



Your DNA.
Your Diet.

MetaCheck

Gene Diet

Analysis results

A decorative graphic in the bottom right corner consisting of several overlapping circles. One circle is filled with a white diagonal hatched pattern, while the others are solid shades of blue.

COGAP



Thank you very much!

Thank you for choosing our MetaCheck! A sustainable and healthy diet is the basis for health, performance and quality of life. By taking this test, you have taken the first important step towards this. Whether it's weight loss or maintaining a healthy diet, this test will provide you with information about yourself that can help you achieve your desired goal. Before you start implementing your results, please read our notice below.

We wish you much success!

Notice:

Your MetaCheck is a computer-assisted gene metabolism analysis based exclusively on your genetic sample. Other findings already known to you are not included. For the evaluation, only your metabolic genes are analyzed - with the exception of the genes mentioned below. The analyzed genes show different constellations, which are assigned to the individual Meta-types. They do not allow any conclusions to be drawn about relationships. Nor do they allow any conclusions to be drawn about disease risks. The sample material is destroyed after analysis!

Since an increased intake of foods containing gluten and/or lactose may occur in the course of the dietary change, the genes that may be responsible for gluten/lactose intolerance are also analyzed. However, a genetic predisposition unfavorable to gluten/lactose intolerance does not allow the conclusion that such gluten/lactose intolerance does not exist or cannot occur, and a genetic predisposition favorable to gluten/lactose intolerance does not allow the conclusion that gluten/lactose intolerance actually exists or will occur. If the result of your genetic analysis shows a disposition in favor of gluten/lactose intolerance, this was taken into account purely as a precautionary measure in the context of risk minimization in the dietary recommendation with the avoidance or reduction of gluten- and/or lactose-containing food(s).

Also, the gene analysis in this regard and the information provided by CoGAP GmbH for this purpose do not replace medical advice, treatment and/or diagnosis, but only serve to minimize risks when recommending nutrition within the framework of the MetaCheck concept. Please consult a specially trained physician for medical advice, diagnosis and/or treatment, especially nutrition-related health problems, and also for the inclusion of previous findings. When drawing up the respective individual diet plan, attention must be paid to the diet target, taking into account person-specific characteristics (e.g. gender, age, weight, state of health, etc.).



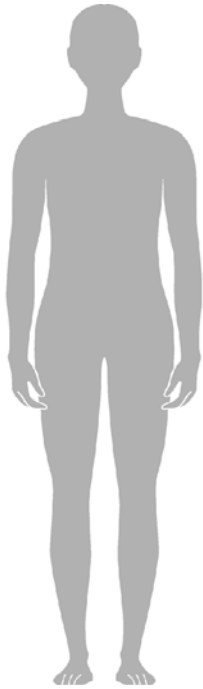
Table of Contents

That's me!	2
Introduction	4
Results	8
Optimal macronutrient distribution	9
Weight loss factors	13
Micronutrients - vitamins, antioxidants and omega 3 fatty acids	15
Let's start! - 4 Week Plan	21
Meta-Type specific food-list	25
Your sport variant	35
Further individual recommendations	36
Regeneration	37
Your sport type and EMS training	38
Further suitable course offerings	39
What's next?	41



That's me!

MetaCheck Summary



Meta-type: **Beta**

Sport-type: **E**

Weight: **95 kg**

Size: **151 cm**

Age: **57**

Gender: **female**

BMI: **41.7**

Macronutrients

Carbohydrates
30 %

Proteins
40 %

Fats
30 %



Your average daily total energy requirement with light physical activities: **1881 kcal**

The total energy requirement always consists of your basal and active metabolic rate! The optimal amount of calories for you depends on your calorie consumption at rest (basic metabolic rate) and physical activity (active metabolic rate). [Your CoGAP® consultant will be happy to help you determine your exact calorie requirements.](#)

Your different tendencies:

Yo-Yo effect
higher tendency

Saturation
a weaker satiety

Loss of muscle mass during a diet
higher tendency

Hunger
no stronger feeling

Visceral adipose tissue
no higher tendency

Micronutrient need

(normal - increased)



increased



increased



increased



increased



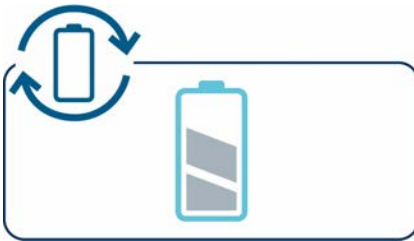
increased



normal

Regenerative capacity

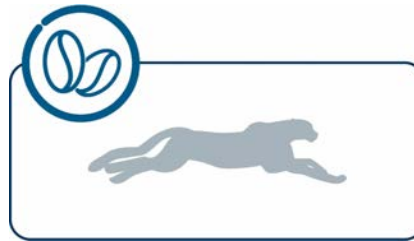
(weak - medium - strong)



medium

Caffeine breakdown

(fast - slow)



fast

Sweet cravings

(normal - increased)



increased

Alcohol breakdown

(normal - limited)



normal

Predisposition to gluten intolerance

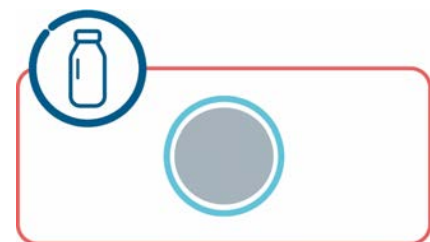
(not present - present)



not present

Predisposition to lactose intolerance

(not present - present)



present

Introduction

The secret lies in your genes

Are you struggling with being overweight and the associated inconveniences in everyday life? Then you are not alone, because obesity has become one of the greatest challenges facing humankind in the world today. Although many people want to lose weight quickly and healthily, it is very difficult for them to lose weight successfully and, above all, in a sustainable way. Given the overload of dieting solutions, it is not surprising that many people cannot find the right diet for themselves. Should I go low carb? Or reduced fat? How do I know which diet is right for me and, above all, what is good for me? The answer to these questions is as simple as it is ingenious. It is in our genes, and therefore in ourselves!

In addition to a positive energy balance, genetics plays the most important role in the development of obesity. Family studies, including studies of twins and adopted children, have shown that obesity is mainly due to hereditary factors. In other words: **every body functions biologically differently, and there is no patent recipe for losing weight!**



The role of evolution

In the course of evolution, the human body had to adapt to new living conditions time and time again. As hunters and collectors, our early food consisted mainly of protein- and fat-rich foods. For hunting, humans had to be particularly fast and skilful. Our metabolism at the genetic level adapted to this way of life.

When people began farming and livestock breeding a few thousand years ago, their dietary habits and physical requirements changed. Endurance was now important for the agricultural activity, and our diet consisted increasingly of carbohydrates derived from the crops we grew.

Since the change in our respective ways of life was not carried out by all humans at the same time (even today there are still isolated nomads), the adaptation of genes did not take place at the same speed. As different populations mixed with each other (e. g. within the framework of migration), different genetic metabolism types developed. These are the so-called meta-types, as well as the sport variants.

Test procedure of the MetaCheck

Your MetaCheck helps you identify your personal meta-type and allows you to adapt your nutritional and exercise behavior to your genes. In addition to the factors relevant to weight management, we have analyzed 13 other important elements to help you optimize your diet. We looked at whether you tend to have vitamin deficiencies, whether it is advisable to avoid foods containing lactose and gluten, and how your body reacts to alcohol. Your genes also provide the answer to how you design your exercise plan to burn more calories and build more muscle mass. For this purpose, the genetic material (DNA) of your cheek swab will be isolated and purified in the laboratory. Your DNA will then be examined in the laboratory using state-of-the-art sequencing technologies. CoGAP uses a scientific study database which has been created especially for this purpose. It is constantly updated to evaluate the information obtained from this data and analyze it with regard to your meta-type. Since your entire genome (complete DNA) does not have an influence on your metabolism, CoGAP only examines the genes (DNA sections) that are relevant for the determination of your meta-type. These genes include those:



- which are involved in the weight control system
- whose effect on the body can be positively influenced by dietary or behavioural changes
- which are expressed differently in different people

Since the genes investigated have many different constellations that are attributed to individual meta-types, the latter do not allow conclusions to be drawn about family relationships. Similarly, genes that allow disease-related statements were excluded from the examination.

Quality assurance

The genetic analysis of the MetaCheck samples is carried out by the DNA analytical laboratory of humatrix AG in Pfungstadt, Germany. Since its inception in 2001, humatrix has specialized in human DNA research and has set qualitative standards in the field of private genetic parentage testing. Meanwhile, the company's focus is on personalized medicine. Here, humatrix offers nationwide test systems for the prevention of inefficiencies and side effects in drug therapies in cooperation with physicians and pharmacists.

For humatrix, the highest priority is the quality of the analysis, the certainty of results and the protection of data privacy. The company operates a quality management system according to DIN EN ISO-IEC 17025. The humatrix AG laboratory is accredited for genetic parentage testing (DAkKS D-PL-17498 01-00) and undergoes biannual external quality monitoring by independent institutions. Continuous certifications by the GEDNAP and DGAB (forensics) as well as the INSTAND e.V. (diagnostics) show that humatrix also lives up to its high-quality promises.



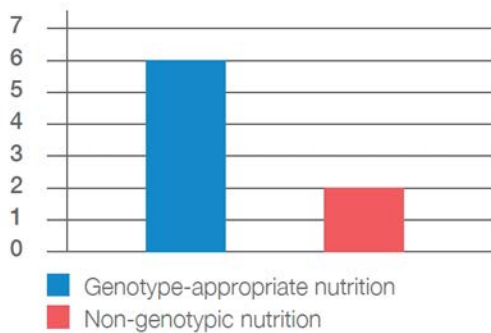


The MetaCheck has proven itself!

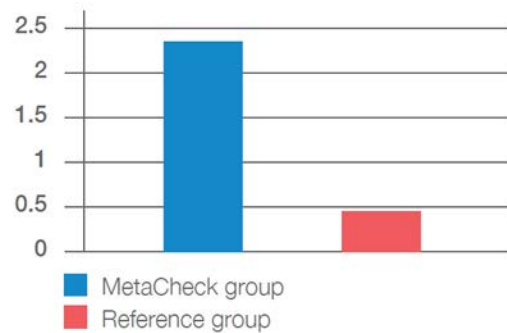
Retrospective studies from the USA show that a gene-based diet that matches the genetic characteristics of the person seeking advice can achieve better results in weight loss than a diet that ignores these physiological properties 1. In order to test the effectiveness of the MetaCheck, a comparative study was carried out at the German Sport University Cologne. A group of subjects adapted their diet and athletic activities to the MetaCheck. The comparative group followed traditional recommendations on weight loss. After 6 – 9 months, the MetaCheck group was significantly more successful than the comparative group. The study participants who were allocated to the MetaCheck group were able to reduce their body mass index by an average of 2.33 points, while the comparative group of subjects showed an improvement of only about 0.43 points 2.

