

All about PROTEIN!

What is protein?

Proteins are found in every cell, tissue, and organ in our bodies and are consistently being broken down and replaced. Protein helps to:

- build muscle
- heal
- keep us strong
- keep our bellies full!

Calorie Math:

1 gram of protein = 4 calories

(so a protein shake with 25 grams of protein has at least 100 calories)
Protein isn't a 'free food'. Eating too much turns into fat, not muscle.

In conjunction with exercise, it also preserves muscle during weight loss so you lose more weight as fat. Muscle is important for keeping our **metabolism** up long term.

How much protein do you need?

Most people need about **60-80 grams of protein** after bariatric surgery. If you are eating 3 meals each day, each meal should provide 20-25 grams. If you are eating 4 small meals each day, you should get in about 15-20 grams at each eating occasion.

What are good sources of protein?

- **lean meats** (skinless chicken, ground chicken breast, chicken in the can, ground turkey breast, ground beef >96% lean, pork tenderloin, >97% fat free deli-sliced meats, venison)
- **fish** (tilapia, flounder, grouper, tuna or salmon filets or canned in water, etc.)
- **shellfish** (shrimp, scallops, oysters, crab)
- **eggs** (or egg substitute or egg whites)
- **milk** (skim or 1%, Lactaid, nonfat dried milk powder, or unsweetened soy milk)
- **yogurt** (nonfat, no added sugar or plain Greek style yogurt)
- **cottage or ricotta cheese** (fat free or 1%)
- **cheese** (low fat, 1% or fat free)
- **beans** (black beans, black eyed peas, lima beans, garbanzo beans or chickpeas, lentils, white beans, split peas, refried beans or pinto beans, etc.)
- **soy products** (tofu, edamame, veggie burgers, soy sausages)

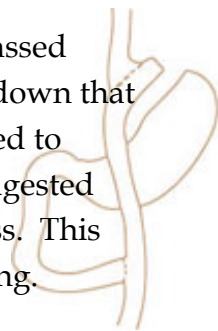
Watch out! Seeds (sunflower, pumpkin, sesame), nuts (almonds, walnuts, peanuts, pecans) and nut butters (peanut butter) have some protein but contain more fat than protein per serving and are very high in calories. They must be used sparingly – not more than ¼ cup of nuts or 2 Tbsp of nut butter per day.

What are NOT good sources of protein?

Protein sources can also be high in fat and calories so it is important to choose the leanest protein sources possible to maximize weight loss. Each serving of protein (ie: 1 oz of cooked meat) should have no more than 55 calories. These foods are too high in fat and too low in protein and must be **avoided for life**: poultry skin, chicken or turkey wings, potted meat like Vienna sausages or SPAM and processed meats like bacon (turkey, beef and pork), sausage, hot dogs, bologna or salami.

Why is it good to eat protein with every meal?

Protein keeps us **FULL** and **SATISFIED** throughout the day. When food is chewed and passed through to the stomach, gastric juices are squeezed into the stomach to help further break down that food. It takes these gastric juices longer to break down proteins and fibrous foods compared to starchy foods. However, after bariatric surgery, it takes even longer for these foods to be digested because the food doesn't meet with the gastric juices until way later in the digestion process. This should leave you **feeling full for longer** periods of time and in turn, help prevent overeating.



Watch out! Food textures also play a role in the feeling of fullness. "Slider" foods, like soups, yogurt, pudding and protein shakes trickle through your pouch quickly so you get hungry again quickly. Choose solid protein foods to meet your needs.

What if you don't tolerate meat?

Developing an intolerance to certain meats after surgery is normal and may or may not improve with time. First, it is important to determine if you are not tolerating meat or over eating meat. An **intolerance** means that you have negative feelings on the first bite of eating the offending food. However, if these feelings don't occur until the third, fourth or fifth bite, then you **DO** tolerate this food, you may just be **overeating** it. Include this food in your plan, just eat less of it. Be sure to cook it in a moist heat method (baking, stewing, crock pot) so it doesn't dry out and cut each piece to the size of a frozen pea before putting it in your mouth.

Watch for these signs that you are over eating your protein:

- Food feels stuck in the throat
- Foods feel "hung up"
- Feeling chest pressure or an elephant sitting on your chest
- Gagging
- The urge to vomit

Can I use protein shakes?

