ZINZINO

BALANCETEST REPORT

Change starts from the inside

The BalanceTest report provides you with accurate insights into your diet and how it Λs reɳected in your bo overview compared to optimal target values, and gain a deeper understanding of what fatty acids are and what their importance is in human health.

Changing your diet and remaining in ba The report provides you with advice ar your test results.

If you act on our words of advice and consume your Balance product daily, you can expect your fatty acid in 120 days.

Contents

KEY INSIGHTS

#01

Are you in the danger zone?

95% of the people tested do not have the optimal ba

#02

More Omega-3, **less** Omega-6

Most people today have an imbalance of Omega-6 and O
levels of Omega-3 due to our modern diet.

#03

Ratio 3:1

Where you should be with a healthy diet or a supplement that works. Science recommends you have a 3:1 ratio between the essential fatty acids Omega-6 and Omega-3.

Ratio 7:1

People who take a traditional Omega-3 supplement are surprised, most of them have an average Omega-6:3 ratio of 7:1 instead of 3:1 or lower.

Ratio 15:1

Some people don't take any supplement and don't eat fatty fish regularly and have an Omega-6:3 ratio above 15:1. We find 30:1, 50:1, 80:1 and above. Don't worry! A recommended dosage of BalanceOil daily will correct it.

#04

We know the statistics

5% of those tested have a ratio of 3:1 or lower, which is the recommended Omega-6:3 ratio.

20% of those tested take an Omega-3 supplement, but their results are still not optimal.

75% of those tested do not take any Omega-3 supplement and often have a ratio of 15:1 or higher.

95% of those people taking a BalanceOil product daily have an Omega-6:3 ratio near 3:1 after 120 days.

#05

Zinzino BalanceOil a blend of polyphenols and omegas

BalanceOil contains a high amount of olive polyphenols combined with Omega-3, Omega-6, Omega-7 and Omega-9, which is exactly what you need to get your Omega-6:3 ratio to where it should be.

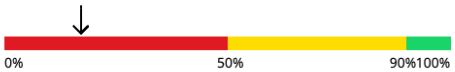
Omega-6:3 balance

Unbalanced 9.6:1

The Omega-6:3 balance is too high. Increase the Omega-3 intake to improve the results and to reach balance.

Protection value

Insufficient 17%



The Protection value is insufficient. A daily intake of BalanceOil in the recommended dosage for 120 days will increase the diet's protective capacity.

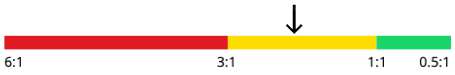
Omega-3 index

Moderate 5.0%

The Omega-3 index is moderate. Increase the Omega-3 intake to reach an optimal Omega-3 index.

Mental strength

Moderate 2.1:1



The Mental strength value is moderate. You need to ensure a marine source of Omega-3 in the diet to reach an optimal Mental strength value.

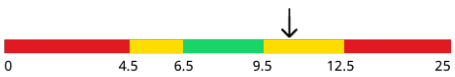
Cell membrane fluidity

Moderate 7.4:1

The Cell membrane fluidity is moderate. To achieve good membrane fluidity, further increase the Omega-3 intake and reduce excess-sugars in the diet.

Arachidonic acid (AA) index

Elevated 10.5%



The AA index is elevated.

Details of fatty acids measured

Saturated fat	Target range, %	Your value	Deviation (in %)
Palmitic acid (PA) C16:0	23.12 - 25.05	23.40%	0%
Stearic acid (SA) C18:0	12.51 - 13.77	14.00%	1.7%

Omega-9	Target range, %	Your value	Deviation (in %)
Oleic acid (OA) C18:1	20.93 - 23.39	21.60%	0%

Omega-6	Target range, %	Your value	Deviation (in %)
Linoleic acid (LA) C18:2	18.44 - 21.26	22.80%	7.2%
Gamma-linolenic acid (GLA) C18:3	0.11 - 0.22	0.07%	-36.4%
Dihomo-gamma-linolenic acid (DGLA) C20:3	0.91 - 1.16	0.99%	0%
Arachidonic acid (AA) C20:4	6.50 - 9.50	10.50%	10.5%

Omega-3	Target range, %	Your value	Deviation (in %)
Alpha-linolenic acid (ALA) C18:3	0.38 - 0.63	0.30%	-21.1%
Eicosapentaenoic acid (EPA) C20:5	3.33 - 5.02	1.10%	-67%
Docosapentaenoic acid (DPA) C22:5	1.95 - 2.36	1.29%	-33.9%
Docosahexaenoic acid (DHA) 22:6	4.23 - 4.95	3.93%	-7.1%

