

Table 74: Summary of Surveys Included in Meta-Analysis: Egypt												Northern Africa	
Country	Study (survey year*)	Region	Population and sampling method	Sex	Sample (n)	HBsAg positive (%)	lower 95% CI	upper 95% CI	RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
Egypt	Mohamed 1996*	five different parts	Egyptians applying for work abroad; individual applying to Ministry of Health for certification of freedom from viral hepatitis (B and C) to work abroad; all five labs in all parts of Egypt were included; all individuals attending the labs during a full work week were included; males (5,013)	males	4,422	3.6%	3.05%	4.15%	2.91%	16.4%	Mohamed, M. K., M. H. Hussein, et al. (1996). "Study of the risk factors for viral hepatitis C infection among Egyptians applying for work abroad." J Egypt Public Health Assoc 71(1-2): 113-47.	17217004	1125
Egypt	Hyams 1982-1983	from urban and rural communities	Military recruits; military recruits presenting for induction physical; generally in good health; all giving informed consent were included; mostly from lower and middle class; half urban, half rural; (1,234)	males	1,234	7.4%	5.94%	8.86%	2.68%	2.3%	Hyams, K. C., M. M. Mansour, et al. (1987). "Parenteral antischistosomal therapy: a potential risk factor for hepatitis B infection." J Med Virol 23(2): 109-14.	3119770	1103
Egypt	Sherif 1985*	El Menia province, Upper	General population El Menia region; no selection described; male (456)	males	456	17.1%	13.64%	20.56%	1.89%	0.4%	Sherif, M. M., B. A. Abou-Aita, et al. (1985). "Hepatitis B virus infection in upper and lower Egypt." J Med Virol 15(2): 129-35.	3973568	1107
Egypt	Sherif 1985*	Alexandria's province, Lower	General population Alexandria region; no selection described male (328)	males	328	10.4%	7.10%	13.70%	1.95%	0.5%	Sherif, M. M., B. A. Abou-Aita, et al. (1985). "Hepatitis B virus infection in upper and lower Egypt." J Med Virol 15(2): 129-35.	3973568	1107
Egypt	Kotkat 1990*	Alexandria	Military recruits of Central Security Camps; no selection described(336)	males	336	4.2%	2.03%	6.31%	2.43%	1.1%	Kotkat, A., S. el-Masry, et al. (1990). "Chronic hepatitis B antigenaemia in bilharzial patients treated with Praziquantel." J Egypt Public Health Assoc 65(5-6): 543-54.	2134090	1101
Egypt	Farghaly 1992*		Military recruits without schistosomiasis; no selection described (370)	males	370	6.2%	3.74%	8.66%	2.30%	0.8%	Farghaly, A. G. and R. M. Barakat (1992). "Association between chronic hepatitis B carrier state and schistosomiasis." J Egypt Public Health Assoc 67(5-6): 607-21.	1294685	1099
Egypt	el-Sayed 1993	Bitter Lakes area of Sinai	Settlers in a newly reclaimed area; a random sample of 506 persons were included; "comparable to the general population" ; male (262)	males	262	2.7%	0.74%	4.66%	2.50%	1.3%	el-Sayed, H. F., S. M. Abaza, et al. (1997). "The prevalence of hepatitis B and C infections among immigrants to a newly reclaimed area endemic for Schistosoma mansoni in Sinai, Egypt." Acta Trop 68(2): 229-37.	9386797	1113
Egypt	Badr 1998*	Cairo	Apparently healthy friends and relatives of addicts (80)	males	80	5.0%	0.22%	9.78%	1.42%	0.2%	Badr, II, A. G. Farghaly, et al. (1998). "Health status assessment of drug addicts in Alexandria." J Egypt Public Health Assoc 73(3-4): 275-96.	17219925	1128
Egypt	Amr 1999*		Pesticide workers; randomly selected from applicators in three villages who seasonally spray different types of pesticide on cotton crops (311)	males	311	7.4%	4.49%	10.31%	2.11%	0.6%	Amr, M. M. (1999). "Pesticide monitoring and its health problems in Egypt, a Third World country." Toxicol Lett 107(1-3): 1-13.	10414776	1115
Egypt	Amr 1999*		Controls for pesticide workers; workers never exposed occupationally to pesticides; no selection described (87)	males	87	10.5%	4.06%	16.94%	1.00%	0.1%	Amr, M. M. (1999). "Pesticide monitoring and its health problems in Egypt, a Third World country." Toxicol Lett 107(1-3): 1-13.	10414776	1115
Egypt	Ezzat 2005*	Cairo	Urban and rural controls for HCC patients; recruited from the Orthopedic Dept of Cairo University hospital; matched with HCC patients for age, sex, urban-rural residence; participation rate 77%; males (176)	males	176	2.8%	0.39%	5.29%	2.30%	0.8%	Ezzat, S., M. Abdel-Hamid, et al. (2005). "Associations of pesticides, HCV, HBV, and hepatocellular carcinoma in Egypt." Int J Hyg Environ Health 208(5): 329-39.	16217918	1121
Egypt	Mohamed 1996*	five different parts	Egyptians applying for work abroad; individual applying to Ministry of Health for certification of freedom from viral hepatitis (B and C) to work abroad; all five labs in all parts of Egypt were included; all individuals attending the labs during a full work week were included; females (5,013)	females	591	1.9%	0.80%	3.00%	2.79%	4.1%	Mohamed, M. K., M. H. Hussein, et al. (1996). "Study of the risk factors for viral hepatitis C infection among Egyptians applying for work abroad." J Egypt Public Health Assoc 71(1-2): 113-47.	17217004	1125

