



**Dmitrijs Milkevics - Latvia**

**SPECIAL RUNNING  
DIETARY SUPPLEMENTS  
MADE IN ITALY**

**SYFORM**

# RUNNING AND NUTRITION

The sport of **RUNNING** includes the specialties of medium and long-distance walking race, from the 10,000 meters to the marathon and beyond. Running is a sport with a high water and energy expenditure, from the 700 (marathon) and 950 (10,000 m) kcal / h. In the running, technique and training probably affects the performance more significantly than proper nutrition. However, it is appropriate to point out that good nutrition does not improve much the performance but a bad one gets it worse. For the runner is very important to achieve and maintain an optimal body weight, restore and use well the energy reserves, ensure a good plastic-muscle efficiency and maintain an optimal immune system. Running is classified as an aerobic sport, without significant accumulation of lactic acid in the muscles, at medium-high intensive labor; is in fact the oxygen that results in the production of energy (ATP) to perform the exercise, starting from the decomposition of sugars, fats and even protein.

These are the three running speeds that are considered aerobic:

- 1) between 10 and 12 km/h time per km between 5 and 6 minutes
- 2) between 12 and 14 km/h time per km between 4.15 and 5 minutes
- 3) between 14 and 16 km/h time per km between 3.45 and 4.15 minutes

A good level of training is able to lead to adaptation mechanisms, which allow the muscles to make the best possible use of the energy reserves. Another particularly important factor in running is the maintenance of the hydrosaline reserve, and so a good condition of cellular hydration and minerals concentration.



To recharge the body and improve the performance it is necessary not to forget to drink a lot and regularly, even in the days when you don't train. Endurance trainings, especially if carried out in summer, cause intense sweating that results in loss of fluids and minerals. These losses must be absolutely replenished to maintain the muscle's reactivity.



Proper nutrition is essential for the runner to compensate for the significant increase in energy-plastic requirement, and to maintain an optimal muscle efficiency.

For endurance athletes, who consume a high amount of calories at each workout (500-700 kcal / hour), carbohydrate and fats coming from the nutrition are the main source of energy.

**Carbohydrate** contained in starchy foods (pasta, rice, potatoes, cereals ...), at gradual release of energy, and the simple sugars (eg. glucose and fructose in honey and fruits) are deposited in the liver and muscles in the form of glycogen, an energy reserve that is essential to make any kind of effort.

The carbohydrate to be preferred are undoubtedly the complex ones, of pasta, rice and whole grains; while you should avoid as much as possible simple sugars, contained in particular in sweets. Complex sugars stabilize glucose and increase the amount of muscle glycogen, so the availability of energy during the exercise.

The role of fats and protein should be carefully considered in the nutrition of a runner.

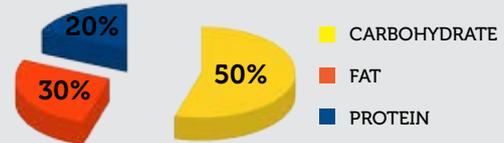
**Fat** play an important role from the energy point of view. In particular, unsaturated (linoleic acid, Omega 3) and short-chain fatty acids, contained in the oils and oilseeds fruits, are quickly utilized by the muscle during the exercise, at medium intensities.

Moreover a correct intake of polyunsaturated fatty acids, linoleic acid and Omega 3, is essential to keep your cardiovascular system in good health and protect the osteoarticular system, particularly stressed in the runner, and often victim of chronic inflammatory processes.

**Protein**, although they are not involved in terms of energy, play a primary role. They are indispensable for the maintenance and growth of the muscle structure (plastic role), and they maintain the efficiency of the immune, endocrine, nervous and digestive systems.

Protein from animal sources (meat, fish, eggs, cheese) have a better nutritional value compared to those of plants (legumes, soybeans) because they contain a greater quantity of essential amino acid, branched included. For this reason, they feed more specifically the muscle tissue. For this reason, a balanced diet should on average contain the following caloric distribution:

### BALANCED NUTRITION



## AVOID THESE DIET MISTAKES

### 1) Taking too many calories and then gain weight

Over-consumption of carbohydrate and fats, which generally produce a feeling of well-being to the athlete during and after training or performance, are often cause of overweight.

### 2) Take at all costs carbohydrate supplements

Good nutrition is able to restore optimally the reserves of muscle glycogen.

