

Table 104: Summary of Surveys Included in Meta-Analysis: Italy Southern Europe

Country	Study, survey year(s)*	Region	Population and sampling method	Sex	HBsAg				RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
					Sample positive (n)	(%)	lower CI	upper CI					
Italy	Chiaramonte, 1979-1980	Northeast	Children northeast Italy; admitted for minor surgery or attending clinics for blood tests for conditions other than liver disease male (357)	males	357	5.9%	3.46%	8.34%	0.66%	0.02%	Chiaramonte, M., A. Floreani, et al. (1983). "Hepatitis A and hepatitis B virus infection in children and adolescents in north-east Italy." <i>J Med Virol</i> 12(3): 179-86.	6631426	744
Italy	Chiaramonte, 1979-1980	Northeast	Adults northeast Italy; admitted for minor surgery or attending clinics for blood tests for conditions other than liver disease; males (2,048)	males	1,000	3.0%	1.94%	4.06%	1.09%	0.10%	Chiaramonte, M., A. Floreani, et al. (1983). "Hepatitis A and hepatitis B virus infection in children and adolescents in north-east Italy." <i>J Med Virol</i> 12(3): 179-86.	6631426	744
Italy	Trivello, 1979-1982	Veneto	Population of Padua; without liver disease; selection in Italian; males (1,551)	males	1,551	3.8%	2.85%	4.75%	1.12%	0.12%	Trivello, R., M. Chiaramonte, et al. (1982). "[Viral hepatitis B. Seroepidemiological study in Veneto]." <i>Boll Ist Sieroter Milan</i> 61(2): 136-43.	7126338	748
Italy	Pasquini, 1981	northern	Italian navy recruits from NORTHERN Italy; all recruits between Jan and Jun 1981 accepted for Navy service at La Spezia and Taranto (5,005)	males	1,207	2.4%	1.54%	3.26%	1.15%	0.15%	Pasquini, P., H. A. Kahn, et al. (1983). "Prevalence of hepatitis B markers in Italy." <i>Am J Epidemiol</i> 118(5): 699-709.	6637996	745
Italy	Pasquini, 1981	central	Italian navy recruits from CENTRAL Italy; all recruits between Jan and Jun 1981 accepted for Navy service at La Spezia and Taranto (5,005)	males	1,026	2.2%	1.30%	3.10%	1.14%	0.14%	Pasquini, P., H. A. Kahn, et al. (1983). "Prevalence of hepatitis B markers in Italy." <i>Am J Epidemiol</i> 118(5): 699-709.	6637996	745
Italy	Pasquini, 1981	Southern	Italian navy recruits from SOUTHERN Italy; all recruits between Jan and Jun 1981 accepted for Navy service at La Spezia and Taranto (5,005)	males	1,527	4.3%	3.28%	5.32%	1.10%	0.11%	Pasquini, P., H. A. Kahn, et al. (1983). "Prevalence of hepatitis B markers in Italy." <i>Am J Epidemiol</i> 118(5): 699-709.	6637996	745
Italy	Pasquini, 1981	Islands	Italian navy recruits from ISLANDS Italy; all recruits between Jan and Jun 1981 accepted for Navy service at La Spezia and Taranto (5,005)	males	1,245	4.3%	3.17%	5.43%	1.07%	0.09%	Pasquini, P., H. A. Kahn, et al. (1983). "Prevalence of hepatitis B markers in Italy." <i>Am J Epidemiol</i> 118(5): 699-709.	6637996	745
Italy	Di Ciommo, 1983-1986	all	Adolescent patients of orthopaedic department; review of medical records of 174 patients of orthopaedic department; males (79)	males	79	5.1%	0.23%	9.89%	0.27%	0.00%	Di Ciommo, V., F. Ferrario, et al. (1990). "Prevalence of hepatitis B virus (HBV) in Italian adolescents." <i>Boll Ist Sieroter Milan</i> 69(2): 437-9.	2152302	724
Italy	Gruppo di ricerca "HBV-Sardegna", 1986*	6 regions of Sardinia	General population of 6 regions of Sardinia; population-based survey, random samples; age-standardized rates; males (2,312)	males	2,312	8.7%	7.55%	9.85%	1.06%	0.08%	(1986). "[Epidemiologic study of infection with hepatitis B virus and delta agent in Sardinia. The HBV-Sardinia Research Group]." <i>Recenti Prog Med</i> 77(9): 401-4.	3797790	740
Italy	Gaeta, 1987	Naples	Fathers of pre-school children; children from 6 schools, which covered 86% of the school population; in each school 2-3 classes were randomly selected (206)	males	206	3.9%	1.26%	6.54%	0.61%	0.02%	Gaeta, G. B., M. De Fraia, et al. (1990). "HBV infection among pre-school children in Naples (Italy) and the role of intrafamily contact." <i>Public Health</i> 104(5): 331-4.	2247586	726
Italy	Intonazzo, 1988-1989	Palermo	Apparently healthy population Palermo; mostly health check ups; represented about 2% of Palermo population; stratified by age and sex according to population; male (478)	males	478	2.5%	1.10%	3.90%	0.98%	0.06%	Intonazzo, V., G. La Rosa, et al. (1991). "Epidemiological aspects of hepatitis B in Palermo: changes in HBV spread." <i>Eur J Epidemiol</i> 7(6): 696-8.	1783065	720
Italy	Stroffolini, 1989	Elisia	Healthy teenagers Friuli; recruited from consecutive pts to public health office to ask for certificate of good health for admission to final exam of high school; serology for syphilis mandatory; male (236)	males	236	3.8%	1.36%	6.24%	0.66%	0.02%	Stroffolini, T., G. Rigo, et al. (1990). "Prevalence of hepatitis B markers among teenagers in Friuli." <i>Boll Ist Sieroter Milan</i> 69(2): 455-7.	2152306	725
Italy	Stroffolini, 1989	Sardinia	High school students Sardinia; systematic cluster sample; single class in all public and private high schools; males (656)	males	656	1.7%	0.70%	2.66%	1.11%	0.11%	Stroffolini, T., E. Franco, et al. (1990). "Age-specific prevalence of hepatitis B virus infection among teenagers in Sardinia." <i>Ital J Gastroenterol</i> 22(5): 295-7.	2134328	722

Italy	Albano, 1990	Milan	Clinic patients Milan; attending a private clinical chemistry laboratory for test not linked to hepatic pathology female (430)	males	382	5.7%	3.38%	8.02%	0.69%	0.02%	Albano, A., A. Pianetti, et al. (1992). "Prevalence of anti-HCV in subjects of various age groups." <i>Eur J Epidemiol</i> 8(2): 309-11.	1379536	715
Italy	D'Amelio, 1989-1990	north and central Italy	Air Force recruits from NORTH AND CENTRAL Italy; all recruits aged 18-26 yrs who had been accepted for Air Force were tested (3,392)	males	3,392	0.8%	0.50%	1.10%	1.26%	1.23%	D'Amelio, R., P. M. Matricardi, et al. (1992). "Changing epidemiology of hepatitis B in Italy: public health implications." <i>Am J Epidemiol</i> 135(9): 1012-8.	1595687	717
Italy	D'Amelio, 1989-1990	Southern Italy and islands	Air Force recruits from SOUTHERN Italy and ISLANDS; all recruits aged 18-26 yrs who had been accepted for Air Force were tested (1,586)	males	1,586	2.0%	1.31%	2.69%	1.19%	0.23%	D'Amelio, R., P. M. Matricardi, et al. (1992). "Changing epidemiology of hepatitis B in Italy: public health implications." <i>Am J Epidemiol</i> 135(9): 1012-8.	1595687	717
Italy	D'Amelio, 1990	all	Military at NCO School Campanias; subjects admitted to this military school passed careful physical exam and psychological tests; 74% participated (1,324)	males	1,324	0.7%	0.25%	1.15%	1.24%	0.55%	D'Amelio, R., T. Stroffolini, et al. (1994). "Incidence of hepatitis B virus infection among an Italian military population: evidence of low infection spread." <i>Eur J Epidemiol</i> 10(1): 105-7.	7957780	750
Italy	Fabris, 2002	Vicenza, northern city	General population Vicenza; sera from persons tested for HAV following a sewer main break; statistically representative of city population in terms of age and sex males 452)	males	452	1.1%	0.14%	2.06%	1.12%	0.12%	Fabris, P., V. Baldo, et al. (2008). "Changing epidemiology of HCV and HBV infections in Northern Italy: a survey in the general population." <i>J Clin Gastroenterol</i> 42(5): 527-32.	18277889	774
Italy	Pendino, 2002-2003	Cittanova, a southern Italian town	General population Cittanova; selected from census list using a systematic random 1 in 5 sampling procedure; invite by letter; advertising campaign; males (772)	males	772	1.3%	0.50%	2.10%	1.16%	0.17%	Pendino, G. M., A. Mariano, et al. (2005). "Prevalence and etiology of altered liver tests: a population-based survey in a Mediterranean town." <i>Hepatology</i> 41(5): 1151-9.	15841464	771
Italy	Fusco, 2003	Naples	Adult population Naples; stratified by health district, gender, and age; obtained using list of random numbers from the 370,846 residents 20-84 yo; males (2,014)	males	2,014	2.8%	2.08%	3.52%	1.18%	0.21%	Fusco, M., E. Girardi, et al. (2008). "Epidemiology of viral hepatitis infections in an area of southern Italy with high incidence rates of liver cancer." <i>Eur J Cancer</i> 44(6): 847-53.	18313290	775
Italy	Chiaromonte, 1979-1980	Northeast	Children northeast Italy; admitted for minor surgery or attending clinics for blood tests for conditions other than liver disease; female (301)	females	301	5.6%	3.00%	8.20%	0.62%	0.02%	Chiaromonte, M., A. Floreani, et al. (1983). "Hepatitis A and hepatitis B virus infection in children and adolescents in north-east Italy." <i>J Med Virol</i> 12(3): 179-86.	6631426	744
Italy	Chiaromonte, 1979-1980	Northeast	Adults northeast Italy; admitted for minor surgery or attending clinics for blood tests for conditions other than liver disease; females (2,048)	females	1,048	2.0%	1.15%	2.85%	1.15%	0.15%	Chiaromonte, M., A. Floreani, et al. (1983). "Hepatitis A and hepatitis B virus infection in children and adolescents in north-east Italy." <i>J Med Virol</i> 12(3): 179-86.	6631426	744
Italy	Trivello, 1979-1982	Veneto	Population of Padua; without liver disease; selection in Italian; females (1,609)	females	1,609	2.7%	1.91%	3.49%	1.17%	0.18%	Trivello, R., M. Chiaromonte, et al. (1982). "[Viral hepatitis B. Seroepidemiological study in Veneto]." <i>Boll Ist Sieroter Milan</i> 61(2): 136-43.	7126338	748
Italy	Zanetti, 1979-1981	Milan and Turin	Pregnant women treated at hospitals of Milan and Turin; exclude fo hx hepatitis of abnl LFTs (6,111)	females	6,111	2.6%	2.20%	3.00%	1.25%	0.69%	Zanetti, A. R., P. Ferroni, et al. (1982). "Perinatal transmission of the hepatitis B virus and of the HBV-associated delta agent from mothers to offspring in northern Italy." <i>J Med Virol</i> 9(2): 139-48.	7069408	747
Italy	Foschini, 1981-1983	Brescia	Pregnant women delivering in Dept OBGYN of the Spedali Civili of Brescia (5,327)	females	5,327	5.2%	4.60%	5.80%	1.21%	0.31%	Foschini, M., A. De Toni, et al. (1985). "Prevention of perinatally transmitted hepatitis B virus infection by hepatitis B immunoglobulin immunoprophylaxis: an account of 201 newborn babies of hepatitis Bs antigen carrier mothers." <i>J Pediatr Gastroenterol Nutr</i> 4(4): 523-7.	4032162	741
Italy	Di Ciommo, 1983-1986	all	Adolescent patients of orthopaedic department; review of medical records of 174 patients of orthopaedic department; females (125)	females	125	2.4%	-0.28%	5.08%	0.60%	0.02%	Stroffolini, T., G. Rigo, et al. (1990). "Prevalence of hepatitis B markers among teenagers in Friuli." <i>Boll Ist Sieroter Milan</i> 69(2): 455-7.	2152306	725

