

TUNISIA

Last Updated: 2006-02-14

| 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 | 1999 | Tunis: PW: Total | F | 18.00- 48.99 | 200 | | | 37.5 | | | | | | C | 3946 | * | 1 | |
| | | Tunis: PW by gestational age: 1st trimester | F | 18.00- 48.99 | 8 | | | 12.5 | | | | 119 | 13 | | | | | |
| | | Tunis: PW by gestational age: 2nd trimester | F | 18.00- 48.99 | 55 | | | 29.1 | | | | 117 | 14 | | | | | |
| | | Tunis: PW by gestational age: 3rd trimester | F | 18.00- 48.99 | 137 | | | 42.3 | | | | 111 | 17 | | | | | |
| N | 1996 -1997 | Women: Total | F | 20.00- 59.99 | 1778 | | | | | 25.9 | | | | C | 2485 | | | |
| | | PW | F | 19.00- 40.99 | 70 | | | 32.3 | | | | | | | | | | |
| | | LW | F | 17.00- 45.99 | 173 | | | | | 30.4 | | | | | | | | |
| | | Men: Total | M | 20.00- 59.99 | 896 | | | | | | 6.2 | | | | | | | |
| | | Elderly: Total | B | 61.00-NS | 846 | | | | | | | | | | | | | 2 |
| | | Pre-SAC: Total | B | 0.00- 5.99 | 965 | | | 21.7 | | | | | | | | | | |
| | | SAC: Total | B | 6.00- 9.99 | 870 | | | | 7.4 | | | | | | | | | |
| | | Adolescents: Total | B | 10.00- 19.99 | 1827 | | | | | | | | | | | | | 3 |
| | | Women by area: Urban | F | 20.00- 59.99 | 1114 | | | | | | 25.4 | | | | | | | |
| | | Women by area: Rural | F | 20.00- 59.99 | 664 | | | | | | 26.8 | | | | | | | |
| | | Women by region: Grand Tunis | F | 20.00- 59.99 | 279 | | | | | | 25.5 | | | | | | | |
| | | Women by region: Nord Est | F | 20.00- 59.99 | 224 | | | | | | 19.0 | | | | | | | |
| | | Women by region: Nord Ouest | F | 20.00- 59.99 | 307 | | | | | | 28.6 | | | | | | | |
| | | Women by region: Centre Est | F | 20.00- 59.99 | 264 | | | | | | 20.9 | | | | | | | |
| | | Women by region: Centre Ouest | F | 20.00- 59.99 | 249 | | | | | | 30.5 | | | | | | | |
| | | Women by region: Sud Est | F | 20.00- 59.99 | 248 | | | | | | 33.5 | | | | | | | |
| | | Women by region: Sud Ouest | F | 20.00- 59.99 | 207 | | | | | | 35.1 | | | | | | | |
| | | Men by area: Urban | M | 20.00- 59.99 | 500 | | | | | | 6.0 | | | | | | | |
| | | Men by area: Rural | M | 20.00- 59.99 | 396 | | | | | | 6.6 | | | | | | | |
| | | Men by region: Grand Tunis | M | 20.00- 59.99 | 94 | | | | | | 8.7 | | | | | | | |
| | | Men by region: Nord Est | M | 20.00- 59.99 | 118 | | | | | | 3.3 | | | | | | | |
| | | Men by region: Nord Ouest | M | 20.00- 59.99 | 172 | | | | | | 4.3 | | | | | | | |
| | | Men by region: Centre Est | M | 20.00- 59.99 | 164 | | | | | | 6.8 | | | | | | | |
| | | Men by region: Centre Ouest | M | 20.00- 59.99 | 132 | | | | | | 5.5 | | | | | | | |
| | | Men by region: Sud Est | M | 20.00- 59.99 | 123 | | | | | | 6.7 | | | | | | | |
| | | Men by region: Sud Ouest | M | 20.00- 59.99 | 96 | | | | | | 4.3 | | | | | | | |
| | | Elderly by sex | F | 61.00-NS | 472 | | | | | | | 14.2 | | | | | | |
| Elderly by sex | M | 61.00-NS | 374 | | | | | | | 18.1 | | | | | | | | |
| Elderly by area: Urban | B | 61.00-NS | 482 | | | | | | | | | | | | | 4 | | |
| Elderly by area: Rural | B | 61.00-NS | 364 | | | | | | | | | | | | | 5 | | |
| Elderly by region: Grand Tunis | B | 61.00-NS | 121 | | | | | | | | | | | | | 6 | | |

