



# POWERFUL PROTEIN!

- The Magic Bullet! -



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# **Our 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 its 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.

## **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 **60-80 grams a day**. This will serve most people quite nicely, and it's 1-1.5 gms/lean bodyweight (in pounds)

## **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 80-100 grams** throughout the day, to start...

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	$\frac{3}{4}$ 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	$\frac{3}{4}$ cup / 180 ml	621
Ezekiel 4:9 cereal	1 $\frac{1}{2}$ 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 $\frac{1}{2}$ 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 Ratio, 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.

## 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.

## **Power Breakfasts**

**- under 500 calories, ready in 15 minutes!**



**Remember, the most important meal of your day is breakfast**, so it's vitally important you build it properly. This includes ample protein, quality carbs and healthy fats. With these three ingredients, in the right amounts, you'll start the day with level blood sugars, increased metabolism, you'll feel full longer, you won't experience a 'dip' in your energy, and you'll be on the road to burning fat and building shapely muscle.

### **"I'm just not hungry in the morning. How can I eat breakfast?"**

- 1) Stop over-indulging at night (by eating too much or too late - if you try going to bed with your tank half empty, you'll wake up feeling hungry).
- 2) Wait a bit before you eat (if you don't eat until an hour after getting up, that's fine. But remember not to drink your coffee until you eat, or you'll start the 'rollercoaster' of irregular blood sugars and fat storage).

All recipes have minimum **15 grams of protein**, a must in any healthy meal, and are under 500 calories. And they fit into the healthy eating goals of the **222 Clean Diet Plan**, with the proper ratio of proteins-to-carbs-to-fats. The protein is of the highest quality, the carbs are complex, live carbs and the fats are healthy mono and polyunsaturated fats, with plenty of Omega 3s and 6s.

**Bon Appétit!**

### **POWERED-UP PROTEIN SHAKE:**

- 1 scoop whey protein isolate (natural sweeteners only – try Sisu, Natural Factors, PVL) – 90 cal
- 1 cup fresh or frozen blueberries – 80 cal
- ½ cup yogurt (Fraser Meadows, Saugeen or Astro) – 90 cal
- 1 cup almond breeze – 40 cal
- 1 cup water
- 1 TBSP flax oil – 125 cal
- 2 TBSB ground flax seed (can purchase pre-ground at health food stores) – 55 cal



**Calories: 480**

**Protein: 15-20 g**

**Carbs: 21 g**

**Healthy Fats: 19 g**



## **OATMEAL DELIGHT:**

Oatmeal is one of the best fat busters as it levels out your body's sugars, helps decrease weight, lowers cholesterol, and is loaded with fiber and vitamins! Note: instant oatmeal is no match for this near-perfect food. The instant version impacts sugar levels in the body, because it's over-processed (not to mention often filled with sugar).

- ½ cup slow cooking oatmeal (dry measure) – 138
- ¾ cup water
- ½ cup fresh or frozen blueberries - 40
- ½ cup yogurt (try Fraser Meadows, Saugeen or Astro organic yogurts) - 90
- 1 TBSP almond or cashew butter - 120
- ½ banana - 45
- ½ scoop protein powder – 50



Cook oatmeal in boiling water, let cool for a few minutes, then stir in nut butter. Mix protein powder & berries into yogurt. Fold yogurt into oatmeal blend.

**Calories: 483**

**Protein: 15 g**

**Carbs: 23**

**Healthy Fats: 12**

## **LIGHT N' EASY EGGS:**

Eggs have got a bad rap over the years, but science shows eggs are one of the most perfect proteins around. If you're worried about too many yolks, then just throw the extra ones away (or give them to your dog!)

- 2 eggs (1 yolk, 2 egg whites) – 90 cal
- 1 cup finely chopped veggies – 80 cal
- 1 oz feta cheese (it's less allergenic and fatty than regular cheese)- 75 cal
- 2 Wasa Hearty Rye crackers - 90
- ½ avocado – 140 cal



Sautee chopped veggies for 1-2 minutes, lower heat, add in mixed eggs. Just before taking off heat, fold in feta. Don't over-mix. Serve over crackers with avocado on top or on side.

**Calories: 475**

**Protein: 17 g**

**Carbs: 29 g**

**Healthy Fats: 11 g**

## **MORNING TUNA MELT** (yes, you can eat tuna for breakfast!)

One of the most perfect proteins, tuna has been sustaining athletes for years. Remember to drain and rinse the tuna, and only choose tuna (or albacore) packed in water.



- ½ can tuna (packed in water) – 70 cal
- 1 TBSP Spectrum Mayonnaise (no trans fats, fewer sugars) – 100 cal
- 1 oz feta cheese – 75 cal.
- 2 Wasa Hearty Rye crackers, or 1 slice no-wheat bread like Irene's or Wildfire Bakery (available at health food stores) - 90
- Topped with ½ thinly sliced avocado - 140

Mix tuna and mayo, spread over crackers, top with crumbled cheese and sliced avocado.

<b>Calories: 475</b>	<b>Protein: 25 g</b>	<b>Carbs: 26 g</b>	<b>Healthy Fats: 13 g</b>
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## **QUICKIE YOGURT CUP**

Choose organic yogurt with 'live bacterial cultures' to aid digestion and build a strong immune system (in women it's particularly beneficial in warding off yeast infections, and to offset the acidic and negative effects of NSAIDs and prescription medications).

*Saugeen, Astro and Fraser Meadows* are all good bets, and available at both Safeway and Thrifty's.

If you're sensitive to dairy, try Fraser Meadows Goat Yogurt. It's gentler on the stomach and slightly tangy. Or try fermented Kefir for a healthy kick!



