The Macronutrients

Powerful Protein – The Magic Bullet!

The first thing we always concentrate on with our clients is their protein levels. Unfortunately, protein is usually underrated, often misunderstood, and always under-consumed. It's always interesting to see people's reactions when we tell them they need to increase their protein intake, as most people think they're taking in enough protein. But nothing could be further from the truth.

We're not getting enough Protein!

Studies show that we need minimum of 40 grams a day just to maintain normal functioning of our vital organs (even people in coma require 40 grams just to sustain healthy organ function). Yet sadly, the average woman is getting around 30 grams (men are higher, but not by much!) No wonder we have such high rates of osteoporosis, breast cancer, colon cancer, and prostate cancer which are directly related to too little protein!

Protein is critical for so many things, including proper thyroid function, healthy bones (our bones are 25% protein), balancing hormones, and steadying our sugar levels in the body, which will reduce our risk of diabetes and other insulin-dependent diseases. And protein builds the immune system, builds healthy blood, and maintains healthy muscle, ligaments, tendons and joints.

A Word about Meat

Meat (especially red meat) has been given a bad rap over the years, but in our haste to get healthy, we've thrown out the baby with the bathwater. While many health specialists tout the dangers of red meat, the problem is not in the meat itself, but the type of meat.

In commercial farming, our cattle are fed a cocktail of hormones and antibiotics their entire life. As well, most of their feed is grain and corn, which is not their natural food, and which are the largest genetically modified crops. What ends up on our plates are meats that have an unusually high saturated fat content (approximately 75%), and a low Omega 3 content (healthy fats, which are around 25%).

In traditional farming, animals are allowed to roam and to they eat their native grasses. They're not force-fed antibiotics or hormones. The result – a meat with a totally different profile. The saturated fat content is down around 23%, and the healthy Omega's are upwards of 70%. Clean, healthy, energizing. So the issue is not red meat, but what *type* of red meat we're consuming.

PROTEIN - Quick Facts

What is Protein?

Protein consists of 20 amino acids (building blocks) and it makes up 50% of our body. It's the building blocks of hormones, enzymes, muscles, ligaments, tendons, bones, organ, glands, hair skin and nails. While the liver produces most of our body's protein, we need to get 20% from our diets. Twelve amino acids we make, but we need to get the other eight from our foods.

Why is it important?

Protein is critical for building healthy bones, immune system, organs, skin, hair , nails, and hormones, to name just a few of its remarkable properties. But it is also critical for other reasons:

1) **It increases your metabolism**: given it structure and thermogenic effect (rate of burn), your body has to use energy (calories) to digest it. So it's a viable weight loss food.
2) **It cuts the sugar cravings** by leveling out insulin and glucagon, those hormones responsible for blood sugars and cravings. So it's a great tool for weight management.
3) **It keeps you feeling fuller longer**. Again, another bonus in the weight loss arena.
4) **It makes you look good!** The first place protein deficiency shows up is on our face (wrinkles), hair (brittle) and nails (weak). With protein, it's not just about building and performance, it's about aesthetics too. It's the classic anti-ageing food!

I'm not training in the gym, so do I really need protein?

Everyone needs protein, not just those who exercise. If we don't get enough (at least 60 grams/day minimum), we experience fatigue, fogginess, weak nails, thin hair and skin, poor muscle tone, osteoporosis and increased risk for cancers and immune dysfunctions. And our energy levels plummet!

How much protein do I need?

There's some debate about how much protein people need, based on gender, activity, age and size. So we're just going to keep it simple for you.

For now, we want to ensure you're getting at least **80 grams a day**. This will serve most people quite nicely, regardless of age and activity level

When is the best time to eat protein?

First thing in the morning and after exercise. Try for a minimum of 20 grams for breakfast.

Can I eat all my protein at once?

No. The body can only absorb 20-30 grams at a time, so we need to eat it 3 to 5 times a day. And protein can't be stored in the body, so we need a constant circulating supply. We also want

to eat it more often because it keeps our sugars and cravings in check. Remember, we're only as hormonally good as our last meal, so every 2-3 hours we need to replenish the protein stores.

