

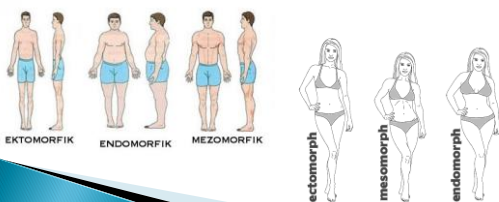
## Diet and supplementation solutions - body type

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### Three types of body:

There are three main types of body:  
**endomorph, ectomorph and mesomorph.**

They refer primarily to the structure of the skeleton not to the muscles.



### Endomorph:



- pear body shape,
- rounded head,
- wide hips and shoulders,
- highly fatty body, especially the arms and calves
- finds it hard to lose fat
- slow metabolism
- muscles not so well defined.

## Endomorph

- very solid body structure with typical rather short arms and legs.

- persons having such a structure **does not have an endurance and speed aptitude** (predispositions).

- **fast weight gain and rapid loss of fitness and exercise capacity** after the cessation of exercise.

- greater than other types of **ability to increase muscle mass** due to work (disciplines: shot put, hammer throw).




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- For **endomorphs** more important than training is the way of eating, which is **proper diet**.

- The diet should be based on **low-calorie products, rich in proteins and carbohydrates** (low GI) and **low in fat** (the daily dose should not exceed 15-20% of meals).

For endomorphs should not be any derogation from the diet, especially if they want to maintain a well-curved body with good muscles.




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- Due to the fact that endomorphists are a group of people with a particular **tendency to gain weight**, an endomorph's diet should be very restrictive.

- Endomorphs should focus primarily on: **white meat, lean fish and carbohydrates with the lowest glycemic index (GI)**.

- The condition for its success is completely **fat-free form** of food preparation.

- Extremely important is the **regularity of meals**, it is best if they do not exceed **4-5** per day.




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- In the case of people with **endomorph physique with a slower metabolism** there are usually no problems with covering the demand for energy components involving conventional food products.

- Definitely should be advised to avoid **carbohydrate preparations (supplements)** and **carbohydrate-protein, supplements** the use of which could lead to the **increase in body fat**. Carbohydrates are recommended to provide from the **low-processed** food.

- **Protein supplements - yes.** Increased protein intake promotes the **reduction of fat, accelerate metabolism and reducing appetite**. The use of a portion of the formulation after training may also be appropriate in the context of improving the **post-workout recovery**.




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### Thermogenic supplements – yes (!)

The best are the supplements based on: **caffeine, extracts of green tea, green coffee, yerba mate, bitter orange, cayenne pepper (capsaicin) and black pepper.**

These components have a **thermogenic effect**, which stimulate the **production of heat**, which entails increased energy expenditure. In addition, caffeine stimulates the body, reduces fatigue (tiredness) and stimulates to action.




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- Persons applying more restrictive calorie diet may include **branched chain amino acids BCAA supplementation**, which **can boost your post-workout recovery**.

- A valuable addition to the diet may be concentrated formulations containing **fish oil**, providing **polyunsaturated fatty acids**, which are often lacking in the daily diet. Proper intake affects not only beneficial for the **cardiovascular system and the nervous system**, but also can be justified in the context of the work on the **aesthetics of the figure**.

- You can also think about taking **vitamin and mineral supplements**.




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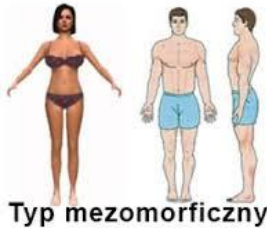
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## Mesomorph:



Typ mezomorficzny

- wedge shape of the body,
- cubic shape of the head,
- broad shoulders,
- muscled arms and legs,
- narrow hips,
- a small amount of body fat.
- athletic
- strong
- gains muscle easily
- gains fat more easily than ectomorphs

## Mesomorph

- Best in the sport, in which **strength, agility and speed** dominated.
- His **"medium high" physique** and with a clear tendency for rapid muscle and strength growth makes him a perfect candidate for the **best player in almost every sport**.

