



## THREE TETANUS CASES

Today, due to extensive vaccination, tetanus rarely occurs in Denmark, but the tetanus bacteria are still present in nature.

In 2007, three cases of tetanus were notified in Denmark. The three following case stories emphasise the importance of ensuring tetanus immunity before and after wound injury:

### Patient 1

A 83-year-old Danish woman was admitted to hospital after three days of symptoms including trismus, dysphagia and dyspnoea.

The woman had fallen three weeks prior to admission and had a lesion to the knee. A few days after the fall, penicillin therapy was initiated to counter infection, but she did not receive tetanus vaccination. She had probably never been vaccinated against tetanus.

Shortly after admission, she presented with muscle cramps and respiratory insufficiency.

At the intensive care unit, she was kept on sedatives and relaxants for 2 ½ weeks and subsequently underwent protracted mechanical ventilation before she could be transferred to a local hospital for further rehabilitation.

(O. Kirk, CPH University Hospital)

### Patient 2

A 68-year-old Danish woman was admitted on suspicion of allergic reaction following medication. At admission, she was unable to open her mouth, and suffered from soreness of the musculus masseter. The woman was diabetic and had a necrotic wound on one foot and one toe. She had received her last tetanus vaccination 30 years earlier.

The patient's condition deteriorated and mechanical ventilation was initiated. The necrotic wound was assessed, and the toe amputated. The patient died after nearly three days of hospitalisation.

(J. Krogh, Naestved Hospital)

### Patient 3

A 55-year-old man of non-Danish origin was involved in a traffic accident abroad. He suffered several fractures and a large wound on the forehead.

Upon arrival to Denmark, 17 days after the traffic accident, examination at a Danish hospital confirmed presence of facial nerve palsy. The patient was discharged, but readmitted four days later with trismus, lack of appetite and increasing muscular pain. His vaccination status was unknown. As muscle relaxing treat-

ment was indicated, the patient was transferred to intensive care unit and received mechanical ventilation for 12 days. He was discharged after 27 days of hospitalisation. At a subsequent follow-up, he had recovered fully with no sequelae.

(D.L. Kaltoft, Skejby Hospital)

## Comments

Tetanus is a clinical diagnosis and the prognosis relies on quick, specific and symptomatic treatment. Persons born before 1950 cannot be expected to have received primary tetanus vaccination. Therefore, it is essential to update the vaccination status of such persons, also in case of wound injury.

In connection with wound injury in unvaccinated or incompletely vaccinated persons and with high risk lesions in persons no longer protected by their last vaccination, tetanus prevention comprises both human tetanus immunoglobulin and tetanus vaccination. Human tetanus immunoglobulin is available around the clock from Statens Serum Institut. Furthermore, it is essential to receive tetanus vaccination before travelling abroad. Unvaccinated persons should be administered three doses of tetanus vaccine, and persons who have previously received a primary vaccination series, normally by administration of a dTBooster. For a detailed presentation of tetanus prophylaxis in connection with wound injury, please see EPI-NEWS 07/04. (A.H. Christiansen, P.H. Andersen, Department of Epidemiology)

## YELLOW FEVER IN PARAGUAY, ARGENTINA AND BRAZIL

Paraguay  
According to WHO, the Paraguayan health authorities have reported the first case of yellow fever in more than 30 years.

A 24-year-old man from a rural area of the San Pedro province near San Estanislao in central east Paraguay fell ill and died after hunting monkeys. The local health authorities have subsequently confirmed an additional four cases who had all participated in monkey hunting. According to WHO, Paraguay is not normally part of the yellow fever transmission zone, but mosquito species (*Aedes* and *Haemagogus*) which are potential carriers of yellow fever inhabit the area. The authorities have initiated active monitoring, mosquito control and vaccination of the local population.

There is no yellow fever vaccination

requirement for persons travelling directly from Denmark to Paraguay, but vaccination is *required* for travellers entering via an endemic area, e.g. Brazil.

Vaccination is generally only *recommended* for travellers visiting the Iguazu Falls. Presently, yellow fever vaccination is also *recommended* for travellers visiting the affected area of the San Pedro Province.

### Argentina

In ProMed ([www.promedmail.org](http://www.promedmail.org)), the Argentinean health authorities presume there is a risk of infection with yellow fever after finding dead monkeys in the province of Misiones, and have thus initiated a vaccination campaign against yellow fever in the area.

There is no vaccination *requirement* for travellers visiting Argentina, but the local authorities currently *recommend* vaccination of anyone travelling to the Northern part of the Misiones province, including the Iguazu Falls.

### Brazil

In autumn 2007, the Brazilian health authorities reported having found monkeys presumably dead from yellow fever, and as of the middle of December, a rising number of human cases were reported. By 12 February 2008, 57 suspected human cases of yellow fever had been reported.

A total of 30 cases have been confirmed, including 15 deaths. The confirmed cases have been located to the states of Goias, Federal District, Mato Grosso and Mato Grosso do Sul; all parts of the yellow fever transmission zone. Since December 2007, the Brazilian authorities have distributed more than 11 million doses of yellow fever vaccine.