Egypt	Hyams 1984	Cairo	Pregnant women; indigent women living in Cairo and surrounding urban areas who had received no prenatal care; four public hospitals in Cairo: voluntary, no response rate (901)	females	901	4.8%	3.40%	6.20%	2.71%	2.5%	Hyams, K. C., N. M. Osman, et al. (1988). "Maternal-infant transmission of hepatitis B in Egypt." <i>J Med Virol</i> 24(2): 191-7.	3351486	1104
Egypt	Sherif 1985*	El Menia province, Upper	General population El Menia region; no selection described; female (608)	females	608	7.6%	5.49%	9.71%	2.44%	1.1%	Sherif, M. M., B. A. Abou-Aita, et al. (1985). "Hepatitis B virus infection in upper and lower Egypt." <i>J Med Virol</i> 15(2): 129-35.	3973568	1107
Egypt	Sherif 1985*	Alexandria's province, Lower	General population Alexandria region; no selection described; female (474)	females	474	6.3%	4.11%	8.49%	2.41%	1.0%	Sherif, M. M., B. A. Abou-Aita, et al. (1985). "Hepatitis B virus infection in upper and lower Egypt." <i>J Med Virol</i> 15(2): 129-35.	3973568	1107
Egypt	Osman 1987*	Cairo	Pregnant women Cairo; women in labor subjected to HBsAg screening (255)	females	255	5.5%	2.69%	8.29%	2.16%	0.6%	Osman, N. M., E. M. Khaled, et al. (1987). "Evaluation of the correlation between hepatitis B virus markers in pregnant women and risk factors." <i>Chemioterapia</i> 6(2 Suppl): 647-8.	3509517	1105
Egypt	el-Nawawy 1992-1993	rural area	Pregnant women; randomly selected women attending the antenatal clinic at Kalyoubeya General Hospital; (150)	females	150	8.0%	3.66%	12.34%	1.57%	0.3%	el-Nawawy, A., A. T. Soliman, et al. (1996). "Maternal and neonatal prevalence of toxoplasma and cytomegalovirus (CMV) antibodies and hepatitis-B antigens in an Egyptian rural area." <i>J Trop Pediatr</i> 42(3): 154-7.	8699582	1111
Egypt	Agha 1996-1997	Mansoura	Pregnant women presenting to antenatal clinic at Mansoura University Hospital (767)	females	767	2.4%	1.28%	3.42%	2.80%	4.3%	Agha, S., L. S. Sherif, et al. (1998). "Transplacental transmission of hepatitis C virus in HIV-negative mothers." <i>Res Virol</i> 149(4): 229-34.	9783338	1114
Egypt	el-Sayed 1993	Bitter Lakes area of Sinai	Settlers in a newly reclaimed area; a random sample of 506 persons were included; "comparable to the general population" female (244)	females	244	3.3%	1.06%	5.54%	2.39%	1.0%	el-Sayed, H. F., S. M. Abaza, et al. (1997). "The prevalence of hepatitis B and C infections among immigrants to a newly reclaimed area endemic for <i>Schistosoma mansoni</i> in Sinai, Egypt." <i>Acta Trop</i> 68(2): 229-37.	9386797	1113
Egypt	Badawy 1997-1998	Abbassia district, Cairo	Pregnant women Cairo; women admitted to labour ward at Ain Shams University Hospital (352)	females	352	8.2%	5.33%	11.07%	2.13%	0.6%	Badawy, H. A. and E. El-Salahy (2000). "Materno-foetal transmission of hepatitis B infection." <i>J Egypt Public Health Assoc</i> 75(5-6): 357-67.	17219879	1127
Egypt	Ezzat 2005*	Cairo	Urban and rural controls for HCC patients; recruited from the Orthopedic Dept of Cairo University hospital; matched with HCC patients for age, sex, urban-rural residence; participation rate 77%; females (60)	females	60	5.0%	-0.51%	10.51%	1.22%	0.2%	Ezzat, S., M. Abdel-Hamid, et al. (2005). "Associations of pesticides, HCV, HBV, and hepatocellular carcinoma in Egypt." <i>Int J Hyg Environ Health</i> 208(5): 329-39.	16217918	1121
Egypt	Shaamsh 2005*		Women using norgestrel acetate contraceptive implant; women of reproductive age recruited from among attendees of family planning clinic of Assiut University Hospitals; no history of jaundice or liver diseases (187)	females	187	3.4%	0.80%	6.00%	2.24%	0.7%	Shaamsh, A. H., H. T. Salem, et al. (2005). "Effect of uniplant on liver function in Egyptian women with asymptomatic hepatitis B virus infection." <i>Afr J Reprod Health</i> 9(1): 24-31.	16104652	1120
Egypt	Bassily 1976,	village north of Cairo	Healthy controls for schistosomiasis; surveyed by CDC and Egypt Ministry of Health (90)	both	90	4.5%	0.22%	8.78%	1.59%	0.3%	Bassily, S., M. A. Dunn, et al. (1983). "Chronic hepatitis B in patients with schistosomiasis mansoni." <i>J Trop Med Hyg</i> 86(2): 67-71.	6887317	1108
Egypt	Sobeslavsky 1980*	Cairo	Apparently healthy non-institutionalized population of Cairo; individuals of both sexes and different age groups (1,819)	both	1,819	6.2%	5.09%	7.31%	2.79%	4.0%	Sobeslavsky O. (1980) Prevalence of markers of hepatitis B virus infection in various countries: a WHO collaborative study. 58(4):621-8	6969134	1129
Egypt	Hyams 1981	farming village in Nile Delta	General population of Nile Delta; all inhabitants of farming village invited; no selection or response rate described (324)	both	324	3.4%	1.43%	5.37%	2.50%	1.3%	Hyams, K. C., M. A. el Alamy, et al. (1986). "Risk of hepatitis B infection among Egyptians infected with <i>Schistosoma mansoni</i> ." <i>Am J Trop Med Hyg</i> 35(5): 1035-9.	3094391	1102

