

FOUR WEEK FAT LOSS

Fats for good health *and* weight loss?

FISH OIL

Of all the supplements that I recommend to my clients (athletes and non-athletes) the first choice is always Fish Oil. Fish oil is the panacea of life - there's not much it can't or won't do in the body to regulate and enhance all aspects of cellular function. The reason it does this is because the cells or rather cell walls are made from fat. So the health of the cell membrane depends on the fat that you eat. You need cells to be built from a good mix of fatty acids, but if you have too many of one type over another then cell membrane health will be compromised and cell communication will be less efficient.

Before we enter into a discussion about the merits of fish oil, it's worth looking at Figure 1* at the end of this article, which explains the metabolic pathways that are involved in fat metabolism. There are, for the purposes of this discussion 3 types of omega classification you need to think about, omega 3, 6 and 9.

Inflammation in the body is required for all systems to function, one example might be swollen quads after running down hill for a while. Another a bee sting, a third a runny nose when you have a cold or the flu. Prostaglandins regulate inflammation in the body. The foods we eat regulate prostaglandin synthesis.

You can see that eating foods on the top of the chart begin a process where the fats are converted into chemicals in the body known as prostaglandins (PGE1, 2, & 3). A prostaglandin (PGE) is any member of a group of lipid compounds that are derived enzymatically from fatty acids and have important functions in the body. Every prostaglandin contains 20 carbon atoms, including a 5-carbon ring. They are mediators and have a variety of strong physiological effects; although they are technically hormones, they are rarely classified as such.

Eating fish oil increases PGE3, whereas eating omega 6 fats from vegetables increases PGE1. Both these have favourable effects in the body if they are consumed in the right balance. *PGE2* however has some nasty pro-inflammatory effects that in excess cause all the problems associated with a pro inflammatory state. A pro-inflammatory state means that the immune system and hormonal inflammatory system is on full alert: aches and pains will feel worse and recovery times will lengthen. Diseases like heart disease, and conditions like Asthma and Eczema are pro inflammatory diseases. If you over consume omega 6's you overload this pathway and cause a rise in PGE2. This can be worsened through excess insulin, wheat, milk, inadequate nutrients to assist with enzyme conversion and under consumption of omega 3.

I should say right now that some inflammation in the body is a good thing, and certain processes within inflammation are critical for the body to operate correctly and to manage stress and repair. Just think what happens when you get a swelling after being stung by a wasp, why you get a runny nose when you have a cold, or why your quads get sore after a squat session or downhill run. Each of these are parts of the inflammatory process that the body uses to repair itself. It's when the inflammatory state is perpetually *ON* that we have problems.

A good balance between omega 3 and 6 would be 1:2 or 1:1 – in fact in the UK we routinely consume 1: 20 and up to 1: 50. This is one of the reasons asthma, eczema, diabetes, stroke, alzheimers and heart disease are all on the rise.

People who are likely to be deficient in omega 3 are those who don't eat oily fish or walnuts, pumpkinseeds and linseeds regularly or people who don't supplement. Athletes are normally always deficient as they process these fats quicker than the public but eat like the general public.

There are a number of ways to tell if the balance of fatty acids in your body is inappropriate and by far the most accurate and recommended way is to get your red blood cell fatty acids status analysed through a blood test. You should take this test at least once every 6 months as it will help you determine if your fat balance is appropriate to start with and, subsequently, how fish oil supplementation is affecting your fat balance over time.

89% of all athletes that I test are deficient, and 50% are still low after 18 months of supplementation. The reason for this is athletes process these fats quicker due to high cell turnover and high states of inflammation due to their training. Plus it takes time to get these fats back into the body unless you mega dose which is something I do not believe in.

Other indicators of ways that you can tell when you are deficient are if you have rough skin on the back of your arms, or anywhere else, dry eyes, frequent infections, poor memory, loss of hair or dandruff, slow wound healing, PMS or breast pain and infertility. Any inflammatory condition will worsen with low or insufficient intake of omega 3 and too much of other fatty acids particularly omega 6 and trans or hydrogenated fats. This is one of the reasons for the increase in these disorders in the western world. Asthma, eczema, arthritis, aches pains, heart disease, and stroke, can all be avoided or symptoms associated with these conditions improved through supplementation and changing the way you eat.

