

About Protein

After Surgery

Many patients after weight loss surgery will struggle to eat 60 gm of protein daily. Protein shakes temporarily will become the main source of protein at the start. After a month most patients begin to eat solid food. At that time we want to start getting you off protein shakes. To help wean patients off protein shakes faster and continue to maximize weight loss, they are encouraged to eat solid protein as soon as possible.



The ideal protein food:

- should be solid, dry and dense
- have a high percentage of protein / volume-weight

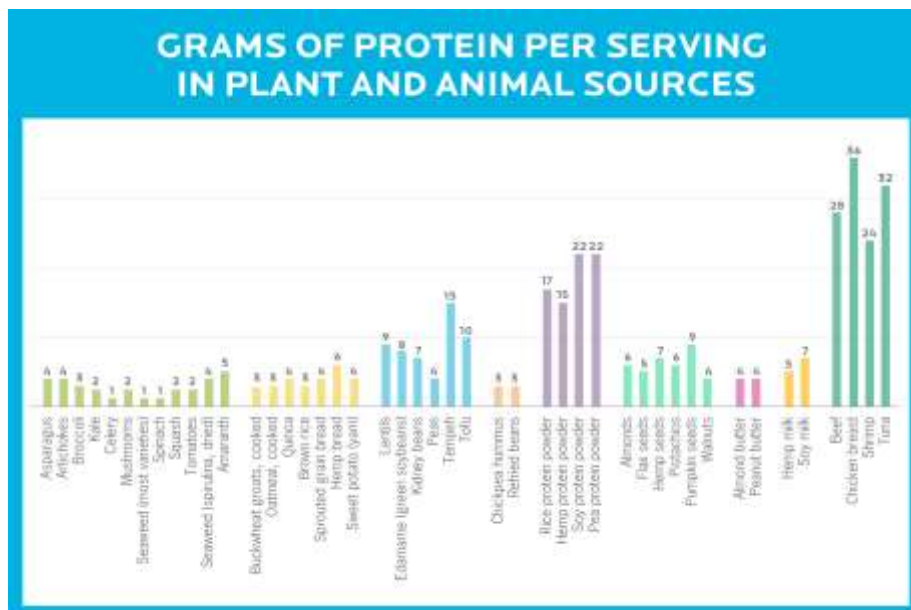
Foods considered highest in protein:

- Meat is one of the best sources of protein, but can be high in unhealthy saturated fat. Select Leaner meats (low in saturated fat)
- Fish and seafood is another great source of protein that contains Omega 3 Fatty Acids. Regular eating of oily fish protects against heart disease.
- Dairy and eggs are another great source of protein, and they contain valuable calcium.
- Beans and nuts are a good protein source, they are also full of fiber and phytochemicals, that are thought to help prevent cancer and heart disease.
- Balance your diet with lean meats, low fat dairy and beans to meet your protein needs (60 gms of protein/day)



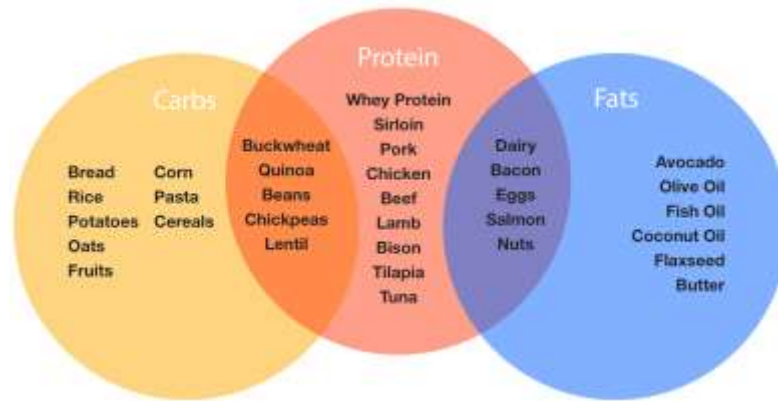
The table below shows the amount of protein in foods per one serving.

- Meat/Fish/Seafood contain the largest amount of protein per serving.