Egypt	Nasr 1985*	Al-Zahraa hospital	Patients without jaundice or complaints of liver disease; "conducted in Al-Zahraa hospital on patients from various wards attending the haematology laboratory for various investigations" (120)	both	120	9.3%	4.07%	14.45%	1.30%	0.2%	Nasr, E. M., T. M. el Mekkawi, et al. (1985). "Survey of hepatitis B surface antigenemia in Al Zahraa Hospital." J Egypt Public Health Assoc 60(1-2): 81-99.	3836294	1106
Egypt	Hammad 1990*	Alexandria	Healthy children controls for schistosomiasis; no selection described (100)	both	100	2.0%	-0.74%	4.74%	2.18%	0.7%	Hammad, H. A., M. M. el Fattah, et al. (1990). "Study on some hepatic functions and prevalence of hepatitis B surface antigenaemia in Egyptian children with schistosomal hepatic fibrosis." J Trop Pediatr 36(3): 126-7.	2362312	1116
Egypt	Kotkat 1990*	all	Control pts without schistosomiasis; no selection described (184)	both	184	2.2%	0.08%	4.32%	2.44%	1.1%	Kotkat, A., S. el-Masry, et al. (1990). "Chronic hepatitis B antigenaemia in bilharzial patients treated with Praziquantel." J Egypt Public Health Assoc 65(5-6): 543-54.	2134090	1101
Egypt	Darwish 1990*	Cairo	Patients with asthma, diabetes, or neither attending outpatient clinics (83)	both	83	7.2%	1.66%	12.80%	1.20%	0.2%	Darwish, M., S. Shoir, et al. (1990). "Hepatitis B virus infection among immunocompromised patients in Egypt." J Egypt Public Health Assoc 65(3-4): 335-47.	2133906	1100
Egypt	El Sherbini 1991	Tanta (urban) and rural (2 villages)	School children; "Schools were randomly selected that represented different stages and locations of study settings. Letters inviting parents to bring their children to Tanta Fever Hops for viral hepatitis screening were delivered among randomized students." (198)	both	198	1.5%	-0.19%	3.19%	2.60%	1.7%	El Sherbini, A., S. A. Mohsen, et al. (2006). "Hepatitis B virus among schoolchildren in an endemic area in Egypt over a decade: impact of hepatitis B vaccine." Am J Infect Control 34(9): 600-2.	17097457	1123
Egypt	Farghaly 1992	0	Persons without schistosomiasis; no selection in abstract (370)	both	370	6.2%	3.74%	8.66%	2.30%	0.8%	Farghaly, A. G. and R. M. Barakat (1992). "Association between chronic hepatitis B carrier state and schistosomiasis." J Egypt Public Health Assoc 67(5-6): 607-21.	1294685	1099
Egypt	Kamel 1992	Saada, a village in Kafr EL Sheikh (Nile Delta)	General population village in Nile Delta; all inhabitants of village were invited; 68% participated; less among young children (1,259)	both	1,259	2.1%	1.31%	2.89%	2.87%	7.9%	Kamel, M. A., H. Troonen, et al. (1995). "Seroprevalence of hepatitis E virus in the Egyptian Nile Delta." J Med Virol 47(4): 399-403.	8636709	1109
Egypt	Darwish 1993	Kalama, semiurban village of Qalyub district of Qualyab	General population; "61 nonrandomly selected residents of village (age 1-20 yo) and 49 adults (age 20-67 yo) seen at govt health center for minor complaints or accompanying a pt to the clinic (155)	both	155	1.3%	-0.48%	3.08%	2.57%	1.6%	Darwish, M. A., R. Faris, et al. (1996). "High seroprevalence of hepatitis A, B, C, and E viruses in residents in an Egyptian village in The Nile Delta: a pilot study." Am J Trop Med Hyg 54(6): 554-8.	8686770	1110
Egypt	el-Sayed 1994	South Sinai governate	Workers in tourist area; Egyptian Nationals; volunteers recruited from workers at hotels and tourist camps; 50% of hotel workers whose who had direct contact with tourists participated (740)	both	740	1.6%	0.70%	2.50%	2.84%	6.0%	el-Sayed, N. M., P. J. Gomas, et al. (1996). "Seroprevalence survey of Egyptian tourism workers for hepatitis B virus, hepatitis C virus, human immunodeficiency virus, and Treponema pallidum infections: association of hepatitis C virus infections with specific regions of Egypt." Am J Trop Med Hyg 55(2): 179-84.	8780457	1112
Egypt	El Sherbini 1995	Tanta (urban) and rural (2 villages)	School children; "Schools were randomly selected that represented different stages and locations of study settings. Letters inviting parents to bring their children to Tanta Fever Hosp for viral hepatitis screening were delivered among randomized students." (300)	both	300	0.7%	-0.24%	1.64%	2.83%	5.6%	El Sherbini, A., S. A. Mohsen, et al. (2006). "Hepatitis B virus among schoolchildren in an endemic area in Egypt over a decade: impact of hepatitis B vaccine." Am J Infect Control 34(9): 600-2.	17097457	1123
Egypt	Darwish 1995	Kalama, semirural village no of Cairo	General population; mapped and numbered all 2,431 houses, divided are into 12 sectors, selected every 15th house in each sector; invited head of household to participate; 98% agreed ; 88% of age-eligible persons agreed (801)	both	801	10.0%	7.92%	12.08%	2.46%	1.1%	Darwish, M. A., R. Faris, et al. (2001). "Hepatitis c and cirrhotic liver disease in the Nile delta of Egypt: a community-based study." Am J Trop Med Hyg 64(3-4): 147-53.	11442209	1117