The main culprit in this picture is excess omega 6, i.e. vegetable oil. If you have sunflower oil at home also, throw it away! Switch to omega 9, sources

FOUR WEEK FAT LOSS

instead – olive oil is the way to go along with avocado, and other monounsaturated rich sources like peanuts and sesame seeds.

Omega 9 although not included in the fatty acid chart is an inert fat, in that it does not alter PGE production negatively, in fact research suggests omega 9 may complement fish consumption and has additional anti inflammatory benefits. This is one of the reasons the Mediterranean diet is so healthy.

BENEFITS OF FISH OIL SUPPLEMENTATION

The most common reported health benefit that people are aware of is a decrease in inflammation and pain around joints and problem areas such as old injuries or points of surgery. Many athletes who have taken fish oils can use less anti-inflammatory NSAIDS or even none at all once they have the right levels in their diet and supplementation programme. Combining fish oil with other herbal botanicals can literally work wonders. Last week I took an elderly lady from not being able to open doors or lift up her grandchildren to doing just that within a week. Her arthritic thumb was hampering common daily activities so much that she couldn't function in normal ways. Her regime simple, cat's claw, ultra inflamex (metagenics product), and fish oil. Full details of where to source your oils from are included at the end of this article.

Fish oil supplementation is also linked to brain function. The highest concentration of DHA and EPA in the body is in the brain. There's plenty of research to support higher IQ level in children and better general behaviour with kids who take fish oils and fatty acid supplements regularly. The same benefits also apply to adults through fish oil's ability to increase serotonin levels and brain communication.

SCIENCE;

Here's some science based advice and practical issues you should consider when supplementing with fish oils;

Fish oil, which has a high concentration of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), may increase fat utilization and decrease fat storage. More specifically, it may turn on the lipolytic genes (fat burning genes) and turn off the lipogenic genes (fat storage genes). Furthermore, it may provide additional fat loss effects by increasing the utilization of fat stores from the adipocytes, serotonin levels (and hence reduce carbohydrate cravings), insulin sensitivity and decreasing alcohol cravings.

As with all supplements, it is worth noting that you can have too much of a good thing, even with fish oil! So to optimise fish oil supplementation, here are my practical recommendations:

- The accumulative dose of EPA and DHA should be ~4-6g/d. However, higher doses may have an additive effect on fat loss
- You should get your red blood cell fatty acid profile measured every 6 months when taking fish oil or any fatty acid supplement
- *The ratio of EPA:DHA should be 3:2 most supplements come at this dose*
- Fish oil supplement should be combined with GLA in the dose highlighted above
- Fish oil supplement should be combined with vitamin E (prevents oxidation of fish oil within the body, i.e. increases its stability within the body) you'll need 400iu for each 10g of fish oil consumed. So 100iu is enough for a 2-3g fish oil dose
- Fish oil supplement should be stored in a cool, dry place
- Cycle the Fish oil product that you use regularly i.e. use a range of reputable suppliers
- Combining fish oil with L-carnitine may have an additive effect on fat loss. For every 10g of fish oil, take 1g of L-carnitine. Since L-carnitine is a stimulant, it should be taken before 4pm so as not to disrupt sleep.

VIRGIN ORGANIC COCONUT OIL

This is one of the most misunderstood of all fats, classically labeled a saturate and as such fattening to consume. Nothing, I repeat nothing could be further from the truth.

Note it is virgin, organic – not any old coconut oil will do! Be very sure you have this type of oil otherwise the health benefits will not happen! Standard palm oil is not the stuff you are looking for.

Coconuts themselves are highly nutritious and rich in vitamins, minerals and fiber. They are classified as a "functional foods" because it provides many health benefits beyond its nutritional or calorie content. Coconut oil is of special interest in addition to other functional fats because it possesses healing properties far beyond that of any other culinary oil and is extensively used in traditional medicine among Asian and Pacific populations. Pacific Islanders consider coconut oil to be the cure for all illness. The coconut palm is so highly valued by them as both a source of food and medicine that it is called "The Tree of Life." Only recently has modern medical science unlocked the secrets to coconut's amazing healing powers.

