

Worldwide Prevalence of Head Lice

Technical Appendix

Table. Worldwide prevalence of head lice infestation*

| Country (reference) | Year | Setting | Definition | Incidence |
|---------------------|------|--|--|---|
| Asia | | | | |
| China (1) | 2004 | Refugee children | NA | 43/303 (14.2%) |
| India (2) | 2004 | Child laborers in a slum area | NA | 72/150 (48%) |
| India (3) | 2002 | Public primary-school children | NA | 156/940 (16.59% overall; 20.42% girls, 13.86% boys) |
| India (4) | 2002 | Jail inmates | NA | 15/225 (6.6%) |
| Iran (5) | 2006 | Children in 12 public rural primary schools | Detection of nits and/or lice | 58/847 (6.85%) (55/407 [13.%] girls, 3/440 [0.7%] boys) |
| Iran (6) | 2005 | Primary-school children | NA | 45/1,200 (3.8%); 2/564 boys, 45/636 girls |
| Iraq (7) | 2003 | 409 children from 2 primary schools in Baghdad with different school environment and hygienic status | NA | 48.9% incidence in the school with lower school environment and hygiene status. 9.4% in other school |
| Israel (8) | 2001 | Children 7–10 years of age | Visual examination and combing; detection of nits and/or lice | 152/268; (56.7% overall; 61.2% girls, 36.7% boys) |
| Jordan (9) | 2000 | Elementary public-school children | Detection of nits and/or lice | 338/2,519 (13.4% overall; 14.5% girls, 11.1% boys) |
| South Korea (10) | 2003 | Kindergarten and primary-school children | NA | 435/7,495 (5.8% overall; 11.2% girls, 0.9% boys) |
| South Korea (11) | 2000 | Kindergarten and primary-school children | Detection of nits and/or lice | 294/2,288 (12.8% overall; 23.5% girls, 3.9% i boys) |
| Malaysia (12) | 2006 | 11-year-old schoolchildren | Fine-tooth combing and visual examination; detection of nits and/or lice | 162/463 (35%) |
| Nepal (13) | 2004 | A sample of persons 10–39 years of age, street children | NA | 16% 59% |
| Nepal (14) | 2004 | Urban schoolchildren | NA | 172/ 818 (21%) |
| Palestine (15) | 2006 | Primary-school girls, 6–14 years of age, from rural and urban area | Detection of nits or lice | 340/2,408 (14.1%) with lice 843 of 2408 (35%) with nits |
| Saudi Arabia (16) | 2006 | Urban female schoolchildren from private and preparatory schools | NA | 116/2239 (5.2%) |
| Sri Lanka (17) | 2001 | Children accompanying their mothers in prison | NA | 10% |
| Taiwan (18) | 2001 | Students | NA | 615/5121 (12%) |
| Taiwan (19) | 2000 | Primary-school children (12.9%) from 4 rural districts and 1 urban area | NA | 391/3029; More common in rural areas and among girls |
| Turkey (20) | 2007 | Schoolchildren | Visual inspection | 31.1% in a low socioeconomic–status village, 7.7% in a neighboring higher socioeconomic status village (69 and 31 children, respectively) |
| Turkey (21) | 2007 | Deaf students | NA | 6/117 (5.1%) |
| Turkey (22) | 2006 | Schoolchildren | Visual inspection | 9/1134 (0.8%) |
| Turkey (23) | 2006 | Primary-school children | NA | 20/68 (29.4%); 0/32 (0%) boys, 20/36 (55.5%) girls |