These and other studies have shown that a diet adapted to specific genes is much more successful and sustainable than an arbitrarily selected diet!

[1] Weight reduction (kg) in 12 months



[2] BMI reduction in 6 – 9 months



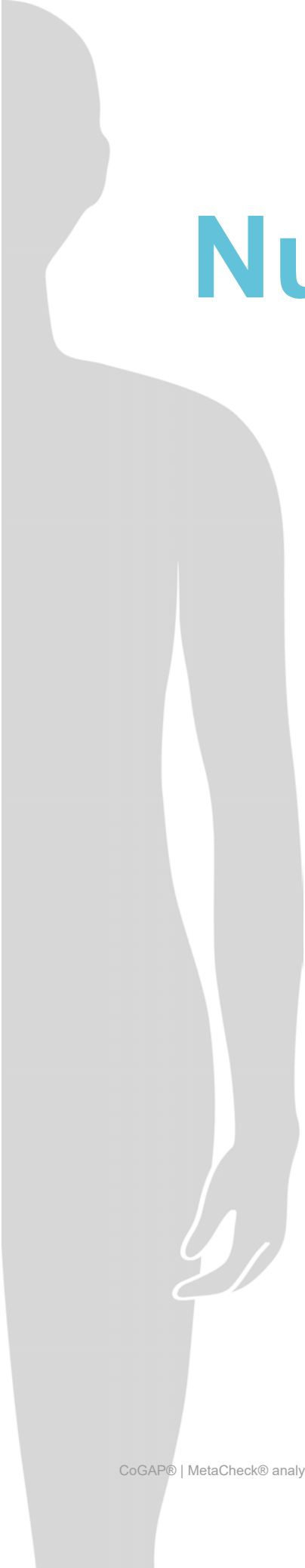


Nutritional part

Lose weight effectively and sustainably!

α β γ δ

β



Results



A brief summary of your results

Energy Source	Effect	-	Magnitude of effect	+
Carbohydrates	negative		<div style="width: 20%; background-color: red;"></div>	
Proteins	positive			<div style="width: 25%; background-color: blue;"></div>
Fats	positive			<div style="width: 10%; background-color: blue;"></div>

Factor	Effect	Speed	Endurance
Exercise	Endurance		<div style="width: 30%; background-color: blue;"></div>

You have the **Meta-type Beta** and the **Sport-type E**.



Beta

The meta-type Beta is characterised by the fact that it processes both protein-rich and fatty foods well and therefore converts them less strongly into body fat. In the context of a diet for rapid weight loss, the proportion of high-carbohydrate foods should be reduced, as they are less well metabolized and more strongly stored in the form of body fat.

The optimal diet plan for your meta-type can be found on page 21.



Endurance

Your sport type E means that you will have a more effective and therefore higher calorie consumption in all endurance-based sports (such as jogging, Nordic walking, swimming and rowing) than in high-speed sports.

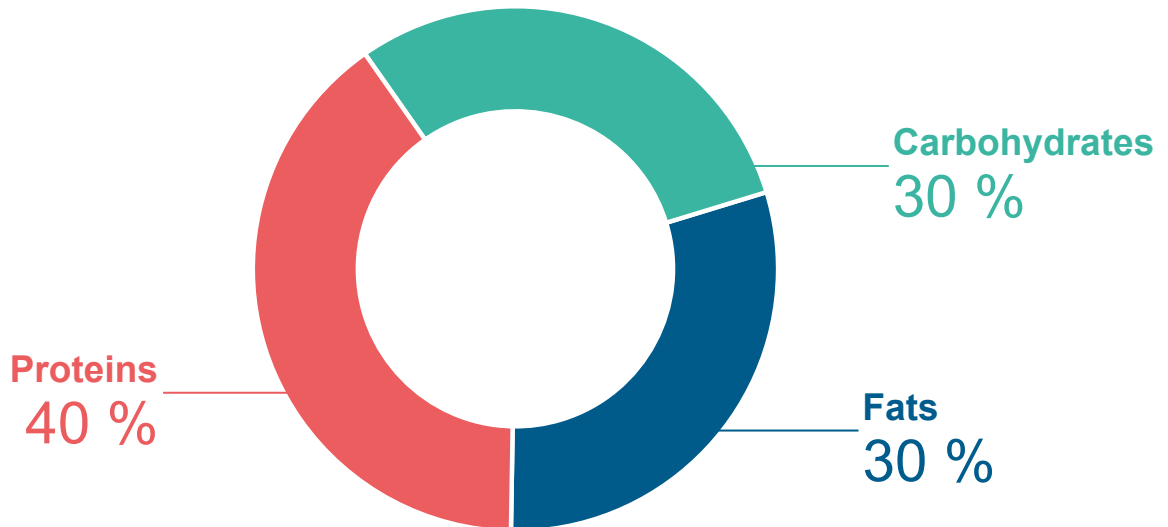
Detailed information about your sport type can be found on page 33.



Optimal macronutrient distribution

Phase 1: The first 4 weeks

The following figure shows your macronutrient distribution for the first 4 weeks.



At the beginning of a meta-type dietary change for weight loss, you can use these values to adjust the distribution of energy requirements in the form of macronutrients. We have put together a nutrition plan for you on page 21 so that you can start right away.

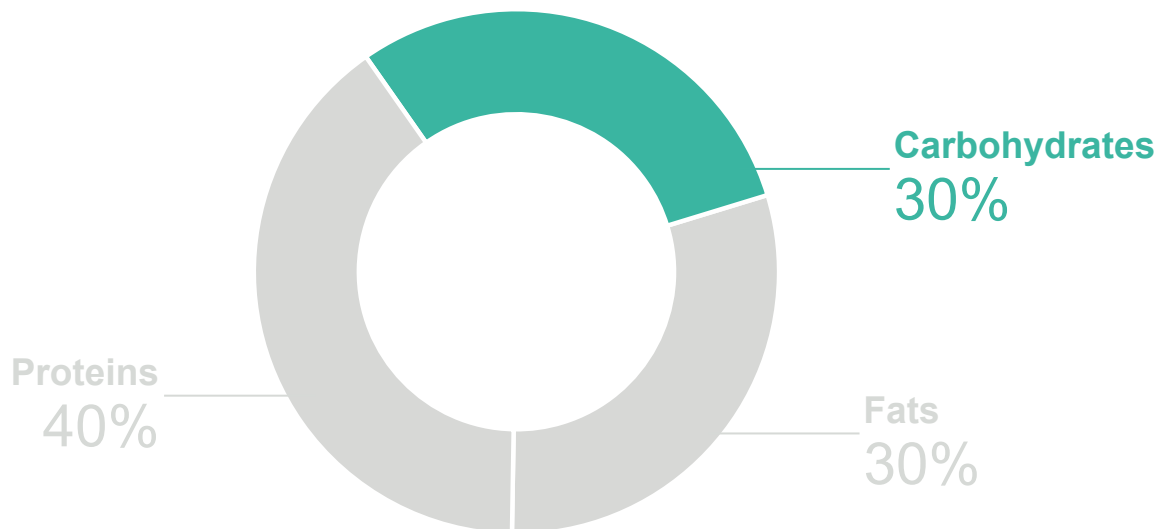


Carbohydrates

As a meta-type Beta, you metabolize carbohydrate-containing foods less efficiently compared to the average population. This means that these foods are stored more quickly in the form of fatty tissue in your body. Therefore, it makes sense for you to reduce the amount of carbohydrates (potatoes, pasta, rice, sugar, white flour) in your diet.

Note, however, that in order to lose weight you should not only adjust the proportion of carbohydrates in your diet, but also the amount of carbohydrates. However, a complete renunciation of carbohydrates is not recommended in any case, as this can lead to the aforementioned yo-yo effect in addition to hunger attacks due to the dynamics of the metabolism.

Since you metabolize carbohydrates less efficiently, an average reduction of the carbohydrate intake below the recommended level is advantageous. For this reason, we recommend that you consume energy from carbohydrate-containing food as follows:



What are carbohydrates?

Apart from proteins and fats, carbohydrates – also known as saccharides – are an essential component of our diet. They are found in foods such as potatoes, pasta, and bread and they provide the human body with important energy.

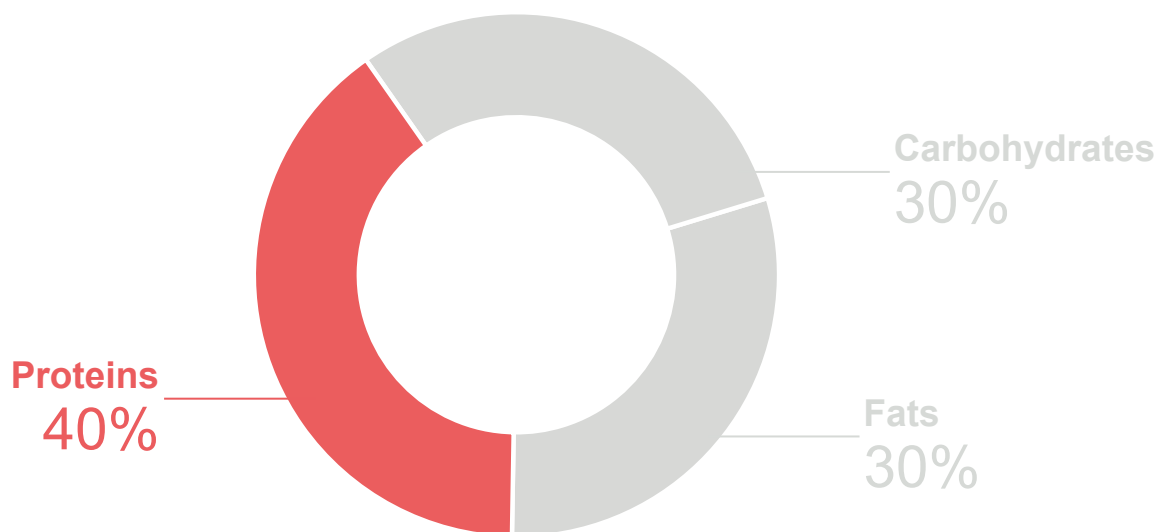
In contrast to fats, they are used quickly and can thus supply the body with energy in the shortest possible time. Carbohydrates are subdivided into simple and complex carbohydrates. Simple carbohydrates (e. g. in confectionery) provide energy quickly but at short notice, whereas complex carbohydrates (e. g. whole grain products and other starchy foods) release energy more slowly over a longer period of time.

Proteins

The metabolism of protein-rich foods works very well for you as a meta-type Beta, i. e. they are converted into body fat more slowly than carbohydrate-rich foods. The optimal diet for your meta-type should tend to consist of protein-rich or protein-containing foods (e. g. eggs, legumes, fish, meat, tofu and dairy products).

