A FRAXINUS EXCELSIOR L. SEED EXTRACT, GLUCEVIA™ HAS FAVORABLE EFFECTS ON GLUCOSE HOMEOSTASIS IN ELDERLY OVERWEIGHT SUBJECTS

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Botanical extracts with biologically active compounds may have positive effects on body homeostasis and have been reported to treat different metabolic impairments. In this context, an extract obtained from seeds of the European ash tree (*Fraxinus excelsior L*; *Oleaceae*) was investigated in order to determine the potential benefits on insulin sensitivity in overweight/obese subjects.

The intervention study was carried out in 22 participants (50-80 years-old) with an initial BMI <40.0 kg/m^2 (mean value at baseline 31.0 kg/m^2), who followed a balanced energy-restricted diet (-15% Energy) for 7 weeks. The design was a longitudinal, randomized, crossover, and double-blinded nutritional intervention, with a one week wash-out period between the 2 intervention periods of 3 weeks. Experimental groups were administered 1 g daily of either placebo capsules (control) or capsules containing an extract from *Fraxinus excelsior* L. seeds (Glucevia™). Anthropometrical and biochemical measurements were performed at the beginning and at the end of the interventions for both cross-over periods.

Statistical analysis revealed that administration of 1 g of Glucevia™ for 3 weeks resulted in significantly lower incremental glucose AUC values ($p<0.05$) while no significant change was observed in the placebo group (-28.2% vs. -7.9%). Interestingly, fructosamine levels were significantly reduced by the ash tree seed extract (-4.13 µmol/L vs. +7.51 µmol/L ; $p<0.05$) as compared to placebo. The experimental product administration produced no relevant changes on body weight and lean mass as compared to the control, but the fat content was significantly reduced (-1.26% vs. -0.19 %; $p<0.05$) by the botanical extract compared to placebo. In summary, the administration of an extract from *Fraxinus excelsior* L. seeds in combination with a hypocaloric diet induced favorable effects in glucose homeostasis in overweight/obese subjects.

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