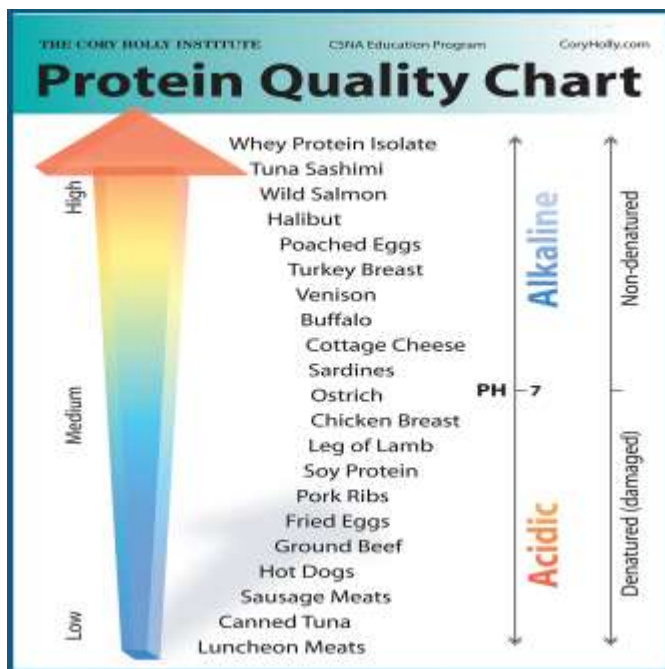
In the illustration below:

- the highest protein foods are meats and fish: sirloin, pork, chicken, beef, lamb, bison...
- Legumes: buckwheat, quinoa, beans, chickpeas and lentils contain significant amounts of protein as well as carbs
- Dairy, bacon, eggs, salmon and nuts contain a significant amount of protein as well as fats
- Grains: Bread, rice, oats, corn, pasta are mostly carbohydrates with little protein
- Oils, butter, avocado are mostly fat with little protein



The illustrations below are a visual aid to understand how different proteins rank in protein quality.

Protein quality is based on our ability to digest it (*the efficiency of utilizing it*), and the number of essential amino acids they contain.



Food Source	Biological value
Whey protein	96
Whole egg	94
Milk	90
Cheese	84
Chicken	80
Fish	76
Beef	74
Soy beans	73
Oats	66
Rice	64
Tofu	64
Wholegrains	64
Corn	60
Beans	58
White flour	41

The higher ranking proteins are:

- Eggs
- Whey protein (hydrolyzed)
- Beef
- Milk
- Casein protein and
- Soy



Quality of Food

Highest Quality:
Least Processed and Least Refined

PROTEIN	CARBOHYDRATES	FATS
Beef	Beans - Fresh	Avocado
Chicken	Brown Rice	Flaxseed Oil
Egg Whites	Fruit	Natural Nut Butter
Eggs Whole	Hot Cereals	Nuts
Fish	Sweet Potatoes	Olive Oil
Hemp Powder	Vegetables	Olives
Hydrolyzed Whey (shakes/bars)	Yams	
Pork		
Turkey Breast		
(All Other Fresh / Frozen Meats)		

Medium Quality:
Medium Processed and Medium Refined

PROTEIN	CARBOHYDRATES	FATS
Canned Meats	Bread - (at least 2 grams of fiber)	Canola Oil
Garden Burgers	Canned Beans	Guacamole
Pre-Packaged Meats	Canned Fruit	Processed Nut Butters
Protein Powder - Whey, Egg & Soy	Canned Vegetables	Vegetable Oil
Sandwich Meats	Cold Cereals	
Soy Beans	Crackers	
Soy Meats - Packaged	Pasta	
Quorn	Potatoes, Red & White	
Dairy	Pretzels	
- Cheese - Milk		
- Cottage Cheese - Yegart		

