# Risk factors for sporadic and community acquired Legionnaires' disease, metropolitan France, 2002- 04.

**Presenting author:**
Patricia SANTA-OLALLA PERALTA

**Authors:**
Patricia Santa-Olalla *(1,2)*, D. Che *(1),* C. Campèse *(1)*, G. Jacquier *(1)*, D. Bitar *(1)*.

**Affiliations:**
1. Institut de Veille Sanitaire, 12, rue du Val d'Osne, 94415 Saint Maurice Cédex, France
2. European programme for intervention epidemiology training (EPIET)

**Abstract background, methods, results and conclusions: (280 words)**
Background: Legionnaires' disease (LD) is a common aetiology of community acquired bacterial pneumonia in adults, with a high case fatality ratio (CFR). Known risk factors derive mainly from outbreak studies, but little is known about sporadic, community-acquired LD, which accounts for more than 50% of the cases. We conducted a matched case-control study to identify risk factors for sporadic, community-acquired LD.
Methods: Cases with onset of symptoms from 1st September 2002 were included consecutively until sample size (602) was completed (31st September 2004). Cases with sporadic, community-acquired and biologically confirmed LD, in metropolitan France, were matched with a control subject. Matching variables were age, sex, underlying illness and location of residence within 5 km. Study variables collected through a phone standardised interview included host-related factors, potential outdoors and indoor exposures, professional and leisure activities. We performed a conditional logistic regression on various host-related factors and exposures.
Results: Analysis was done on 546 matching pairs. The CFR was 3.5%. Age ranged from 10 - 93 years (median, 55 years), with a 3.6 M/F sex ratio. In 93 % of the cases diagnosis was confirmed by detection of the legionella's antigen in urine. In 29% an underlying illness known to be a risk factor for LD was present. Cases were more likely to have smoked ($OR_{95\%CI}$ 8.9; 5.3-15.0), travelled ($OR_{95\%CI}$ 3.2; 1.8-5.9) or stayed in a hotel ($OR_{95\%CI}$ 6.8; 3.1-14.8) than controls. Risk of LD increased with number of years of smoking and number of cigarettes smoked. None of the leisure activities analysed was associated with LD.
Conclusions: Tobacco and travels have been previously described as risk factors for LD, but it's the first time that, for tobacco and LD, such a dose-effect pattern is documented.

**Contact details:**
Patricia SANTA-OLALLA PERALTA, MD, MPH
Département Maladies Infectieuses
Institut de Veille Sanitaire
12, rue du Val d'Osne
94415 Saint Maurice Cedex
Tél : 01-41-79-68-77 / Fax : 01-41-79-67-69
mailto: p.santa-olalla@invs.sante.fr