

# 2006年世界杯传染病预防 措施

**Protection against infectious diseases  
during the 2006 Football World Cup**

# 2006年世界杯传染病预防措施

## Protection against infectious diseases during the 2006 Football World Cup

- **核心内容**
- **Core elements**
  - **传染病发病期**
  - **Infectious diseases**
  
  - **食物中毒**
  - **Food poisoning**
  
  - **饮用水污染**
  - **Purity of water supply**
  
  - **对预防恐怖主义危害**
  - **Prevention terrorist attacks**

# 2006年世界杯传染病预防措施

## Protection against infectious diseases during the 2006 Football World Cup

- 传染病防御法 (IfSG)规定
- Infection Protection Act (IfSG) rules
  - 登记通告
  - Reporting
  - 传染病隔离
  - Prevention of infection
  - 传染病斗争
  - Fighting infection
  - 其他法律框架
  - Other relevant legal rules

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- 传染病防御法 (IfSG): 通告程序
- Infection Protection Act (IfSG): Reporting hierarchy



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## Protection against infectious diseases during the 2006 Football World Cup

- 传染病发病：实验室检验诊断
  - Infectious diseases: Laboratory diagnosis
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- 16个国家各科中心 16 National Reference Centers
  - 48个会诊实验室 48 recommended laboratories



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## ■ 传染病发病 Factors promoting infection

- 众多人数聚集
  - Many concentrated in one place
- 活动时间长
  - Long duration of event
- 外国人较多，带有当地诱发因素
  - Many people from abroad; different range of pathogens
- 亚热带脑膜炎/流感高发期（7月-8月）
  - Different seasons in the (subtropical) southern hemisphere
- 在大型活动中的空气感染难以避免
  - Air-borne transmission almost impossible to prevent at mass events

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## ■ 传染源 Sources of infections

### ■ 重点相关

#### ■ especially relevant

- 食物传染
- Infections related to food
- 飞沫传染或空气传染
- Droplet infections or air-borne infections

### ■ 较少相关

#### ■ less relevant

- 疾病交叉传染
- Infection transmitted by vectors
- 医院传染
- Nosocomial infections

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盛会Event	综合监控? Syndrom surveillance?	内部日报? Internal daily reports?	公开日报? Public daily reports?
都灵冬奥会 Winter Olympics 2006 Turin	Yes	Yes	Yes
雅典奥运会 Summer Olympics 2004 Athen	Yes	Yes	No
日韩世界杯 Football World Cup 2002 Japan/Korea	Yes	Yes	?
盐湖城冬奥会 Winter olympics 2002 Salt Lake City	Yes	Yes	No
悉尼奥运会 Summer olympics 2000 Sydney	Yes	Yes	No
法国世界杯 Football World Cup 1998 France	Yes	Yes	Yes



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- 传染病多发期：重点监控
- Infectious diseases: Intensified surveillance
- 依据IfSG法加快每天信息传递
- Expedited communication on a daily basis pursuant to IfSG
- 通过卫生局及时监控（每天）
- Up-to-date surveillance by the public health offices (daily)
- 通过罗勃特科赫研究所加快加大报道
- Expedited reporting by the RKI
- 特别考虑国际卫生健康规定
- Special attention paid to International Health Regulations (IHR)

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## Protection against infectious diseases during the 2006 Football World Cup

- 传染病多发期：柏林重点监控
- Infectious diseases: Increased surveillance in Berlin
- 从**2006年6月7日至7月11日**
  - From 7 June to 11 July 2006
  - 每天到**10点**传递卫生局信息至州政府部门
  - Daily reports from the Public health Offices sent before 10 a.m. to the state authorities
  - 无警亦须报告
  - NIL reports are required
  - 周六周日情况周一通报
  - Events that take place on Saturday/Sunday will be reported on Monday
  - 保证电话即时通知可能性
  - Information can always be obtained or communicated immediately by telephone
  - 现有软件进行通报
  - The established software (Octoware, SurvNet) is to be used for reporting
  - 州政府部门每天至**12点**向罗勃特 科赫 研究所通报
  - State authority sends daily reports before 12 noon to RKI

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## Protection against infectious diseases during the 2006 Football World Cup

- 传染病多发期：重点监控
- Infectious diseases: Increased surveillance in Berlin
- 柏林每天作为卫生单位直接向罗勃特 科赫 研究所通报
- Daily reports sends directly to RKI; Berlin sends one centralized report
  - 特别事件 Unusual events
  - 发病情况 Outbreaks
  - 综合报道 Syndrom surveillance?
  - 注意事项 Must be clarified:
    - 参与人数(地方或中心数据) Number of visitors (local or central sources)?
    - 气候/天气数据? (天气预报) Climate/environmental info? (e.g. weather report)

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- **饮用水规定** Regulation on drinking water regulates:
  - **微生物要求**
    - Microbiological requirements
  - **化学要求**
    - Chemical requirements
  - **水处理**
    - Water treatment
  - **检验义务/方法**
    - Inspection duties and procedures
  - **其他法律框架**
    - Other relevant legal issues

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- 应用水：柏林9家自来水厂
- Drinking water: 9 waterworks in Berlin



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- 饮用水：7830 公里水管
- Drinking water : 7830 km of pipelines



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- 饮用水: **254000** 用户接口
- Drinking water: 254,000 water mains connections





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- 饮用水：62000消防栓
- Drinking water: 62,000 hydrants





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- 应用水：生物恐怖袭击的目标？
- **Drinking water: The target of bioterrorist attacks?**
  - 能成为病原体萌生的载体
  - **Can be an effective carrier of pathogens**
  - 能有效对大部分人口至病
  - **Can make large parts of population sick**
  - 简单，无保护的供水口
  - **Easy to gain access to unprotected water supply**
  - 低费用
  - **Low cost**



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- **应用水：病原体必须具备那些因素？**
- **Drinking water: What characteristics must the pathogens have?**
  - **足量简单的产品**
  - **Easily produced in sufficient quantities**
  - **能长时间滞留在水网中**
  - **High resilience in water supply system**
  - **产品含有毒性**
  - **Virulence maintained after production**
  - **低剂量传染**
  - **Low dose required for infection**
  - **不易发现**
  - **Not easily detected**



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## Protection against infectious diseases during the 2006 Football World Cup

- **饮用水：卫生部门采取的措施**
- **Drinking water: Measures taken by health authorities in the event of an occurrence**
  - **多种语言的媒体煮开消毒宣传**
  - **Immediate announcement in all media and several languages that water must be boiled**
  - **确认病原体**
  - **Identification of the pathogen**
  - **组织隔离措施**
  - **Instituting of isolation measures**
  - **发动可能的消毒措施**
  - **Initiation of possible disinfection measures**



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- 传染病发病：食品安全
- Infectious diseases: Food safety

Tabelle 3: Die Rolle von Infektionskrankheiten bei Großveranstaltungen:  
Risikoanalysen bei Olympische Sommerspielen

	Athen 2004	Sydney 2000	Atlanta 1996	Barcelona 1992	Seoul 1988
Lebensmittelsicherheit	+	+	+	+	+
Terror (konventionell)	+	+	+	+	+
Terror biologisch und chemisch	+		+		
Legionärskrankheit		+		+	
hitze-assozierte Erkrankungen	+		+	+	+

Peter, Maurer (2005)