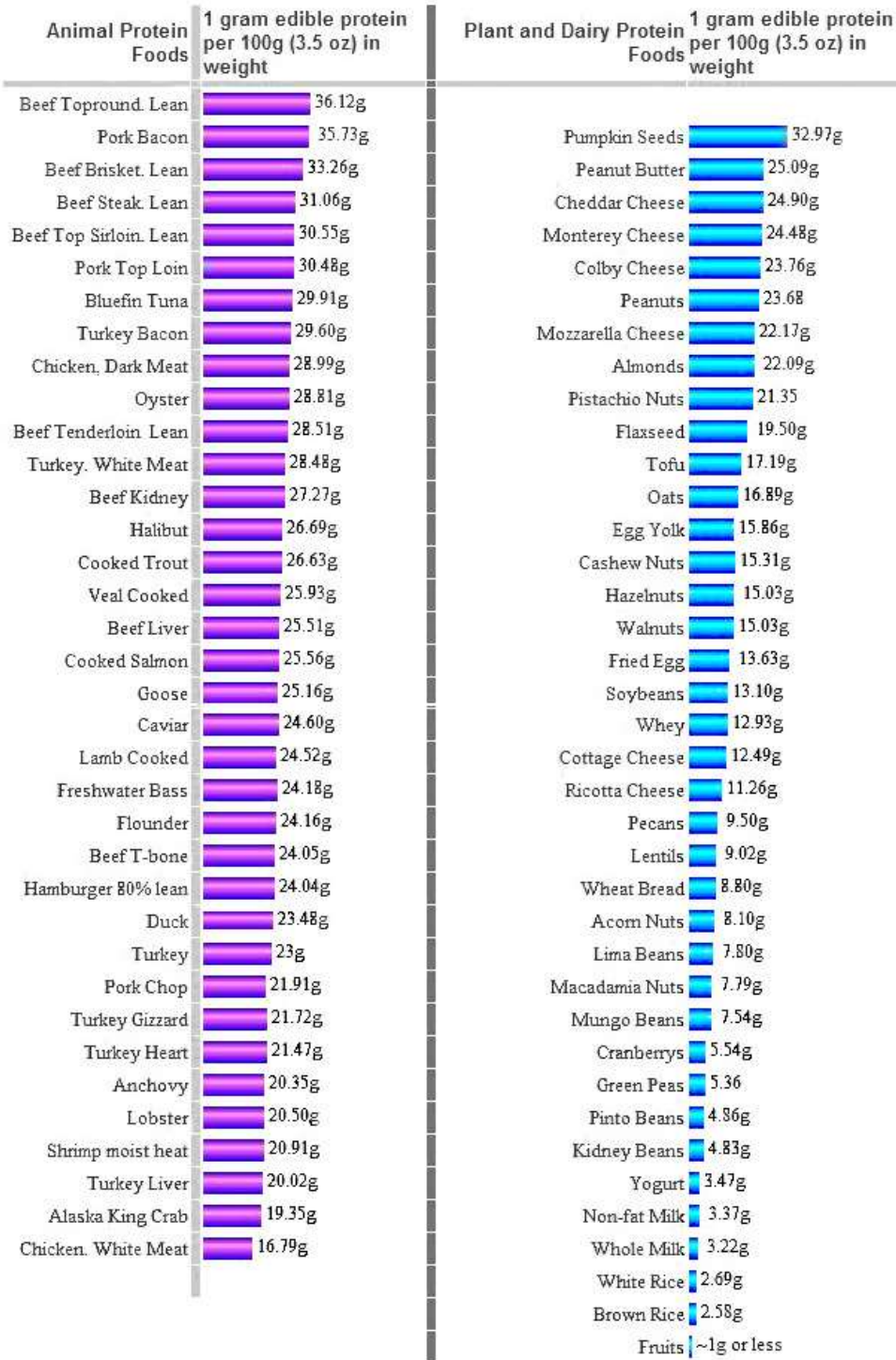
Low Quality:
Most Processed and Most Refined

PROTEIN	CARBOHYDRATES	FATS
Protein Bars (non-hydrolyzed)	Bread - (< 2 grams of fiber)	Butter
RTD Protein (non-hydrolyzed) (ready to drink)	Ice Cream (NF, LF)	Creamy Salad Dressing
	Potato Chips	Margarine
	Tortilla Chips	Mayonaisse
	White Rice	Sour Cream

You can also think of protein quality by the degree of processing and refinement they are subjected to:

- Protein shakes and protein bars (non-hydrolyzed) are considered low quality proteins
- Canned meats, deli meats, soy meats, dairy products are of medium quality – moderate processing and refinement
- Beef, chicken, eggs, fish, turkey, and hydrolyzed protein shakes and bars are of high quality – the least processing and refinement

High Protein Foods List:

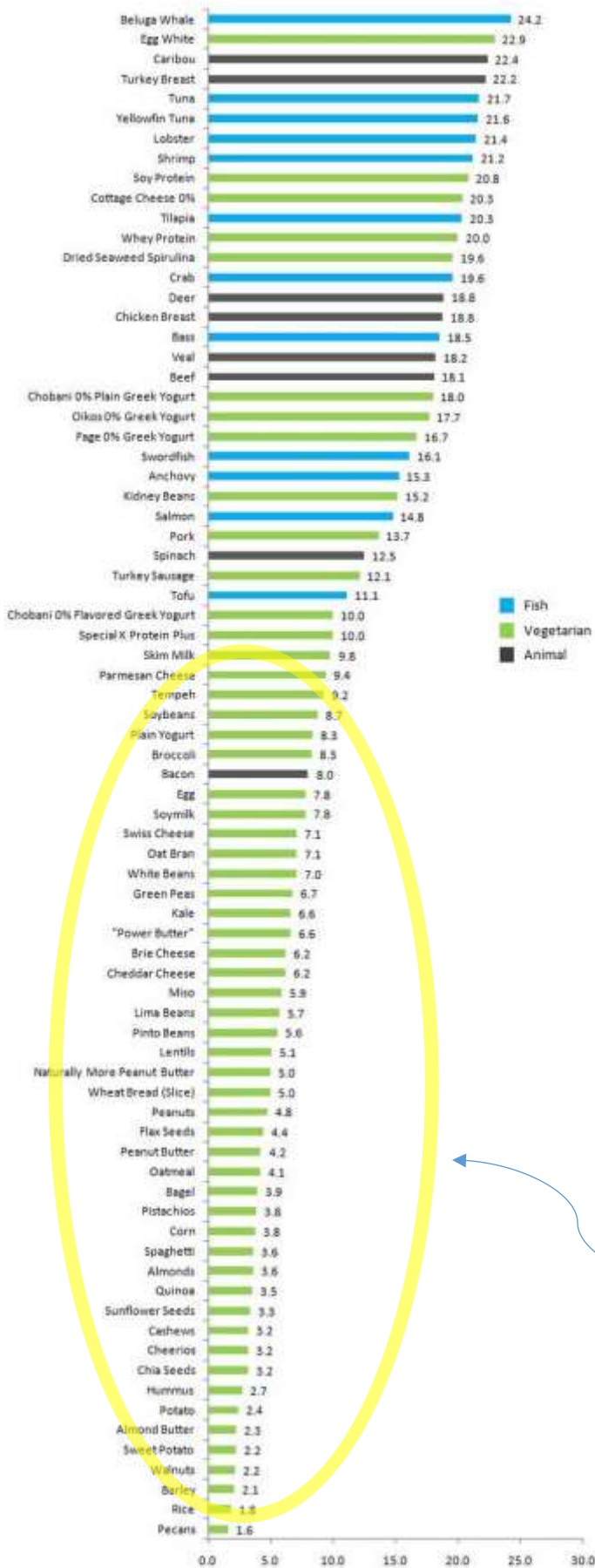


Each listed food item gives you the amount of protein in 3.5 ounces of food.

For a weight loss surgery patient that needs to eat 20 gm of protein per meal this is important information.

Remember you have to eat 60gm of protein/day. If you can only eat 1 ounce at a time the more protein in the smaller amount of food the better.

**High Protein Foods:
Grams of Protein Per 100 Calories**



This table lists amount of protein in 100 calories of food.

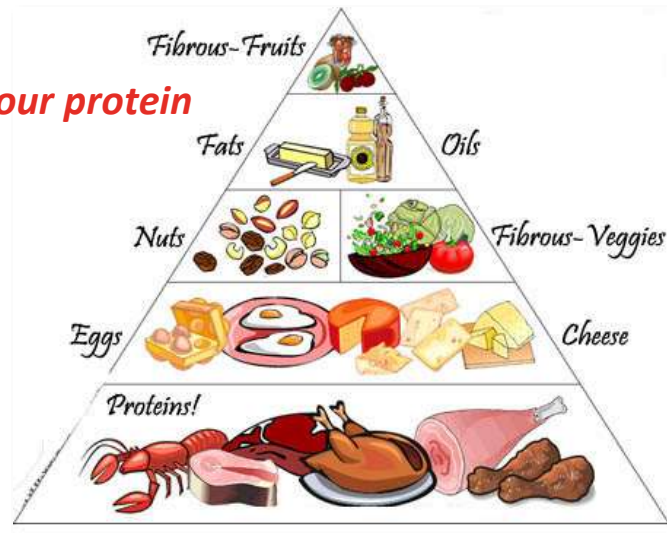
If you look at the table closer you will realize that:

- Meats
- Fish
- Seafood and Dairy
- Not only have more protein in smaller amounts of food, but they also have less calories
- Example:
- 100 calories of egg whites will give you 22.9 gm of protein, while 100 calories of peanut butter will only give you 4.2 gm of protein

So while many nuts, seeds and legumes have protein.