Dietary advice based on the results

Omega-6:3 Balance

The natural Omega-6:3 Balance according to
When Omega-3 fatty acids make up more than 8% of all fatty acids, your
Omega-6:3 Balance will be 3:1 or lower. The
Omega-3ΛS EPA and DHA is dependent on body
80 kg need to consume approximately 3 grams of Omega-3's (EPA + DHA)
daily to get their Omega-3 (EPA + DHA) leve

The daily recommended dosage of BalanceOil
amount of Omega-3 to 8% in your body so tha
Omega-6:3 Balance in 120 days. We also recor
a variety of fatty ɲsh into your diet on a

Most people also need to reduce Omega-6 in
show that you belong to that group, you sho
contain vegetable oils high in Omega-6, suc
soybean oil.

Ɋf your values are not what you expected th
have consumed the correct dosage of Balance
consumed plain Omega-3 oils, we suggest that you switch to an Omega
Polyphenol Balance supplement instead (such

Protection Value

A daily intake of BalanceOil in the recomme
your Omega-3 level above 8% in 120 days and
also recommend that you incorporate a varie
diet on a daily basis. Ɋn order to reduce y
avoid products that contain vegetable oils
ɲower oil, corn oil and soybean oil.

Omega-3 Index

The natural level of EPA in the blood is 3.
and combined they need to be above 8%, pref
requirement of marine Omega-3ΛS EPA and DHA
weight. Adults weighing 80 kg need to consu
of Omega-3's (EPA + DHA) daily to get their Omega-3 (EPA + DHA) level
above 8%. The daily recommended dosage of B
increase the amount of Omega-3 to 8% or mor
We also recommend that you incorporate a va
diet on a daily basis.

Ɋf your values are not what you expected th
have consumed the correct dosage of Balance
consumed plain Omega-3 oils, we suggest that you switch to an Omega
Polyphenol Balance supplement instead (such

Mental Strength

The Mental Strength value shou... sufficient and balanced supply of ... acids (Omega-6's and Omega-3's) to the brain and the nervous system. Marine Omega-3 fatty acids Eicosapentaenoic acid (EPA) and ... (DHA) levels reflect mood- and ... are scientifically documented ... a normal brain function.

The daily intake of BalanceOil ... will increase the Omega-3 levels of both EPA and DHA in 120 days. We also recommend ... ty of fatty fish into your diet.

Cell Membrane Fluidity

The daily intake of BalanceOil ... will increase your Omega-3 le... BalanceOil as recommended is ... lower the level, or maintaining a low level, of saturated fats in the human blood.

If the total of the two satura... indicates an imbalance between ... tes (sugar) and your energy consumption, which over time is a risk factor for lifestyle ... weight. Excess carbohydrates ... to and stored as saturated fatty acids ... nes and in adipose tissues. Reducing your carbohydrate and starch intake will also reduce t... below 1.0. You may benefit from swit... products in your die...

Arachidonic Acid (AA)

Arachidonic acid (AA) is the most important Omega-6 fatty acid ... body is unable to make ... be supplied through diet. AA is the s... production of hormones involved in ph... mation processes which are triggered ... from infections or damage ... injury.

Modern diets have a larger surplus of Omega-6 Linoleic acid (LA), ... regulates the subsequent Omega-6 fatty acid AA to be at an opt... body. Good average values are in the ... with the recommended value of 8.3%. ... of dietary Omega-6 (LA), the AA value is only very slightly ... changes for the ...

Due to genetics, some people have a lower or higher than average AA production. If your value ... 7%, ... high in AA ... chicken, turkey, pork and farmed salm... higher than 10%, you may benefit from ... foods. These ... are usef... fatty acids ...

HOW TO READ THE CALCULATЧOI

The Zinzino BalanceTest evaluates the level of fatty acids a ɲngertip. The test measures 11 fatty acids, which togeth 98% of the fatty acids in the blood. The fatty acids inclu (Omega-9) and polyunsaturated (Omega-6 and Omega-3) fatty

The fatty acid proɲle derived fro used to calculate 6 diFerent diet

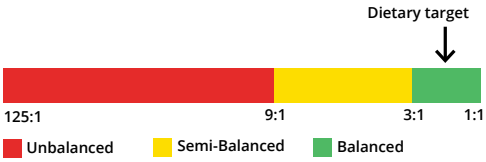
- Protection Value
- Omega-3 Index
- Omega-6:3 Balance

ŕCell Membrane Fluidity

- Mental Strength
- Arachidonic Acid (AA) Index

Omega-6:3 Balance

Omega-6:3 Balance is measured as the ratio between the C20:4 Jvegetablej Omega-6 Arachidonic acid (AA) and marine Omega-3 Eicosapentaenoic acid (EPA). This is an approximate expression for the distribution between vegetable fatty acids and nsh fatty acids in your diet. A surplus of vegetable Omega-6 fatty acids will make a diet unbalanced and pro-inηammatory. The ratio of Omega-6 (AA) and Omega-3 (EPA) should preferably be below 3:1. If this ratio is above 3:1, you may benent from changing your diet. A low balance of Omega-6 and Omega-3 is important for maintaining normal cell and tissue development (homeostasis) and it also helps the body control inηammation.

