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Losebig: An effective nutritional suplement to impove weight loss and mental health

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Abstract

This randomized, double-blind, placebo-controlled study evaluated the efficacy and safety of *Losebig*, a multi-ingredient dietary supplement, in managing weight and improving cognitive and emotional health in overweight and obese individuals. Over 12 weeks, 50 participants followed a standardized hypocaloric diet and received either Losebig or a placebo. The Losebig group exhibited significantly greater reductions in body weight, BMI, waist circumference, total and visceral fat compared to the placebo group. Additionally, cognitive function (MoCA scores) improved, while binge eating and emotional eating behaviors (BES and EES scores) decreased significantly in the Losebig group. The supplement's multifactorial action combining plant extracts, micronutrients, amino acids, probiotics, and sensory molecules contributed to metabolic regulation, appetite control, and psychological well-being. The results suggest that Losebig may be an effective adjunct to dietary interventions in obesity management, though further long-term studies are warranted.

Keywords

Losebig, dietary supplements, n plant extracts, obesity management

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Introduction

Obesity is a chronic, complex condition that makes a person prone to various diseases and increases the mortality or morbidity rate. Similarly, being overweight is an equally serious public health problem. The scientific literature extensively reports the association of both overweight and obesity with metabolic disorders, cardiovascular diseases, psychosocial disorders, diabetes, and other pathological conditions. Although modern medicine has developed therapeutic techniques to treat overweight and obesity, their effective management remains a significant clinical challenge today (Farooqi & O'Rahilly, 2005, Mann et al., 2007).

Recent approaches to treating both conditions often consider the use of dietary supplements that can help reduce appetite and calorie intake, as well as improve various metabolic indicators as supportive practices. This study examines the clinical efficacy and safety of a dietary supplement with the trade name Losebig, which involves a combination of bioactive ingredients that act multifactorially in weight management and the formation of dietary behaviors related to obesity. The main ingredients of the supplement include: French Lilac extract (Galega officinalis), rich in plant guanidine, chromium (picolinate) for blood sugar regulation, berberine, purple eggplant extract, MHCP (cinnamon polyphenol), as well as various amino acids such as tryptophan and tyrosine, which are involved in neurotransmitter synthesis. In addition, it includes probiotic strains that strengthen the intestinal microbiota and natural aromatic molecules such as mint, grapefruit, and vanilla, which support sensory control of appetite (Saltzman & Roberts, 1995, Anderson, 1998, Atanasov et al., 2000, Bailey & Day, 2004, Richard et al., 2009, Fernstrom, 2013, Kadowaki et al., 2011, Delzenne et al., 2011, Sarkar et al., 2016, Proserpio et al., 2017, Asbaghi et al., 2020, Yin et al., 2008, Zhang et al., 2010, Khan et al., 2003, Allen et al., 2013). The combination of the above ingredients makes the Losebig dietary supplement a holistic approach to supporting the treatment of overweight and obesity addressing two central target groups in weight control.

The first set of targets describes quantitative anthropometric criteria, which include, among others: height, body weight ratio, waist circumference, and BMI, as well as lipometric data such as limb mass, visceral fat to height ratio, and body fat distribution (Madden & Smith, 2016). The second set of goals also examines certain qualitative characteristics that determine the successful outcome of the weight loss process, such as the emotional, cognitive and psychosocial functions of participants, the frequency of possible binge eating episodes and the implementation of a weight loss diet, as well as the intensity of emotional eating phenomena. This is a randomized, double-blind study with an intervention group that received the dietary supplement Losebig and a placebo control group. Data were collected over a 3-month period, during and after which, based on the analysis of the results, conclusions were drawn with the aim of addressing specific clinical challenges.

Bioactive ingredients of the dietary supplement

The dietary supplement with the trade name Losebig is an advanced nutritional formulation that combines plant extracts, essential amino acids, micronutrients, and sensory molecules, designed to enhance weight management through simultaneous action on metabolic pathways, neuroendocrine and behavioral mechanisms. Its ingredients include French Lilac extract (Galega officinalis), a source of plant guanidine that acts similarly to metformin, regulating blood sugar and insulin response (Atanasov et al., 2000, Bailey & Day, 2004). Chromium (picolinate) enhances insulin sensitivity and metabolic homeostasis, helping to control appetite and reduce hypoglycemic episodes (Anderson, 1998, Asbaghi et al., 2020). Various researchers have highlighted the key importance of chromium in combating obesity, as its ability to effectively intervene in glucose homeostasis and metabolism has been documented. Berberine, purple eggplant extract (rich in anthocyanins and chlorogenic acid), and cinnamon MHCP have lipotropic and antihyperglycemic effects (Yin et al., 2008, Zhang et al., 2010). The amino acids tryptophan and tyrosine participate in the synthesis of "well-being" neurotransmitters (serotonin) involved in mood, satiety, and emotional eating (Richard et al., 2009, Fernstrom, 2013). The probiotics also contained in the supplement shift the balance of the intestinal microbiota, contributing to the formation of the gut-brain axis, thus affecting the individual's health (Delzenne et al., 2011, Sarkar et al., 2016). Finally, natural aromas such as mint, grapefruit, and vanilla promote appetite control and sensory fulfillment (Kadowaki et al., 2011, Proserpio et al., 2017). Vanilla and mint have been associated with increased salivation and secretion of digestive enzymes, while grapefruit aroma, through naringenin, is linked to reduced energy intake and enhanced lipolysis. The overall combination of the above ingredients makes Losebig a holistic intervention with a significant effect on weight loss and multifactorial control of obesity.