To get 20 gm of protein from nuts, seeds or legumes you have to eat a lot more with a lot more calories to equal that in meats, fish, seafood and dairy

This is your new food pyramid while you are struggling getting in your protein



*Do not overdue Nuts / Peanut butter
A lot more calories for less protein*

NUTS

Nut (1/3 cup)	Calories	Fat (g)	Carbs (g)	Protein (g)
Coconut	94.3	8.9	4.1	0.9
Chestnut	98.9	1	21	1.5
Almond	182.9	16	6.2	6.7
Pistachio	237.4	18.9	11.9	8.8
Hazelnut	240.5	23.3	6.4	5.7
Pine Nut	256.3	23	6.4	10.9
Walnut	261.3	26.1	5.5	6.1
Cashew, dry roasted	261.9	21.1	14.9	7
Pecan	273.8	28.5	5.5	3.6
Peanut, dry roasted	284.4	24.1	10.5	11.5
Macadamia	320.4	33.8	6.2	3.5



While veggies have fiber, vitamins and minerals, they have little protein.

VEGGIES

Vegetable (1/2 cup)	Calories	Fat (g)	Carbs (g)	Protein (g)
Cucumber	6.8	0.1	1.4	0.4
Romaine Lettuce (1 cup)	7.8	0.2	1.4	1
Cabbage	11.1	0.1	2.4	0.6
Summer Squash	11.3	0.1	2.5	0.7
Radish	11.6	0.3	2.1	0.3
Celery, cooked	13.5	0.1	3	0.6
Eggplant, cooked	13.9	0.1	3.3	0.4
Cauliflower, cooked	14.3	0.3	2.5	1.1
Zucchini, cooked	14.4	0	3.5	0.6
Banana Peppers *	17	0.3	3.3	0.9
Green Beans	17.1	0.1	3.9	1
Tomato	18.9	0.3	4.2	0.8
Green & Red Bell Peppers	19	0.1	4.6	0.6
Potato	57	0	13	1
Spinach, cooked	20.7	0.2	3.4	2.7
Mushrooms, cooked	21.1	0.4	4	1.7
Broccoli, cooked	21.8	0.3	3.9	2.3
Asparagus, cooked *	22	0.3	3.8	2.3
Pumpkin, cooked	24.5	0.1	6	0.9
Leek	27.1	0.1	6.3	0.7
Brussel Sprouts	30.4	0.4	6.8	2
Onion	30.4	0.1	6.9	0.9
Carrot, cooked	35.1	0.1	8.2	0.9
Peas	58.7	0.3	10.5	1.9
Sweet Corn	66.2	0.9	14.6	2.5
Sweet Potato, cooked	103	0.1	24.3	1.7

M

While fruits have complex sugars, vitamins and minerals, they have the least protein

FRUITS

Fresh Fruit (1/2 cup)	Calories	Fat (g)	Carbs (g)	Protein (g)
Watermelon	24.3	0.3	5.5	0.5
Strawberry	24.9	0.3	5.8	0.5
Cantaloupe	27.3	0.2	6.5	0.7
Honeydew Melon	29.8	0.1	7.8	0.4
Raspberries	30.1	0.3	7.1	0.6
Nectarine	33.8	0.3	8.1	0.6
Grapefruit	34.5	0.1	8.6	0.6
Peach	36.6	0.1	9.4	0.6
Apple	36.9	0.2	9.5	0.1
Blackberries	37.4	0.3	9.2	0.5
Pineapple	38	0.3	9.6	0.3
Apricot	39.6	0.3	9.2	1.2
Cherry	42.1	0.6	9.7	0.7
Orange	42.3	0.1	10.6	0.8
Tangerines	42.9	0.2	10.9	0.6
Plum	45.4	0.5	10.7	0.7
Pear	48.7	0.3	12.5	0.3
Mango	53.6	0.2	14	0.4
Kiwi	54	0.4	13.2	0.9
Grapes	56.8	0.5	14.2	0.5
Banana	69	0.4	17.6	0.8
Raisins (1/4 cup)	109	0.2	29	1.2
Dates (1/4 cup)	122.4	0.2	33	0.4

Vegetarian Protein Sources

Protein Sources

Legumes, 1 cup cooked	Protein	Calories	Fiber
Soybeans	29 g	298	10 g
Lentils	18 g	230	16 g
Split peas	16 g	231	16 g
Navy beans	16 g	258	12 g
Garbanzo beans (chickpeas)	15 g	269	12 g
Black beans	15 g	227	15 g
Kidney beans	15 g	225	11 g
Lima beans	15 g	216	13 g
Pinto beans	14 g	234	15 g