Please note that if you wish to lose weight, you must first reduce the total amount of food before you increase the proportion of proteins. In any case, avoid so-called extreme diets, e. g. consuming only protein-rich foods. An almost exclusive diet with proteins increases the risk of kidney damage, headaches, nausea, dehydration, constipation and bad breath.

Because you metabolize proteins very well, a medium increase in protein intake is recommended. Therefore, we recommend that you take energy from protein-containing food as follows:



What are proteins?

Proteins are considered to be the most valuable macronutrients in the diet. They consist of amino acids and serve as basic building blocks for all cells in the body. Not only muscle tissue, but also organs, hormones, and messenger substances consist of proteins.

Adequate daily protein intake should be ensured, otherwise the body will break down important muscle tissue. On the other hand, too much protein can lead to health problems. The exact amount of protein required for the human body has remained a mystery for many years. For decades, nutritionists recommended eating only a small amount of protein in food. Today, however, a per day amount of about 0.8 g protein per kilogram of body weight is recommended. On average, however, protein intake in Germany is already above the recommendation, at more than 1 g per kilogram of body weight per day.

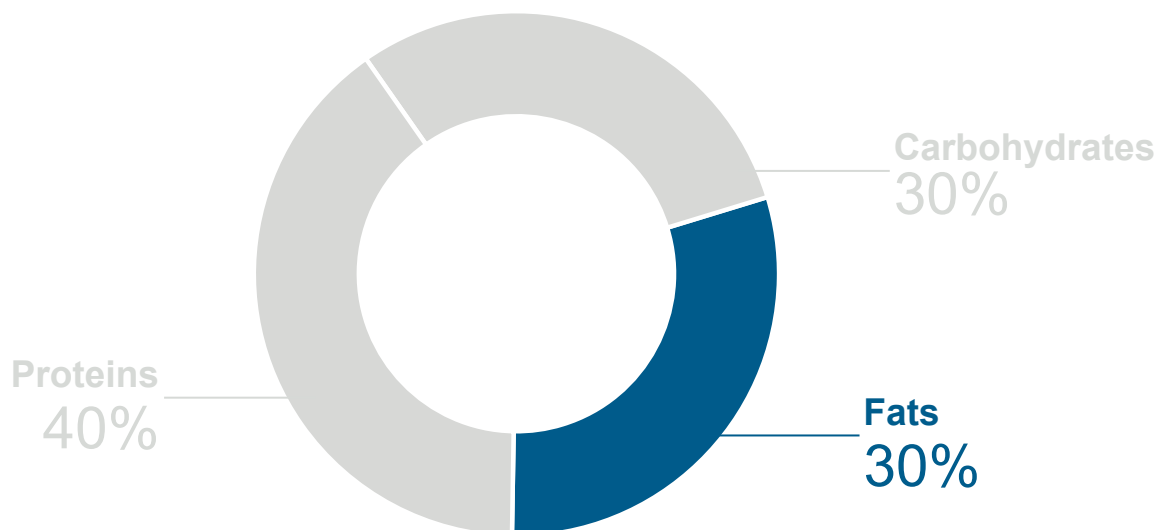
Fats

As a meta-type Beta the metabolism of fats works very well for you. This means that when you ingest fats with food, a below-average amount of that fat is converted into body fat. This means that you do not have to go without fatty foods or reduce their share of the diet.

Please note, however, that a very high-fat diet with predominantly saturated fatty acids (animal fats, such as butter) can generally have harmful effects on health. For example, cholesterol, which is mainly derived from animal fats, can accumulate in the arteries and increase the risk of stroke or heart attack.

Therefore, you should avoid saturated fatty acids (animal fats, such as butter) as far as possible and instead eat unsaturated fatty acids (vegetable oils, fish oils) in a ratio of 1:5 (omega 3 to omega 6). Omega 3 fatty acids are found in linseed oil and hemp oil as well as in cold-water fish such as herring, mackerel and salmon. Omega 6 fatty acids are mainly found in animal products and in sunflower, corn and safflower oils.

Because you are able to metabolize fats very well, a medium increase in fat intake is recommended. For this reason, we recommend that you consume energy from fatty foods as follows:



What are fats?

Apart from carbohydrates, fats are the body's most important source of energy. The physiological calorific value of fat is more than double that of carbohydrates and proteins. Fats are also carriers of fat-soluble vitamins, such as A, D, E and K.

As part of a balanced diet, a fat intake of about 60 – 80 g per day is recommended. However, these reference values are guidelines for the maximum absorption of fats. It is quite possible to manage with much less fat in the food. If you want to lose weight, it is precisely through fat that you can save unnecessary calories. Your MetaCheck consultant will be happy to help you determine your individual calorie requirements.

Weight loss factors

Your CoGAP MetaCheck® not only determines your meta- and sports type, but also your tendencies towards the yo-yo effect, loss of muscle mass during a diet, hunger, satiety and visceral adipose tissue. Your analysis revealed the following:



Trend towards yo-yo effect

The onset of new, undesirable and rapid weight gain after a successful diet is called the yo-yo effect. One of the main reasons for this effect, which is partly due to genetic factors, is that over the course of time certain biological mechanisms are activated in the body of overweight people, which aim to regain the highest body weight to date. These mechanisms are also referred to as "anti-weight loss mechanisms".

Compared to the average population, you have an increased tendency to experience the yo-yo effect.

In order to effectively prevent the yo-yo effect, we recommend that you aim for a weight loss of 0.5 kg per week, especially during the initial phase. In order to reduce your weight in a sustainable way, we recommend that you change your diet to suit your meta-type in the long term.

Loss of muscle mass during a diet

In addition to the desired loss of fat mass, a diet can also lead to a loss of muscle mass. A one-sided diet, for example an unhealthy crash diet, can lead to a much greater loss of muscle mass. For this reason, it is particularly important in the context of a diet or long-term nutritional change to pay attention to a meta-type adjusted diet, which is nutritionally meaningful and balanced. In addition, the loss of muscle mass can be counteracted by appropriate exercise.



Compared to the average population, you have an increased tendency to lose muscle mass during a diet.

In order to be able to effectively counteract the loss of muscle mass, we recommend that you pay special attention to increased sporting activities in addition to your meta-type adjusted diet. The sports variant determined for you in the MetaCheck analysis will help you with this.



Feeling of hunger

The human body develops a feeling of hunger to ensure an adequate supply of energy and all necessary nutrients. The feeling of hunger varies from person to person, and can also be perceived as subjective physical sensation. In addition to subjective perception, the genetic component also plays a role.

Compared to the average population, you have no stronger feeling of hunger.

However, if you feel hungry, we recommend that you take care of sufficient hydration between meals.

Feeling of satiety

In contrast to the feeling of hunger, the body signals that sufficient food has been ingested with a feeling of satiety, and the meal can be ended accordingly. Through the interaction of hunger and saturation, the body regulates food intake and thus ensures an adequate supply of energy and nutrients. Like the feeling of hunger, the feeling of satiety is also determined by genetic components. Depending on the genetic predisposition, the feeling of satiety can also occur much more slowly, which in turn leads to increased food intake.



You have a weaker feeling of satiety than the average population.

We therefore recommend that you eat your Meta-Type meals slowly, as your body takes longer to reach saturation.

Visceral adipose tissue

In humans, and all vertebrates in general, the fat that is stored in the free abdominal cavity and envelops the internal organs is called visceral adipose tissue. Primarily, it provides mechanical protection for the internal organs and serves as an energy reserve in the event of a lack of food. Unlike subcutaneous fatty tissue, visceral fat is not visible in normal amounts. However, in larger quantities it is noticeable by a clear increase in the abdominal volume. Since visceral adipose tissue is more active in metabolic physiology than fatty tissue in other regions of the body, it is disadvantaged against other fatty tissue.

Compared to the average population, you have no higher tendency to visceral adipose tissue.

However, in the context of weight loss, we recommend that you follow a meta-type diet and moderate physical activity that is appropriate for your sport type, so that your metabolism remains active and that you reduce fat in the long term.



Micronutrients - vitamins, antioxidants and omega 3 fatty acids

Vitamins belong to the group of micronutrients. They strengthen the immune system, ensure growth and development (e.g. blood formation, cells, bones and teeth), and are involved in almost all metabolic processes. Basically, they are divided into fat-soluble and water-soluble vitamins. Fat-soluble vitamins can be stored in the body. These include vitamins A, D, E and K. All other vitamins are water-soluble. The body cannot store these. The excess amounts are excreted in the urine.

With a few exceptions, such as vitamin D, vitamins are considered essential because the body cannot produce them itself. They must therefore be ingested with food. With a healthy and varied diet, the body is usually also well supplied with vitamins. Nevertheless, special life situations and eating habits can lead to an increased vitamin requirement. Examples include pregnancy and breastfeeding period, increased nicotine and alcohol consumption, increasing age, stressful daily life, regular sports activities and genetic dispositions that are associated with lower vitamin levels. Therefore, it is always important to pay attention to the micronutrient supply for the optimization of the diet plan. Below we show you the results of the genetic test and what you should pay special attention to in your diet.

Vitamin A

Vitamin A, also called retinol, is a fat-soluble vitamin and is mainly found in animal products such as liver, milk, eggs and fish oil. It is particularly important for the protection and function of the skin, eyes and mucous membranes. While retinol is the active form of vitamin A, provitamin A beta-carotene is a precursor of vitamin A that can be converted to the active form in the body. Provitamin A carotenoids are found mainly in plant foods such as carrots, sweet potatoes, spinach, kale, peppers, pumpkin and apricots. The recommended daily intake of vitamin A is 900 micrograms for men and 700 micrograms for women.



You have a genetic variant which, according to current studies, is associated with lower vitamin A levels. This does not mean that you also currently have a too low vitamin A level. In any case, we recommend that you optimize your intake of vitamin A as a preventive measure by paying attention to your diet and eating foods that are rich in vitamin A. The above-mentioned examples and corresponding dietary supplements are particularly suitable for this purpose.



Vitamin B9 (folate)



Vitamin B9, also called folate, is a water-soluble vitamin from the vitamin B complex that is important for healthy cell division and growth as well as for the immune system. It is involved in a variety of metabolic processes and is especially important during pregnancy to support the development of the fetal brain and spinal cord. The industrially produced form of the vitamin is called folic acid. Good sources of vitamin B9 include green leafy vegetables such as spinach and kale, legumes such as lentils and beans, and avocados, asparagus, broccoli, beets, citrus fruits and wheat germ. The recommended daily allowance for vitamin B9 for adults is 400-600 micrograms per day. For pregnant women and during breastfeeding period, the daily requirement increases significantly and should always be discussed with the attending physician.

You have a genetic variant which, according to current studies, is associated with lower vitamin B9 levels. This does not mean that you also currently have a too low vitamin B9 level. In any case, we recommend that you optimize your intake of vitamin B9 as a preventive measure by paying attention to your diet and eating foods that are rich in vitamin B9. The above-mentioned examples and corresponding dietary supplements are particularly suitable for this purpose.