Methodology and Materials

This study is a randomized, double-blind investigation with an intervention group using the dietary supplement Losebig (n=25), at a dosage of 3 sprays each time, 5 times daily, before meals. The goal was to reduce appetite, better manage calorie intake, and suppress hunger to facilitate weight loss. The placebo control group, n=25, received placebo product at the same dosage consisting of 3 sprays each time, 5 times daily, before meals. Participants were randomly assigned to the two groups, using a double-blind system so that neither the researchers nor the participants knew which group each participant belonged to. Both groups followed the same diet model, as follows: The diet was designed to provide 1,200 calories per day, of which 55-60% of daily energy came from complex carbohydrates, 25-30% from fats, and 12-15% from proteins. Weekly food consumption was identical for all participants. An adequate amount of antioxidants was provided

daily to all volunteers. Anthropometric measurements, including height, waist circumference, total body weight, total body fat mass, body fat distribution, body muscle mass, and body mass index (BMI), were performed at baseline and at weeks 4, 8, and 12 (Madden & Smith, 2016). Based on the analysis of the data collected at the above times, conclusions were drawn aiming at gaining valuable insights. The Tanita MC 180 Multi-Frequency Body Composition Analyzer Scale (Tanita Corporation, Tokyo, 174-8630, Japan) was used to analyze body composition and calculate basal metabolic rate based on body weight. A stadiometer and tape measure were used to measure height and waist circumference. A psychologist, who was blind to the allocation of participants to the groups, assessed the volunteers' cognitive functions using the Montreal Cognitive Assessment (MoCA) test at the start of the diet (pre-test) and at the end of the 12th week (Nasreddine et al., 2005, Gunstad et al., 2007, Larner, 2012, Ciesielska et al., 2016, Ozdilek & Kenangil, 2014). Similarly, the frequency of bulimic episodes and the intensity of emotional overeating were assessed using standardized assessment tools such as the Bulimia Eating Scale (BES) and the Emotional Eating Scale (EES), respectively (Benton, 2010, Yan et al., 2023).

Statistical analysis

The normality of the distribution of variables was examined using the Kolmogorov-Smirnov test. To compare differences between groups in parameters that showed a normal distribution, independent-sample T-tests were used. For parameters without normal distribution, the nonparametric Mann-Whitney U test was applied. To compare the effects of the intervention and time within groups, repeated measures T-tests were used for parameters with normal distribution, while the nonparametric Wilcoxon signed rank test was used for the rest. P-values less than 0.05 were considered statistically significant. Data are presented as mean ± standard deviation. All statistical analyses were performed using IBM SPSS software (version 21.0, IBM International Business Machines Inc., Armonk, NY, USA).

Results

All subjects followed their diet and took Losebig supplement without reporting any intolerance or incompliance. They reported no change in their physical activities and lifestyle. Daily energy intake, macronutrients and micronutrients in diet food consumption records, provided by the subjects, at onset, at the end of week 6, and at the end of the study demonstrated no statistically significant differences between study groups ($p > 0.05$). Subject age, gender, weight, height, BMI, waist measurements and physical activity factors at study onset in each group are listed in table I. There were no statistically significantly differences between groups ($p > 0.05$). Body composition data at study onset regarding fat mass, fat percentage, abdominal fat mass, abdominal fat percentage, muscle mass, muscle percentage, and total body water of the subjects at study onset in each group are listed in table II.