Seeds (1/4 cup)	Protein	Calories	Fat
Hemp seeds	15 g	232	18 g
Pumpkin seeds, roasted	9 g	187	16 g
Flaxseed	8 g	191	13 g
Sunflower seeds, roasted	8 g	205	18 g
Sesame seeds, roasted	6 g	206	18 g

Grains	Protein	Calories	Fiber
Amaranth, 1 cup cooked	9 g	238	9 g
Quinoa, 1 cup cooked	9 g	254	4 g
Whole wheat pasta, 1 cup cooked	8 g	174	6 g
Barley, 1 cup cooked	7 g	270	14 g
Spelt, 4 oz cooked	6 g	144	4 g
Oats, 1 cup cooked	6 g	147	4 g
Bulgur, 1 cup cooked	6 g	151	8 g
Buckwheat, 1 cup cooked	6 g	155	5 g
Brown rice, 1 cup cooked	5 g	216	4 g
Whole wheat bread, 1 slice	4 g	128	3 g
Sprouted grain bread, 1 slice	4 g	80	3 g

Soy Foods	Protein	Calories	Fat
Soybeans, 1 cup cooked	29 g	298	10 g
Tempeh, 4 oz cooked	21 g	223	13 g
Edamame, 1 cup shelled	20 g	240	10 g
TVP, 1/4 cup dry	12 g	80	0 g
Soy nuts, 1/4 cup roasted	11 g	200	1 g
Tofu, 4 oz raw	9 g	86	5 g
Soy nut butter, 2 tablespoons	7 g	170	11 g
Soy milk, 1 cup sweetened	7 g	100	0.5 g
Soy milk, 1 cup unsweetened	7 g	80	0.5 g

Dairy	Protein	Calories	Fat
Fat-free cottage cheese, 1 cup	31 g	160	1 g
2% cottage cheese, 1 cup	30 g	203	4 g
1% cottage cheese, 1 cup	28 g	163	2 g
Fat-free plain yogurt, 1 cup	14 g	137	0 g
Low-fat plain yogurt, 1 cup	13 g	155	4 g
Parmesan cheese, 1 oz grated	12 g	129	9 g
Whole milk yogurt, 1 cup	9 g	150	8 g
Goat's milk, 1 cup	9 g	168	10 g
1% milk, 1 cup	8 g	102	2 g
Swiss cheese, 1 oz	8 g	106	8 g
2% milk, 1 cup	8 g	121	7 g
3.25% (whole) milk, 1 cup	8 g	148	8 g
Low-fat cheddar/Colby cheese, 1 oz	7 g	49	2 g
Part-skim mozzarella cheese, 1 oz	7 g	72	5 g
Provolone cheese, 1 oz	7 g	100	8 g
Cheddar cheese, 1 oz	7 g	114	9 g
Blue cheese, 1 oz	6 g	100	8 g
American cheese, 1 oz	6 g	106	9 g
Goat cheese, 1 oz	5 g	76	6 g
Feta cheese, 1 oz	4 g	75	6 g
Part-skim ricotta cheese, 1 oz	3 g	39	2 g

Eggs	Protein	Calories	Fat
Egg, 1 boiled	6 g	68	5 g
Egg white, 1 cooked	5 g	17	0 g
Liquid egg substitute, 1.5 fl oz	5 g	23	0 g



