

MOROCCO
Last Updated: 2007-01-04

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							
LR	2003 -2004	Brikcha Rural Commune: SAC: Total	B	6.00- 15.99	158									D	4899	*	1	
		Brikcha Rural Commune: SAC by intervention: Iodis	B	6.00- 15.99	83							116	9					2
		Brikcha Rural Commune: SAC by intervention: Dual-	B	6.00- 15.99	75							113	10					3
N	2000	NPW: Total	F	15.00- 49.99	1784					32.6	127	22	A	3469				
		PW: Total	F	15.00- 44.99	462			37.2			119	27						4
		Men: Total	M	18.00- 59.99	635					18.0	145	26						5
		Children: Total	B	0.50- 4.99	1486			31.5			118	20						
		NPW by area: Urban	F	15.00- 49.99	981					33.9								
		NPW by area: Rural	F	15.00- 49.99	803					31.9								
		NPW by age	F	15.00- 19.99	169					27.8								
		NPW by age	F	20.00- 24.99	294					31.3								
		NPW by age	F	25.00- 29.99	379					30.3								
		NPW by age	F	30.00- 34.99	325					36.0								
		NPW by age	F	35.00- 39.99	298					33.2								
		NPW by age	F	40.00- 44.99	210					37.1								
		NPW by age	F	45.00- 49.99	109					37.6								
		PW by area: Urban	F	15.00- 44.99	224				34.8									
		PW by area: Rural	F	15.00- 44.99	238				39.5									
		PW by gestational age: 1st trimester	F	15.00- 44.99	107				22.4									
		PW by gestational age: 2nd trimester	F	15.00- 44.99	166				32.5									
		PW by gestational age: 3rd trimester	F	15.00- 44.99	189				49.7									
		Men by area: Urban	M	18.00- 59.99	329						16.7							
		Men by area: Rural	M	18.00- 59.99	300						19.3							
		Children by area: Urban	B	0.50- 4.99	747				31.9									
		Children by area: Rural	B	0.50- 4.99	739				31.1									
		Children by sex	F	0.50- 4.99	706				30.0									
		Children by sex	M	0.50- 4.99	780				32.8									
		Children by age	B	0.50- 0.99	80				50.6									
		Children by age	B	1.00- 1.99	296				58.1									
		Children by age	B	2.00- 2.99	359				61.3									
Children by age	B	3.00- 3.99	364				74.7											
Children by age	B	4.00- 4.99	387				80.6											

NOTES

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Reference No: 4899

General Notes: *Study was conducted in villages in Brikcha Rural Commune, northern Morocco; same study as reference No. 4965; dates of survey provided by investigator; facility based study (2 neighbouring primary schools); baseline values of intervention study; method: AcT8 Counter; sampling: all children were invited to participate, all accepted (n=163), 158 completed the study; altitude 400-800 m above sea level.*

Line note 1 Prevalence of anaemia 57.6% (Hb <115 g/L both sexes 6-11 yrs, Hb <120 g/L both sexes 12-14 yrs, females 15 yrs, Hb <130 g/L males 15 yrs); prevalence of iron deficiency anaemia 32.3% (Hb <115 g/L both sexes 6-11 yrs, Hb <120 g/L both sexes 12-14 yrs, females 15 yrs, Hb <130 g/L males 15 yrs+zinc protoporphyrin >40 µmol/mol heme+serum ferritin <15 µg/L or serum transferrin receptor >8.5 mg/L).

Line note 2 Prevalence of anaemia 55.4% (Hb <115 g/L both sexes 6-11 yrs, Hb <120 g/L both sexes 12-14 yrs, females 15 yrs, Hb <130 g/L males 15 yrs); prevalence of iron deficiency anaemia 33.7% (Hb <115 g/L both sexes 6-11 yrs, Hb <120 g/L both sexes 12-14 yrs, females 15 yrs, Hb <130 g/L males 15 yrs+zinc protoporphyrin >40 µmol/mol heme+serum ferritin <15 µg/L or serum transferrin receptor >8.5 mg/L).

Line note 3 Prevalence of anaemia 60.0% (Hb <115 g/L both sexes 6-11 yrs, Hb <120 g/L both sexes 12-14 yrs, females 15 yrs, Hb <130 g/L males 15 yrs); prevalence of iron deficiency anaemia 30.7% (Hb <115 g/L both sexes 6-11 yrs, Hb <120 g/L both sexes 12-14 yrs, females 15 yrs, Hb <130 g/L males 15 yrs+zinc protoporphyrin >40 µmol/mol heme+serum ferritin <15 µg/L or serum transferrin receptor >8.5 mg/L).

Line note 4 Disaggregated data by age.

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REFERENCES

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- Reference 3469** Ministère de la Santé [Maroc]. Enquête nationale sur la carence en fer l'utilisation du sel iodé et la supplémentation par la vitamine A, 2000. 2000.
- Reference 4899** Zimmermann MB, Wegmueller R, Zeder C, Chaouki N, Rohner F, Saïssi M, Torresani T, Hurrell RF. Dual fortification of salt with iodine and micronized ferric pyrophosphate: a randomized, double-blind, controlled trial. *American Journal of Clinical Nutrition*, 2004, 80 :952-959.

ADDITIONAL REFERENCES

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- Reference 819 El Arbi Rjmati. Strategies to prevent iron deficiency anaemia. Alexandria, World Health Organization, 1995.
- Reference 956 Ministry of Health. National Report. 1992.
- Reference 3530 Zimmermann MB, Zeder C, Chaouki N, Saad A, Torresani T, Hurrell RF. Dual fortification of salt with iodine and microencapsulated iron: a randomized, double-blind, controlled trial in Moroccan schoolchildren. *American Journal of Clinical Nutrition*, 2003, 77 :425-432.
- Reference 3907 FAO. Aperçus nutritionnels par pays - Maroc [nutrition country profiles - Maroc]. Rome, Food and Agriculture Organization, 1998.
- Reference 4965 Zimmermann MB, Wegmueller R, Zeder C, Chaouki N, Biebinger R, Hurrell RF, Windhab E. Triple fortification of salt with microcapsules of iodine, iron, and vitamin A. *American Journal of Clinical Nutrition*, 2004, 80 :1283-1290.
- Reference 5085 Zimmermann MB, Chaouki N, Hurrell RF. Iron deficiency due to consumption of a habitual diet low in bioavailable iron: a longitudinal cohort study in Moroccan children. *American Journal of Clinical Nutrition*, 2005, 81 :115-121.