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Case reports

Changes in weight loss and lipid profiles after a dietary purification program: a prospective case series

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Abstract

Objective: The purpose of this case series was to describe immediate changes to weight and lipid profiles after a 21-day Standard Process whole food supplement and dietary modification program.

Methods: Changes in weight and lipid profiles were measured for 7 participants (6 men and 1 woman) participating in a 21-day program. The dietary modifications throughout the Standard Process program were consumption of (1) unlimited fresh or frozen vegetables and fruits and preferably twice as many vegetables as fruits, (2) ½ to 1 cup of cooked lentils or brown rice each day, (3) 4 to 7 teaspoons of cold pressed oils per day, and (4) at least 64 oz of water a day. After day 10 of the program, participants were allowed to consume 1 to 2 servings of baked, broiled, or braised poultry or fish per day. Participants consumed a whey protein–based shake as meal replacement 2 times per day. Nutritional supplementation included a cleanse product on days 1 to 7, soluble fiber supplementation including oat bran concentrate and apple pectin on all days, and "green food" supplementation on days 8 to 21.

Results: Weight loss ranged between 5.2 (2.4 kg) and 19.9 lb (9.0 kg) (average, 11.7 lb; 5.3 kg). Total cholesterol levels decreased with ranges between 11 and 77 mg/dL, and low-density lipoprotein cholesterol levels decreased in a range between 7 and 67 mg/dL.

Conclusion: After participating in a dietary program, the 7 participants demonstrated short-term weight loss and improvements in their lipid profiles.

Introduction

National statistics indicate that 33% to 36% of the US population is obese.[1] Diets emphasizing caloric restriction, without malnutrition of essential nutrients and regardless of dietary macronutrients, are promoting healthy weight loss, improving lipid profiles and fasting insulin levels, inducing metabolic adaptations, and reducing oxidative stress.[2-6] In addition, commercially available meal replacement products, such as Medifast (Medifast Inc., Owings Mills, MD),[7] NutriSystem (Nutrisystem, Fort Washington, PA),[8] Healthy Solutions (Healthy Solutions LLC, Scottsdale, AZ),[9]

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Ultra-Slim Fast (Unilever Slim Fast, London, UK),[10] and Isagenix 28-Day Program (Isagenix International LLC, Chandler, AZ),[11] are safe and effective weight loss products. With so many weight management programs available, how can a health care provider recommend the most appropriate evidence-based intervention for each of their patients?

Adherence to the diet plan is the critical factor for weight loss, weight maintenance, and health benefits. Evidence-based commercially available programs and products require minimal professional intervention and address the individualized eating habits of a diverse patient population. However, the development of nutrient profiling systems with an emphasis on whole foods philosophy and patient education may induce behavioral changes in eating habits.[12]

Consequently, a better quality diet characterized by increased consumption of more fruits, vegetables, whole foods, and decreased consumption of saturated fats, sugar, sodium, and processed foods may allow individuals to maintain a healthy weight and prevent chronic diseases associated with being overweight and obese to include cardiovascular disease, type II diabetes, and certain types of cancers.[13,14]

The Standard Process Purification Program (SPPP) (Standard Process Inc, Palmyra, WI) is used by some chiropractors as a nutritional intervention for their patients.[15] The 21-day SPPP is a holistic therapy designed to create a synergistic effect of whole food supplementation and dietary modifications with energy restriction.[15] The dietary modifications with energy restriction emphasize consuming controlled portion sizes of low–energy-density foods, for example, fruits, vegetables, and whole grain products, and have been fully described by Powell and Leonard.[15] The program includes 2 meal replacement shakes and introduces moderate amounts of protein from vegetable and whey sources on days 11 through 21 while restricting or eliminating meat, refined oils, and refined carbohydrates.[15] In addition to the whey protein–based shake, the nutritional supplementation program includes a cleanse product on days 1 to 7, soluble fiber supplementation including oat bran concentrate and apple pectin on all days, and "green food" supplementation on days 8 to 21.[15] Based upon a retrospective medical record review, Powell and Leonard[15] reported that SPPP improved lipid profiles and weight status of 28 chiropractic patients.

As summarized by Rolls,[16,17] low–energy-density diets and portion size control are 2 critical attributes underlying nutritional interventions in both the prevention and treatment of obesity. The dietary component of the SPPP incorporates both of these attributes. The attributes of regimented nutritional supplementation program are consistent with the evidence for improvements in lipid profiles and weight loss. Dietary fiber intake of more than or 22 g/d has been associated with reduction in total cholesterol and low-density lipoprotein (LDL) cholesterol in premenopausal women.[18] Phytosterols are cholesterol-like substances found in plants such as oat bran. A diet high in soluble fiber pectin and phytosterols has been found to significantly reduce total cholesterol levels[19] and exert a modest triglyceride-lowering effect.[20] Probiotics and prebiotics may have significant health benefits on lipid metabolism, mineral absorption, and immune function via their beneficial influences on microbial ecology of the gut.[21-26] Although there are limited clinical data on the role of microflora management interventions on weight loss and improved health status,[27-29] probiotic and/or prebiotic nutritional supplementation and colon-cleansing products are being promoted as critical elements for initiating and maintaining weight loss.

The development of the SPPP incorporated theoretical concepts underlying effective nutritional interventions for improvements in lipid profiles and weight status associated with reducing chronic disease risk factors. However, at present, the only published evidence on its effectiveness is a retrospective medical record review of a nonrandom series of 28 chiropractic patients who "successfully" completed the SPPP; and their patient records included pre-post lipid profiles and weight measurements.[15] Thus, the purpose of this case series was to describe prospectively any changes to weight and lipid profiles after a 21-day SP whole food supplement and dietary modification program.

Methods

Study population

Participants were recruited from faculty, staff, and students at a chiropractic college (20-60 years of age) who were participating in a college-sponsored "Cleanse Event." For approximately 1 month (April 2011), general campus announcements were used to advertise a "Cleanse Event"; and individuals inquiring about the "Cleanse Event" were made aware of the concurrent research study. The "Cleanse Event" was a 21-day weight management program in which volunteer participants completed the SPPP, attended weekly "Lunch and Learn" nutritional educational seminars,