



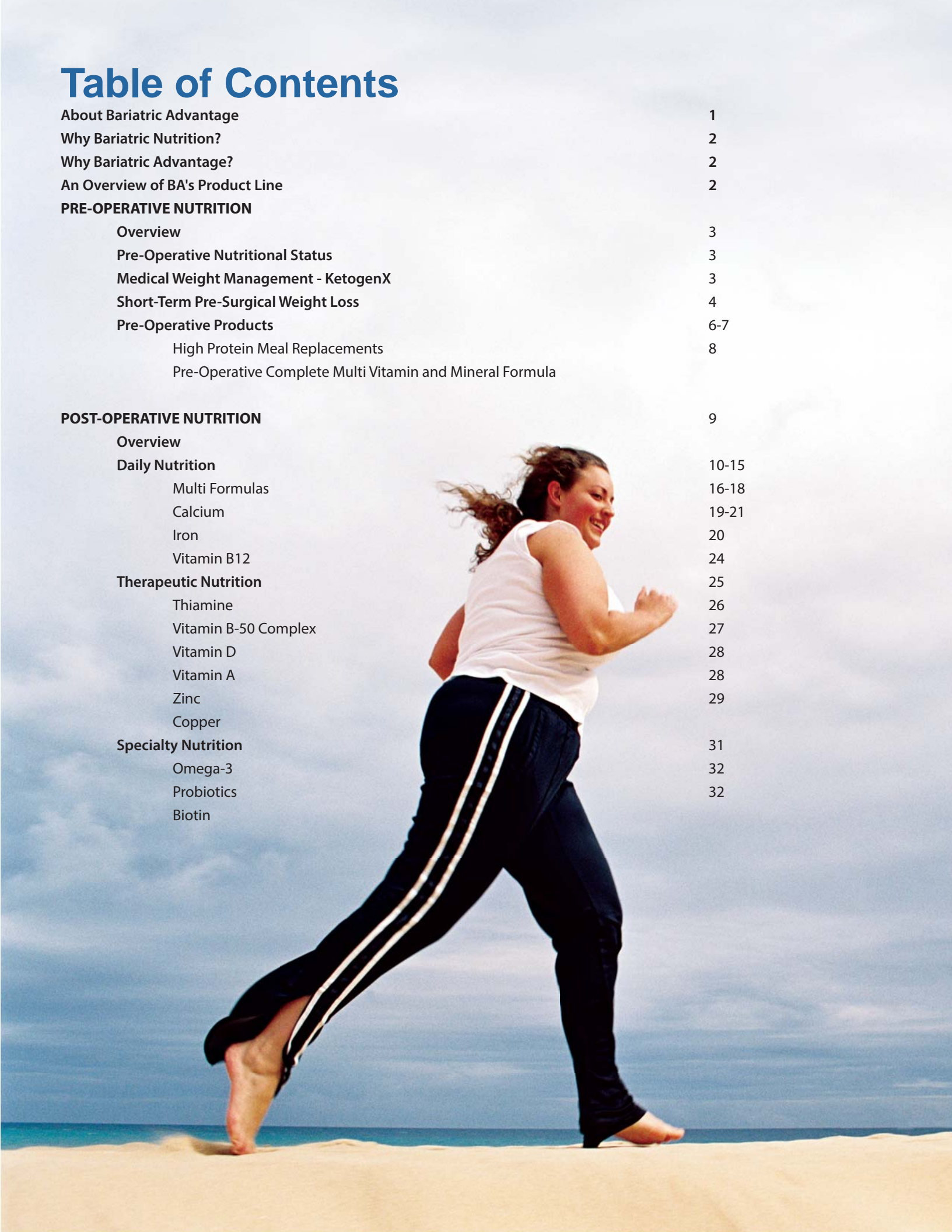
Product Backgrounder

The Professional Guide to
Bariatric Advantage[®] Products
the most complete line of nutritional
products for the weight loss surgery
patient



Table of Contents

About Bariatric Advantage	1
Why Bariatric Nutrition?	2
Why Bariatric Advantage?	2
An Overview of BA's Product Line	2
PRE-OPERATIVE NUTRITION	
Overview	3
Pre-Operative Nutritional Status	3
Medical Weight Management - KetogenX	3
Short-Term Pre-Surgical Weight Loss	4
Pre-Operative Products	6-7
High Protein Meal Replacements	8
Pre-Operative Complete Multi Vitamin and Mineral Formula	
POST-OPERATIVE NUTRITION	9
Overview	
Daily Nutrition	10-15
Multi Formulas	16-18
Calcium	19-21
Iron	20
Vitamin B12	24
Therapeutic Nutrition	25
Thiamine	26
Vitamin B-50 Complex	27
Vitamin D	28
Vitamin A	28
Zinc	29
Copper	
Specialty Nutrition	31
Omega-3	32
Probiotics	32
Biotin	



About Bariatric Advantage®

Bariatric Advantage offers a comprehensive line of micronutrient replacement products designed specifically to meet the needs of patients who have undergone weight loss surgical procedures. This includes gastric bypass, duodenal switch, vertical sleeve gastrectomy, and adjustable gastric banding.

Grounded in the belief that we can help to support a vision of lifelong health after bariatric surgery, we are proud to be one of the pioneers in this growing industry. Bariatric Advantage was started in 2002, when bariatric science was in its infancy. Since then, medical and public acceptance has grown exponentially, and bariatric surgery today is not only a viable means for significant weight loss, but in many cases is preferred for those severely overweight.

As science and technology advanced, so has Bariatric Advantage, through quality and adherence to scientific principles. Our products are manufactured in GMP-certified manufacturing facilities from the highest quality raw materials. All products meet the highest standards for purity, potency, stability and dissolution.

Our products are formulated to be easy to digest, to provide the most bioavailable nutrient forms, and to meet adult nutritional needs. The great taste of our chewable and powder products helps to foster compliance, and added details to some of our products, like being lactose free and low-glycemic help our customers to be successful.

Why Bariatric Nutrition?

In the many years since doctors began using surgery as part of the treatment of severe obesity, much has been learned about the long-term nutritional challenges that patients potentially face. These challenges arise for a variety of reasons that include, but are not limited to:

- » The presence of pre-existing nutritional deficiency in obesity
- » Deficiencies related to conditions such as diabetes or chronic medication use
- » Voluntary or involuntary dietary changes after surgery
- » Reduced food intake after surgery
- » Changes in anatomy that result in changes to digestion and absorption of nutrients

For reasons such as these, patients who have undergone bariatric surgical procedures are nutritionally unique. They have needs that are different from the general population – needs that can be specific to each procedure.

For many years now, professional organizations such as the American Society for Metabolic and Bariatric Surgery (ASMBS), The Obesity Society (TOS), and the American Academy of Clinical Endocrinology (AACE) have acknowledged through published papers and guideline documents that the needs of these individuals are unique. While research is still emerging – especially on newer procedures like Vertical Sleeve Gastrectomy – the expert communities generally agree on the basic principles for prevention and monitoring.

Why Bariatric Advantage?

Even before these guidelines existed, our primary goal at Bariatric Advantage was to read the literature and to create products that supported the unique nutritional requirements of individuals undergoing bariatric surgery. Our mission has always been to take an evidence - based approach to understanding the needs of bariatric surgery patients, and provide formulas fulfilling those needs. We have continued to change and adapt our formulary as research reveals new or different information – and we are committed to ongoing growth and product development to match the needs of the community.

An Overview of Our Product Line

Our core product line includes multivitamin supplements for all procedures in a variety of formulations and delivery systems. One of our strengths has been to produce superior chewables, all-important for the bariatric patient. We additionally offer an encapsulated multivitamin product, a multivitamin-mineral powder, a variety of flavors and forms of calcium citrate, sublingual vitamin B12, and four dosages of chewable iron. We also provide a range of encapsulated specialty products such as a high-potency B-complex, thiamine, vitamin D and high-protein meal replacements.

We look at our product line in time frames – similar to the journey that patients follow under the care of the programs we work with.

- » **Pre-operative Nutrition** – includes our KetogenX Professional Weight Management Program, our Pre-Op Multi Vitamin, and our High Protein Meal Replacement (HPMR) shakes for short-term pre-surgical use.
- » **Post-operative Nutrition** - The rest of our products fall into this category with subcategories including Daily Nutrition, Therapeutic Nutrition and Specialty Nutrition.
 - » **Daily Nutrition** – these are the primary products that make up preventive nutrition – including our range of multivitamin, calcium, iron, and B12 products.
 - » **Therapeutic Nutrition** – these are primarily products (such as higher potencies of vitamins A and D or minerals like Zinc) that patients may need at higher levels to support a deficiency.
 - » **Specialty Nutrition** – these are a range of support products such as fish oil, chewable probiotics, and protein products to support the overall health needs of your patients.

This document is designed to give you, the health professional, a more comprehensive view of our products. We also offer a range of other services for you and your program from professional education, to support for patient adherence, to support group presentations. Our highly trained customer care and sales teams are ready and waiting to help in any way they can – so please contact us at www.bariatricadvantage.com or call 1.800.898.6888 and let our team know how we can support your program.

Pre-Operative Nutrition Overview

It is increasingly recognized that even prior to undergoing bariatric surgery, there are nutritional issues that can impact both patient health and surgical outcomes. At Bariatric Advantage, our goal is to be able to support patients through their entire weight loss surgery journey, and starting before surgery often makes sense.

Pre-Operative Nutritional Status

The more that we study obesity, the more we find that many patients preparing for bariatric surgery have both subclinical and frank nutritional deficiencies. Studies increasingly demonstrate significant deficiencies in many nutrients in the morbidly obese. These include, but are not limited to Vitamin E, Vitamin A and the Carotenoids, Zinc, Selenium and Thiamine. The most recent data from the Third National Health and Nutrition Examination Survey (NHANES III: 1988–1994) showed that higher BMI was associated with deficiency of vitamins, A, E, C, D, selenium, folate and carotenoids. It has been noted that vitamin D deficiency is so common in morbid obesity that it should most likely be considered a comorbidity.

Medical Weight Management

Sometimes patients may be candidates for longer periods of weight loss prior to bariatric surgery. Examples would include individual cases where the surgeon feels that more substantial weight loss prior to surgery would make surgery safer or in the case of an insurance requirement to qualify for surgery. Additionally, a growing number of bariatric surgery practices are adding medical weight management to serve the needs of patients who are not candidates for surgery or who may need to get “back on track” if they have regained weight.

To serve these needs, Bariatric Advantage offers a comprehensive weight management program: KetogenX. KetogenX is a professional weight management program based on the well-researched science of the ketogenic diet. Designed to be easy for you to incorporate into your practice and simple for patients to learn and follow, KetogenX can be a valuable addition to any bariatric practice.

If you are interested in learning more about the KetogenX products or program, visit our website:

www.KetogenX.com, or call us at 1-800-898-6888



Short-term Pre-Surgical Weight Loss

Non-Alcoholic Fatty Liver Disease (NAFLD), which includes Non-Alcoholic Steatohepatitis (NASH), is common in patients presenting for bariatric surgery. Risk factors for NAFLD include obesity, diabetes, and insulin resistance. Incidence of NAFLD in patients with obesity or type 2 diabetes can be as high as 80-90 percent and in those presenting for bariatric surgery 90%. The enlargement of the liver due to fatty infiltration and, in the case of NASH, inflammation, can significantly interfere with the surgical field in weight loss surgery procedures such as Roux-en-Y Gastric Bypass (RYGB) and Laparoscopic Adjustable Gastric Banding (LAGB). Obscuring of the surgical field, especially the upper portion of the stomach, can prolong surgical times, impair visibility, increase surgical difficulties, and increase risk to the patient. Inability to adequately retract the liver in a laparoscopic procedure is cited as the single most common cause for conversion to an open procedure, accounting for roughly half of such conversions according to some reports. For this reason, it is increasingly common that surgeons may ask patients to undergo short-term, pre-operative weight loss. Moreover, a growing body of research supports acute presurgical weight reduction as a simple measure to improve operative safety.

Studies done in pre-operative bariatric surgery patients have indicated that short duration, acute weight loss may be very effective for sufficiently reducing liver volume to make surgery easier, safer and faster. Lewis, et al assessed liver volume in 18 patients undergoing placement of a LAGB. Patients were instructed to use a Very Low Energy Diet (VLED) for 6 weeks. After 6 weeks there was a 14.7% reduction in mean liver volume and a 43% reduction in mean liver fat. More recently, Co lles, Dixon, et al examined the impact of a VLED on liver volume and abdominal fat in patients preparing for weight loss surgery. A group of patients, all with significantly large livers and significant steatosis, had their liver volume measured serially during a 12-week course of a VLED (<800 kcal/day). The reduction in the liver volume was rapid with 80% of the total liver volume reduction occurring in the first 2 weeks of therapy.