Italy	Bonanno, 1984-1989	Trapani	Pregnant women; vaccination campaign against HBV at Division of Neonatal Pathology at the Hospital of Trapan (6,849)	females	6,849	1.1%	0.84%	1.32%	1.27%	1.84%	Bonanno Conti, M. I., A. F. Critti, et al. (1990). "[HBsAG-positive mothers and neonatal immunization: experience at the USL No. 1 in Trapani]." <i>Minerva Pediatr</i> 42(6): 233-5.	2147456	723
Italy	Stroffolini, 1984	north-centre	Pregnant women north-central; national immunization program started 1984-186; 38% of preg women screened during these years (81,619)	females	81,619	2.1%	2.00%	2.20%	1.28%	11.41%	Stroffolini, T., P. Pasquini, et al. (1989). "A nationwide vaccination programme in Italy against hepatitis B virus infection in infants of hepatitis B surface antigen-carrier mothers." <i>Vaccine</i> 7(2): 152-4.	2526420	728
Italy	Stroffolini, 1984	south-islands Italy	Pregnant women south-islands; national immunization program started 1984-186; 38% of preg women screened during these years (37,567)	females	37,567	4.1%	3.90%	4.30%	1.27%	2.75%	Stroffolini, T., P. Pasquini, et al. (1989). "A nationwide vaccination programme in Italy against hepatitis B virus infection in infants of hepatitis B surface antigen-carrier mothers." <i>Vaccine</i> 7(2): 152-4.	2526420	728
Italy	Colombo, 1985-1986	Milano	Adolescent seek abortion; study of STDs at the clinic at University of Milan (370)	females	370	1.4%	0.17%	2.53%	1.05%	0.08%	Colombo, U. F., T. Bregozzo, et al. (1987). "[Screening for sexually transmitted diseases in sexually active adolescents]." <i>Ann Ostet Ginecol Med Perinat</i> 108(4): 245-50.	3442395	738
Italy	Maida, 1985	Northern Sardinia	Pregnant women; survey of the Local Health Unit of Sassari; 67% of all pregnant women screened	females	1,863	4.3%	3.38%	5.22%	1.13%	0.13%	Maida, A., G. Bagella, et al. (1988). "[Prevalence of HBsAG during pregnancy at the local health unit in Sassari and initial results of the anti-HBV prophylactic vaccine in newborn infants]." <i>Nuovi Ann Ig Microbiol</i> 39(2): 115-28.	2977433	736
Italy	Stroffolini, 1985	north-centre	Pregnant women north-centra; national immunization program started 1984-186; 38% of preg women screened during these years (114,323)	females	114,323	2.1%	2.02%	2.18%	1.28%	15.99%	Stroffolini, T., P. Pasquini, et al. (1989). "A nationwide vaccination programme in Italy against hepatitis B virus infection in infants of hepatitis B surface antigen-carrier mothers." <i>Vaccine</i> 7(2): 152-4.	2526420	728
Italy	Stroffolini, 1985	south-islands Italy	Pregnant women south-islands; national immunization program started 1984-186; 38% of preg women screened during these years (70,507)	females	70,507	4.5%	4.35%	4.65%	1.28%	4.72%	Stroffolini, T., P. Pasquini, et al. (1989). "A nationwide vaccination programme in Italy against hepatitis B virus infection in infants of hepatitis B surface antigen-carrier mothers." <i>Vaccine</i> 7(2): 152-4.	2526420	728
Italy	Gruppo di ricerca "HBV-Sardegna"	6 regions of Sardinia	General population of 6 regions of Sardinia; population-based survey, random samples; age-standardized rates; females (2,599)	females	2,599	4.0%	3.25%	4.75%	1.18%	0.19%	(1986). "[Epidemiologic study of infection with hepatitis B virus and delta agent in Sardinia. The HBV-Sardinia Research Group]." <i>Recenti Prog Med</i> 77(9): 401-4.	3797790	740
Italy	Stroffolini, 1986	north-centre	Pregnant women north-central; national immunization program started 1984-186; 38% of preg women screened during these years (135,366)	females	135,366	1.9%	1.83%	1.97%	1.28%	20.88%	Stroffolini, T., P. Pasquini, et al. (1989). "A nationwide vaccination programme in Italy against hepatitis B virus infection in infants of hepatitis B surface antigen-carrier mothers." <i>Vaccine</i> 7(2): 152-4.	2526420	728
Italy	Stroffolini, 1986	south-islands Italy	Pregnant women south-islands; national immunization program started 1984-186; 38% of preg women screened during these years (65,492)	females	65,492	4.2%	4.05%	4.35%	1.28%	4.68%	Stroffolini, T., P. Pasquini, et al. (1989). "A nationwide vaccination programme in Italy against hepatitis B virus infection in infants of hepatitis B surface antigen-carrier mothers." <i>Vaccine</i> 7(2): 152-4.	2526420	728
Italy	Ricci, 1987-1988	Tivoli	Pregnant women three National health Units in Tivoli; sera from outpatient department pts without infectious dx (1,172)	females	1,172	1.7%	0.97%	2.45%	1.18%	0.20%	Ricci, C., C. Alunni, et al. (1989). "[Prevalence of HBV markers in pregnant women at 3 national health units in Tivoli]." <i>Minerva Ginecol</i> 41(6): 299-300.	2788836	732
Italy	Gaeta, 1987	Naples	Mothers of pre-school children; children from 6 schools, which covered 86% of the school population; in each school 2-3 classes were randomly selected (207)	females	207	2.4%	0.32%	4.48%	0.76%	0.03%	Gaeta, G. B., M. De Fraia, et al. (1990). "HBV infection among pre-school children in Naples (Italy) and the role of intrafamily contact." <i>Public Health</i> 104(5): 331-4.	2247586	726

Italy	Intonazzo, 1988-1989	Palermo	Apparently healthy population Palermo; mostly health check ups; represented about 2% of Palermo population; stratified by age and sex according to population: female (523)	females	523	2.7%	1.31%	4.09%	0.98%	0.06%	Intonazzo, V., G. La Rosa, et al. (1991). "Epidemiological aspects of hepatitis B in Palermo: changes in HBV spread." <i>Eur J Epidemiol</i> 7(6): 696-8.	1783065	720
Italy	Stroffolini, 1989	Elisia	Healthy teenagers Friuli; recruited from consecutive pts to public health office to ask for certificate of good health for admission to final exam of high school; serology for syphilis mandatory; females (185)	females	185	0.5%	-0.52%	1.52%	1.10%	0.11%	Stroffolini, T., G. Rigo, et al. (1990). "Prevalence of hepatitis B markers among teenagers in Friuli." <i>Boll Ist Sieroter Milan</i> 69(2): 455-7.	2152306	725
Italy	Stroffolini, 1989	Sardinia	High school students Sardinia; systematic cluster sample; single class in all public and private high schools; females (701)	females	701	0.6%	0.01%	1.13%	1.22%	0.36%	Stroffolini, T., E. Franco, et al. (1990). "Age-specific prevalence of hepatitis B virus infection among teenagers in Sardinia." <i>Ital J Gastroenterol</i> 22(5): 295-7.	2134328	722
Italy	Puro, 1989-1990	Rome, latium region	Pregnant women; attending our centres consecutively for delivery, miscarriage, voluntary interruption of pregnancy or screening for pre- and perinatal prevention of infectious diseases (1,142)	females	1,142	1.6%	0.87%	2.33%	1.18%	0.21%	Puro, V., E. Girardi, et al. (1992). "Prevalence of hepatitis B and C viruses and human immunodeficiency virus infections in women of reproductive age." <i>Br J Obstet Gynaecol</i> 99(7): 598-600.	1525103	716
Italy	Albano, 1990	Milan	Clinic patients Milan; attending a private clinical chemistry laboratory for test not linked to hepatic pathology female (430)	females	430	3.7%	1.92%	5.48%	0.85%	0.03%	Albano, A., A. Pianetti, et al. (1992). "Prevalence of anti-HCV in subjects of various age groups." <i>Eur J Epidemiol</i> 8(2): 309-11.	1379536	715
Italy	Adamo, 1994	Naples	Pregnant women Naples; random sample of women admitted for delivery one private and one public hospital in each of 10 health districts of Naples; 125 women selected from each (1,887)	females	1,887	2.5%	1.80%	3.20%	1.19%	0.22%	Adamo, B., T. Stroffolini, et al. (1998). "Ad hoc survey of hepatitis B vaccination campaign in newborns of HBsAg positive mothers and in 12-year-old subjects in southern Italy." <i>Vaccine</i> 16(8): 775-7.	9627934	759
Italy	Baldo, 1996	Padua (NE Italy)	Pregnant women consecutively seen in Dept of Obstetrics and Gynecology of University of Padua(2,059)	females	2,059	1.0%	0.57%	1.43%	1.24%	0.60%	Baldo, V., A. Floreani, et al. (2000). "Hepatitis C virus, hepatitis B virus and human immunodeficiency virus infection in pregnant women in North-East Italy: a seroepidemiological study." <i>Eur J Epidemiol</i> 16(1): 87-91.	10780348	762
Italy	Bonura, 2001-2003	Palermo	Pregnant women consecutively admitted to Obstetrical Unit of the University Hospital in Palermo (3,318)	females	3,318	1.1%	0.75%	1.45%	1.26%	0.88%	Bonura, F., M. Sorigi, et al. (2005). "Pregnant women as a sentinel population to target and implement hepatitis B virus (HBV) vaccine coverage: a three-year survey in Palermo, Sicily." <i>Vaccine</i> 23(25): 3243-6.	15837228	770
Italy	Masia, 2001	Sardinia	Pregnant women Sardinia; consecutively recruited in public and private hospitals of the Sardinia (1,596)	females	1,596	2.6%	1.82%	3.38%	1.17%	0.18%	Masia, G., L. Minerba, et al. (2003). "[Adherence to the screening program for HBV infection in pregnant women and application of the immunoprophylaxis protocol in babies born to HBV carrier women]." <i>Ig Sanita Pubbl</i> 59(6): 373-82.	15116149	769
Italy	Stroffolini, 2001	six regions: Piemonte, Emilia Romagna (north); Marche (center); Puglia, Campania (south); Sardegna (island)	Pregnant women six regions; consecutively recruited in public and private hospitals during 2 month period; women vaccinated excluded (10,881)	females	10,881	1.7%	1.46%	1.94%	1.27%	1.87%	Stroffolini, T., E. Bianco, et al. (2003). "Factors affecting the compliance of the antenatal hepatitis B screening programme in Italy." <i>Vaccine</i> 21(11-12): 1246-9.	12559805	768
Italy	Fabris, 2002	Vicenzia, northern city	General population Vicenzia; sera from persons tested for HAV following a sewer main break; statistically representative of city population in terms of age and sex; females (513)	females	513	0.9%	0.08%	1.72%	1.16%	0.17%	Fabris, P., V. Baldo, et al. (2008). "Changing epidemiology of HCV and HBV infections in Northern Italy: a survey in the general population." <i>J Clin Gastroenterol</i> 42(5): 527-32.	18277889	774

