

## Microbiological Case Definitions

Legionnaires' disease is an uncommon form of pneumonia. The disease has no particular clinical features that clearly distinguish it from other types of pneumonia, and laboratory investigations must therefore be carried out in order to obtain a diagnosis. The following definitions have been agreed for the European surveillance scheme:

### **Confirmed case**

An acute lower respiratory infection with focal signs of pneumonia on clinical examination and/or radiological evidence of pneumonia and one or more of the following:

- Isolation of any Legionella organism from respiratory secretion, lung tissue or blood.
- A fourfold or greater rise in specific serum antibody titre to *L. pneumophila* sg1.
- The detection of specific Legionella antigen in urine using validated reagents and methods recommended by EWGLI in 1998 (18).

### **Presumptive case**

An acute lower respiratory infection with focal signs of pneumonia on clinical examination and/or radiological evidence of pneumonia and one or more of the following:

- A fourfold or greater rise in specific serum antibody titre to *L. pneumophila* other serogroups or other Legionella species.
- A single high titre\* in specific serum antibody to *L. pneumophila* sg1 or other serogroups or other Legionella species.
- The detection of specific Legionella antigen in respiratory secretion or direct fluorescent antibody (DFA) staining of the organism in respiratory secretion or lung tissue using evaluated monoclonal reagents.
- The detection of Legionella specific DNA by polymerase chain reaction (PCR).

\***A single high serological titre:** as differing serological testing methods are used in different countries, and as an internationally accepted validation exercise has not been carried out, no specific serological test or titre level can be specified. It is suggested however that the single high titre result considered to indicate recent Legionella infection, in the presence of compatible symptoms, be set at a sufficiently high level to be specific for Legionella infection (i.e. to produce a low level of false positives).

### **Laboratory methods for diagnosis of legionnaires' disease**

Details of specimens to be collected and laboratory methods to be used for diagnosis of legionnaires' disease can be found in laboratory manuals and standard textbooks on Legionella.

**Reference**

18. Revised case definition – 13<sup>th</sup> Annual Scientific Meeting of the European Working Group for Legionella Infections, Helsinki 1998.