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Get the science behind NeoLifeShake with both NeoLife Studies and Peer Reviewed Studies that support ingredients found in this amazing product.



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NeoLife Studies

Assessing The Efficacy Of The GNLD Neolifeshake Protein-Based Meal Replacement Product On Weight Loss.

ABSTRACT

Weight management continues to be a huge concern for the population. We aimed to evaluate the efficacy of the GNLD NeoLifeShake protein-based meal replacement product on weight loss and markers of metabolic health among overweight and obese men and women. Overweight and obese subjects were enrolled in a 12-week open-label study where two meals per day were replaced with a 160-calorie shake comprised of 18g protein and 5g dietary fiber. Measured endpoints included weight and anthropometric measures, as well as lipid profile and other biomarkers. The protocol did not enforce any additional dietary restrictions or exercise programs. A total of 68 individuals were enrolled in the study. The mean age of subjects was 39 +/- 10 years, mean weight was 184 +/- 23.4 lbs and mean BMI was 29.78 +/- 2.50 kg/m². At the end of the study, subjects were found to lose an average of 5.27 pounds compared to baseline $p < 0.001$. The BMI decreased to 29.12 ($p = 0.001$) kg/m² and hip circumference decreased from 42.82 inches at baseline to 42.28 inches at week 12 ($p = 0.051$). Additionally, low density lipoprotein (LD) levels decreased from 108.6 mg/dL at baseline to 92.13 mg/dL ($p = 0.018$).

This study demonstrates that even in the absence of other changes in diet or exercise, meal replacement with the GNLD NeoLifeShake protein-based product supports a healthy and consistent weight loss and a healthy lipid profile.

Source: Udani JK, Pakdaman MN, Srivastava A, Miller JR. Assessing the efficacy of the GNLD NeoLifeShake protein-based meal replacement product on weight loss. American College of Nutrition 55th Annual Conference. 2014.

Peer Reviewed Studies

Weight Management

Ghrelin And Glucagon-Like Peptide 1 Concentrations, 24-H Satiety, And Energy And Substrate Metabolism During A High-Protein Diet And Measured In A Respiration Chamber.

ABSTRACT

Background: The mechanism of protein-induced satiety remains unclear. Objective: The objective was to investigate 24-h satiety and related hormones and energy and substrate metabolism during a high protein (HP) diet in a respiration chamber. Design: Twelve healthy women aged 18 – 40 y were fed in energy balance an adequate-protein (AP: 10%, 60%, and 30% of energy from protein, carbohydrate, and fat, respectively) or an HP (30%, 40%, and 30% of energy from protein, carbohydrate, and fat, respectively) diet in a randomized crossover design. Substrate oxidation, 24-h energy expenditure (EE), appetite profile, and ghrelin and glucagon-like peptide 1 (GLP-1) concentrations were measured. Results: Sleeping metabolic rate (6.40 +/- 0.47 compared with 6.12 +/- 0.40 MJ/d; $P < 0.05$), diet-induced thermogenesis (0.91 +/- 0.25 compared with 0.69 +/- 0.24 MJ/d; $P < 0.05$), and satiety were significantly higher, and activity-induced EE (1.68 +/- 0.32 compared with 1.86 +/- 0.41; $P < 0.05$), respiratory quotient (0.84 +/- 0.02 compared with 0.88 +/- 0.03; $P < 0.0005$), and hunger were significantly lower during the HP diet. There was a tendency for a greater 24-h EE during the HP diet ($P = 0.05$). Although energy intake was not significantly different between the diet groups, the subjects were in energy balance during the HP diet and in positive energy balance during the AP diet. Satiety was related to 24-h protein intake ($r^2 = 0.49$, $P < 0.05$) only during the HP diet. Ghrelin concentrations were not significantly different between diets. GLP-1 concentrations after dinner were higher during the HP than during the AP diet ($P < 0.05$). Conclusion: An HP diet, compared with an AP diet, fed at energy balance for 4 d increased 24-h satiety, thermogenesis, sleeping metabolic rate, protein balance, and fat oxidation. Satiety was related to protein intake, and incidentally to ghrelin and GLP-1 concentrations, only during the HP diet.