More recently, we conducted a small study with our own meal replacement. 15 subjects (2 men and 13 women) with a mean \pm SD age of 46.7 ± 7.6 y and BMI of 50.5 ± 7.3 kgm² consumed the Bariatric Advantage High Protein Meal Replacement for 2 weeks. 13 completed the intervention and the other 2 stopped because surgery was canceled. Liver volume reduced from 2.8 ± 0.5 L to 2.4 ± 0.6 L, a reduction of 15.9%. Body weight decreased by 5.4 (3.4-7.5) % and waist circumference by 4.7 (3.1-6.2) %, ($p < 0.001$ for all). There were no adverse biochemical changes, and the product was well tolerated.

The impact of a high-protein, low energy meal replacement on liver volume in patients with liver steatosis prior to bariatric surgery.

Dixon, J¹, Barkley, J², Davis, R³, Davis, G⁴, Carr, J⁵, Jacques, J⁶

¹ Monash University and the Baker Heart and Diabetes Institute, Melbourne, Australia

² Department of Radiology, The Methodist Hospital, Houston, Texas, United States.

³ The Davis Clinic, Houston, Texas, United States.

⁴ The Davis Clinic, Houston, Texas, United States.

⁵ Carr & Associates, Nashville, Tennessee, United States.

⁶ Catalina Lifesciences, Inc, Irvine, California, United States.

Abstract

Background: Diets have been used for weight loss prior to bariatric surgery to reduce technical difficulties by reducing liver size and abdominal adiposity. A high protein - low energy total meal replacement is theoretically an ideal way to achieve this. Interventions as short as 2-weeks may achieve significant reductions in liver size. Our aim was to investigate the efficacy and acceptability of a new high protein meal replacement (HPMR).

Background

Non-Alcoholic Fatty Liver Disease (NAFLD), which includes Non-Alcoholic Steatohepatitis (NASH), is common in patients presenting for bariatric surgery. The enlargement of the liver due to fatty infiltration and, in the case of NASH, inflammation can significantly interfere with the surgical field in weight loss surgery procedures such as Roux-en-Y Gastric Bypass (RYGB) and Laparoscopic Adjustable Gastric Banding (LAGB) as key elements of the surgery are in the region of the gastro-esophageal junction, a region where access is compromised by a large liver. Obscuring of the surgical field, especially the upper portion of the stomach, can prolong surgical times, impair visibility, increase surgical difficulties, and increase risk to the patient. Inability to adequately retract the liver in a laparoscopic procedure is cited as the single most common cause for conversion to an open procedure, accounting for roughly half of such conversions according to some reports.

Studies have indicated that acute pre-operative weight loss can sufficiently reduce liver volume to make surgery easier, safer and faster. As a result, the use of low calorie meal replacements before weight loss surgery is increasingly common in order to reduce liver size and improve access to the region of the lower esophagus and stomach.

There is currently no agreement on the degree, duration or method of weight loss for reduction of NAFLD in pre-operative patients. The aim of this study was to assess a newly developed complete meal replacement VLED for its effect on liver volume prior to bariatric surgery.

Objectives

The aim of this study was to assess a newly developed complete meal replacement VLED for its effect on liver volume prior to bariatric surgery. The specific study objectives were:

1. To assess the effect of a 2-week course of Bariatric Advantage® High-Protein Meal Replacement on liver volume in a groups of patients prior to bariatric surgery.
2. To assess the efficacy, patient compliance and adverse effects with the use of Bariatric Advantage® High-Protein Meal Replacement for 2 weeks prior to bariatric surgery.

Methods

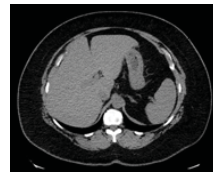
Design: A prospective observational study to examine the effect HPMR for 2-weeks prior to surgery. The primary outcome was change in liver volume (LV). Secondary measures included change in weight, biochemistry, compliance, acceptability and side effects. LV was measured by computed tomography and compliance using urinary ketone levels.

Results

Results: 15 subjects (2 men, 13 women) with a mean \pm SD age of 46.7 ± 7.6 and BMI of 50.5 ± 7.3 kg/m² consumed the HPMR for 2 weeks. 13 completed the intervention and the other 2 stopped because surgery was canceled. Liver volume reduced from 2.8 ± 0.5 L to 2.4 ± 0.6 L, a reduction in 15.9 (95% CI, 10.9 to 21) %, $p < 0.001$. Body weight decreased by 5.4 (3.4-7.5) % and waist circumference by 4.7 (3.1-6.2) %, ($p < 0.001$ for all). There were no adverse biochemical changes. The acceptability of the diet was good but compliance variable. Mild transitory side effects occurred.

Table 1: Descriptive characteristics of 13 subjects before and after 2-week VLED.

Characteristic	Baseline	After 2 Weeks	Percentage Change (95% CI)
Age (mean)	46.7 \pm 7.6		
Males	2 (15%)		
Body Weight (kg)	123.5 \pm 19.1	116.7 \pm 17.1	-5.4 (-3.4 to -7.5) %
BMI (kg/m ²)	50.5 \pm 7.3	47.7 \pm 6.3	-5.4 (-3.4 to -7.5) %
Waist circumference (cm)	129.1 \pm 12.0	123.2 \pm 13.1	-4.7 (3.1 to -6.2) %
Liver Volume (L)	2.8 \pm 0.5	2.4 \pm 0.6	-15.9 (10.9 to 21.0) %



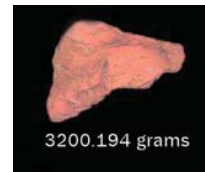
1a



1b

• **Image 1a:** Axial non-contrast CT source Image, pre-HPMR

• **Image 1b:** Axial non-contrast CT source Image, post-HPMR



2a



2b

• **Image 2a:** Volume rendering of pre-HPMR CT, establishing a pre-therapy baseline liver volume

• **Image 2b:** Volume rendering of pre-HPMR CT, demonstrating a significant reduction in total liver volume

Composition of HPMR

	1 Serving	5 Servings
Calories	140	700
Protein	27 grams	135 grams
Carbohydrate	7 grams	35 grams
Fiber	0.5 grams	2.5 grams
Sugar	5 grams	25 grams
Lactose	0	0
Fat	0.5 grams	2.5 grams
Cholesterol	6 mg	30 mg
Vitamin A	2500 IU	10000 IU
Vitamin D	200 IU	1000 IU
Vitamin E	15 IU	75 IU
Vitamin C	30 mg	150 mg
Thiamine (B1)	0.7 mg	3.5 mg
RiboFlavin (B2)	0.85 mg	4.25 mg
Pyridoxine (B6)	1 mg	5 mg
Vitamin B12	3 mcg	15 mcg
Niacin	10 mg	50 mg
Biotin	150 mcg	750 mcg
Pantothenic Acid	5 mg	25 mg
Folic Acid	200 mcg	1000 mcg
Calcium	150 mg	750 mg
Copper	0.66 mg	3.3 mg
Iodine	49.5 mcg	247.5 mcg
Iron	6.3 mg	31.5 mg
Magnesium	132 mg	660 mg
Phosphorus	0.60 grams	3 grams
Zinc	4.95 mg	24.75 mg
Potassium	150 mg	750 mg
Sodium	50 mg	250 mg

Conclusions

Conclusions: A 2-week pre-operative diet with Bariatric Advantage® HPMR provided major reductions in liver volume in association with modest weight loss. We confirm the early preferential reduction in liver volume. The diet was acceptable. There should be a focus on support to improve compliance.

References

1. Liver pathology in morbidly obese patients with and without diabetes. *Am J Gastroenterol.*
2. Nonalcoholic fatty liver disease: predictors of NASH and liver fibrosis in the severely obese. *Gastroenterology.*
3. Laparoscopic Roux-en-Y gastric bypass: preoperative determinants of prolonged operative times, conversion to open gastric bypasses, and postoperative complications. *Obes Surg.*
4. Effects of weight loss surgeries on liver disease. *Semin Liver Dis.*
5. Change in liver size and fat content after treatment with Optifast very low calorie diet. *Obes Surg.*
6. Preoperative weight loss with a very-low-energy diet: quantitation of changes in liver and abdominal fat by serial imaging. *Am J Clin Nutr.*
7. Preoperative low energy diet diminishes liver size. *Obes Surg.*
8. Accuracy and significance of computed tomographic scan assessment of hepatic volume in patients undergoing liver transplantation. *Transplantation.*
9. Measurement of liver volume using spiral CT and the curved line and cubic spline algorithms: reproducibility and interobserver variation. *Abdom Imaging*
10. Value of high-protein diet is clearer than drawbacks. *Nature.*
11. Systematic review of randomized controlled trials of low-carbohydrate vs. low-fat/low-calorie diets in the management of obesity and its comorbidities. *Obes Rev.*
12. Effects of a high-protein ketogenic diet on hunger, appetite, and weight loss in obese men feeding ad libitum. *Am J Clin Nutr.*
13. The effects of a low-carbohydrate ketogenic diet and a low-fat diet on mood, hunger, and other self-reported symptoms. *Obesity (Silver Spring).*
14. Effect of weight loss and ketosis on postprandial cholecystokinin and free fatty acid concentrations. *Am J Clin Nutr.*
15. State of the science: VLED (Very Low Energy Diet) for obesity. *Asia Pac J Clin Nutr.*

Pre-Operative Products

High Protein Meal Replacement

Shakes

Pre-op Multivitamin

Chewables

Bariatric Advantage® High Protein Meal Replacements (HPMR)



Bariatric Advantage® High Protein Meal Replacements (HPMR)

High Protein Meal Replacement – 27 Grams Protein in a creamy delicious shake.

The Bariatric Advantage High Protein Meal Replacement comes in an economic 35-serving bag with a measured scoop to make accurate dispensing easy. Each 150 to 160 calorie serving provides a full 27 grams of protein, with only 7 grams of carbohydrate (of which 5 grams are fiber, and only 1 gram is sugar) and 1.5 gram of fat. They are also lactose-free to best meet the needs of weight loss surgery patients. One hundred percent of the protein is from a high quality whey protein isolate. Fortified with between 15 and 50 percent of the DV for 23 essential vitamins and minerals, this product makes a perfect pre-operative weight loss shake for individuals preparing for bariatric surgery. Our meal replacements come in a great variety of flavors (chocolate, vanilla, strawberry, banana, iced latte and orange cream) to satisfy a broad range of palates.

If you are interested in learning more about incorporating the use of HPMR in your pre-surgery patients call us at **1-800-898-6888** or speak with your local sales representative.



- ✓ 150-160 Calories
- ✓ 27g of High Quality Whey Protein Isolate
- ✓ 5g of Fiber
- ✓ Only 1-2g of Sugar
- ✓ 23 Essential Vitamins and Minerals
- ✓ Lactose Free
- ✓ Gluten Free
- ✓ Tastes Great
- ✓ Clinically Studied For Pre-Operative Use

6 Flavors Available in:
 35 Serving Bags
 21 Serving Tubs
 Single Serving Packets
 Single Serving Ready-to-Shake Bottles

Nutrition Facts

Serving Size: 42 grams			
Amount per Serving			
Calories: 150	Calories from Fat: 15		
% Daily Value*			
Total Fat	1.5 g 2%		
Saturated Fat	1 g 5%		
Sodium	290 mg 12%		
Potassium	200 mg 6%		
Total Carbohydrate	7 g 2%		
Dietary Fiber	5 g 20%		
Sugars	1 g		
Protein	27 g 54%		
Vitamin A 50%	• Vitamin C 50%	• Calcium 15%	
Iron 35%	• Vitamin D 50%	• Vitamin E 50%	
Vitamin K 50%	• Thiamine 50%	• Riboflavin 50%	
Niacin 50%	• Vitamin B6 50%	• Folic Acid 50%	
Vitamin B12 50%	• Biotin 50%	• Pantothenic Acid 50%	
Phosphorus 15%	• Iodine 50%	• Magnesium 20%	
Zinc 50%	• Selenium 50%	• Copper 50%	
Manganese 50%	• Chromium 50%	• Molybdenum 50%	
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.			
	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Potassium	Less than	3,500mg	3,500mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g
Protein		50g	65g
Calories per gram:			
Fat 9 • Carbohydrate 4 • Protein 4			

Bariatric Advantage® Pre-Operative Complete Vitamin and Mineral Formula

Bariatric Advantage Pre-Operative Multi-Formula is a comprehensive vitamin and mineral supplement designed to help the bariatric patient get started on the path towards better health. Many studies have shown that obesity is commonly associated with poor vitamin and mineral status. While checking for and even treating some problems before surgery, many nutrients are simply too difficult and costly to screen. Recommending a high quality vitamin and mineral product before surgery can help to build and support healthy nutrient levels. Healthy nutrient status is associated with better immune function, which can be important after surgery. Also, starting your patients on vitamins now – before their surgery – helps them to learn part of the routine they will have to adopt after surgery.