Vitamin B12

Vitamin B12 is a water-soluble vitamin from the vitamin B complex. It is important for the function of the nervous system and is involved in the formation of DNA as well as red blood cells. Natural sources of vitamin B12 are of animal origin, such as meat, fish, eggs and dairy products. It is not found in plant foods, or only in very small amounts that are insufficient for a reliable supply. Vegans in particular should therefore cover their requirements with suitable dietary supplements. Alternatively, there are also cereal products enriched with vitamin B12 and soy milk. The recommended daily allowance for vitamin B12 for adults is 2.4 micrograms per day.



You have a genetic variant which, according to current studies, is associated with lower vitamin B12 levels. This does not mean that you also currently have a too low vitamin B12 level. In any case, we recommend that you optimize your intake of vitamin B12 as a preventive measure by paying attention to your diet and eating foods that are rich in vitamin B12. The above-mentioned examples and corresponding dietary supplements are particularly suitable for this purpose.

Vitamin D



Vitamin D is a fat-soluble vitamin that plays an important role in bone health by promoting the absorption of calcium and phosphate in the body. In addition, it is involved in many metabolic processes and is therefore also important for the immune system, nervous system and muscle health. Vitamin D can be obtained from food and can also be produced in the body with the help of sunlight. Foods that contain vitamin D are mainly fatty fish such as salmon, mackerel and herring, as well as eggs, milk and dairy products such as cheese and yogurt. However, the amounts absorbed with food are rather small, so sunlight is the most important source of vitamin D. The recommended daily dose is 20 micrograms and applies only in the absence of self-production.

You have a genetic variant which, according to current studies, is associated with lower vitamin D levels. This does not mean that you also currently have a too low vitamin D level. In any case, we recommend that you optimize your intake of vitamin D as a preventive measure by paying attention to your diet and eating foods that are rich in vitamin D. Since sunlight is the most important source of vitamin D, we recommend that you take special care to spend 5-25 minutes a day outdoors, depending on your skin type.

Antioxidants

During physical activities in general and especially during intense stress, such as regular sports, more free radicals are produced in the body. More precisely, oxygen radicals are produced in the mitochondria as a by-product of energy production (cell respiration). They are highly reactive and can damage a wide variety of biological structures. Normally, the body can counteract the free radicals with naturally occurring antioxidants and antioxidant enzymes. However, if the free radicals predominate because the load is too high or the antioxidant enzymes do not work properly, this leads to damage to the cell and is referred to as oxidative stress. The body's own repair and detoxification functions of the cells can be supported by the supply of suitable antioxidants. These include vitamins C, E, β -carotene, zinc and selenium, as well as secondary plant compounds such as anthocyanins, flavonoids, and catechins. Foods rich in antioxidants include berries, green leafy vegetables, tomatoes, carrots, nuts and seeds.



You have a genetic variant which, according to current studies, is associated with reduced activity of antioxidant enzymes. This does not suggest that you also currently have an increased need for antioxidants. In any case, we recommend that you preventively optimize your intake of antioxidants by paying attention to your diet and eating foods rich in antioxidants. Also with regard to an effective regeneration and recovery after sports activities or strong everyday stress, we recommend you to pay special attention to a sufficient antioxidant intake.



Omega 3

The polyunsaturated omega-3 fatty acids are essential for us humans and must be ingested regularly, as our body cannot produce them itself. However, there is not one omega-3 fatty acid, but different types. α -Linoleic acid, for example, is found primarily in linseed, rapeseed, soybean and walnut oil. Eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) are two other important omega-3 fatty acids, which are mainly found in marine fish oils. In the body, α -linoleic acid is metabolized to EPA and DHA. In addition to numerous health benefits, such as the regulation of blood pressure and blood clotting, the additional intake of EPA and DHA helps to reduce inflammatory processes and thus ensures faster regeneration. It is therefore very important, especially for athletes, to ensure a sufficient supply of omega-3 fatty acids. In addition to fish oil capsules, regular consumption of fish or algae is particularly suitable for this purpose.



With respect to your genetic predisposition, there is no need for you to increase your omega-3 fatty acid intake. We therefore recommend that you follow the current recommendations for vitamin and micronutrient intake for omega-3 fatty acids. Foods rich in omega-3 fatty acids, such as the examples mentioned above, are particularly suitable for this purpose. Pay particular attention to an adequate intake of omega-3 fatty acids when you are active in sports, so that effective regeneration and recovery is possible.

Caffeine metabolism



Caffeine is one of the most common stimulants and is contained in a wide variety of beverages. While coffee and black tea, for example, have a natural caffeine content, there are more and more soft drinks or energy drinks to which caffeine is added. In everyday life, caffeine is primarily consumed to temporarily dispel fatigue and increase the ability to concentrate. In addition, it also has a performance-enhancing effect for people during sports. The effect of caffeine is not only broad, but also dependent on one's own genetic predisposition and can therefore vary greatly from person to person. For example, some people can break down caffeine quickly, whereas others metabolize caffeine rather slowly, which can lead to increased inner restlessness, irritability and insomnia. Therefore, caffeine for performance enhancement in sports should always be taken with caution.

You metabolize caffeine quickly compared to the average. Therefore, if you want to take caffeine to enhance performance during sports, we recommend taking it shortly before training (about 30 minutes).

Sweet tooth

People with a weakness for sweet foods are often described as having a “sweet tooth”. Sweet foods can include both healthy foods such as fruit and unhealthy foods such as candy and sweet drinks. A, compared to the average, stronger desire for sweet foods can have different reasons. One of these reasons may be a genetic disposition, in which individuals may develop an increased likelihood of eating more sweets and sugary foods. Particularly in the context of a diet and healthy dietary change, it is therefore especially valuable to find out whether there may be a disposition for an increased craving for sweet foods.



You have an increased tendency to eat more sweets and sugary foods compared to the average population. We therefore recommend that you pay particular attention to sugary foods, choosing fruit, for example, as a healthy sweet alternative to sweets and sweetened beverages.

Alcohol



For many, drinking alcoholic beverages is a relaxing or social activity, but for some it can also be unpleasant because of their body's reaction to alcohol. The metabolization, or breakdown, of alcohol in the body is largely carried out by the liver. If the metabolization of alcohol is impaired, it is called alcohol intolerance. This can manifest itself in symptoms such as muscle weakness, palpitations or facial flushing. This intolerance can have various causes, including a genetic predisposition. What is also underestimated in addition to tolerance is the fact that alcohol also contains many calories. For example, a glass of red wine contains about 170 kcal and a pint of beer about 430 kcal. This should always be considered in the context of a diet or a healthy change of diet.

Your genetic analysis has shown that there is no genetic predisposition in favor of alcohol intolerance. However, if you observe any problems after consuming alcoholic beverages, please consult your physician.



Lactose



Lactose, which is for example ingested with milk and dairy products, must be broken down in the intestine with the help of the digestive enzyme lactase. In the case of lactose intolerance, not enough lactase is available to the body due to missing or reduced production, which means that the lactose cannot be digested or can only be digested incompletely. This enzyme deficiency can then lead to symptoms such as diarrhea, bloating, abdominal pain or nausea. The majority of the world's population cannot fully digest lactose after infancy. In Asia and Africa, lactose intolerance affects the majority of the adult population (90% or more), while in Central Europe it affects approximately one in 5 to 10 people. However, the degree of intolerance and the time of onset after birth can vary greatly. Lactose intolerance is not a disease, but it can limit the quality of life and should therefore always be included as part of a healthy dietary change.

Your genetic analysis has shown that there is a genetic predisposition in favor of lactose intolerance. This does not allow the conclusion that a lactose intolerance actually exists or will occur. Nevertheless, we recommend that you change to a low-lactose diet as a precaution. Should you nevertheless consume foods containing lactose and subsequently observe problems, please consult your doctor.

Gluten

Gluten is a protein found in many types of cereals. These include, for example, wheat, rye, oats and barley. In recent years, intolerance to this protein has become increasingly common, and is called celiac disease. Thus, approximately every 600-4000th person in Germany is affected by a gluten intolerance, in children, however, this is estimated to be every 100-400th person. With the gluten intolerance it comes to an overreaction of the immune system and in the consequence to a chronic inflammation of the small intestine. Abdominal pain, diarrhea, vomiting, loss of appetite and lack of weight gain are common symptoms in children, which may appear at the earliest about 3-4 months after the first feeding with gluten-containing foods (e.g. porridge mixtures). Depending on the diet, symptoms are usually first noticed between 6 months and 2 years of age.

The mechanisms by which celiac disease develops are not yet fully understood. However, it is certain that there is a genetic predisposition that contributes in part to the development. >99% of all celiac patients have a specific genetic constellation in the HLA-DQ gene. However, this gene constellation also occurs in >25% healthy individuals, so the presence of this gene constellation does not necessarily predict the onset of celiac disease. Nevertheless, the knowledge of the presence of the genetic prerequisite is useful to optimize one's own diet plan.



Your genetic analysis has shown that there is no genetic disposition in favor of gluten intolerance. You can continue to include gluten-containing foods in your diet. However, if you observe any problems after consuming gluten-containing foods, please consult your doctor.



Let's start! - 4 Week Plan

On the following pages you will find your nutrition plans for the next 4 weeks. Please read the following instructions carefully before starting.

- Each of the four following plans is your personal nutrition plan for an entire week. After consulting with your MetaCheck consultant, stick exactly to these guidelines and discuss any special features (e.g. diabetes, pregnancy or uncertainties) with them.
- For successful, rapid weight loss, it is necessary that you eat only the three meals listed in the diet plans every day and completely avoid snacks in between.
- In your plans, you will find general food names such as "vegetables," "fruits," or "meat/fish/seafood." To achieve the most varied diet possible, you can vary your choices daily. To see which foods you can choose, see the "Food choices for your weekly nutrition plans" listing.
- Alternatively, you can replace up to two meals a day with one serving of MetaShake each.
- Please note that the gram specifications refer to the respective "full" unit and should be adjusted accordingly depending on the quantity specification. Example: 1 cup of low-fat quark equals 250 g and 0.5 cup of low-fat quark equals 125 g.
- You may season the meals as you like with pepper, herbs, garlic, ginger, vinegar or similar. Vegetable broth may also be used to cook the ingredients. Salt should only be used in small quantities.
- The listed foods can also be interchanged as long as the macronutrient energy has a similar composition. Please ask your MetaCheck consultant if you need help.

Important!

Your result shows that you have a genetic predisposition in favor of lactose intolerance. As a precaution, we recommend that you either replace dairy products with vegan alternatives such as soy yogurt, etc., or use a dairy product that is commercially available and labeled "lactose-free". Semi-hard cheeses such as Appenzeller, old Gouda, Emmentaler, and Edam are considered "lactose-free" because during the long ripening process, the lactose contained in the milk is gradually converted almost completely into lactic acid.