Source: Lejeune MP, Westerterp KR, Adam TC, Luscombe-Marsh ND, Westerterp-Plantenga MS. Ghrelin and glucagon-like peptide 1 concentrations, 24-h satiety, and energy and substrate metabolism during a high-protein diet and measured in a respiration chamber. Am J Clin Nutr. 2006;83(1):89-94.

Diet Induced Thermogenesis Measured Over 24h In A Respiration Chamber: Effect Of Diet Composition

ABSTRACT

Objective: To study the effect of diet composition on diet-induced thermogenesis (DIT) over 24 h in a respiration chamber. **SUBJECTS:** Eight healthy female volunteers (age 27 +/- 3 y; body mass index, BMI 23 +/- 3 kg/m²). **DIETS:** A high protein and carbohydrate (HP/C) (60:10:30; percentage energy (E%) carbohydrate, fat and protein, respectively) and high fat (HF) (30:60:10 respectively) diet, both isoenergetic, isovolumetric, composed of normal food items and matched for organoleptic properties (taste, smell, appearance). **DESIGN:** Subjects spent two 36 h periods each in a respiration chamber consuming both test diets in random order. Components of 24 h energy expenditure (24 h EE): sleeping metabolic rate, DIT and activity induced energy expenditure were measured. **RESULTS:** DIT was higher in all subjects while on the HP/C diet (1295 kJ/d vs 931 kJ/d; 14.6% vs 10.5% of energy intake; P < 0.02). There was no significant difference in other components or total 24 h EE, although there was a trend towards higher EE on the HP/C diet.

CONCLUSION

A high protein and carbohydrate diet induces a greater thermic response in healthy individuals when compared to a high fat diet.

Source: Westerterp KR, Wilson SA, Rolland V. Diet induced thermogenesis measured over 24h in a respiration chamber: effect of diet composition. Int J Obes Relat Metab Disord. 1999;23(3):287-292.

Normal Protein Intake Is Required For Body Weight Loss And Weight Maintenance, And Elevated Protein Intake For Additional Preservation Of Resting Energy Expenditure And Fat Free Mass.

ABSTRACT

Energy-restricted high-protein diets (HPDs) have shown favorable results for body weight (BW) management, yet studies differ in their outcomes depending on the dietary protein content. Our objective was to determine the effects of dietary protein content on BW loss-related variables during a 6-mo energy restriction with the use of diets containing protein at the level of requirement [normal-protein diet (NPD), 0.8 g/kg BW/day] and above (HPD, 1.2 g/kg BW/day). In overweight and obese participants (24 men and 48 women), BW, body composition, and metabolic responses were assessed

before and after subsequent energy intakes of 100, 33, and 67% of the original individual daily energy requirements. Protein intake was consistent in the NPD (0.8 +/- 0.3 g/kg BW/day) and HPD (1.2 +/- 0.3 g/kg BW/day) groups throughout the study (P < 0.001). BMI and body fat mass similarly decreased in the NPD and HPD groups (P < 0.01). Fat free mass (FFM), resting energy expenditure (REE) compared with predicted REE, and diastolic blood pressure (DBP) changed favorably with the HPD compared with the NPD group after BW loss (P < 0.05). A NPD of 0.8 g/kg BW/day is sufficient for BW management, whereas a HPD of 1.2 g/kg BW/day is necessary for preservation of REE and a stronger initial sparing effect of FFM and lowering of DBP

Source: Soenen S, Martens EA, Hochstenbach-Waelen A, Lemmens SG, Westerterp-Plantenga MS. Normal protein intake is required for body weight loss and weight maintenance, and elevated protein intake for additional preservation of resting energy expenditure and fat free mass. J Nutr. 2013;143(5):591-596.

Satiety

A High-Protein Diet Induces Sustained Reductions In Appetite, Ad Libitum Caloric Intake, And Body Weight Despite Compensatory Changes In Diurnal Plasma Leptin And Ghrelin Concentrations.

