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Tickborne encephalitis in Europe: basic information, country by country

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On 24 June, *Eurosurveillance Weekly* published overviews of the tickborne encephalitis (TBE) situation in the Czech Republic, Lithuania and Latvia [1-3]. This week, we publish brief information from other countries in Europe where TBE infections may be acquired. Websites of national institutes (above) have more data, and more information on TBE in Europe can be found at http://www.tbe-info.com, the website of the International Scientific Working Group On Tick-Borne-Encephalitis (ISW-TBE).

Table showing number of cases reported in most recent year, and incidence, where available. Data provided by listed contributors, and from references 1-3.

Country	Most recent year	Number of cases reported	Incidence / 100 000
Austria	2003	87	1.09
Czech Republic	2003	-	5.9
Denmark	-	-	-
Finland	2001	>40	-
Germany	2003	276	-
Hungary	2001-2003	63 (annual average)	-
Latvia	2003	-	15.7
Lithuania	2003	763	22
Norway	2003	1	-
Poland	2003	339	0.89
Slovakia	2003	74	1.38
Slovenia	2003	272	13.6
Finland	2003	107	-

Austria
Meningoencephalitis is a notifiable disease in Austria. There were 87 cases of tickborne encephalitis (TBE) in Austria in 2003: an incidence rate of 1.09 per 100 000. In 2002, there were 51 cases and 2002, 60 cases.

Regions most affected by TBE are in the south: Steiermark (Styria) and Kärnten (Carinthia).
All of these cases were in unvaccinated people or people who had not had the vaccine according to the recommended schedule. In the past five years, vaccine coverage of the entire population has risen from 79% to 87%. The coverage rate for very young children and people over 65 is under 70%. This lower coverage in older people represents the biggest challenge for prevention of TBE in Austria.

Vaccination is not free, but health insurance companies pay part of the cost (this varies according to region).

Denmark
TBE is not a notifiable disease in Denmark. The only area where there is a risk of acquiring TBE is the island of Bornholm.

People who live on Bornholm permanently or have a summer holiday home there are advised to get vaccinated if they do activities which involve leaving the designated paths in woods or scrubland. Tourists and school parties are not considered to require vaccination unless participating in activities that take place in a fixed location in the woods.

Finland
TBE is a notifiable disease in Finland. The absolute number of TBE cases has risen from an annual 10-20 in the 1990s to over 40 cases in 2001 (population 5.2 million). The incidence of identified cases is highest (i.e. over 100/100 000/year) on the island of Åland, which is situated between Finland and Sweden. According to antibody analyses, approximately every one in five Ålanders is infected during his or her lifetime. TBE infections are rare in children and adolescents. In addition to the Ålanders, approximately 10 Swedes annually fall ill with TBE after visiting Åland. Foci of TBE also exist elsewhere in Finland, for example in the Turku archipelago, and in some areas of southeast Finland, around Kokkola and on Isosaari, which is close to Helsinki.

The National Public Health Institute (KTL) recommends vaccination against TBE for all those over 7 years of age who reside or spend long periods in the known endemic areas. The vaccine is not, however, currently part of the Finnish national immunisation programme. A TBE vaccination subcommittee of KTL has recently completed an analysis of the TBE disease burden on Åland and the impact of the different vaccination strategies, including cost-effectiveness, and whether the vaccine should be given free of charge.

Germany
TBE is notifiable in Germany. In 2003, 276 cases of TBE were notified (2002: 239; 2001: 256). These occurred mainly in southern Germany in the federal states of Baden-Württemberg (42%) and Bavaria (38%).

Counties in Germany are classified according to three levels of TBE risk. A county is classified as a ‘high risk area’ if at least 25 TBE cases occurred within a 5 year period between 1984-2003 and as a ‘risk area’ if at least 2 cases occurred within a single year or at least 5 cases occurred within a 5 year period between 1984-2003. Areas are declared to be TBE endemic areas based on elevated TBE seroprevalence in studies in non-immunised forestry workers. In 2003, three new districts were identified as risk areas. Seventy four of Germany's 440 counties are currently classified as TBE risk areas and 9 as high risk areas. They are located in Baden-Württemberg (30), Bavaria (45), Hesse (4), Thuringia (3) and Rhineland-Palatinate. A further 5 counties in Baden-Württemberg are classified as endemic for TBE based on seroprevalence studies.
(see map: http://www.rki.de/INFEKT/EPIBULL/2004/FSME21_04.PDF).