- » **Tasty, chewable formula.**
- » **600 mg of Calcium.**
- » **Trace Element Support.**



References

1. Alvarado R, Alami RS, Hsu G, Safadi BY, Sanchez BR, Morton JM, Curet MJ. The impact of preoperative weight loss in patients undergoing laparoscopic Roux-en-Y gastric bypass. *Obes Surg.* 2005 Oct;15(9):1282-6.
2. Andersen T, Gluud C, Franzmann MB, Christoffersen P. Hepatic effects of dietary weight loss in morbidly obese subjects. *J Hepatol* 1991;12:224-9.
3. Dixon JB, Barkley JM, Davis R, Davis G, Carr JJ, Dixon ME, and Jacques JH. The impact of a high-protein, low energy meal replacement on liver volume in patients with liver steatosis prior to bariatric surgery. *European Congress on Obesity* 2009.
4. Liu RC, Sabnis AA, Forsyth C, Chand B. The effects of acute preoperative weight loss on laparoscopic Roux-en-Y gastric bypass. *Obes Surg.* 2005 Nov-Dec;15(10):1396-402
5. Palmer M, Schaffner F. Effects of weight reduction on hepatic abnormalities in overweight patients. *Gastroenterology* 1990; 99: 1408-1413.
6. Schwartz ML, Drew RL, Chazin-Caldie M. Laparoscopic Roux-en-Y Gastric Bypass: Preoperative Determinants of Prolonged Operative Times, Conversion to Open Gastric Bypasses, and Postoperative Complications. *Obes Surg.* 13, 734-738.
7. Silverman JF, O'Brien KF, Long S, et al. Liver pathology in morbidly obese patients with and without diabetes. *Am J Gastroenterol.* 1990;85:1349-55.
8. Dixon JB, Bhathal PS, O'Brien PE. Nonalcoholic fatty liver disease: predictors of nonalcoholic steatohepatitis and liver fibrosis in the severely obese. *Gastroenterology.* 2001;121:91-100.
9. Schwartz ML, Drew RL, Chazin-Caldie M. Laparoscopic Roux-en-Y gastric bypass: preoperative determinants of prolonged operative times, conversion to open gastric bypasses, and postoperative complications. *Obes Surg.* 2003;13:734-8.
10. Lewis MC, Phillips ML, Slavotinek JP, et al. Change in liver size and fat content after treatment with Optifast very low calorie diet. *Obes Surg.* 2006;16:697-701.
11. Colles SL, Dixon JB, Marks P, et al. Preoperative weight loss with a very-low-energy diet: quantitation of changes in liver and abdominal fat by serial imaging. *Am J Clin Nutr.* 2006;84:304-11.
12. Dixon JB, Barkley JM, Davis R, Davis G, Carr JJ, Dixon ME, and Jacques JH. The impact of a high-protein, low energy meal replacement on liver volume in patients with liver steatosis prior to bariatric surgery. *European Congress on Obesity* 2009.
13. Ohrvall M, Tengblad S, Vessby B. Lower tocopherol serum levels in subjects with abdominal adiposity. *J Intern Med* 1993;234:53±60.
14. Pereira S, Saboya C, Chaves G, et al. Class III Obesity and its Relationship with the Nutritional Status of Vitamin A in Pre- and Postoperative Gastric Bypass. *Obes Surg.* 2008 Apr 8. [Epub ahead of print]
15. Madan AK, Orth WS, Tichansky DS, et al. Vitamin and trace mineral levels after laparoscopic gastric bypass. *Obes Surg.* 2006 May;16(5):603-6.
16. Flanbaum L, Belsley S, Drake V, et al. Preoperative nutritional status of patients undergoing Roux-en-Y gastric bypass for morbid obesity. *J Gastrointest Surg.* 2006 Jul-Aug;10(7):1033-7.
17. Kimmons JE, Blanck HM, Tohill BC, et al. Associations between body mass index and the prevalence of low micronutrient levels among US adults. *MedGenMed.* 2006 Dec 19;8(4):59.
18. Wortsman J, Matsuoka LY, Chen TC, et al. Decreased bioavailability of vitamin D in obesity. *Am J Clin Nutr.* 2000 Sep;72(3):690-3.

Supplement Facts

Serving Size: 2 Tablets

	Amount per Serving (2 Tablets)	% Daily Value *
Calories	0	
Total Carbohydrates	<1 g	<1%
Sugar	<1 g	†
Vitamin A (from Beta Carotene, Natural Mixed Carotenoids)	5000 IU	100 %
Vitamin C (as Ascorbic Acid)	120 mg	200 %
Vitamin D3 (as Cholecalciferol)	1000 IU	250 %
Vitamin E (as d-alpha Tocopheryl Acetate)	30 IU	100 %
Vitamin B1 (from Thiamine Mononitrate)	3 mg	200 %
Vitamin B2 (as Riboflavin)	3.4 mg	200 %
Vitamin B3 (as Niacinamide)	50 mg	250 %
Vitamin B6 (from Pyridoxine HCl)	4 mg	200 %
Folic Acid	800 mcg	200 %
Vitamin B12 (as Cyanocobalamin)	50 mcg	833 %
Biotin USP/FCC	300 mcg	100 %
Pantothenic Acid (from Calcium D-Pantothenate)	10 mg	100 %
Calcium (from Calcium Carbonate, Calcium Citrate USP)	600 mg	60 %
Iron (from Ferrous Fumarate USP)	18 mg	100 %
Magnesium (from Magnesium Oxide USP)	50 mg	13 %
Zinc (from Zinc Oxide USP/FCC)	15 mg	100 %
Selenium (from L-Selenomethionine)	55 mcg	79 %
Copper (from Copper Citrate)	2 mg	100 %
Manganese (from Manganese Citrate)	2 mg	100 %
Chromium (from Chromium Picolinate [Chromax® (Nutrition 21)])	120 mcg	100 %
Molybdenum (from Sodium Molybdate)	75 mcg	100 %
Choline (from Choline Bitartrate)	5 mg	†
Inositol FCC	5 mg	†
Vanadium (from Vanadium Citrate)	25 mcg	†

* Percent Daily Values are based on a 2,000 calorie diet.

† Daily Value not established.

Post-Operative Nutrition Overview

Following any kind of surgery for the treatment of obesity, nutrition is a routine part of care. Long-term nutritional follow-up includes dietary management, periodic laboratory testing and the use of micronutrient replacement to help support healthy nutritional status. Different procedures create different risks, and Bariatric Advantage has supportive daily nutrition for all of the bariatric procedures offered.

Guidelines for post-operative preventive nutrition have been published both by the Allied Health Committee of the ASMBS and by a joint committee from AACE, TOS and ASMBS. Both of these papers are available for download on the ASMBS website at <http://asmbs.org/guidelines-statements>. A summary table matching Bariatric Advantage products with the basic guidelines for prevention can be found on page 25.

In addition to daily nutrition, our comprehensive line offers targeted therapeutic nutrients for individuals who may present with deficiency as well as specialty health-supportive products such as fish oil and probiotics.

Daily Nutrition

The following section describes the products most commonly used by patients for preventive nutrition following weight loss surgery. Depending on which procedure has been done, this often includes a multivitamin, additional calcium, iron and vitamin B12. Other products are sometimes added to this at the discretion of the physician.

Daily Nutrition Products:

Multi Formulas

Chewables
Capsules
Crystals

Calcium

Chewables
Chewy Bites
Crystals

Iron

Chewables
Chewy Bites

B12

Sublingual

Complete Chewable Multi Formula with B-Complex and Essential Minerals

FOR PROCEDURES	
RNY	VSG
Flavors	
● Orange	● Berry
● French Vanilla	



- » **Comprehensive B Complex.** Our product contains all eight of the required B vitamins as well as the accessory nutrients choline and inositol. We provide additional B1 to help support patients in maintaining levels of this important nutrient. We also include a full 800 micrograms of folic acid, for heart health and to support women who may get pregnant after surgery.*
- » **Water-miscible Fat-soluble Vitamins.** We use only water-miscible forms of vitamins A, E, and D in all of our formulas. This may improve bioavailability. We also use only natural vitamin E for its superior bioavailability, and Vitamin D3, which is more bioactive than the D2 form. This formula provides a full 1000 IU of vitamin D3 to support the needs of the bariatric patient.*
- » **Calcium Citrate.** Because of decreased stomach acid after gastric bypass or sleeve gastrectomy, calcium citrate is the preferred form of calcium supplement.
- » **Trace Element Support.** All of our multivitamins contain comprehensive trace element support with selenium, zinc, copper, chromium, vanadium and more.
- » **Lactose and Gluten Free.**
- » **Easy on the digestive system.** Many nutrients, especially minerals like magnesium and zinc can be hard on the digestive system. We have opted for nutrient forms like magnesium citrate and zinc citrate that are both well absorbed and easy on the gut.*
- » **100 percent sugar free.** This formula is sugar-free. It is sweetened with Sucralose (Splenda®).
- » **Minimal “other” ingredients** Our chewable multivitamins contain the minimal amount of low-allergen tableting materials needed to create a chewable tablet. We always seek to minimize allergens and excipients in our products.
- » **Great Taste** We know that many people experience change in taste perception after weight loss surgery. Our flavors are selected by a focus group of post-operative patients and are highly palatable .

Supplement Facts		
Serving Size: 2 Tablets		
	Amount per Serving (2 Tablets)	% Daily Value *
Calories	10	
Total Carbohydrates	2 g	1%
Sugar	<1 g	†
Vitamin A (from Beta Carotene)	7500 IU	150%
Vitamin C (from Sodium Ascorbate USP, as Ascorbic Acid)	120 mg	200%
Vitamin D3 (as Cholecalciferol)	1000 IU	250%
Vitamin E (as d-alpha Tocopheryl Acetate)	30 IU	100%
Vitamin B1 (from Thiamine Mononitrate)	6 mg	400%
Vitamin B2 (as Riboflavin)	3.4 mg	200%
Niacinamide	50 mg	250%
Vitamin B6 (from Pyridoxine HCl)	4 mg	200%
Folic Acid	800 mcg	200%
Vitamin B12 (as Cyanocobalamin)	100 mcg	1667%
Biotin USP/FCC	600 mcg	200%
Pantothenic Acid (from Calcium D-Pantothenate)	20 mg	200%
Calcium (from Calcium Citrate)	200 mg	20%
Magnesium (from Magnesium Citrate)	50 mg	13%
Zinc (from Zinc Citrate)	15 mg	100%
Selenium (as L-Selenomethionine)	100 mcg	143%
Copper (from Copper Citrate)	2 mg	100%
Manganese (from Manganese Sulfate)	2 mg	100%
Chromium (from Chromium Picolinate NF (Chromax®))	120 mcg	100%
Molybdenum (as Sodium Molybdate)	75 mcg	100%
Sodium	10 mg	<1%
Citrus Fruit Peel Bioflavonoids Complex (50% Bioflavonoids)	12.5 mg	†
Inositol USP/FCC	5 mg	†
Choline (from Choline Bitartrate FCC)	2 mg	†
Vanadium (from Vanadium Citrate)	25 mcg	†

*Percent Daily Values are based on a 2,000 calorie diet.
† % Daily Value not established.

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Chewable Multi Formula with High A, D, E, and K

FOR PROCEDURES	
RNY / VSG (2/DAY)	Distal RNY / BPD-DS (3/DAY)
Flavors	
● Tropical	● Lemon-Lime
● Chocolate Mint Truffle	



This multivitamin provides the high doses of fat-soluble vitamins needed by patients who have undergone duodenal switch or distal gastric bypass. It can also be used in cases where a physician determines a patient has greater nutritional needs. Comprehensive B Complex.