- ¾ cup organic unflavoured yogurt – 140
- ½ cup berries (rasp, blueberries, strawberries) – 80
- 1 TBSP flax oil - 125
- 2 TBSP ground flax seed - 55
- 1 scoop chocolate or vanilla protein powder – 90

<b>Calories: 490</b>	<b>Protein: 19 g</b>	<b>Carbs: 23 g</b>	<b>Healthy Fats: 17 g</b>
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## NOT ALL PROTEIN POWDER is CREATED EQUAL

Ladies...please remember when it comes to choosing a protein powder that you want a high protein value in every scoop. What this means is...if you have a 25 gram scoop in your protein bag, you should be getting that same amount of protein in the scoop (a little less, if your protein is flavoured, because they have to make way for the flavourings that will take up space).

So....in EDGE (my protein of choice), a 28 gram scoop size yields 24 grams of protein, so it is 86% protein. (You divide it....24 divided into 28 = 86%). THIS is what we are looking for.

Many proteins have anywhere from 11-15 grams of protein in a 25 gram scoop, which yields only 60%-ish protein...so you MUST do the math, ladies.

What happens then, if it is low, women try to 'save up' and only use 1 scoop, but are getting much less protein than the suggested 20-25 grams in a serving. So they are short-changing their protein. OR, they have to double-up to get the required 25 grams, and end up going through the protein too fast (and many women slow it down, to save money. But it only shortchanges their health in the end).

A high level of whey ISOLATE (not concentrate, or not a 'blend') is what is needed, and it will SAVE you money because you will need less to yield a high protein level.

RIEN D'ARTIFICIEL  
AUCUN ARÔME ARTIFICIEL, COLORANT OU ÉDULCORANT

Nutrition Facts	
Valeur nutritive	
Per serving (28g) / Par portion (28g)	
Amount / Teneur	% Daily Value* / % valeur quotidienne*
Calories / Calories	111
Fat / Lipides 0.5 g	0 %
Saturated / Saturés 0 g	0 %
+ Trans 0 g	
Cholesterol / Cholestérol 8 mg	3 %
Sodium / Sodium 49 mg	2 %
Carbohydrates / Glucides 2.5 g	1 %
Sugars / Sucres 0g	0 %
Protein / Protéine 24 g	48 %
Calcium / Calcium 86 mg	9 %
Potassium / Potassium 225 mg	6 %

\*Percent Daily Values are based on a diet of other people's secrets.



## **Quick n' Easy Protein Snacks**

**- under 200 calories, ready in 5 minutes!**

**Remember, it's best to eat at the same time intervals each day, whether that is every 3 or 4 hours, to keep our energy up, metabolism revved, and keep those blood sugars level.**

Here are some quick, easy snacks around 200 calories for you to grab in a hurry. And remember to keep them low on the glycemic index, and no labelled foods or man-made products (no bread, crackers, muffins, bagels etc. If it's not made in nature, it's not meant for your body!). And NO rice cakes – they're high in sugars (natural sugars, yes, but still high impact) and will spike your insulin. And NO energy drinks. They're not about energy, they're about sugar.

Keep your snacks bite-sized. It is, after all, a snack, mean to keep you satiated and to keep your energy and metabolism on even ground. It's not meant to fill you up. It's not a meal. If you're full, you've eaten too much and your blood sugars will dip, signalling your body to start storing fat.

Try to include the 3 basic food groups in your snacks – protein (if even just a little), quality carbs and a bit of fat. That will ensure your metabolism is kept up, and you're sailing on calm waters.

**Create a Snack Pack:** Use a small bag or container with different pockets, and refer to this as your *snack pack*. Make sure it's filled before you head out the door. Then the habit is ingrained and you'll surely stay on track. Most of all, be like a **COD** fish – **C**reative, **O**rganized and **D**isciplined!



### **Make and Take**

Remember, trying to source out healthy snacks while on the run is difficult and usually counterproductive to good health. The healthiest snacks are the ones we *make and take with us*. Bars (even seemingly healthy ones!), muffins, bagels, fruit juices (yes juices) and even some fruits will spike your insulin and blood sugars, drop your energy, slow your metabolism, turn on your fat-storing mechanisms, acidify your body, and increase your likelihood for cravings and future weight gain. So learn to prepare your own snacks in advance. It's all up to you!

### **Fridge Fixes**

Make sure you always have some healthy snacks in your fridge or pantry for those times when you need something small and fast. It's an easy habit to get into, once you get the hang of it.

# Packin' Snacks

## Wrap it Up

- Take a tortilla wrap (if wheat or gluten is an issue, try brown rice wraps or Ezekiel sprouted wraps found at health food stores)
- Spread on 1 TBSP nut butter (almond, hazelnut, cashew).
- Add in thin apple slices or a banana.
- Sprinkle with cinnamon
- Roll up, cut into thirds, and enjoy!
- Total Calories – 400, so just eat  $\frac{1}{3}$  or  $\frac{1}{2}$  at a time.



## Yogurt Cup

- $\frac{1}{2}$  cup unflavoured yogurt
- Handful of berries (strawberries, blueberries, blackberries – you can purchase frozen mixed berries at Safeway or Thrifty's.
- 2 TBSP granola or ground flax seed



## Veggies n' Dip

You can purchase hummus at your local grocery store (try *Holy Hummus*).

- Bag of mixed veggies
- 3 scoops hummus

Dip and enjoy! Watch the serving sizes on this – more veggies, less dip!



## Baker's Delight

One small baked potato topped with  $\frac{1}{2}$  tsp dried onion flakes, mixed with 2 TBSP plain yogurt. Fast n' easy! Try it with a sweet potato too. Yum!



