahor M, Wallace RB, Hennekens CH. Serum iron level, coronary artery disease, and all-cause mortality in older men and women. *American Journal of Cardiology*, 1997, 79 :120-127.
- Reference 4828 Ziegler EE, Fomon SJ. Strategies for the prevention of iron deficiency: iron in infant formulas and baby foods. *Nutrition Reviews*, 1996, 54 :348-354.
- Reference 4829 Choi YS, Reid T. Anemia and red cell distribution width at the 12-month well-baby examination. *Southern Medical Journal*, 1998, 91 :372-374.
- Reference 4840 Zauber NP, Zauber AG. Hematologic data of healthy very old people. *JAMA: Journal of the American Medical Association*, 1987, 257 :2181-2184.
- Reference 4841 Ania BJ, Suman VJ, Fairbanks VF, Rademacher DM, Melton LJ 3rd. Incidence of anemia in older people: an epidemiologic study in a well defined population. *Journal of the American Geriatrics Society*, 1997, 45 :825-831.
- Reference 4881 Fleming DJ, Jacques PF, Dallal GE, Tucker KL, Wilson PWF, Wood RJ. Dietary determinants of iron stores in a free-living elderly population: the Framingham Heart Study. *American Journal of Clinical Nutrition*, 1998, 67 :722-733.

## ADDITIONAL REFERENCES

### UNITED STATES OF AMERICA (THE)

---

- Reference 4884      Hurtado EK, Claussen AH, Scott KG. Early childhood anemia and mild or moderate mental retardation. *American Journal of Clinical Nutrition*, 1999, 69 :115-119.
- Reference 4967      Chaves PHM, Xue QL, Guralnik JM, Ferrucci L, Volpato S, Fried LP. What constitutes normal hemoglobin concentration in community-dwelling disabled older women?. *Journal of the American Geriatrics Society*, 2004, 52 :1811-1816.
- Reference 4984      Tamura T, Goldenberg RL, Hou J, Johnston KE, Cliver SP, Ramey SL, Nelson KG. Cord serum ferritin concentrations and mental and psychomotor development of children at five years of age. *Journal of Pediatrics*, 2002, 140 :165-170.
- Reference 4997      Nordenberg D, Yip R, Binkin NJ. The effect of cigarette smoking on hemoglobin levels and anemia screening. *JAMA: Journal of the American Medical Association*, 1990, 264 :1556-1559.
- Reference 5008      Lipschitz DA, Cook JD, Finch CA. A clinical evaluation of serum ferritin as an index of iron stores. *New England Journal of Medicine*, 1974, 290 :1213-1216.
- Reference 5019      Fuchs GF, Sundeen M, Hutchinson SW, DeWier M, Suskind R, Schwartz S. Fecal hemoglobin in normal infants 4-12 months of age and the effect of whole cow's milk in the second 6 months of life [abstract]. *Gastroenterology*, 1991. 100 (5 Pt 2):A523.
- Reference 5020      Fomon SJ, Ziegler EE, Nelson SE, Edwards BB. Cow milk feeding in infancy: gastrointestinal blood loss and iron nutritional status. *Journal of Pediatrics*, 1981, 98 :540-545.
- Reference 5028      Brigety RE, Pearson HA. Effects of dietary and iron supplementation on hematocrit levels of preschool children. *Journal of Pediatrics*, 1970, 76 :757-760.
- Reference 5030      Beal VA, Meyers AJ, McCammon RW. Iron intake, hemoglobin, and physical growth during the first two years of life. *Pediatrics*, 1962, 30 :518-539.
- Reference 5046      Skikne BS, Flowers CH, Cook JD. Serum transferrin receptor: a quantitative measure of tissue iron deficiency. *Blood*, 1990, 75 :1870-1876.
- Reference 5048      Artz AS, Fergusson D, Drinka PJ, Gerald M, Bidenbender R, Lechich A, Silverstone F, McCamish MA, Dai J, Keller E, Ershler WB. Mechanisms of unexplained anemia in the nursing home. *Journal of the American Geriatrics Society*, 2004, 52 :423-427.
- Reference 5051      Tamura T, Hou J, Goldenberg RL, Johnston KE, Cliver SP. Gender difference in cord serum ferritin concentrations. *Biology of the Neonate*, 1999, 75 :343-349.
- Reference 5055      Mei Z, Parvanta I, Cogswell ME, Gunter EW, Grummer-Strawn LM. Erythrocyte protoporphyrin or hemoglobin: which is a better screening test for iron deficiency in children and women?. *American Journal of Clinical Nutrition*, 2003, 77 :1229-1233.
- Reference 5056      Centers for Disease Control and Prevention. Recommendations to prevent and control iron deficiency in the United States. *MMWR. Morbidity and Mortality Weekly Report*, 1998, 47 :1-29.
- Reference 5065      Centers for Disease Control and Prevention. Pregnancy nutrition surveillance 1996 [full report]. Atlanta, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 1998.
- Reference 5304      White KC. Anemia is a poor predictor of iron deficiency among toddlers in the United States: for heme the bell tolls. *Pediatrics*, 2005, 115 :315-320.
- Reference 5330      Schneider JM, Fujii ML, Lamp CL, Lonnerdal B, Dewey KG, Zidenberg-Cherr S. Anemia, iron deficiency, and iron deficiency anemia in 12-36-mo-old children from low-income families. *American Journal of Clinical Nutrition*, 2005, 82 :1269-1275.

## ADDITIONAL REFERENCES

### UNITED STATES OF AMERICA (THE)

---

- Reference 5342 Siega-Riz AM, Hartzema AG, Turnbull C, Thorp J, McDonald T, Cogswell ME. The effects of prophylactic iron given in prenatal supplements on iron status and birth outcomes: a randomized controlled trial. *American Journal of Obstetrics and Gynecology*, 2006, 194 :512-519.
- Reference 5720 Geltman PL, Meyers AF, Mehta SD, Brugnara C, Villon I, Wu YA, Bauchner H. Daily multivitamins with iron to prevent anemia in high-risk infants: a randomized clinical trial. *Pediatrics*, 2004, 114 :86-93.