Egypt	el-Ghazzawi 1995	Alexandria	Healthy controls for drug addicts; no selection (80)	both	80	5.0%	0.22%	9.78%	1.42%	0.2%	el-Ghazzawi, E., L. Drew, et al. (1995). "Intravenous drug addicts: a high risk group for infection with human immunodeficiency virus, hepatitis viruses, cytomegalo virus and bacterial infections in Alexandria Egypt." J Egypt Public Health Assoc 70(1-2): 127-50.	17214204	1124
Egypt	Reda 1997	Alexandria	Vaccinated children; selected from primary schools; vaccination status from birth certificate (1000)	both	1,000	0.8%	0.25%	1.35%	2.91%	16.2%	Reda, A. A., M. A. Arafa, et al. (2003). "Epidemiologic evaluation of the immunity against hepatitis B in Alexandria, Egypt." Eur J Epidemiol 18(10): 1007-11.	14598932	1119
Egypt	Reda 1997	Alexandria	Unvaccinated children; selected from primary schools; vaccination status from birth certificate (500)	both	500	2.2%	0.91%	3.49%	2.74%	3.0%	Reda, A. A., M. A. Arafa, et al. (2003). "Epidemiologic evaluation of the immunity against hepatitis B in Alexandria, Egypt." Eur J Epidemiol 18(10): 1007-11.	14598932	1119
Egypt	Farghaly 1998*	Alexandria	Dental patients with periodontal disease; matched case control study of patients with and without periodontal disease; patients attending outpatient clinic of Oral Medicine and Peridontology, Alexandria University; (100)	both	100	3.0%	-0.34%	6.34%	1.94%	0.4%	Farghaly AG, Mansour GA, Mahdy NH, Yousri A. (1998). Hepatitis B and C virus infections among patients with gingivitis and adult periodontitis: seroprevalence and public health importance. J Egypt Public Health Assoc 73(5-6):707-35.	17217032	1126
Egypt	Farghaly 1998*	Alexandria	Dental patients without periodontal disease; matched case control study of patients with and without periodontal disease; patients attending outpatient clinic of Oral Medicine and Peridontology, Alexandria University; (100)	both	100	3.0%	-0.34%	6.34%	1.94%	0.4%	Farghaly AG, Mansour GA, Mahdy NH, Yousri A. (1998). Hepatitis B and C virus infections among patients with gingivitis and adult periodontitis: seroprevalence and public health importance. J Egypt Public Health Assoc 73(5-6):707-35.	17217032	1126
Egypt	El Sherbini 2002	Tanta (urban) and rural (2 villages)	School children; matched case control study of patients with and without periodontal disease; patients attending outpatient clinic of Oral Medicine and Peridontology, Alexandria University; (470)	both	470	1.5%	0.40%	2.60%	2.79%	4.1%	El Sherbini, A., S. A. Mohsen, et al. (2006). "Hepatitis B virus among schoolchildren in an endemic area in Egypt over a decade: impact of hepatitis B vaccine." Am J Infect Control 34(9): 600-2.	17097457	1123
Egypt	Strickland 2002*		Healthy controls for patients with liver disease; age and se-matched controls for patients with liver disease at the National Liver Institute; neighbors selected by patient (212)	both	212	2.4%	0.34%	4.46%	2.46%	1.2%	Strickland, G. T., H. Elhefni, et al. (2002). "Role of hepatitis C infection in chronic liver disease in Egypt." Am J Trop Med Hyg 67(4): 436-42.	12452500	1118
Egypt	Sayed 2005*	El Shobak El Sharki, a village south of Cairo	Population in rural industrial area; systematic random sample of 90 houses was selected; 15 houses that met criteria were selected randomly representing five geographical locations of the village (84)	both	84	30.0%	20.20%	39.80%	0.54%	0.1%	Sayed, H. A., A. El Ayyat, et al. (2005). "A cross sectional study of hepatitis B, C, some trace elements, heavy metals, aflatoxin B1 and schistosomiasis in a rural population, Egypt." J Egypt Public Health Assoc 80(3-4): 355-88.	16900614	1122
Egypt	Shalaby 2010*	Gharbia governorate	Clients of barbers, no selection in abstract (308)	both	308	3.9%	1.74%	6.06%	2.42%	1.1%	Shalaby, S., I. A. Kabbash, et al. (2010). "Hepatitis B and C viral infection: prevalence, knowledge, attitude and practice among barbers and clients in Gharbia governorate, Egypt." East Mediterr Health J 16(1): 10-7.	20214151	1098
				total studies	45	22,048		100.00%		100.00%			
				males	11								
				females	11								
				both	23								

