

<< As featured in the “2004 Physicians’ Desk Reference” >>

**SON Formula® Tablets**

**[(Master Amino Acid Pattern (MAP®))]**

**A safe and effective substitute for dietary proteins**

**DESCRIPTION**

SON Formula® (MAP®) is a patented dietary proteins substitute, which provides a unique pattern of essential amino acids, in a highly purified, free, crystalline form. After oral ingestion, SON Formula® is rapidly utilized. SON Formula® does not require the aid of peptidases and therefore, it is absorbed, within 23 minutes, through the first 100 cm of functional small intestine. SON Formula® does not provide any fecal residue. SON Formula® is amphoteric. SON Formula® is supplied in tablets of 1,000 mg for oral administration. Each tablet of SON Formula®, in addition to the active ingredient MAP®, contains no inactive ingredients.

**COMPOSITION**

SON Formula®, in a dose of 10 g, provides the following essential amino acids profile:

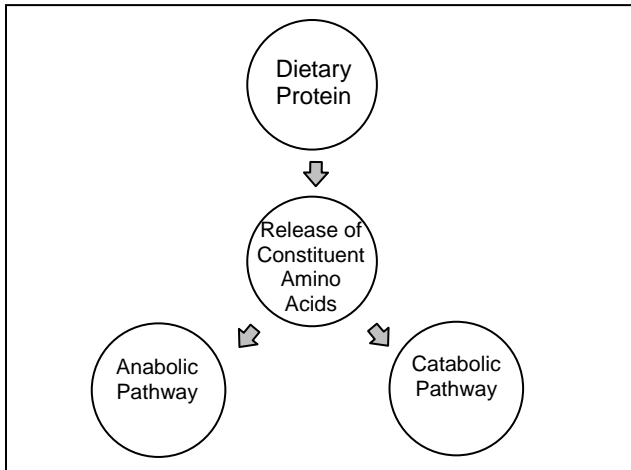
L-Leucine	1.964 g
L-Valine	1.657 g
L-Isoleucine	1.483 g
L-Lysine	1.429 g
L-Phenylalanine	1.289 g
L-Threonine	1.111 g
L-Methionine	0.699 g
L-Tryptophan	0.368 g

**CLINICAL STUDIES**

The results of a comparative, double-blind, triple crossover Net Nitrogen Utilization (NNU) clinical study have shown that the subjects, while taking MAP®, as a dietary proteins substitute, achieved a body’s 99% NNU. This means that 99% of MAP’s constituent amino acids followed the anabolic pathway, thus acting as precursor of body’s protein synthesis. By comparison, dietary proteins only provide between 16 to 48% NNU. This fact evidences that MAP is more nutritious than dietary proteins. This has been confirmed by the fact that during the study, each subject body’s nitrogen balance was maintained in equilibrium by taking MAP, as a sole and total substitute of dietary proteins, in a dosage of only 400 mg/kg/day, which provided less than 2 kcal/day (1g MAP= 0.04 Kcal). The study results have also shown that 1% of MAP’s constituent amino acids followed the catabolic pathway, thus releasing only 1% of nitrogen catabolites and energy. By comparison dietary proteins release between 52% to 84% nitrogen catabolites and energy. This fact evidences that MAP is safer than dietary proteins, and that provides the lowest amount of energy in comparison to any dietary protein.

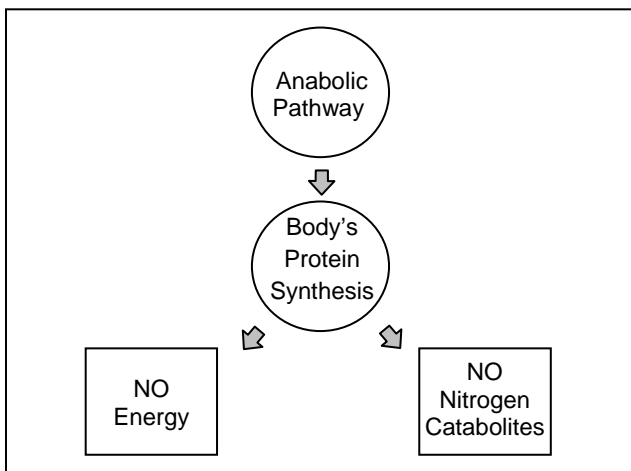
To illustrate: when a dietary protein is digested, it releases its constituent amino acids into the small intestine, where they are absorbed. Then, those amino acids can follow either the *anabolic pathway* or the *catabolic pathway* (Fig. 1).