For those who can't eat enough food or have increased needs, protein supplements may be required. Whey or soy powdered supplements are mixed with water, milk or crystal light. Mixing it with milk provides extra protein. Look for a powder that provides **>15 g of protein per scoop** with no added sugar. "Ready-to-drink" supplements provide added convenience. Keep in mind that the higher the protein content, the stronger the taste and smell. Also, collagen based protein supplements (ie: New Whey protein bullet) are considered 'incomplete' protein sources and are best used in combination with other protein sources (ie: food, whey or soy supplements). Milk provides 1 g protein per ounce you consume. Your shake should provide you with **>1 g protein per ounce**.








	Name	Serving size	Calories	Protein (g)	Protein (g/oz)
Ready to Drink	Carnation Instant Breakfast (no sugar added)	11 oz	150	13	1.18
	Glucerna Shake	8 oz	200	10	1.25
	Atkins Advantage Shake	11 oz	160	15	1.36
	EAS Myoplex Light	11 oz	170	20	1.82
	Isopure	20 oz	160	40	2
	New Whey Protein Bullet	3 oz	176	42	14
Powder: mix in milk, water.	Carnation Instant Breakfast (no sugar added) made with 8 oz skim milk	8 oz	160	12	1.5
	3 Tbsp Dry skim milk made with 8 oz skim milk	8 oz	180	18	2.25
	Unjury powder	1 packet in 8oz	100	20	2.5
	Nectar (try mixing it in crystal light)	1 scoop in 8oz	100	23	2.8
	Muscle Milk Light	2 scoops in 8oz	195	25	3.1



Watch out! Protein bars are really just glorified candy bars. Most deliver too many calories for the grams of protein, are high in fat, have unhealthy ingredients (ie: palm oil, hydrogenated oil) or contain sugar or sugar alcohols, which may cause GI distress.






Ok, So I know protein is important but HOW DO I PREPARE IT?

Easy (no cook) preparation (aka *fast foods!*)

- ✓ 8 oz carton of skim/ non fat milk (8 g) 
- ✓ 4 oz serving of low fat cottage cheese (11 g)
- ✓ 6 oz of non fat plain Greek yogurt (16 g)
- ✓ 1 oz low fat block cheese (6 g)
- ✓ 1 *Laughing Cow* Light cheese wedge (2.5 g)
- ✓ 1 oz low fat string cheese (8 g)
- ✓ 14 *Emerald* Cocoa/Cinnamon Roast almonds (100 cal portion/3 g protein) 
- ✓ 2 hardboiled egg whites (6 g) 
- ✓ ½ cup shelled Edamamme (6 g) 
- ✓ 2 oz ready to eat shrimp (14 g) 
- ✓ 2 imitation crab sticks (8 g)

Quick put-together meal ideas (aka *combining foods*)



- ✓ *Chicken of the Sea* Tuna/Salmon Cup (2.7 oz) with 1 Tbsp fat free mayo (like *Smart Beat*) spread on ½ cup of cucumber or carrot slices (18 g) 
- ✓ 1 oz (3 slices) of *Hillshire Farms* Deli Select turkey or ham rolled up with 1 slice of *Sargento* reduced fat Swiss cheese in a Bibb lettuce leaf (15 g)  
- ✓ 2 oz *Tyson* Grilled Chicken Breast strips with ½ cup *Chi-Chi's* Salsa snacker cup (14 g)
- ✓ 1 *Morning Star Farms* Veggie Burger topped with ¼ cup black beans and ¼ cup salsa (14 g)
- ✓ 6 oz container of plain nonfat Greek yogurt with ½ cup berries or flavor with a *Crystal Light-To-Go* packet or stir in *Hidden Valley* ranch dip to pair with veggies (16 g)
- ✓ ¼ cup *Egg Beaters* microwaved for 45-90 seconds and topped with ¼ cup salsa and 1 oz. *Cabot* 75% reduced fat cheese (15 g)  

Choosing Lean Meats

Choosing **lean** meats (< 55 cal/oz) helps you lose weight *and* meet your protein needs. Lean meat can be tender, tasty, and low in calories!



- Choose 'select' cuts of meat to limit marbling
- Choose meats with 'loin' or 'round' in the name
- Best Bets for Beef: eye, top, or bottom round roast, sirloin tip or top sirloin steak or filet mignon or 96% lean ground beef
- Best Bets for Pork: tenderloin or boneless top loin chops or roast, or center loin chop
- Best Bets for Chicken and Turkey: skinless chicken breast or 97% lean ground turkey breast

Preparing Lean Meats

After spending money on low fat foods, don't increase calories by adding fat in the cooking process. Cook *without* oil, butter, margarine, lard, bacon drippings, or any other parts of an animal! Use cooking methods that retain moisture, and use low-calorie sauces and marinades to add flavor.