TUNISIA
Last Updated: 2006-02-14

| 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 | | | | | | |
| N | 1996 -1997 | Elderly by region: Nord Est | B | 61.00-NS | 119 | | | | | | | C | 2485 | | 7 | | |
| | | Elderly by region: Nord Ouest | B | 61.00-NS | 159 | | | | | | | | | | 8 | | |
| | | Elderly by region: Centre Est | B | 61.00-NS | 133 | | | | | | | | | | 9 | | |
| | | Elderly by region: Centre Ouest | B | 61.00-NS | 104 | | | | | | | | | | 10 | | |
| | | Elderly by region: Sud Est | B | 61.00-NS | 110 | | | | | | | | | | 11 | | |
| | | Elderly by region: Sud Ouest | B | 61.00-NS | 100 | | | | | | | | | | 12 | | |
| | | Pre-SAC by sex | F | 0.00- 5.99 | 478 | | | 20.7 | | | | | | | | | |
| | | Pre-SAC by sex | M | 0.00- 5.99 | 487 | | | 22.7 | | | | | | | | | |
| | | Pre-SAC by area: Urban | B | 0.00- 5.99 | 499 | | | 22.7 | | | | | | | | | |
| | | Pre-SAC by area: Rural | B | 0.00- 5.99 | 466 | | | 20.4 | | | | | | | | | |
| | | Pre-SAC by region: Grand Tunis | B | 0.00- 5.99 | 117 | | | 30.8 | | | | | | | | | |
| | | Pre-SAC by region: Nord Est | B | 0.00- 5.99 | 110 | | | 14.2 | | | | | | | | | |
| | | Pre-SAC by region: Nord Ouest | B | 0.00- 5.99 | 158 | | | 21.4 | | | | | | | | | |
| | | Pre-SAC by region: Centre Est | B | 0.00- 5.99 | 148 | | | 13.4 | | | | | | | | | |
| | | Pre-SAC by region: Centre Ouest | B | 0.00- 5.99 | 168 | | | 24.3 | | | | | | | | | |
| | | Pre-SAC by region: Sud Est | B | 0.00- 5.99 | 137 | | | 19.0 | | | | | | | | | |
| | | Pre-SAC by region: Sud Ouest | B | 0.00- 5.99 | 125 | | | 34.1 | | | | | | | | | |
| | | SAC by sex | F | 6.00- 9.99 | 432 | | | | 7.4 | | | | | | | | |
| | | SAC by sex | M | 6.00- 9.99 | 438 | | | | 7.5 | | | | | | | | |
| | | SAC by area: Urban | B | 6.00- 9.99 | 456 | | | | 7.0 | | | | | | | | |
| | | SAC by area: Rural | B | 6.00- 9.99 | 414 | | | | 8.0 | | | | | | | | |
| | | SAC by region: Grand Tunis | B | 6.00- 9.99 | 118 | | | | 7.4 | | | | | | | | |
| | | SAC by region: Nord Est | B | 6.00- 9.99 | 104 | | | | 8.3 | | | | | | | | |
| | | SAC by region: Nord Ouest | B | 6.00- 9.99 | 139 | | | | 2.9 | | | | | | | | |
| | | SAC by region: Centre Est | B | 6.00- 9.99 | 138 | | | | 6.5 | | | | | | | | |
| | | SAC by region: Centre Ouest | B | 6.00- 9.99 | 127 | | | | 10.7 | | | | | | | | |
| | | SAC by region: Sud Est | B | 6.00- 9.99 | 143 | | | | 4.8 | | | | | | | | |
| | | SAC by region: Sud Ouest | B | 6.00- 9.99 | 101 | | | | 9.8 | | | | | | | | |
| | | Adolescents by sex | F | 10.00- 19.99 | 1004 | | | | | | | | | | 13 | | |
| | | Adolescents by sex | M | 10.00- 19.99 | 823 | | | | | | | | | | 14 | | |
| | | Adolescents by area: Urban | B | 10.00- 19.99 | 1017 | | | | | | | | | | 15 | | |
| | | Adolescents by area: Rural | B | 10.00- 19.99 | 810 | | | | | | | | | | 16 | | |
| | | Adolescents by region: Grand Tunis | B | 10.00- 19.99 | 209 | | | | | | | | | | 17 | | |
| Adolescents by region: Nord Est | B | 10.00- 19.99 | 213 | | | | | | | | 18 | | | | | | |
| Adolescents by region: Nord Ouest | B | 10.00- 19.99 | 305 | | | | | | | | 19 | | | | | | |
| Adolescents by region: Centre Est | B | 10.00- 19.99 | 255 | | | | | | | | 20 | | | | | | |

