

# European Respiratory Society Annual Congress 2012

**Abstract Number:** 3743

**Publication Number:** P4361

**Abstract Group:** 6.2. Occupational and Environmental Health

**Keyword 1:** Occupation **Keyword 2:** Spirometry **Keyword 3:** Cough

**Title:** Prevalence of chronic respiratory symptoms, ventilatory capacity and bronchial responsiveness in welders

Dr. Saso 21890 Stoleski sstoleski@yahoo.com MD <sup>1</sup>, Prof. Dr Jovanka 21891 Karadzinska Bislimovska bislimovska\_j@yahoo.com MD <sup>1</sup>, Prof. Dr Jordan 21892 Minov minovj@hotmail.com MD <sup>1</sup>, Dr. Dragan 21893 Mijakoski dmijakoski@yahoo.com MD <sup>2</sup> and Dr. Snezana 21894 Ristetska Kuc risteska-kuc@yahoo.com MD <sup>2</sup>. <sup>1</sup> Dpt for Respiratory Functional Diagnostics, Institute for Occupational Health of RM, WHO CC, Ga2len CC, Skopje, Macedonia, The Former Yugoslav Republic of, 1000 and <sup>2</sup> Allergy Center, Institute for Occupational Health of RM, WHO CC, Ga2len CC, Skopje, Macedonia, The Former Yugoslav Republic of, 1000 .

**Body:** Objective: To evaluate the prevalence of chronic respiratory symptoms, ventilatory capacity abnormalities and bronchial hyperresponsiveness in welders and to clarify the role of workplace exposure. Methods: A cross sectional study was performed including 40 males working as stainless steel welders (mean age=43.9±7.4; duration of exposure 15.2±6.8 yrs) and 40 male office workers as a control group (mean age=42.8±7.1) matched for age, duration of employment, smoking habits and socioeconomic status. Evaluation of examined subjects included completion of a questionnaire on respiratory symptoms in the last 12 months (cough, phlegm, dyspnea, wheezing, and chest tightness), spirometry and histamine challenge (PC20≤8 mg/mL). Results: We found non-significantly higher prevalence of respiratory symptoms in the last 12 months in welders with significant difference for cough (P=0.036) and phlegm (P=0.007). Mean values of spirometric parameters was lower in welders with significant difference for MEF25 (P=0.006) and MEF75 (P=0.000). Prevalence of bronchial hyperresponsiveness (BHR) was higher in welders with significant difference for borderline BHR (P=0.041). Multivariate analysis showed that current smoking (OR=8.4, 1.6 to 81.7) and total exposure to welding fumes with duration of more than 10 years (OR=8.2, 1.7 to 69.8) were independent risk factors for development of chronic respiratory symptoms. Conclusion: Our data suggest that workplace exposure in welders may lead to respiratory impairment that on the other hand is closely related to its duration.