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**Title:** Oxidative stress in obese and nonobese patients with and without asthma

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**Body:** RATIONALE: Oxidative stress plays a role in the pathogenesis of many chronic inflammatory lung diseases. Alternatively, increasing BMI may lead to an increase in airway oxidative stress and obesity increases the risk for developing new onset asthma in adults and children. Exhaled breath condensate (EBC) collection is a noninvasive method to investigate pulmonary oxidative stress biomarkers. METHODS: We measured exhaled nitrites and nitrites, 8-isoprostane, pH and oxidized (GSSG) glutathione, to assess alveolar oxidative stress in obese patients (52 asthmatics and 135 non-asthmatic) and 118 nonobese (52 asthmatics and 135 non-asthmatics). EBC was collected over 10 min using a refrigerated condenser according to European Respiratory Society/American Thoracic Society recommendations. RESULTS.187. We found an increase in the concentrations of GSSG and 8-isoprostanes in both groups of obese patients (both asthmatic and non-asthmatics) compared with nonobese patient (asthmatic and non asthmatic) ( $p < 0.001$ ) and a slight decrease in the pH of EBC in obese patients with asthma compared with the rest ( $p < 0.05$ ). In relation to nitrites and nitrates were statistically lower in obese patients with asthma and without asthma than the total non-obese patients. CONCLUSIONS: Our results suggest that obesity leads to an increase proinflammatory mechanisms that could be associated with increased systemic inflammation and oxidative stress and may affect the status or condition of asthma.