* indicates publication year; survey year not reported

Table 75: Summary of Surveys Included in Meta-Analysis: Morocco Northern Africa

Country	Study (survey year*)	Region	Population and sampling method	Sex	Sample (n)	HBsAg			RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
						positive (%)	lower 95% CI	upper 95% CI					
Morocco	Nejmi 1984*		Adult male recruits of the l'Armee Royale Marocaine; no selection described (288)	males	288	6.3%	3.45%	9.05%	20.52%	1.0%	Nejmi, S., P. Coursaget, et al. (1984). "[Prevalence of infections caused by hepatitis A and B viruses in Morocco]." Presse Med 13(29): 1786-7.	6235510	1,130
Morocco	van Steenberghe 1993-1998	immigrants to Netherlands	Pregnant women, Moroccan migrants to Amsterdam; routine antenatal screening (7,337)	females	7,337	1.5%	1.26%	1.82%	30.68%	95.3%	van Steenberghe, J. E., A. Leentvaar-Kuijpers, et al. (2001). "Evaluation of the hepatitis B antenatal screening and neonatal immunization program in Amsterdam, 1993-1998." Vaccine 20(1-2): 7-11.	11567738	693
Morocco	Sobeslavsky 1980*	Rabat	Apparently healthy non-institutionalized population of Rabat; no selection described (333)	both	333	3.3%	1.38%	5.22%	24.93%	2.1%	Sobeslavsky O. (1980) Prevalence of markers of hepatitis B virus infection in various countries: a WHO collaborative study. 58(4):621-8	6969134	371
Morocco	Sebti 1984*		Controls for HCC patients; article in French, no selection in abstract (379)	both	379	4.7%	2.57%	6.83%	23.87%	1.7%	Sebti, M. F. (1984). "[Acute viral hepatitis and hepatitis B virus markers in chronic liver disease and primary cancer of the liver]." IARC Sci Publ(63): 227-36.	6100271	1,133
				total studies	4	8,337				100.00%	100.00%		
				males	1								
				females	1								
				both	2								