Italy	Pendino, 2002-2003	Cittanova, a southern Italian town	General population Cittanova; selected from census list using a systematic random 1 in 5 sampling procedure; invite by letter; advertising campaign; females (873)	females	873	0.3%	-0.05%	0.73%	1.25%	0.74%	Pendino, G. M., A. Mariano, et al. (2005). "Prevalence and etiology of altered liver tests: a population-based survey in a Mediterranean town." <i>Hepatology</i> 41(5): 1151-9.	15841464	771
Italy	Fusco, 2003-2006	Naples	General population Naples; stratified by health district, gender, and age; obtained using list of random numbers from the 370,846 residents 20-84 yo; females (2,482)	females	2,482	1.8%	1.28%	2.32%	1.23%	0.40%	Fusco, M., E. Girardi, et al. (2008). "Epidemiology of viral hepatitis infections in an area of southern Italy with high incidence rates of liver cancer." <i>Eur J Cancer</i> 44(6): 847-53.	18313290	775
Italy	Chiaramonte, 1978	Padova	Elderly living in their own homes; controls for elderly living in nursing homes (319)	both	319	1.8%	0.34%	3.26%	0.96%	0.05%	Chiaramonte, M., A. Floreani, et al. (1982). "Hepatitis B virus infection in homes for the aged." <i>J Med Virol</i> 9(4): 247-55.	7108492	776
Italy	Chiaramonte, 1979	0	Healthy school children; recruited from children attending primary and secondary schools using a systematic cluster sampling (1,635)	both	500	5.8%	3.75%	7.85%	0.77%	0.03%	Chiaramonte, M., R. Trivello, et al. (1991). "Changing pattern of hepatitis B infection in children: a comparative seroepidemiological study (1979 vs 1989) in north-east Italy." <i>Ital J Gastroenterol</i> 23(6): 347-50.	1742524	719
Italy	Pasquini, 1979-1980	Rome	Hospitalized children Roma; random sample of sera from children admitted over a 23-month period to a large paediatric hospital in Rome for diagnoses believed unrelated to viral hepatitis (537)	both	537	0.6%	-0.05%	1.25%	1.20%	0.26%	Pasquini, P., H. A. Kahn, et al. (1982). "Prevalence of hepatitis markers in Roman children." <i>Int J Epidemiol</i> 11(3): 268-70.	6290405	742
Italy	D'Argenio, 1980	Naples	Children attending two primary schools in Naples; no selection described; compared to later study in 1988 (393)	both	393	2.1%	0.68%	3.52%	0.97%	0.05%	D'Argenio, P., D. Esposito, et al. (1989). "Decline in the exposure to hepatitis A and B infections in children in Naples, Italy." <i>Public Health</i> 103(5): 385-9.	2798751	733
Italy	Chiaramonte, 1981	Padua	Consecutive patients undergoing endoscopy; consecutive patients tested prior to procedure; Dept Gastroenterology, Pauda Univ (588)	both	588	7.1%	5.06%	9.22%	0.76%	0.03%	Chiaramonte, M., R. Farini, et al. (1983). "Risk of hepatitis B virus infection following upper gastrointestinal endoscopy: a prospective study in an endemic area." <i>Hepatogastroenterology</i> 30(5): 189-91.	6642404	746
Italy	Antoniello, 1982-1984	Naples (southern)	Healthy employees at large electric plant; (786)	both	786	4.0%	2.63%	5.37%	0.99%	0.06%	Antoniello, S., M. Auletta, et al. (1989). "Hepatitis B virus infection among health care workers at an urban teaching hospital in southern Italy: a low occupational hazard?" <i>Eur J Epidemiol</i> 5(2): 228-33.	2767232	731
Italy	Baraldini, 1983*	Bologna	General population Bologna; randomly selected from general population during a mass screening for HBV markers (72)	both	72	2.8%	-1.01%	6.61%	0.39%	0.01%	Baraldini, M., F. Miglio, et al. (1983). "Hepatitis B virus markers in hematologic patients: relation to transfusion treatment and hospitalization." <i>Vox Sang</i> 45(2): 112-20.	6613078	743
Italy	Conte, 1984-1986	Northeast	Conte 1984-1986, persons undergoing check-ups before starting jobs; comparable for age and sex to IDU; no selection described (2,983)	both	2,983	4.2%	3.48%	4.92%	1.18%	0.21%	Conte, D., P. Ferroni, et al. (1987). "HIV and HBV infection in intravenous drug addicts from northeastern Italy." <i>J Med Virol</i> 22(4): 299-306.	3498007	739
Italy	D'Amelio, 1985	all	D'Amelio 1985, Italian Armed Forces; persons on active duty >6 mos in Italian Armed Forces; no selection described (710)	both	710	4.4%	2.89%	5.91%	0.94%	0.05%	D'Amelio, R., P. M. Matricardi, et al. (1989). "Prevalence of HBV markers in the Italian Armed Forces and HBV vaccination." <i>Mil Med</i> 154(12): 589-92.	2532310	729
Italy	Rocchi, 1985	Ferrara, northern Italy	Rocchi 1985, residents of Ferrara; selected the first ten persons arriving each morning at the laboratory (1985)	both	1,000	2.4%	1.45%	3.35%	1.12%	0.12%	Rocchi, L., M. L. Grata, et al. (1988). "[Diffusion of hepatitis B markers in a Ferrara population]." <i>Clin Ter</i> 124(1): 33-7.	2973916	735
Italy	Calia, 1987	Piedmont	Calia 1987, patients of the Lanzo Torinese Hospital, Piedmont; no selection described in abstract(2,242)	both	2,242	0.7%	0.32%	1.00%	1.26%	0.98%	Calia, F., M. Ferlini, et al. (1989). "[Prevalence of HBsAg carriers in a population of Northern Italy in 1987]." <i>Minerva Med</i> 80(10): 1111-3.	2812469	734

Italy	Gaeta, 1987	Naples	Gaeta 1987, grandparents of pre-school children; children from 6 schools, which covered 86% of the school population; in each school 2-3 classes were randomly selected (223)	both	223	6.7%	3.42%	9.98%	0.47%	0.01%	Gaeta, G. B., M. De Fraia, et al. (1990). "HBV infection among pre-school children in Naples (Italy) and the role of intrafamily contact." Public Health 104(5): 331-4.	2247586	726
Italy	Gaeta, 1987	Naples	Gaeta 1987, siblings of pre-school children; children from 6 schools, which covered 86% of the school population; in each school 2-3 classes were randomly selected (256)	both	256	0.4%	-0.37%	1.17%	1.17%	0.18%	Gaeta, G. B., M. De Fraia, et al. (1990). "HBV infection among pre-school children in Naples (Italy) and the role of intrafamily contact." Public Health 104(5): 331-4.	2247586	726
Italy	Stroffolini, 1989	Sardinia	Stroffolini 1989, young children in Sardinia; 6-12 months recruited from pt consecutively admitted to Inst of Neonatology at Universities of Cagliari ad Sassari; older children from systematic cluster sampling at public kindergartens and primary schools (1,826)	both	1,826	0.2%	0.00%	0.40%	1.27%	2.63%	Stroffolini, T., E. Franco, et al. (1989). "Hepatitis B virus infection in children in Sardinia, Italy." Eur J Epidemiol 5(2): 202-6.	2767229	730
Italy	Stroffolini, 1987-1989	all	Stroffolini 1987-1989, apparently healthy young persons; selected by systematic cluster sampling in five different geographical areas (7,405)	both	7,405	0.6%	0.42%	0.78%	1.27%	3.57%	Stroffolini, T., M. Chiaramonte, et al. (1991). "Baseline sero-epidemiology of hepatitis B virus infection in children and teenagers in Italy. A survey before mass hepatitis B vaccination." J Infect 22(2): 191-9.	2026895	721
Italy	D'Argenio, 1988	Naples	D'Argenio 1988, school children attending two primary schools in Naples; no selection described; compared to earlier study in 1980 (484)	both	484	0.8%	0.01%	1.59%	1.16%	0.18%	D'Argenio, P., D. Esposito, et al. (1989). "Decline in the exposure to hepatitis A and B infections in children in Naples, Italy." Public Health 103(5): 385-9.	2798751	733
Italy	Mastroeni, 1988-1989	Rome	Mastroeni 1988-1989, children 1-15 yo in urban area of Roma; sera from outpatient department; pts without infectious dx (769)	both	769	4.8%	3.30%	6.32%	0.94%	0.05%	Mastroeni, I., N. Vescia, et al. (1990). "[Seroepidemiology of hepatitis B in pediatric age. Studies conducted in the city of Rome]." Ann Ig 2(1-2): 15-9.	1711334	718
Italy	Chiaramonte, 1989	0	Chiaramonte 1989, healthy school children; recruited from children attending primary and secondary schools using a systematic cluster sampling (1,635)	both	1,635	0.1%	-0.06%	0.18%	1.28%	7.84%	Chiaramonte, M., R. Trivello, et al. (1991). "Changing pattern of hepatitis B infection in children: a comparative seroepidemiological study (1979 vs 1989) in north-east Italy." Ital J Gastroenterol 23(6): 347-50.	1742524	719
Italy	Brevi, 1989-1990	Northern	Brevi 1989-1990, outpatient clinical controls for lichen planus; dermatological conditons other than lichen planus; controls in a case-control study of risk factors for lichen planus; (1,031)	both	1,031	2.7%	1.71%	3.69%	1.11%	0.11%	Brevi, A., L. Naldi, et al. (1993). "Prevalence and awareness of hepatitis B virus carrier status in Italy." Genitourin Med 69(3): 241.	8335320	752
Italy	Corrao, 1989-1990	Abruzzo	Corrao 1989-1990, hospital controls w/o GI disease; randomly selected from the same 6 hospitals as the cirrhosis patients; ; admitted to general medicine division of six district hospitals (1989-1990)	both	167	0.6%	-0.57%	1.77%	1.05%	0.08%	Corrao, G., F. Carle, et al. (1992). "Interaction between alcohol consumption and positivity for antibodies to hepatitis C virus on the risk of liver cirrhosis: a case-control study. Provincial Group for the Study of Chronic Liver Disease." Eur J Epidemiol 8(5): 634-9.	1330673	714
Italy	Stroffolini, 1989	Apulia (southern)	Stroffolini 1989, school children Apulia; attending kindergarten and the primary schools of the city; recruited using a systematic cluster sampling (1,426)	both	1,426	0.8%	0.34%	1.26%	1.24%	0.52%	Stroffolini, T., D. De Mattia, et al. (1990). "Age-specific prevalence of hepatitis B virus infection among children in an endemic area in southern Italy." Pediatr Infect Dis J 9(6): 407-10.	2367162	727
Italy	Gentile, 1990	Rome and Bologna	Gentile 1990, outpatient controls for cancer patients; recruited at same three hospitals as cancer pts during the study period; first five outpts in Rome and first three in Bolona each day on random day of week (862)	both	862	1.4%	0.62%	2.18%	1.17%	0.18%	Gentile, G., A. Mele, et al. (1996). "Hepatitis B and C viruses, human T-cell lymphotropic virus types I and II, and leukemias: a case-control study. The Italian Leukemia Study Group." Cancer Epidemiol Biomarkers Prev 5(3): 227-30.	8833624	755

Italy	Belletani, 1991-1993	Campogalliano and Cormons (north)	Belletani 1991-1993, general well-to-do population northern Italy Dionysos Study, a prospective cohort study of chronic liver disease; recruited through ads and written invitation to every citizen; 70% participation rate (6,917)	both	6,917	1.3%	1.03%	1.57%	1.27%	1.55%	Belletani, S., C. Tiribelli, et al. (1994). "Prevalence of chronic liver disease in the general population of northern Italy: the Dionysos Study." <i>Hepatology</i> 20(6): 1442-9.	7982643	751
Italy	Carrozzo, 1992-1994	Piedmont	Carrozzo 1992-1994, control patients for lichen planus patients; the first patients seen consecutively during the same period for oral keratoses not lichen planus; all lived in the same area of Italy (70)	both	70	4.3%	-0.46%	9.02%	0.28%	0.00%	Carrozzo, M., S. Gandolfo, et al. (1996). "Hepatitis C virus infection in Italian patients with oral lichen planus: a prospective case-control study." <i>J Oral Pathol Med</i> 25(10): 527-33.	8986963	756
Italy	Corrao, 1993,	Turin, north	Corrao 1993, hospital controls for cirrhosis pts, Turin; admitted to same hospitals for acute disease unrelated to alcohol consumption and to viral infections (250)	both	250	1.2%	-0.15%	2.55%	0.99%	0.06%	Corrao, G., P. Torchio, et al. (1998). "Exploring the combined action of lifetime alcohol intake and chronic hepatotropic virus infections on the risk of symptomatic liver cirrhosis. Collaborative Groups for the Study of Liver Diseases in Italy." <i>Eur J Epidemiol</i> 14(5): 447-56.	9744676	760
Italy	Gessoni, 1993*	Venetian area (Chioggia)	Gessoni 1993*, 14 yo adolescents Venetian area; population-based survey; all 14 yo in the district were called to take part; 97% participated (1,015)	both	1,015	0.5%	0.06%	0.92%	1.24%	0.60%	Gessoni, G. and F. Manoni (1993). "Prevalence of anti-hepatitis C virus antibodies among teenagers in the Venetian area: a seroepidemiological study." <i>Eur J Med</i> 2(2): 79-82.	7504974	749
Italy	Natali, 1993-1996	Parma, north	Natali 1993-1996, outpatients Parma; no selection described (4,277)	both	4,277	2.2%	1.76%	2.64%	1.24%	0.57%	Natali, A., E. Dieci, et al. (1999). "Prevalence of hepatitis C virus antibodies in a clinic-based group of Italians from one geographic area." <i>Clin Microbiol Infect</i> 5(3): 125-129.	11856235	765
Italy	Natali, 1993-1996	Parma, north	Natali 1993-1996, patients admitted to surgical wards; no selection described (1993-1996)	both	6,449	1.4%	1.11%	1.69%	1.26%	1.34%	Natali, A., E. Dieci, et al. (1999). "Prevalence of hepatitis C virus antibodies in a clinic-based group of Italians from one geographic area." <i>Clin Microbiol Infect</i> 5(3): 125-129.	11856235	765
Italy	Natali, 1993-1996	Parma, north	Natali 1993-1996, patients admitted to medical wards; no selection described (1993-1996)	both	4,587	2.8%	2.32%	3.28%	1.24%	0.48%	Natali, A., E. Dieci, et al. (1999). "Prevalence of hepatitis C virus antibodies in a clinic-based group of Italians from one geographic area." <i>Clin Microbiol Infect</i> 5(3): 125-129.	11856235	765
Italy	Puro, 1993*	Rome	Puro 1993*, general surgery patients; no selection in abstract (485)	both	485	2.5%	1.11%	3.89%	0.98%	0.06%	Puro, V., E. Lo Presti, et al. (1993). "[The seroprevalence of HIV, HBV and HCV infections in patients coming to the departments of general surgery of a public hospital (S. Camillo, Rome)]." <i>Minerva Chir</i> 48(7): 349-54.	8392152	753
Italy	Coppola, 1994-1995	Sardinia	Coppola 1994-1995, healthy subjects from Sardinia; 95% of all subjects consecutively attending two Public Health Services in Cagliari (2,950)	both	2,950	4.3%	3.60%	5.08%	1.18%	0.20%	Coppola, R. C., G. Masia, et al. (2000). "Impact of hepatitis C virus infection on healthy subjects on an Italian island." <i>J Viral Hepat</i> 7(2): 130-7.	10760043	761
Italy	Corrao, 1993-1996	throughout Italy	Corrao 1993-1996, hospital controls for cirrhosis pts, throughout Italy; admitted to same hospitals for acute disease unrelated to alcohol consumption and to viral infections (234)	both	234	2.1%	0.26%	3.94%	0.84%	0.03%	Corrao, G., P. Torchio, et al. (1998). "Exploring the combined action of lifetime alcohol intake and chronic hepatotropic virus infections on the risk of symptomatic liver cirrhosis. Collaborative Groups for the Study of Liver Diseases in Italy." <i>Eur J Epidemiol</i> 14(5): 447-56.	9744676	760
Italy	Filippini, 1994-1998	Naples	Filippini 1994-1998, HIV-negative persons (212)	both	212	2.4%	0.34%	4.46%	0.77%	0.03%	Filippini, P., N. Coppola, et al. (2001). "Does HIV infection favor the sexual transmission of hepatitis C?" <i>Sex Transm Dis</i> 28(12): 725-9.	11725228	764