- » **High-dose Vitamin A, D, E and K.** Patients who have undergone procedures with a greater degree of malabsorption need higher levels of fat-soluble vitamins. We have 667 IU of vitamin D3 per tablet – or 2000 IU in 3 tablets. Water-miscible forms of all four fat-soluble vitamins offer the greatest stability as well as help to optimize intestinal absorption.*
- » **Comprehensive B Complex.** Our product contains all eight of the required B vitamins as well as the accessory nutrients choline and inositol. We provide additional B1 to help support patients in maintaining levels of this important nutrient. We also include a full 1200 micrograms of folic acid per 3 tablets, for heart health and to support women who may get pregnant after surgery.*
- » **Calcium Citrate.** Calcium citrate is generally the preferred form of calcium supplement after weight loss surgery.
- » **Trace Element Support.** All of our multivitamins contain comprehensive trace element support with selenium, zinc, copper, chromium, vanadium and more.
- » **Easy on the digestive system.** Many nutrients, especially minerals like magnesium and zinc can be hard on the digestive system. We have opted for nutrient forms like zinc citrate and l-selenomethionine that are both well absorbed and easy on the gut.*
- » **100 percent Sugar Free.** This formula is sugar-free. It is sweetened with Sucralose (Splenda®).
- » **Minimal “other” ingredients.** Our chewable multivitamins contain the minimal amount of low-allergen tableting materials needed to create a chewable tablet. We always seek to minimize allergens and excipients in our products.
- » **Great Taste.** We know that many people experience change in taste perception after weight loss surgery. Our flavors are selected by a focus group of post-operative patients. If a patient enjoys the flavor of their vitamins, compliance is better.

Supplement Facts

Serving Size: 2-3 Tablets

	Amount per 1 Tablet	% Daily Value *
Vitamin A (from Beta Carotene and Vitamin A Acetate)	5000 IU	100%
Vitamin C (from Sodium Ascorbate and Ascorbic Acid)	60 mg	100%
Vitamin D3 (as Cholecalciferol)	667 IU	167%
Vitamin E (as d-alpha Tocopheryl Succinate)	250 IU	833%
Vitamin K (as Phytonadione)	60 mcg	75%
Vitamin B1 (from Thiamine Mononitrate)	3 mg	200%
Vitamin B2 (as Riboflavin)	1.7 mg	100%
Niacin (as Niacinamide)	25 mg	125%
Vitamin B6 (from Pyridoxine HCl)	2 mg	100%
Folic Acid	400 mcg	100%
Vitamin B12 (as Cyanocobalamin)	50 mcg	833%
Biotin	150 mcg	50%
Pantothenic Acid (from Calcium D-Pantothenate)	5 mg	50%
Calcium (from Calcium Citrate)	50 mg	5%
Magnesium (from Magnesium Citrate)	25 mg	6%
Zinc (from Zinc Citrate)	7.5 mg	50%
Selenium (from L-Selenomethionine)	67 mcg	96%
Copper (from Copper Citrate)	0.5 mg	25%
Manganese (from Manganese Sulfate)	1 mg	50%
Chromium (from Chromium Picolinate)		
[Chromax® Nutrition 21]	50 mcg	42%
Molybdenum (from Sodium Molybdate)	37.5 mcg	50%
Citrus Bioflavonoids (from Citrus Fruit Peel Bioflavonoid Complex)	6.25 mg	†
Inositol	2.5 mg	†
Choline (from Choline Bitartrate)	1 mg	†
Vanadium (from Vanadium Citrate)	12.5 mcg	†

*Percent Daily Values are based on a 2,000 calorie diet.

† % Daily Value not established.

Multi Formula Capsules with Antioxidants

FOR PROCEDURES

RNY

VSG

While most post-operative weight loss surgery patients will select a chewable product for life, some will only want a product they can swallow or wish to switch to a product they can swallow after some months or years. Our capsules are a small size to help facilitate easy swallowing – no double-aught (“00”) capsules or “horse pills.” They offer high-level nutritional support, antioxidant fortification, and the same attention to nutrient form and bioavailability as our chewable vitamins. In addition, there are a few unique properties to the capsules.

- » **Comprehensive B Complex.** Our product contains all eight of the required B vitamins as well as the accessory nutrients choline and inositol. We provide additional B1 to help support patients in maintaining levels of this nutrient especially in the early months after surgery. We also include a full 800 micrograms of folic acid, for heart health and to support women who may get pregnant after surgery.*
- » **Additional Antioxidant Support.*** Our capsules contain more antioxidants than our other formulas. We are able to do this because we do not have to be concerned with the taste for some less palatable nutrients. This includes a full 25 milligrams of lipoic acid and 100 mg of the sulfur-containing antioxidant N-Acetyl Cysteine (NAC). NAC helps the body to regenerate glutathione, a potent intracellular antioxidant.* It also supports respiratory, liver and cardiovascular health.* Lipoic acid is a universal antioxidant (both fat and water soluble) that supports the nervous system.*
- » **Added Potassium.** Potassium is vital for healthy muscle tissue and heart tissue.*
- » **Water-miscible Fat-soluble Vitamins.** We use only water-miscible forms of vitamins A, E, and D in all of our formulas. This may improve bioavailability. We also use only natural vitamin E for its superior bioavailability, and Vitamin D3, which is more bioactive than the D2 form. This formula provides a full 1000 IU of vitamin D3 to support the needs of the bariatric patient.
- » **Calcium Citrate.** Because of decreased stomach acid after gastric bypass or sleeve gastrectomy calcium citrate is the preferred form of calcium supplement after weight loss surgery.
- » **Trace Element Support.** All of our multivitamins contain comprehensive trace element support with selenium, zinc, copper, chromium, vanadium and more.
- » **Easy on the digestive system.** Many nutrients, especially minerals like magnesium and zinc can be hard on the digestive system. We have opted for nutrient forms like magnesium citrate and zinc citrate that are both well absorbed and easy on the gut.*
- » **Minimal “other” ingredients.** Like our chewable multivitamins, our capsules contain the minimal amount of low-allergen materials needed to assure proper breakdown. There is no wheat, gluten, egg, or dairy in most of our formulas. We also do not include ingredients such as starch, talc, vegetable oils, waxes, or chemical dyes.



Supplement Facts

Serving Size: 6 Capsules

	Amount per Serving	% Daily Value
Vitamin A (as Beta Carotene 75%, Retinyl Acetate 25%)	10,000 IU	200 %
Vitamin C (as Ascorbic Acid)	120 mg	200 %
Vitamin D3 (as Cholecalciferol)	1,000 IU	250 %
Vitamin E (as d-alpha Tocopheryl Succinate)	60 IU	200 %
Thiamine (as Thiamine HCl)	6 mg	400 %
Riboflavin	3.4 mg	200 %
Niacinamide	40 mg	200 %
Vitamin B6 (from Pyridoxine HCl)	4 mg	200 %
Folic Acid	800 mcg	200 %
Vitamin B12 (as Cyanocobalamin)	350 mcg	5830 %
d-Biotin	600 mcg	200 %
Pantothenic Acid (from Calcium D-Pantothenate)	20 mg	200 %
Calcium (from Calcium Citrate)	200 mg	20 %
Magnesium (from Magnesium Citrate)	100 mg	25 %
Zinc (from Zinc Picolinate)	15 mg	100 %
Selenium (as L-Selenomethionine)	100 mcg	140 %
Copper (as Copper Gluconate, Copper Citrate)	2 mg	100 %
Manganese (from Manganese Gluconate)	2 mg	100 %
Chromium (as Chromium Picolinate)	120 mcg	100 %
Molybdenum (as Sodium Molybdate)	75 mcg	100 %
Potassium (as Potassium Chloride)	99 mg	3 %
Inositol FCC	25 mg	†
Boron (as Boron Citrate)	3 mg	†
Vanadium (as Vanadyl Sulfate)	25 mcg	†
NAC (N-Acetyl-L-Cysteine)	100 mg	†
Alpha Lipoic Acid	25 mg	†
Choline (from Choline Bitartrate)	10 mg	†

† % Daily Value not established.

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

FOR PROCEDURES

AGB

Flavors

- Mixed Berry
- Watermelon

The VitaBand™ formula is specifically designed to meet the needs of patients who have an Adjustable Gastric Banding (AGB). Patients with bands can develop deficiencies due to lower food intake, rapid weight loss and other reasons. Some of the deficiencies reported with AGB include Thiamine, B12, Folate, and Iron. Bone loss is also a risk. VitaBand consists of two chewable wafers per day, which can be taken at any time of the day.

- » **Comprehensive B-Complex.** VitaBand provides an average of 200% of the RDA for most of the B vitamins as well as the accessory nutrients choline and inositol. We add additional B1 to help support patients in maintaining levels of this nutrient that is at risk for deficiency, especially in the early months after surgery. We also include a full 800 micrograms of folic acid, for healthy homocysteine metabolism and to support women who may get pregnant after surgery.*
- » **600 milligrams of calcium.** This is a very substantial level of calcium for a multivitamin – most provide less than 100 mg in a daily dose. With 600 milligrams in a multi, most AGB patients should be able to achieve the RDA of calcium through the combination of this product and dietary intake.
- » **Trace Element Support.** All of our multivitamins contain comprehensive trace element support with selenium, zinc, copper, chromium, vanadium and more.
- » **Easy on the digestive system.** Many nutrients, especially minerals like magnesium and zinc can be hard on the digestive system. We have opted for nutrient forms like magnesium citrate and zinc citrate that are both well absorbed and easy on the gut.*
- » **Minimal Use of Sweeteners.** Many chewable vitamins provide 4 to 8 grams of sugars in a daily dose. VitaBand™ is sweetened with sucralose (Splenda®) and a minimal amount of low-glycemic, crystalline fructose (less than 1 gram per daily serving).
- » **Minimal “other” ingredients.** Our chewable multivitamins contain the minimal amount of low-allergen tableting materials needed to create a chewable tablet. We always seek to minimize allergens and excipients in our products.
- » **Great Taste.** This formula comes in two great flavors selected by patients.



Supplement Facts

Serving Size: 2 Tablets

	Amount per Serving (2 Tablets)	% Daily Value *
Total Carbohydrates	<1 g	<1%
Sugar	<1 g	†
Vitamin A (from Beta Carotene, Natural Mixed Carotenoids)	5000 IU	100 %
Vitamin C (as Ascorbic Acid)	120 mg	200 %
Vitamin D3 (as Cholecalciferol)	1000 IU	250 %
Vitamin E (as d-alpha Tocopheryl Acetate)	30 IU	100 %
Vitamin B1 (from Thiamine Mononitrate)	3 mg	200 %
Vitamin B2 (as Riboflavin)	3.4 mg	200 %
Vitamin B3 (as Niacinamide)	50 mg	250 %
Vitamin B6 (from Pyridoxine HCl)	4 mg	200 %
Folic Acid	800 mcg	200 %
Vitamin B12 (as Cyanocobalamin)	50 mcg	833 %
Biotin USP/FCC	300 mcg	100 %
Pantothenic Acid (from Calcium D-Pantothenate)	10 mg	100 %
Calcium (from Calcium Carbonate, Calcium Citrate USP)	600 mg	60 %
Iron (from Ferrous Fumarate USP)	18 mg	100 %
Magnesium (from Magnesium Oxide USP)	50 mg	13 %
Zinc (from Zinc Oxide USP/FCC)	15 mg	100 %
Selenium (from L-Selenomethionine)	55 mcg	79 %
Copper (from Copper Citrate)	2 mg	100 %
Manganese (from Manganese Citrate)	2 mg	100 %
Chromium (from Chromium Picolinate [Chromax® (Nutrition 21)])	120 mcg	100 %
Molybdenum (from Sodium Molybdate)	75 mcg	100 %
Choline (from Choline Bitartrate)	5 mg	†
Inositol FCC	5 mg	†
Vanadium (from Vanadium Citrate)	25 mcg	†

*Percent Daily Values are based on a 2,000 calorie diet.

† % Daily Value not established.

Complete Multi Formula Crystals with Calcium

FOR PROCEDURES		
AGB	VSG	RNY
Flavors		
● Wild Berry Punch		

Some patients prefer taking their multivitamin in drink form. BA's unique Wild Berry Punch Crystals is the answer. It tastes good, is easy on the gut and contains a number of high potency critical nutrients. This formula also provides the complete daily dose of calcium.