Your result shows that you do not have a genetic disposition in favor of gluten intolerance. When eating bread and pasta, you should choose whole grain varieties if possible. With whole grain products, the whole grain is processed. They therefore contain more fiber, vitamins and minerals than white flour products. If you still experience discomfort after eating foods containing gluten, please consult a doctor.



Food selection for your weekly nutrition plans

We recommend that you include as many different of the foods listed below as possible in your meals over the next 4 weeks to ensure a varied diet.

Vegetables: artichoke, aubergine, cauliflower, broccoli, chicory, chinese cabbage, iceberg lettuce, endive, fennel, green cabbage, cucumber, ginger, kohlrabi, lettuce, pumpkin, mangold, carrots, paprika fruits, parsnip, leek, radish, rhubarb, Brussels sprouts, beetroot, red cabbage, rocket, sauerkraut, chives, celery, soya sprouts, asparagus, spinach, tomatoes, Jerusalem artichoke, cabbage, savoy cabbage, zucchini, onion

Legumes: white beans, peas, chickpeas, lentils, kidney beans, soybeans

Lean cold cuts: chicken breast, corned beef, ham, vegetarian cold cuts




Meat or oily fish: duck, minced meat (beef, pork, half and half), chicken (chicken roasted, leg with skin, soup chicken), rabbit, lamb (leg), turkey leg, turkey, beef (medium firm, e. g. chest, oxtail, tongue), ham, pork (belly, minced meat, smoked pork, smoked pork), wild boar, eel (fresh, smoked), fried herring, herring, herring, salmon (fresh, smoked), mackerel (fresh, smoked), tuna (fresh, in oil), **vegetarian alternative:** (smoked) tofu

Fruit: pineapple, apple, orange, apricot, banana, pear, blackberry, strawberry, pomegranate, grapefruit, rosehip, blueberry, raspberry, elderberry, honeydew melon, redcurrants (red and black), kaki, prickly pear, cherries (sour and sweet), kiwi, lime, litchi, tangerines, mango, melon, mirabelle plums, nectarines, oranges, papaya, passion fruit, peach, plums, cranberries, quince, sea buckthorn berries, gooseberries, watermelon, grapes, lemon

Raw vegetables: chicory, Chinese cabbage, iceberg lettuce, endive, lamb's lettuce, fennel, pickled cucumber, cucumber, kohlrabi, lettuce, carrots, pepper, radicchio, radish, rhubarb, red cabbage, rocket, celery, bean sprouts, asparagus, spinach, tomatoes, cabbage, onion

Examples for implementation in daily life

Meal: Lunch, Ingredients: Meat/fish/seafood (high fat), vegetables, potatoes, quark

	<p>Baked potato with herb quark, raw vegetables and smoked salmon</p> <ul style="list-style-type: none"> • Baked potato • smoked salmon • Tomatoes • cucumber • Quark with Salt, pepper, chives, dill, parsley, chervil, cress
	<p>Barbecue skewer with potatoes, beef and vegetables</p> <ul style="list-style-type: none"> • Beef (breast) • cherry tomatoes • zucchini • bell peppers • potatoes • garlic • salt, pepper • rosemary • Herb quark, homemade
	<p>Chicken legs and potato wedges from the oven, served with bush beans and herb quark</p> <ul style="list-style-type: none"> • Chicken legs • salt, curry powder • Potatoes (cut into wedges) • bush beans • quark • herbs (e.g. ""8-herbs"" mixture frozen)

Nutritional plan

Your starting weight:

Your body fat content:

Your muscle percentage:

Your meta-type optimized nutrition plan for week 1:

meal	amount	unit	ingredient
Breakfast or MetaShake	1	slice (50 g)	Protein bread
	1	tablespoon	low-fat cream cheese (17-20% FDM.)
	2	handful (60 g)	raw vegetables
Lunch or MetaShake	125	gram	meat or oily fish
	4	handful (60 g)	vegetables
	1	piece or handful (130 g)	fruit
	80	gram	potato
	125	gram	low-fat quark
Dinner or MetaShake	1	slice (50 g)	Protein bread
	1	slice (30 g)	low fat cheese (20 % FDM)
	125	gram	skyr, plain
	1	piece or handful (130 g)	fruit

Your weight
after week 1:Your body fat content
after week 1:Your muscle percentage
after week 1:

Your meta-type optimized nutrition plan for week 2:

meal	amount	unit	ingredient
Breakfast or MetaShake	150	gram	skyr, plain
	1	piece or handful (130 g)	fruit
Lunch or MetaShake	125	gram	meat or oily fish
	30	gram	legumes
	40	gram	Whole grain pasta or whole grain rice (uncooked)
	4	handful (60 g)	vegetables
Dinner or MetaShake	2	slice (50 g)	Protein bread
	30	gram	avocado
	65	gram	tuna (in brine)
	2	handful (60 g)	raw vegetables
	150	gram	plain yogurt (3.5 % fat)

Your weight
after week 2:Your body fat content
after week 2:Your muscle percentage
after week 2:



Your meta-type optimized nutrition plan for week 3:

meal	amount	unit	ingredient
Breakfast or MetaShake	1	slice (50 g)	Protein bread
	1	tablespoon	low-fat cream cheese (17-20% FDM.)
	1	teaspoon	apple butter or honey
	1	piece or handful (130 g)	fruit
Lunch or MetaShake	125	gram	meat or oily fish
	60	gram	Whole grain pasta or whole grain rice (uncooked)
	4	handful (60 g)	vegetables
	1	piece or handful (130 g)	fruit
	125	gram	low-fat quark
Dinner or MetaShake	1	slice (50 g)	Protein bread
	1	slice (30 g)	low fat cheese (20 % FDM)
	2	handful (60 g)	raw vegetables

Your weight
after week 3:

Your body fat content
after week 3:

Your muscle percentage
after week 3:

Your meta-type optimized nutrition plan for week 4:

meal	amount	unit	ingredient
Breakfast or MetaShake	5	tablespoon	oats
	150	gram	plain yogurt (3.5 % fat)
	1	piece or handful (130 g)	fruit
Lunch or MetaShake	125	gram	meat or oily fish
	4	handful (60 g)	vegetables
	80	gram	potato
	125	gram	curd cheese (20 % FDM)
Dinner or MetaShake	1	large cup (250 ml)	vegetable broth
	2	handful (60 g)	vegetables
	2	slice (10 g)	Whole grain crispbread
	1	tablespoon	low-fat cottage cheese (< 10% FDM)

Your weight
after week 4:




Your body fat content
after week 4:


















































Your muscle percentage
after week 4:















































Meta-Type specific food-list

Based on your meta type **Beta** you will find in the following tables different foods, which are color-coded according to their potential for weight loss.



Most suitable 
 Suitable 
 Poorly suitable 

Cereal(-products) and pseudocereals	
Baked goods	
Baguette	
Black bread (whole grain)/"Pumpernickel"	
Bread, whole grain (all types of cereals)	
Crispbread	
Crispbread, whole grain	
Croissant	
Flatbread	
Flatbread, whole grain	
Multi-grain bread	
Prezel	
Roll, wheat	
Roll, whole grain	
Breadcrumbs	
Breadcrumbs, whole grain	
Rusk, without egg	
Rusk, without egg, whole grain	
Rye bread, sourdough	
Toast, wheat	
Toast, whole grain	
White bread	
Breakfast cereals	
Flakes	
Buckwheat flakes	
Millet flakes	
Oat flakes	
Oat flakes, instant	
Quinoa flakes	
Rye flakes	
Whole grain flakes (e. g. "6-Korn-Flocken")	
Whole wheat flakes	
Other	
Amaranth, puffed, unsweetend	
Breakfast biscuits, with added sugar	
Breakfast cereals, with added sugar	
Chia seed pudding, with milk (1.5 % fat)	
Cornflakes, no added sugar	
Crunchy granola, with added sugar	
Muesli bar/granola bar, with added sugar	
Muesli with dark chocolate	
Muesli with dried fruits, no added sugar	
Muesli with nuts, no added sugar	
Overnight oats, with milk (1.5 % fat)	
Porridge, dry product, no added sugar	
Quinoa, puffed, no added sugar	
Smoothie bowl, with fresh fruit and cottage cheese	
Doughs and mixes	
Flammkuchen dough, ready to bake	
Pancake mix (dry product)	
Pizza dough, ready to bake	
Puff Pastry, ready to bake	
Grains, flours, grinding products (containing gluten)	
Barley, seed	
Pearl barley	
Oats, seed	

Oat bran	
Rye, seed	
Spelt, seed	
Spelt bran	
Green spelt (unripe spelt grain)	
Wheat, seed	
Bulgur	
Couscous	
Wheat semolina	
Wheat germs	
Wheat bran	
Tender wheat ("Ebly")	
Flours (all sorts containing gluten)	
Pastry flour (US)/soft flour (UK)/Type 405 (D)	
All-purpose flour (US)/plain flour (UK)/Type 550 (D)	
First clear flour (US)/ hard flour (UK)/Type 1050 (D)	
Flour, whole wheat/wholemeal	
Ancient grains	
Einkorn, seed	
Emmer, seed	
Kamut, seed	
Triticale, seed	
Flour, wholemeal (from ancient grains)	
(Pseudo)Cereals, flours, grinding products (gluten free)	
Amaranth, seed	
Buckweed, seed	
Corn, seed	
Cornmeal/Polenta (maize semolina)	
Corn, Popcorn (pure)	
Corn, Popcorn, with sugar (cinema popcorn)	
Flour, wholemeal (gluten free grains)	
Millet, seed	
Quinoa, seed	
Rice, Basmati	
Rice, whole grain (Parboiled)	
Rice, wild rice	
Thickeners and starch	
Agar	
Arrowroot, powder	
Corn starch	
Gelatine, clear, unflavoured	
Guar gum, powder	
Inulin	
Locust bean gum, powder	
Pectin	
Potato starch	
Rice starch	
Sago (Pearl tapioca)	
Wheat starch	
Xanthan gum, powder	