## Banana-Almond Split

- $\frac{1}{2}$  banana sprinkled with cinnamon
- 1 tsp almond butter blended with 1 tsp plain non-fat yogurt

Dip banana in the yogurt blend, for a creamy, satisfying treat!





## Ready-Made Fridge Snacks

The key to successful snacking is to have something available *before* you get too hungry. Learn to keep your fridge stocked with healthy foods at all times, so you can grab something fast and healthy.

### Egg Salad Bowl

I always have a bowl of fresh egg salad in the fridge, to have a quick, protein-filled snack when I need it fast. Try making your egg salad with *Spectrum* mayonnaise from the Health Food store. There is no added sugar and no trans fats, and it tastes just like real mayonnaise. Use ¼ wrap of whole grain crackers for dipping.



### Tuna Bowl

I always have a prepared bowl of tuna in the fridge for when the urge strikes. Spread on crackers or ¼ wrap for a quick, easy snack.



### Boiled Eggs

I always have two or three boiled eggs on hand for a fast snack. You can sprinkle them with sea salt, or try a dash of cayenne pepper for added zest!



### Protein Hit

1 scoop protein powder in ½ cup juice or almond milk to satisfy your craving, level out blood sugars, and rev your metabolism. Try chocolate or vanilla-flavoured powder. Yum!



### Nut Butters – *almond, cashew, hazelnut, peanut butter (organic)*

There are about 120 calories in each TBSP, but spread on a rye, spelt or rice cracker or in a ¼ wrap and you've got a satisfying, healthy snack for under 200 calories. Throw in a small slice of banana, apple and a sprinkle of cinnamon or nutmeg.



### **Stir it Up**

Put warmed-up left over stir fry from last night's dinner in a small wrap for a quick, easy snack.

### **More Smart Snacks:**

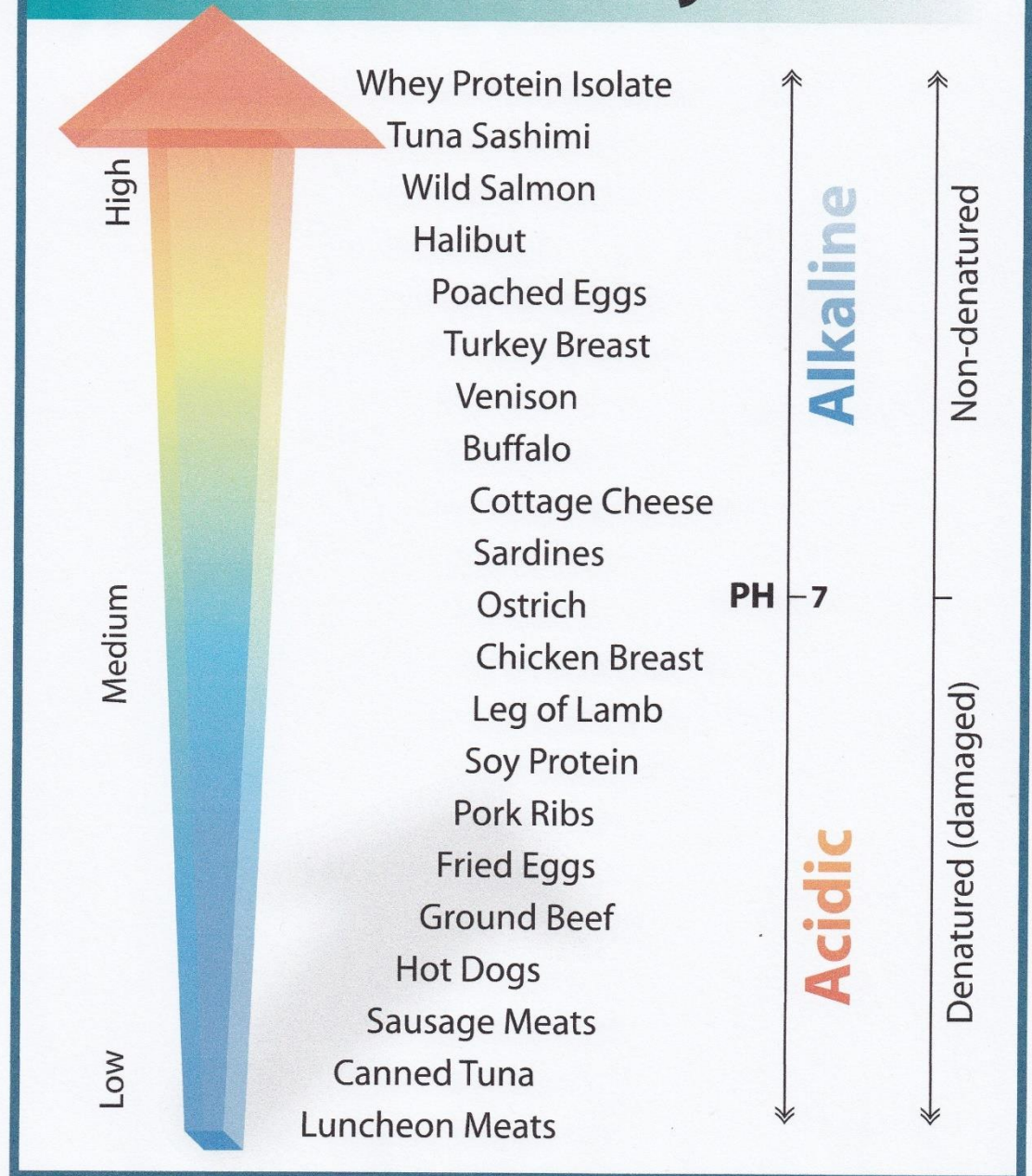
- ¼ avocado - spread on crackers with a sprinkle of feta or parmesan cheese
- Kalamata Olives – 10 will do for a nice, healthy snack.
- Fresh Nuts (not roasted) – 10-15 nuts is all you need.
- Nut Butters – 1 Tbsp will soothe that growly beast inside

**Healthy Protein Bars** – Most protein bars are poor choices, as they are high in sugars, carb dense and just too many calories. But there are healthy choices out there.