### 3) Take too much carbohydrate in the pre- race

If you take them in the immediate pre-race of a short distance race (up to 15 km) it will block the release of glycogen, not offset by the increase in circulating glucose. For short races the runner has all the energy he needs, you should just use it.

### 4) Take too little protein

A low-protein diet (less than 15%) makes it difficult to reconstruct muscle after exertion.

### 5) Take too little fats

It is not true that to lose weight you have just to limit the fat intake, moreover it means to use carbohydrate as the main source of energy, that are wasted for low-intensity activities. The percentage of fats should not falls below 20%.

## RUNNER'S CALORIE CONSUMPTION

Knowing the calorie consumption of the run is of fundamental importance to adjust the introduction of food. The energy requirement of the race does not depend on the speed at which you run, but rather on the distance covered. Using the approximation of 1 kcal per kg of weight and per km covered, you can easily calculate the consumption of the race from the weight and the distance covered. If C is the consumption in calories, W the weight in kilograms and d the distance:

$$C=W*d$$

( C= calorie consumption - W = weight in Kg - d = distance in km)

You should also consider the individual variable of the race efficiency, which can account for a +/- 20%.

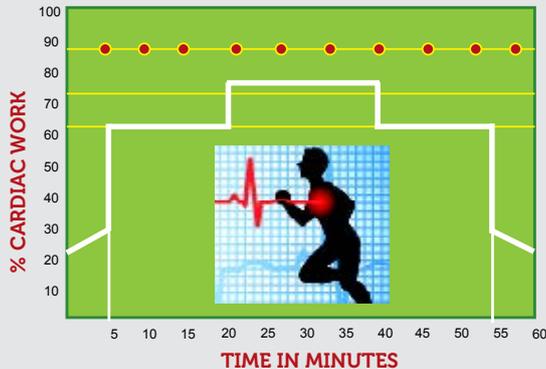
Far more interesting is the consideration about the fuel used by the athlete. Generally people believe that the athlete uses normally carbohydrate, while the use of fat intervenes only at low speeds (for example, in a marathon the estimated fat use is about 20%). Actually, it has been demonstrated for a long time that protein are used as energy source when glycogen stores are low. The fuel used depends on:

- a) the speed at which you run
- b) the level of training
- c) the ability to run under conditions of glycogen depletion

The first two points are in line with the traditional cultural information; the third one tells us that the more the athlete is used to running with low stores of carbohydrate, the more he/she increases the ability to burn fats and protein. This occurs in those who train every day (athlete A), and often must do so without having completely recovered the previous workout. Those who train three times a week (athlete B) will instead perform the training having fully recovered and the body will continue to use carbohydrate. In the case of a slow long-distance run of 20 km, we can suppose that for the athlete A the mixture is 60% carbohydrate, 30% fat and 10% protein, while for the athlete B 80% carbohydrate, 15% fat and at most 5 % protein.

Apart from percentages, it should be noted that the new vision explains why athletes of the B type have usually limited capacity of recovery: if their glycogen reserves are not at most their performance drops dramatically, while in athletes of the A type the drop is less substantial.

**DIAGRAM: Ratio between intensity of effort and energy sources**



**VO<sub>2</sub> max > 85% : ANAEROBIC = CARBOHYDRATE 100%**

**VO<sub>2</sub> max between 60 and 85% : mixed aerobic-anaerobic= CARBOHYDRATE 70%+FAT 30%**

**VO<sub>2</sub> max < 60% : AEROBIC = FAT 70%+CARBOHYDRATE 30%**

The diagram shows how the type of energy used varies according to the different exercise intensity. During the high stress (> 85%) energy is mainly supplied by the oxidation of carbohydrate, while when the intensity is less than 60% it is almost exclusively supplied by fat.

Therefore, depending on the type of training to deal with, the approach with food and integration will have necessarily to change. During a high workload, we recommend using a supplement containing carbohydrate at different speed of assimilation (X-PLOSIV or REISPRINT) to be used in short intervals and small sips, while during a moderate workload a supplement based on sugars at a slow speed (CARBO SPEED). It is also particularly important that the concentration of the drink does not exceed 6% (30 g powder / 500 ml), to favor a fast gastric emptying and a rapid availability of energy.



## WHY SUPPLEMENTS?

Physical activity and frequent workouts involve high consumption of sugars, water and minerals and an increase in oxidative stress resulting in the production of free radicals. We said that runners have a high plastic-energy consumption that proper nutrition is normally able to meet. However competitive athletes train very frequently so they can't always ideally programme the intervals between meals and training; finally, during the competitive season, they are inevitably subject to considerable drops in athletic condition.