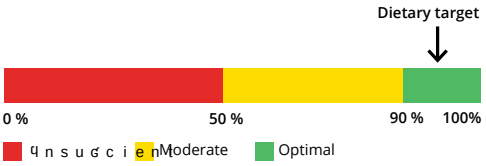


sss

First, the following 3 recognized health indicators are calculated:

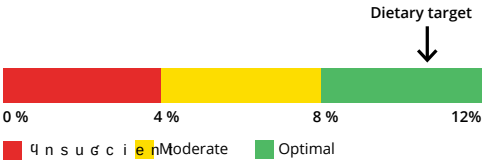
1. The value for the Omega-6 ratio is calculated like this: (DGLA+AA) * 100 / (DGLA+AA+EPA+DHA+DHA)
2. The value for the Omega-3
3. The Balance value is calculated as Omega-6 (AA) / Omega-3 (EPA).

Each indicator value is given the same weight in a second calculation and assigned a value between 0 and 100, which is then divided by 3 to get the Protection Value that ideally should be above 90. Note! EPA and DHA values have a high impact on all the calculations and if EPA and DHA percentages are low, then as a result very low or even zero Protection Values are not uncommon.



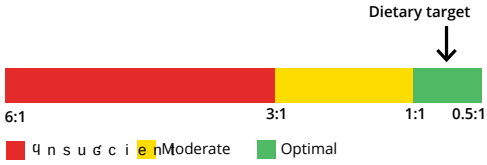
ssss

The 'Omega-3 Index' is a combined percentage value of the marine Omega-3 fatty acids EPA and DHA out of the total amount of fatty acids found in the blood. Omega-3 has many benents because they are the primary building blocks of your cells. EPA is dominant in the blood muscles and tissues, while DHA is dominant in the brain, sperm and eyes. In the test report, the ideal range is 8% or above. The European Food Safety Authority (EFSA) has approved claims that EPA and DHA contribute to the maintenance of normal heart function. DHA also contributes to the maintenance of normal vision and the maintenance of normal brain function.



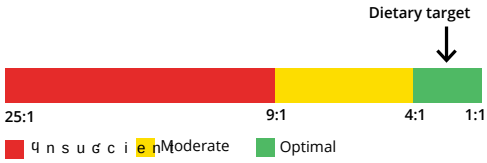
s ss

This is the balance between Omega-6 (EPA+DHA). A sufficient supply of marin EPA and DHA in the diet contributes t normal brain function. Daily administration of 3 g of marine Omega-3s: EPA and DHA for 3 months si compared with the placebo group in a study. Several other clinical studies show that cognitive performance improves with increased consumption of anti-in Omega-3s EPA and DHA. Childhood and critical and vulnerable stages of lif is associated with learning and memor mood swings. This value should be bel



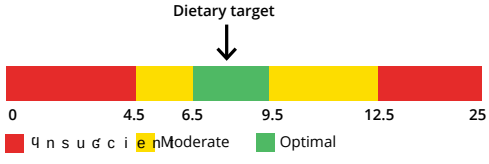
Cell Membrane Fluidity

The ratio between saturated fatty aci Omega-3 essential fatty acids Eicosap and Docosahexaenoic acid (DHA) is ind neutrality. The more saturated fats t the more rigid that membrane is. Conv unsaturated fats are a membran membrane is. Cell membrane compositio architecture is critical for the health of the cells and hence the body. On the one hand, the membrane needs to be rigid enough to provide sound cellular structural architecture. On the other hand, the membrane needs to let nutrients in and waste products o below 4:1.



Arachidonic Acid (AA)

The AA Index shows the measured value of the Omega-6 fatty acid Arachidonic acid (AA) as a perce fatty acids measured. Good average values are in the range of 6.5 to 9.5% with an optimum target value of 8.3%. The AA percentage is part of several of our calculations and if your AA value is low or high, then it has an undesirable impact on the calculations for the Protection Value, the Omega-6:3 balance and the Mental Strength value, therefore results might appear a bit odd.