Italy	Gelatti, 1994-2003	Brescia	Gelatti 1994-2003, hospital controls for HCC patients; admitted to Dept Ophthalmology, Dermatology, Urology, General Surgery, Cardiology, Internal Med of same hospital for reasons other than liver diseases (500)	both	500	4.4%	2.60%	6.20%	0.85%	0.03%	Gelatti, U., L. Covolo, et al. (2005). "Coffee consumption reduces the risk of hepatocellular carcinoma independently of its aetiology: a case-control study." J Hepatol 42(4): 528-34.	15868652	772
Italy	Stroffolini, 1984	central Italy	Stroffolini 1984, residents of small town in central Italy; used systematic simple random sample procedure to select from list of residents; 82% participation rate (81,619)	both	681	1.3%	0.45%	2.15%	1.15%	0.15%	Stroffolini, T., M. Menchinelli, et al. (1995). "High prevalence of hepatitis C virus infection in a small central Italian town: lack of evidence of parenteral exposure." Ital J Gastroenterol 27(5): 235-8.	8541572	754
Italy	Donato, 1995-1996	Brescia	Donato 1995-1996, clinic controls for HCC pts; admitted to the Departments of Ophthalmology, Dermatology, Urology, Cardiology, and Internal Medicine (332)	both	332	5.4%	2.97%	7.83%	0.66%	0.02%	Donato, F., A. Tagger, et al. (1997). "Hepatitis B and C virus infection, alcohol drinking, and hepatocellular carcinoma: a case-control study in Italy. Brescia HCC Study." Hepatology 26(3): 579-84.	9303486	757
Italy	Nardone, 1996	all	Nardone 1996, general population; sera collected to be geographically representative of country; from sera left from routine lab testing (3,522)	both	3,522	0.6%	0.34%	0.86%	1.27%	1.70%	Nardone, A., C. G. Anastassopoulou, et al. (2009). "A comparison of hepatitis B seroepidemiology in ten European countries." Epidemiol Infect 137(7): 961-9.	19102797	777
Italy	Stroffolini, 1996	Sersale, a town in southern Italy	Stroffolini 1996, subjects residing in Sersale, a town in Southern Italy; subjects were selected from the census by a systematic 1:4 random sampling procedure (1,003)	both	1,003	0.8%	0.25%	1.35%	1.22%	0.36%	Stroffolini, T., V. Guadagnino, et al. (1997). "A population based survey of hepatitis B virus infection in a southern Italian town." Ital J Gastroenterol Hepatol 29(5): 415-8.	9494849	758
Italy	Raffaele, 1997	central; two municipalities of L'Aquila: Gioia dei Marsi and Lecce dei Marsi	General population; selected by random sampling among 3308 people living in two municipalities of L'Aquila: Gioia dei Marsi and Lecce dei Marsi; invitation letter; 72% participation (344)	both	344	1.2%	0.05%	2.35%	1.06%	0.08%	Raffaele, A., M. Valenti, et al. (2001). "High prevalence of HCV infection among the general population in a rural area of central Italy." Eur J Epidemiol 17(1): 41-6.	11523574	763
Italy	Di Stefano, 1999-2000	small town in Sicily	General population small town Sicily; random 1:4 sampling from the census of the general population was performed; 90% of eligible participated (1999-2000)	both	721	0.5%	-0.01%	1.01%	1.23%	0.42%	Di Stefano, R., T. Stroffolini, et al. (2002). "Endemic hepatitis C virus infection in a Sicilian town: further evidence for iatrogenic transmission." J Med Virol 67(3): 339-44.	12116024	767
Italy	Bongiorno, 2000	Sicily	Dermatologic patients admitted to Dept Dermatology Univeristy of Palermo for variety of chronic and acute dermatological diseases (677)	both	677	3.5%	2.13%	4.91%	0.98%	0.06%	Bongiorno, M. R., G. Pistone, et al. (2002). "Hepatitis B and hepatitis C virus infections in dermatological patients in west Sicily: a seroepidemiological study." J Eur Acad Dermatol Venerol 16(1): 43-6.	11952289	766
Italy	Cozzolongo, 2005-2007	Putignano, Bari, Apulia (southern town)	Residents of Putignano; random 1:5 sampling from the list of records maintained by general practitioners; ; 86% of invited participated (2,195)	both	2,195	0.5%	0.20%	0.80%	1.26%	1.27%	Cozzolongo, R., A. R. Osella, et al. (2009). "Epidemiology of HCV infection in the general population: a survey in a southern Italian town." Am J Gastroenterol 104(11): 2740-6.	19638964	737
Italy	De Corno, 2006*	four towns in Northern Lombardy	Residents of four towns in Northern Lombardy; "simple random sample drawn from the sampling frame" (960)	both	2,829	5.8%	4.94%	6.66%	1.15%	0.15%	Del Corno, G. and E. Civardi (2006). "Intrafamilial transmission of hepatitis B and C viruses in an Italian local health district." Ann Ig 18(4): 287-95.	17063627	773
				total studies	94	647,311			100.00%	100.00%			
				males	20								
				females	31								
				both	43								

* indicates publication year; survey year not reported

Table 105: Summary of Surveys Included in Meta-Analysis: Portugal

Southern Europe

Country	Study, survey year(s)*	Region	Population and sampling method	Sex	HBsAg				RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
					Sample positive (n)	(%)	lower CI	upper CI					
Portugal	Lecour, 1984*		Apparently healthy persons in all provinces; randomly selected; 80 samples per province; male (539)	males	539	2.0%	0.85%	3.23%	12.85%	7.85%	Lecour, H., A. T. Ribeiro, et al. (1984). "Prevalence of viral hepatitis markers in the population of Portugal." Bull World Health Organ 62(5): 743-7.	6334572	818
Portugal	Santos, 1992	Coimbra	Adult population Coimbra; four regions chose with characteristics representative of the whole district; individuals randomly selected from files at Health Center and sent letter; 657/1,150 summoned participated; males (267)	males	267	1.5%	0.04%	2.96%	10.82%	5.26%	Santos, A., A. Carvalho, et al. (2000). "[Prevalence of markers of hepatitis B infection in the adult population of the district of Coimbra]." Acta Med Port 13(4): 167-71.	11155483	815
Portugal	Lecour, 1984*		Apparently healthy persons in all provinces; randomly selected; 80 samples per province females (901)	females	901	0.8%	0.21%	1.35%	18.20%	33.88%	Lecour, H., A. T. Ribeiro, et al. (1984). "Prevalence of viral hepatitis markers in the population of Portugal." Bull World Health Organ 62(5): 743-7.	6334572	818
Portugal	Costa, 1990	Lisbon	Pregnant women Lisbon; Hospital de Santa Maria, Lisbon (1,000)	females	1,000	3.2%	2.11%	4.29%	13.72%	9.40%	Costa, A. P., A. C. Vaz, et al. (1992). "[Determination of HBSAg in pregnancy. Epidemiologic study of 100 cases]." Acta Med Port 5(3): 124-7.	1595378	817
Portugal	Santos, 1992	Coimbra	Adult population Coimbra; four regions chose with characteristics representative of the whole district; individuals randomly selected from files at Health Center and sent letter; 657/1,150 summoned participated females (390)	females	390	0.5%	-0.20%	1.22%	17.10%	22.37%	Santos, A., A. Carvalho, et al. (2000). "[Prevalence of markers of hepatitis B infection in the adult population of the district of Coimbra]." Acta Med Port 13(4): 167-71.	11155483	815
Portugal	Mineiro, 1992	Lisbon	Orthopedic surgery patients; treated surgically in the orthopaedic department of an urban public teaching hospital(288)	both	288	1.4%	0.04%	2.76%	11.56%	6.07%	Mineiro, J., A. Catela, et al. (1997). "[The risk of seroconversion in surgeons of the hepatitis B, hepatitis C and human immunodeficiency viruses (in a specific surgical population)]." Acta Med Port 10(6-7): 455-61.	9341037	816
Portugal	Antunes, 1999	Braga	Adolescents; voluntary partipants from schools; 86% had been vaccinated for HBV (311)	both	311	0.6%	-0.26%	1.46%	15.76%	15.18%	Antunes, H., M. Macedo, et al. (2004). "[Hepatitis B virus vaccination rate with immunization]." Acta Med Port 17(4): 303-8.	15941556	814
				total studies	7	3,696			100.00%	100.00%			
				males	2								
				females	3								
				both	2								