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| Turkey (24) | 2006 | Primary-school children | Detection of nits and/or lice | 117/1261 (9.1%); 16/648 (2.1%) boys, 101/613 (16.4%) girls |
| Turkey (25) | 2006 | Rural primary-school children | Nits (no adult lice detected) | 17/178 (9.5%); 2/104 (1.9%) boys, 15/74 (20.3%) girls |
| Turkey (26) | 2005 | Schoolchildren 7–14 years of age | Visual examination; detection of nits and/or lice | 260/1569 (16.6% overall; 31.8% girls, 2.5% boys) |
| Turkey (27) | 2003 | Elementary-school children | Detection of nits and/or lice | 360/5318 (6.8% overall; 13.3% girls, 1.1% boys) |
| Turkey (28) | 2003 | Schoolchildren | NA | 701/20612 (3.4%) |
| Turkey (29) | 2002 | Primary-school children | NA | 74/785 (9.4%) |
| Europe | | | | |
| Albania (30) | 2002 | Refugees from Kosovo (479,223 officially registered) | NA | ≈4% |
| Belgium (31) | 2005 | Schoolchildren 2.5–12 years of age | Wet combing | 549/6169 (8.9%) |
| Belgium (32) | 2000 | Primary-school children in a socially deprived urban area | Visual examination and combing | 49/224 (21.9%) |
| Czech Republic (33) | 2006 | Schoolchildren 6–15 years of age | Dry-hair combing; detection of live lice or dead nits. | 75/531 with lice (14.1%) 52/531 with nits (9.8%) |
| England (34) | 2003 | Primary-school children | NA | 438/21556 (2.03%); annual incidence 37.4% |
| England (35) | 2003 | Diagnosis of pediculosis in the West Midland population from 1993-2000 | NA | 28.2/1,000 patient years at risk |
| France (36) | 2007 | Urban primary-school children | Fine-tooth combing. Detection of live lice | 112/3345 (3.3%) |
| France (37) | 2005 | Homeless persons | NA | 205/930 (22%) |
| Kosovo (38) | 2000 | Kosovar refugees upon arrival in the United States | Detection of nits and/or lice | 107/1051 (10.2%) |
| Poland (39) | 2004 | Rural schoolchildren, urban schoolchildren | NA | 682/42759 (1.59%) 252/52394 (0.48%) |
| Ukraine (40) | 2006 | Population of Ukraine 1990–2004 | NA | Referenced as endemic, no actual data shown. Predominance of children in the total infected population in 1990 roughly equal infestation of adults and children in 2004 |
| Africa | | | | |
| Egypt (41) | 2003 | Rural inhabitants of all ages | NA | 1551/8008 (19.37%) |
| Egypt (42) | 2002 | Population sample | Visual examination | 137/2448 (5.6%) |
| Egypt (43) | 2001 | Primary-, preparatory-, secondary- school children | NA | 384/1772 with head or body lice (21.67% overall; 30.26% girls, 17.7% boys, 18.2:1 head lice:body lice ratio) |
| Egypt (44) | 2000 | Urban poor preschool children | Visual examination | 151/ 256 (58.9%) |
| Egypt (45) | 2000 | Orphanage children 2–6 years of age | NA | 64.1% |
| Egypt (46) | 2000 | Primary-school children | NA | 276/510 (54.1%) |
| South Africa (47) | 2003 | Primary-school children 6–13 years of age (black and white) from 2 rural schools, 1 with low and 1 with high socioeconomic status | Visual examination followed by hair conditioner and fine-tooth combing if evidence of lice found; detection of nits and/or lice | 0/300 (0%) in the school with low socioeconomic status; 15/175 (8.6%) in the other school; all infected children were white |
| Americas | | | | |
| Argentina (48) | 2005 | Primary-school children from public and private school | Detection of nits and/or lice | 842/1370 (61.4%); 296/678 (44%) boys, 546/692 (79%) girls |

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| Brazil (49) | 2007 | 98 children, 196 adolescents, 119 adults, 90 elderly nursing home residents | Cut hair analysis and visual inspection | 13.3%, 5.6%, 5.4%. and 5.5% respectively, by cut hair analysis. Visual inspection doubled this prevalence in general |
| Brazil (50) | 2005 | Urban slum residents, fishing community residents | NA | 634/1460 (43.4%); 170/605 (28.1%) |
| Brazil (51) | 2003 | Slum population attending a primary healthcare center | NA | Point prevalence 38.2% |
| Brazil (52) | 2002 | Children 0–15 years of age at day care centers; public, urban, rural schools | NA | 309/884 (35%) |
| Cuba (53) | 2000 | Persons living with children who repeatedly had pediculosis | NA | 40/237 (14.54% overall; 82.5% female) |
| United States (54) | 2001 | Students | Detection of nits or lice | 28/1729 (1.6%) with lice 63/1729 (3.6%) with nits without lice |
| Oceania (Australia) (55) | 2004 | Primary-school children | Hair conditioner and fine-tooth combing; detection of nits and/or lice | 239/1838 (13%); girls more likely to have active infection |

*NA, not available.

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Normally, the prevalence of head lice in the general population of industrialized countries is low. Infestations occur almost exclusively in vulnerable groups: school children, homeless people, refugees, and slum dwellers (prevalence 0.7% to 61% [1].

Background: Conflicting information about the proper treatment of head lice has given rise to uncertainty among patients and treating personnel. For example, the reported efficacy of permethrin fell from 97% in the 1990s to 30% in 2010.

Methods: Review of the literature based on a selective search of PubMed.

Results: In Germany, outbreaks of head lice mainly occur among 5- to 13-year-olds returning to school after the summer vacation. The head louse (*Pediculus humanus capitis*) is an obligate ectoparasite of humans. Head lice are wingless insects that spend their entire lives on the human scalp and feeding exclusively on human blood. Humans are the only known hosts of this specific parasite, while chimpanzees host a closely related species, *Pediculus schaeffi*. Other species of lice infest most orders of mammals and all orders of birds.

Worldwide prevalence of head lice. Authors: Matthew E Falagas Dimitrios K Matthaiou Petros I Rafailidis George Panos Georgios Pappas.

Transmission of head lice usually requires head-to-head contact. Head lice can only live on humans and the lifespan is very short (several days) once detached from a human head. *Epidemiology*[1, 3]. Head lice infestation is extremely common worldwide, affecting millions of children. Prevalence varies between countries. Head lice are endemic in the UK. They are most common in children aged 4-11 with a peak age of 7-8 years. Information on current prevalence in the UK is limited, but past studies have shown prevalence rates of 4.1-22%. There is no evidence that head lice have a preference for either clean or dirty hair. Risk factors include