Product Information
– for professionals only –

Glykogea Kid

In Short

- Glykogea Kid is a powdered sip and tube feed, rich in fat and protein, low in carbohydrate, nutritionally complete Food for Special Medical Purposes
- for use in the dietary management of Glycogen Storage Diseases, e. g. Glycogenosis Type III, VI and IX
- source of protein: biological high valued whey protein isolate
- high-molecular source of carbohydrate – amylopectin starch from rice
- with micronutrients in age-adapted, adequate amounts
- suitable from 1 to 10 years of age
- in 400 g tin

Product profile

Glykogea Kid is a nutritionally complete sip feed and tube feed nutrition, rich in protein and fat and low in carbohydrate, for use in the dietary management of glycogen storage diseases. Suitable from 1 to 10 years of age.

In Glykogea Kid, the nutrient ratio of carbohydrates:fat:protein is 26:51:22 energy%, considering current scientific knowledge of the dietary management of GSD/GSD Type III.

As a protein source, Glykogea Kid contains biologically highly valued whey protein isolate. The recommendations for the optimal amount of protein range between 2 g/kg body weight/day (adults) and 3 g/kg body weight/day (children) or 20 to 30 percent of energy (1).

The high-molecular carbohydrate component in Glykogea Kid consists of waxy rice starch, almost exclusively of amylopectin. The source of the soluble fibre is polydextrose from partially hydrolyzed maize starch.

The fat component in Glykogea Kid consists of 50 % easily digestible MCT-lipids and 50 % LCT-lipids with an optimal ratio of ω-6- and ω-3 fatty acids.

Thus, Glykogea Kid is free from soy, egg and gluten-containing cereals and free from lactose and fructose.

Glykogea Kid is supplemented with vitamins, minerals and trace elements in age-adapted, adequate amounts by the Reference Values for Nutrient Intake from the nutrition societies from Germany, Austria and Switzerland (D-A-CH).

Good to know

According to current knowledge, a diet high in protein and fat but low in carbohydrates is favored for both children and adults with glycogen storage disease type III (1).

Due to an intact process of gluconeogenesis, protein serves as an alternative source for endogenous glucose synthesis (2). Increasing protein intake may improve muscle function by promoting muscle protein synthesis. In addition, it prevents the breakdown of endogenous muscle protein in metabolic situations where glucose is needed. The replacement of carbohydrates with protein leads to a reduction in the accumulation of glycogen and its abnormally structured intermediates in the liver as well (2, 3).

Case studies show the improvement of skeletal and cardiac myopathies with the use of a high-protein diet and the avoidance of excessive carbohydrate intake (4). Similarly, increased exercise tolerance and muscle strength, as well as improved growth, has been observed in children (3). For this reason, a high-protein diet is recommended for children with GSD IIIa with existing myopathy and growth retardation (2).

Monosaccharides should be avoided in favor of complex carbohydrates to prevent excessive glycogen storage and a rise in lactate. To keep blood glucose levels constant, starch is used in the dietary management. Increased fat content and a higher concentration of ketone bodies led to an improvement in hypertrophic cardiomyopathy (5).

Similarly, the use of MCT fats, a modified Atkins diet, and a high-protein diet has been shown to be effective in the dietary management of various forms of GSD, particularly in the case of children with GSD type III (6, 7).

Indication

For use in the dietary management of Glycogen Storage Diseases, e. g. Glycogenosis Type III, VI and IX.

Important Notice: Must only be used under medical supervision. Do not use in severe disorders of absorption and digestion. Only for people from 1 to 10 years of age with Glycogen Storage Diseases, e. g. Glycogenosis Type III, VI and IX. Suitable for exclusive or supplementary feeding. For enteral use only.

Dosage and Usage

Glykogea Kid can be used supplementary or according to energy requirements. The daily dosage depends on age, body weight and individual metabolic condition of the child and should be given in several single portions distributed during the day. If applicable begin with low, then gradually increasing doses.

The individual dosage is calculated on the basis of the daily energy requirements according to the Reference Values for Nutrient Intake from the nutrition societies from Germany, Austria and Switzerland (D-A-CH) and should be re-examined and adjusted regularly under medical control.

Glykogea Kid is mainly used as a tube feed, but can also be prepared as a sip feed. Glykogea Kid dissolves easily in cold and warm water.

Always prepare freshly. Do not reuse leftovers!

Preparation

Measure or rather weigh out amount of powder according to the required energy density. Preferably use a shaker for preparation, so that the powder dissolves optimally. See pictograms.