- » **Complete Multi Vitamin Formula.** 3 daily servings supply a complete array of vitamins, minerals, and nutrients.
- » **1500 mg of Elemental Calcium.** We use the highly absorbable preferred calcium citrate as our only source of calcium.
- » **900 IU Vitamin D3.** Vitamin D3 is more bioactive than the D2 form. This formula provides a full 900 IU of vitamin D3 to support the needs of the bariatric patient.
- » **900 mcg Vitamin B12.** Vitamin B12 is an essential nutrient often compromised in the bariatric patient.
- » **300 mg potassium.** Potassium is vital for healthy muscle tissue and heart tissue.
- » **9 mg of thiamine.** Vitamin B is especially important for the bariatric patient.
- » **Refreshing Wild Berry Flavored Punch**



Supplement Facts		
Serving Size: 9 grams		
	Amount per Serving	% Daily Value *
Calories	10	
Sodium	5 mg	<1%
Total Carbohydrates	3 g	1%
Dietary Fiber	<1 g	1%
Vitamin A (as Retinyl Palmitate)	3000 IU	60%
Vitamin C (as Ascorbic Acid)	60 mg	100%
Vitamin D3 (as Cholecalciferol)	300 IU	80%
Vitamin E (as d-Alpha Tocopheryl Acid Succinate)	20 IU	70%
Thamin (as Thiamin Mononitrate)	3 mg	200%
Riboflavin	1.7 mg	100%
Niacinamide	25 mg	130%
Vitamin B6 (as Pyridoxine HCl)	2 mg	100%
Folic Acid	270 mcg	70%
Vitamin B12 (Cyanocobalamin)	300 mcg	5000%
d-Biotin	200 mcg	70%
Pantothenic Acid (as Calcium d-Pantothenate)	7 mg	70%
Calcium (as Calcium Citrate)	500 mg	50%
Phosphorous (as Dipotassium Phosphate)	39 mg	4%
Magnesium (as Magnesium Citrate)	75 mg	20%
Zinc (as Zinc Oxide)	8 mg	55%
Selenium (as L-Selenomethionine)	25 mcg	35%
Copper (as Cuprous Oxide)	1 mg	50%
Manganese (as Manganese Carbonate)	0.75 mg	40%
Chromium (as Chromium Picolinate)	40 mcg	35%
Molybdenum (as Sodium Molybdate)	25 mcg	35%
Potassium (as Dipotassium Phosphate)	100 mg	4%
Choline (as Choline Bitartrate)	20 mg	*
Inositol	20 mg	*
Vanadium (as Vanadyl Sulfate)	8 mcg	*

* % Daily Value not established
 **Not a significant source of calories from Fat, Total Fat, Trans Fat, Saturated Fat, Cholesterol, or Protein

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Nutrients per Serving of Wild Berry Punch Crystals

	1 Serving		2 Servings		3 Servings	
Calories	10		20		30	
Sodium	5 mg	<1%	10 mg	1%	15 mg	1%
Total Carbohydrates	3 g	1%	6 g	2%	9 g	3%
Dietary Fiber	<1 g	1%	<1 g	1%	<1 g	1%
Vitamin A (as Retinyl Palmitate)	3000 IU	60%	6000 IU	120%	9,000 IU	180%
Vitamin C (as Ascorbic Acid)	60 mg	100%	120 mg	200%	180 mg	300%
Vitamin D3 (as Cholecalciferol)	300 IU	80%	600 IU	160%	900 IU	270%
Vitamin E (as d-Alpha Tocopheryl Acid Succinate)	20 IU	70%	40 IU	140%	60 IU	210%
Thiamine (as Thiamine Mononitrate)	3 mg	200%	6 mg	400%	9 mg	600%
Riboflavin	1.7 mg	100%	3.4 mg	200%	5.1 mg	300%
Niacinamide	25 mg	130%	50 mg	260%	75 mg	390%
Vitamin B6 (as Pyridoxine HCl)	2 mg	100%	4 mg	200%	6 mg	300%
Folic Acid	270 mcg	70%	540 mcg	140%	810 mcg	210%
Vitamin B12 (Cyanocobalamin)	300 mcg	5000%	600 mcg	10,000%	900 mcg	15,000%
d-Biotin	200 mcg	70%	400 mcg	140%	600 mcg	210%
Pantothenic Acid (as Calcium d-Pantothenate)	7 mg	70%	14 mg	140%	21 mg	210%
Calcium (as Calcium Citrate)	500 mg	50%	1000 mg	100%	1500 mg	150%
Phosphorous (as Dipotassium Phosphate)	39 mg	4%	78 mg	8%	117 mg	12%
Magnesium (as Magnesium Citrate)	75 mg	20%	150 mg	40%	225 mg	60%
Zinc (as Zinc Oxide)	8 mg	55%	16 mg	110%	24 mg	165%
Selenium (as L-Selenomethionine)	25 mcg	35%	50 mcg	70%	75 mcg	105%
Copper (as Cuprous Oxide)	1 mg	50%	2 mg	100%	3 mg	150%
Manganese (as Manganese Carbonate)	0.75 mg	40%	1.5 mg	80%	2.25 mg	120%
Chromium (as Chromium Picolinate)	40 mcg	35%	80 mcg	70%	120 mcg	105%
Molybdenum (as Sodium Molybdate)	25 mcg	35%	50 mcg	70%	75 mcg	105%
Potassium (as Dipotassium Phosphate)	100 mg	4%	200 mg	8%	300 mg	12%
Choline (as Choline Bitartrate)	20 mg	*	40 mg	*	60 mg	*
Inositol	20 mg	*	40 mg	*	60 mg	*
Vanadium (as Vanadyl Sulfate)	8 mcg	*	16mcg	*	24 mcg	*

References

1. Alvarez-Leite JI. Nutrient deficiencies secondary to bariatric surgery. *Curr Opin Clin Nutr Metab Care*. 2004 Sep;7(5):569-75.
2. Arfeen Z, Owen H, Plummer JL, et al. A double-blind randomized controlled trial of ginger for the prevention of postoperative nausea and vomiting. *Anaesthesia* 1995;23:449-52.
3. Ben-Ari Z, Vaknin H, Tur-Kaspa R. N-acetylcysteine in acute hepatic failure (non-paracetamol-induced). *Hepatogastroenterology* 2000;47:786-9. Dixon J. Elevated homocysteine with weight loss. *Obes Surg*. 2001 Oct;11(5):537-8.
4. Bozboru A; Coskun H; Özarmagan S; Erbil Y; Özbey N; Orhan Y. A Rare Complication of Adjustable Gastric Banding: Wernicke's Encephalopathy. *Obesity Surgery, Volume 10, Number 3, 1 June 2000*, pp. 274-275(2).
5. Dixon JB, Dixon ME, O'Brien PE. Elevated homocysteine levels with weight loss after Lap-Band surgery: higher folate and vitamin B12 levels required to maintain homocysteine level. *Int J Obes Relat Metab Disord*. 2001 Feb;25(2):219-27.
6. Flancbaum L, Belsley S, Drake V, Colarusso T, Tayler E. Preoperative nutritional status of patients undergoing Roux-en-Y gastric bypass for morbid obesity. *J Gastrointest Surg*. 2006 Jul-Aug;10(7):1033-7.
7. Gasteyer C, Suter M, Calmes JM, Gaillard RC, Giusti V. Changes in body composition, metabolic profile and nutritional status 24 months after gastric banding. *Obes Surg*. 2006 Mar;16(3):243-50.
8. Gilbert R, Kaats, Kenneth Blum, Jeffrey A. Fisher and Jack A. Adelman. "Effects of chromium picolinate supplementation on body composition: a randomized, double-masked, placebo-controlled study," *Current Therapeutic Research* 57(10):747-456, 1996. Grandjean EM, Berthet P, Ruffmann R, Leuenberger P. Efficacy of oral long-term N-Acetylcysteine in chronic bronchopulmonary disease: A meta-analysis of published double-blind, placebo-controlled clinical trials. *Clin Ther* 2000;22:209-21.
9. Langner E, Greifenberg S, Gruenwald J. Ginger: History and use. *Adv Ther* 1998;15:25-44 [review].
10. Ledoux S, Msika S, Moussa F, Larger E, Boudou P, Salomon L, Roy C, Clerici C. Comparison of nutritional consequences of conventional therapy of obesity, adjustable gastric banding, and gastric bypass. *Obes Surg*. 2006 Aug;16(8):1041-9.
11. Madan AK, Orth WS, Tichansky DS, Ternovits CA. Vitamin and trace mineral levels after laparoscopic gastric bypass. *Obes Surg*. 2006 May;16(5):603-6.
12. Makarewicz W, et al. Wernicke's Syndrome after Sleeve Gastrectomy. *Obes Surg*. 2007 May;17(5):704-6.
13. Marchetti G, Lodola E, Licciardello L, Colombo A. Use of N-acetylcysteine in the management of coronary artery diseases. *Cardiologia* 1999;44:633-7. Pugnale N, Giusti V, Suter M, Zysset E, Heraief E, Gaillard RC, Burckhardt P. Bone metabolism and risk of secondary hyperparathyroidism 12 months after gastric banding in obese pre-menopausal women. *Int J Obes Relat Metab Disord*. 2003 Jan;27(1):110-6.
14. Salas-Salvado J, Garcia-Lorda P, Cuatrecasas G, Bonada A, Formiguera X, Del Castillo D, Hernandez M, Olive JM. Wernicke's syndrome after bariatric surgery. *Clin Nutr*. 2000 Oct;19(5):371-3.
15. Riedt CS, Brolin RE, Sherrell RM, Field MP, Shapses SA. True fractional calcium absorption is decreased after Roux-en-Y gastric bypass surgery. *Obesity (Silver Spring)*. 2006 Nov;14(11):1940-8.
16. Raymond I. Press, MD, Jack Geller, MD, and Gary Evans, PhD. "The effect of chromium picolinate on serum cholesterol and apolipoprotein fractions in human subjects," *The Western Journal of Medicine* 152:41-45, 1990.
17. Richard A. Anderson, PhD. "Chromium, glucose intolerance and diabetes," *Journal of the American College of Nutrition* 17(6):548-555, 1998.
18. Scruggs DM, Buffington C, Cowan GS Jr. Taste Acuity of the Morbidly Obese before and after Gastric Bypass Surgery. *Obes Surg*. 1994 Feb;4(1):24-28.
19. Singh S, Kumar A. CME Wernicke encephalopathy after obesity surgery: A systematic review. *Neurology* 2007 Mar 13;68(11):807-11.
20. Wang J, Yuen VG, McNeill JH. Effect of vanadium on insulin sensitivity and appetite. *Metabolism* 2001;50:667-673.
21. Yamahara J, Huang QR, Li YH, et al. Gastrointestinal motility enhancing effect of ginger and its active constituents. *Chem Pharm Bull* 1990;38:430-1.
22. Vemulapalli P, McGinty A, Lopes J, Goodwin A, Teixeira J. Nutritional Deficiencies in Laproscopic Gastric Banding. *Clinical Proceedings of the 21st Annual Meeting of the American Society of Bariatric Surgeons*. http://www.asbs.org/html/pdf/asbs_abstract_booklet.pdf (accessed January 19, 2005)

Calcium Products

Changes to digestion and absorption of calcium can occur following bariatric surgery, resulting in the potential for significant bone loss as well as a host of other complications. Calcium and Vitamin D supplementation is strongly advised in all patients, with recommendations provided from the ASMBS and from the Endocrine Society (AACE) for all procedures. Calcium Citrate with vitamin D is the preferred preparation because it is more soluble than calcium carbonate particularly when there is low or absent gastric acid.

After bariatric surgery, many patients cannot easily meet their daily calcium needs through diet alone, so it is common to supplement their diet. The existing guidelines for patients lists levels that are intended to be over and above their diet to ensure adequate intakes. At Bariatric Advantage, we recognize that providing different flavors and forms of this important nutrient helps assure adherence and makes taking large amounts of calcium much easier.

Calcium Citrate Chewable with Vitamin D

Flavors

- Chocolate
- Wild Cherry
- Mint
- Cinnamon

BA's Calcium Citrate Chewables are designed to meet the calcium replacement needs of patients who have undergone weight loss surgery. Our Calcium Citrate is a tablet/lozenge that can be chewed or allowed to dissolve in the mouth. This provides patients the calcium they need without swallowing large or multiple pills, which can be challenging after weight loss surgery. Calcium citrate, the form most recommended after weight loss surgery is the sole calcium source in the product. The lozenges also provide Vitamin D, Vitamin K and a small amount of magnesium, all for the support of bone health. BA Calcium Citrate Chewables are designed to be easy on the digestive system, to support maximum absorption and to foster compliance. For patients taking our iron, we suggest that they take calcium and iron at least two hours apart.