Try these alternatives, which you can find in any health food store. (Yes, they're more expensive, but you only need ½ the bar, as they're filling. Remember, what's an extra 50 cents when you're trying to stay off the fat-storing Rollercoaster, and stay healthy?).

- Larabar
- Elev 8 Me
- Garden of Life – Perfect Food, Fruits of life bars
- Veganique
- Vega sports bars
- Greens+
- Nutrilean+
- Oskri
- Organic Food Bar

# Protein Quality Chart





# Protein Summary - Top 10 Tips

## Summary



- 1) Protein reduces cravings, makes you feel fuller longer and balances sugars.
- 2) If protein has been low, aim for 60 grams/day, then as digestion eases, move up to **80-120** grams a day.
- 3) Make protein your **anchor** at every meal, and build your meal around it.
- 4) Two best times to eat protein is **first a.m.** and up to 1 hour after training.
- 5) Women can only absorb **20-25** 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.
- 6) THE perfect PROTEIN is the almighty **EGG**! Love your eggs!
- 7) Nuts, seeds, grains and beans are better seen as CARBS, rather than protein. While they have protein in them, they are considered carbs first.
- 8) Whey protein *isolate* is the preferred type of dry protein, given its structure, simplicity, absorbability, alkalinity, and ability to detoxify the body.
- 9) Red meat is not the enemy, *commercial* red meat is. Choose traditional / local / organic meats at all costs!
- 10) When it comes to any meal, always ask yourself **three questions**: 1. Where's the protein? 2. How much is there? 3. Is it of high biological value (absorbable)?



# CARBOHYDRATES

- Friend or Foe? -



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# Our Macronutrients

## Carbohydrates – Our FRIEND!



**Ah yes...we love our carbs.** Any why not? Nothing elicits a warm, fuzzy feeling like a hot cinnamon bun on a cold winter's day. But we are a nation addicted to carbs, and it's adding to our weight struggles, soaring diabetes rates, insulin resistance, overly-acidic bodies and a host of other undesirables.

But not all carbs are created equal. In fact, *the right kinds of carbs* are of extreme importance. They supply energy to body, and they are the **only** source of energy to the brain and red blood cells. But they must be understood in their differences, and treated with respect. A 'holding of the reins' is necessary here. And carbs are protein-sparing!

If you're looking to optimize all three of our goals – to *look, feel* and *perform* better, close attention to carbs is extremely important. But make sure *you're using them* to your advantage, instead of *them using you*!

## Know the difference between 'real' and 'other' carbs

**First**, if you're looking to lose weight, increase your **real, live** carbs (those found in nature, like fruits and veggies) and minimize or eliminate **other** carbs (man-made, refined ones - breads, pasta, crackers, cookies, chips etc...you know the drill!). And combine your carbs with protein which will help lessen the sugar value of the carbs.

**Second:** If you must indulge in these '**other**' carbs, do so before 3 pm. The reason for this is simple - if you eat other carbs in the evening, your body's metabolic processes are winding down for the day, so you can't digest these starchy carbs efficiently. So they end up being only partially digested, and are carried over into the next day. Before you know it, things starts piling up! Literally!



**Third**, eat a little bit of **real, live** carbs with every meal (veggies, fruit, raw or lightly steamed). They clean out the cells, energize your body, provide much-needed antioxidant protection, lower blood sugars, remove toxins and reduce cravings.

**Fourth:** while fruit is a healthy carb, if you have weight issues, limit your fruit intake to one piece a day, and make it a low sugar choice like an apple, pear or berries.

**Fifth:** If you like your juice, milk, sodas or alcohol, *and* you have weight issues you now know why you can't get rid of the excess weight. Your body converts all carbs into sugars for fuel. (Remember, the other word for 'carbs' is 'sugar'). And the simpler the sugars (liquid form is the simplest), the faster it gets absorbed and stored as excess calories. So for optimum weight, immediately replace all sodas, juice, milk, and those designer coffees with water. Pretty simple.

**‘Get out of jail’ card:** There’s an exception to the rule when it comes to eating **‘other’** carbs and here it is - if you trained that day, you get to eat a serving of ‘other’ carbs after your training session. It’s like your own ‘get out of jail’ wild card. You’ve earned it, and your body is well-equipped to burn it off after training.

## The ‘real’ (live) carbs – complex carbs

**Vegetables and fruits are the preferred choice for several reasons:**



- **They are whole, ‘live’ foods** as nature intended
- They are full of antioxidants, vitamins, minerals and enzymes
- They contain soluble and insoluble fibre (good for digestion, elimination, removes toxins)
- Eat a ‘rainbow’ of different coloured fruits and veggies.
- Eat some raw veggies at every meal, to clean the cells and rev up the metabolism.
- **Eat 5-10 servings of fruits and veggies** each day (a ‘serving’ is ½ cup).

**Grains are another valuable complex carb source, but eat them judiciously!**

- Eat whole grains (spelt, kamut, quinoa, tabouli)
- They contain soluble and insoluble fibre (good for digestion, elimination, removes toxins)
- Minimize or eliminate bread (yes, there is life after sandwiches!)
- **Eat 2-3 servings a day** (a serving is ½ cup rice, ½ potato).