Coconut oil is not actually saturated fat in the true sense of the word, in that it comes under the saturated classification but is not a long chain fatty acid, it is a medium chain triglyceride as such it does not behave like a saturated fat in the body. Medium chain triglycerides actually absorb directly to the liver so they burn very like carbohydrate, this means they provide instant energy and

FOUR WEEK **FAT LOSS**

are suitable for endurance based events, containing more calories per weight than carbohydrate and with many additional health benefits.

There's been a lot written on the net about coconut oil and for those of you who want to read further go to; <http://www.livecoconutoil.com/maryenig.htm>

All I will say on the matter is coconut oil is absolutely essential for excelling in any sport and should be consumed as part of a regular diet whether you exercise or not.

The caveat is you need to replace other oils with coconut oil, not add coconut oil to existing fat consumption. Whilst I don't agree with counting calories, calories do eventually count in any regime based on body composition management.

With all food products which have health benefits, it easy to think 'why believe all the hype'? And I still don't believe it's good for you! Well here's a list of things coconut oil definitely does not do;

Unlike other sources of saturated fat; Virgin Coconut Oil does not;

- promote platelet stickiness, which leads to blood clot formation.
- contribute to atherosclerosis or heart disease.
- promote cancer or any other degenerative disease.
- contribute to weight problems.
- create cell damaging free radicals like other vegetable oils and is stable at cooking temperatures

So we can see that it is not associated with the same stigma as other saturated fats!

What about the good things it can do? Before you read this list remember these are facts supported by research you can follow the link for peer reviewed research at the end of this article. Finally I'd like you to take the coconut challenge, replace all butter and oil use with coconut oil for 2 weeks and see and feel the difference.

POSITIVE HEALTH BENEFITS FROM USING VIRGIN COCONUT OIL

As with any claims made for health there is often conflicting and sometimes scarce information. However when reviewing the literature there appears to be enough positive benefits to warrant the use of coconut oil in your daily regime. Certainly replacing omega 6 sources of fat and using coconut oil for any type of heated cooking would seem of absolute benefit. Once you begin using coconut oil you may also feel some of the other benefit listed below.

FOUR WEEK FAT LOSS

- It helps prevent bacterial, viral, and fungal infections, including Candida.
- It improves insulin secretion and utilization of blood glucose.
- It assists in the absorption of minerals and fat-soluble vitamins.
- It is easily absorbed and utilized by people who have trouble digesting fats or who have gallbladder disease.
- It helps protect us from disease-causing bacteria, viruses, yeast, fungi, and parasites
- It supports immune system function.
- It supports good thyroid function (an essential part of any good weight loss program).
- It supports a healthy metabolism.
- It provides an immediate source of energy.
- It supplies less calories than other fats.
- It improves digestion and nutrient absorption.
- It resists spoilage and rancidity, even without refrigeration.
- It resists breakdown from heat, making it the absolute best oil on Earth for cooking.
- It may help your skin to stay soft and smooth.
- It may help prevent premature aging and wrinkling of the skin.

In summary;

Just adding coconut oil on top of your current diet is not the sensible thing to do. Exchange other fats such as sunflower oil and sources of saturates with coconut oil will have positive outcomes.

Replacing vegetable oils with coconut oil and olive oil to increase potential health benefits seems like an easy and tasty way to improve health through reduction of pro inflammatory fats, and it also appears to do what it says on the tin in terms of fat burning through raising the metabolic rate. Additional benefits for digestive health and immune boosting properties make it a functional asset to anyone's nutrition. Anyone who is immune compromised or suffers from digestive problems should also use coconut oil regularly.

Thanks to livecoconutoil.com for some of the Information in this article.

For the science hungry guys go to;
http://www.coconutoil.com/peer_reviewed.htm

To buy Coconut Oil, here is a reputable source: <http://www.coconoil.co.uk/>

FOUR WEEK FAT LOSS

Figure 1*.