* indicates publication year; survey year not reported

Table 106: Summary of Surveys Included in Meta-Analysis: Greece

Southern Europe

Country	Study, survey year(s)*	Region	Population and sampling method	Sex	HBsAg				RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
					Sample positive (n)	(%)	lower CI	upper CI					
Greece	Papaevangelou, 1971-1973	all areas	Recruits of Greek Air Force; screening program of Greek Air Force recruits established in 1971; recruits tested at time of enlistment; every district represented almost proportionally to its population (17,991)	males	17,991	4.7%	4.39%	5.01%	2.45%	6.63%	Papaevangelou, G., D. Trichopoulos, et al. (1976). "Epidemiologic study of the modes of spread of viral hepatitis in Greece." <i>Trans R Soc Trop Med Hyg</i> 70(3): 213-6.	982515	810
Greece	Papaevangelou, 1973	all areas	Military recruits; random sample of recruits from all geographic areas and population strata (560)	males	560	3.9%	2.30%	5.50%	1.95%	0.25%	Papaevangelou, G. J. and A. Roumeliotou-Karayannis (1988). "Reduction of HBV infections and mass immunisation." <i>Lancet</i> 1(8575-6): 53-4.	2891912	802
Greece	Papaevangelou, 1973-1975	Athens	General population Greater Athens; roughly representative by age and sex; males (1,609)	males	1,609	3.4%	2.51%	4.29%	2.29%	0.81%	Papaevangelou, G., A. Kyriakidou, et al. (1976). "Seroprevalence study of HBV infections in Athens, Greece." <i>J Hyg (Lond)</i> 76(2): 229-34.	57193	809
Greece	Sobeslavsky, 1980*	Athens	Apparently healthy non-institutionalized population of Athens; individuals of both sexes and different age groups; male (1,465)	males	1,465	10.1%	8.56%	11.64%	1.99%	0.27%	Sobeslavsky O. (1980) Prevalence of markers of hepatitis B virus infection in various countries: a WHO collaborative study. <i>58(4):621-8</i>	6969134	866
Greece	Papaevangelou, 1980	all areas	Military recruits; random sample of recruits from all geographic areas and population strata (325)	males	325	3.4%	1.43%	5.37%	1.77%	0.16%	Papaevangelou, G. J. and A. Roumeliotou-Karayannis (1988). "Reduction of HBV infections and mass immunisation." <i>Lancet</i> 1(8575-6): 53-4.	2891912	802
Greece	Papaevangelou, 1986	all areas	Military recruits from all geographic areas and population strata (342)	males	342	0.9%	-0.10%	1.90%	2.24%	0.63%	Papaevangelou, G. J. and A. Roumeliotou-Karayannis (1988). "Reduction of HBV infections and mass immunisation." <i>Lancet</i> 1(8575-6): 53-4.	2891912	802
Greece	Papaevangelou, 1988*	Cyprus	Military recruits Cyprus; no selection described (388)	males	388	0.8%	-0.10%	1.64%	2.30%	0.84%	Papaevangelou, G., A. Roumeliotou, et al. (1988). "Epidemiological characteristics of hepatitis B virus infection in Cyprus." <i>Eur J Epidemiol</i> 4(2): 150-3.	2969824	801
Greece	Lionis, 1993-1994]	rural Crete; Agios Vassilios Province or southern Crete	Clinic attendees in rural Crete; all persons referred to lab for any reason were included; males (94)	males	94	1.1%	-1.01%	3.21%	1.69%	0.14%	Lionis, C., M. Koulentaki, et al. (1997). "Current prevalence of hepatitis A, B and C in a well-defined area in rural Crete, Greece." <i>J Viral Hepat</i> 4(1): 55-61.	9031066	797
Greece	Dalekos, 1995*	Ioannina	Healthy Greek nationals; residents of Ioannina area; controls for refugees from Albania; no selection described males (1,293)	males	1,293	1.3%	0.69%	1.93%	2.38%	1.65%	Dalekos, G. N., E. Zervou, et al. (1995). "Prevalence of viral markers among refugees from southern Albania: increased incidence of infection with hepatitis A, B and D viruses." <i>Eur J Gastroenterol Hepatol</i> 7(6): 553-8.	7552639	799
Greece	Sypas, 1996-1997]	mainly Athens	Employees of 17 companies; random sample of employees; employees contacted and invited to participate; 67% participated; males (788)	males	788	2.7%	1.57%	3.83%	2.19%	0.49%	Sypas, V., E. Hadjipaschali, et al. (2001). "Prevalence, risk factors and evaluation of a screening strategy for chronic hepatitis C and B virus infections in healthy company employees." <i>Eur J Epidemiol</i> 17(8): 721-8.	12086089	788
Greece	Stamouli, 1997-1998	all	Military recruits male; sample should be representative of young male adult population; 33% vaccinated for HBV (1,050)	males	1,050	1.0%	0.36%	1.54%	2.39%	1.84%	Stamouli, M., V. Gizaris, et al. (1999). "Decline of hepatitis B infection in Greece." <i>Eur J Epidemiol</i> 15(5): 447-9.	10442470	793
Greece	Mazokopakis, 1998	0	Greek warship personnel seamen and officers; no selection described (263)	males	139	0.7%	-0.69%	2.13%	2.06%	0.32%	Mazokopakis, E., J. Vlachonikolis, et al. (2000). "Seroprevalence of hepatitis A, B and C markers in Greek warship personnel." <i>Eur J Epidemiol</i> 16(11): 1069-72.	11421478	789

Greece	Mazokopakis, 1998	0	Greek warship personnel seamen and officers; ; no selection described (263)	males	124	1.6%	-0.61%	3.83%	1.64%	0.13%	Mazokopakis, E., J. Vlachonikolis, et al. (2000). "Seroprevalence of hepatitis A, B and C markers in Greek warship personnel." <i>Eur J Epidemiol</i> 16(11): 1069-72.	11421478	789
Greece	German, 2004-2005	Sparta	Military recruits; men transferred to Sparta to receive training in food handling and meal preparation (1,840)	males	1,840	0.3%	0.06%	0.58%	2.46%	9.52%	German, V., G. Giannakos, et al. (2006). "Serologic indices of hepatitis B virus infection in military recruits in Greece (2004-2005)." <i>BMC Infect Dis</i> 6: 163.	17105648	780
Greece	Papaevangelou, 1973-1975	Athens	General population Greater Athens; lifetime residents of Greater Athens area; roughly representative by age and sex; females (1,135)	females	1,135	1.5%	0.79%	2.21%	2.35%	1.27%	Papaevangelou, G., A. Kyriakidou, et al. (1976). "Seropidemiological study of HBV infections in Athens, Greece." <i>J Hyg (Lond)</i> 76(2): 229-34.	57193	809
Greece	Kaklamani, 1978-1979	Greater Athens area	Women of low socio-economic class; no selection described (117)	females	117	4.3%	0.62%	7.98%	1.03%	0.05%	Kaklamani, E., A. Kyriakidou, et al. (1980). "Hepatitis B serology in Greek prostitutes: significance of the different serum markers." <i>J Hyg (Lond)</i> 84(2): 257-61.	7358965	807
Greece	Sobeslavsky, 1980*	Athens	Apparently healthy non-institutionalized population of Athens; individuals of both sexes and different age groups; female (1,155)	females	1,155	8.4%	6.80%	10.00%	1.96%	0.25%	Sobeslavsky O. (1980) Prevalence of markers of hepatitis B virus infection in various countries: a WHO collaborative study. 58(4):621-8	6969134	866
Greece	Papaevangelou, 1987-1992	Athens area	Pregnant women giving birth at Helena Venizelou Maternity Hospital (24,855)	females	24,855	3.0%	2.79%	3.21%	2.47%	14.10%	Papaevangelou, G., G. Farmaki, et al. (1998). "Hepatitis B maternal-fetal transmission in Southern Europe." <i>Intervirology</i> 41(4-5): 197-200.	10213896	794
Greece	Lionis, 1993-1994	rural Crete; Agios Vassilios Province or southern Crete	Clinic attendees in rural Crete; all persons referred to lab for any reason were included; females (163)	females	163	1.2%	-0.47%	2.87%	1.92%	0.23%	Lionis, C., M. Koulentaki, et al. (1997). "Current prevalence of hepatitis A, B and C in a well-defined area in rural Crete, Greece." <i>J Viral Hepat</i> 4(1): 55-61.	9031066	797
Greece	Panagopoulos, 1994-2002	Piraeus	Pregnant women who gave birth in Department of Obstetrics and Gynaecology, Tzaneio General Hospital (5,497)	females	5,497	3.9%	3.36%	4.38%	2.41%	2.44%	Panagopoulos, P., A. Economou, et al. (2004). "Prevalence of hepatitis B and C in the maternity department of a Greek district hospital." <i>J Matern Fetal Neonatal Med</i> 16(2): 106-10.	15512720	785
Greece	Papaevangelou, 1994-1996	Athens area	Pregnant women giving birth at Helena Venizelou Maternity Hospital (5,120)	females	5,120	2.8%	2.35%	3.25%	2.43%	3.10%	Papaevangelou, G., G. Farmaki, et al. (1998). "Hepatitis B maternal-fetal transmission in Southern Europe." <i>Intervirology</i> 41(4-5): 197-200.	10213896	794
Greece	Dalekos, 1995*	Ioannina	Healthy Greek nationals, controls for refugees from Albania; no selection described; females (691)	females	691	1.9%	0.87%	2.89%	2.24%	0.62%	Dalekos, G. N., E. Zervou, et al. (1995). "Prevalence of viral markers among refugees from southern Albania: increased incidence of infection with hepatitis A, B and D viruses." <i>Eur J Gastroenterol Hepatol</i> 7(6): 553-8.	7552639	799
Greece	Mucci, 1995-1998	Athens	Hospital controls for female HCC pts; with minor trauma or surgical conditions who attended one of three hospitals in Athens (62)	females	62	3.2%	-1.17%	7.61%	0.82%	0.03%	Mucci, L. A., H. E. Kuper, et al. (2001). "Age at menarche and age at menopause in relation to hepatocellular carcinoma in women." <i>BJOG</i> 108(3): 291-4.	11281471	790
Greece	Sypas, 1996-1997	mainly Athens	Employees of 17 companies; employees contacted and invited to participate; 67% participated; females (202)	females	202	2.5%	0.35%	4.65%	1.67%	0.14%	Sypas, V., E. Hadjipaschali, et al. (2001). "Prevalence, risk factors and evaluation of a screening strategy for chronic hepatitis C and B virus infections in healthy company employees." <i>Eur J Epidemiol</i> 17(8): 721-8.	12086089	788
Greece	Elefsiniotis, 2003-2004	Athens	Women of reproductive age; prospectively evaluated at Dept OBGYN at Maternal Hospital 'Helena Venizelou'; majority from Greece; 15% from other areas (26,746)	females	26,746	1.5%	1.39%	1.69%	2.47%	29.11%	Elefsiniotis, I. S., I. Glynou, et al. (2007). "Serological and virological profile of chronic HBV infected women at reproductive age in Greece. A two-year single center study." <i>Eur J Obstet Gynecol Reprod Biol</i> 132(2): 200-3.	17030083	781

Greece	Papaevangelou, 2003	all areas	Pregnant women; all women delivering in Greece between 17-30/03/03 were included (5,120)	females	3,760	2.9%	2.35%	3.43%	2.41%	2.21%	Papaevangelou, V., C. Hadjichristodoulou, et al. (2006). "Adherence to the screening program for HBV infection in pregnant women delivering in Greece." <i>BMC Infect Dis</i> 6: 84.	16681862	782
Greece	Elefsiniotis, 2008-2009	Athens	Pregnant women of Greek origin; delivering at Maternal and Perinatal Hospital of Athens (2008-2009)	females	1,333	1.2%	0.62%	1.78%	2.39%	1.86%	Elefsiniotis, I. S., E. Vezali, et al. (2009). "Hepatitis B markers and vaccination-induced protection rate among Albanian pregnant women in Greece." <i>World J Gastroenterol</i> 15(43): 5498-9.	19916183	812
Greece	Elefsiniotis, 2003-2004	Athens	Pregnant Greek women; evaluated at Dept OBGYN at Maternal Hospital 'Helena Venizelou (749)	females	749	4.1%	2.68%	5.52%	2.05%	0.31%	Elefsiniotis, I. S., I. Glynou, et al. (2009). "Surveillance for hepatitis B virus infection in pregnant women in Greece shows high rates of chronic infection among immigrants and low vaccination-induced protection rates: preliminary results of a single center study." <i>Euro Surveill</i> 14(9): 5-7.	19317974	778
Greece	Kaklamani, 1976-1984	Athens	Hospital controls for HCC patients; pts with diagnoses other than malignant neoplasms or liver disease or for accidents or orthopedic disorders (432)	both	432	2.1%	0.75%	3.45%	2.08%	0.35%	Kaklamani, E., D. Trichopoulos, et al. (1991). "Hepatitis B and C viruses and their interaction in the origin of hepatocellular carcinoma." <i>JAMA</i> 265(15): 1974-6.	1848908	800
Greece	Sparos, 1976-1977	Athens	Hospital controls for HCC patients; selected from the same hospitals with diagnosis other than neoplasm or liver disease (160)	both	160	7.5%	3.42%	11.58%	0.91%	0.04%	Sparos, L., Y. Tountas, et al. (1984). "Alpha 1-antitrypsin levels and phenotypes and hepatitis B serology in liver cancer." <i>Br J Cancer</i> 49(5): 567-70.	6326791	811
Greece	Papaevangelou, 1977*	Athens	General population Greater Athens; children selected from Child Welfare Centers, elementary and high schools; adults selected from recruits, volunteer blood donors, and outpatients and patients entering Red Cross Hospital for reasons other than chronic or liver diseases (412)	both	412	4.1%	2.19%	6.01%	1.79%	0.17%	Papaevangelou, G., P. Karaboyia-Karafyllidis, et al. (1977). "Prevalence and epidemiologic significance of antibody to hepatitis B core antigen in Greece." <i>Am J Epidemiol</i> 106(6): 502-6.	930920	808
Greece	Livadas, 1981*	different areas	Apparently healthy adult residents of 13 villages in endemic goiter areas; no hx or physical evidence of hepatitis or liver disease (1,768)	both	1,768	3.2%	2.40%	4.04%	2.31%	0.94%	Livadas, D. P., D. A. Koutras, et al. (1981). "Some epidemiologic studies of HBSAg in Greece." <i>Hepatology</i> 28(2): 77-80.	7216149	806
Greece	Livadas, 1981*	different areas	Apparently healthy adult residents of 4 villages in non-endemic goiter areas; no hx or physical evidence of hepatitis or liver disease (1,130)	both	1,130	6.3%	4.87%	7.69%	2.05%	0.32%	Livadas, D. P., D. A. Koutras, et al. (1981). "Some epidemiologic studies of HBSAg in Greece." <i>Hepatology</i> 28(2): 77-80.	7216149	806
Greece	Papaevangelou, 1982	Athens	Healthy persons Athens; attending voluntarily the routine screening service of the Centre for Prevention of Thalassemia; 320 randomly selected from 930 persons screened (320)	both	320	2.2%	0.59%	3.81%	1.95%	0.25%	Papaevangelou, G., A. Roumeliotou-Karayannis, et al. (1985). "Evaluation of methods of pre-vaccination screening for markers of hepatitis B infection." <i>Eur J Epidemiol</i> 1(2): 100-3.	2946600	805
Greece	Papaioannou, 1986*	Athens	Hospital controls for leprosy patients; pts of low socioeconomic class hospitalized in nearby hospitals for diseases other than leprosy (1,768)	both	382	5.8%	3.46%	8.14%	1.58%	0.12%	Papaioannou, D. J., E. P. Kaklamani, et al. (1986). "Hepatitis B virus (HBV) serum markers in Greek leprosy patients." <i>Int J Lepr Other Mycobact Dis</i> 54(2): 245-51.	3722963	803
Greece	Panis, 1986*	Athens	Clinic attendees Athens; unselected sample of persons attending voluntarily for exam at the Center for Mediterranean Thalassemia (329)	both	329	1.8%	0.38%	3.26%	2.04%	0.30%	Panis, B., A. Roumeliotou-Karayannis, et al. (1986). "Hepatitis B virus infection in dentists and dental students in Greece." <i>Oral Surg Oral Med Oral Pathol</i> 61(4): 343-5.	3458145	804
Greece	Zacharakis, 1992-1994	Thrace, northeastern Greece	Young 5-19 yo population of Thrace; community-based survey; stratified random sampling of all schools in region (8,919)	both	8,919	2.2%	1.85%	2.45%	2.45%	7.00%	Zacharakis, G., S. Kotsiou, et al. (2009). "Changes in the epidemiology of hepatitis B virus infection following the implementation of immunisation programmes in northeastern Greece." <i>Euro Surveill</i> 14(32).	19679032	813