## The ‘other’ (man-made) carbs – simple carbs

- **Sucrose** (white sugar)
- **Fructose** (Fruit sugar) – ie fruit juice
- **Lactose** (milk sugar) – ie milk
- **Man-made, refined products** – ie bread, chips, crackers, cookies, fast foods, etc



**We should try to minimize these carbs.** Why? Because they absorb quickly, and cause the body to release insulin in greater-than-necessary quantities. When this happens, it signals to the body to store more fat and use muscle for fuel, definitely what you don’t want (remember, our metabolism is in our muscles! Lose the muscle and you lower your metabolism!) They can also lead to.....

- hypoglycemia
- peaks and valleys, low energy, anxiety, mood swings
- stored fat today and in the future – weight gain!
- future onset diabetes

# **What is the GI Index?**

The GI index refers to the glycemic index which measures the sugar value of a food and its impact on our body's blood sugar levels. In our carb-heavy world, we eat way too many high glycemic foods (heavy, starchy, simple sugars) which adds to weight gain, poor energy, lack of motivation, emotional disturbances, an overly-acidic body, future-onset diabetes and more.

**The key is to eat lower on the GI table (below 75 value).**

If you're going to indulge in a high glycemic food, the way to bring down its value is combine it with ***fibre*** and ***protein***. That's why orange juice has a much higher glycemic value than the actual orange – it's been stripped of its sugar-lowering fiber. Or why if you want to eat a chocolate bar, eat it after a meal, versus eating it alone – the fibre and protein in a meal will soak up the excess sugar in the bar, giving it a lower GI value, versus eating it alone where the sugar value acts like a run-away race horse in your system.

**Eat low (in the index) and you'll stay low (in bodyweight)!**

## **Breads**

Whole grain rye	42
Coarse barley	57
Pumpernickel rye	51
Coarse wheat	69
Whole meal rye	89
Whole meal barley	93
Coarse oat	93
Rye crisp	95
Whole wheat	69
Pita bread, whole wheat	57
Dark rye, Black bread	76

## **Cereal Grains**

Buckwheat pancakes	45
Oatmeal (long cooking)	49
Oat bran	85
Muesli	56
Millet	103
Buckwheat	78
Couscous	66
Bulgur	48
Wheat kernels	63
Rye kernels	47
Pearled barley	25
Cornmeal, whole grain	68

## **Rice & Pasta**

Whole wheat spaghetti	37
Brown rice	50
Wild rice	55

## **Fruit**

Bananas	55
Raisins	64
Dried fruit	65-70
Apples	36
Oranges	40
Cherries	23
Plums	25
Grapefruit	26
Peaches	29
Pears	38
Grapes	45
Mangos	55
Dates	103
Papaya	58
Cantaloupe	65

## **Beans, Peas & Legumes**

Peanuts	15
Black-eyed peas	33
Soybeans	15
Lima beans	36

Navy beans	40
Broad beans	75
Chickpeas (canned)	60
Chickpeas (dried)	47
Kidney beans (dried)	30
Kidney beans (canned)	74
Frozen peas	51
Green lentils (canned)	74
Green lentils (dried)	25
Pinto beans	62

### **Vegetables**

Parsnips	98
Carrots	90
White potatoes	82
Sweet potatoes	48
Yams	45
Beets	64
Mashed potatoes	98
Baked russet potato	116

### **Dairy Products**

Nonfat yogurt, plain	15
Whole milk	27
Cheese (raw)	30

### **Sugars**

Honey	58
Fructose	20
Lactose	57
Sucrose	75
Glucose	100
Maltose	105

## Helpful Hint

**If you don't have access to a GI table**, here's a self-administered test you can use. Next time you are wondering about a carb's sugar content, *just think about how the carb feels in your mouth*. Is it overly *sweet* (tropical fruits, fruit juices) or *starchy* and *heavy* in your mouth (bananas, potatoes, beans, corn), then it's likely a high glycemic carb, the kind you want to keep to a minimum. So trade up the pineapple for an apple or a pear, and the banana for some berries. Got it?