Foods alone are not always able to compensate these needs, as not available in a quickly assimilable form.

For this reason the athlete can resort, in a highly focused way, to natural food supplements, able to quickly rebalance the functions and nutritional losses which the body goes towards during exercise. Dietary supplements should not be confused neither with drugs nor with doping products. However, they must be chosen carefully and according to the actual physical needs. Dietary supplementation, in fact, if is properly and customized according to individual needs, together with the will, spirit of self-sacrifice and hard training, is an excellent resource to sustain the performance.

## SYFORM SUPPLEMENTS

Syform provides the runner a complete line of specific supplements, particularly technical, based on nutrients of high quality and in effective formulations to support the maximum performance during trainings and competitions. Runners should pay close attention to nutrition and supplementation. We need to give due importance to the energy nutrients such as those specific to muscle mass, vitamin minerals, antioxidants and detoxicants in relation to the seasonal commitments.

We selected them for you, in relation to their nutritional meaning, dividing them into four categories according to the following diagram. Contact our experts, through the website, or request more information via email.

## PRODUCT LINES



PROTEIN=STRUCTURE



AMINO ACID=STRENGTH



CARBOHYDRATE=ENERGY



MICRONUTRIENTS

## QUALITY CREATION

Creation of formulas with active ingredients, well-supported by clinical studies

Use of registered trademark raw materials or with production patents



Selection of vegetable extracts obtained with innovative extraction methods

Not subjected to radiation raw materials, GMO free, BSE free, gluten free, sugar free and preservative free

Use of vegetable capsules Vegicaps®, time-release tablets, film coated and gastro-resistant

Selection of certified production laboratories

Microbiological, organoleptic and nutritional compliance certificate



## STRUCTURE & STRENGTH

The products belonging to this section are particularly suited to promote the increase and the efficiency of the muscle mass, necessary for a perfect shape in general. The protein of milk powder are particularly useful to enrich breakfast, make nutritious snacks between meals, and, if it's necessary, to replace protein foods.



### BALANCE

#### MILK PROTEIN - RETARD ACTION + TONE + LEAN BODY MASS

Casein milk protein and isolated whey protein, rich in essential amino acid, gradually absorbed, "retard." Balance is ideal for strengthening the muscles, to support heavy workloads and improve elasticity, tone and muscle force. Highly soluble and digestible, it is suitable to enrich nutritious snacks.



### NUTRISOY

#### SOY PROTEIN

Isolated soy protein **Supro®** for those who are allergic to milk protein. It promotes an increase in strength, endurance and muscle volume. It tones up the tissues and stimulates the immune system. It's highly and rapidly assimilable.



### FRIRAM

#### MUSCULAR STRENGTH

Supplement of **Kyowa** BCAA, among the most qualitative in the world. Essential throughout the year to ensure maximum efficiency and energy to the muscle. The amino acid spare muscle mass, promote the recovery, but are also strongly anti-fatigue and energetic. Ideal during competitions and sessions of intense training.



### SYNTHESY - HMB

#### PROMOTES MUSCLE TROPHISM

Supplement HMB and KIC, two substances that come from the metabolism of branched chain amino acid; they play an important role in promoting muscle protein synthesis after a very intense workout. Ideal in case of weight loss, poor recovery capability, and to strengthen the muscle mass.

# ENERGY & ENDURANCE



Vitargo®

## CARBO SPEED VITARGO® INNOVATIVE ENERGY

Contains traditional maltodextrins, isomaltose and **Vitargo®**, a revolutionary maltodextrin from corn that is specifically designed to meet the energy requirement of athletes subjected to aerobic sports for at least 1 hour.



## VO2 BEET RED AND NITRATE

Innovative energetic supplement based on complex carbohydrates beetroot and arginine, which improves muscle oxygenation and supply constantly energy, improves the production of nitric oxide. Ideal for training and pre-competition.



## SMARTY vial and Shot CONCENTRATION AND ADRENALINE

A concentration of substances that promote the highest nervous charge and concentration. It can lower the threshold of fatigue, improve the immune response and reactivity.



## REISPRINT ENERGY AND MINERALS

Hypotonic saline energy supplement in powder form. It contains sugars at different speeds of absorption for a short, medium and long energy response, and also minerals of magnesium and potassium. Taurine has a stimulating action from the nervous point of view. Ideal for training and competition.



