



## 8<sup>th</sup> ISW-TBE Newsletter

November 2008

Dear colleague,

we are very proud to present to you the 8<sup>th</sup> edition of our international TBE newsletter which you will hopefully enjoy while reading. The newsletter will cover an update on the latest activities of the International Scientific Working Group on TBE (ISW-TBE).

In this edition you will find a summary on:

- 1) **New publication from the ISW-TBE 2008 conference**
- 2) **ESCAIDE Conference (European Scientific Conference on Applied Infectious Disease Epidemiology), Berlin, Germany, 19-21 November 2008**
- 3) **First results of the online survey of the ISW-TBE**
- 4) **Pre-Announcement – International Conference, Brussels, Belgium, 6 February 2009**
- 5) **Pre-Announcement – X International Jena Symposium on Tick-Borne Diseases, Weimar, Germany, 19-21 March 2009**

Please feel free and come back to us in case of comments, further suggestions and ideas for this newsletter that we will certainly try to incorporate in one of our next editions.

Best regards,

A handwritten signature in black ink that reads "Dr. Ursula Kunze". The signature is written in a cursive, flowing style.

Prof. Dr. Ursula Kunze  
Institute for Social Medicine,  
Center for Public Health, Medical University of Vienna  
Publisher of the ISW-TBE  
Rooseveltplatz 3  
1090 Vienna  
Austria  
Tel: ++43/1/4277-64660  
Fax: ++43/1/4277-9646  
Email: [Ursula.kunze@meduniwien.ac.at](mailto:Ursula.kunze@meduniwien.ac.at)



## 1.) New publication of Prof. Ursula Kunze and the ISW-TBE: Combating tick-borne encephalitis: Vaccination rates on the rise



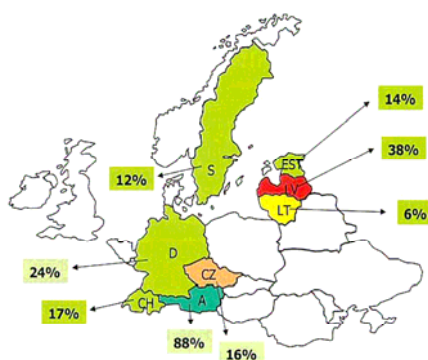
The new publication of Prof. Ursula Kunze shows the importance of increasing vaccination rates in affected countries and implementing vaccination recommendations among travelers when visiting endemic areas in Europe, which are otherwise considered safe traveling destinations. In many parts of Europe an increasing trend of TBE incidence has been observed for several years but the disease is still unknown in numerous countries and with international travel activity picking up, it will be one of the main tasks of the ISW-TBE to raise awareness of TBE and work towards increases in vaccination rates.

### Summary

The 10<sup>th</sup> annual meeting of the International Scientific Working Group on Tick –Borne Encephalitis (ISW-TBE) was entitled “*Combating TBE: Vaccination rates on the rise*”. The incidence of TBE has increased in several European countries endemic for this potentially debilitating central nervous system infection. Among the countries most affected are Germany, Switzerland, the Czech Republic, Slovenia, Sweden and the Baltic States. In many regions, the three basic requirements for optimal living conditions for ticks, i.e., humidity above 85 %, temperatures above 6 – 7° C, and the presence of large numbers of hosts, have been changing in favor of the tick population. Austria has the highest TBE vaccination rate (88%) in Europe. Although recent years have been seen increases in the vaccination rates in some countries, coverage is still too low to offer adequate protection. Presently no clear recommendations for travelers exist. The ISW-TBE has initiated programs geared towards increasing appreciation of TBE in countries where the disease is largely unknown and towards incorporating travel-related considerations when drawing up vaccination recommendations.

### Epidemiological trends

Fig. 1 shows the incidence of TBE in selected countries form 1990 to 2007. The 2007 decrease in the number of TBE cases observed in some European countries may be considered typical for TBE, with incidence variations of more than 100% between successive years a common phenomenon.



### Vaccination rates in Europe

Recent years have shown increases in the vaccination rates in Austria’s neighboring countries, most likely a result of the proactive communication the ISW-TBE has established with health authorities, physicians, and journalists. The joint efforts of all of these parties have helped to raise awareness of TBE. However, with vaccination rates between 6% and 38% coverage is still too low to afford effective protection. (Fig. 1)

Fig. 1: TBE vaccination coverage in selected European countries



## Results

An indispensable part of every ISW-TBE annual meeting has been the series of workshops bringing together the participating experts to discuss the most pressing issues regarding TBE.