Table 1. Demographic Characteristics

DEMOGRAPHIC CHARACTERISTICS	PL	LB	TOTAL
AGE	43,4 + 8,4	41,8 + 8,8	42,6 + 8,5
GENDER (M/F)	10 A / 15 Γ	8 A / 17 Γ	18 A / 32 Γ
HEIGHT	168,5 + 8,4	167,3 + 10,8	167,9 + 9,6
WEIGHT	89,4 + 11,5	88,0 + 12,7	88,7 + 12,1
BMI	31,4 + 2,4	31,5 + 2,6	31,4 + 2,5
WAISTCIRCUMEFERENCE	101,20 + 12,86	99,56 + 13,98	100,53 + 13,31
PHYSICAL ACTIVITY FACTOR (PAF)	1,40 + 0,97	1,39 + 0,14	1,40 + 0,12

Mean + SD. *p<0,05

Table 2. Body Composition Characteristics of the Participants

BODY COMPOSITION VARIABLES	PL	LB	TOTAL
BODY FAT (Kg)	31,5 + 5,2	30,6 + 5,8	31,1 + 5,5
BODY FAT PERCENTAGE (%)	35,4 + 5,1	34,8 + 5,2	35,1 + 5,2
VISCERAL FAT(Kg)	16,1 + 2,8	15,4 + 3,0	15,8 + 2,9
VISCERAL FAT PERCENTAGE(%)	18,0 + 1,9	17,5 + 2,7	17,8 + 2,3
MUSCLE MASS(Kg)	16,8 + 3,2	16,6 + 3,6	16,7 + 3,4
MUSCLE MASS PERCENTAGE(%)	18,6 + 2,0	18,9 + 2,2	18,8 + 2,1
TOTAL BODY WATER (lt)	39,9 + 8,5	40,8 + 8,8	40,4 + 8,7

Mean + SD. *p<0,05 between groups

There were no statistically significant differences between groups ($p > 0.05$). When weight (Figure 1), BMI (Figure 2) and waist measurements (Figure 3) were analyzed, significant decreases over time were observed in both the control and Losebig group; however, there were statistically significant differences observed between the groups.

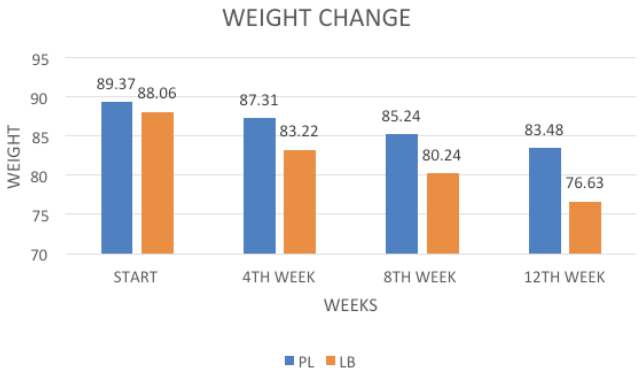

Figure 1: Body weight levels at specific time intervals for two groups: losebig and placebo (Mean+SD. *p<0.05 within time, #p<0.05 between groups).

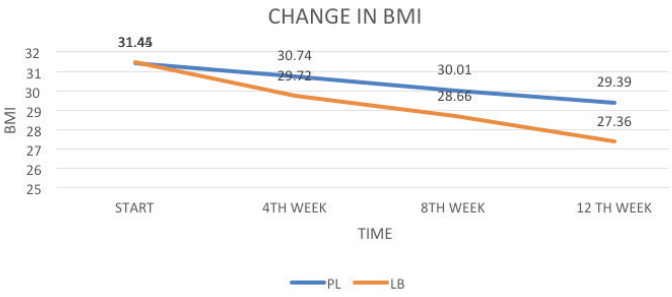

Figure 2: Change in body mass index (BMI) per time period, in Losebig and placebo groups (Mean+SD. *p<0.05 within time, #p<0.05 between groups).

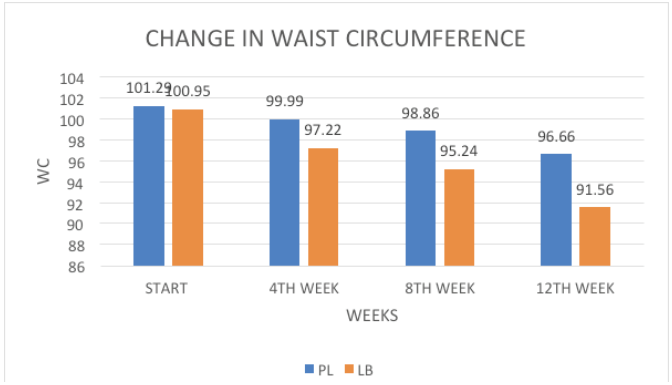

Figure 3: Change in Waist Circumference (WC) by time, in Losebig and placebo groups (Mean+SD. *p<0.05 within time, #p<0.05 between groups).