The Standing Committee on Vaccination (STIKO) recommends TBE vaccination for persons at risk of tick exposure in high risk and risk areas.

Hungary
TBE has been mandatory notifiable in Hungary since 1977, and data are collected by the “Béla Johan” National Center for Epidemiology (formerly the National Institute of Public Health). Samples from patients with aseptic meningitis and encephalitis have been regularly tested for TBE at the centre’s division of virology since 1958, which is the only diagnostic laboratory for TBE in Hungary. The average yearly incidence between 1977 and 1996 was 2.5 per 100 000 population (range 1.3 to 3.8), with the highest incidences between 1981 and 1990. From 1997 to 2000, a significant decrease in the number of the registered/diagnosed TBE cases were observed, with incidence of 0.5 per 100 000 in 2000. Since 2001, the incidence has been slowly increasing again. In the last 3 years the yearly average of the reported cases was 63.

The high risk areas are the counties of Zala, Somogy, Vas (western Hungary) and Nógrád (northern Hungary), which are in the areas of the known natural foci (Central and Western Transdanubia, and the northern central mountain chain).

Vaccination for the highest risk groups (forestry and agriculture workers, etc.) was introduced in 1977. Vaccination is carried out by campaigns that are organised and controlled by the state. Since 1991, TBE vaccine has been available for all, through purchase at pharmacies, and employers must ensure the vaccination of employees. No detailed data on TBE vaccination coverage is currently available, although a rough estimate is that 5% of the population has been vaccinated, mostly people living in high risk areas.

Norway
All cases of encephalitis are notifiable in Norway, including TBE. In 2003, one case of TBE was reported. Only eight cases of TBE acquired in Norway have so far ever been reported. The first case was identified in 1998. All cases were acquired within a limited area on the southern coast, and four were diagnosed in the municipality of Tromøy. A study done among regular patients attending a health center in Tromøy showed a seroprevalence of 2.4% with TBEV antibodies [4]. This area probably represents a small focus of the disease in Norway. In addition, two cases of imported TBE have been reported since 1994. These were acquired in endemic areas in Sweden and Austria.

Due to low incidence in Norway, vaccination is currently not recommended as protection against transmission within the country. It is only recommended for travellers planning outdoor activities in forested endemic areas abroad.

in forested endemic areas abroad.

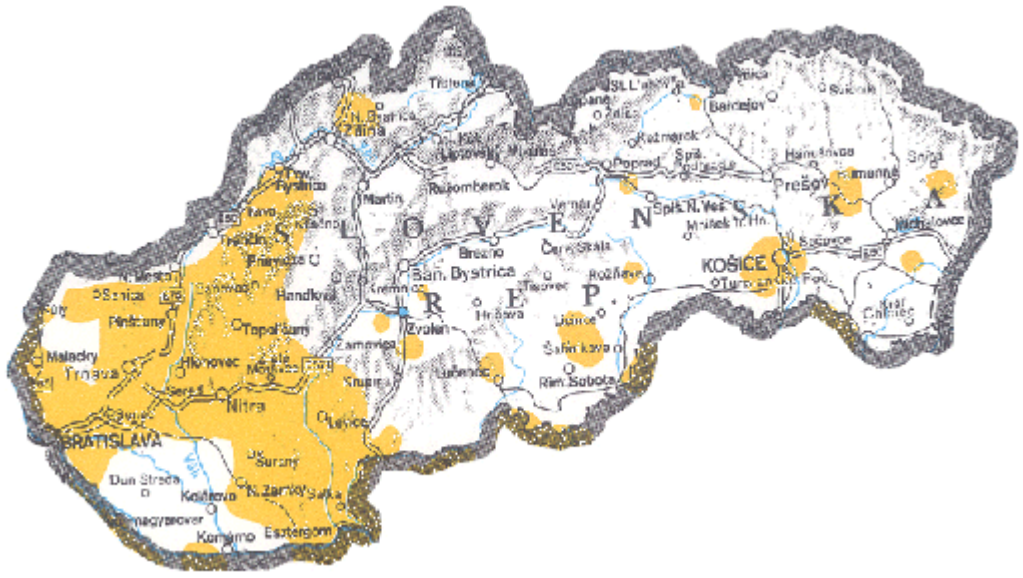
Poland
TBE is a notifiable disease in Poland, where it has been endemic for more than 30 years. Since 1993, the number of reported cases at country level ranged from 100 to 350 cases per year. In 2002 the number of reported cases was 126 (incidence 0.33 per 100 000), and in 2003 the number of reported cases was 339 (incidence 0.89 per 100 000). Eighty percent of cases occurred in two northeastern provinces of Poland adjacent to Lithuania and Belarus. A second focus of the disease was in the southwestern part of Poland, in districts adjacent to the Czech Republic.