Any person above the age of nine months travelling to Brazil from yellow fever risk areas *must* carry valid proof of yellow fever vaccination. Yellow fever vaccination is *recommended* to anyone travelling to yellow fever risk areas in Brazil, see [www.ssi.dk/rejser](http://www.ssi.dk/rejser) (Danish language). Specifically, yellow fever vaccination is *recommended* to anyone visiting the Iguazu Falls, regardless of whether they are entering the area from Argentina, Paraguay or Brazil.

The coastal cities, including Rio de Janeiro, Sao Paulo, Salvador, Recife and Fortaleza, are not yellow fever risk areas.

(P.H. Andersen, Department of Epidemiology)

## Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2008 figures are preliminary)

Table 1	Week 6 2008	Cum. 2008 <sup>1)</sup>	Cum. 2007 <sup>1)</sup>
AIDS	0	5	7
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	0	4	2
Diphtheria	0	0	0
Food-borne diseases	2	26	79
of these, infected abroad	0	4	7
Gonorrhoea	2	28	51
Haemorrhagic fever	0	0	0
Hepatitis A	1	8	7
of these, infected abroad	0	2	2
Hepatitis B (acute)	1	1	2
Hepatitis B (chronic)	4	19	31
Hepatitis C (acute)	0	1	1
Hepatitis C (chronic)	4	28	53
HIV	4	25	34
Legionella pneumonia	2	15	12
of these, infected abroad	0	8	2
Leprosy	0	0	0
Leptospirosis	0	0	4
Measles	0	2	0
Meningococcal disease	2	7	6
of these, group B	0	2	1
of these, group C	0	1	4
of these, unspec. + other	2	4	1
Mumps	0	1	1
Neuroborreliosis	0	10	15
Ornithosis	0	1	0
Pertussis (children < 2 years)	0	10	14
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	0	0
Listeria monocytogenes	0	0	4
Streptococcus pneumoniae	1	14	13
Other aethiology	0	8	2
Unknown aethiology	1	4	0
Under registration	1	9	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	0	9	3
of these, infected abroad	0	7	1
Syphilis	4	13	13
Tetanus	0	0	0
Tuberculosis	5	38	45
Typhoid/paratyphoid fever	1	4	1
of these, infected abroad	1	4	1
Typhus exanthematicus	0	0	0
VTEC/HUS	2	13	14
of these, infected abroad	0	1	5

<sup>1)</sup> Cumulative number 2008 and in corresponding period 2007

## Selected laboratory diagnosed infections

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

Table 2	Week 6 2008	Cum. 2008 <sup>2)</sup>	Cum. 2007 <sup>2)</sup>
Bordetella pertussis (all ages)	2	13	20
Gonococci	6	39	46
of these, females	2	5	8
of these, males	4	34	38
Listeria monocytogenes	0	1	11
Mycoplasma pneumoniae			
Resp. specimens <sup>3)</sup>	3	25	139
Serum specimens <sup>4)</sup>	0	19	106
Streptococci <sup>5)</sup>			
Group A streptococci	1	19	18
Group B streptococci	2	15	11
Group C streptococci	0	3	1
Group G streptococci	2	19	16
S. pneumoniae	15	168	144
Table 3	Week 4 2008	Cum. 2008 <sup>2)</sup>	Cum. 2007 <sup>2)</sup>
MRSA	6	40	-
Pathogenic int. bacteria <sup>6)</sup>			
Campylobacter	21	97	194
S. Enteritidis	4	21	13
S. Typhimurium	7	22	12
Other zoon. salmonella	9	54	43
Yersinia enterocolitica	10	18	17
Verocytotoxin-producing E. coli	2	6	9
Enteropathogenic E. coli	1	6	22
Enterotoxigenic E. coli	7	19	9

<sup>2)</sup> Cumulative number 2008 and in corresponding period 2007

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

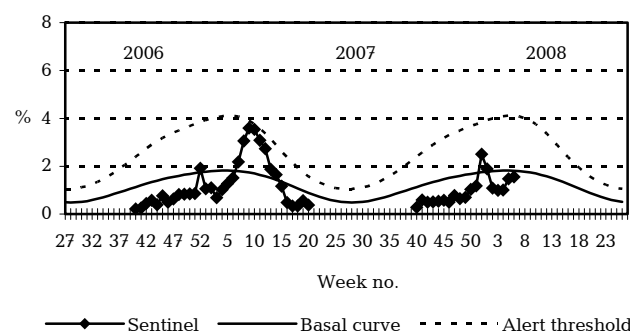
<sup>4)</sup> Serum specimens with pos. complement fixation test

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

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

## Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2006/2007/2008



Sentinel: Influenza consultations (as percentage of total consultations)  
 Basal curve: Expected frequency of consultations under non-epidemic conditions  
 Alert threshold: Possible incipient epidemic

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