

Mevalia

AMINO
ACIDS



GMP-based protein substitutes and a sense of fullness. Powered by Mevalia PKU GMPOWER.

GMPOWER is a product based on glycomacropeptide, which is naturally free from phenylalanine*. It is a preferred tasting protein supplement for the dietary management of PKU patients.

Endless innovation brings powerful solutions.

DrSchär

* The residual amount of Phe is due to the presence of minor amounts of other proteins/peptides.

BENEFITS OF GMP FOR PKU PATIENTS (2)

GMP intake shows greater ghrelin suppression than AA intake [6].

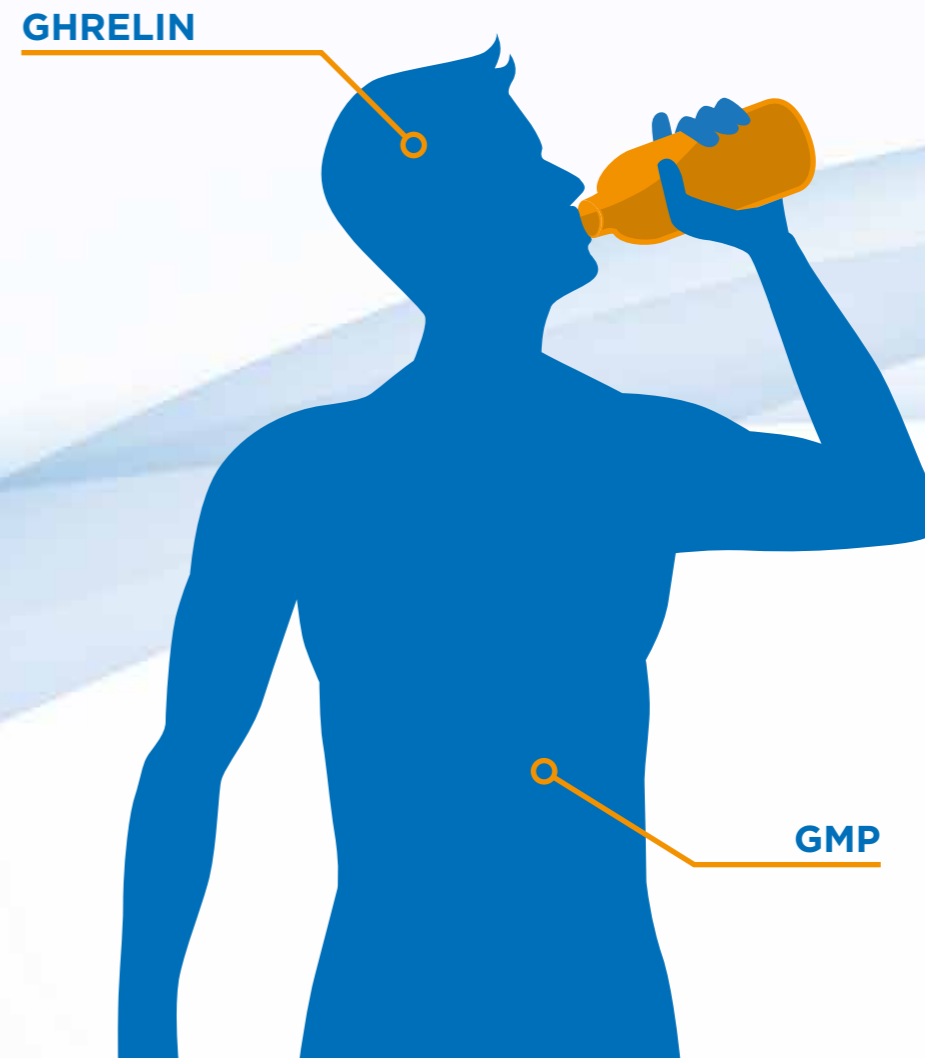
Whey proteins, such as GMP, may decrease appetite due to sustained levels of plasma AAs [10], whereas synthetic AAs cause an acute rise in plasma AAs which disappear from plasma faster and to a greater extent compared to intact protein, resulting in increased appetite shortly after a meal [11,8].

Supportive of this hypothesis, a breakfast containing GMP induced higher total postprandial plasma AA and lower ghrelin concentrations. Moreover, our data show an association between lower postprandial ghrelin concentration and **greater feelings of fullness suggesting that a GMP meal sustains satiety when compared with AAs.**



Significant changes in plasma concentrations of ghrelin, insulin and amino acids were apparent with the GMP diet. Ghrelin and insulin values represent equal volumes of plasma combined for each subject from days 3+4 for the AA breakfast, days 7+8 for the GMP breakfast. Sum of postprandial (PP) plasma AA values on the last day of the AA diet (day 4) and last day of the GMP diet (day 8). All values are means \pm 3 SEM; n=6 for ghrelin fasting values [1].
 *Indicates significantly different from postprandial ghrelin with AA breakfast (p=0.03, paired t-test, pairing on subject; n=10)
 **Indicates moderately significant difference from insulin with the AA breakfast (p=0.053, paired t-test, pairing on subject; n=10)
 ***Indicates significantly different from sum of plasma AAs with the AA breakfast (p=0.049, paired t-test, pairing on subject; n=11)

GHRELIN AND GMP



Ghrelin suppression is regulated by **postgastric feedback** [12], requiring luminal nutrients in the distal intestine, not in the stomach or duodenum [13,14]. **The rapid rise of plasma amino acids** following consumption of an AA based formula suggests that luminal nutrients are present for a shorter time, therefore **limiting their ability to suppress ghrelin** [15].