What are the best sources of protein?

Animal sources still yield the highest biological value of any protein source, meaning, all the amino acids are in high amounts and are readily absorbable and utilized by the body.

This isn't the case with grain, legumes or vegetable protein sources. In fact, they rank quite low on the Biological Value scale which measures the quality and absorbability is low. Grains and beans rank 69 or lower (out of a total of 100), eggs are 100, milk is 91, beef is 80, beans are a distant 49. Whey is the highest at 104. Soy is 79.

Protein Chart: Aim for 80 grams throughout the day, spread out over 3-5 meals.

Salmon (fresh/frozen) 3 oz - 17 grams	Whey Protein 1 scoop – 20-25 gms
Sockeye salmon 1 can - 17 grams	1 egg white 7 grams
Cod 3 oz – 15 grams	Skim milk 1 Cup – 12 grams
Can of tuna 170 gram can – 25 grams	Cottage cheese, lowfat (2%) 1 Cup - 31 grams
Chicken breast 4 oz – 25 grams	Cheddar, swiss, mozzarella, brick 1 oz - 8 grams
Steak 4 oz – 28 grams	Cottage cheese 1 Cup – 25 grams
Almonds, cashews, pistachios 1/4 Cup (app. 20 nuts) –7 grams	Yogurt 1 Cup – 13 grams
Sunflower seeds 1 Cup – 34 grams	Soy Milk 1 Cup – 7 grams
Peanut Butter 1 TBSP – 4 grams	Soybeans 1 Cup – 34 grams

WHAT DOES
25 GRAMS
OF PROTEIN LOOK LIKE?

Food Item	Amt to make 25 gms	Calories
Whey Protein	1 scoop	100
Egg whites	5 - 7 whites	115
Low fat yogurt	2 cups / 480 ml	220
Low fat cottage cheese	1 cup / 240 ml	115
Whey protein powder	¾ cup / 80 ml	165
Soy Protein powder	1 ounce / 28 gm	112
Tofu	1 cup / 240 ml	360
Skinless turkey breast	5 ounces / 140 gm	225
Skinless chicken breast	5 ounces / 140 gm	232
Salmon	5 ounces / 140 gm	166
Tuna	5 ounces / 140 gm	155
Bison	5 ounces / 140 gm	123
Lean beef tenderloin	4 ounces / 112 gm	183
Quinoa	2 cups cooked / 480 ml	234
Almonds or pine nuts	¾ cup / 180 ml	621
Ezekiel 4:9 cereal	1 ½ cups / 360 ml	600
Soybeans / edamame	1 cup / 240 ml	254
Natural peanut butter	6 Tbsp / 90 ml	600
Almond butter	6 Tbsp / 90 ml	570
Lentils	1 ½ cups / 360 ml	265

Getting the Scoop on Protein Powders!

When you exercise, you are challenging muscle and breaking it down, and hence they are forced to make themselves a bit stronger (aka toning). This necessary repair process requires a deluge of things – vitamins, minerals, enzymes, and most of all, protein.

Because this repair process is on-going, we need a constant supply of protein circulating in our body at all times, so it's available for when our body needs it. (This is one of the reasons we recommend 3 to 5 smaller protein meals throughout the day). Protein powders are a quick and easily digestible, and they detoxify our body at the same time.

As mentioned, protein is also important for various bodily functions including maintaining strong hair, teeth and skin. Protein maintains blood, organs, and tendons, and it balances hormones (women, take note!). So protein is important for everyone - not just for athletes.

But what kind of protein powder is best? The two most popular are **whey** and **soy**, because they have a high BV (biological value - the percentage of nitrogen absorbed), which refers to your body's ability to absorb and use the protein.

Whey protein remains the most popular choice, with a biological value (BV) of 104. It also scores highest on the Protein Digestibility Corrected Amino Acid Score and the second highest (behind whole eggs) on the Protein Efficiency Ration, industry measurements put out by the USDA.

Along with whey's superior amino acid profile, whey raises glutathione levels (a powerful antioxidant that wards off cancer, infection and viruses). Make sure the whey you choose is an 'isolate', not a concentrate form. Isolates are the highest quality, and are suitable for even the most lactose-intolerant individuals.