Significant decreases over time were observed in both the control and Losebig group in subject weight, total fat mass, and abdominal fat mass. The decreases in total fat weight and total fat percentage were similar in both groups. The decrease in abdominal fat mass was greater in the Losebig group than in the control group (p = 0.05).

Total Fat Mass percentage (Figure 4), total fat mass change in kg (Figure 5) and abdominal fat percentage (Figure 6) decreased more in the Losebig group compared to those in the control group (p= 0.043). Also abdominal fat mass in kg decreased more in the Losebig group compared to that in the control group (Figure 7). When MoCA, BES and EES scores at study onset and at week 12 were compared, MoCA scores were found to be increased in Losebig group compared to those in the control group (Figure 8). BES scores were found to be decreased in Losebig group compared to the control group (Figure 9). EES scores were found to be decreased in Losebig group compared to the control group (Figure 10).

Body Fat

In terms of body fat, the Losebig group showed a more significant reduction compared to the placebo group. The initial average fat value for the Losebig group was 34.8%, with the final average value decreasing to 28.4% (Figure 5). This statistically significant reduction of 6.4 percentage points represents a substantial improvement in the muscle mass to fat ratio. The corresponding reduction in body fat in kilograms in the Losebig group was from 30.6 kg to 21.8 kg (Figure 6). Figures 7 and 8 show the variation in the percentage (%) and kilograms (kg) of body fat over time in the Losebig and placebo groups.

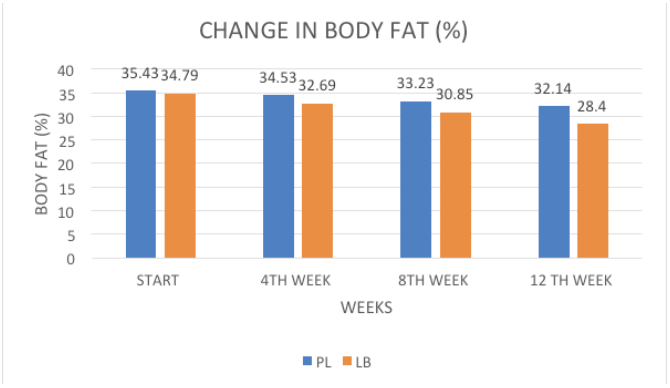

Figure 4: Change in body fat percentage (%) by time, in Losebig and placebo groups (Mean+SD. *p<0.05 within time, #p<0.05 between groups).

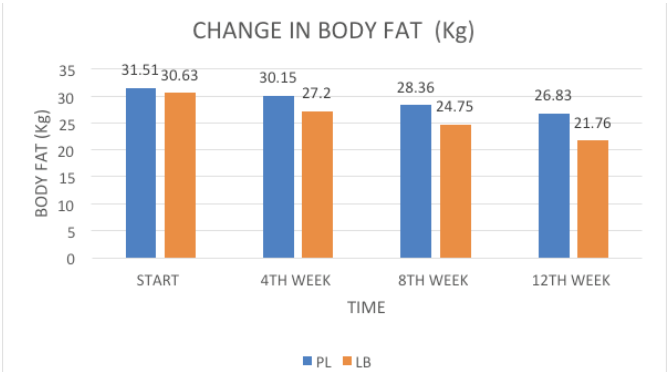

Figure 5: Change in body fat (Kg) per time period, in Losebig and placebo groups (Mean+SD. *p<0.05 within time, #p<0.05 between groups).

Visceral Fat

The accumulation of visceral fat is a serious health problem. Visceral fat releases free fatty acids that travel through the veins to vital organs, causing fat to accumulate in them. It is associated with a higher risk of type 2 diabetes, insulin resistance, heart disease, low immunity, inflammation, and certain types of cancer. In terms of visceral fat, the Losebig group showed a more significant reduction compared to the placebo group.

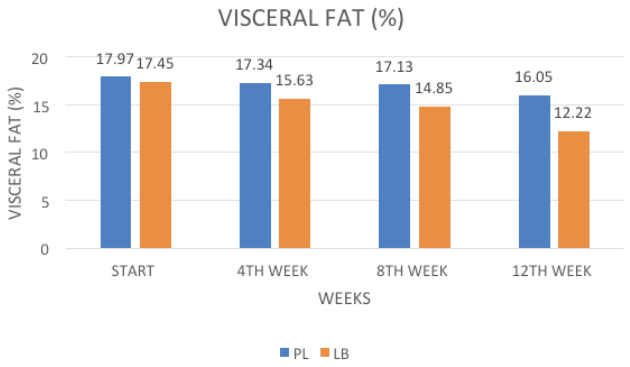

Figure 6: Change in percentage (%) of visceral fat by time, in Losebig and placebo groups (Mean+SD. *p<0.05 within time, #p<0.05 between groups).