* indicates publication year; survey year not reported

Table 76: Summary of Surveys Included in Meta-Analysis: Sudan

Northern Africa

Country	Study (survey year*)	Region	Population and sampling method	Sex	Sample (n)	HBsAg			RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
						positive (%)	lower 95% CI	upper 95% CI					
Sudan	Higashi 1981*	eight regions of the country	Healthy soldiers of the Sudanese armed force; no selection described (719)	males	719	19.0%	16.13%	21.87%	6.47%	9.9%	Higashi, G. I., T. J. Bucci, et al. (1981). "Hepatitis B virus surface antigen and antibody in a selected adult population in the Sudan." <i>Trans R Soc Trop Med Hyg</i> 75(3): 476.	7324122	1134
Sudan	Haditsch 1993	Melut region	Residents of Melut Region; no selection described males (102)	males	102	33.3%	24.15%	42.45%	5.15%	1.0%	Haditsch, M., D. Stunzner, et al. (1988). "[Hepatitis B study in Sudan--the Melut region]." <i>Geogr Med Suppl</i> 1: 155-66.	3169556	1135
Sudan	Hyams 1986	Khalawaat (pop 1 K) and Saleim (pop 3K) in Gezira (north)	General population; subjects included based on time of appearance for exam and blood draw; approx 50% of population sampled; males (434)	males	434	19.0%	15.31%	22.69%	6.35%	6.0%	Hyams, K. C., M. A. al-Arabi, et al. (1989). "Epidemiology of hepatitis B in the Gezira region of Sudan." <i>Am J Trop Med Hyg</i> 40(2): 200-6.	2919728	1136
Sudan	McCarthy 1987	Port Sudan and Suakin	Men not customers of prostitutes; included soldiers attending clinic and truckers; study to target mobile and sexually active adults (120)	males	120	18.0%	11.13%	24.87%	5.71%	1.7%	McCarthy, M. C., J. P. Burans, et al. (1989). "Hepatitis B and HIV in Sudan: a serosurvey for hepatitis B and human immunodeficiency virus antibodies among sexually active heterosexuals." <i>Am J Trop Med Hyg</i> 41(6): 726-31.	2641647	1137
Sudan	McCarthy 1987-1988	Port Sudan, Kassala, Gederef, Omdurman, Juba	Soldiers stationed in five urban locations presenting to outpatient clinics; "few refused to participate"; no prior screening (773)	males	773	25.5%	22.43%	28.57%	6.44%	8.6%	McCarthy, M. C., K. C. Hyams, et al. (1989). "HIV-1 and hepatitis B transmission in Sudan." <i>AIDS</i> 3(11): 725-9.	2515878	1138
Sudan	McCarthy 1989	Juba	Out-patients attending 6 public clinics in Juba city; male (299)	males	299	30.0%	24.81%	35.19%	6.08%	3.0%	McCarthy, M. C., A. el-Tigani, et al. (1994). "Hepatitis B and C in Juba, southern Sudan: results of a serosurvey." <i>Trans R Soc Trop Med Hyg</i> 88(5): 534-6.	7992329	1139