TUNISIA

Last Updated: 2006-02-14

| 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 | 1996 -1997 | Adolescents by region: Centre Ouest | B | 10.00- 19.99 | 291 | | | | | | | C | 2485 | | 21 | | |
| | | Adolescents by region: Sud Est | B | 10.00- 19.99 | 287 | | | | | | | | | | 22 | | |
| | | Adolescents by region: Sud Ouest | B | 10.00- 19.99 | 267 | | | | | | | | | | 23 | | |
| R | 1985 -1986 | Mellassine Region: Children: Total | B | 0.50- 2.99 | 500 | | | 52.2 | | | | NS | 2054 | | | | |
| | | Mellassine Region: Children by sex | F | 0.50- 2.99 | 239 | | | 50.2 | | | | | | | | | |
| | | Mellassine Region: Children by sex | M | 0.50- 2.99 | 261 | | | 54.0 | | | | | | | | | |
| | | Mellassine Region: Children by age | B | 0.50- 0.99 | 115 | | | 73.0 | | | | | | | | | |
| | | Mellassine Region: Children by age | B | 1.00- 1.99 | 248 | | | 58.9 | | | | | | | | | |
| | | Mellassine Region: Children by age | B | 2.00- 2.99 | 137 | | | 30.7 | | | | | | | | | |
| N | 1973 -1975 | Women by age | F | 16.00- 20.99 | 120 | | | | | 23.3 | | A | 2537 | * | 24 | | |
| | | Women by age | F | 21.00- 40.99 | 139 | | | | | 38.4 | | | | | | | |
| | | PW | F | 16.00- 40.99 | 107 | | | 38.3 | | | | | | | | | |
| | | LW | F | 16.00- 40.99 | 273 | | | | | 45.8 | | | | | | | |
| | | Men by age | M | 16.00- 20.99 | 103 | | | | | | 29.2 | | | | | | |
| | | Men by age | M | 21.00- 40.99 | 114 | | | | | | 15.8 | | | | | | |
| | | Infants | B | NS- 0.99 | 240 | | | | | | | | | | | | |
| | | Children by age | B | 1.00- 2.99 | 164 | | | 43.3 | | | | | | | | | |
| | | Children by age | B | 3.00- 5.99 | 91 | | | 28.6 | | | | | | | | | |
| | | Children by sex and age | F | 6.00- 11.99 | 181 | | | | | 40.9 | | | | | | | |
| | | Children by sex and age | M | 6.00- 11.99 | 206 | | | | | 37.4 | | | | | | | |
| | | Children by sex and age | F | 12.00- 15.99 | 110 | | | | | 28.1 | | | | | | | |
| | | Children by sex and age | M | 12.00- 15.99 | 126 | | | | | | | | | | | | |

NOTES

TUNISIA

Reference No: 3946

General Notes: *Facility based study (Maternité la Rabta Tunis); sampling: design not explained, 100 PW were selected during prenatal visits and 100 were selected while hospitalized related to their pregnancy; exclusion of subjects with infection and haemoglobinopathies.*

Line note 1 Mean age 30.1 yrs; disaggregated data by parity.