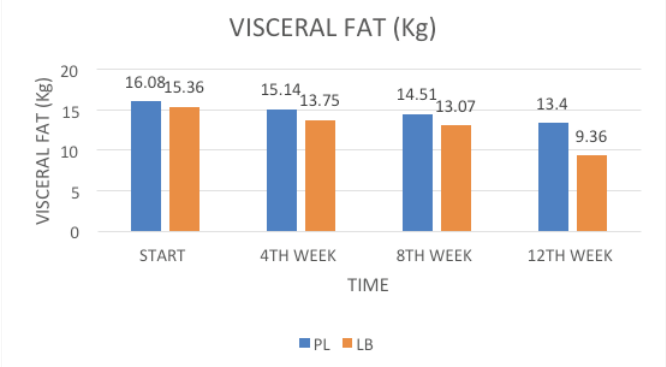

Figure 7: Change in abdominal fat (Kg) per time interval, in Losebig and placebo groups (Mean+SD. *p<0.05 within time, #p<0.05 between groups).

MoCA Score

As shown in Figure 8, cognitive functions did not decrease. If anything, they increased significantly in the Losebig Group, indicating the absolute safety of the supplement.

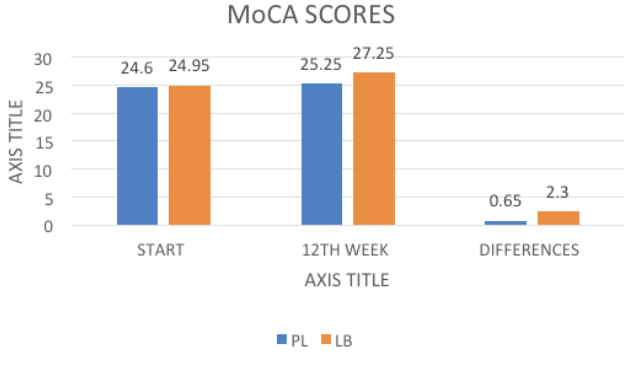

Figure 8: Start and end MoCA Score values, as well as difference of change in MoCA Score values, in Losebig and placebo groups (Mean +SD. *p<0.05 between groups).

Binge Eating Scale

As shown in Figures 24 and 25, the Losebig Group showed a particularly statistically significant decline in the Binge Eating Scale (BES) score, and in fact, this Group declined from levels of severe bulimia to levels of no or mild bulimia (28.5 vs. 14.6), in contrast to the Placebo Group, which exhibited no difference in its assessment (28.6 vs. 27.0).

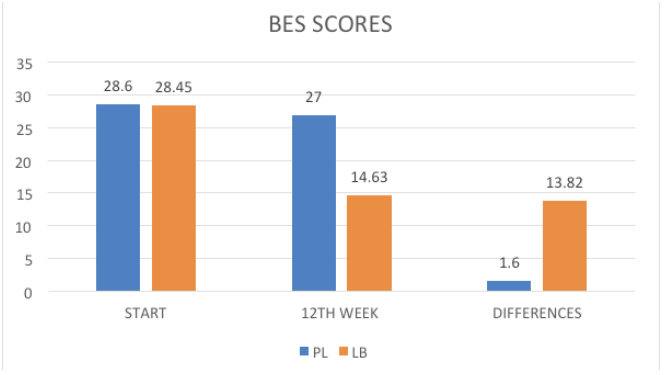

Figure 9: **Binge** Eating Scale (BES) start and end scores in the Losebig and placebo groups (Mean+SD. *p<0.05 within time, #p<0.05 between groups).

Emotional Eating Scale

Both the BES and the Emotional Eating Scale are used in many research studies and clinical applications to help health professionals better understand the psychological dimension of eating and to design intervention strategies, such as counseling and therapy, that focus on the emotional component of eating behavior. (Benton, 2010). As shown in Figure 10, the Losebig group demonstrated a statistically significant reduction in EES scores. Notably, participants shifted from levels indicating high emotional eating to levels indicating low emotional eating (57.5 vs 19.3). In contrast, the Placebo group showed no substantial change in their scores (55.6 vs 50.1).