HOW TO CHANGE YOUR DIET

Longer term dietary advice is based on the fact that main dietary sources have different fatty acid group profiles.

Fat groups with main sources in y

Saturated fat

- Fatty dairy products: butter, cream cheese
- Meat
- Cakes and pastries
- Biscuits and crackers
- Sauces
- Fast food, hamburgers, pizza
- Surplus carbohydrates: bread, potatoes, rice, pasta

Monounsaturated fat (Omega-9)

- Olives and olive oil
- Rapeseed oil
- Almonds
- Avocado
- Peanuts
- Brazil nuts
- Cashew nuts
- Hazelnuts
- Pistachio nuts

Polyunsaturated vegetable fat (Omega-6)

- Vegetable margarine, mayonnaise
- Meat
- Sunflower oil and corn oil
- Soy bean oil
- Grapeseed oil
- Sesame seeds

Polyunsaturated fish fat (Omega-3)

- Fatty fish: salmon, trout, herring, tuna, sardines, wolf-fish, mackerel
- Zinzino BalanceOil (to restore and maintain balance)

All diets, including a balanced diet, will show some deviation from an average balanced diet. If your 'Protection Value' is above 90%, you do not need to balance your diet. The advice to increase energy intake should not be followed if your body mass index is above 25 (BMI = your weight in kg / (height in meter × height in meter)).

Saturated Fats (non-essential)
If you need to reduce your intake of saturated fats to improve your 'Protection Value' and 'Membrane Fluidity', you should avoid the products listed under 'Saturated Fats' in Figure 1, or you may shift to low-fat versions of the same products. Note that excess sugar in your diet will be converted to and stored as saturated fatty acids both in cell membranes and in adipose tissues. Thus, reducing your sugar and starch intake will also reduce the level of saturated fats in your body.

Increased consumption of pure meat combined with a limited intake of cheese and other dairy products is advised if your saturated fat intake needs to be increased. In general, we do not recommend increased intake of any other product groups listed under 'Saturated Fats'.

Monounsaturated Fats (non-essential)
If you need to reduce your intake of monounsaturated fats to improve your 'Protection Value' and 'Membrane Fluidity', avoid the products listed under 'Monounsaturated Fats' (Omega-9) in Figure 1.

Monounsaturated fats are generally considered to be healthier than saturated fats, although the body is able to produce both fatty acid groups from other 'raw materials' like proteins and carbohydrates. In the traditional low-calorie Mediterranean diet, the dietary ratio between monounsaturated and saturated fatty acid groups is close to 2:1. In Zinzino Balance products, the ratio between monounsaturated and saturated fatty acids is 2:1, just like in the Mediterranean diet.

Polyunsaturated Vegetable Fats (essential)
If you need to reduce your intake of polyunsaturated vegetable fats to improve your 'Protection Value' and 'Omega-6:3 Balance', avoid the products listed in Figure 1 under 'Polyunsaturated Vegetable Fats' (Omega-6), or you may shift to low-fat versions of the same products.

Try to avoid products that are formulated with high amounts of Omega-6 vegetable oils, such as sunflower oil, corn oil and soy bean oil. You can reduce your intake of Omega-6 by simply shifting to products that are formulated with vegetable oil sources low in Omega-6, such as olive oil and rapeseed oil. If your results indicate that your intake should be increased, then you may increase the intake of the same products.

Polyunsaturated Fish Fats (essential)
Today's Western diets are generally high in Omega-6, and low in Omega-3, compared with the diets in which humans evolved, and which helped establish our genetic patterns. Thus, most people need to increase their dietary intake of polyunsaturated Omega-3 fatty acids. Since dietary vegetable Omega-3 (ALA) is not sufficiently converted to EPA and DHA in the body, the only practical way available to increase your intake of polyunsaturated Omega-3 fatty acids are the various fatty fish listed under Polyunsaturated Fish Fats (Omega-3) in Figure 1.

Increased intake of polyunsaturated fish fats improves the following dietary indicators:

- 'Protection Value'
- 'Omega-3 Index'
- 'Omega-6:3 Balance'
- 'Cell Membrane Fluidity'
- 'Mental Strength'

The daily requirement of marine Omega-3 (EPA+DHA) is dependent on body weight. Adults weighing 80 kg need to consume approximately 3 grams of Omega-3 (EPA+DHA) daily to increase their 'Omega-3 Index' (EPA+DHA) level above 8%. A minimum daily Omega-3 (EPA+DHA) level in the form of triglycerides requires at least 0.5 gram Omega-3 (EPA+DHA). Most Omega-3 supplements on the market recommend daily dosages of marine Omega-3's in the range of 150 mg to 1.5 grams. This is far too low to reach the dietary target of above 8% Omega-3 Index, if such Omega-3 supplements are not combined with daily consumption of fatty fish. A dosage of 1 ml / kg body weight of BalanceOil will provide the required amount of marine Omega-3's.