**Figure I. Dietary Protein Metabolism**



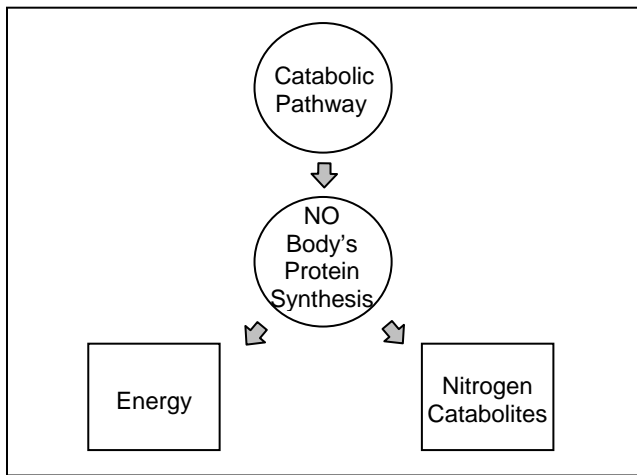
When dietary amino acids follow the *anabolic pathway*, they act as precursors for the body's protein synthesis, thus becoming the body's constituent proteins. Throughout the *anabolic pathway*, amino acids do not release any nitrogen catabolites or energy (Fig. II).

**Figure II. The Protein Metabolism Anabolic Pathway**



On the other hand, when dietary amino acids follow the *catabolic pathway*, they act only as a source of energy and not as precursors of body's proteins synthesis. Throughout the *catabolic pathway*, amino acids do release nitrogen catabolites and energy (Fig. III).

**Figure III. The Protein Metabolism Catabolic Pathway**



**INDICATIONS AND USAGE**

SON Formula® is indicated as a safe and effective substitute for dietary proteins.

**SON Formula® Vs Dietary Proteins**

<b>Characteristics</b>	<b>SON Formula®</b>	<b>Dietary Proteins</b>
Net Nitrogen Utilization (NNU)	99%	16% - 48%
Nitrogen Catabolites	1%	52% - 84%
Body's Protein Synthesis	10g	Approx. 350g
Energy	0.04 Kcal/g	4 Kcal/g
Digestion	Approx. 23 minutes	3 – 5 hours
Contraindications	None	Renal Failure or Hepatic Failure
Adverse Reactions	None	Food Sensitivities
Shelf-Life	3 years	1 – 4 days
Refrigeration	Not needed	Needed
Volume	Approx. 30cc.	500 – 1000cc.

**ADVERSE REACTIONS**

No adverse reactions have been reported.

**OVERDOSAGE**

No adverse reactions have been reported.

## **DOSAGE AND ADMINISTRATION**

SON Formula® should be administered with food. SON Formula® in a dosage of 400mg/kg/day has been shown to be adequate, as a sole and total substitute of dietary proteins, to maintain the body's nitrogen balance in equilibrium. To calculate the SON Formula® dosage necessary to substitute dietary proteins, apply the following:

$$\text{SON Formula® dosage} = (\text{Dietary Protein} \times 0.4) \text{ g}$$

For instance: to calculate the dosage of SON Formula® necessary to substitute 10 g of dietary proteins, proceed as follows:

- a. SON Formula® dosage = (Dietary Proteins x 0.4) g
- b. SON Formula® dosage = (10 x 0.4) g
- c. SON Formula® dosage = 4 g

Therefore, 4 g of SON Formula® provide a body's protein synthesis equivalent to that provided by 10 g of high biological value dietary proteins.

## **SUPPLY INFORMATION**

SON Formula®, is available in bottles of 100 tablets of 1,000 mg, for oral administration.