Soy protein is the second most popular choice in protein powders, although it has a lower biological value. This is partly due to the isoflavones (found in isolate form only) which are estrogenic and help ease PMS. Isoflavones also help to increase bone density in perimenopausal and menopausal women.

Hemp also shares the limelight as a high quality, complete vegetarian source of all amino acids, essential fatty acids (in particular Omega 3's) natural antioxidants, fiber and chlorophyll. *Edestin*, found only in hemp, is considered the backbone of our cell's DNA, which is why out of all the vegetable kingdom, hemp protein has the closest resemblance to our human protein profile.

Rice is the lowest on the bioavailability scale, and we usually recommend this lower form of protein in extreme cases of allergies or digestive issues.

PROTEIN POWER SHAKE:

- 1 scoop Whey Protein Powder
- 1 cup soy or almond milk (natural, chocolate or vanilla)
- 1 cup water
- ½ banana
- ½ cup blueberries or mixed berries
- 2 TBSP ground flax seeds
- 1 TBSP flax or fish oil
- 1 tsp fresh bee pollen (if desired)

Remember: the two best times for protein is first thing in the a.m. and up to one hour after a workout. Don't lose out on these vital times to build your body, cut the cravings, balance hormones and energize and detoxify your 100 trillion cells!

Note: If you're trying to gain mass and build strength in your training, it is best to **bracket** your workout with a shake one hour before *and* after training. This will optimize growth hormone, fuel you for an intense workout, and aid in faster repair and recovery. In fact, our bodies can absorb almost 50% of our daily protein requirements at this time, so if you want to beef up the protein content, go for it.

My favourite is EDGE Protein – clean, no artificial colours or sweeteners, no carb, no lactose… and it's made for women like us!

Check it out at www.edgeprotein.com (email me for details!)

What about Nuts and Seeds?

As a source of minerals and antioxidants, they rock! But they are a poor source of protein. In fact, 1 TBSP of most nut butters offers approximately 4-5 grams per serving, with lots of fat. As a snack, they're great, in limited quantities, but if you're trying to up your protein and lower your waistline, don't go nuts with the nuts.

Nut / Seed / Bean / Legume	Fat %	Protein %	Carb %
Almonds	78	11	11
Cashews	73	11	16
Coconut (seed)	86	4	10
Pumpkin seed	76	18	4
Sesame seed	76	12	12
Peanuts (legume)	76	16	8
Soy (legume)	47	38	15
Garbanzo bean	11	22	67
Kidney bean	1	26	73
Lima bean	1	24	75
Split pea	1	26	73

I'm a vegetarian – Can I get my protein needs met easily?

Vegetarians often have a tough time getting a minimum of 80 grams of protein in their diet. Often they eat a lot of dairy, cheese and the like, which can be heavy in fat too! Grains, beans and vegetables are poor sources of protein as their amino acids profile is weak, so they rank quite low on the Biological Value scale (a distant 69). Vegetarians are best served by drinking one to two protein shakes a day, to ensure they're getting adequate protein.

Protein - Top 10 Tips

Summary

1) You need a minimum of 80 grams a day.

2) Two best times to eat protein is first a.m. and up to 1 hour after training.

3) Women can only absorb 25 grams at a time, men can absorb 35 grams (and it can't be stored in the body), so you need to eat it 3-5 times a day, every 2-3 hours.

4) Protein reduces cravings and boosts the metabolism every time you eat it.

5) Make sure your protein comes from animal sources (meat, dairy, whey), as they are the highest Biological Value (absorbable).

6) Nuts, seeds, grains and beans are a poor source of protein.

7) Whey protein is the preferred type of protein, given its structure, simplicity, absorbability, alkalinity, and ability to detoxify the body.

8) Red meat is not the enemy, *commercial* red meat is. Choose traditional / local / organic meats at all costs!

9) You can absorb up to 50% of your daily protein needs after hard training (weight training for at least 45 minutes).

10) Protein keeps you feeling fuller longer, so you eat less food.

Remember, PROTEIN should make up 30% of your daily caloric intake!