ABSTRACT

Background: Ad libitum, low-carbohydrate diets decrease caloric intake and cause weight loss. It is unclear whether these effects are due to the reduced carbohydrate content of such diets or to their associated increase in protein intake. **Objective:** We tested the hypothesis that increasing the protein content while maintaining the carbohydrate content of the diet lowers body weight by decreasing appetite and spontaneous caloric intake. **Design:** Appetite, caloric intake, body weight, and fat mass were measured in 19 subjects placed sequentially on the following diets: a weight-maintaining diet (15% protein, 35% fat, and 50% carbohydrate) for 2 wk, an isocaloric diet (30% protein, 20% fat, and 50% carbohydrate) for 2 wk, and an ad libitum diet (30% protein, 20% fat, and 50% carbohydrate) for 12 wk. Blood was sampled frequently at the end of each diet phase to measure the area under the plasma concentration versus time curve (AUC) for insulin, leptin, and ghrelin. **Results:** Satiety was markedly increased with the isocaloric high-protein diet despite an unchanged leptin AUC. Mean (+/-SE) spontaneous energy intake decreased by 441 +/- 63 kcal/d, body weight decreased by 4.9 +/- 0.5 kg, and fat mass decreased by 3.7 +/- 0.4 kg with the ad libitum, high-protein diet, despite a

significantly decreased leptin AUC and increased ghrelin AUC. Conclusions: An increase in dietary protein from 15% to 30% of energy at a constant carbohydrate intake produces a sustained decrease in ad libitum caloric intake that may be mediated by increased central nervous system leptin sensitivity and results in significant weight loss. This anorexic effect of protein may contribute to the weight loss produced by low-carbohydrate diets.

Source: Weigle DS, Breen PA, Matthys CC, et al. A high-protein diet induces sustained reductions in appetite, ad libitum caloric intake, and body weight despite compensatory changes in diurnal plasma leptin and ghrelin concentrations. Am J Clin Nutr. 2005;82(1):41-48.

Dose-Dependent Satiating Effect Of Whey Relative To Casein Or Soy

ABSTRACT

Dietary protein plays a role in body weight regulation, partly because of its effects on appetite. The objective was to compare the effects of high or normal casein-, soy-, or whey-protein breakfasts on appetite, specific hormones, amino acid responses and subsequent energy intake. Twenty-five healthy subjects (mean \pm SEM BMI:23.9 \pm 0.3 kg/m² ; age:22 \pm 1 years) received standardized breakfasts: custards with either casein-, soy, or whey-protein with either 10/55/35 (normal) or 25/55/20 (high)En% protein/carbohydrate/fat in a randomized, single-blind design. Appetite profile (Visual Analogue Scales) and amino acid concentrations were determined for 4 h whereas plasma glucose, insulin, active Glucagon-like Peptide 1 (GLP-1), and active ghrelin concentrations were determined for 3 h; the sensitive moment for lunch was determined. Subjects returned for a second set of experiments and received the same breakfasts, ad lib lunch was offered 180 min later; energy intake (EI) was assessed. At 10En%, whey decreased hunger more than casein or soy ($p < 0.05$), coinciding with higher leucine, lysine, tryptophan, isoleucine, and threonine responses ($p < 0.05$). At 25En% there were no differences in appetite ratings. Whey triggered the strongest responses in concentrations of active GLP-1 ($p < 0.05$) and insulin ($p < 0.05$) compared with casein and/or soy. There were no differences in EI. In conclusion, differences in appetite ratings between different proteins appeared at a normal concentration; at 10En% whey-protein decreased hunger more than casein- or soy-protein. At 25En% whey-protein triggered stronger responses in hormone concentrations than casein- or soy-protein. The results suggest that a difference in appetite ratings between types of protein appears when certain amino acids are above and below particular threshold values.

Source: Veldhorst MA, Nieuwenhuizen AG, Hochstenbach-Waelen A, et al. Dose-dependent satiating effect of whey relative to casein or soy. Physiol Behav. 2009;96(4-5):675-682.

Healthy Blood Sugar Maintenance

A Reduced Ratio Of Dietary Carbohydrate To Protein Improves Body Composition And Blood Lipid Profiles During Weight Loss In Adult Women.