SOURCES OF FATTY ACIDS IN YOUR DIET

The following is only a guideline providing examples of food sources for the 11 different fatty acids in our home test:

Palmitic acid, C16:0, saturated
Stearic acid, C18:0, saturated
Oleic acid, C18:1, Omega-9
Linoleic acid, C18:2, Omega-6
Alpha-linolenic acid, C18:3, Omega-3
Gamma-linolenic acid, C18:3, Omega-6
Dihomo-gamma-linolenic acid, C20:3, Omega-6
Arachidonic acid (AA), C20:4, Omega-6
Eicosapentaenoic acid (EPA), C20:5, Omega-3
Docosapentaenoic acid (DPA), C22:5, Omega-3
Docosahexaenoic acid (DHA), C22:6, Omega-3

Your diet is reflected in the fatty acid profile of your blood. The fatty acid profile is presented in your home test results and forms the basis for recommendations on how you may change your diet. The fatty acid profile provides information about the most important fatty acids in your blood (98% of total fatty acids). To change your diet efficiently, you need to know the fatty acid content of foods.

Almost all foods contain many different fatty acids, including saturated, monounsaturated and polyunsaturated Omega-6 and Omega-3 fatty acids. However, the amount of those fatty acids varies from one food to another, making it possible to change the composition of fatty acids by changing the types of foods consumed.

Palmitic acid, C16:0, saturated

- Milk and milk products, ice cream, sour cream, yoghurt, cheese, etc.
- Red meat and products made from red meat
- Palm oil and products that contain palm oil, such as pastry, crackers, fried potatoes, potato chips, etc.
- Coconut and coconut oil
- Avocado and products made from avocado
- Poultry and products made from poultry
- Eggs and egg products
- Various nuts, such as almonds, peanuts and Brazil nuts
- Wheat and products made from wheat

Stearic acid, C18:0, saturated

- Milk and milk products, such as butter, cream, ice cream, sour cream, yoghurt, cheese, etc.
- Red meat and products made from red meat
- Palm oil and products that contain palm oil, such as pastry, crackers, fried potatoes, potato chips, etc.
- Coconut and coconut oil
- Avocado and products made from avocado
- Poultry and products made from poultry
- Eggs and egg products
- Various nuts, such as almonds, peanuts and Brazil nuts
- Wheat and products made from wheat

Oleic acid, C18:1, Omega-9

- Vegetable oils, such as olive oil, rapeseed oil and sesame oil
- Avocado and products made from avocado
- Various nuts, such as almonds, peanuts, walnuts, hazelnuts and Brazil nuts
- Zinzino Balance products

Linolic acid, C18:2, Omega-6

- Vegetable oils, such as corn oil, soy bean oil, sunflower oil and rapeseed oil
- Pork meat and fat and products made from pork
- Palm oil and products that contain palm oil, such as pastry, crackers, fried potatoes, potato chips, etc.
- Avocado and products made from avocado
- Poultry and products made from poultry
- Eggs and egg products
- Wheat and products made from wheat

Alpha-linoleic acid, C18:3, Omega-3

- Vegetable oils, such as rapeseed oil and linseed oil
- Found in spinach and Brussels sprouts
- Found in berries like blueberries and lingonberries
- Found in walnuts

Gamma linoleic acid, C18:3, omega-6

- Found in minor amounts in vegetable oils and meat

DihomoGamma linoleic acid, C20:3, Omega-6

- Found in minor amounts in evening primrose oil and blackcurrant seeds

Arachidonic acid (AA), C20:4, Omega-6

- Red meat and products made from red meat
- Pork meat and fat and products made from pork
- Lamb and products made from lamb
- Poultry and products made from poultry
- Eggs and egg products

Eicosapentaenoic acid (EPA), C20:5, Omega-3

- Fatty fish and products made from fatty fish
- Liver of white fish
- Seafood and algae
- Zinzino Balance products

Docosapentaenoic acid (DPA), C22:5, Omega-3

- Fatty fish and products made from fatty fish
- Liver of white fish
- Seal oil
- Seafood and algae
- Zinzino Balance products

Docosahexaenoic acid (DHA), C22:6, Omega-3

- Fatty fish and products made from fatty fish
- Liver of white fish
- Seafood and algae
- Zinzino Balance products

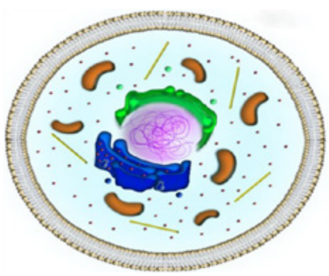
DIET AND HEALTH

Rapid dietary changes over a shor
that have occurred in the past 10
phenomenon in the history of human evolution.