## FINAL RACE gel ENERGY FOR THE FINAL SPRINT

Single-dose energy gel, indicated for the periods of particular intense training. It reduces fatigue, favours a rapid recovery of the explosive capacity in the final phase of the exercise. It contains 3 g of **fructose 1-6 di-phosphate**, acetylcarntine, beta-alanine, magnesium.



## MALTO+ gel VERY PURE MALTODEXTRIN IN GEL FORM

Energy drink based on pure maltodextrin, at D.E.19 (dextrose equivalence), for a short, medium and long-term energetic response. It promotes a rapid gastric emptying and has a slightly marked aroma, ideal for the runner during training and competition, to be taken with some sips of water.



## **X PLOSIV gel**

### **CHARGE OF IMMEDIATE ENERGY**

Concentrated energy drink of carbohydrate and magnesium. With maltodextrin, glucose and dextrose: over 60% of carbohydrate. Magnesium is useful for counteracting cramps and final race fatigue. It contains a great Red Vine extract that improves muscle oxygenation during the exercise and counteracts the oxidation.



## **SYBAR ENERGY FRUIT**

### **ENERGY FROM FRUIT**

Energy bar based on tasty pasta of fruit and cereal flakes. It is a concentrate of pure energy, to obtain an immediate charge at any time of need. Its best quality is the very high digestibility.



## **RECOVERY**

Products belonging to this section are specific to allow the runner overcoming the most difficult moments of the season, in which regularly occurs a significant decrease in performance, you get sick easily and the energy lacks.

As well as a needed rest, this is the most important time to restore the essential nutrients.



## **COMPETITION**

### **POWER, ENDURANCE, RECOVERY**

Concentrate of carbohydrate at different speeds of absorption, amino acid, minerals and antioxidant factors. It is a complete formula to deal with a prolonged effort and to facilitate the recovery post workout. It gives energy, saves muscles and promotes the recovery.

*It is also available in convenient single-dose sachet!*



## **GL3**

### **RECOVERY**

Supplement of 3 different types of glutamine, an important amino acid that favours the muscle plastic recovery after a prolonged exercise. It is also detoxifying and very effective in supporting the immune system, particularly weakened by an intense workout.

## SPECIFIC SUPPLEMENTATION



### EFA BLU CARDIOVASCULAR PROTECTION

Highly qualitative supplement, concentrated at 72% in **Omega 3** fatty acids, obtained by triple-distillation of fish oil oily. Contains 40% EPA and 20% DHA. Promotes cardiovascular function.



### EMAFOL HIGHLY BIOAVAILABLE IRON

Supplement of iron, an extremely beneficial mineral for the athlete, and hard to be orally assimilated. It contains lactoferrin, a special whey protein that significantly increases the iron absorption, together with pyrophosphate iron **Sunactive**®, Vitamin C, B12 and folic acid.



### MGK MAGNESIUM AND POTASSIUM

Supplement of magnesium and potassium, very precious minerals for athletes. Useful to supply these two elements during summer, when the excessive sweating increases their requirement, to improve the cellular energy metabolism and prevent cramps.



### NOLATTICO COUNTERACTS THE LACTIC ACID

It favours the increase of carnosine, a substance that counteracts the excessive muscular acidosis and the accumulation of free radicals. Nolattico is ideal during the phase of lactate work, to promote the recovery and to support very intense efforts.



### NOSENEX NATURAL ANTIOXIDANTS

Concentration of the latest generation of antioxidant micronutrients, made entirely of plant derivatives. Antioxidants are substances which play the most important role of safeguarding the health against any element capable of producing a cellular damage, which eg. the exercise. With **Goji, Resveratrol** and **Green Tea**.



### CARNITINE FAVOURS ENERGY FROM FATS

Carnitine and acetyl-carnitine supplement. It plays a tonic and energy action. It makes possible a greater use of fat, saves muscle glycogen, facilitates the performance of intense physical aerobic exercise. Ideal for particularly long competitions.



# SUPPLEMENTATION PLANS



## NON COMPETITIVE RUNNING

For those who practice running without any competitive ambitions, dietary supplementation may be very simple and focused on the sole objective of ensuring an optimal energy efficiency during the training. For the "Sunday's Runner " it is important to start the exercise with the highest glycogen stores. It is therefore essential to have followed a high carbohydrate diet. Otherwise the use of a supplement based on complex carbohydrate is ideal.