Greece	Zacharakis, 1992-1994	Thrace, northeastern Greece	Adult 20-60 yo residents of Thrace; sample representative of population; community-based survey; volunteers informed via local media (2,564)	both	2,564	13.8%	12.46%	15.14%	2.09%	0.36%	Zacharakis, G., S. Kotsiou, et al. (2009). "Changes in the epidemiology of hepatitis B virus infection following the implementation of immunisation programmes in northeastern Greece." <i>Euro Surveill</i> 14(32).	19679032	813
Greece	Kuper, 1995-1998	Athens	Hospital controls for HCC pts; patients hospitalized for injuries or ENT conditions at three teaching hospitals in Athens (360)	both	360	3.7%	1.75%	5.65%	1.78%	0.17%	Kuper, H. E., A. Tzonou, et al. (2000). "Hepatitis B and C viruses in the etiology of hepatocellular carcinoma; a study in Greece using third-generation assays." <i>Cancer Causes Control</i> 11(2): 171-5.	10710202	792
Greece	Dalekos, 1996*	Ioannina	Hospitalized non-alcoholic ps with no current or past evidence of liver disease, no history of IDU or occupational exposure to blood/products (70)	both	70	1.4%	-1.35%	4.15%	1.39%	0.08%	Dalekos, G. N., E. Zervou, et al. (1996). "Prevalence of hepatitis B and C viruses infection in chronic alcoholics with or without liver disease in Ioannina, Greece: low incidence of HCV infection." <i>Eur J Epidemiol</i> 12(1): 21-5.	8817173	798
Greece	Lionis, 1997*	Agios Vassilios province of Southern Crete	Junior and senior high school children Crete; three junior schools and one senior high school; 88% of all students participated (334)	both	334	0.3%	-0.29%	0.95%	2.38%	1.68%	Lionis, C., E. Frangoulis, et al. (1997). "Prevalence of hepatitis A, B, and C markers in school children of a rural area of Crete, Greece." <i>Eur J Epidemiol</i> 13(4): 417-20.	9258547	796
Greece	Arvanitidou, 1997	Thessaloniki	Sewage workers NOT exposed to sewage, Thessaloniki; voluntary participation; 84% of employees tested (78)	both	78	3.9%	-0.42%	8.12%	0.86%	0.03%	Arvanitidou, M., T. C. Constantinidis, et al. (1998). "Occupational hepatitis B virus infection in sewage workers." <i>Med Lav</i> 89(5): 437-44.	10064948	795
Greece	Gogos, 1997-1998	Achaia region, South-Western Greece	General population Achaia region; community-based; study sample obtained from the list of residents by multi-staged random sampling; selection of towns made on basis of urban/rural and flat/mountainous classification (1,500)	both	1,500	2.1%	1.37%	2.83%	2.35%	1.20%	Gogos, C. A., K. P. Fouka, et al. (2003). "Prevalence of hepatitis B and C virus infection in the general population and selected groups in South-Western Greece." <i>Eur J Epidemiol</i> 18(6): 551-7.	12908721	787
Greece	Zacharakis, 1998-2006	Thrace, northeastern Greece	Young 5-19 yo population of Thrace; community-based survey to investigate changes in HBV epidemiology in the general population and selected groups of immigrants over 10 yrs; stratified random sampling of all schools in region (8,533)	both	8,533	2.9%	2.55%	3.27%	2.44%	4.98%	Zacharakis, G., S. Kotsiou, et al. (2009). "Changes in the epidemiology of hepatitis B virus infection following the implementation of immunisation programmes in northeastern Greece." <i>Euro Surveill</i> 14(32).	19679032	813
Greece	Zacharakis, 1998-2006	Thrace, northeastern Greece	Adult 20-60 yo residents of Thrace; sample representative of population to investigate changes in HBV epidemiology in the general population and selected groups of immigrants over 10 yrs; community-based survey; volunteers informed via local media (5,089)	both	5,089	4.7%	4.12%	5.28%	2.39%	1.87%	Zacharakis, G., S. Kotsiou, et al. (2009). "Changes in the epidemiology of hepatitis B virus infection following the implementation of immunisation programmes in northeastern Greece." <i>Euro Surveill</i> 14(32).	19679032	813
Greece	Zervou, 1999-2000	Ioannina	Healthy volunteers residents of Ioannina; controls for open-heart surgery patients; screened with questionnaire for low risk of transfusion transmitted infections (158)	both	158	3.2%	0.43%	5.89%	1.40%	0.09%	Zervou, E. K., S. P. Georgiadou, et al. (2005). "Markers of hepatitis viruses and human T-lymphotropic virus types I/II in patients who have undergone open-heart surgery: evidence of increased risk for exposure to HBV and HEV." <i>Eur J Intern Med</i> 16(6): 424-8.	16198902	783
Greece	Dounias, 1999-2001,	Keratsini, a suburb of Piraeus port	Solid waste workers not at risk of exposure to waste; municipal employees attending an annual medical exam; 37% of employees included (71)	both	88	4.5%	0.17%	8.83%	0.84%	0.03%	Dounias, G., E. Kypraiou, et al. (2005). "Prevalence of hepatitis B virus markers in municipal solid waste workers in Keratsini (Greece)." <i>Occup Med (Lond)</i> 55(1): 60-3.	15699092	784
Greece	Anastassopoulou, 2000*	Athens	Healthy persons who had participated in an occupational screening for viral hepatitis markers (100)	both	100	2.0%	-0.74%	4.74%	1.39%	0.08%	Anastassopoulou, C. G., D. Paraskevis, et al. (2000). "Molecular epidemiology of GB virus C/hepatitis G virus in Athens, Greece." <i>J Med Virol</i> 61(3): 319-26.	10861639	791

Greece	Arvanitidou, 2002	Thessaloniki	Control group participating in screening program for hyperlipidemia; randomly selected, no further info (86)	both	86	2.3%	-0.86%	5.52%	1.21%	0.06%	Arvanitidou, M., P. Mamassi, et al. (2004). "Epidemiological evidence for vaccinating wastewater treatment plant workers against hepatitis A and hepatitis B virus." <i>Eur J Epidemiol</i> 19(3): 259-62.	15117120	786
Greece	Papaevangelou, 2003-2004	all areas	Children born before implementation of universal infant immunization; serum samples prospectively collected using serum bank residuals (727)	both	727	5.5%	3.84%	7.16%	1.93%	0.23%	Papaevangelou, V., C. Hadjichristodoulou, et al. (2008). "Seroepidemiology of hepatitis B in Greek children 6 years after the implementation of universal vaccination." <i>Infection</i> 36(2): 135-9.	18231718	779
Greece	Papaevangelou, 2003	all areas	Children born after implementation of universal infant immunization; serum samples prospectively collected using serum bank residuals (451)	both	451	2.9%	1.35%	4.45%	1.98%	0.26%	Papaevangelou, V., C. Hadjichristodoulou, et al. (2008). "Seroepidemiology of hepatitis B in Greek children 6 years after the implementation of universal vaccination." <i>Infection</i> 36(2): 135-9.	18231718	779
				total studies	51	133,583				100.00%	100.00%		
				males	14								
				females	14								
				both	23								

* indicates publication year; survey year not reported

Table 107: Summary of Surveys Included in Meta-Analysis: Spain

Southern Europe

Country	Study, survey year(s)*	Region	Population and sampling method	Sex	HBsAg				RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
					Sample positive (n)	(%)	lower CI	upper CI					
Spain	Garcia-Fulgueiras, 1992-1993	Murcia (southeast)	General population Murcia; population-based survey of cardiovascular risk factors using multistage random sampling; males (1,021)	males	1,021	0.5%	0.07%	0.93%	2.34%	1.56%	Garcia-Fulgueiras, A., M. J. Tormo, et al. (1996). "Prevalence of hepatitis B and C markers in the south-east of Spain: an unlinked community-based serosurvey of 2,203 adults." <i>Scand J Infect Dis</i> 28(1): 17-20.	9122626	847
Spain	Taberner, 1992*	Barcelona	Military recruits; representative sample of 839 recruits; males (839)	males	839	0.5%	0.01%	0.95%	2.29%	1.34%	Taberner, J. L., M. Bruguera, et al. (1992). "Seroepidemiological survey of hepatitis B infection in a cohort of military recruits in Barcelona, Spain." <i>Eur J Epidemiol</i> 8(1): 117-9.	1572419	823
Spain	Sola, 1994-1996	Girones, Catalonia	General population Girones; chosen at random out from different Catalan countiesmales (160)	males	160	2.1%	-0.13%	4.29%	0.53%	0.06%	Sola, R., E. Cruz De Castro, et al. (2002). "[Prevalence of hepatitis B and hepatitis C viruses in different counties of Catalonia, Spain: cross-sectional study]." <i>Med Clin (Barc)</i> 119(3): 90-5.	12106536	853
Spain	Sola, 1994-1996	La Selva, Catalonia	General population La Selva, chosen at random out from different Catalan countiesmales (184)	males	184	4.3%	1.40%	7.28%	0.33%	0.03%	Sola, R., E. Cruz De Castro, et al. (2002). "[Prevalence of hepatitis B and hepatitis C viruses in different counties of Catalonia, Spain: cross-sectional study]." <i>Med Clin (Barc)</i> 119(3): 90-5.	12106536	853
Spain	Sola, 1994-1996	Alt Emporda, Catalonia	General population Alt Emporda; chosen at random out from different Catalan countiesmales (134)	males	134	3.7%	0.52%	6.94%	0.28%	0.03%	Sola, R., E. Cruz De Castro, et al. (2002). "[Prevalence of hepatitis B and hepatitis C viruses in different counties of Catalonia, Spain: cross-sectional study]." <i>Med Clin (Barc)</i> 119(3): 90-5.	12106536	853
Spain	Sola, 1994-1996	Garrotxa, Catalonia	General population Garrotxa; chosen at random out from different Catalan counties; males (154)	males	154	3.9%	0.84%	6.94%	0.31%	0.03%	Sola, R., E. Cruz De Castro, et al. (2002). "[Prevalence of hepatitis B and hepatitis C viruses in different counties of Catalonia, Spain: cross-sectional study]." <i>Med Clin (Barc)</i> 119(3): 90-5.	12106536	853
Spain	Dominguez, 1996ng roll males (610)	Catalonia	Adults Catalonia; 97 municipal areas of Catalonia selected at random after being stratified into urban and rural habitat; individuals selected from voting roll males (610)	males	610	2.0%	0.87%	3.07%	1.34%	0.24%	Dominguez, A., M. Bruguera, et al. (2000). "Changes in the seroepidemiology of hepatitis B infection in Catalonia 1989-1996." <i>Vaccine</i> 18(22): 2345-50.	10738090	850
Spain	Pares, 2000*	Barcelona	Healthy male workers Barcelona; workers of 4 companies of the area of Barcelona that collaborated in the project (1,801)	males	1,801	1.6%	1.02%	2.18%	2.11%	0.87%	Pares, A., R. Tresserras, et al. (2000). "[Prevalence and factors associated to the presence of fatty liver in apparently healthy adult men]." <i>Med Clin (Barc)</i> 114(15): 561-5.	10846673	851
Spain	Salleras, 2002*	Catalonia	Adults Catalonia; two-stage random cluster sampling; representative sample of municipalities stratified according to urban and non-urban; male (575)	males	575	0.9%	0.11%	1.63%	1.83%	0.51%	Salleras, L., A. Dominguez, et al. (2007). "Declining prevalence of hepatitis B virus infection in Catalonia (Spain) 12 years after the introduction of universal vaccination." <i>Vaccine</i> 25(52): 8726-31.	18045753	858
Spain	Esteban, 1982		Pregnant women; a study carried out in our hospital before screening of pregnant women for HBsAg was implemented (8,200)	females	8,200	1.2%	1.00%	1.48%	2.58%	5.11%	Esteban, R. (1995). "Risk of hepatitis B in infancy and childhood." <i>Vaccine</i> 13 Suppl 1: S35-6.	7571825	837
Spain	Esteban, 1982-	Barcelona	Pregnant women Barcelona; screened as part of prospective immunoprophylaxis trial (5,560)	females	5,560	1.3%	1.00%	1.60%	2.52%	3.30%	Esteban JI, Esteban R, et al. (1983) Immunoprophylaxis for children born to HBsAg-positive mothers. <i>Lancet</i> 322 (8342): 170-171	NPM	861