Pasta products	
Glass noodles/Chinese noodles, uncooked	
Instant noodles (dry product)	
Kriitharaki (Greece pasta), uncooked	
Legume-pasta (from lentils etc.), uncooked	
Pasta, egg free, uncooked	
Pasta, egg free, wholemeal, uncooked	
Pasta, egg pasta, uncooked	
Rice noodles, uncooked	
Shirataki noodles, uncooked	
Milk and dairy products, cheese and eggs	
Cheese	
Cream cheese	
Cream cheese preparations	
3 % fat absolute, low fat	
17 % fat absolute, medium fat	
25 % fat absolute, full fat	
Cottage cheese, 3.9 % fat absolute	
Fruit quark, 0.2 % fat absolute	
Fruit quark, 3.5 % fat absolute	
Mascarpone, 80 % FDM	
Mozzarella, buffalo milk	
Mozzarella, cow's milk	
Mozzarella, cow's milk, low fat	
Quark, low fat, < 10 % FDM (0.2 % fat absolute)	
20 % FDM, semifat	
40 % FDM, full fat	
Ricotta, 45 % FDM	
Schichtkäse, 10 % FDM	
Soft cheese	
Brie, 50 % FMD	
Camembert, 45 % FMD	
Camembert, 30 % FMD	
Feta (sheep's milk), 45 % FMD	
Feta (sheep's milk), light, 9 % fat absolute	
Gorgonzola, 50 % FMD	
Brined cheese/"Feta" (cow's milk), 45 % FMD	
Brined cheese (cow's milk), 12 % absolute	
Limburger, 40 % FMD	
Processed cheese, 45 % FMD	
Processed cheese, slices	
Romadur, 30 % FMD	
Roquefort, 52 % FMD	
Saint Albray, 62 % FMD	
Sliced cheese	
Buttercheese, 60 % FMD	
Buttercheese, 30 % FMD	
Gouda, 48 % FMD (29 % fat absolute)	
Gouda, 30 % FMD (18 % fat absolute)	
Edamer, 45 % FMD	
Edamer, 30 % FMD	
Tilsiter, 45 % FMD	
Tilsiter, 30 % FMD	
Leerdammer, 45 % FMD	
Hard cheese	
Appenzeller, 50 % FMD	
Cheddar (Chester), 50 % FMD	
Emmentaler, 45 % FMD	
Greyerzer/Gruyère, 45 % FMD	
Manchego, 50 % FMD	
Mountain cheese, 45 % FMD	
Parmesan, 37 % FMD	
Pecorino, 40 % FMD	
Provolone, 45 % FMD	
Sour milk cheese	
Bauernhandkäse	
Harzer cheese ("Mainzerkäse")	
Plant-based cheese, vegan	

Vegan cheese, made from coconut oil and starch	
Vegan cheese, made from nuts	
Dairy products	
Buttermilk, max 1 % fat	
Buttermilk, with fruit	
Condensed milk, 7.5 % fat	
Crème fraîche, 30 % fat	
Crème double, 42 % fat	
Crème légère, 15 % fat	
Cream, soured, 10 % fat	
Cream, soured, 20 % fat	
Fruit yoghurt 0.1 % fat	
Fruit yoghurt, 3.5 % fat	
Hot Chocolate with skim milk	
Kefir, low fat, 1.5 % fat	
Schmand, 24 % fat	
Sour Cream, 11 % fat	
Sour milk, 3.5 % fat	
Whey, 0.1 % fat	
Whipping cream, 30 % fat	
Cooking cream, 15 % fat	
Plant-based alternative to cream, 7 % fat	
Heavy (whipping) cream, 35 % fat	
Spray cream, 30 % fat	
Yoghurt, natural (plain), non fat, max. 0.1 % fat	
Yoghurt, natural (plain), low fat, 1.5 % fat	
Yoghurt, natural (plain), whole milk, 3.5 % fat	
Yoghurt, natural (plain), greek style, 10 % fat	
Plant-based alternatives to dairy products, vegan	
Plant-based cooking creams	
Coconutmilk, canned	
Crema Vega (soy)	
Cuisine Almond	
Cuisine Coconut	
Cuisine Rice	
Soya alternative to single cream	
Soya alternative to single cream, light	
Plant-based yoghurt	
Coconut yoghurt, sweetened	
Lupine yoghurt, sweetened	
Soy yoghurt, plain, sweetened	
Soy yoghurt, plain, unsweetened	
Soy yoghurt, Vanilla	
Soy-almond-yoghurt, unsweetened	
Soy-coconut-yoghurt, unsweetened	
Plant-based quark	
Quark, from soybeans, sweetened	
Quark, from soybeans, unsweetened	
Silken tofu	
Plant-based spreads	
Alternative to cream cheese (soy), herbs	
Alternative to cream cheese (soy), tomato	
Lard, plant-based, with apples and onion	
Spread, curry and lentil	
Spread, tomatoe and basil	
Eggs	
1 hen's egg (whole), size M	
1 egg white, size M	
1 egg yolk, size M	
Egg replacer, vegan	
Aquafaba (Chickpea Brine)	
Egg replacer with corn starch, dry product)	
Kala Namak (salt with natural egg flavour)	
Soy flour, full-fat	
Soy flour, defatted	

Milk	Dips & Sauces (Convenience products)
Milk (cow's milk), 3.5 % fat	Aioli
Milk (cow's milk), 1.5 % fat	Ajvar (Paprika paste)
Milk (cow's milk), skimmed, 0.1 % fat	Barbecue sauce
Goat milk	Béchamel sauce
Sheep's milk	Bernaise sauce
Plant-based drinks ("vegan milk")	Bouillon, powder, without flavour enhancers
Almond drink, unsweetened	Burger sauce
Cashewmilk, unsweetened	Chutney
Coconut drink, unsweetened	Cocktail sauce
Hazelnut drink, unsweetened	Cream sauce
Hemp seed drink, unsweetened	Frankfurt green sauce
Lupine milk, unsweetened	Garlic sauce
Macadamia milk, unsweetened	Gravy, dry product
Oat milk, unsweetened	Guacamole
Rice & Quinoa drink, unsweetened	Hollandaise sauce
Rice milk, unsweetened	Hot dog sauce
Soy milk, unsweetened	Hummus
Soy milk, banana, sweetened	Ketchup
Soy milk, light, sweetened	Mushroom sauce ("Jägersauce")
Soy milk, chocolate, sweetened	Olive tapenade
Soy milk, vanilla, sweetened	Paprika sauce ("Zigeunersauce")
Spelt drink, unsweetened	Peanut sauce
Spreadable fats & Oils	Pesto
Oils suited for the cold kitchen	Salad dressing "Sylt style", convenience product
Avocado oil, cold pressed	Salad dressing, dry product
Chia seed oil, cold pressed	Salad dressing, oil & vinegar, convenience product
Hemp seed oil, cold pressed	Salad dressing, oil & vinegar, home-made
Pumpkin seed oil, cold pressed	Salsa sauce
Linseed oil, cold pressed	Sweet & sour sauce
Rapeseed oil, cold pressed	Teriyaki sauce
Sesame seed oil, dark, roasted, cold pressed	Thousand island dressing, convenience product
Grape seed oil, cold pressed	Tomato sauce (arrabiata)
Walnut oil, cold pressed	Tomato sauce (bolognese)
Wheat germ oil, cold pressed	Tomato sauce, convenience product, jarred
Oils suited for the warm kitchen	Tsatziki
(e.g. for frying vegetables)	Yoghurt dressing, convenience product
Albaöl (Rapeseed oil with butter flavor)	Seasonings
Safflower oil, refined	Curry paste, green
Peanut oil, refined	Curry paste, red
Corn oil, refined	Fish sauce
Olive oil, native	Horseradish sauce
Plant-based fat for frying (e. g. Rama Culinesse)	Liquid seasonings (e. g. Maggi)
Rapeseed oil, refined	Miso (japanese spice paste)
Sesame seed oil, not roasted, unrefined	Mustard, medium hot
Oils & fats suited for the warm kitchen	Mustard, sweet
(for very high temperatures, e. g. searing; deep frying)	Oyster Sauce
Goose fat	Oyster Sauce, vegetarian
Ghee (clarified butter)	Sambal Oelek
Coconut oil, cold pressed	Sesame paste (tahini)
Beef fat (grazer)	Soy sauce
Red palm oil, unrefined and cold pressed	Tabasco
Lard	Tomato puree
Sunflower oil, refined	Vinegar
Spreadable fats	Balsamic vinegar (balsamic reduction)
Aioli	Wasabi
Alsan (plant-based "butter"), vegan	Worcester sauce
Butter (sweet or cultured)	Yeast flakes
Salad dressing (mayonnaise and yoghurt), 25 % fat	
Mayonnaise, 80 % fat	
Mayonnaise, légère 4.8 % fat	
Vegetable margarine	
Vegetable margarine, light	
Remoulade, 60 % fat	
Mayonnaise, 50 % fat	
Onion lard	
Spices, Dips, Sauces & Seasonings	



Spices	
Caraway	
Cardamom	
Chilli paste (harissa)	
Chillies	
Cinnamon	
Coriander	
Cumin	
Curry powder	
Ginger	
Herbs, dried (e. g. oregano, basil, etc.)	
Nutmeg	
Paprika powder	
Pepper	
Spice mixes, with additives (sugar, fat, etc.)	
Spices, pure, without additives	
Turmeric	
Vegetables and vegetable products	
Artichokes, raw	
Artichokes, jarred, preserved in oil	
Asparagus, raw	
Asparagus, jarred	
Aubergine/eggplant, raw	
Bamboo shoots, jarred	
Beetroot, raw	
Beetroot, chips, deep fried	
Beetroot, jarred	
Beetroot, vacuum-treated and sealed	
Broccoli, raw	
Brussel sprouts, raw	
Carrots, raw	
Carrots, canned	
Cauliflower, raw	
Celeriac, raw	
Celeriac, jarred	
Celery, raw	
Chestnuts, raw	
Chinese cabbage, raw	
Fermented Chinese cabbage (Kimchi), jarred	
Cucumber, raw	
Sandwich gherkins, jarred	
Dill pickles, jarred	
Fennel, raw	
Frozen vegetables, without additives	
Garlic, raw	
Ginger, raw	
Ginger, jarred	
Horseradish, Root, raw	
Jerusalem artichoke, raw	
Kale (green cabbage), raw	
Kale, jarred	
Kohlrabi, raw	
Leek, raw	
Lettuce, raw	
Chicory, raw	
Endive, raw	
Head lettuce, raw	
Iceberg lettuce, raw	
Lamb's lettuce, raw	
Radicchio, raw	
Rocket, raw	
Mung bean sprouts, raw	
Mung bean sprouts, jarred	
Mushrooms, raw	
Oyster mushroom, raw	
Butter fungus, raw	
Butter fungus, jarred	
White mushrooms, raw	
White mushrooms, jarred	
Morel, raw	
Morel, dried	
Chanterelles, raw	
Chanterelles, jarred	
Porcini, raw	
Porcini, dried	
Truffles, raw	
Onion, raw	
Parsley root, raw	
Parsnip, raw	
Parsnip, chips, deep fried	
Peas, green, raw	
Pepper fruit, raw	
Pepper fruit, jarred, preserved in oil	
Pointed cabbage, raw	
Potatoes, raw, with peel	
Potato chips	
Potato, jarred	
French fries, ready-to-eat, salted	
Potato flakes (puree, dry product)	
Pumpkin, raw	
Radish, raw	
Red cabbage, raw	
Red cabbage, jarred	
Red radish, raw	
Rhubarb, raw	
Romanesco, raw	
Salsify, raw	
Savoy, raw	
Soy bean sprouts, raw	
Soy bean sprouts, jarred	
Spinach, raw	
Baby spinach, raw	
Creamed spinach, deep frozen	
Spring onion, raw	
String beans, raw	
String beans, canned	
Sugar snaps, raw	
Sweetcorn (cob), raw	
Popcorn, with sugar ("cinema popcorn")	
Corn, puffed, (corn crackers)	
Sweetcorn, canned	
Sweet potato (Batate), raw	
Sweet potato, chips, deep fried	
Swiss chard, raw	
Tomatoes, raw	
Tomatoes, paste, canned	
Tomatoes, dried	
Tomatoes, preserved in oil	
Tomato ketchup, with added sugar	
Tomato puree, salted	
Turnips, raw	
White cabbage, raw	
Sauerkraut, jarred	
Zucchini, raw	
Zucchini, chips, deep fried	
Fresh herbs	
Basil, fresh	
Chive, fresh	
Coriander, fresh	
Dill, fresh	
Garden cress, fresh	
Mint, fresh	
Parsley, fresh	
Watercress, fresh	