Vaccination using a three-dose schedule is recommended for high-risk groups living in endemic areas and tourists visiting endemic places. Certain risk groups (foresters, soldiers, timber industry employees) are immunised in regular campaigns paid for by their employers.

Slovakia
TBE is a compulsory notifiable disease in Slovakia. The number of reported cases at country level has ranged from 54 to 101 cases per year in the last ten years. In 2002 the number of reported cases was 62 (incidence 1.15 per 100 000), and in 2003 the number of reported cases was 74 (incidence 1.38 per 100 000). Some of reported the cases were caused by drinking raw goat and sheep milk (home production).

Longitudinal monitoring of TBE virus in ticks and vertebrate hosts (including humans) between 1964-1997 resulted in identification of 37 natural endemic foci (see Figure).

Figure 1. Natural endemic foci of TBE virus in Slovakia.



Vaccination using a three dose schedule is recommended for high risk groups living or working in endemic areas, and for tourists visiting endemic areas. The cost of vaccination for those who work in TBE endemic foci is reimbursed by health insurance.

Slovenia
TBE and Lyme borreliosis are endemic in the northern part of Slovenia, and are notifiable diseases. In 2003, 272 cases of TBE were reported, an incidence of 13.6 / 100 000. Similar numbers of cases were reported in 2002 (262 cases) and 2001 (260 cases).

Efforts are being directed towards early diagnostics, antibiotic treatment and awareness campaigns. A vaccination campaign coordinated by National Institute of Public Health is in place throughout the country, from late autumn to spring annually. TBE immunization is recommended by ministry of health and offered by general practitioners and epidemiologists to anybody who spends time outdoor in the endemic areas, including short term visitors.
Vaccination is obligatory for those carrying out military service, and other professionally exposed persons, including forestry and agriculture students. The cost of vaccination is covered by health insurance for students only. Coverage in those professionally exposed and students is very high (98%). Coverage in the general population is unfortunately below 10%.

Sweden
TBE infection is included in voluntary laboratory reporting for infectious disease surveillance in Sweden. To gather more information about the spread of TBE in the country a questionnaire is sent from the laboratories to the physicians who are requested to identify probable place of infection and known tick bite. By the late 1980s and early 1990s, around 50 to 70 TBE cases were being reported annually. The majority of the patients were diagnosed through hospital care. Since the end of the 1990s, around 100 cases have been reported annually, of which approximately 20% were treated through primary health care. During the same period the disease attracted increased public attention. It is therefore difficult to say whether there has been a real increase in the number of cases or increased diagnosis due to a higher clinical awareness or that samples have been taken to a greater extent. Apart from the fact that more cases have been observed by primary health care, several cases were reported in recent years from areas where previously only occasional cases had been detected.

In 2003, 107 cases of TBE were notified (in 75 men and 32 women). Most of the infectious were acquired in the counties of Stockholm (56%), Södermanland (15%) and Uppsala (6%). In the county of Västra Götaland (to the south of Lake Vänern) 5 to 10 cases are notified annually. Sporadic cases occur in the rest of Sweden every year.

Vaccination is recommended for high risk groups residing in endemic areas and for people who live in endemic areas during the summer.

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