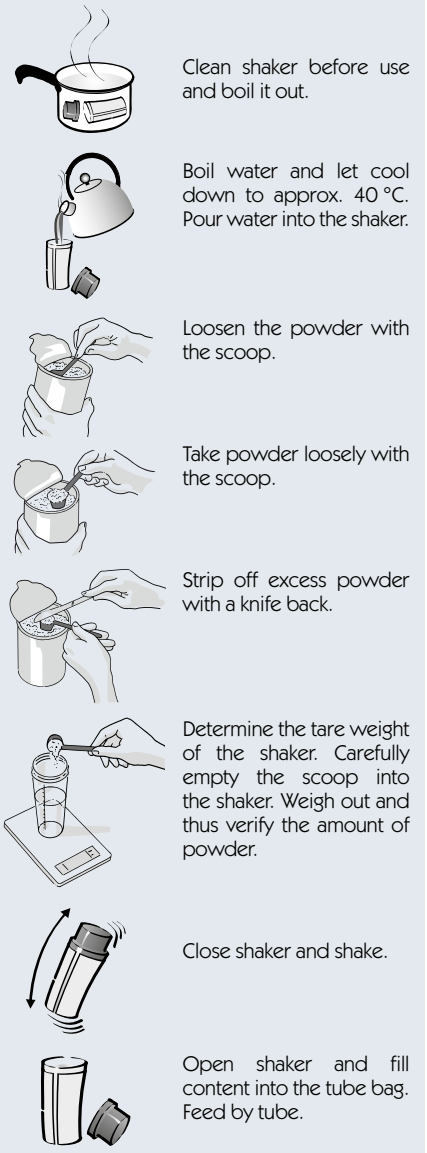
- **Sip feed**

Stir required amount of powder into water with favoured temperature and dissolve.

- **Tube feed**

Stir required amount of powder into boiled water, cooled down to approx. 40 °C, and dissolve lump-free. Glykogea Kid can be applied using standard tubes.

Preparation with Shaker



Source:

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(4) Sentner CP, Caliskan K, Vletter WB, Smit GP.(2012) Heart Failure Due to Severe Hypertrophic Cardiomyopathy Reversed by Low Calorie, High Protein Dietary Adjustments in a Glycogen Storage Disease Type IIIa Patient. JIMD Rep. 2012; 5:13-6. doi: 10.1007/8904_2011_111. Epub 2011 Dec 13.

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NUTRITION INFORMATION

Glykogea Kid		100 g powder	30 g powder	100 kcal
Energy	kJ	2113	634	
	kcal	506	152	
Fat	g	29	9	5
of which				
saturates	g	16	5	3
mono-unsaturates	g	7	2	1,4
polyunsaturates	g	5	1,5	1
Carbohydrate	g	33	10	7
of which sugars	g	0	0	0
Lactose	g	0	0	0
Fructose	g	0	0	0
Fibre	g	2,6	0,8	0,5
Protein	g	28	8	5
Salt	g	0,6	0,2	0,11
Vitamins				
Vitamin A	µg	312	94	58
Vitamin D3	µg	8	2,4	1,5
Vitamin E	mg	3	1	0,6
Vitamin K1	µg	18	6	3,4
Vitamin C	mg	32	9	6
Thiamin (Vit. B1)	mg	0,3	0,1	0,06
Riboflavin (Vit. B2)	mg	0,4	0,13	0,08
Niacin	mg	4	1	0,7
Vitamin B6	mg	0,1	0,03	0,02
Folic acid	µg	105	32	20
Vitamin B12	µg	2	0,6	0,4
Biotin	µg	3,5	1	0,7
Pantothenic acid	mg	2	0,6	0,4
Minerals				
Sodium	mg	230	69	46
	mmol	10	3	2
Potassium	mg	525	158	98
	mmol	13	4	2,5
Chloride	mg	233	70	43
	mmol	7	2	1,2
Calcium	mg	315	94	59
	mmol	8	2,4	1,5
Phosphorus	mg	237	71	44
	mmol	8	2,3	1,4
Magnesium	mg	42	13	8
	mmol	1,7	0,5	0,3

		100 g powder	30 g powder	100 kcal
Trace elements				
Iron	mg	3	0,9	0,6
Zinc	mg	1,6	0,5	0,3
Copper	mg	0,26	0,08	0,05
Manganese	mg	0,5	0,16	0,1
Fluoride	mg	0,3	0,09	0,06
Selenium	µg	11	3	2
Chromium	µg	7	2	1,3
Molybdenum	µg	21	6	4
Iodine	µg	53	16	10

Due to the natural raw materials used the nutrition values may vary.

Standard dilution
30 g Glykogea Kid + 100 ml drinking water
= 120 ml ready to drink feed.

The scoop provided in the tin measures approx. 11 g Glykogea Kid when levelled.
We recommend the use of a scale for weighing out the required amount of Glykogea Kid.

Osmolality

Glykogea Kid (g)	Drinking water (ml)	Osmolality (mosmol/kg)
30	100	128

INGREDIENTS

Rice starch, ***whey protein***, vegetable oils (MCT-oil, rape seed oil, corn oil, palm oil), dextrin, calcium phosphate, L-lysine acetate, L-tryptophan, L-isoleucine, maltodextrin, vitamin B2, vitamin B1, potassium chloride, magnesium carbonate, ferrous sulphate, sodium chloride, vitamin C, zinc sulphate, vitamin E, sodium fluoride, vitamin D, niacin, manganese sulphate, pantothenic acid, cupric sulphate, vitamin B6, vitamin A, folic acid, chromium (III) chloride, sodium selenite, potassium iodide, sodium molybdate, vitamin K, biotin, vitamin B12.

Delivery Unit	tin 1 x 400 g
Article Number	xx-001-51001
Delivery to	Pharmacies, clinics
Storage	Store in a cool, dry place.

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