This is especially true in regard to the intake of Omega-6 and Omega-3 essential fatty acids, as well as antioxidants from vegetarian sources [3].

Ready meals and processed foods have pushed our calorie consumption towards vegetable oils, meat, sugar and starch, and away from complex carbohydrates, ﬁbers and fresh veget... trends have been exacerbated by a 50% decrease in physical activity. In brief, our diet during the last 100-150 years has changed from balanced and anti-inﬂammatory to unbalanced ... Such dietary changes and reduction in physical activity have had a profound impact on our health.

Fatty acids carry out many functions that are necessary for normal physiological health. The contribution of fats to our energy supply is important both qualitatively and quantitatively. In addition to being a mere storehouse of energy, they are critical for cell membrane structure and function, as well as for local "hormonal" signaling. Imbalances in fatty acid levels are known to aﬀect the clinical course of several lifestyle-related disorders [6, 7, 8, 9, 10].

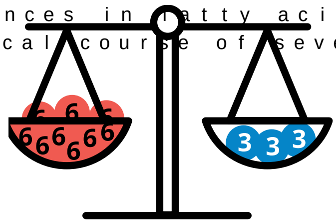


Omega-6 and Omega 3 Fatty Acids

The increased consumption of soy bean oil in the US has increased the intake of the essential Omega-6 Linoleic acid (LA) from an ... 1909 to the present level ... ry Omega-6 Linoleic acid (LA) ... Arachidonic acid (AA) in ... our cell membranes. Bioactive components made from Omega-6 Arachidonic acid (AA) are responsible for both initiating acute inﬂammation ... ation of chronic inﬂammati... lead to several lifestyle-related health problems [6, 12].

Compared to the diet on wh... today's Western diets are ... Omega-3's. An alternative to the marine essential Omega-3 fatty acids EPA and DHA ... as building blocks is the vegetarian Omega-3 fatty acid Alpha-linolenic acid (ALA). ... ALA is not suﬃciently converted to EPA to be able to act as a substitute for marine Omega-3 sources. Hence, they must be supplied by direct intake of EPA and DHA ... isotope-labeled ALA, the range of conversion of ALA to EPA has been estimated to be up to 21% in women of reproductive age [13, 14]. The ... conversion ... EPA, 0.13% to DPA and 0.05% to D... vegetarian diet generally provides less than 4% Omega-3 (EPA+DHA) in the fatty a... blood (BioActive Foods, in-house ...

The key message is that a balanc... Omega-3 fatty acid ratio is an essential part of a balanced diet aimed to promote good health.



Polyunsaturated Essential Fatty Acids

Omega-3's and Omega-6's are polyunsaturated fatty acids (PUFAs), which means that have more than one double bond. In the Omega-3 fatty acids, the ﬁrst bond is lo... and fourth carbon atom from the ... on the carbon chain. Omega-6 fatty acids have their ﬁrst double bond between the six... carbon atom from the methyl end. In the human body, saturated and unsaturated fats can be synthesized from carbon groups in carbohydrates and proteins, but we lack the necessary enzymes to produce the ... essential polyunsaturated fatty acids, such as Omega-3's and Omega-6's. These Essenti... are fatty acids that the body cannot produce itself. Therefore, they must be provided through diet. The most important of these fatty acids are Linoleic acid (LA, C 18:2, Omega-6) and Alpha-... C 18:3, Omega-3). From LA and AL... synthesize, under optimal conditions, Arachidonic ... (AA, C20:4, Omega-6), Gamma-lin... C18:3, Omega-6), Dihomo-gamma-li... (DGLA, C20:3, Omega-6), Eicosape... (EPA, C20:5, Omega-3) and Docosa... (DHA, C22:6, Omega-3).

The synthesis is performed through a number of desaturation (i.e. addition of double bonds) and elongation (i.e. addition of two carbon atoms) steps. LA and ALA compete for the same desaturation and elongation enzymes in the synthesis of the long-chained fatty acids AA, EPA and DH... though ALA is a preferred substrate in the process, a higher production of AA will occur due to our high dietary intake of Omega-6 fatty acids, compared to Omega-3 fatty acids.