## Say NO! to Low / No-Carb Diets!

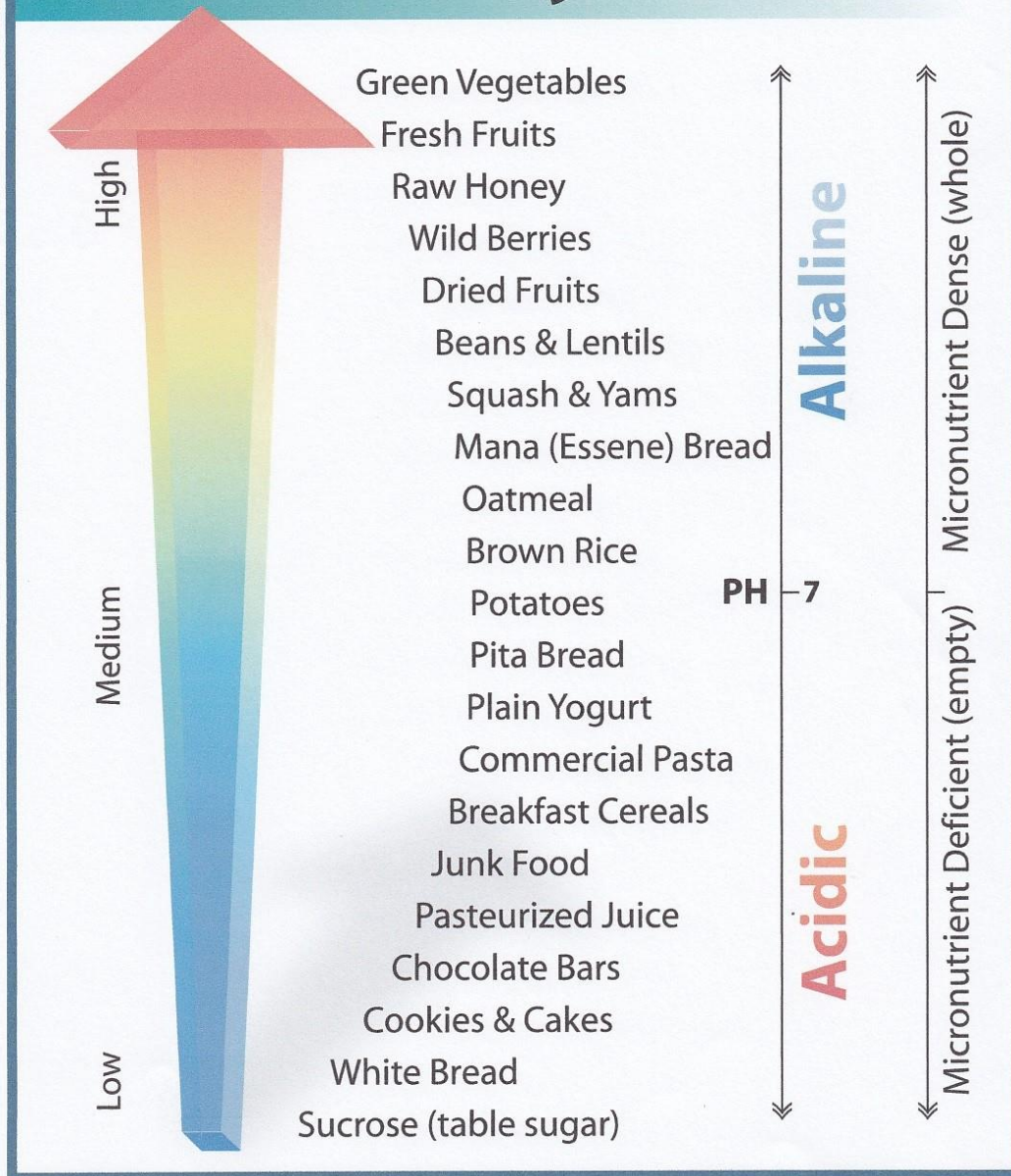
**You need carbs to burn fat.** If you cut the carbs too much, your body will be forced to burn precious muscle. And we don't want that! (Remember, your metabolism is in your muscles!). Also, if you cut carbs too drastically, it will also cause your body to hoard the fat, so when you do resume regular eating, you will gain back more weight than when you started! (Can anyone say *Atkins Diet*? Now lovingly re-labeled as Keto?).

As long as you're eating lots of veggies, some root veggies and a bit of seasonal fruit a day, you are feeding your body healthy carbs that will help you to burn fat on a regular basis. So cut out the bread, crackers, and pastas, and know you're on your way to a healthy metabolism, while at the same time breaking free of that carb addiction, the one that keeps you overweight and lethargic!

**A Note about Cutting Down on Man-Made Carbs:** If you've been eating a regular diet of breads, pastas, crackers etc., it is often advisable to first cut your refined products consumption in half, rather than cut them out all at once. For some people, cutting them out all at once may be too difficult, too much of a shock on the body, and there may be a too-drastic drop in energy. Only you can decide, as everybody is different.



# Carb Quality Chart





# Carbohydrates - Top 10 Tips



## Summary

- 1) The best kinds of carbs are '**real, live**' carbs, that you would find in nature, in that state. For optimum health, eating some raw veggies at every meal.
- 2) To cut all offending carbs out at once, you may 'shock' your body into seemingly rapid weight loss, but it's only water weight. AND you could initiate a plateau (stalled weight loss. So easy does it when lowering carbs!
- 3) **Carbs Two main Value Traits:** They are ***protein-sparing*** (meaning, if you don't have enough carbs, your body will use protein – aka your muscles- for fuel! AND you **cannot lose weight** without CARBS! (Your body will hoard the fat if you don't feed it carbs, because it thinks you are starving it!)
- 4) **Do you know** how many carbs you average in a day? FIND OUT! You might be surprised! You are likely NOT sensitive to carbs, like you think. Very few people are sensitive to whole food carbs. When most women talk about carbs being negative, it's because they are investing in man-made, sub optimal carbs. Change up your take on carbs – WHOLE FOODS ROCK!
- 5) When using the glycemic index, eat the majority of your foods under 75. But be wary – orange juice and eating an orange are very different indeed!
- 6) To level out the glycemic (sugar) value of a carb, combine it with *protein*.
- 7) If trying to lose weight, limit fruits to 1-2 servings of seasonal, low glycemic fruits like apples, pears and berries (no tropical fruits).
- 8) For optimum weight loss, don't drink your calories (minimize shakes and sports drinks). A robust metabolism and digestion need something 'meatier' than liquid to function properly!
- 9) Replace all juice (diet and otherwise), milk and sodas with plain water.
- 10) You need carbs for healthy digestion AND metabolism! Oh yeah, AND to help build and maintain shapely muscle too!



# FATS!

- The Good, the Bad and the Ugly! -



# Fats – The good, the bad & the ugly.



**Poor fats!** They've been the target of dieticians and doctors for too many years, but without good cause, in many instances. Let's clear up some misconceptions.

In a nutshell, if it's a good fat, it's healthy to eat, and all natural sources of fats are healthy to a certain extent. It's when man comes in and tries to make his own version of fat (trans fats) that everything gets messed up. So let's go over the fat list again.

## ✓✓ **Monounsaturated fats: Good Fats**

These are the good guys. They're liquid at room temperature and they lower cholesterol levels in the body.