**Tab. 1: Results of the workshops held at the 10<sup>th</sup> annual meeting of the ISW-TBE**

Workshop	Main challenges	Main action points
Vaccination after a tick-bite	Desirable for countries with high or scattered endemicity but low vaccination coverage	Design feasibility study followed by animal studies; if these studies are successful, post-exposure vaccination should be recommended and the effect followed up by an epidemiological study
General TBE vaccination recommendations	National TBE vaccination recommendations vary considerably. The reimbursement status of TBE vaccination also varies, even though the TBE vaccine is among the cheapest vaccines available.	Provide national authorities across Europe with scientific data, determine the research needs and develop multicenter studies, and draw up regular position statements about the necessity of TBE vaccination
TBE case reports	The clinical presentations of TBE are varied, often making differential diagnosis difficult. Also, cases of TBE in travelers may be misdiagnosed once they return home because TBE is not screened for.	Draw up a database of severe TBE cases, develop treatment guidelines, include comprehensive neurological work-up for emergency department patients, and raise awareness that even 'mild' cases of TBE may require long-term rehabilitation.
Epidemiology of TBE	Epidemiological methods and reporting practices vary considerably between endemic countries, as do definitions of what is to be considered a TBE case and a TBE risk area	Develop uniform definitions of TBE case and a TBE risk area and publish these, make notification of TBE cases mandatory in all endemic countries, harmonize epidemiological methods, and cooperate with the European Centre for Disease Prevention and Control (ECDC)
Event tourism and TBE	The risk awareness of TBE in non-endemic countries is low, partly because Europe is not considered an 'exotic' country requiring travelers to be vaccinated	Increase awareness, e.g., by cooperating with sports organizations, airlines, publishers or travel guides; draw up a symptom checklist to facilitate the diagnosis of TBE after travelers return home, and implement a surveillance system for 'exported' cases of TBE

## Discussion

The presentations at the 10<sup>th</sup> meeting of the ISW-TBE reconfirmed the growing importance of TBE in many parts of Europe but in numerous countries the disease is still an unknown disease. Even though slight increases in vaccination rates have already become apparent in some endemic countries there is still quite some way to go. Attention will also have to be focused on travelers, many of whom are unaware of possible TBE risk when visiting endemic areas in Europe. Implementing vaccination recommendations continues to be a major task of the ISW-TBE.

## References:

- Kunze U and the ISW-TBE, Combating Tick-Borne Encephalitis: Vaccination rates on the rise, WMW 2008  
 Kunze U and the ISW-TBE, ISW-TBE Conference Report, Vaccine 2008



## 2.) 2<sup>nd</sup> ESCAIDE Conference (European Scientific Conference on Applied Infectious Disease Epidemiology), Berlin, Germany, 19-21 November 2008

At the ESCAIDE congress in Berlin Prof. Ursula Kunze (Institute of Social Medicine, Center of Public Health, Medical University of Vienna, Austria), a member of the International Scientific Working Group, held a lecture on TBE and what still needs to be done.

### Abstract

Tick borne encephalitis (TBE) is the most important and widespread disease caused by tick transmitted arboviruses in Europe. The spectrum of clinical presentations ranges from mild meningitis to severe encephalitis with or without myelitis, and infection may result in death or long-term neurological sequelae.

Over the past three decades, TBE has become a growing public health challenge, with a minimum of about 13,000 cases in Europe. The incidence has increased in several European countries; among the most affected are Germany, Switzerland, Czech Republic, Slovenia, Sweden, and the Baltic States. Various social, economic, political, ecological, and climatic factors may be responsible for the observed increases. Quality improvements in epidemiological surveillance and diagnostics may play a role. Changes in lifestyle have resulted in more leisure time spent in nature and most infections are contracted during outdoor leisure time activities. In many European regions, the three basic requirements for optimal living conditions for ticks - humidity > 85%, temperatures > 6°C–7°C, and the presence of large numbers of hosts - have been changing in favour of the tick population. Increasing travel streams of non-vaccinated persons from non-endemic to high-risk areas are also important. Especially tourism to and within Europe is continuously increasing and the market is expected to grow further during the next years.

Although recent years have seen increases in the vaccination rates in some countries, coverage is still too low to offer adequate protection. Presently, no clear recommendations for travellers exist. The International Scientific Working Group on TBE has initiated programs geared towards increasing appreciation of TBE in countries where the disease is largely unknown and towards incorporating travel-related considerations when drawing up vaccination recommendations.