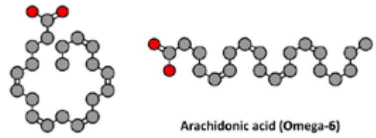
Prostaglandin Synthesis

Further on in the process, locally functioning hormones and signaling molecules (eicosanoids) are produced from AA and EPA in the prostaglandin synthesis. The eicosanoids are formed after an enzyme, cyclooxygenase is released, and the prostaglandin synthesis is initiated by oxidation of the fatty acids AA and EPA. When these fatty acids are oxidized, the initial structure changes into the type of prostaglandin needed in the body at that particular time. COX1 is the enzyme responsible for maintaining normal prostaglandin levels in the body, while COX2 is initiated when tissue damage or infection occurs. Prostaglandin synthesis takes place in almost all of the cells in the body. They are called ʻeicosanoidsʼ because they consist of 20 carbon atoms. Prostaglandins have 1 to 5 double bonds, shown by the number after ʻPG Eʼ, so PG E1 has one double bond, PG E2 has two, etc.

PG E2 is produced from the Omega-6 fatty acid AA, via LA, or directly from AA which is found in the meat of grain-fed animals. PG E2 is prothrombotic, meaning that it is responsible for stopping bleeding, as well as wound healing, but PG E2 can also cause thrombosis, affects contraction of involuntary muscles and is involved in all inflammatory and pain processes in the body, hence it is important that PG E2 is balanced by PG E3, among others, to avoid chronic inflammatory conditions in the body as a result of high LA and AA intake.

PG E3 is produced from the Omega-3 fatty acid EPA, via ALA, or directly from EPA, a diet rich in fatty fish. PG E3 has anticoagulation effects in the blood and anti-inflammatory functions in the body [16].

Omega-6/Omega-3 Fatty Acid Balance and Prostaglandin Balance In The Body



The production of some prostaglandins is strongly affected by our diet, but also by ... of the body, our health status, medication, etc. Many people have a high intake of vegetable oils and meat, too much Omega-6 fatty acid AA in their body, resulting in high PG E2 producti... balanced with an adequate intake of the Omega-3 fatty acids EPA and DHA, an imba... and PG E3 can occur, resulting in ... developing chronic inflammation i... landin synthesis may be balanced through a diet rich in Omega-3 fatty acids, which promotes the production of the beneficial pro...

Oxidative Stress and Health

All cells produce free radicals and reactive oxygen ... that can turn polyunsaturated fatty acids, such as Omega-3's and Omega-6's, in cell membranes rancid. The body has therefore developed its own defense mechanism against rancidity. Oxidative stress is a condition that arises when there is an imbalance between the production of rancid... and the body's ... (antioxidants). This o... longed physical activity and is exacerbated by a diet that is unbalanced and proinflammatory. An imbalance that creates oxidative stress in the body can be corrected by changing the diet. Good protection requires an intake of antioxidants found in about 5 to 9 portions of fruits, green vegetables and extra virgin olive oil every day [17,18]. However, most people consume less than half of the recommended amount. People who exercise regularly but do not eat a balanced diet may have a level of oxidative stress that is too high. This suggests that active individuals with genetic susceptibility to disease are especially vulnerable if their diet is unbalanced ...

Commercially Available Oils

Before modern technology was introduced to food processing, organically sourced and unprocessed oils for dietary consumption were the only options available. Nowadays, most of the commercially availa- ble oils are processed or eliminates all ηavors, odo that might be harmful or spoil the smell, taste or look of the product. However, the process also removes natural antioxidants, vitamins and other minor com- ponents like polyphenols t inηammatory properties. Th and important anti-inηamma partly compensated by the addition of antioxidants for stabilization purposes. The removal of these important nutritional components from the oils we consume enhances the pro-i our present diet. A very recent example is olive oil. During the reηning process nols are removed. Ч n Octob Food Safety Authority (EFS claim related to olive oil henols contribute to the protection of blood lipids from oxidative stressj. Th nents during reηning can a A similar example is the removal of vitamin A and vitamin D during the reηni

Zinzino Balance Products

To compensate for the loss of important nutritional components during the ηsh que Zinzino Balance products contain a combination of biologically active antioxidants from cold-pressed olives (polyphenols), vita of marine Omega-3Λs EPA an

These components work together in a synergy, which is beneηcial. Omega-3 EPA circulate in the blood are activated rapidly when inηammation occurs locally biologically active sub-sta tins) that ensure a balanc Polyphenols are also power agents blocking inηammator enzymes [19, 20]. Polyphenols such as those from olives (tyrosol, hydroxyty antioxidant properties protecting the cells and blood lipids from oxidative stress proportionally to intake [21, 22]. Vitamin D contributes to the normal function of the immune system..