Avocado	Pistachios
Cashews	Pumpkin seeds
Macadamia nuts	Walnuts and walnut oil
Peanuts & peanut oil	Canola oil
Olive oil	

## ✓✓ **Polyunsaturated Fats: Good Fats**

Polyunsaturated fats are also healthy fats. They too are liquid at room temperature and lower cholesterol levels.

Corn oil	Safflower oil
Cottonseed oil	Sunflower oil and seeds
Flaxseeds and flaxseed oil	Sesame oil and seeds
Fish and fish oils	Soybean oil and seeds
Grapeseed oil	Walnut oil and seeds

## ✓ ✕ **Saturated fats: Good and Bad Fats**

These guys are solid at room temperature, come mainly from animal fats, and they should be eaten in smaller amounts. But meats in particular have been given a bad rap because of their supposed cholesterol-raising abilities. But again, we have to differentiate between commercial meats and traditional meats (those animals raised and grass-fed as nature intended, without antibiotics, hormones and toxins).

If one eats these traditional (wild, organic) meats, the levels of saturated fats are minimal, the healthy Omega 3 fat levels are higher (see *Omega 3's and 6's – The New Kids on the Block*), and they don't contain dangerous antibiotics and hormones (commercial meats routinely use antibiotics and hormones, it's a standard practice). So choose wild, traditional or local meats at all times. You'll taste the difference!

**\* Note:** Coconut oil is also a saturated fat, and is one of the healthiest fats you can eat. So don't believe what they say about coconut oil, it's good for you! And it helps you to burn fat too!

Animal fat	Palm oil
Fatty meats	lamb
Coconut oil	Pork
Vegetable shortening	Veal

## ✕ ✕ Trans fats –Ugly Fats

These nasty stabilizing fats are found in cookies, candy, crackers, fast food and processed foods, any food that sits in your cupboard for a long time needs trans fats to stop it from going bad in a few days.. Anything that says '*hydrogenated*' or '*modified*' is a trans fat, so read your labels. And remember, if a food has less than 2 grams of trans fats in a serving (see Oreo cookie story) the label can legally say there's zero (0) trans fats! Another loophole in our food regulations!



Total Fat, Saturated Fat, <i>Trans</i> Fat, and Cholesterol Content Per Serving*								
Product	Common Serving Size	Total Fat g	Sat. Fat g	%DV for Sat. Fat	Trans Fat g	Combined Sat. & <i>Trans</i> Fat g	Chol. mg	%DV for Chol.
French Fried Potatoes± (Fast Food)	Medium (147 g)	27	7	35%	8	15	0	0%
Butter**	1 tbsp	11	7	35%	0	7	30	10%
Margarine, stick†	1 tbsp	11	2	10%	3	5	0	0%
Mayonnaise†† (Soybean Oil)	1 tbsp	11	1.5	8%	0	1.5	5	2%
Shortening±	1 tbsp	13	3.5	18%	4	7.5	0	0%
Potato Chips±	Small bag (42.5 g)	11	2	10%	3	5	0	0%
Milk, whole±	1 cup	7	4.5	23%	0	4.5	35	12%
Doughnut±	1	18	4.5	23%	5	9.5	25	8%
Cookies± (Cream Filled)	3 (30 g)	6	1	5%	2	3	0	0%
Candy Bar±	1 (40 g)	10	4	20%	3	7	<5	1%
Cake, pound±	1 slice (80 g)	16	3.5	18%	4.5	8	0	0%

## **Omega 3's and 6's – The New Kids on the Block**

**Polyunsaturated fats:** Omega fatty acids are just recently getting their time in the spotlight, and with good reason. Some of their outstanding benefits include:

- Improve skin and hair, and aids eczema and psoriasis
- Thins blood, so decrease in blood clotting
- Decreases blood pressure
- Regulates immune system
- Decreases depression and neurological disorders
- Decreases cholesterol and blood triglycerides(blood fat that increases risk of heart disease),
- Produce *prostaglandins 1 and 3*, shown to **destroy breast, prostate and lung cancer cells**.
- Needed for normal development of brain function and learning (use in ADHD therapy)
- **Decreases inflammation** (important for athletes and non-athletes alike).
- **Helps us to burn fat!**

### **The best sources of Omega's include:**

- **Fish:** (also rich in EPA, a healthy oil, found in high amounts in wild salmon). Sources include wild salmon, tuna, swordfish, sardines, mackerel, anchovies, herring, bass, trout
- **Flax oil** and seeds
- **hemp oil** and seeds
- **other sources** – grape seed oil, walnuts, soybeans, organic corn
- **be wary of the 'S'- oils** – sunflower, sesame and safflower, - as we often over consume them, throwing the delicate balance of Omega 3's to 6's off. They're also often genetically modified.
- **Try Udo's Oil**, a remarkable blend of nuts and seeds, and great in salad dressings.

**Help Your Brain:** Fish oil is particularly important, given our high rates of **Alzheimer's** and **Attention Deficit Disorder**, so aim for **2000** mg a day. If you're an **athlete**, you may want to increase this to **4000** mg a day.



## **Sources of Omega 3's and Omega 6's**

It's important you eat only healthy oils and fats. Our society is built on refined, 'dead' oils which create an imbalance in body chemistry through eating an over-abundance of such genetically modified and chemically sprayed oils like cottonseed, corn, and safflower oils.

We need to return to our Omega 3's and 6's (especially 3's) which keep our hormones healthy and balanced in our bodies, aid in fat burning, joint health, arterial and heart health. Fish, flax and hemp are the best sources, so if you don't think you're eating enough of these in whole form, you can supplement with 2000-4000 mg/day (check your local health food store for reputable brands).

