

# **Smoking in MS and correlation with IL17&IL23 levels**

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## **Introduction**

The aim of the study was to reveal whether there is any effect of smoking status in the different subtypes of multiple sclerosis(MS) and correlation between smoking and IL 17&IL23 levels.

## **Method**

Plasma samples were obtained from patients who are diagnosed with clinically isolated syndrome(CIS), relapsing-remitting MS(RRMS), primary progressive MS(PPMS), secondary progressive MS(SPMS) and healthy controls. Patients and controls are grouped into three subgroups according to smoking status as active smokers, former smokers and never smokers.

## **Results**

Sixty patients and 20 age-sex matched healthy controls were included. The patient groups consisted of 8 CIS, 32 RRMS, 15 SPMS and 5 PPMS cases. The mean age of the patients was 39.0 and 37.4 for controls.. Age of smoking onset didn't show any relationship with the age of MS onset. Age of smoking onset for active and former smoker patients with CIS, RRMS, SMPS and PPMS were similar. Actively smoking RRMS and SPMS patients had higher rates of attacks per year in comparison to former smokers and never smokers.

Regarding IL17 and IL23 levels, no difference was detected between MS subtypes and controls. IL23 levels were highest amongst never smokers and lowest in active smokers( $p=0.000$ ). Similar results were observed for IL 17 levels with no significance. Onset symptoms, progression index and MS severity scores were not found to be correlated with either smoking status or IL 17 and 23 levels.

## **Conclusion**

Although we couldn't show significant effect of smoking status on MS other than higher attack rate in smokers, our results suggest that IL23 level changes in relation to smoking status; highest amongst never smokers and lowest in active smokers.