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Title: Short-term effects of quitting smoking in TNF-α and interleukin-10 serum and nasal lavage levels

Ms. Marceli 30081 Rocha Leite marcelirocha@hotmail.com [1], Prof. Dr Dionei 30082 Ramos dionei-ramos@bol.com.br [1], Ms. Rafaella 30083 Fagundes Xavier rafaellaxavier@yahoo.com.br [1], Ms. Juliana 30084 Tiyaki Ito jutiyakito@hotmail.com [1], Ms. Fernanda Maria 30085 Machado Rodrigues fernandammr@yahoo.com.br [1], Ms. Juliana 30106 Nicolino junicolino@hotmail.com [1], Prof. Dr Alessandra 30194 Choqueta de Toledo alechoqueta@yahoo.com.br [1] and Prof. Dr Ercy Mara 30204 Cipulo Ramos ercy@bol.com.br [1]. [1] Phisiotherapy, UNESP - São Paulo State University, Presidente Prudente, SP, Brazil .

Body: Some systemic benefits of quitting smoking are known, however, the immediate effects on inflammatory biomarkers have not been well described. The purpose of this study was to evaluate inflammatory biomarkers during a smoking cessation program (SCP). Twenty two abstinent smokers (age 50 [40-55] years; 13 [6-38] pack/years index; FEV1% 92,5 [87-104] enrolled in a SCP were evaluated at baseline and after 7, 15, 30 and 60 days of abstinence. The measurements of TNFα and interleukin-10 (IL-10) levels on nasal lavage and blood plasma (ELISA) and exhaled carbon monoxide (eCO), carboxyhaemoglobin (COHb). Current smokers (n=9; age 54[50-60] years; 28[19-42] pack/years index; FEV1% 96 [82-104] and non-smokers (n=8; age 53 [33-60] years; FEV1% 104,5 [93,5-106]) were also evaluated at the same time points. Statistical analyses were performed using One-way ANOVA followed by Tukey for parametric data and Kruskal-Wallis test followed by Dunn's test for non parametric data. There was a significant decrease in eCO and COHb in abstinent smokers after 7, 15, 30 and 60 days of abstinence ($p<0,0001$). There was a significant decrease in TNF-α levels on nasal lavage in abstinent smokers after 60 days of abstinence ($p=0,0186$). For TNF-α levels on blond plasma and IL-10 on blond plasma and nasal lavage there was no observed significant difference. The abstinence promoted decreased exCO and COHb levels after 7 days, decreased in TNF-α levels on nasal lavage in 60 days and of abstinence.