ABSTRACT

Claims about the merits or risks of carbohydrate (CHO) vs. protein for weight loss diets are extensive, yet the ideal ratio of dietary carbohydrate to protein for adult health and weight management remains unknown. This study examined the efficacy of two weight loss diets with modified CHO/protein ratios to change body composition and blood lipids in adult women. Women (n=24; 45 to 56 y old) with body mass indices >26 kg/m² were assigned to either a CHO Group consuming a diet with a CHO/protein ratio of 3.5 (68 g protein/d) or a Protein Group with a ratio of 1.4 (125 g protein/d). Diets were isoenergetic, providing 7100 kJ/d, and similar amounts of fat (~50 g/d). After consuming the diets for 10 wk, the CHO Group lost 6.96 \pm 1.36 kg body weight and the Protein Group lost 7.53 \pm 1.44 kg. Weight loss in the Protein Group was partitioned to a significantly higher loss of fat/lean (6.3 \pm 1.2 g/g) compared with the CHO Group (3.8 \pm 0.9). Both groups had significant reductions in serum cholesterol (~10%), whereas the Protein Group also had significant reductions in triacylglycerols (TAG) (21%) and the ratio of TAG/HDL cholesterol (23%). Women in the CHO Group had higher insulin responses to meals and postprandial hypoglycemia, whereas women in the Protein Group reported greater satiety. This study demonstrates that increasing the proportion of protein to carbohydrate in the diet of adult women has positive effects on body composition, blood lipids, glucose homeostasis and satiety during weight loss.

Source: Layman DK, Boileau RA, Erickson DJ, et al. A reduced ratio of dietary carbohydrate to protein improves body composition and blood lipid profiles during weight loss in adult women. J Nutr. 2003;133(2):411-417.

Effect Of A High-Protein, Energy-Restricted Diet On Body Composition, Glycemic Control, And Lipid Concentrations In Overweight And Obese Hyperinsulinemic Men And Women.

ABSTRACT

Background: It is not clear whether varying the protein-to-carbohydrate ratio of weight-loss diets benefits body composition or metabolism. Objective: The objective was to compare the effects of 2 weight-loss diets differing in protein-to-carbohydrate ratio on body composition, glucose and lipid metabolism, and markers of bone turnover. Design: A parallel design included either a high-protein diet of meat, poultry, and dairy foods (HP diet: 27% of energy as protein, 44% as carbohydrate, and 29% as fat) or a standard-protein diet low in those foods (SP diet: 16% of energy as protein, 57% as carbohydrate, and 27% as fat) during 12 wk of energy restriction (6–6.3 MJ/d) and 4 wk of energy balance (~8.2 MJ/d). Fifty-seven overweight volunteers with fasting insulin concentrations > 12 mU/L completed the study. Results: Weight loss (7.9 ± 0.5 kg) and total fat loss (6.9 ± 0.4 kg) did not differ between diet groups. In women, total lean mass was significantly ($P = 0.02$) better preserved with the HP diet (-0.1 ± 0.3 kg) than with the SP diet (-1.5 ± 0.3 kg). Those fed the HP diet had significantly ($P < 0.03$) less glycemic response at weeks 0 and 16 than did those fed the SP diet. After weight loss, the glycemic response decreased significantly ($P < 0.05$) more in the HP diet group. The reduction in serum triacylglycerol concentrations was significantly ($P < 0.05$) greater in the HP diet group (23%) than in the SP diet group (10%). Markers of bone turnover, calcium excretion, and systolic blood pressure were unchanged. Conclusion: Replacing carbohydrate with protein from meat, poultry, and dairy foods has beneficial metabolic effects and no adverse effects on markers of bone turnover or calcium excretion.

Source: Farnsworth E, Luscombe ND, Noakes M, Wittert G, Argyiou E, Clifton PM. Effect of a high-protein, energy-restricted diet on body composition, glycemic control, and lipid concentrations in overweight and obese hyperinsulinemic men and women. *Am J Clin Nutr.* 2003;78(1):31-39.