Cooking Tips:

- Retain moisture by stewing, boiling, microwaving or using the crock pot
- Use non-stick cookware and spray oil to sauté or stir-fry
- Use the BBQ grill, George Foreman or a countertop griddle to cook without added fat
- Wrap meat in foil or parchment paper and bake in the oven
- Slather the meat in a specialty mustard or other low calorie sauce (read the food label to avoid added sugar)
- Marinate or cook in salsa or non fat yogurt mixed with spices and herbs

Quick Recipes and Sample Menu

Acceptable on the pureed diet

Double Protein Chicken Soup

Mix 8 oz. of Chicken Broth with one 2.5 oz. jar of baby food chicken. Heat and sip. (16 g)

Protein-Fiber Combo Soup

Mix 8 oz. of Split Pea or Lentil Soup with one 2.5 oz. jar of baby food turkey or ham. Puree if needed. Heat and sip. (16 g)

Double Protein Versatile Milk

Mix 8 oz. of Skim Milk with 1/3 cup nonfat dry milk powder. (16 g)

Try it with vanilla extract and Splenda or blend with 3 frozen strawberries or add 1 packet of No Added Sugar Chocolate Carnation Instant Breakfast (adds 4 g protein), heat and sip

High Protein Cup of Joe



Add 1/3 cup nonfat dry milk powder to your cup of coffee. Sweeten as desired with artificial sweetener or Torani sugar-free coffee syrup. (8 g)

Above Average Mocha Latte

Add 1/3 cup nonfat dry milk powder and 1 packet of No Added Sugar Chocolate Carnation Instant Breakfast to your cup of coffee. (12 g)

Sample Menu

with >60 g protein

(for > 6 months out from surgery)

Breakfast

- 1/4 cup Egg Beaters, scrambled (6 g)
- 1 oz. reduced fat cheese (7 g)
- 1 slice reduced calorie wheat toast (2 g)

Snack

- 4 oz. fat free Cottage Cheese (14 g)
- 1/2 cup diced peaches (0 g)

Lunch

- 2 cups lettuce greens (0 g)
- 1/2 cup chopped veggies (2 g)
(tomato, cucumber, onion, mushrooms)
- 2 oz grilled chicken (14 g)
- 1 Tbsp reduced fat salad dressing (0 g)

Snack

- 6 oz. fat-free, no added sugar yogurt (6 g)
- 1/2 cup mixed berries (0 g)

Dinner

- 2 oz. grilled Tilapia (11 g)
- 1/2 cup Green Beans (1 g)
- 1/2 cup steamed brown rice (2 g)

Turkey Burger

- 2 oz. ground turkey breast (97% lean)
- 1/2 cup chopped veggies (carrot, zucchini, onion)
- 1 Tbsp Egg Beaters
- 1 tsp Worcestershire sauce
- 1 tsp mustard
- 1/8 tsp black pepper
- 1 medium sweet potato (2 in x 5 in potato, cut into fries)
- PAM Spray, chili powder, black pepper
- Bibb lettuce leaves
- Reduced-sugar ketchup or mustard



Directions:

1. Chop veggies (or use pre-chopped), add ground turkey breast, egg beaters, Worcestershire sauce, mustard and black pepper and form into a ball
2. Grill on Panini press, George Foreman grill, or spray sauté pan with PAM and cook through (5-7 minutes or until done)
3. Cut sweet potato into French fry shapes and spray toaster tray or baking sheet with PAM then season potatoes with chili powder, black pepper, and/or other spices
4. Bake at 350 until crispy (about 20 minutes)
5. Serve turkey burger in Bibb lettuce leaf with sweet potato fries and ketchup or mustard

Chicken Enchiladas

- 1 (6-in) corn tortilla (try *Tam-x-ico* brand)
- 2 oz chicken breast (chopped)
- 1/4 cup enchilada sauce
- 1/2 cup chopped onion, bell peppers, green onion
- 1 oz. Fat free Kraft shredded cheddar cheese
- 1 Tbsp nonfat plain Greek yogurt
- 1 Tbsp salsa



Directions:

1. Spray saucepan with PAM, sauté peppers/onions for about 3-4 minutes, add chopped chicken breast and enchilada sauce and cook until chicken is fully cooked
2. Spoon mixture into tortilla, roll and top with any remaining sauce
3. Place in glass baking dish coated with PAM; cover enchilada with cheese and bake until cheese is melted in a 350 degree oven (about 15-20 minutes). Top with Greek yogurt and salsa

For more great recipes and some instructional video recipes, check out our website at:

<http://www.muschealth.com/weightlosssurgery/nutrition/Recipes>

Or check out these websites for more info:

www.calorieking.com, www.chefdave.org, or www.pouchfriendly.com.