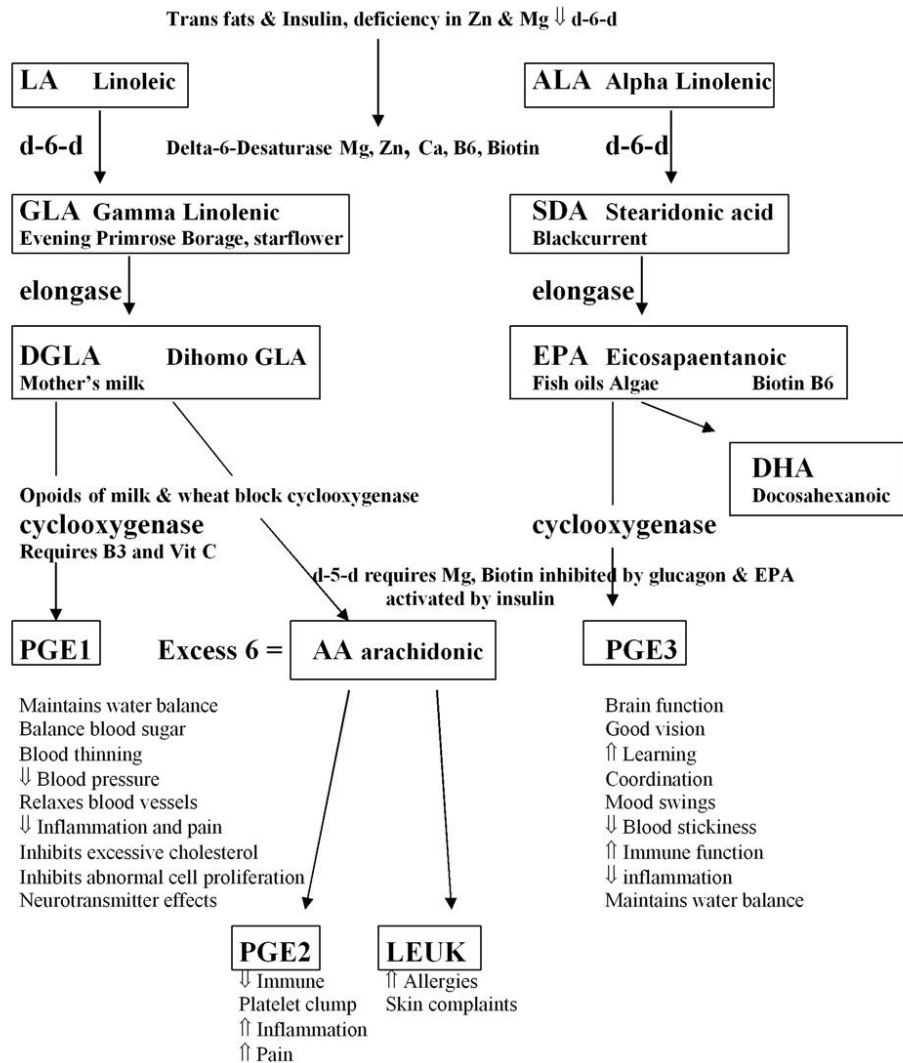
ESSENTIAL FATTY ACID CHART

All nuts and seeds and their oils.
Brazils, corn, peanut, pecan, safflower
Sesame, sunflower

OMEGA-6 FATTY ACIDS

Flax, hemp, walnuts, soybeans, pumpkin

OMEGA-3 FATTY ACIDS



- RATIOS OF OMEGA-3 TO OMEGA-6 IN THE BRAIN IS 1:1
- RATIO OF OMEGA-3 TO OMEGA-6 IN LEAN TISSUES IS 1:4
- AVERAGE CONSUMPTION FROM OUR DIET IS AROUND 1:20
- OMEGA-3 TO OMEGA-6
- THE AMOUNT OF INTACT OMEGA-3 FAT IN OUR DIETS HAVE DECREASED BY OVER 85% SINCE 1850.
- IF YOU HAVE BEEN SUPPLEMENTING WITH FLAX-SEED OIL OR FISH OILS AS YOUR PRIMARY SOURCE OF FAT FOR 2-3 YEARS CONSIDER GETTING YOUR PLASMA FATTY ACID PROFILE CHECKED