### 1-HOUR TRAINING

1 h BEFORE TRAINING

**CARBO SPEED** or **MALTO+**  
2 scoops in 300 ml of water



## COMPETITIVE RUNNING PRE-COMPETITIVE PREPARATION

This period of the year is characterized by the resumption of the training to regain an optimum condition and to improve the general deficiencies found during the previous season. At this stage, the athlete is subjected to a heavier work, aimed at recovering a good muscle tone and the ideal weight. The athlete should follow a balanced and varied diet, rich in structural nutrients , vitamins and minerals.

### SUPPLEMENTATION FOR 2 MONTHS

1 HOUR BEFORE TRAINING

**CARBO SPEED** or **VO2**  
2 scoops in 300 ml of water

DURING TRAINING

**REISPRINT**  
1 sachet or 2 scoops every 90'  
of work

AFTER TRAINING

**FRIRAM**  
5 tablets

MID-MORNING OR  
MID-AFTERNOON SNACK

**BALANCE** or **NUTRISOY**  
1,5 scoops in 200 ml of water

### NOTES

- Our protein contain less than 1% of lactose, but if you are allergic to milk protein you should use **NUTRISOY**, which is based on excellent soy protein.
- To improve the recovery it is possible to associate 4 tablet of **SYNTHESY** with **FRIRAM**, after the training.

# SUPPLEMENTATION PLANS



## COMPETITIVE RUNNING COMPETITIVE PREPARATION

Runner's competitive activity normally involves a series of planned events, on average from one to two middle distance races per month. It is important to manage the training very well, rationing out workloads and energies, to preserve them throughout the competitive season. For this reason, you should plan also the nutrition and dietary supplementation, which may be very useful to speed up the recovery and to supply all the main nutrients used during the exercise at appropriate times.

### 1-HOUR INTENSE TRAINING

1 HOUR BEFORE TRAINING

**CARBO SPEED** or **MALTO+**  
2 scoops in 300 ml of water

15 MIN. AFTER TRAINING

**REISPRINT**  
1 sachet or 1,5 scoops in 500 ml of water

### NOTES

- If **COMPETITION**, containing aroma and being a complex formula, creates gastrointestinal problems, you should ensure the supply of energy by **CARBO SPEED** and **MALTO+**, in a dose of 30 g/hour, associating with **FRIRAM** or a single-dose gel.
  - During summer take **MGK**, 2 tablet 1 hour before the race.

### 2 or 3-HOUR TRAINING

40 MIN. BEFORE TRAINING

**VO2**  
2 scoops in 300 ml of water

MID-TRAINING

**FRIRAM** 5 tablet  
**REISPRINT**  
1 sachet or 1,5 scoops in 500 ml of water  
**SYBAR ENERGY FRUIT**  
as needed

20 MIN. AFTER TRAINING

**COMPETITION**  
1 or 2 scoops in 500-600 ml of water

### 3-HOUR RACE

2 HOURS BEFORE RACE

**CARBO SPEED**  
2 scoops in 300 ml of water

40 MIN. BEFORE RACE

**SMARTY** 1 vial

DURING RACE  
after 20 minutes from start  
at 2/3

**COMPETITION\***  
1 sachet or 3 scoops in 500-600 ml of water sip in a hour

**FINAL RACE GEL** 1 single-dose

20 MIN. AFTER RACE

**CARBO SPEED** 2,5 scoops  
**BALANCE** 2 scoops  
dissolved in 500 ml of water

\* or **REISPRINT**  
1 sachet or 1,5 scoops in 500 ml of water

# SUPPLEMENTATION PLANS



## SPECIFIC SUPPLEMENTATION

to customize according to the specific individual situations

PHYSICAL DISORDER	RECCOMENDED PRODUCT
LACTIC ACID	<b>NOLATTICO</b> 1 scoop daily before bedtime for a month
IRON DEFICIENCY	<b>EMAFOL</b> 1 capsule, twice a day, after meals
ANTIOXIDANT	<b>NOSENX</b> 1 tablet daily - for 2 months - during particularly overworking periods, or 1 tablet every other day, for the whole season.