Spain	Cruz, 1984-1985	Barcelona	Pregnant women women deliveirng at Hospital Clínico de Barcelona (3,404)	females	3,404	2.8%	2.21%	3.31%	2.16%	0.97%	Cruz, M., A. Dieguez, et al. (1988). "Epidemiologic survey on hepatitis B in Gypsy women." <i>Eur J Epidemiol</i> 4(3): 314-7.	3181381	833
Spain	Fos, 1984	Barcelona	Pregnant women; attendees at Hospital Clinic I Provincial se la Universidad de Barcelona (1,497)	females	1,497	3.2%	2.31%	4.09%	1.63%	0.37%	Fos, E., A. Dieguez, et al. (1986). "[Hepatitis B virus infection in a population of the gypsy race]." <i>Med Clin (Barc)</i> 86(7): 304.	3713349	836
Spain	González, 1984-1986	Palma de Mallorca	Pregnant women; consecutive women served by the Maternity Hospital of Majorca (864)	females	864	0.9%	0.27%	1.53%	2.03%	0.74%	Gonzalez, L., A. Roses, et al. (1988). "The maternal-infant center in the control of hepatitis B." <i>Acta Obstet Gynecol Scand</i> 67(5): 421-7.	2975454	832
Spain	Fos, 1984	Barcelona	Pregnant women; 387 white, 60 Gypsy, 10 Araba, Aisian, or black; Barcelona (457)	females	457	3.2%	1.59%	4.81%	0.85%	0.11%	Fos, E., A. Dieguez, et al. (1986). "[Hepatitis B virus infection in a population of the gypsy race]." <i>Med Clin (Barc)</i> 86(7): 304.	3713349	836
Spain	Delgado Sánchez, 1986-1989	Cartuja	Pregnant women; systemic screening at Cartuja Health Center (454)	females	454	3.1%	1.51%	4.69%	0.87%	0.12%	Delgado Sanchez, A., E. Bailon Munoz, et al. (1990). "[Results and analysis of research on HBsAg in pregnant women at a health center over 4 years]." <i>Aten Primaria</i> 7(8): 556-60.	2104153	821
Spain	Perez-Trallero, 1986-1991	Basque (north)	Pregnant women; 64% of women who gave birth in Guipúzcoa in 1986-1991 (18,196)	females	18,196	0.6%	0.50%	0.72%	2.67%	22.89%	Perez-Trallero, E., G. Cilla, et al. (1992). "Low risk of mother to infant transmission of hepatitis B virus in Guipuzcoa (Basque country, northern Spain)." <i>Eur J Epidemiol</i> 8(6): 878-81.	1294397	819
Spain	Fos, 1987*	Barcelona	Pregnant women white; attendees at Hospital Clinic I Provincial se la Universidad de Barcelona(3,218)	females	3,218	1.6%	1.18%	2.06%	2.33%	1.54%	Fos, E., A. Dieguez, et al. (1987). "[High risk of hepatitis B virus infection in the gypsy population]." <i>Med Clin (Barc)</i> 89(13): 537-9.	3695684	835
Spain	García Vila, 1987-1988	south of the province of Pontevedra	Pregnant women; selection in Spanish (535)	females	535	0.8%	0.02%	1.48%	1.87%	0.55%	Garcia Vila, L. M., C. Fernandez Rodriguez, et al. (1989). "[Utility of systematically determining serum HBsAg in the 3d trimester of pregnancy]." <i>Rev Clin Esp</i> 184(3): 131-4.	2717791	831
Spain	Alvarez Fernandez, 1989*	Alicante	Pregnant women admitted for delivery Alicante (550)	females	550	0.5%	-0.07%	1.15%	2.06%	0.78%	Alvarez Fernandez, M., A. M. Carrion Tomas, et al. (1989). "[The prevalence of the surface antigen of the hepatitis B virus (HBsAg) in pregnant women in Alicante]." <i>Aten Primaria</i> 6(4): 222-4.	2491570	829
Spain	Carbonell, 1989	Baix Lobregat (Barcelona)	Pregnant women Baix Lobregat; selection not described (561)	females	561	1.8%	0.70%	2.90%	1.35%	0.24%	Carbonell, C., M. Catala, et al. (1990). "[Detection of HBsAg in pregnant women]." <i>Aten Primaria</i> 7(6): 467.	2129722	826
Spain	Moreno, 1989-1990	Valencia	Pregnant women; women who gave birth in the Hospital General de Elche between March 1989 and February 1990 (3,193)	females	3,193	0.9%	0.56%	1.22%	2.48%	2.76%	Moreno, R., I. Hernandez, et al. (1992). "[Prevalence of human immunodeficiency virus infection, hepatitis B virus and syphilis in full term pregnancy]." <i>Med Clin (Barc)</i> 98(20): 768-70.	1635393	824
Spain	Panzio, 1991	Navarra	Pregnant women attending public hospital; screening rate 70% (2,499)	females	2,499	0.7%	0.37%	1.03%	2.48%	2.74%	Panizo Delgado, A., V. Martinez de Artola, et al. (1994). "[Seroprevalence of hepatitis B virus markers in pregnant women attending a public hospital in Navarra]." <i>Rev Clin Esp</i> 194(10): 891-6.	7800869	841
Spain	Ribes, 1991-1993	Jaen	Pregnant women; sytemtic random process was used to select women whose pregnancies had been monitored in three health centers (269)	females	275	1.1%	-0.14%	2.32%	1.20%	0.19%	Ribes Bautista, A., J. M. Saniger Herrera, et al. (1996). "[Serologic study of vertically transmitted infections in pregnant women attending 3 health centers in Jaen]." <i>Rev Esp Salud Publica</i> 70(3): 313-8.	9005034	846
Spain	García-Fulgueiras, 1992-1993	Murcia (southeast)	General population Murcia; population-based survey of cardiovascular risk factors using multistage random sampling; females (1,182)	females	1,182	1.3%	0.65%	1.95%	2.01%	0.70%	Garcia-Fulgueiras, A., M. J. Tormo, et al. (1996). "Prevalence of hepatitis B and C markers in the south-east of Spain: an unlinked community-based serosurvey of 2,203 adults." <i>Scand J Infect Dis</i> 28(1): 17-20.	9122626	847

Spain	Menendez, 1994-1995	Gijon	Pregnant women; women from the 5.3 Health District in Asturias (109)	females	109	4.0%	0.32%	7.68%	0.22%	0.02%	Menendez, M. T., M. Cordero, et al. (1996). "[The serum markers in the pregnant population of the basic health area of El Natahoyo (Gijon)]." <i>Aten Primaria</i> 18(1): 17-21.	8768536	843
Spain	Sola, 1994-1996	Girones, Catalonia	General population Girones; chosen at random out from different Catalonian counties; females (172)	females	172	1.2%	-0.44%	2.76%	0.86%	0.11%	Sola, R., E. Cruz De Castro, et al. (2002). "[Prevalence of hepatitis B and hepatitis C viruses in different counties of Catalonia, Spain: cross-sectional study]." <i>Med Clin (Barc)</i> 119(3): 90-5.	12106536	853
Spain	Sola, 1994-1996	La Selva, Catalonia	General population La Selva; chosen at random out from different Catalonian counties; females (179)	females	179	2.8%	0.38%	5.20%	0.46%	0.05%	Sola, R., E. Cruz De Castro, et al. (2002). "[Prevalence of hepatitis B and hepatitis C viruses in different counties of Catalonia, Spain: cross-sectional study]." <i>Med Clin (Barc)</i> 119(3): 90-5.	12106536	853
Spain	Sola, 1994-1996	Alt Emporda, Catalonia	General population Alt Emporda; chosen at random out from different Catalonian counties; females (162)	females	162	3.1%	0.43%	5.75%	0.39%	0.04%	Sola, R., E. Cruz De Castro, et al. (2002). "[Prevalence of hepatitis B and hepatitis C viruses in different counties of Catalonia, Spain: cross-sectional study]." <i>Med Clin (Barc)</i> 119(3): 90-5.	12106536	853
Spain	Sola, 1994-1996	Garrotxa, Catalonia	General population Garrotxa; chosen at random out from different Catalonian counties; females (160)	females	160	1.3%	-0.47%	2.97%	0.78%	0.10%	Sola, R., E. Cruz De Castro, et al. (2002). "[Prevalence of hepatitis B and hepatitis C viruses in different counties of Catalonia, Spain: cross-sectional study]." <i>Med Clin (Barc)</i> 119(3): 90-5.	12106536	853
Spain	Dominguez, 1996	Catalonia	97 municipal areas of Catalonia selected at random after being stratified into urban and rural habitat; individuals selected from voting roll female (648)	females	648	0.2%	-0.15%	0.45%	2.52%	3.30%	Dominguez, A., M. Bruguera, et al. (2000). "Changes in the seroepidemiology of hepatitis B infection in Catalonia 1989-1996." <i>Vaccine</i> 18(22): 2345-50.	10738090	850
Spain	Suarez Gonzalez, 1997-1999	Gijon	Pregnant women Gijon; pregnant women consecutively attended in the Cabueñes Hospital, Gijón (2,043)	females	2,043	0.7%	0.34%	1.06%	2.44%	2.24%	Suarez Gonzalez, A., G. Solis Sanchez, et al. (2004). "[Prevalence of immunity to hepatitis viruses in pregnant women from the health area of Gijon (Spain)]." <i>Gastroenterol Hepatol</i> 27(6): 347-52.	15207132	854
Spain	Gutierrez-Zufiaurre, 2001	Salamanca	Pregnant women samples from women who had their first obstetric visit in 2001 (2,929)	females	2,929	0.4%	0.17%	0.63%	2.59%	5.61%	Gutierrez-Zufiaurre, N., J. Sanchez-Hernandez, et al. (2004). "[Seroprevalence of antibodies against <i>Treponema pallidum</i> , <i>Toxoplasma gondii</i> , rubella virus, hepatitis B and C virus, and HIV in pregnant women]." <i>Enferm Infecc Microbiol Clin</i> 22(9): 512-6.	15511391	855
Spain	Salleras, 2002	Catalonia	Adults Catalonia; two-stage random cluster sampling ; representative sample of municipalities stratified according to urban and non-urban; female (721)	females	721	0.8%	0.17%	1.49%	1.98%	0.67%	Salleras, L., A. Dominguez, et al. (2007). "Declining prevalence of hepatitis B virus infection in Catalonia (Spain) 12 years after the introduction of universal vaccination." <i>Vaccine</i> 25(52): 8726-31.	18045753	858
Spain	Salleras, 2004	Catalonia	Pregnant women; representative sample of pregnant women obtained by random cluster sampling (hospitals with maternity units) (1,534)	females	1,534	0.1%	-0.06%	0.26%	2.65%	11.71%	Salleras, L., A. Dominguez, et al. (2009). "Seroepidemiology of hepatitis B virus infection in pregnant women in Catalonia (Spain)." <i>J Clin Virol</i> 44(4): 329-32.	19230752	860
Spain	Ramos, 2006	Elche	Pregnant women Spanish; controls for foreign women who went to General Hospital Universitario de Elche during 2006 (351)	females	351	0.9%	-0.09%	1.89%	1.49%	0.30%	Ramos, J. M., A. Milla, et al. (2007). "[Seroprevalence of antibodies against <i>Toxoplasma gondii</i> , rubella virus, hepatitis B virus, HIV and <i>Treponema pallidum</i> in foreign pregnant women in Elche (Spain)]." <i>Med Clin (Barc)</i> 129(17): 677-8.	18005637	857
Spain	Mur Sierra, 2007-2008	Barcelona	Pregnant women, Spanish natives; mothers of all newborns attending the Neonatology Unit at Hospital del Mar in Barcelona Jan2007-Dec2008 (1,743)	females	1,743	0.4%	0.10%	0.70%	2.52%	3.34%	Mur Sierra, A., F. Diaz, et al. "[Neonatal repercussions of immigration in Spain: comparison of periods 2003-2004 and 2007-2008.]" <i>Med Clin (Barc)</i> 135(12): 537-42.	20542525	852