- » **100% Calcium Citrate.** Each Calcium Citrate Lozenge contains 500 milligrams of elemental calcium from calcium citrate. Calcium citrate is highly soluble and is appropriate for individuals who lack adequate stomach acid.
- » **Vitamin D3 (Cholecalciferol).** Three of our calcium lozenges provide 900 IU. Vitamin D is critical for proper calcium absorption and utilization. Vitamin D deficiency is now known to be common in obesity as well as after all forms of weight loss surgery.
- » **Vitamin K (Phytonadione).** Vitamin K is a fat-soluble nutrient that is important for bone health as it plays a role in three proteins that are vital to bone health. The best known of these proteins is osteocalcin, which plays a critical role in bone remodeling. Several studies have indicated that low vitamin K can occur after weight loss surgery. Additionally, patients may not consume adequate dark green vegetables to assure good dietary intakes.
- » **Minimal Use of Sweeteners.** Many chewable calcium products rely on candy bases as delivery systems. Leading brands provide 3 to 4 grams of sugars from corn syrup and high-fructose corn syrup – or up to 8 grams of concentrated sweeteners in a daily dose. Our calcium citrate chewables are sweetened with sucralose (Splenda®) and a minimal amount of low-glycemic, crystalline fructose (1 gram per tablet). Minimal sweetener use significantly minimizes the risk of dumping syndrome in patients taking our chewables. Moreover, post-operative weight loss surgery patients are often on severely carbohydrate-restricted diets, and really count those grams each day. Our formula meets the needs of these patients without compromising taste and quality.



Supplement Facts

	Amount per 1 Tablet	% Daily Value *
Total Carbohydrates	<1 g	<1%
Sugar	<1 g	†
Vitamin D3 (as Cholecalciferol)	300 IU	75%
Vitamin K (as Phytonadione)	20 mcg	25%
Calcium (from Calcium Citrate USP)	500 mg	50%
Magnesium (from Magnesium Amino Acid Chelate)	10 mg	3%

*Percent Daily Values are based on a 2,000 calorie diet.
 † % Daily Value not established.

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Calcium Citrate Chewy Bites

Flavors

- Chocolate
- Raspberry
- Lemon
- Caramel

- » **250 mg of elemental calcium as calcium citrate** in a delicious truffle-like chew.
- » **Delicious and satisfying.**
- » **Sugar free.**
- » **Vitamin D3** for aid in healthy calcium absorption.*
- » **Individually wrapped** for convenience and portability.



Supplement Facts

Serving Size: 1 Chew

	Amount per Serving	% Daily Value *
Calories	20	
Calories from Fat	5	
Total Fat	0 g	0%*
Total Carbohydrate	5 g	2%*
Sugars	0 g	**
Sugar Alcohol	4 g	**
Sodium	10 mg	<1%
Calcium (as calcium citrate)	250 mg	25%
Vitamin D	125 IU	31%

*Percent Daily Values are based on a 2,000 calorie diet.
† % Daily Value not established.



Calcium Crystals with Vitamin D

Flavors

Unflavored

Bariatric Advantage offers another way to introduce Calcium into the diet. These unflavored crystals can be added to plain water or another drink of choice as an easy and effective way to augment the diet with calcium and vitamin D. Calcium Crystals are available in tubs or convenient individual serving packets.

- » **600 mg Calcium** per serving
- » **500 IU of vitamin D3** to aid in healthy calcium absorption and to support bone health.
- » **Highly Soluble.** Dissolves readily in water and most other liquids
- » **Leaves minimal taste.**
- » **Calcium Lactate-Gluconate** is a unique form of calcium whose bioavailability is comparable to that of Calcium Citrate, but it is more easily mixed in water.
- » **Versatile.** Can be added to water, protein shakes, yogurt and more.



Supplement Facts

Serving Size: 2 level teaspoons (5 grams)

	Amount per Serving	% Daily Value *
Calories	15	
Total Carbohydrates	4 g	1%
Vitamin D (as Cholecalciferol)	500 IU	125%
Calcium (as calcium lactate-gluconate)	600 mg	60%

*Percent Daily Values are based on a 2,000 calorie diet.

References

1. Alvarez-Leite JJ. Nutrient deficiencies secondary to bariatric surgery. *Curr Opin Clin Nutr Metab Care.* 2004 Sep;7(5):569-75.
2. Carr CJ and Shangraw RF. 1987. Nutritional and pharmaceutical aspects of calcium supplementation. *Am Pharm NS27:49-57.*
3. Heaney RP, Recker RR and Hinders SM. 1988. Variability of calcium absorption. *Am J Clin Nutr* 47:262-264.
4. Newbury L, Dolan K, Hatzifotis M, Low N, Fielding G. Calcium and vitamin D depletion and elevated parathyroid hormone following biliopancreatic diversion. *Obes Surg.* 2003 Dec;13(6):893-5.
5. Recker RR. Calcium absorption and achlorhydria. *N Engl J Med* 1985; 313: 70-3.
6. Riedt CS, Brolin RE, Sherrell RM, Field MP, Shapses SA. True fractional calcium absorption is decreased after Roux-en-Y gastric bypass surgery. *Obesity (Silver Spring).* 2006 Nov;14(11):1940-8.
7. Sirinek KR, O'Dorisio TM, Howe B, McFee AS. Neurotensin, vasoactive intestinal peptide, and Roux-en-Y gastrojejunostomy. Their role in the dumping syndrome. *Arch Surg.* 1985 May;120(5):605-9
8. Slater GH, Ren CJ, Siegel N, Williams T, Barr D, Wolfe B, Dolan K, Fielding GA. Serum fat-soluble vitamin deficiency and abnormal calcium metabolism after malabsorptive bariatric surgery. *J Gastrointest Surg.* 2004 Jan;8(1):48-55; discussion 54-5.
9. Brink EJ, Van Den Heuvel E, Muijs T. Comparison of Six Different Calcium Sources and Meal Type on True Fractional Calcium Absorption in Postmenopausal Women. *Cuff Top Nutraceut Res* 2003;1:161-168.

a. Flynn, A.; Cashman, K. Calcium. In: Hurrell, R. (ed.) *The Mineral Fortification of Foods*, Leatherhead International Ltd, Surrey, England 1999

Iron Products

Bariatric Advantage's Iron products are designed to meet the iron replacement needs of patients who have undergone bariatric surgery. Our iron is in a form that is both easy to take and tastes great. We offer chewable tablets in three dosages: 18 mg Strawberry, 29 mg Passion Fruit, and 60 mg Lemon Lime. We also have a 30 mg Iron Chewy Bite in Chocolate Raspberry Truffle flavor. All four contain vitamin C to optimize iron absorption and utilization.* All of our iron products are designed to be easy on the digestive system, to support maximum absorption, and to minimize side effects like constipation.* We suggest that iron supplements be taken at least two hours away from calcium supplements and dairy products.

Ferronyl® Carbonyl Iron

Bariatric Advantage Chewable Iron products incorporate a special form of iron known as carbonyl iron. We chose carbonyl iron because of its minimal side effects, high bioavailability and pleasant taste.*

Ferronyl® carbonyl iron powder is elemental iron (Fe) with > 98% iron content. A key physical property of Ferronyl is its fine spherical particle size (5 µm), which is considerably smaller than the 10-100 µm of other forms of elemental iron (e.g., reduced, electrolytic and atomized). As a result, Ferronyl has higher human bioavailability than these other forms.* The net absorption per unit dose of Ferronyl is also greater than that of any of the currently used ferrous (Fe²⁺) salts (Fe²⁺ sulfate, Fe²⁺ fumarate, Fe²⁺ Gluconate, etc.). While the latter may have a higher relative biological availability than elemental iron, their iron content is only 12 - 32% of Ferronyl®.

Bioavailability

The amount of iron absorbed by the body per unit dosage from a particular iron source is a function of several factors - particle size, surface area, ionic charge, and iron content. The first three of these factors contribute to the relative biological value (RBV) of the iron source - a measure of how quickly the iron enters the blood stream. The iron content is a function of molecular structure, i.e. elemental iron versus ferrous salts like FeSO₄ and is a measure of the percentage of iron in a unit dose. Multiplying the RBV by the iron content produces the iron absorption per unit dosage. Table 1 shows that the high iron absorption from Ferronyl results from its small particle size which contributes to a higher RBV than other forms of elemental iron and its high iron content relative to ferrous sulfate.

The small particle size of Ferronyl® contributes to its high RBV which, together with its high iron content, leads to high absorption per unit dose.*

Table 1

Iron Source	Particle Size, µm	RBV, %	% Iron Content	Absorption, %
FeSO ₄	N/A	100	20	20
Reduced Iron	10 - 20	34	96	33
Electrolytic Iron	10 -20	48	97	47
Ferronyl®	4-6	70	98	69

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Chewable Iron

3 Dosages

- » **18 mg Strawberry**
- » **29 mg Passion Fruit**
- » **60 mg Lemon-Lime**

- » **Ferronyl® carbonyl iron.** Ferronyl® carbonyl iron powder is elemental iron (Fe) with > 98% iron content. A key physical property of Ferronyl is its small particle size, which is considerably smaller than other forms of elemental iron. As a result, Ferronyl has higher human bioavailability than these other forms.* The net absorption per unit dose of Ferronyl is also greater than that of any of the currently used ferrous (Fe2+) salts.

- » **Ferrous Fumarate** (Passion Fruit only). Ferrous fumarate is a well-tolerated and well-absorbed form of iron.* The ferrous forms of iron are known to be among the best absorbed of the salts. The most commonly used form, ferrous sulfate, is 20% elemental iron and is notorious for causing gastrointestinal side effects. By contrast, ferrous fumarate is 33% elemental iron, and is much less likely to produce side effects. Absorption of ferrous fumarate is additionally enhanced by vitamin C.

- » **Vitamin C.** Vitamin C is known to enhance iron absorption.* Vitamin C benefits the absorption of iron by reducing ferric iron (Fe3+) to ferrous iron (Fe2+) and forming an iron-ascorbic acid complex. A 1999 study conducted in gastric bypass patients suggested that the combination of iron with vitamin C was more effective than iron alone at restoring ferritin and hemoglobin levels in anemic patients.*

- » **Short-Chain Fructooligosaccharides.** Fructooligosaccharides (FOS) have been studied for their ability to improve the uptake of select minerals (including iron, calcium and magnesium) from the colon. In animal models, use of FOS with iron has been shown to increase ferritin levels and aid in the recovery from anemia. This strategy makes sense for individuals who have undergone weight loss surgery where there is both partial gastrectomy and short bowel to aid in the optimization of iron uptake and support the maintenance of body stores.

- » **Great Taste.** When it comes to our iron, tasting is believing. Our great taste helps patients comply with your recommendation.



18 mg Strawberry

Supplement Facts		
Serving Size: 1 Tablet		
	Amount per Tablet	% Daily Value *
Vitamin C (from Sodium Ascorbate USP)	30 mg	50%
Iron (from Ferronyl)	18 mg	100%
Fructooligosaccharides (FOS)	5 mg	†

† % Daily Value not established.

29 mg Passion Fruit

Supplement Facts		
Serving Size: 1 Tablet		
	Amount per 1 Tablet	% Daily Value *
Total Carbohydrates	<1 g	<1
Vitamin C (as Ascorbic Acid USP)	60 mg	100%
Iron (from Ferrous Fumarate USP, Ferronyl)	29 mg	161%
Fructooligosaccharides (FOS)	10 mg	†

*Percent Daily Values are based on a 2,000 calorie diet.
† % Daily Value not established.

60 mg Lemon-Lime

Supplement Facts		
Serving Size: 1 Tablet		
	Amount per Tablet	% Daily Value
Vitamin C (from Sodium Ascorbate USP)	30 mg	50%
Vitamin C (as Ascorbic Acid, from Sodium Ascorbate)	250 mg	417%
Iron (from Ferronyl)	60 mg	333%
Sodium	5 mg	<1%
Fructooligosaccharides (FOS)	66.5 mg	†

† % Daily Value not established.