Sudan	Haditsch 1993	Melut region	Residents of Melut Region; no selection described females (62)	females	62	21.0%	10.86%	31.14%	4.90%	0.8%	Haditsch, M., D. Stunzner, et al. (1988). "[Hepatitis B study in Sudan--the Melut region]." <i>Geogr Med Suppl</i> 1: 155-66.	3169556	1135
Sudan	Woodruff 1986*	Atlaara district of Juba	Mothers of infants in a general health study; prospective study of child health continued until age 36 mos (88)	females	88	10.2%	3.88%	16.52%	5.84%	2.0%	Woodruff, A. W., E. A. Adamson, et al. (1986). "Children in Juba, southern Sudan: the second and third years of life." <i>Lancet</i> 2(8507): 615-8.	2875327	1140
Sudan	Hyams 1986	Khalawaat (pop 1 K) and Saleim (pop 3K) in Gezira (north)	General population; subjects included based on time of appearance for exam and blood draw; approx 50% of population sampled; females (851)	females	417	17.9%	14.22%	21.58%	6.35%	6.0%	Hyams, K. C., M. A. al-Arabi, et al. (1989). "Epidemiology of hepatitis B in the Gezira region of Sudan." <i>Am J Trop Med Hyg</i> 40(2): 200-6.	2919728	1136
Sudan	McCarthy 1987	Port Sudan and Suakin	Refugee women not prostitutes presenting to 3 internationally funded outpatient clinics; study to target mobile and sexually active adults (57)	females	57	21.0%	10.43%	31.57%	4.79%	0.7%	McCarthy, M. C., J. P. Burans, et al. (1989). "Hepatitis B and HIV in Sudan: a serosurvey for hepatitis B and human immunodeficiency virus antibodies among sexually active heterosexuals." <i>Am J Trop Med Hyg</i> 41(6): 726-31.	2641647	1137
Sudan	McCarthy 1989	Juba	Out-patients attending 6 public clinics in Juba city; female (352)	females	352	23.0%	18.60%	27.40%	6.23%	4.2%	McCarthy, M. C., A. el-Tigani, et al. (1994). "Hepatitis B and C in Juba, southern Sudan: results of a serosurvey." <i>Trans R Soc Trop Med Hyg</i> 88(5): 534-6.	7992329	1139
Sudan	Elsheikh 2006	Omdurman, largest city	Pregnant women; all women attending first antenatal visit at Umdurum Maternity Hospital were invited (728)	females	728	5.6%	3.93%	7.27%	6.59%	29.2%	Elsheikh, R. M., A. A. Daak, et al. (2007). "Hepatitis B virus and hepatitis C virus in pregnant Sudanese women." <i>Virol J</i> 4: 104.	17958904	1141
Sudan	Omer, 1976	Gezira area	Residents of Shobeli village in Gezira region, typical of those in northern Gezeri; no selection described (75)	both	75	33.0%	22.36%	43.64%	4.77%	0.7%	Omer, A. H., M. L. McLaren, et al. (1981). "A seroepidemiological survey in the Gezira, Sudan, with special reference to arboviruses." <i>J Trop Med Hyg</i> 84(2): 63-6.	7218404	1142