### WARNING:

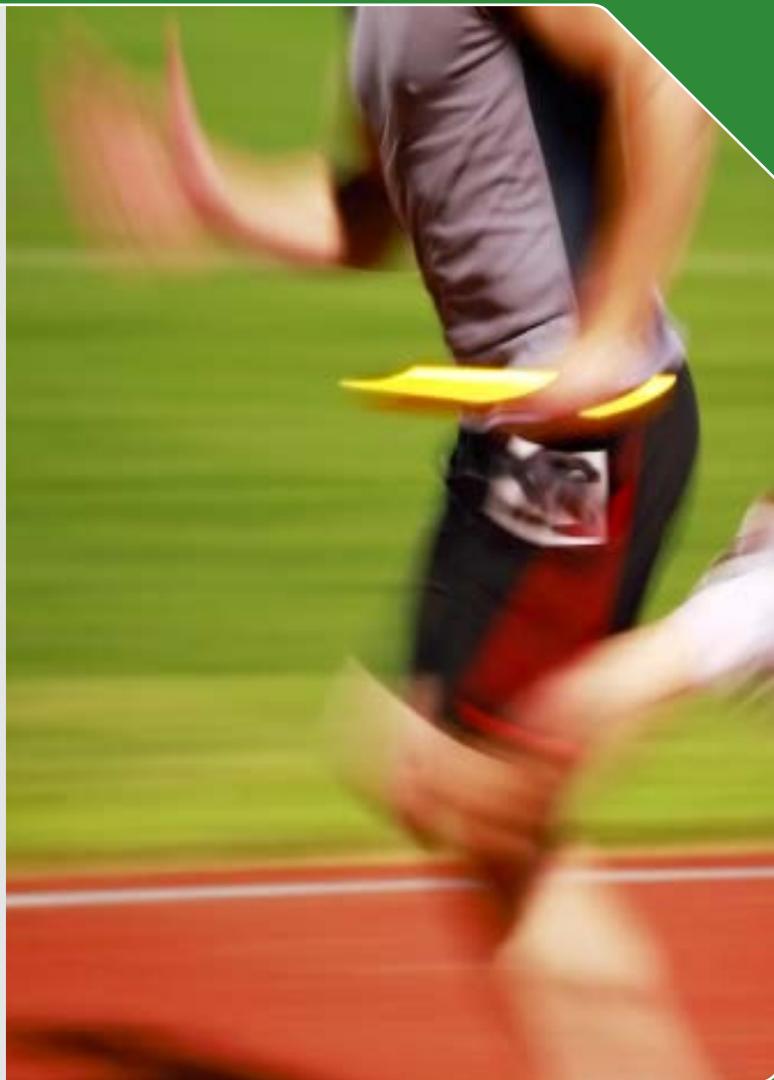
The supplementation plans that are illustrated in this guide are purely suggestive.

The first factor that has to be analyzed is the individual variability of response. The trainer and the athlete, in concert must constantly monitor the feelings that the training produces, in order to correct any negative symptoms (eg. fatigue, muscular acidosis, difficulty of recovery or properly resting), also using a supplementation plan that is different from the one proposed.



In this guide there is only a part of the wide range of Syform supplements.

You can download the complete catalogue at [www.syform.com](http://www.syform.com)



## SYFORM QUALITY

In a rather delicate and complex market situation, in the maze of tens of thousands commercialized supplements, Syform continues to base its philosophy on the concept of Quality, understood as a guarantee of the correspondence between the content of the product and what declared on the label, maintaining the security and healthiness of the same.

The **Quality** of the product is always the first and most valid guarantee of competitiveness.

It is necessary, however, that the end user is informed of this in order to be able to freely choose the product that he consider most suitable for his needs, in relation to the selling price.

For this reason, we are beginning to make available to our resellers, specific technical information about Syform supplements.

In our opinion, we believe that this is the only way liable, today and in the future, to appreciate the important functionality of the dietary supplement.

In this way we aim also to protect our business partners and their professionalism.

### FIND SYFORM SUPPLEMENTS IN:

- **CHEMIST'S AND PARAPHARMACY**
- **THE BEST SPECIALIZED SHOPS**

Stay tuned



## SYFORM SERVICES

### 1) THE EXPERT ANSWERS

In the "LIVE" section on syform.com, you can have free access to our experts' answers to general questions on Syform supplements.

### 2) NUTRITIONAL ADVICE

In the "LIVE" section you may directly contact our experts to receive a customized nutritional advice service. This is a chargeable service.

### SYFORM CONSULTANTS

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