

**RABIES PROPHYLAXIS**

In 2006, a total of 83 persons were given prophylactic treatment for rabies after animal bites, [Table 1](#).

**Table 1. Number of persons given post-exposure prophylaxis after possible exposure to rabies, 2006**

Species	Denmark	Abroad
Dog	0	40
Bat	5	2
Monkey	1	14
Cat	3	9
Other		9
Total	9	74

Nine persons were possibly exposed in Denmark, 15 in the rest of Europe, 40 in Asia, 13 in Africa and six in South America. A total of 43 persons were treated with human rabies immunoglobulin (HRIG) in addition to vaccination.

Five persons were given prophylactic treatment after bat bites in Denmark, [Table 1](#).

One bat was tested and found positive for rabies. Furthermore, three persons were treated after cat bites, and one after a marmoset bite. All cats tested negative for rabies. The marmoset was not tested. Thailand was the primary country for possible exposure. In a total of 32 cases, treatment was initiated, including 17 cases after dog bites, 10 after monkey bites and five after cat bites.

**Commentary**

The majority of the possibly exposed persons (89%), who had received prophylactic treatment, had been exposed abroad. In connection with dog bites abroad, it is essential to seek medical attention to ensure that treatment is initiated without delay, when needed. In cases where prophylactic rabies treatment has not been initiated in connection with the bite, treatment may be initiated after returning to Denmark, EPI-NEWS 13/04.

(A.H. Christiansen, S. Cowan, Department of Epidemiology)

**RABIES IN ANIMALS**

Classical sylvatic rabies virus is not found in Denmark. It is, however, endemic to Greenland where polar foxes regularly spread the infection to sledge dogs and other mammals. 2006 saw the first ever Greenland case of rabies in a cat, [Table 2](#). As an increasing number of cats are being imported to Greenland, it becomes increasingly important to comply with the statutory requirement to vaccinate cats. European Bat Lyssa Virus (EBLV)

**RABIES 2006**

**Table 2. Rabies tests performed on animals in Denmark, 2006**

Species	Denmark No./pos.	Greenland No./pos.
Fox	8/0	19/17
Dog		5/2
Cat	3/0	2/1
Bat	49/10*	
Total	60/10*	26/20

\*European Bat Lyssa Virus (EBLV)

was first detected in Denmark in 1985 and has subsequently been found almost annually. The number of cases has varied substantially between years and the number of animals sent for testing has also varied. In connection with a case in 2006 where a child was bitten, EBLV was found in four of nine bats tested from a single colony. This indicates that accumulated cases of the infection may be found in bat colonies.

It is well-known that EBLV may be transmitted experimentally to a number of animal species with ensuing low mortality rates. However, screening studies of a number of animal species, including cats and foxes show that natural spreading of the disease is extremely uncommon. As from 1977, a total of four fatal human cases of EBLV infection have been reported in Europe, all following massive bat exposure.

(L.S. Christensen, K.J. Sørensen, Danish Institute for Food and Veterinary Research, Lindholm)

**WHOOPING COUGH 2006**

2006 saw a total of 55 notified cases of whooping cough in children < 2 years, 29 boys and 26 girls. Reminders were sent out for 38% of the notifications. The annual incidence was 42 per 10<sup>5</sup>. Incidence by county is shown in [Table 3](#).

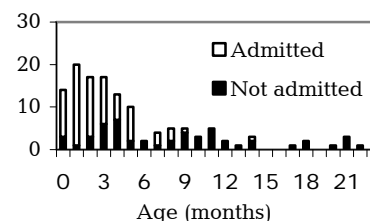
The age distribution was as follows; 21 children (38%) were ≤ 2 months, 15 (27%) were 3-4 months, 11 (20%) were 5-11 months and eight (15%) were 12-24 months.

The majority (85%) of the notified cases were detected by PCR alone. The source of infection was unknown for slightly more than half (55%) of the notified cases among children. Among known infection sources, siblings comprised 60%, other family members 12%, other known persons 16% and whooping cough in the environment 12%. The proportion of children < 6 months admitted to hospital with whooping cough was 69% in addition to which only two children, aged 7 and 8 months, respectively, were admitted, [Figure 1](#).

**Table 3. Notified whooping cough cases and incidence per 10<sup>5</sup> in children < 2 years, by county, 2006**

County	No.	Incidence per 10 <sup>5</sup>
Cph. Municipal.	7	50
Frb. Municipal	0	-
Copenhagen	5	34
Frederiksborg	7	77
Roskilde	0	-
West Zealand	2	28
Storstroem	4	76
Bornholm	0	-
Funen	2	19
South Jutland	3	54
Ribe	0	-
Vejle	4	45
Ringkoebing	3	44
Aarhus	9	54
Viborg	3	55
North Jutland	6	53
Total	55	42

**Figure 1. Notified whooping cough cases in children < 2 years, by age admission status and age, 2006**



Among 55 notified children, 29 (53%) were unvaccinated, while seven (13%) had received three whooping cough vaccinations.