Heart Health

Soy: A Complete Source Of Protein

ABSTRACT

Soybeans contain all of the essential amino acids necessary for human nutrition and have been grown and harvested for thousands of years. Populations with diets high in soy protein and low in animal protein have lower

risks of prostate and breast cancers than other populations. Increasing dietary whole soy protein lowers levels of total cholesterol, low-density lipoproteins, and triglycerides; may improve menopausal hot flashes; and may help maintain bone density and decrease fractures in postmenopausal women. There are not enough data to make recommendations concerning soy intake in women with a history of breast cancer. The refined soy isoflavone components, when given as supplements, have not yielded the same results as increasing dietary whole soy protein. Overall, soy is well tolerated, and because it is a complete source of protein shown to lower cholesterol, it is recommended as a dietary substitution for higher-fat animal products.

Source: Michelfelder AJ. Soy: a complete source of protein. *Am Fam Physician.* 2009;79(1):43-47.

A Meta-Analysis Of The Effect Of Soy Protein Supplementation On Serum Lipids.

ABSTRACT

Hypercholesterolemia is a major modifiable risk factor for cardiovascular disease. Some, but not all, studies have shown that soy protein intake decreases total and low-density lipoprotein cholesterol and triglycerides and increases high-density lipoprotein cholesterol. The objective of this meta-analysis was to examine the effect of soy protein supplementation on serum lipid levels in adults. English language articles were retrieved by searching MEDLINE (1966 to February 2005) and the bibliographies of the retrieved articles. A total of 41 randomized controlled trials in which isolated soy protein supplementation was the only intervention and the net changes in serum lipids during intervention were reported. Information on study design, sample size, participant characteristics, intervention, follow-up duration, and treatment outcomes was independently abstracted using a standardized protocol. Using a random-effects model, data from each study were pooled and weighted by the inverse of their variance. Soy protein supplementation was associated with a significant reduction in mean serum total cholesterol (-5.26 mg/dl, 95% confidence interval [CI] -7.14 to -3.38), low-density lipoprotein cholesterol (-4.25 mg/dl, 95% CI -6.00 to -2.50), and triglycerides (-6.26 mg/dl, 95% CI -9.14 to -3.38) and a significant increase in high-density lipoprotein cholesterol (0.77 mg/dl, 95% CI 0.20 to 1.34). Meta-regression analyses showed a dose-response relation between soy protein and isoflavone supplementation and net changes in serum lipids. These results indicate that soy protein supplementation reduces serum lipids among adults with or without hypercholesterolemia. In conclusion, replacing foods high

in saturated fat, trans-saturated fat, and cholesterol with soy protein may have a beneficial effect on coronary risk factors.

Source: Reynolds K, Chin A, Lees KA, Nguyen A, Bujnowski D, He J. A meta-analysis of the effect of soy protein supplementation on serum lipids. Am J Cardiol. 2006;98(5):633-640.

Protein Quality

Protein - Which Is Best?

ABSTRACT

Protein intake that exceeds the recommended daily allowance is widely accepted for both endurance and power athletes. However, considering the variety of proteins that are available much less is known concerning the benefits of consuming one protein versus another. The purpose of this paper is to identify and analyze key factors in order to make responsible recommendations to both the general and athletic populations. Evaluation of a protein is fundamental in determining its appropriateness in the human diet. Proteins that are of inferior content and digestibility are important to recognize and restrict or limit in the diet. Similarly, such knowledge will provide an ability to identify proteins that provide the greatest benefit and should be consumed. The various techniques utilized to rate protein will be discussed. Traditionally, sources of dietary protein are seen as either being of animal or vegetable origin. Animal sources provide a complete source of protein (i.e. containing all essential amino acids), whereas vegetable sources generally lack one or more of the essential amino acids. Animal sources of dietary protein, despite providing a complete protein and numerous vitamins and minerals, have some health professionals concerned about the amount of saturated fat common in these foods compared to vegetable sources. The advent of processing techniques has shifted some of this attention and ignited the sports supplement marketplace with derivative products such as whey, casein and soy. Individually, these products vary in quality and applicability to certain populations. The benefits that these particular proteins possess are discussed. In addition, the impact that elevated protein consumption has on health and safety issues (i.e. bone health, renal function) are also reviewed.

Source: Hoffman JR, Falvo MJ. Protein - Which is Best?. J Sports Sci Med. 2004;3(3):118-130. PMID: PMC3905294.