Fruits and fruit products	
NAS = no added sugar/ AS = with added sugar	
Apple, unpeeled, raw	
Apple, dried (NAS, non-sulphurized)	
Apple, dried (sulphurized)	
Applesauce, jarred (NAS)	
Apricot, raw	
Apricot, canned, sugared	
Apricot, dried (NAS, non-sulphurized)	
Avocado, raw	
Guacamole, jarred	
Banana, raw	
Banana chips (AS and fat, sulphurized)	
Banana, dried (NAS, non-sulphurized)	
Blackberry, raw	
Blood orange, raw	
Blueberries, raw	
Blueberries, freeze-dried	
Cherries, sour, raw	
Morello cherries, jarred, sugared	
Cherries, sweet, raw	
Cranberries, dried, sugared	
Currants, raw, red	
Currants, raw, black	
Currants, raw, white	
Dates, dried (NAS, non-sulphurized)	
Elderberries, raw, black	
Fig, dried (NAS, non-sulphurized)	
Fig, raw	
Galia melon, raw	
Goji berries, dried (NAS, non-sulphurized)	
Gooseberries, raw	
Grapefruit, red, raw	
Grapefruit, white, raw	
Grapes, raw	
Black Corinths, dried (NAS, non-sulphurized)	
Raisins, dried (NAS, non-sulphurized)	
Sultanas, dried (NAS, non-sulphurized)	
Honeydew, raw	
Kiwi, raw	
Lemon, raw	
Lemon juice, freshly-squeezed	
Lime, raw	
Lingonberry, raw	
Litchi, raw	
Litchi, canned, sugared	
Mandarin, raw	
Mandarin, canned, sugared	
Mango, raw	
Mango, canned, sugared	
Mango, dried (NAS, non-sulphurized)	
Mirabelles, raw	
Mirabelles, canned, sugared	
Mulberries, dried (NAS, non-sulphurized)	
Nectarines, raw	
Olives, black, marinated (Greek style)	
Olives, green, marinated	
Orange, raw	
Papaya, raw	
Passion fruit, raw	
Peach, raw	
Peach, canned, sugared	
Peach, dried (NAS, non-sulphurized)	
Pear, raw	
Pear sauce, jarred (NAS)	
Pear, canned, sugared	
Persimmon, raw	
Physalis, raw	
Pineapple, raw	
Pineapple, canned, sugared	
Pineapple, dried NAS, non-sulphurized)	
Plum, raw	

Plum, dried (NAS, non-sulphurized)	
Pomegranate, raw	
Pomelo, raw	
Quince, raw	
Raspberries, raw	
Raspberries, freeze-dried	
Sea buckthorn berries, raw	
Strawberries, raw	
Strawberries, freeze-dried	
Watermelon, raw	

Legumes, kernels, seeds and nuts

Legumes	
Beans, white, dried	
Beans, white, canned	
Chickpeas, dried	
Chickpeas, canned	
Kidney beans, dried	
Kidney beans, canned	
Lentils, dried	
Lentils, canned	
Peas, dried	
Peas, canned	
Soy beans, dried	
Soy beans, canned	

Kernels & Seeds	
Chia seeds	
Hemp seeds, peeled	
Linseeds	
Pine nuts	
Pistachio kernels	
Poppy seeds	
Psyllium husks	
Pumpkin seeds	
Sesame seeds, white, unpeeled	
Sesame seeds, black, unpeeled	
Gomasio	
Sunflower seeds	

Nuts	
Almonds	
Brazil nuts	
Cashews	
Chestnuts	
Coconut milk	
Coconut paste, 100 % coconut	
Coconut, ripe	
Hazelnuts	
Macadamia nuts	
Nut paste (100 % nut)	
Peanuts, unroasted	
Peanut butter, 100 % peanuts	
Peanuts, roasted	
Pecan nuts	
Tigernuts (nut alternative)	
Trail mix	
Walnuts	

Meat and poultry

Beef	
Beef, canned	
Beef, fillet	
Beef, lean meat without fat	
Beef, leg	
Beef, liver	
Beef, minced (maximum 20 % fat)	
Beef, steak tartare (maximum 7 % fat)	
Beef, tongue	



Game (Quarry)	
Hare	
Venison (deer, stag)	
Venison (roe deer)	
Wild boar	
Lamb	
Lamb, escalope	
Lamb, fillet	
Lamb, leg	
Lamb, meat chop	
Lamb, minced	
Meat products & sausages	
Bierschinken	
Blood sausage	
Bologna sausage (Fleischwurst)	
Bratwurst (pork)	
Ham, salted and cooked	
Ham, salted and smoked	
Jagdwurst	
Liverwurst	
Meat loaf (Leberkäse)	
Mettwurst (Braunschweiger)	
Minced meat (pork and beef, maximum 30 % fat)	
Mortadella	
Poultry sausage, lean	
Salami	
Saveloy	
Vienna sausage	
Meat substitutes	
Quorn	
Seitan	
Soy cutlets	
Tempeh	
Tofu	
Almond-nut-tofu	
Silken tofu	
Smoked tofu	
Vegetarian liverwurst	
Vegetarian salami	
Vegetarian sausage	
Vegetarian schnitzel	
Other	
Goat	
Horse	
Rabbit	
Pork	
Bacon	
Pork, belly	
Pork, cured, lean	
Pork, diced ham (lean)	
Pork, escalope (from the topside)	
Pork, fillet	
Pork, ground ("Mett")	
Pork, lean meat without fat	
Pork, meat chop	
Pork, minced (maximal 30 % fat)	
Pork, neck	
Poultry	
Chicken, roast chicken, whole	
Chicken breast, with skin	
Chicken breast, without skin	
Chicken, boiler	
Chicken, heart	
Chicken, leg with skin	
Chicken, liver	
Duck, breast with skin	
Duck, leg	
Goose, breast with skin	
Goose, leg with skin	
Turkey, with skin	
Turkey hen, breast, without skin	
Turkey hen, leg, without skin	
Veal	
Veal, escalope (no breadcrumb coating)	
Veal, fillet	
Veal, meat chop	
Veal, Wiener Schnitzel (breaded, fried)	
Fish and fish products	
Brathering, jarred	
Brown trout, fresh	
Carp, fresh	
Caviar (sturgeon), jarred	
Caviar (other fish), jarred	
Cod, fresh	
Common sole, fresh	
Crab, fresh	
Crustacea (crayfish), fresh	
European flounder, fresh	
Hake (Merlucciidae), fresh	
Halibut, fresh	
Lobster, fresh	
Northern pike, fresh	
Oysters, fresh	
Perch, fresh	
Plaice, fresh	
Pollock (saithe), fresh	
Pollock, preseeded in oil, canned	
Pollock, smoked	
Rose fish (red perch), fresh	
Scampi, fresh	
Sea eel (Seeaal), smoked	
Shrimp, fresh	
(Skipjack) Tuna, fresh (Katsuwonus pelamis)	
Tuna, in oil, canned	
Tuna, in water, canned	
Zander, fresh	
Cuttlefish	
Octopus (Pulpo), fresh	
Sepia, fresh	
Squid, fresh	
Cold water fish, high in omega-3 fatty acids	
Anchovy, fresh	
Anchovy, in oil, canned	
Eel, freshwater eel, fresh	
Eel, smoked	
Herring, fresh	
Herring, fillet (Matjesfilet)	
Herring, fillet, in cream sauce	
Herring, fillet, in tomato sauce, canned	
Herring, in jelly	
Herring, marinated ("Bismarckhering")	
Mackerel, fresh	
Mackerel, smoked	
Salmon, fresh	
Salmon, smoked	
Sardine, fresh	
Sardine, in oil, canned	
Tuna (Thunnus), fresh	
Sweets, pastry and sweeteners	
Desserts (Ready-to-eat product)	
Jelly	
Pudding, chocolate	
Pudding, vanilla	
Rice pudding	
Rote Grütze (red fruit dessert)	
Semolina pudding	
Tiramisu	

Ice cream	
Fruit ice (Italian ice)	Yellow
Ice cream (with cream)	Red
Ice cream (with milk)	Yellow
Sorbet	Red
Water ice	Yellow
Salty snacks	
Bamba (German: "Erdnussflips")	Red
Breadstick (Grissini)	Red
Cheese breadsticks	Red
Nachos/Tortilla chips	Red
Potato chips, deep fried	Red
Salt sticks/Pretzel sticks	Red
Sweets	
Candy	Red
Chocolate, with nuts	Red
Chocolate, dark (= 90 % Cocoa)	Yellow
Chocolate, milk	Red
Chocolate, white	Red
Gummi candy	Red
Liquorice (confectionery)	Red
Marzipan	Red
Nougat	Red
Sweeteners	
Agave nectar	Red
Coconut sugar	Yellow
Concentrated apple/pear juice	Red
Date syrup	Yellow
Erythritol, no calories	Red
Golden syrup	Red
Honey	Yellow
Maple syrup	Red
Rice syrup	Yellow
Stevia (100 %)	Yellow
Sugar, brown	Red
Sugar, white	Red
Xylitol, 40 % less calories than sugar	Yellow
Yacón syrup	Yellow
Sweet pastries (Ready-to-eat)	
Apple strudel	Red
Cake, curd-oil-dough	Yellow
Cake, sponge cake	Red
Cake, yeast dough	Yellow
Cookies/Biscuits	Red
Cream cake	Red
Fruit tart	Red
Waffels	Red
Sweet spreads	
Chocolate-hazelnut spread	Red
Fruit jelly, all kinds	Red
Jam, all kinds	Red
Pear & apple spread, no added sugar	Yellow
Beverages	
Alcoholic beverages	
Beer (5 %)	Red
Brandy (32 %)	Red
Cider (5 %)	Red
Kölsch beer (5 %)	Red
Pale lager (5 %)	Red
Sparkling wine (11-12 %)	Red
Table wine, white (9-10 %)	Red
Wine, red (10-12 %)	Red
Wine, white (10-12 %)	Red
Non-alcoholic beverages/softdrinks	
Coke	Red
Coke, no sugar (light)	Yellow
Energy drink	Red
Fanta	Red

