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Beneficial clinical effects of honey from bees fed with specific plant extracts

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Background: Our team has demonstrated in a number of pre-clinical studies that special bees fed with syrups containing natural plant extracts contain a number of active substances that have beneficial effects on the human body. We have previously reported that bees fed with green walnut have beneficial effects on sugar metabolism, lowering serum glucose levels and reducing insulin resistance.

Methods: We conducted a prospective double-blind functional food study with 45 healthy volunteers using a strict inclusion and exclusion criteria with ethical approval. Participants ate 30 grammes of honey layered under 150 ml of yoghurt twice a day for 3 weeks. Fifteen participants consumed honey from bees fed with green

walnut extract, while 15 participants consumed honey from bees fed with sea buckthorn extract, and 15 participants in the control group consumed acacia honey. Sleep quality was assessed with the SQS questionnaire, and quality of life with the SF-36, EORTC Q-C30 and EQ-5D tests on days 0 and 22 of the study.

Results: Consumption of both specific honey resulted improvements in the life quality parameters and in the sleep quality. 'Buckthorn honey' showed significant differences after the 3rd week: physical function improved (25.3 ± 0.5 vs 27.4 ± 2.8 ; $p = 0.04$), anxiety-depression decreased (1.4 ± 3.6 vs 1 ± 0.3 ; $p = 0.03$), complex physical status (84.1 ± 9.7 vs 88.7 ± 6.9 ; $p = 0.04$), while 'green walnut honey' improved EQ-5D complex quality of life (84.1 ± 9.7 vs 88.9 ± 6.9 ; $p = 0.01$), overall quality of life functioning (90.6 ± 14.9 vs 99.2 ± 4.2 ; $p = 0.03$), EORTC Q-C30 total score (467.1 ± 30.6 vs 487.4 ± 21.4 ; $p = 0.03$). No such positive effects were confirmed in the control group.

Conclusions: Honey from bees fed with sea buckthorn extract has many beneficial physiological effects on the human body, improving physical well-being and reducing anxiety and depression. Honey from bees fed with green walnut extract improves the complex quality of life.

Key messages:

- Improving the quality of life with nutrition is an increasingly important research field, playing a key role in our life.
- Our research has shown that honey from bees fed with green walnut and sea buckthorn extract improves several parameters in the quality of life.