VEGAN PROTEIN

PER 100G (3.5 OZ) IN WEIGHT



**Meat,
Fish,
Seafood
and
Dairy
Protein
Sources**

Protein Food and Serving Size	Calories	Protein grams
Bacon, 1 medium slice, (6 grams) cooked	40	2
Beef, Sirloin Steak, 1 ounce, broiled	77	8
Beef, Ground, 4% fat, 1 ounce, broiled	34	7.5
Beef, Ground, 15% fat, 1 ounce, broiled	80	6.1
Beef, Roast, 1 ounce, baked	67	8
Chicken, white meat, 1 ounce	33	7
Chicken, dark meat, 1 ounce	40	7
Egg, 1 small, 38 g	65	4.7
Egg, 1 medium, 44 g	70	5.5
Egg, 1 large, 50 g	75	6.3
Egg, 1 extra-large, 56 g	81	7
Egg, 1 jumbo, 63 g	90	7.9
Fish, Cod, 1 ounce	30	6.5
Fish, Flounder, 1 ounce	27	5
Fish, Sole, 1 ounce	27	5
Fish, Salmon, 1 ounce	60	7
Ham, smoked, 1 ounce	40	5.3
Hot dog, beef, 1.25 ounce	148	5
Lamb, ground, 1 ounce	80	4.7
Lamb chop, 1 ounce	70	7
Nuts, Almonds, roasted, 1 ounce	170	6.2
Nuts, Cashews, roasted, 1 ounce	165	4.3
Nuts, Macadamia, roasted, 1 ounce	205	2.2
Nuts, Pecans, 1 ounce, raw	192	2.6
Nuts, Pistachios, 1 ounce, roasted	170	5.3
Nuts, Walnuts, 1 ounce	175	2
Pork chop, 1 ounce	60	7
Pork, roast 1 ounce	60	7
Pork ribs, spareribs, 1 ounce, roasted	116	8
Scallops, 1 ounce	23	6
Shrimp, 1 ounce	26	6
Tuna, 1 ounce	32	6.5
Turkey Breast, 1 ounce	30	7
Veal, roasted, 1 ounce	45	8

	Calories kcal	Protein g
Egg White by Ounce	105	22
Egg White by Ounce, 7 ounce		
Fish	107	22
Halibut, 3.4 oz		
Mahi Mahi Tuna	108	23
4.5 oz.		
Real Crab Meat	105	25
4.5 oz		
Chicken - Breast, meat only, cooked, roasted	103	19
2.2 oz(1)		
Roasted Turkey Breast	106	19
Evest, 3.3 ounce		
Ground Turkey	104	13
Organic, 2.3 oz.		
Ham - Baked	108	21
Ham - Baked, 6 oz		
Pork Tenderloin - Grilled	102	25
Meat, 3.3 oz		
Shell Fish	108	14
Mussels, 12 cooked		
Salmon, Sockeye (Cooked)	106	16
2.2 oz		
Beef - Chuck, cold roast, lean only, cooked, roasted	103	16
2.1 oz(1)		
0% Greek Yogurt Plain	106	19
Total 0% Fats, 6.5 ounces		

BURN THE FAT FOODS QUICK REFERENCE CHART

LEAN PROTEINS					
Food Item	Qty	Calories	Protein	Carbs	Fat
Chicken Breast, skinless	4 oz	196	35.1	0	5.1
Beef, ground 96% lean	4 oz	171	28.5	0	5.1
Beef, top sirloin	4 oz	229	34.4	0	9.1
Beef, top Round	4 oz	214	35.9	0	6.7
Buffalo, top round	4 oz	195	32.0	0	6.8
Cod	4 oz	119	25.9	0	1.0
Egg whites	6	102	21	1.8	0.0
Egg, whole	1	75	6.3	0.6	5.0
Lobster	4 oz	111	23.2	1.5	0.7
Protein Powder, Whey	2 scoops	180	35	4	3.0
Salmon, Atlantic	4 oz	206	28.8	0	9.2
Shrimp	4 oz	120	23	1	2.0
Tuna, canned in water	4 oz	120	26	0	1.0
Turkey Breast, skinless	4 oz	178	33.9	0	3.7
Turkey, ground 99% lean	4 oz	120	28	0	1.0
Venison steak	4 oz	173	35	0	2.3

FRUIT (NATURAL SIMPLE CARBS)					
Food Item	Qty	Cal	Protein	Carbs	Fat
Apples	1	81	0.3	21.1	0.5
Banana	1	105	1.2	26.7	0.6
Blueberries	1 cup	82	1.0	20.4	0.6
Cantaloupe	1/2	94	2.3	22.3	0.7
Grapefruit	1/2	46	0.6	11.9	0.1
Grapes (seedless)	10	36	0.3	8.9	0.3
Jelly, all fruit (no sugar)	2 tbsp	80	0	20	0
Nectarine	1	67	1.3	16	0.6
Orange	1	65	1.4	16.3	0.1
Peach	1	37	0.6	9.7	0.1
Pear	1	98	0.7	25.1	0.7
Plum	1	36	0.5	8.6	0.4
Raisins	1/4 cup	130	1.0	31	0.5
Raspberries	1 cup	62	1.2	14.2	0.6
Strawberries	1 cup	46	1.0	10.4	0.6
Watermelon (diced)	1 cup	50	1.0	3.6	0.2