Line note 2 Prevalence of anaemia 16.3% (Hb <120 g/L women, Hb <130 g/L men).

Line note 3 Prevalence of anaemia 12.9% (Hb <115 g/L both sexes 10-11 yrs, Hb <120 g/L females 12-19 yrs, boys 12-13 yrs, Hb <130 g/L males 14-19 yrs).

Line note 4 Prevalence of anaemia 13.5% (Hb <120 g/L women, Hb <130 g/L men); disaggregated data by sex.

Line note 5 Prevalence of anaemia 20.8% (Hb <120 g/L women, Hb <130 g/L men).

Line note 6 Prevalence of anaemia 17.9% (Hb <120 g/L women, Hb <130 g/L men).

Line note 7 Prevalence of anaemia 18.1% (Hb <120 g/L women, Hb <130 g/L men).

Line note 8 Prevalence of anaemia 17.1% (Hb <120 g/L women, Hb <130 g/L men).

Line note 9 Prevalence of anaemia 14.2% (Hb <120 g/L women, Hb <130 g/L men).

Line note 10 Prevalence of anaemia 18.5% (Hb <120 g/L women, Hb <130 g/L men).

Line note 11 Prevalence of anaemia 12.9% (Hb <120 g/L women, Hb <130 g/L men).

Line note 12 Prevalence of anaemia 14.3% (Hb <120 g/L women, Hb <130 g/L men).

Line note 13 Prevalence of anaemia 11.3% (Hb <115 g/L 10-11 yrs, Hb <120 g/L 12-19 yrs).

Line note 14 Prevalence of anaemia 12.7% (Hb <115 g/L 10-11 yrs, Hb <120 g/L 12-13 yrs, Hb <130 g/L 14-19 yrs).

Line note 15 Prevalence of anaemia 10.4% (Hb <115 g/L both sexes 10-11 yrs, Hb <120 g/L females 12-19 yrs, boys 12-13 yrs, Hb <130 g/L males 14-19 yrs).

Line note 16 Prevalence of anaemia 14.4% (Hb <115 g/L both sexes 10-11 yrs, Hb <120 g/L females 12-19 yrs, boys 12-13 yrs, Hb <130 g/L males 14-19 yrs).

Line note 17 Prevalence of anaemia 10.0% (Hb <115 g/L both sexes 10-11 yrs, Hb <120 g/L females 12-19 yrs, boys 12-13 yrs, Hb <130 g/L males 14-19 yrs).

Line note 18 Prevalence of anaemia 10.8% (Hb <115 g/L both sexes 10-11 yrs, Hb <120 g/L females 12-19 yrs, boys 12-13 yrs, Hb <130 g/L males 14-19 yrs).

Line note 19 Prevalence of anaemia 9.9% (Hb <115 g/L both sexes 10-11 yrs, Hb <120 g/L females 12-19 yrs, boys 12-13 yrs, Hb <130 g/L males 14-19 yrs).

Line note 20 Prevalence of anaemia 8.8% (Hb <115 g/L both sexes 10-11 yrs, Hb <120 g/L females 12-19 yrs, boys 12-13 yrs, Hb <130 g/L males 14-19 yrs).

Line note 21 Prevalence of anaemia 15.0% (Hb <115 g/L both sexes 10-11 yrs, Hb <120 g/L females 12-19 yrs, boys 12-13 yrs, Hb <130 g/L males 14-19 yrs).

Line note 22 Prevalence of anaemia 15.0% (Hb <115 g/L both sexes 10-11 yrs, Hb <120 g/L females 12-19 yrs, boys 12-13 yrs, Hb <130 g/L males 14-19 yrs).

Line note 23 Prevalence of anaemia 17.2% (Hb <115 g/L both sexes 10-11 yrs, Hb <120 g/L females 12-19 yrs, boys 12-13 yrs, Hb <130 g/L males 14-19 yrs).

Reference No: 2537

General Notes: *Hb determination only for subsample (about 20%).*

Line note 24 Disaggregated data by region.

Line note 25 Prevalence of anaemia 39.7% (Hb <100 g/L 0-6 months, Hb <110 g/L 6-12 months).