### TBE cases in Europe 1990-2007

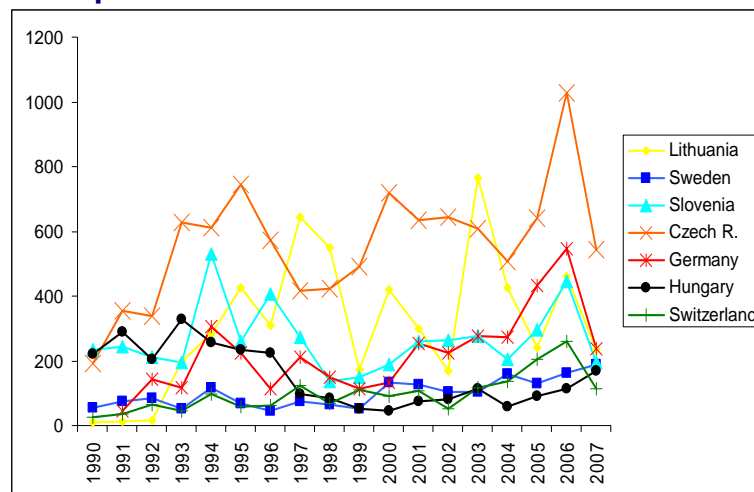


Fig. 2: TBE cases in Europe



**TBE cases: Austria vs. Czech Republic from 1990 to 2007**

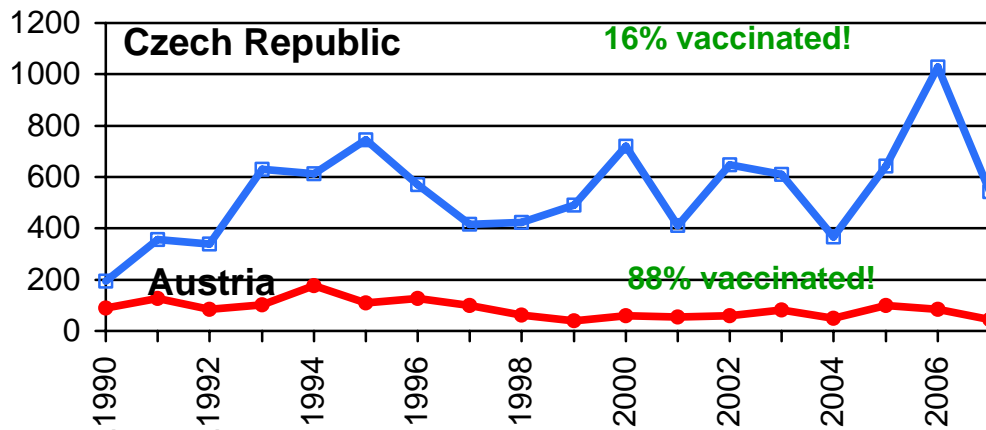


Fig. 3: TBE cases in Austria and Czech Republic

**Actions and plans for future to minimize the number of TBE cases**

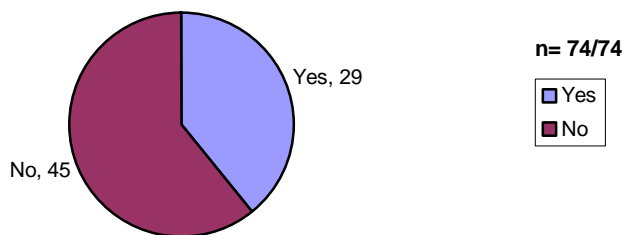
- Implementing a standardized definition of a TBE case
- Making notification of TBE cases mandatory in all countries
- Considering TBE as part of viral screening
- Promoting and raising awareness among the population and the medical system
- Vaccination campaigns
- Raising awareness of the risk of TBE in travelers
- Finding a common definition for general travel recommendations on TBE vaccination

**3.) First results on the online survey of the ISW-TBE**

In order to find out more details on the awareness about tick-borne encephalitis (TBE) and what still needs to be done an online survey for ISW-TBE newsletter recipients was set up on the website [www.isw-tbe.info](http://www.isw-tbe.info) in September 2008.

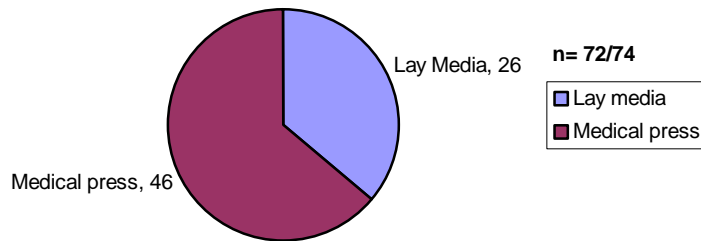
Please find some of the preliminary results in the figures beneath:

**1. Do you think that your fellow countrymen and women are aware of the risk of TBE when traveling to or within an endemic country?**