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Iron Chewy Bite 30 mg

Flavors

- Chocolate Raspberry Truffle

- » **Ferric Orthophosphate** as our source of iron, which performs optimally in this dosage form.
- » **Vitamin C.** Vitamin C is known to enhance iron absorption. Vitamin C benefits the absorption of iron by reducing ferric iron (Fe³⁺) to ferrous iron (Fe²⁺) and forming an iron-ascorbic acid complex. A 1999 study conducted in gastric bypass patients suggested that the combination of iron with vitamin C was more effective than iron alone at restoring ferritin and hemoglobin levels in anemic patients.
- » **Delicious, chewy and satisfying.**



Supplement Facts

Serving Size: 1 Chew

	Amount per Serving	% Daily Value *
Total Carbohydrates	<1 g	<1
Calories	20	
Calories from Fat	5	
Total Fat	0.5 g	1%*
Saturated Fat	0 g	0%*
Trans Fat	0 g	†
Total Carbohydrate	4 g	1%*
Sugars	0 g	†
Sugar Alcohol	4 g	†
Vitamin C (as Ascorbic Acid)	60 mg	100%
Iron	30 mg	167%
Sodium	10 mg	<1%

*Percent Daily Values are based on a 2,000 calorie diet.

† Daily Value not established.

B12 with Folic Acid 1000 mcg

Flavors

- Black Cherry
- Peppermint

Deficiencies of Vitamin B12 and folate have been demonstrated in virtually every bariatric surgery procedure. Our B12 was designed to meet the vitamin B12 needs of individuals who have undergone weight loss surgery. Each tablet provides 1000 micrograms of B12. This product is a 100% lactose-free formula that can be placed under the tongue or between the cheek and gum and allowed to dissolve over a period of several minutes. The slow-dissolve base assures optimal contact time with the inside of the mouth so that B12 is absorbed in the mouth rather than swallowed. This tablet also contains 200 mcg of folic acid. Vitamin B12 and folic acid are synergistic nutrients in the body, supporting many of each other's functions.

- » **Highly Absorbable.** Once swallowed, the absorption of vitamin B12 is highly dependant on the stomach – requiring specialized proteins such as Intrinsic Factor for absorption. Absorption in the mucosa of the mouth has been shown to be effective in the prevention and treatment of B12 deficiency.
- » **100 Percent Lactose Free.** A percentage of patients who have undergone weight loss surgery such as gastric bypass or duodenal switch develop lactose intolerance. Others have heard about this potential problem and avoid lactose-containing foods and products without a confirmed problem. The vast majority of sublingual B12 products contain lactose for one of two reasons: 1) the tablet itself contains lactose or 2) the B12 is titrated in lactose. The latter may not show in the ingredient listing, and may cause symptoms for unidentifiable reasons. Our B12 is 100 percent lactose free. There is no lactose in the base and the B12 ingredient is titrated in calcium. Thus, this is the best choice formula for those who may need to avoid lactose.
- » **Slow Dissolving.** Many sublingual vitamin products dissolve rapidly in the mouth allowing most of the vitamin to be swallowed. This is not optimal in individuals with malabsorption where the goal is to assure absorption in the mucosa of the mouth. Our formula is designed to dissolve over several minutes, allowing for optimal absorption. For greatest comfort, we suggest that the tablet be placed transbuccally, between cheek and gum rather than under the tongue.
- » **Great Taste.** We consistently get feedback from customers on the great taste of our products, especially our B12. Great taste fosters compliance, and makes the process of taking daily vitamins more pleasant for patients.



Supplement Facts

Serving Size: 1 Tablet

	Amount per Tablet	% Daily Value *
Folic Acid	200 mcg	50%
Vitamin B12 (as Cyanocobalamin)	1000 mcg	16,667%

General Protocol by Weight Loss Surgical Procedure

These are suggested use only; please ask your doctor what levels of nutrients you need to take.

Nutrient	Level (ASMBS)	Adjustable Gastric Band	Sleeve Gastrectomy	Gastric Bypass	Biliopancreatic Diversion/Duodenal Switch
Multiformula	100% DV for at least 2/3 of nutrients 1xdaily	VitaBand Multi Crystals*			
	200% DV for at least 2/3 of nutrients 2xdaily			Complete Chewable Multi High ADEK Multi (2) Multi Capsules Multi Crystals*	High ADEK Multi
	Multivitamin with minerals and at least 400mcg folate 2x/daily		Complete Chewable Multi High ADEK Multi (2) Multi Capsules Multi Crystals*		
B12	1000 mcg/month as injection or 350 to 500 mcg/day for oral forms	Level† in multi	B12	B12	Level† in multi/B12
Calcium	1500mg/day	Chewable Calcium Citrate Calcium Crystals Calcium Chewy Bites Multi Crystals*			
	1500-2000mg/day			Chewable Calcium Citrate Calcium Crystals Calcium Chewy Bites Multi Crystals*	
	1800-2400mg/day				Chewable Calcium Citrate Calcium Crystals Calcium Chewy Bites
	1,200 to 2000 mg/day		Chewable Calcium Citrate Calcium Crystals Calcium Chewy Bites Multi Crystals*		
Iron	Minimum 18 to 27 mg/day	Level† in multi	Strawberry Iron (18mg) Passion Fruit Iron (29mg) Iron Chewy Bite (30mg)		
	Minimum 18 to 27 mg/day, 40 to 65mg for menstruating women			Strawberry Iron (18mg) Passion Fruit Iron (29mg) Iron Chewy Bite (30mg) Lemon-Lime Iron (60mg)	Passion Fruit Iron (29mg) Iron Chewy Bite (30mg) Lemon-Lime Iron (60mg)
Other		As Needed	As Needed	As Needed	Dry Vitamin A Dry Vitamin D Vitamin D Gels Liquid Vitamin D Zinc 50

* 3 Servings of Multi Crystals contain 1500mg calcium from Calcium Citrate

† 1. Aillis L, Blankenship J, Buffington C, Furtado M, Parrott J. ASMBS Allied Health Nutritional Guidelines for the Surgical Weight Loss Patient. Surgery for Obesity and Related Diseases. 2008 May; 4(5): S73-S108.

2. Mechanick J, Kushner R, Sugarman H, Gonzalez-Campoy M, Collazo-Clavell M, Guven S, Spitz A, Apovian C, Livingston E, Brolin R, Sarwer D, Anderson W, Dixon J. AACE/TOS/ASMBS Bariatric Surgery Guidelines, Endocr Pract. 2008;14 (Suppl 1).

Therapeutic Nutrition

Nutritional deficiencies requiring therapeutic intervention are not uncommon in bariatric surgery patients. Deficiencies are sometimes found pre-operatively, and many clinicians are choosing to correct these problems (such as vitamin D or thiamine deficiency) prior to surgery. Post-operatively, deficiencies become more common due to decreased food intake, differences in food choices, malabsorption, and non-compliance with basic nutritional and dietary instructions.

Bariatric Advantage has long recognized that prevention is not always enough. We have created our therapeutic line of products to help you, the clinicians best meet the needs of your patients when problems arise. We strive to continue to meet these needs through our on-going efforts in product development – we create products as the research indicates the need.

Much more so than most companies, BA seeks the guidance of our customers by listening to your needs for new products as you identify trends you see in your patients. To accomplish this task, we greatly appreciate your feedback. If you are regularly finding a problem in your patients that we are not addressing, we encourage you to let us know.

You will find that most of the products in our therapeutic line come in small-sized capsules. We use a #1 two-piece capsule as even those who are challenged with pills can easily swallow this size. Alternately, capsules can be opened up into a liquid or soft food. Unlike tablets, capsules break down simply from contact with moisture and heat, and require no digestion. Thus, there is no concern that capsules will not properly release the nutrients they contain. Since the strength of many therapeutic products makes them very unpleasant tasting in a liquid or chewable, this form allows a convenient and effective delivery system.

Thiamine (B-1)

The growing popularity of weight loss surgery has created a new axis for thiamine deficiency. While there are few reports in medical literature, thiamine has become a topic of increased interest. Thiamine deficiency has been reported with all forms of bariatric surgery, including adjustable gastric band and sleeve gastrectomy. It is most common in the first 6 months post-operatively in patients who have vomiting or difficulty eating, although it can occur at any time. Thiamine deficiency has also been identified pre-operatively, with two studies showing 15.5% and 29% of patients having identifiable thiamine deficiency before surgery. Our 100 mg thiamine capsule can help to support patients who have or are at high risk for this problem.

- » **Provides 100 mg of thiamine** from Mononitrate.
- » **Small, easy to swallow** two-piece capsule.



Supplement Facts

Serving Size: 1 Capsule

	Amount per Serving	% Daily Value
Thiamine (as Thiamine Mononitrate)	100 mg	6,670%

B-50 Complex

Bariatric Advantage B-50 Complex is a high-potency capsule for those in need of additional B-vitamin nutrition. Our small, easy-to-digest capsules contain all the essential B-vitamins in substantial doses plus the accessory B vitamins choline, inositol, and PABA. We have included the activated forms of several key B-vitamins to support increased bioavailability and function.

The group of vitamins collectively known as B-complex includes all of the essential water-soluble vitamins except for vitamin C. When first discovered, it was thought that this group of vitamins was a single nutrient, and it was given the name vitamin B. Later, it was discovered this was actually a group of compounds with unique structures, features and functions, and they were given individual names and numbers. Today, we consider the following B-vitamins to be essential to human health: thiamine (vitamin B1), riboflavin (vitamin B2), niacin (vitamin B3), pantothenic acid (vitamin B5), pyridoxine (vitamin B6), biotin, folic acid and the cobalamins (vitamin B12). Three other nutrients – choline, inositol, and PABA (para-aminobenzoic acid) – are considered by most nutritional experts to be part of the B-complex group, although they have not been established as essential in humans. B-complex vitamins are essential for a vast range of functions in the body from energy production, to cellular replication, to metabolism, and more.* Several of the B vitamins, including B12, folate, and thiamine have been shown to be deficiency risks with weight loss surgery. Under certain conditions such as stress, poor dietary intake, and malabsorption there may be an increased need for B vitamins above and beyond the RDA. Some physicians, therefore, will recommend the use of a B-complex product over and above the levels in a multi-vitamin. The ASMBS also lists a B-50 Complex as an optional daily product for all weight loss surgery procedures.

- » **Full spectrum Vitamin B Complex.**
- » **Accessory nutrients Choline, Inositol, and PABA.**
- » **Highly bioavailable forms.**



Supplement Facts

Serving Size: 2 Capsules		
	Amount per 2 Capsules	% Daily Value
Thiamin (as thiamin mononitrate USP)	50 mg	3333%
Riboflavin USP	50 mg	2941%
Niacin (as niacinamide USP)	50 mg	250%
Vitamin B6 (80% as pyridoxine hydrochloride USP and 20% as pyridoxal 5'-phosphate)	50 mg	2500%
Folate (50% as calcium folinate and 50% as folic acid USP)	400 mcg	100%
Vitamin B12 (50% as cyanocobalamin and 50% as methylcobalamin)	250 mcg	4167%
Biotin USP	500 mcg	167%
Pantothenic acid (as d-calcium pantothenate)	50 mg	500%
Choline (as choline bitartrate)	25 mg	†
Inositol	25 mg	†
para-aminobenzoic acid USP	100 mg	†

† Daily Value not established.

Dry Vitamin D

Our water-miscible “dry” vitamin D comes in a small, easy to swallow capsule. Each capsule provides 5000 IU of vitamin D as cholecalciferol (D3). Vitamin D deficiency is widespread in morbid obesity, and is also frequently found after bariatric surgery. This high-potency product can be used to support healthy vitamin D levels before or after surgery. The water-miscible powder is a good choice for patients with malabsorption of fat, and the vitamin D3 form is more bioactive than D2, which is often the form used in high-potency products.*

- » **Highly bioactive form of Vitamin D.***
- » **Water-miscible.**
- » **Easy to swallow capsule.**



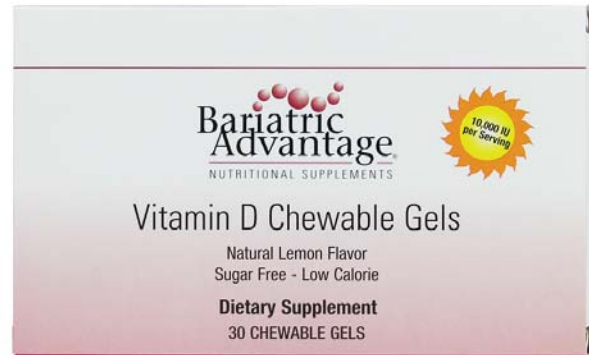
Supplement Facts

Serving Size: 1 Capsule		
	Amount per 1 Capsule	% Daily Value
Vitamin D3 (as cholecalciferol)	5000IU	1250%

Vitamin D Chewable Gels

These unique gels provide 10,000 IU of Vitamin D3 (Cholecalciferol) in one convenient gel. This delivery system is a perfect vehicle for this high potency formula. We use only cholecalciferol as it is more bioavailable than the D2 form.