Spain	Esteban, 1982	0	Children; a study carried out in our hospital before screening of pregnant women for HBsAg was implemented (202)	both	202	1.0%	-0.37%	2.37%	1.05%	0.16%	Esteban, R. (1995). "Risk of hepatitis B in infancy and childhood." <i>Vaccine</i> 13 Suppl 1: S35-6.	7571825	837
Spain	Salleras, 1985-1985	Catalonia	School children Catalonia; two-stage random cluster sampling in schools (1,017)	both	1,017	0.6%	0.13%	1.07%	2.28%	1.30%	Salleras, L., M. Bruguera, et al. (1992). "Prevalence of hepatitis B markers in the population of Catalonia (Spain). Rationale for universal vaccination of adolescents." <i>Eur J Epidemiol</i> 8(5): 640-4.	1426162	820
Spain	Mayans, 1986-1988	Barcelona and other parts of Catalonia	Hospital controls for HCC patients; selected from list of all patients undergoing blood tests at the same hospital (190)	both	190	2.1%	0.06%	4.14%	0.61%	0.07%	Mayans, M. V., X. Calvet, et al. (1990). "Risk factors for hepatocellular carcinoma in Catalonia, Spain." <i>Int J Cancer</i> 46(3): 378-81.	2168342	827
Spain	Ruiz Moreno, 1988*	Madrid	Children in Madrid; from day nurseries, kindergartens, outpt clinics, schools; participation voluntary; exclude for previous pathology (286)	both	286	1.4%	0.04%	2.76%	1.06%	0.16%	Ruiz Moreno, M., J. Garcia Aguado, et al. (1988). "[Prevalence of hepatitis caused by A, B and D virus in children]." <i>An Esp Pediatr</i> 29(5): 357-62.	3232891	834
Spain	Dominguez, 1996	Catalonia	School children Catalonia; 30 schools selected at random and all children age 6-7; 10-11, and 13-24 included (884)	both	884	0.1%	-0.11%	0.33%	2.60%	6.13%	Dominguez, A., M. Bruguera, et al. (2000). "Changes in the seroepidemiology of hepatitis B infection in Catalonia 1989-1996." <i>Vaccine</i> 18(22): 2345-50.	10738090	850
Spain	Boluda Monzo, 1989*	Barcelona	Diabetics in our service in Hospital general Val d'Hebron (100)	both	100	2.0%	-0.74%	4.74%	0.37%	0.04%	Boluda Monzo, S., J. Mesa Manteca, et al. (1989). "[Surface antigen of hepatitis B in diabetes mellitus]." <i>Med Clin (Barc)</i> 92(10): 397.	2716394	830
Spain	Dal-Ré, 1989	Madrid	Employees of five pharmaceutical companies and their families; voluntary participation (497)	both	497	0.8%	0.02%	1.58%	1.79%	0.48%	Dal-Re, R., A. Gonzalez, et al. (1995). "Compliance with immunization against hepatitis B. A pragmatic study in sexually transmitted disease clinics." <i>Vaccine</i> 13(2): 163-7.	7625110	838
Spain	Salleras, 1989	Catalonia	Adults Catalonia; two-stage random cluster sampling (661)	both	661	1.7%	0.71%	2.69%	1.50%	0.30%	Salleras, L., M. Bruguera, et al. (1992). "Prevalence of hepatitis B markers in the population of Catalonia (Spain). Rationale for universal vaccination of adolescents." <i>Eur J Epidemiol</i> 8(5): 640-4.	1426162	820
Spain	Salleras, 1989	Catalonia	Adults Catalonia; two-stage random cluster sampling in schools (1,678)	both	1,678	1.5%	0.92%	2.08%	2.11%	0.87%	Salleras, L., A. Dominguez, et al. (2007). "Declining prevalence of hepatitis B virus infection in Catalonia (Spain) 12 years after the introduction of universal vaccination." <i>Vaccine</i> 25(52): 8726-31.	18045753	858
Spain	Munoz Calvo, 1990*	Madrid	Healthy children from different schools at the Tetuán district (Madrid) (375)	both	375	1.3%	0.17%	2.49%	1.28%	0.22%	Munoz Calvo, M. T., M. Perdomo Giraldi, et al. (1990). "[Prevalence of hepatitis B virus in a sample of healthy children in Madrid]." <i>An Esp Pediatr</i> 32(3): 237-9.	2346259	828
Spain	Oteo, 1990	Pamplona	Patients visiting emergency department of a General Hospital (633)	both	633	1.3%	0.39%	2.13%	1.66%	0.39%	Oteo, J. A., A. Rosino, et al. (1991). "[Usefulness of warning flags in the handling of biological samples in an emergency room]." <i>Enferm Infecc Microbiol Clin</i> 9(10): 634-6.	1822156	825
Spain	Resina, 1990	Vigo	Out-patient population; retrospective study of all sera from people who went to the lab from out-patient clinics of the Hospital Xeral in Vigo; pregnant women excluded (4,581)	both	4,581	3.2%	2.68%	3.70%	2.22%	1.13%	Resina Robert, A., Z. Fahim Zawati, et al. (1992). "[Prevalence of serological markers of the hepatitis B virus in the out-patient population of the city of Vigo]." <i>Aten Primaria</i> 10(9): 1028-9.	1467420	822
Spain	Gimeno Ortiz, 1993*	Extremadura	Low risk population; "random sampling of age groups taken from a population with no history of hepatitis and low risk groups" (855)	both	855	0.6%	0.07%	1.09%	2.22%	1.13%	Gimeno Ortiz, A., R. Jimenez Romano, et al. (1993). "[Seroepidemiological study and program of vaccination against hepatitis B in school children in Extremadura]." <i>Rev Sanid Hig Publica (Madr)</i> 67(5): 369-76.	7732304	839

Spain	Santiveri, 1993-1995	Barcelona	Candidates for orthopedic surgery; retrospective study of preoperative charts for patients awaiting elective orthopedic surgery (1,090)	both	1,090	1.2%	0.55%	1.83%	2.01%	0.71%	Santiveri, X., E. Matute, et al. (1995). "[Prevalence of viral hepatitis in candidates for orthopedic surgery]." <i>Rev Esp Anestesiol Reanim</i> 42(10): 417-9.	8789525	844
Spain	Virto Ruiz, 1993*	Navarra	General population; individuals randomly chosen from the neighborhood were studied as a control group for minorities(103)	both	103	0.9%	-0.92%	2.72%	0.72%	0.09%	Virto Ruiz, M. T., M. P. Marin Alcala, et al. (1993). "[Endemic hepatitis B in 2 marginal ethnic minorities. Comparative study]." <i>Med Clin (Barc)</i> 101(7): 245-8.	7745997	840
Spain	Sola, 1994-1996	Baix Emporda, Catalonia	General population Baix Emporda; chosen at random out from different Catalanian counties(298)	both	298	0.3%	-0.32%	0.98%	2.00%	0.69%	Sola, R., E. Cruz De Castro, et al. (2002). "[Prevalence of hepatitis B and hepatitis C viruses in different counties of Catalonia, Spain: cross-sectional study]." <i>Med Clin (Barc)</i> 119(3): 90-5.	12106536	853
Spain	Sola, 1994-1996	Flix, Catalonia	General population Flix; chosen at random out from different Catalanian counties (591)	both	591	0.3%	-0.13%	0.79%	2.29%	1.37%	Sola, R., E. Cruz De Castro, et al. (2002). "[Prevalence of hepatitis B and hepatitis C viruses in different counties of Catalonia, Spain: cross-sectional study]." <i>Med Clin (Barc)</i> 119(3): 90-5.	12106536	853
Spain	Cortes, 1995*	Madrid	Adolescents Madrid; 8 schools in Villaverde-Usera (262)	both	262	0.4%	-0.37%	1.13%	1.85%	0.53%	Cortes, J. A., P. Costa, et al. (1995). "[Prevalence of hepatitis B and risk factors as motivation for vaccination campaign among adolescents]." <i>Aten Primaria</i> 16(10): 602-6.	8555391	842
Spain	Suarez, 1995	Gijon	General population 26-65 yrs old Gijon; representative (according to the census) transversal randomized sample (340)	both	340	1.2%	0.03%	2.33%	1.29%	0.22%	Suarez, A., G. Viejo, et al. (1997). "[The prevalence of hepatitis A, B and C viral markers in the population of Gijon between 26 and 65 years old]." <i>Gastroenterol Hepatol</i> 20(7): 347-52.	9377232	848
Spain	Suarez, 1996*	Gijon	General population 6-25 yrs old Gijon; representative (according to the census) transversal randomized sample (453)	both	453	0.4%	-0.17%	1.05%	2.06%	0.79%	Suarez, A., C. A. Navascues, et al. (1996). "[The prevalence of markers for the hepatitis A and B viruses in the population of Gijon between 6 and 25 years old]." <i>Med Clin (Barc)</i> 106(13): 491-4.	8992130	845
Spain	Ortea Tugnoli, 1998*	Gijon	Workers employees of the Company Municipal de Limpieza de Gijon; part of HBV vaccination campaign; 19 managerial; 50 cleaning of schools; 86 street sweeping; 42 gardening; 39 signaling and motor pool (236)	both	236	1.3%	-0.15%	2.75%	0.99%	0.14%	Ortea Tugnoli, B., G. Viejo de la Guerra, et al. (1998). "[Markers of hepatitis A and B virus infection in workers of a municipal sanitary enterprise]." <i>Med Clin (Barc)</i> 110(17): 677.	9656214	849
Spain	Solves, 1999-2007	Valencia	Living tissue donors; retrospectively analyzed results of HBsAg testing of all tissue donors; 6237 living donors (including 2880 cord blood) (6237)	both	6,237	0.7%	0.48%	0.88%	2.61%	7.04%	Solves, P., V. Mirabet, et al. (2008). "Donor screening for hepatitis B virus infection in a cell and tissue bank." <i>Transpl Infect Dis</i> 10(6): 391-5.	18665905	859
Spain	Villalba, 2002-2006	Andalusia	Tissue donors; 644 living donors and 267 deceased multiorgan donors; (911)	both	911	0.9%	0.29%	1.51%	2.06%	0.78%	Villalba, R., G. Fomes, et al. (2007). "Evaluation of tissue discards after implementation of anti-HBc test in a tissue bank in Spain." <i>Cell Tissue Bank</i> 8(4): 303-5.	17447156	856
				total studies	60	89,354			100.00%	100.00%			
				males	9								
				females	28								
				both	23								

* indicates publication year; survey year not reported