**Dietary sources of EFAs**

<b>Food</b>	<b>Omega-3 (grams per100g)</b>	<b>Omega-6 (grams per 100g)</b>
<b>Flax</b>	<b>20.3</b>	<b>4.9</b>
Hemp seeds	7.0	21.0
Pumpkin seeds	3.2	23.4
Salmon	3.2	0.7
Walnuts	3.0	30.6
Rape seed	2.1	9.0
Herring	2.0	0.4
Soybeans	1.2	8.6
Butter	1.2	1.8
Olive oil	0.6	7.9
Wheat germ	0.5	5.5
Sunflower seeds	0	30.7
Almond	0	9.2
Olives	0	1.6

# **The Oreo Cookie Story! – The BAD Fats**

~ Or when a label's not a label ~

## **What are *Trans* Fats?**

Basically, *trans* fats are made when manufacturers add hydrogen to vegetable oil--a process called hydrogenation. Hydrogenation increases the shelf life and flavor stability of foods containing these fats.

## **Where can they be found?**

*Trans* fat can be found in vegetable shortenings, some margarines, crackers, cookies, snack foods, and other foods made with or fried in partially hydrogenated oils. Unlike other fats, the majority of *trans* fat is formed when food manufacturers turn liquid oils into solid fats like shortening and hard margarine. A small amount of *trans* fat is found naturally, primarily in dairy products, some meat, and other animal-based foods.



## **What are the Dangers?**

*Trans* fat, like saturated fat and dietary cholesterol, raises the LDL cholesterol that increases your risk for heart disease. It is also implicated in altering our DNA. Canadians consume on average 4 to 5 times as much saturated fat as *trans* fat in their diets.

## **What Can You Do About Saturated Fat, *Trans* Fat, and Cholesterol?**

When comparing foods, look at the Nutrition Facts panel, and choose the food with the lower amounts of saturated fat, *trans* fat, and cholesterol. Health experts recommend that you keep your intake of saturated fat, *trans* fat, and cholesterol as low as possible while consuming a nutritionally adequate diet. However, these experts recognize that eliminating these three components entirely from your diet is not practical because they are unavoidable in ordinary diets.

## **Can You Find *Trans* Fat on the Food Label?**

Yes, but remember, labels can be deceiving. It's legal to show zero trans fats on a label if there is less than 2 grams of trans fat *in a serving*. For example, one Oreo cookie has 1.8 grams of trans fats, but because the manufacturers make a serving size as one cookie, it holds under 2 gms of trans fats, but legally they can put 0 trans fat on the label.

But who ever eats one Oreo cookie? So, if you eat 5 cookies, you're getting 9 grams of trans fats, and you don't even know it. Now that's fancy foot-work on behalf of Health Canada and Mr. Christie!

Remember, if the list of ingredients says **hydrogenated** or **modified** oils, it's a trans fat in disguise.

## **There's Nothing Free about Fat Free!**

Unless you have been prescribed a therapeutic diet, fat-free isn't the way to be. Fat is an important and necessary part of a healthy diet.

One of the most important functions of fat is its role in aiding the absorption of fat-soluble Vitamins A, E, D, and K. Without fat, your body can't use these vitamins to unlock their health benefits. And a meal with a bit of fat (and protein) can help you feel full and take your mind off food, ultimately giving you greater control over the amount of calories you eat.

### **Fat-Free and Low-Calorie: Not the Same**

Fat-free foods can be tricky: if you examine the package closely, you will often find that the calorie difference between the fat-free and the original version is very minimal. Why? When manufacturers take away the fat, they add extras like sugar to improve the taste, thereby adding calories. So while you often won't find added sugar, you will find added sodium. So be careful: when you go fat-free, you may not be getting the health bargain you planned, since fat-free foods can still be loaded in calories. Scarfing down an entire bag of fat-free chips can add nearly 500 calories to your day!

### **Beware the Artificial Sweeteners**

When something is fat-free, read the label carefully. Are there are a bunch of ingredients you can't pronounce? These are artificial sweeteners and other agents that are there to bolster the taste of the product. Not only do these chemicals add dangerous toxins, studies show that artificial sweeteners help your body to hold onto fat, and cause us to overeat more calories in the long run! As well, they disrupt your intestinal bacteria, the very critters that keep our immune system humming along nicely!

### **You Need Fat to Burn Fat!**

Eating fat helps your body to lose fat. If you withhold fat, so too will your body – it will withhold its own fat stores and not let them be burned off for fuel. You need to 'coax' your body into burning fat, so exercise and high quality fats are the answer. No saturated fats or trans-fats here! So cut back on the fatty meats (saturated fats) and refined products (trans fats), and load up on the good stuff.



# **Fats - Top 10 Tips**



## **FATS Summary**

- 1)** The best kinds of fats are monounsaturated and polyunsaturated fats, which are liquid at room temperature – avocado, olives, nuts, fish and flax.
- 2)** You need good fats to burn fat!
- 3)** A label is not a label – just because it says 0 trans fats, it may still contain trans fats, so read labels!
- 4)** Trans fats are also called *hydrogenated* and *modified* on food labels.
- 5)** Animal meat is not necessarily a high source of saturated (unhealthy fats). If they are commercial meats, they're likely high in saturated fats. If they're traditional / wild / local, they typically have very low levels of saturated fats, and are rich in the healthy Omega 3 fats (because the animal is likely grass fed, not grain fed).
- 6)** The best kinds of fats are Omega 3's and 6's, which come predominately from fish, flax or hemp.
- 7)** Low-fat foods are often high in added sugars.
- 8)** Fish oil is superior brain food, so supplement with 2000-3000 mg per day.
- 9)** Using flax oil or Udo's oil is an excellent addition to any diet, as they balance hormones, aid recovery, lower cholesterol and blood pressure, maintain healthy joints and reduce muscle aches and pains.
- 10)** Going no-fat will cause your own body to hoard fat!