Line note 26 Sample size might be wrong (unreadable).

Line note 27 Prevalence of anaemia 39.7% (Hb <120 g/L 12-14 yrs, Hb <130 g/L 15 yrs).

REFERENCES

TUNISIA

- Reference 2054** Koubaa C, Jarraya S, Zouari S, Kaabachi N, Michiri A, Fattoum S, Mbazaa R, Mhenni H, Hamza B. L'anémie carencielle parmi les enfants de 6 à 35 mois dans la région de Mellassine- cité Hellal (Tunisie) [Iron deficiency anemia in 6-35 months children in the Mellassine district (Tunisia)]. *Revue Maghrébine de Pédiatrie*, 1993, 3 :307-312.
- Reference 2485** Ministère de la Santé Publique, Institut National de Nutrition. Rapport national: évaluation de l'état nutritionnel de la population tunisienne [National report: evaluation of the nutritional status of the Tunisian population]. Tunis, Ministère de la Santé Publique, 1996.
- Reference 2537** Tunisian National Institute of Nutrition and Food Technoloy. 1973-1975 Tunisian National Nutrition Survey [preliminary report]. 1976.
- Reference 3946** Chenoufi B, Essafi B, Sfar E, Chelli H, Ben Hamida A, Ben Ammar S, Ben Tanfous N, Ben Abdallah K, Kastalli R. Dépistage de l'anémie carencielle chez la femme enceinte: étude prospective, a propos de 200 cas [Screening of carencial anemia in pregnant women: a prospective study, about 200 cases]. *Tunisie Médicale*, 2001, 79 :423-428.

ADDITIONAL REFERENCES

TUNISIA

- Reference 1783 Mseddi S, Gargouri J, Labiadh Z, Kassis M, Elloumi M, Ghali L, Dammak J, Harrabi M, Souissi T, Frikha M. Prévalence des anomalies de l'hémoglobine à Kebili (Sud Tunisien) [Prevalence of hemoglobin abnormalities in Kibily (South of Tunisia)]. *Revue d'Epidémiologie et de Santé Publique*, 1999, 47 :29-36.
- Reference 1842 Kaabahi N, Abdemoula J, Ben Romdhane N, Mebazaa A. Fréquence de la carence martiale chez les femmes Tunisiennes: intérêt et dosage de la ferritine plasmatique [Frequency of martial deficiency in Tunisian women: value and determination of plasma ferritin]. *Annales de Biologie Clinique*, 1991, 49 :313.
- Reference 1843 Lowenstein FW, O'Connell DE. Health and nutritional status of village boys 6-11 years old in southern Tunisia. *Journal of Tropical Pediatrics and Environmental Child Health*, 1977, 23 :66-72.
- Reference 1845 Ben Amor MS, Cohen H. Quelques aspects d'anémies gravidiques [Various aspects of anemia in pregnancy]. *Tunisie Médicale*, 1967, 45 :259-267.
- Reference 2053 Messaoud T, Ghanem A, Abdennebi M, Guemira F, Hmila R, Fattoum S. Évolution de la carence martiale dans une population de femmes enceintes Tunisiennes [Variation of iron deficiency in a group of Tunisian pregnant women]. *Revue Maghrébine de Pédiatrie*, 1994, 4 :11-17.
- Reference 4054 Khosrof-Ben Jaafar S, el Fazaa S, Kamoun A, Beji C, Farhat A, Cherif S, Haddad S, Gharbi N. L'anémie ferriprive et le statut protéino-énergétique chez l'enfant de 6 à 59 mois en Tunisie [Iron-deficiency anemia and protein-energy status in infant aged 6 to 59 months in Tunisia]. *Tunisie Médicale*, 2003, 81 :540-547.
- Reference 5590 El Ati J, Gaigi S, Beji C, Haddad S, Cherif S, Farhat A, Fattoum S, Ben Abdeladhim A. Prevelence et typologie des anemies chez les enfants de moins de 5 ans. Etude épidémiologique dan le Grand Tunis et le Sud Ouest [Prevalence and causal factors of anemia in children in Tunisia]. *Tunisie Médicale*, 2005, 83 :511-518.