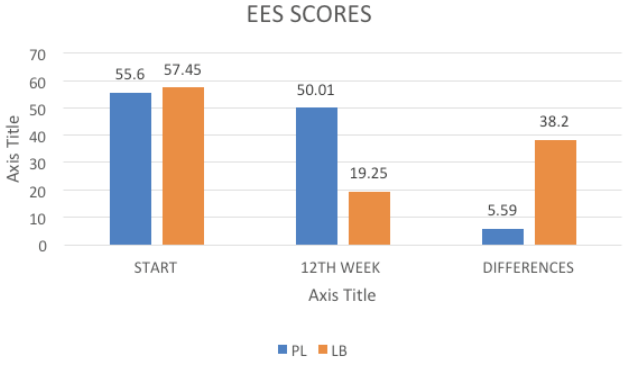

Figure 10: Emotional Eating Scale (EES) start and end scores, in Losebig and placebo groups (Mean+SD. *p<0.05 within time, #p<0.05 between groups). (Benton, 2010)

Discussion

This study clearly and conclusively demonstrates the effectiveness of the Losebig supplement in managing obesity, both biologically and behaviorally. Specifically, the group that received the supplement showed an average weight loss of 11.5 kg in just 3 months, which is almost double that of the placebo group (5.9 kg). At the same time, body fat percentage decreased from 34.8% to 28.4% in the Losebig group, while in the placebo group the change was significantly smaller (from 35.4% to 32.1%). The fact that the loss mainly has to do with fat mass and not muscle mass indicates the lipotropic and targeted action of the supplement. The reduction in visceral fat is particularly important. Visceral fat is directly related to metabolic syndromes, insulin resistance, and inflammatory processes. The reduction from 17.5% to 12.2% (and from 15.4 kg to 9.5 kg, respectively) shows a clear protective effect against chronic diseases. At the same time, the waist circumference in the Losebig group decreased by approximately 10 cm, compared to 4.6 cm in the placebo group, reinforcing the clinical significance of the findings, as waist circumference is an indicator of central obesity and risk for cardiometabolic diseases. Beyond physical parameters, the study also assessed psychological and cognitive functions. Participants in the Losebig group showed improvement in their MoCA scores, indicating a positive effect on cognitive function. In addition, the statistically significant reduction in the Binge Eating Scale (from 28.5 to 14.6) and the Emotional Eating Scale (from 57.5 to 19.3) proves that the supplement contributed to a reduction in emotional overeating and impulsive food consumption, something that is difficult to achieve with dietary interventions alone (Benton, 2010).

The above results may be explained by the composition of Losebig, which includes natural extracts (e.g., berberine, French Lilac, cinnamon), micronutrients (chromium), neuroactive amino acids (tryptophan, tyrosine), and probiotics, which act synergistically on metabolic, neuroendocrine, and psychobehavioral mechanisms (Anderson, 1998, Atanasov et al., 2000, Bailey & Day, 2004, Yin et al., 2008, Zhang et al., 2010, Richard et al., 2009, Fernstrom, 2013, Delzenne et al., 2011, Khan et al., 2003, Allen et al., 2013, Sarkar et al., 2016, Asbaghi et al., 2020). Sensory enhancement through aromas (mint, grapefruit, vanilla) may also have contributed to appetite regulation and dietary behavior modification (Kadowaki et al., 2011, Proserpio et al., 2017).

Regarding berberine, in a clinical trial involving 48 adults with poorly controlled type 2 diabetes mellitus, berberine administration significantly reduced fasting and postprandial glucose levels from the first week until the end of the trial (Yin et al., 2008). Glycated hemoglobin (HbA1c) decreased from 8.1% (±0.2%) to 7.3% (±0.3%; $p < .001$) (Yin et al., 2008). Fasting plasma insulin and the HOMA-IR index decreased by 28.1% and 44.7%, respectively ($p < .001$) (Yin et al., 2008). Total cholesterol and LDL-C also showed a statistically significant decrease. Gastrointestinal side effects were observed in 20 of the 58 patients (34.5%), but without functional impairment of the liver or kidneys. In combination with other drugs, berberine consistently improved glycemic and lipid parameters. Insulin sensitivity improved, as evidenced by a reduction in HOMA-IR of approximately 50%. This is probably related to changes in fat distribution, as waist circumference and waist-to-hip ratio decreased significantly without a change in weight. Interestingly, fasting and postprandial C-peptide levels increased when berberine and insulin were administered concurrently, suggesting a possible improvement in insulin secretion from β-cells and supporting the hypothesis that long-term treatment with berberine may improve pancreatic cell function in patients who do not respond to oral hypoglycemic agents (Yin et al., 2008). However, further research is required. Mechanistically, berberine exhibits insulin sensitizing activity both in vivo and in vitro. In obese individuals on a high-fat diet, it reduces insulin resistance similarly to metformin. In hepatocytes, adipocytes, and muscle cells, it increases glucose uptake even in the absence of insulin. Proposed mechanisms include stimulation of glycolysis through inhibition of oxidative function in mitochondria and inhibition of α-glucosidase, reducing carbohydrate digestion and glucose absorption in the intestine. These latter actions may be responsible for both the hypoglycemic properties and the gastrointestinal side effects observed in some patients (Yin et al., 2008).

