

P033 Oxidative stress in mice fed with walnuts
Romeu M, Giralt M, Salas J, Bullo M, Casas-Agustench P, López-Uriarte P and Nogués MR

School of Medicine and Health Sciences. Rovira i Virgili University. Sant Llorenç, 21. 43201 Reus (Spain)

Consumption of walnuts has been associated with decrease risk for specific diseases. Walnuts are a rich source of both antioxidants and α -linolenic acid. In order to relate the walnut intake with a better antioxidant capacity of the plasma, thirty-six C57BL/6J male mice of 5 weeks of age were randomised into three groups: Control group that received a standard diet (C), Walnut group that received a standard diet with 10% of whole walnuts (W), and the Walnut Skins group that feed standard diet with 2% of walnut skins (WS), for 8 weeks. The following plasma parameters were determined: a) conjugated dienes, b) reduced (GSH) and oxidized (GSSG) glutathione, c) plasma antioxidant capacity (ORAC), and d) plasma ferric reducing antioxidant potential (FRAP). Also, the antioxidant capacity of the diets was determined by the ORAC method. Walnut and walnut skins diets showed greater antioxidant capacity than the standard diet, but mice of the W and WS groups show significantly lower ORAC and FRAP values than mice of the C group. Plasma GSH concentrations tended to be lower in both treated groups while the concentration of conjugated dienes was higher in W group.