Fermented softdrinks (e. g. Bionade)	Yellow
Ice tea	Red
Ice tea, light	Yellow
Malt beer (0.04 - 0.6 %)	Red
Sprite	Red
Fruit juices and smoothies	
Apple juice, freshly-squeezed	Red
Banana juice, direct juice	Red
Beetroot juice, direct juice	Green
Blood orange juice, freshly-squeezed	Red
Buckthorn berry juice, freshly-squeezed	Green
Carrot juice, direct juice	Green
Elderflower syrup	Red
Grape juice, direct juice	Red
Grapefruit juice, freshly-squeezed	Red
Juice spritzer, home-made, 3(water):1(juice)	Yellow
Orange juice, freshly-squeezed	Red
Pineapple juice, direct juice	Red
Tomato juice, direct juice	Green
Hot beverages	
Cappuccino (without sugar)	Green
Coffee (no milk, no sugar)	Red
Coffee (with a little milk, no sugar)	Yellow
Coffee, sugared	Red
Coffee substitute	Red
Cereal-based coffee	Green
Malt coffee	Green
Chicory-based coffee	Green
Latte Macchiato (no sugar)	Yellow
Tea (no sugar)	Green
Meal replacements	
MetaShake, Type Alpha	Red
MetaShake, Type Beta	Green
MetaShake, Type Gamma	Red
MetaShake, Type Delta	Red
Smoothies	
Fruit smoothie, freshly made	Yellow
Green smoothie, freshly made	Green
Other beverages	
Beer, alcohol-free	Yellow
Brottrunk	Green
Kombucha (fermented tea)	Yellow
Sparkling wine, alcohol-free	Yellow



The CoGAP® Nutrition Portal

The nutrition portal of CoGAP® (<http://healthy-eating.cogap.eu>) offers the possibility of receiving recipe suggestions as well as diet and nutritional programmes that are adapted to the calorie requirements in accordance with the meta-type. These take into account not only the meta-types but also other personal characteristics such as gender, age, height, weight and physical activity.

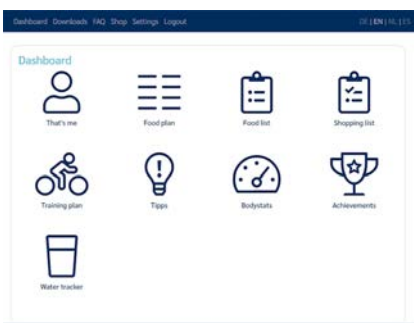


Individualized Nutritional suggestions

Individualized Recipe suggestions



BMI calculator, Calorie requirement, Sports and Nutrition tips



Sports section

Burn calories effectively!





Many people pursue the goal of building their muscles through sporting activities. The basis for a successful training plan to build muscle is the composition of your own muscle fibre. There are basically two types of muscle fibers: red muscle fiber (slowly twitching) and white muscle fiber (fast twitching). The composition of the muscle fibre is determined primarily by genetics and is therefore highly individual and differs from person to person. So if you know your own muscle fibre composition, you can perfectly adapt your training plan to build muscle.



In addition to effective muscle building, any form of exercise can generally have a positive impact on your fitness, health and well-being. Due to the increased energy consumption, weight loss is thus favoured. However, your genetic predisposition has an influence on which activities help you burn more calories. While the endurance version E (like "Endurance") is characterized by a high calorie consumption during endurance training, the (fast) power version S (like "Speed" or "Speed-Power") shows a significantly higher calorie consumption for both speed and muscle strength-based training types.

In a successful weight reduction plan, it is also important to regularly observe the development of the body by means of a profound body analysis. An extensive analysis includes the measurement of the individual relevant body compartments such as body water (TBW), fat-free mass (FFM), lean mass (LBM), fat mass (FM), body cell mass (BCM) and extracellular mass (ECM).

Your sport variant

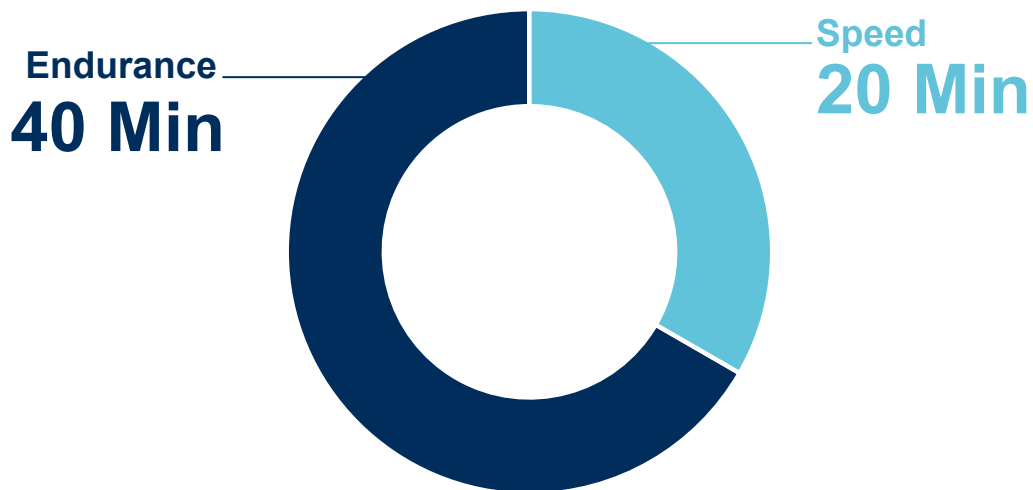
Factor	Effect	Speed	Endurance
Exercise	Endurance		

You have the **Sport-type E**. This means that you will have a more effective and therefore higher calorie consumption in all endurance-based sports (such as jogging, Nordic walking, swimming and rowing) than in speed strength-based sports.

Make the most of your genetic disposition and prioritize your training with endurance-based sports. For a 60-minute training plan, we recommend a distribution of endurance sports to speed and strength-based sports as depicted in the diagram below.

Nevertheless, any form of regular exercise is suitable for increasing your basal metabolic rate in the long term. If you are able to cope better with speed-strength training, it is advisable for you to integrate this more strongly into your training plan, instead of doing without sport altogether.

In addition, you should always ensure that the training is appropriate for your circumstances and does not lead to health issues, such as joint problems caused by excessive strain. Therefore, your training plan will be developed together with your trainer according to your personal needs, wishes and goals.





Further individual recommendations

For your sport variant E (Endurance), sports such as jogging, swimming, inline skating, cycling or walking are suitable. First of all, general stamina or basic endurance should be trained. The training can be structured as follows:

Training method

Focus on strength endurance training and (strength) enduring courses

Strength training

Strength endurance (approx. 15 – 20 repeats)

In addition and especially useful

Continuous method for cardiovascular equipment (basic stamina 50 – 70% max HF)

Training frequency

At least twice a week



Regeneration

While trainers and athletes put a lot of thought into designing a perfect training plan so that the body changes positively as quickly as possible, the regenerative measures are unfortunately often neglected. However, it is during this regeneration phase that the desired anabolic processes take place. A smart athlete will therefore give as much thought to suitable regeneration measures as to the training itself. If the ratio of load (training) and recovery time (rest) between units is correct, the supercompensation effect (the body builds up an energy buffer in order to be able to perform better) can be optimally exploited. If the ratio is not right, if training is done too often and possibly additionally too hard over a longer period of time, overtraining with overload of tendons, fasciae and joints can occur. Here oxidative stress in the individual cells and inflammatory reactions play a special role and can have a considerable negative influence on regeneration after strenuous training sessions. The muscles do not grow, they stagnate and the own performance can no longer be improved.

Your individual genetic evaluation has shown that your recovery ability is within the normal range. To ensure that you recover sufficiently, we recommend that you train your different muscle groups twice a week for optimal muscle growth. Please keep this in mind when creating a training plan so that you can prevent long-term muscle injuries.





Your sport type and EMS training

Electro-Myo Stimulation Training (EMS) enables you to effectively train all the muscles of your body. In addition, you can define various parameters of the EMS training, for example, you can adjust the frequency, duration of contraction and duration of use to suit your personal sport type, resulting in effective calorie consumption.



According to your sport type **Sport-type E**, we recommend that you adjust the parameters of the EMS training with the help of your trainer as follows, so that it corresponds to your genetic predisposition so that you effectively burn calories:

Training method	EMS-Training
Training frequency	Once a week (or at least 4 days break)
Training time	15 - 20 min
Intensity	low to medium
Supplementary training	1 - 2 times a week metabolic program or endurance training

Further suitable course offerings

If you are interested in attending sports courses, please refer to the following list. This offers you a large selection of courses, which are suitable for your sport variant.

We wish you much fun and success!

Cardio Courses

Aqua jogging, AquaFit, Basic Aerobic, Basic Cycling, Dance Moves, Energy Aerobic, Energy Step, Fatburner Cycling, Simple Power Aerobic, Step &Tone

Health Courses

Back & FlexiFit, FitBall, Pilates, Stretch & Relax

50+ Courses

Back & Flexifit, Dynamic Pilates, Start up Cycling, Start up Moves

Strengthening Courses

Belly X-Press, BTB (Butt, Thighs and Belly), Iron Back

Other courses

Aerobic, Aqua Fitness, Belly intensive, BodyBalance, BodyCombat, BodyPump, Body Workout, BOP, Bosu-Cardio, Bosu-Workout, Fatburner, Fit 40+, Fitmix, Flexibar, Hip Hop, Kinesis Gym, Latin Moves, Pilates, SH`BAM, Spine, Step, Step workout, Zumba Fitness





What's next?

Phase 2: The long-term weight loss and stabilization phase

This distribution is adapted to your individual strength of expression and is intended for the long-term weight loss phase or weight stabilization after the first 4 weeks. In order to ensure a balanced diet, you should adhere to the macronutrient distribution specified by us for the long term. With this distribution, you can continue to lose weight in a sustainable way and at a healthy pace after the first 4 weeks, or you can use it to maintain your target weight.



MetaCheck and Social Media

share your success in the social media and use the opportunity to exchange ideas with other MetaCheckers! Visit our social media channels and look forward to exciting information about nutrition, meta-type recipe ideas and interesting sport tips!

Follow us:



www.facebook.com/MetaCheck



www.instagram.com/cogapmetacheck



COGAP

CoGAP GmbH
Center of Genetic Analysis and Prognosis

Lungengasse 48–50
50676 Cologne
Germany

T: +49 221 630 607 010

F: +49 221 630 607 012

info@cogap.de

www.cogap.de