COMPLEX CARBS (STARCHES & GRAINS)					
Food Item	Qty	Calories	Protein	Carbs	Fat
Bagel, plain, whole wheat	1	150	6	33	1
Beans, Kidney	1/3 c ckd	75	5.1	13.5	0.3
Bread, whole wheat	1 slice	80	2.5	14	1
Bread, rye	1 slice	80	3	16	1
Potato, white	1 lg (8oz)	210	4.4	49	0.2
Potato, sweet	4 oz	136	2.1	31.6	0.4
Oatmeal, old-fashioned	1/3 c unckd	100	5	16	2
Cream of Rice	1/4 c unckd	170	3	38	0
Cream of Wheat	1 oz/1 pkt	100	3	21	1
Lentils	1/2 c ckd	115	9	20	0
Black eye peas	1/2 c boild	99	6.6	17.7	0.4
Pita, Whole wheat	1	170	6	35	2
Pasta, whole grain spelt	1 oz (dry)	95	4	20	0.7
Pasta, whole wheat	1 oz (dry)	105	4.5	20	1
Rice, Brown, "success"	1 c cooked	150	4	40	0
Rice, Wild	1 c cooked	166	6.5	35	0.6
Kashi cereal	3/4 cup	120	8	28	1
Shredded Wheat	1 cup	144	3.6	33.4	1.4
Yam	6 oz	180	4	41	0.2

FIBROUS CARBS (VEGGIES & GREENS)					
Food Item	Qty	Calories	Protein	Carbs	Fat
Asparagus	10 spears	40	4	6	0
Broccoli	1 cup	46	4.6	8.6	0.4
Brussel sprouts	1 cup	60	4	11.6	0.4
Cauliflower	1 cup	60	4.8	13.6	0.8
Carrots	1	31	0.8	7.3	0.1
Collard Greens	2 cups	36	1.6	8	0.4
Corn	1/2 cup	89	2.7	20.6	1.1
Cucumber	1 cup	16	0.6	3	0.2
Green Pepper	1 cup	24	0	6	0
Green Beans	6 oz	50	2	12	0
Kale	2 cups	56	4	11.6	0.8
Lettuce	2 cups	20	0	6	0
Onion	1 cup	54	2	12	0
Mushrooms	1 cup ckd	42	3.4	8	0.8
Peas	1/2 cup	57	4	10	0
Salsa	4 tbsp	16	0	4	0
Spinach	1 cup ckd	42	5.4	6.8	0.4
Tomato	1 med	24	1	5	0
Zucchini	1 cup	16	1.4	3.2	0.2

DAIRY PRODUCTS					
Food Item	Qty	Calories	Protein	Carbs	Fat
Milk, skim	1 cup	90	8	12	1
milk, 1% lowfat	1 cup	100	8	11	2
cheese, American, nofat	2 slices	80	12	6	0
Cheese, Cheddar	1 oz	114	7	9	1
Cheese, mozzarella, nofat	1/2 cup	90	18	4	0
Cheese, Parmesan, nofat	2 tbsp	75	10	10	0
cottage cheese, nofat	5 oz	100	17.5	5	1.3
Cottage cheese, 2% lowfat	1/2 cup	103	15.5	4	2
cottage cheese, 1% lowfat	5 oz	100	17.5	5	1.3
cottage cheese, nofat	5 oz	100	16.2	7.5	0
sour cream, non fat	2 tbsp	20	2.5	2.5	0
Yogurt, nofat	8 oz (1)	100	8	17	0
Yogurt, fruit, 1% lowfat	8 oz (1)	250	9	50	2
Yogurt, froz, nofat, no sug	1 cup	160	8	38	0

FATS, OILS, NUTS & SEEDS					
Food Item	Qty	Calories	Protein	Carbs	Fat
Avocado	1 med	115	3	9	15
Almonds	1 oz	170	6	5	15
Cashews	1/2 cup	394	10.5	22.4	31.7
Canola Oil	1 tbsp	120	0	0	14
Flaxseed Oil	1 tbsp	130	0	0	14
Flaxseds, ground	1 oz	151	5	8	12
Peanuts	1/2 cup	428	17.3	15.7	36.3
Peanut Butter, natural	1 tbsp	100	3.5	3.5	8
Olive Oil	1 tbsp	120	0	0	13.6
Udo's essential oil blend	1 tbsp	134	0	0	14.2
Salad Dress., Italian	1 tbsp	82	0	2	9
Salad Dress, Oliv & vingr	1 bsp	75	0	0.5	8
Salad Dress., light Italian	3 tbsp	12	0	3	0
Walnuts	1 oz	200	5	3	20