personnel who do not have direct contact with asbestos in their jobs, the increase in risk depends essentially on the ship's year of arming and the presence of asbestos, whether or not on board, as well as the duration of exposure of seafarers.
Conclusion These results allow us to recommend a classification of the risk in accordance with the recommendations of the french health authority and to propose an adequate post professional follow up for soldiers of the French Navy.

1197 HORSE STABLES AS POTENTIAL SOURCE OF FUNGAL EXPOSURE TO OFFICE WORKERS

[1,2]Tanusha S Singh*, [1,2]Onnicah D Matuka. *[1]National Institute for Occupational Health, National Health Laboratory Services, Johannesburg, South Africa; [2]Department of Clinical Microbiology and Infectious Diseases, University of Witwatersrand, Johannesburg, South Africa*

10.1136/oemed-2018-ICOHabstracts.556

Introduction Workers spend considerable time in office buildings which are generally considered to be low risk environments. However, under favourable conditions (e.g. poor housekeeping, inadequate ventilation, poorly regulated temperature and relative humidity; nutrient substrates), indoor microbial levels may increase. Therefore indoor air quality (IAQ) becomes an important factor for workers health. This investigation examined air quality in offices situated one floor above the horse stables and evaluated the association with reported respiratory symptoms among office workers.
Methods Air sampling by impaction method onto agar plates was done for fungal detection. Fungi were identified using microscopy and BIOLOG system (metabolic fingerprinting). Environmental parameters (temperature, relative humidity, carbon dioxide) were measured using the IAQ monitor. Sampling was repeated (before and after cleaning intervention) in the offices near the horse stables (vaccine production). Employees completed a questionnaire on medical and occupational history.
Results Air measurements showed high concentrations (155–1720 cfu/m^3) of allergenic fungi. The most common genera isolated were *Aspergillus*, *Penicillium*, *Fusarium*, *Trichoderma* and *Paecilomyces*. The average fungal counts after cleaning the offices were threefold (954 cfu/m^3) than before the rigorous cleaning process (303 cfu/m^3). Office occupants complained of bad odour which worsened during the day. Symptoms reported by workers were nose irritation (60%), sinus congestion and headache (40%); and eye irritation and dry throat (30%). Symptoms worsened at work but improved when away from the office.
Conclusion Increased viable concentrations of airborne fungi in offices and high counts after cleaning indicated stables as a source of fungal contamination. The movement of horses between the stable and the paddock creates a lot of dust which is the likely mode of transmission to the offices. Some employees reported symptoms suggestive of those caused by the fungal genera identified. No complaints were received after the horse stables were relocated in keeping with local by-laws.

274 CHEMICAL INTOLERANCE IS NOT A GOOD PREDICTOR OF WORK RELATED SYMPTOMS AMONG FINNISH OFFICE WORKERS

Jari H Stengård*, Sanna Lappalainen, Jouko Remes, Markku Sainio. *Finnish Institute of Occupational Health, Helsinki, Finland*

10.1136/oemed-2018-ICOHabstracts.557

Introduction Chemical intolerance (CI) is a condition characterised by series of symptoms that affected persons attribute to exposure to low levels of several identifiable or unidentifiable substances commonly present in environment. Many of the symptoms are general symptoms, such as dizziness, fatigue, headache and difficulties to concentrate that are present in many medical conditions and illnesses. Similar symptoms are attributed to poor indoor air quality, for instance. In this study we evaluate:

- occurrence of CI among Finnish office workers and
- whether identified CI individuals have work related symptoms.

Methods The study population comprises 174 office workers recruited in connexion with our Multispace Office (MOSI) project. The participants work in six different workplaces, of which none had known abnormal sources of indoor air impurities. The Chemical exposure-section of Quick Environment Exposure Sensitivity Inventory (QEESI) questionnaire was employed to identify CI individuals and modified MM-40 (Örebro) questionnaire to evaluate their work related symptoms.
Results We identified altogether 52 (30%) CI individuals as indicated by their QEESI questionnaire score (score $\geq$40). Of them 21 (40% versus 18% in individuals with QEESI score <40, $p<0.002$) reported that they have had irritation symptoms in throat, nose or eyes at work and 29 (56% vs 39%, $p=0.511$) had general symptoms, such as fatigue, headache, feeling heavy head or difficulties in concentrating. Probability of irritation symptoms among CI individuals is 40%.
Discussion Our findings are in line with earlier observations that prevalence of chemical intolerance may be up to 33%. Occurrence of IC was associated with irritation symptoms but not general symptoms. However, its positive predictive value (i.e. proportion of irritation symptoms among CI individuals, 40%) was not much better than prevalence of irritation symptoms among office workers (25%) suggesting that CI is not very good predictor of work related symptoms among Finnish office workers.

408 IMPROVEMENT OF DETERMINATION METHOD FOR ETHYLENE GLYCOL IN THE AIR OF WORKPLACE BY CAPILLARY GAS CHROMATOGRAPHY

Zhonglin Zhao, Cheng Cao. *Shanghai Institute of Occupational Disease for Chemical Industry, Shanghai, China*

10.1136/oemed-2018-ICOHabstracts.558

Introduction Ethylene glycol, which is colourless and odourless, is widely used in the field of manufacture of coolant,