- » **Unique delivery system.**
- » **Tasty gel form.**
- » **High potency Vitamin D3.**



Supplement Facts

Serving Size: 1 Chewable Gel		
Amount Per Serving		% Daily Value
Calories	5	<1%*
Total Carbohydrate	0.5 g	**
Sugar Alcohol	0.5 g	
Vitamin D3 (as cholecalciferol)	10,000 IU	2500%

* Percent Daily Values are based on a 2,000 calorie diet.
† % Daily Value not established.

Liquid Vitamin D

Bariatric Advantage Liquid Vitamin D3 is designed to facilitate ease of dosing for those who need a high potency Vitamin D product. Our liquid vitamin D is a unique sugar-free formula of vitamin D3 in a suspension of medium chain triglycerides (MCTs). It is very pleasant tasting and offers the easy ability to dose either 10,000 IU (a full-dropper) or 5,000 IU of vitamin D. This is a great solution for those who need to maintain their vitamin D levels and support bone health.*

- » **High Potency Liquid Formula.**
- » **Sugar-Free Formula.**
- » **Suspension of MCTs.**



Supplement Facts		
Serving Size: 1 mil		
Amount Per Serving	% Daily Value	
Vitamin D3	10,000 IU	2500%

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Dry Vitamin A

While it is a less common problem than vitamin D deficiency, vitamin A deficiency can happen in bariatric patients. Our small, high potency capsule is in the water-miscible “dry” form that is usually recommended for patients with fat malabsorption.

- » **10,000 IU of Vitamin A (as Retinol Acetate).**
- » **Unique “dry” form.**



Supplement Facts

Serving Size: 1 Capsule		
	Amount per 1 Capsule	% Daily Value
Vitamin A (as acetate)	10,000 IU	200%

Zinc-50 with Copper

Zinc deficiency has been identified both before and after weight loss surgery. The greatest risk is in patients who have had a duodenal switch procedure, but it also occurs after RNY. Zinc is an essential trace mineral with literally hundreds of functions in the human body. There are perhaps 200 or more zinc-dependant enzymes that are involved in all manner of chemical reactions in the body. In addition, zinc has non-enzymatic functions in growth and development, skin health, host defense/immunity, protein and cell membrane structure, and genetic transcription.* Bariatric Advantage Zinc 50 with copper is a high-potency zinc supplement balanced with the complementary mineral copper. Both minerals are provided in the gluconate form, which is easy to digest and well-absorbed.*

- » **High potency Zinc from Gluconate.**
- » **Better absorbed.***
- » **Addition of Copper (from Gluconate) for enhanced bioavailability.***



Supplement Facts

Serving Size: 1 Capsule		
	Amount per 1 Capsule	% Daily Value
Zinc (as Zinc Gluconate)	50 mg	333%
Copper (as Copper Gluconate)	2 mg	100%

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Copper Gluconate

Copper deficiency is increasingly identified in bariatric surgery patients. Excessive supplementation of zinc or iron can also induce copper deficiency. Bariatric Advantage copper gluconate is a 3-milligram capsule designed for therapeutic use. This product comes in a small easy to swallow capsules, and the gluconate form is easy to digest and absorb.

- » **3 mg Copper from Gluconate.**
- » **Small capsule is easy to digest.**



Supplement Facts

Serving Size: 1 Capsule

	Amount per 1 Capsule	% Daily Value
Copper (as Copper Gluconate USP)	3 mg	150%

References

- Carlin AM, Rao DS, Meslemani AM, et al. Prevalence of vitamin D depletion among morbidly obese patients seeking gastric bypass surgery. *Surgery for Obesity and Related Diseases*. 2006;2:98–103.
- Flancbaum L, Belsley S, Drake V, et al. Preoperative nutritional status of patients undergoing Roux-en-Y gastric bypass for morbid obesity. *Journal of Gastrointestinal Surgery*. 2006;10:1033–1037.
- Goode LR, Brolin RE, Chowdhury HA, et al. Bone and gastric bypass surgery: effects of dietary calcium and vitamin D. *Obes Res*. 2004;12:40–47.
- Johnson JM, Maher JW, Heitshusen D, et al. Effects of gastric bypass procedures on bone mineral density, calcium, parathyroid hormone, and vitamin D. *J Gastrointest Surg*. 2005;9:1106–11.
- Johnson JM, Maher JW, DeMaria EJ, et al. The long-term effects of gastric bypass on vitamin D metabolism. *Annals of Surgery*. 2006;243:701–704.
- Wortsman J, Matsuoka LY, Chen TC, et al. Decreased bioavailability of vitamin D in obesity. *American Journal of Clinical Nutrition*. 2000;72:690–693.
- Stein, E. M., Strain, G., Sinha, N., Ortiz, D., Pomp, A., Dakin, G., McMahon, D. J., Bockman, R. and Silverberg, S. J. (2009), Vitamin D insufficiency prior to bariatric surgery: risk factors and a pilot treatment study. *Clinical Endocrinology*, 71: 176–183.
- Cominetti C, Garrido AB, Cozzolino SMF. Zinc Nutritional Status of Morbidly Obese Patients Before and After Roux-en-Y Bypass: A Preliminary Report. *Obes Surg*. 2006 Apr; 16(4):448-53.
- Coppini, L. Very Early Hypocupremia After Bariatric Surgery. *The Obesity Society 2007 Annual Meeting 2007*. New Orleans, LA.
- Goldberg ME, Laczek J, Napierkowski JJ. Copper deficiency: a rare cause of ataxia following gastric bypass surgery. *Am J Gastroenterol*. 2008;103:1318–1319.
- Griffith DP, Liff DA, Ziegler TR, Esper GJ, Winton EF. Acquired copper deficiency: a potentially serious and preventable complication following gastric bypass surgery. *Obesity (Silver Spring)* 2009;17:827–831.
- Kumar N, Ahlskog JE, Gross JB, Jr. Acquired hypocupremia after gastric surgery. *Clin Gastroenterol Hepatol*. 2004;2:1074–1079.
- Sandstrom B, Abrahamsson H. *Eur J Clin Nutr*. 1989 Dec;43(12):877-9. Zinc absorption and achlorhydria.
- Schuetz P, Peterli R, Ludwig C, Peters T. Fatigue, Weakness, and Sexual Dysfunction after Bariatric Surgery – Not an Unusual Case but an Unusual Cause. *Obes Surg*. 2004 Aug;14(7):1025-8.
- Slater GH, Ren CJ, Siegel N, Williams T, Barr D, Wolfe B, Dolan K, Fielding GA. Serum fat-soluble vitamin deficiency and abnormal calcium metabolism after malabsorptive bariatric surgery. *J Gastrointest Surg*. 2004 Jan;8(1):48-55; discussion 54-5

Omega-3 750

Bariatric Advantage Omega-3 750 is concentrated cold-water fish oil, from sustainably sourced marine lipids providing 750 mg each of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Omega-3 750 is strictly screened for the absence of any toxic metals and chemicals, and is completely free of cholesterol. The oil is carefully processed and handled to avoid oxidation. This is an excellent quality fish oil for those needing additional essential fatty acids.

- » **Supplies 750 mg each of EPA and DHA per softgel.**
- » **From cold-water fish and sustainably sourced marine lipids.**
- » **Highly concentrated.**



Supplement Facts		
Serving Size: 1 Soft Gel		
	Amount per Serving	% Daily Value *
Calories	30	
Calories from Fat	30	
Total Fat	3 g	2%*
Cholesterol	less than 5 mg	
Natural Marine Lipid Concentrate	2,700 mg	**
EPA (Eicosapentaenoic acid)	750 mg	**
DHA (Docosahexaenoic acid)	750 mg	**
Other Omega-3 Fatty Acids	200 mg	**

*Percent Daily Values are based on a 2,000 calorie diet.
**Daily Value not established.

Omega-3 Chewy Bites

These delicious chews foster patient compliance. Each sugar-free cherry flavored chew provides 160 mg of EPA and DHA, eicosapentaenoic acid and docosahexaenoic acid respectively, to support optimal essential fatty acid intake.

- » **160 mg EPA.**
- » **160 mg DHA.**
- » **Sugar-Free Formula.**



Supplement Facts		
Serving Size: 1 Chew		
	Amount per Serving	% Daily Value *
Calories	20	
Calories from Fat	10	
Total Fat	1 g	2%*
Saturated Fat	0 g	0%*
Trans Fat	0 g	†
Total Carbohydrate	4 g	1%*
Sugars	0 g	†
Sugar Alcohol	3 g	†
Sodium	10 mg	<1%
Omega 3 fatty acids (EPA, DHA and other Omega-3)	160 mg	†

*Percent Daily Values are based on a 2,000 calorie diet.
†Daily Value not established.

Chewable Probiotic

The human digestive system is normally home to several kinds of healthful bacteria or “flora” that play a role in bowel health and regularity, immunity, carbohydrate fermentation and absorption and more. It is sometimes possible for this flora to become altered due to medications (such as antibiotics or acid blockers), illnesses, or surgical procedures. Bariatric Advantage Chewable Probiotic is designed to assist in the maintenance of healthy normal flora in the digestive system as well as to support overall digestive health and wellbeing.* This delicious strawberry flavored product provides 2.4 billion CFUs (colony forming units) of probiotic activity from an expert blend of 5 strains of Lactobacillus (acidophilus, fermentum, reuteri, rhamnosus, and salivarius) as well as Bifidobacterium bifidum.

- » **Provides 2.4 billion CFUs per tablet.**
- » **5 Strains of Lactobacillus.**
- » **Also contains Bifidobacterium Bifidum.**
- » **Supports overall digestive health.***
- » **Shelf-Stable.**



Supplement Facts

Serving Size: 1 Tablet

	Amount per Tablet	% Daily Value
Calories	20	
Probiotic Blend	150 mg	†
Lactobacillus acidophilus		
Lactobacillus fermentum		
Lactobacillus reuteri		
Lactobacillus rhamnosus		
Lactobacillus salivarius		
Bifidobacterium bifidum	2.4 Billion*	†

*Contains at least 2.4 billion Colony Forming Units (CFU) per tablet through date of expiration.

†Daily Value not established.

Biotin Capsules

Biotin is a member of the B-vitamin family. It plays a role in the metabolism of protein, fat and carbohydrate.* It may help to maintain the health of nails and hair.* Our small, high-potency capsules are easy to swallow and digest.

- » **5 mg Biotin.**
- » **Easy to swallow capsule.**



Supplement Facts

Serving Size: 1 Tablet

	Amount per Tablet	% Daily Value
Biotin	5 mg	1667%

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Meal Replacements

In addition to their pre-operative use (discussed on page 9), Meal Replacements may also be recommended to post-operative patients for a variety of reasons.

These reasons include, but are not limited to:

1. Assuring adequate protein and nutrients while patients are phasing back into eating a more normal diet.
2. In individuals who may be struggling to meet their daily nutritional intake
3. In gastric band patients following an adjustment or as a morning meal.
4. In individuals who have experienced weight regain and are looking to control intake and calories.

Bariatric Advantage® Meal Replacements (HPMR)

High Protein Meal Replacement – 27 Grams Protein

The Bariatric Advantage High Protein Meal Replacement comes in an economic 35-serving bag with a measured scoop to make accurate dispensing easy. We also offer individual packets and single-serving shaker bottles for convenience. Select flavors are available in 21-serving tubs. Each 150 to 160 calorie serving provides a full 27 grams of protein, with only 7 grams of carbohydrate (of which 5 grams are fiber, and only 0.5 to 2 gram is sugar) and 1.5 gram of fat. They are also lactose-free to best meet the needs of weight loss surgery patients. One hundred percent of the protein is from a high quality whey protein isolate. Fortified with between 15 and 50 percent of the DV (Daily Value) for 23 essential vitamins and minerals, this product makes a perfect pre-operative weight loss shake or post-operative meal replacement for bariatric surgery patients. Our meal replacement also comes in a great variety of flavors (Chocolate, Vanilla, Strawberry, Banana, Orange Cream and Iced Latte) as well as an unflavored shake that can be mixed with soup, yogurt, fruit or home-purchased flavorings.





RECOVER[®] is directed to those caught up in the economic downturn and are working to RECOVER financially while taking care of their health.



ACCUMULATE POINTS that you can redeem and apply against future purchases. Join the thousands of people who have already enrolled and SAVE!



iCOMPLI[™] is a revolutionary new way for patients to stay compliant with their doctor's recommendations via text messaging or email!



Automatic delivery and billing for your Bariatric Advantage products.



Environmentally Conscious