Metformin (dimethylbiguanide) is now considered the most widely used drug in the treatment of diabetes. Its history begins with the use of the plant Galega officinalis Linn as a herbal medicine in medieval Europe (Bailey & Day, 2004). G. officinalis is a perennial plant with white, blue, or purple flowers that grows up to three feet tall and is found in many temperate regions, including Britain (Bailey & Day, 2004). Its common names include goat's rue, French lilac, Spanish sanfoin, and false indigo (Bailey & Day, 2004). The article traces the roots of the antidiabetic dimethylbiguanide to the use of G. officinalis, which was found to be rich in guanidine, a glucose-lowering substance that formed the chemical basis of metformin (Bailey & Day, 2004). A less toxic extract of G. officinalis was soon used as an antidiabetic drug in the 1920s, and eventually the insulin-sensitizing substance was introduced in 1957 (Bailey & Day, 2004).

Cinnamon has been extensively studied for its role in improving insulin sensitivity and glycemic control. In a randomized controlled trial, Khan et al. (2003) investigated the effects of cinnamon supplementation (1, 3, or 6 g/day for 40 days) in patients with type 2 diabetes. The results showed significant reductions in fasting blood glucose (by 18–29%), triglycerides (23–30%), total cholesterol (12–26%), and LDL cholesterol (7–27%), with no significant change in HDL levels. Building on this, Allen et al. (2013) conducted a systematic review and meta-analysis including ten randomized controlled trials with a total of 543 participants. Their analysis found that cinnamon intake (ranging from 120 mg to 6 g per day over 4 to 18 weeks) significantly reduced fasting plasma glucose (by −24.59 mg/dL), total cholesterol (−15.6 mg/dL), LDL-C (−9.4 mg/dL), triglycerides (−29.6 mg/dL), and slightly increased HDL-C (+1.7 mg/dL). However, no statistically significant effect on HbA1c was observed. These findings suggest that cinnamon may serve as a beneficial adjunct therapy in managing type

2 diabetes, especially in improving lipid and glycemic parameters (Khan et al., 2003, Allen et al., 2013).

Chromium is an essential trace element involved in carbohydrate and lipid metabolism, particularly known for enhancing insulin action and improving glycemic control. Recent evidence suggests that chromium supplementation may be beneficial for individuals with type 2 diabetes. In a systematic review and meta-analysis of 28 randomized controlled trials, Asbaghi et al. (2020) reported that chromium supplementation significantly reduced fasting plasma glucose, hemoglobin A1c, fasting insulin levels, and HOMA-IR index. The doses ranged from 50 to 1,000 mg per day, administered for 2 to 6 months. Despite these promising findings, the authors noted considerable heterogeneity among the studies, emphasizing the need for further well-designed clinical trials to confirm chromium's efficacy and safety in diabetes management (Asbaghi et al., 2020).

Tryptophan and tyrosine are essential aromatic amino acids that serve as precursors for the synthesis of serotonin and dopamine, respectively, linking them directly to the regulation of mood, appetite, and cognitive function. Tryptophan, the sole precursor of serotonin, plays a critical role in brain serotonin synthesis: experimental studies have shown that manipulating serum tryptophan concentration can modulate brain serotonin synthesis, which in turn affects mood, behavior, and cognition (Richard et al., 2009). Similarly, the availability of tyrosine—a precursor for dopamine, norepinephrine, and epinephrine—affects catecholamine production in the brain, influencing mood and appetite regulation (Fernstrom, 2013). Together, these neuroactive amino acids are central to monoamine neurotransmission, and their dietary availability can have significant psychophysiological effects.

Probiotics—live microorganisms that confer health benefits—have had effects on both body weight regulation and the gut–brain axis. Research indicates that gut microbiota composition and activity significantly influence energy metabolism, adiposity, and glucose homeostasis, contributing to the development or attenuation of insulin resistance (Delzenne et al., 2011). Probiotic supplementation, often studied alongside prebiotics, has been shown to improve gut barrier function, modulate endocrine responses, and reduce low-grade inflammation—all of which are implicated in metabolic regulation (Delzenne et al., 2011). In addition, emerging evidence from psychology and cognitive neuroscience highlights bidirectional interactions between gut microbes and brain function. These interactions influence mood, cognition, stress responses, and social behaviors, though the field remains limited by methodological constraints such as small sample sizes and mechanistic uncertainty (Sarkar et al., 2016). Collectively, these findings support the role of probiotics in modulating metabolism and psychobehavior via the gut–brain axis, but emphasize the need for larger, well-controlled clinical trials to clarify mechanisms and therapeutic potential.