Such people **lose and gain weight** quickly.

- The **mesomorph** body type responds the best to **weight training**.

- **Gains are usually seen very quickly**, especially for beginners.

- The downside to mesomorphs is they gain **fat more easily than ectomorphs**. This means they must watch their calorie intake.

- Usually a combination of **weight training and cardio** works best for **mesomorphs**.



### Mesomorph

- This is the **most balanced type of body**.
- **Combines the best features** of the other two types.
- **Quite easily gains a mass** at a normal, good diet and regular physical activity.
- The downside may be that these people tend to fall into **excessive complacency and excessive self-confidence** can blind them.



### Nutrition of mesomorph

- **Meals should be frequent (6-7 a day)**, but not abundant, as they could interfere with the digestive process.
- The basis should be **carbohydrates** (65% of the daily ration of calories), i.e. rice, porridge, cereals etc., **proteins** (25%) of egg whites, chicken breast or turkey, fish, lean white cheese, etc., **fats** (15-20%) mainly plant fats, butter fat.
- Selection of nutrients and supplements should be of **secondary importance**. Supplements should be incorporated into the diet after a few weeks of regular training.



- In the case of people with **mesomorphic physique**, depending on the deficiencies in the diet may be advisable to use both of **proteins and carbohydrate-protein supplements**. Caution in the case of the latter should retain people with higher levels of **fat tissue**, or with tendency to gaining fat.

- **Slimmer people**, at greater effort may apply carbohydrate and protein supplements without worrying, of course, adjusting the dose to the body's needs.

- Keep in mind that supplements are **not a replacement for a proper diet**.



## Ectomorph:



- Small "delicate" frame and bone structure
- Classic "hardgainer"
- Flat chest
- Small shoulders
- Thin
- Lean muscle mass
- Fast metabolism

Ectomorph's features **petite physique**, it can be described as a slender and "thin" and therefore **strength sports are not recommended** for them, also because of the high susceptibility to injury.

They perform well in **endurance sports and gymnastics**.

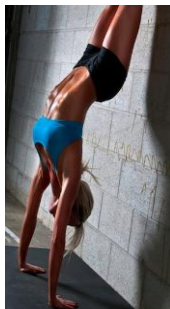
They have a body structure that promotes efficient **thermoregulation occurring processes** (the ability to maintain body temperature), which in many sports play an important role.



• Ectomorph quickly **recovers losses after exercise** - can train often.

• Ectomorph **burns very quickly** - to a normal caloric intake must add at least **1000-2000 kilocalories**. If we don't do that his muscles burn carbohydrates quickly, and after that **they will burn themselves**, removing the effect of training.

• The minimum is **5 nutritious meals**, including plenty of **complex carbohydrates and protein**.



- In the case of **ectomorphs** the **carbohydrates** should play the dominant role in the diet – they are indispensable provider of energy and starters of anabolic processes.

- The amount of **protein** in the meal of **ectomorph** should evolve to a level of **15-30%**, and **carbohydrates** in the diet should be a pool of **60-65%**.

- **Ectomorphs** can afford to consume **simple carbohydrates**, because effectively they **raise insulin levels** and the body does not lose energy for their absorption.

- They can easily eat **wheat bread, potatoes, white rice, fruits and fruit juices**. Without remorse and negative effects they can also afford to sweets, ice cream.



- **Ectomorphs** find it very **hard to gain weight**.

- They have a **fast metabolism** which burns up calories very quickly. Ecto's need a huge amount of calories in order to gain weight.

- Workouts should be **short and intense** focusing on big muscle groups.

- Supplements are definitely **recommended**. Ectomorphs should eat before bed to prevent muscle catabolism during the night.

- Generally, **ectomorphs** can **lose fat very easily** which makes cutting back to **lean muscle** easier for them.



**Thank you for your attention**