GMP provides a protein source that can be more **easily spaced throughout the day** [1]. Greater ghrelin suppression following a meal with intact protein compared to AAs may be due to variations in the rate of absorption of synthetic AAs compared with GMP.

CONCLUSIONS

Studies conducted on food saturation show the importance of protein consumption in a meal to improve satiety, and provide evidence that a GMP intake suppresses plasma levels of ghrelin for a longer period of time compared with an AA intake.

GMP-based protein substitutes can be an alternative to amino acids mixtures that can provide a more physiologically complete diet, improve dietary options, and facilitates protein distribution and metabolic control of PKU.

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| Nutrition declaration: | | Per portion | |
|-----------------------------|------------|-------------|-----------|
| | | 100 g | 23,4 g |
| Energy | KJ kcal | 1352 319 | 316 75 |
| Fat | g | 1,7 | 0,4 |
| of which saturates | g | 0,7 | 0,2 |
| Docosahexaenoic (DHA) | mg | 290 | 68 |
| Eicosapentaenoic acid (EPA) | mg | 64 | 15 |
| Carbohydrate | g | 32 | 7,4 |
| of which sugars | g | 19 | 4,5 |
| Fibre | g | 3,0 | 0,7 |
| of which GOS | g | 1,6 | 0,4 |
| of which FOS | g | 0,2 | 0,05 |
| Protein Equivalent | g | 43 | 10 |
| Salt | g | 0,82 | 0,19 |
| Amino Acids | | | |
| L-Alanine | g | 2,76 | 0,65 |
| L-Arginine | g | 2,02 | 0,47 |
| L-Aspartic Acid | g | 4,80 | 1,12 |
| L-Cystine | g | 0,25 | 0,06 |
| L-Histidine | g | 1,28 | 0,30 |
| L-Glutamic acid | g | 4,17 | 0,98 |
| L-Glutamine | g | 2,76 | 0,65 |
| Glycine | g | 3,36 | 0,79 |
| L-Isoleucine | g | 1,84 | 0,43 |
| L-Leucine | g | 2,65 | 0,62 |
| L-Lysine | g | 3,47 | 0,81 |
| L-Methionine | g | 0,79 | 0,18 |
| L-Phenylalanine | mg | 61 | 14 |
| L-Proline | g | 5,39 | 1,26 |
| L-Threonine | g | 4,03 | 0,94 |
| L-Tryptophan | g | 0,77 | 0,18 |
| L-Tyrosine | g | 6,63 | 1,55 |

Osmolality: 825 mOsm/kg



| MEVALIA PKU GMPOWER - IN BOX | |
|---|-------------|
| PACKAGING | ITEM NUMBER |
| Monoportion 10 g Protein 20 x 23,4 g | 5653150700 |

| Nutrition declaration: | | Per portion | |
|------------------------|----|-------------|--------|
| | | 100 g | 23,4 g |
| L-Valine | g | 1,48 | 0,35 |
| L-Serine | g | 1,42 | 0,33 |
| Vitamins | | | |
| Vitamin A | µg | 1248 | 292 |
| Vitamin D | µg | 37 | 8,75 |
| Vitamin E | mg | 25 | 5,85 |
| Vitamin K | µg | 75 | 18 |
| Vitamin C | mg | 187 | 44 |
| Thiamin B1 | mg | 2,50 | 0,59 |
| Riboflavin B2 | mg | 3,12 | 0,73 |
| Niacin | mg | 15 | 3,51 |
| Vitamin B6 | mg | 2,50 | 0,59 |
| Folic acid | µg | 312 | 73 |
| Vitamin B12 | µg | 5,00 | 1,17 |
| Biotin | µg | 75 | 18 |
| Pantothenic Acid | mg | 8,74 | 2,05 |
| Minerals | | | |
| Sodium | mg | 329 | 77 |
| Potassium | mg | 1753 | 410 |
| Calcium | mg | 1774 | 415 |
| Phosphorus | mg | 1391 | 325 |
| Magnesium | mg | 329 | 77 |
| Trace Elements | | | |
| Iron | mg | 25 | 5,87 |
| Zinc | mg | 13 | 3,07 |
| Copper | mg | 1,31 | 0,31 |
| Manganese | mg | 1,31 | 0,31 |
| Selenium | µg | 62 | 15 |
| Chromium | µg | 50 | 12 |
| Molybdenum | µg | 73 | 17 |
| Iodine | µg | 276 | 65 |
| Other Nutrients | | | |
| L-Carnitine | mg | 25 | 5,86 |
| Choline | mg | 438 | 102 |
| Inositol | mg | 125 | 29 |

| MEVALIA PKU GMPOWER - IN TIN | |
|------------------------------|-------------|
| PACKAGING | ITEM NUMBER |
| 468 g TIN | 5653360701 |

MEVALIA GMP-BASED PROTEIN SUBSTITUTE

- ✓ Preferred tasting
- ✓ Enriched with EPA and DHA (essential fatty acids) combined with GOS and FOS (prebiotics)
- ✓ With natural ingredients and a pleasant vanilla flavour



MEVALIA AMINO ACIDS

2019/07

Dr. Schär develops preferred tasting amino acid mixtures, in liquid and powder form, for the dietary management of PKU patients.

- ✓ Preferred tasting
- ✓ With natural ingredients and free from preservatives
- ✓ Convenience



Foods for special medical purposes for use in the dietary management of phenylketonuria (PKU) and hyperphenylalaninemia (HPA) in children, adolescents and adults.

Mevalia | AMINO ACIDS

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