Certain ambient aromas have been studied for their potential effects on appetite and food intake. Kadowaki et al. (2011) reported that the inhalation of grapefruit scent increased sympathetic nervous system activity, which is linked to appetite suppression. More recent research confirms that food-related odors—especially those congruent with specific food types—enhance sensory-specific appetite and can increase intake of corresponding foods (Proserpio et al., 2017). Findings suggest that targeted aroma exposure may serve as a subtle, non-invasive tool for modulating eating behaviors and promoting better dietary choices.

Analyzing user comments on the use of the Losebig supplement, it appears that reactions varied and depended on individual circumstances as well as the body's response. However, most reports agree that the supplement had a positive effect on their appetite, reducing it significantly. Specifically, several dieters reported that their appetite decreased significantly, with comments such as "it curbed her appetite" and "she is not hungry at all". In particular, a decrease in appetite was observed, along with a positive effect on weight and fat loss. This suggests that Losebig may have contributed to limited food consumption by controlling appetite and possibly helping to accelerate the weight loss process. With regard to metabolism, reports of its enhancement were not universal, but several users reported feeling "deflated" and experiencing an improvement in fat burning. As a result, recording these impressions shows that Losebig may have a positive effect on metabolism among a significant percentage of users.

Improvement in Blood Tests: Most users reported that using the Losebig supplement contributed to an improvement in their blood tests, with significant changes in indicators such as blood sugar, cholesterol (Chol), triglycerides (TG), as well as HDL and LDL. Specifically, there was a decrease in LDL (bad cholesterol) and triglyceride levels, while at the same time there was an increase in HDL (good cholesterol) levels, indicative of good cardiovascular health. In addition, users reported a reduction in blood sugar, suggesting a possible positive effect of the supplement on sugar metabolism management. These improvements in health markers may contribute to better cardiometabolic health, although further studies are needed to confirm the long-term efficacy and safety of the supplement in these areas.

Side Effects and Issues: There have been no reports of side effects such as stomach pain and nausea. These symptoms are most probably related to underlying health problems, such as gastroesophageal reflux disease (GERD), and in these cases, some users may temporarily discontinue the use of the supplement until it is approved by their physician.

Recommendations for Future Use: Although the supplement appears to have a positive effect on appetite and weight loss, some users have reported that its effectiveness may be improved when taken after meals rather than before. Adjusting the use of the supplement after meals may provide greater appetite suppression and better calorie management throughout the day.

Conclusion

This study found an augmentation in the reduction of weight, BMI, waist circumference as well as visceral fat mass and per-

centage over time with Losebig supplementation in overweight or obese individuals on a weight loss diet. Cognitive function, as measured by the Montreal Cognitive Assessment (MoCA) test, Binge Eating Scale (BES) test and Emotional Eating Scale (EES) test, improved over time as the subjects lost weight (Benton, 2010, Yan et al., 2023, Li et al., 2024). The analysis of the results clearly shows that the Losebig supplement has a more significant and substantial effect on weight loss, fat reduction, BMI, and waist circumference compared to the placebo. Participants who used Losebig experienced greater weight loss and improvement in fat-to-muscle ratio, while the placebo group showed more limited results across all indicators. The statistically significant differences in these parameters indicate that the Losebig supplement may offer a real and reliable solution to improving physical health and weight loss. In conclusion, Losebig appears to have a wholly positive effect on appetite and weight loss for all users, and to facilitate the oxidation of body fat. In addition, changing the method of administration and taking it after meals, may offer additional benefits in suppressing appetite and boosting metabolism. However, the clinical significance of these findings warrants further investigation. Studies on larger groups focusing on the effects of possible contributing factors such as BMI, genetic factors, loneliness, age, and gender with higher doses or longer duration of supplementation are required to identify the relationship and mechanisms of action of Losebig supplementation on cognitive performance and weight loss. Focusing on a specific age group or gender might be helpful in finding out the effects of antioxidants on cognitive functions. Our study was not set to identify age or gender effects of Losebig supplementation on MOCA scores, BES scores and EES scores. Another factor might be loneliness or social interaction with other individuals. In conclusion, Losebig may contribute to reduced appetite, weight loss, and improved cognitive function. Further studies with a larger number of subjects, higher doses, or longer duration of supplementation, as well as different tools to assess cognitive functions, are required.

This study was conducted at the facilities and research center of the Hellenic Nutrition Society in Rizoupoli and Kolonaki, with the participation of the following clinical nutritionists:

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- Konstantinos Voutsadakis
- Georgia Kapoli, MSc
- Maria Kazantzidi
- Angelina Lorentzou

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