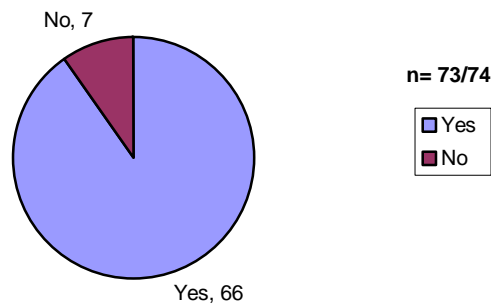




**2. On which kind of information do you think should the ISW-TBE focus on?**



**3. Do you think that TBE is still a neglected topic among travelers?**



**4.) Pre-Announcement: International Conference, Brussels, Belgium, 6 February 2009**  
**Climate change impact on ticks and tick-borne diseases**

The consequences on our daily activities of global warming are increasingly tangible. Its impact on tick-borne diseases is going to be the subject of the international conference in Brussels, on February 6, 2009. European experts are going to update the common valuable scientific knowledge on the worrying situation, in particular the increase of Lyme borreliosis cases and tick-borne encephalitis. The chairs of the conference will be Prof. Michael Kunze (Vienna) and Prof. Georges Van Impe (UCL Louvain-la-Neuve).

**The organization committee will consist of the following members:**

- Research Group and information on Lyme borreliosis and tick-borne diseases (Dr. Victor Luyasu, Prof. Annie Robert, Dr. Bernard Bouffieux, Prof. Georges Van Impe)
- Graduate School in Public Health, Health and Society (Prof. Annie Robert)



- Belgian Wild-Life Diseases Society  
(Mr. Paul Heyman)
- International Scientific Working Group on Tick-Borne Encephalitis (ISW-TBE)  
(Prof. Michael Kunze)
- Scientific Institute of Public Health, Epidemiology Unit, Federal Public Service  
(Mrs. Geneviève Ducoffre)

Beside general information on climate change, Lyme borreliosis and TBE the following subjects are going to be presented:

- Ups and downs with TBE in Switzerland
- Spatial distribution of TBE and Lyme borreliosis: landscape and beyond
- Lyme borreliosis in 2009
- What is new in the field of laboratory diagnosis of Lyme borreliosis
- How to protect the tourist: preventive measures for Lyme borreliosis and vaccine against TBE
- A Lyme borreliosis vaccine for Europe and beyond

If you would like to participate, please find the registration form and further details under the following link: <http://www.isw-tbe.info/upload/medialibrary/InvitationBrussels.pdf>

## **5.) Pre-Announcement – X International Jena Symposium on Tick-Borne Diseases, Weimar, Germany, 19 – 21 March 2009**

### **Main topic: Prevention**

'Prevention' has been chosen as the key subject of the 10th International Jena Symposium. The topic will be considered within the framework of ticks and tick-borne diseases as a comprehensive package of measures to avoid related illnesses: The aim is to address the avoidance of tick bites, discuss how to reduce tick activity in their native habitat as well as the successful combat of ticks through biological control measures and to prevent TBE by vaccination. Immunization against tick bites will be examined as well. This symposium will be dedicated to the analysis and discussion of these crucially important issues. Hence, confidence is present that this broad topic will be stimulating to scientists as well as to physicians, veterinarians, and public health experts. Furthermore attention has to be drawn to the Herbert Sinnecker-Christian Kunz Award that will be presented for the second time to a young scientist with the most outstanding presentation during the Symposium.

### **The X International Jena Symposium on Tick-borne Diseases is organized by:**

- Jochen Süss, Christine Klaus  
National Reference Laboratory for Tick-borne Diseases  
Friedrich Loeffler Institut Jena, Germany



- Olaf Kahl  
Freie Universität Berlin, Institut für Zoologie, Berlin, Germany
- Peter Kimmig, Rainer Oehme  
Regierungspräsidium Stuttgart, Landesgesundheitsamt, Stuttgart, Germany
- Wolfram Dorn  
Friedrich-Schiller-Universität Jena, Biol.-Pharmazeutische Fakultät, Institut für Ernährungswissenschaften, Jena, Germany

The scientific program for IJSTD X will be presented in January 2009.

If you would like to participate, please find the registration form and further details under the following link: [www.tbd-symposium.com](http://www.tbd-symposium.com)

This email is intended merely to highlight issues and not to be comprehensive, nor to provide medical advice. Should you have any questions on issues reported here, please contact Prof. Ursula Kunze ([ursula.kunze@meduniwien.ac.at](mailto:ursula.kunze@meduniwien.ac.at)). We hold your email address, which we use to send you this electronic news update on TBE and on the activities of the ISW -TBE group. We use your details for our own internal purposes only. If any of your details are incorrect or if you no longer wish to receive emails from us, please let us know by emailing us at [ursula.kunze@meduniwien.ac.at](mailto:ursula.kunze@meduniwien.ac.at).