Sudan	Woodruff 1986*	Atlaara district of Juba	Infants in a general health study; prospective study of child health continued until age 36 mos(88)	both	88	26.1%	16.92%	35.28%	5.14%	1.0%	Woodruff, A. W., E. A. Adamson, et al. (1986). "Children in Juba, southern Sudan: the second and third years of life." Lancet 2(8507): 615-8.	2875327	1140
Sudan	Eltoum 1991*	Gezira state of central Sudan	Residents of village in Gezira; randomly selected 25% of residents of village; subjects looked generally healthy (207)	both	207	9.0%	5.10%	12.90%	6.32%	5.4%	Eltoum, I. A., H. W. Ghalib, et al. (1991). "Lack of association between schistosomiasis and hepatitis B virus infection in Gezira-Managil area, Sudan." Trans R Soc Trop Med Hyg 85(1): 81-2.	2068771	1143
Sudan	Omer 1996-1998	North kordofan State (West) and gezra State (central)	General population controls for HCC pts; households selected at random from local registry patients (199)	both	199	7.0%	3.45%	10.55%	6.37%	6.5%	Omer, R. E., P. Van't Veer, et al. (2001). "The role of hepatitis B and hepatitis C viral infections in the incidence of hepatocellular carcinoma in Sudan." Trans R Soc Trop Med Hyg 95(5): 487-91.	11706655	1144
Sudan	Mudawi 2000	Um Zukra village of Gezira state of central Sudan	Residents of Um Zukra village; all villagers appearing in the study site were enrolled (404)	both	404	6.9%	4.43%	9.37%	6.51%	13.3%	Mudawi, H. M., H. M. Smith, et al. (2007). "Prevalence of hepatitis B virus infection in the Gezira state of central Sudan." Saudi J Gastroenterol 13(2): 81-3.	19858618	1145
				total studies	17	5,124		100.00%		100.00%			
				males	6								
				females	6								
				both	5								

* indicates publication year; survey year not reported

Table 77: Summary of Surveys Included in Meta-Analysis: Algeria Northern Africa

Country	Study (survey year*)	Region	Population and sampling method	Sex	Sample (n)	HBsAg			RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
						positive (%)	lower 95% CI	upper 95% CI					
Algeria	Haditsch 1986	Polisario region	Residents of Polisario Region; no selection described males (51)	males	51	11.8%	2.95%	20.65%	22.64%	1.0%	Haditsch, M., D. Stunzner, et al. (1988). "[Hepatitis B studies in the Polisario region (southwestern Algeria)]." Geogr Med Suppl 1: 125-34.	3169553	1096
Algeria	Ayed 1995*		Pregnant women; no selection in abstract (715)	females	715	1.6%	0.68%	2.52%	42.94%	95.4%	Ayed, Z., D. Houinato, et al. (1995). "[Prevalence of serum markers of hepatitis B and C in blood donors and pregnant women in Algeria]." Bull Soc Pathol Exot 88(5): 225-8.	8646011	1097
Algeria	Haditsch 1986	Polisario region	Residents of Polisario Region; no selection described females (126)	females	126	7.9%	3.22%	12.66%	34.41%	3.6%	Haditsch, M., D. Stunzner, et al. (1988). "[Hepatitis B studies in the Polisario region (southwestern Algeria)]." Geogr Med Suppl 1: 125-34.	3169553	1096
					total studies	3				100.00%	100.00%		
					males	1							
					females	2							
					both	0							

* indicates publication year; survey year not reported