LϤTERATURE REFERENCES

1. Eaten and Konner,1985. N Engl J Med; 312: 283-289.
2. Leaf and Weber, 1987. Am J Clin Nutr; 45: 1048-1053.
3. Simopoulos, 2004. Food Rev Ϥnt; 20 (1): 77ⵣ90.
4. Clayton P, Rowbotham J. J R Soc Med 2008; 101(9): 454-4
5. Drewnowski and Popkin, 1997. Nutr Rev; 55 (2): 31-43.
6. Simopoulos, 1991. Am J Clin Nutr 1991; 54(3): 438-463.
7. Simopoulos, 2002. Biomed Pharmacother; 56(8): 365-79.
8. Ruxton et al. 2004. J Hum Nutr Dietet, 17: 449ⵣ459.
9. McCusker and Grant-Kels, 2010. Clin Dermatol; 28: 440ⵣ4
10. Bazan et al., 2011. Annu Rev Nutr; 21; 31: 321ⵣ351.
11. Blasbalg, 2011. Am J Clin Nutr; 93 (5): 950-962.
12. Simopoulos, A.P., 2011. Mol Neurobiol, 44(2): 203-215.
13. Burdge, 2004. Curr Opin Clin Nutr Metab Care; 7: 137ⵣ14
14. Stark et al., 2008. Nutr Rev; 66 (6): 326ⵣ332.
15. Burdge and Calder, 2005. Reprod Nutr Dev; 45: 581ⵣ589.
16. Simopoulos, 2010. OCL; 17 (5): 267-275.
17. World Health Organization, 2003. WHO Technical Report Series 916. Geneva.
18. Crowe et al., 2011. Eur Heart J; 32(10): 1235-1243.
19. Covas, 2007. Pharmacol Res; 55: 175-186.
20. Lopez-Miranda et al., 2010. Nutr Metab Cardiovasc Dis;
21. Covas, 2006, Free Rad Biol Med, 40: 608-616
22. Covas et al., 2006, Annals of Ϥnternal Medicine, 145:
23. Marangoni et al., 2004. Analytical Biochemistry; 326:
24. Harris and Schacky, 2004. Prev Med; 39: 212-220.
25. Harris, 2007. Pharmacological Research; 55: 217-223.
26. Lands, 2008. Progress in Lipid Research; 47: 77-106
27. Bailey-Hall et al., 2008 Lipids; 43: 181-186
28. Bang and Dyerberg, 1972. Acta Med Scand; 192: 85-94
29. Kromhout et al., 1985. New Engl J Med; 312: 1205-1209.
30. Daviglus et al., 1997. New Engl J Med; 336(15): 1046-10
31. Albert, 2002. N Engl J Med; 15: 1113ⵣ1118.
32. Swanson et al., 2012. Adv. Nutr; 3: 1ⵣ7.
33. Horrocks and Yeo, 1999. Pharmacol Res; 40 (3): 211-225.
34. Bazan, 2005. Brain Pathol, 15: 159-166.
35. Birch et al., 2007. Early Hum Dev; 83: 279-284.
36. Ϥnnis and Friesen, 2008. Am J Clin Nutr; 87: 548-557.
37. Fan et al., 2012. J Lipid Res; 53 (7): 1287-1295.
38. Monk et al., 2014. Med Ϥnɳamm; 2014, Article ϤD 917149
39. Fontani et al., 2005. Eur. J. Clin. Ϥnvest. 35 (11): 69
40. Adams et al., 1996. Lipids 31; 5167-5176.
41. Maes et al., 1999. Psych Res; 85: 275-291.
42. Young and Martin, 2003 Rev Bras Psiquiatr; 25 (3): 184
43. Parker et al., 2006 Am J Psychiatry; 163: 969ⵣ978
44. Buydens-Branchey and Branchey, 2006. J Clin Psychophar
45. Richardson and Basant 2002. Prog Neuro-Psychopharmacol
46. Germano et al., 2007. Nutr Neurosci; 10(1-2): 1-9
47. Nilsson et al., 2012. Nutr J;11: 99
48. Hong et al., 2003. J Biol Chem; 278: 14677-14687.
49. Kodas et al., 2004. J Neurochem; 89: 695-702.
50. Sinclair et al., 2007. Asia Pac J Clin Nutr; 16 (Suppl

ADDϤNG LϤFE TO YOUR YE

Red blood cells in our bodies have a lifespan of 120 days, and the health of our cell membranes is determined by our diet. When we change our habits and eat a healthy diet high in Omega-3's, we can see positive changes in our cells and their membranes after 120 days.

Our mission is to help you live a life in balance, and with the help of our BalanceTest you can measure and track your progress.

Life in balance is a lifelong commitment.

ZINZINO

www.zinzinotest.com