**Commentary**

In 2006, the whooping incidence in children < 2 years reached the lowest levels observed since 1995 when whooping cough was made notifiable in children < 2 years. Whooping cough normally occurs cyclically with epidemics every 3-5 years. The latest whooping cough epidemic occurred in 2002. The currently observed low incidence may be a reflection of this variation. However, the recent introduction of a 5-year whooping cough booster may also be a contributing factor. The booster was introduced in the autumn of 2003 and is currently being assessed. The whooping cough vaccine used in Denmark provides about 78% protection against the disease after three vaccinations. Consequently, a limited number of whooping cough cases in fully vaccinated children < 2 years should be expected. Prophylaxis should be considered for exposed children, EPI-NEWS 45/02. (A.H. Christiansen, P.H. Andersen, Department of Epidemiology)

## Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2007 figures are preliminary)

Table 1	Week 22 2007	Cum. 2007 <sup>1)</sup>	Cum. 2006 <sup>1)</sup>
AIDS	0	26	18
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	0	4	5
Diphtheria	0	0	0
Food-borne diseases	23	207	148
of these, infected abroad	1	35	38
Gonorrhoea	8	152	193
Haemorrhagic fever	0	0	0
Hepatitis A	1	14	7
of these, infected abroad	0	6	1
Hepatitis B (acute)	1	11	10
Hepatitis B (chronic)	6	111	186
Hepatitis C (acute)	0	2	5
Hepatitis C (chronic)	13	124	285
HIV	4	117	85
Legionella pneumonia	2	34	32
of these, infected abroad	0	4	6
Leprosy	0	0	0
Leptospirosis	0	6	5
Measles	0	2	20
Meningococcal disease	0	23	40
of these, group B	0	12	21
of these, group C	0	6	6
of these, unspec. + other	0	5	13
Mumps	0	4	8
Neuroborreliosis	1	27	15
Ornithosis	0	1	7
Pertussis (children < 2 years)	2	32	25
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	1	1
Listeria monocytogenes	0	5	4
Streptococcus pneumoniae	0	37	48
Other aethiology	0	4	2
Unknown aethiology	0	7	11
Under registration	3	37	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	1	23	22
of these, infected abroad	0	12	20
Syphilis	1	40	27
Tetanus	0	0	0
Tuberculosis	8	162	151
Typhoid/paratyphoid fever	0	5	13
of these, infected abroad	0	5	13
Typhus exanthematicus	0	2	0
VTEC/HUS	2	64	48
of these, infected abroad	0	22	11

<sup>1)</sup> Cumulative number 2007 and in corresponding period 2006

## Selected laboratory diagnosed infections

Number of specimens, isolates, and/or notifications received in SSI laboratories

Table 2	Week 22 2007	Cum. 2007 <sup>2)</sup>	Cum. 2006 <sup>2)</sup>
Bordetella pertussis (all ages)	5	63	106
Gonococci	11	149	192
of these, females	0	19	38
of these, males	11	130	154
Listeria monocytogenes	0	21	12
Mycoplasma pneumoniae			
Resp. specimens <sup>3)</sup>	3	232	221
Serum specimens <sup>4)</sup>	6	268	200
Streptococci <sup>5)</sup>			
Group A streptococci	1	61	85
Group B streptococci	0	41	44
Group C streptococci	1	10	10
Group G streptococci	2	52	61
S. pneumoniae	17	575	563
Table 3	Week 20 2007	Cum. 2007 <sup>2)</sup>	Cum. 2006 <sup>2)</sup>
Pathogenic int. bacteria <sup>6)</sup>			
Campylobacter	54	885	630
S. Enteritidis	3	133	116
S. Typhimurium	3	105	98
Other zoon. salmonella	9	230	172
Yersinia enterocolitica	3	118	59
Verocytotoxin- producing E. coli	1	64	44
Enteropathogenic E. coli	2	54	75
Enterotoxigenic E. coli	3	64	76

<sup>2)</sup> Cumulative number 2007 and in corresponding period 2006

<sup>3)</sup> Resp. specimens with positive PCR

<sup>4)</sup> Serum specimens with pos. complement fixation test

<sup>5)</sup> Isolated in blood or spinal fluid

<sup>6)</sup> See also [www.germ.dk](http://www.germ.dk)