

AES Member Alert and Information on Ketogenic Diet Formulas

February 3, 2022, AES Treatments Committee

As of January 2022, Nestlé has discontinued any further production of Microlipid™, a 50% fat emulsion containing safflower oil which has been utilized to increase fat calorie content for patients managed on the ketogenic diet. This product was not discontinued due to efficacy or safety reasons. No additional supply is being released and availability through traditional distribution channels is limited. Patients on the ketogenic diet that currently use Microlipid™ as part of their regimen will need to be transitioned to alternative fat modular. Complete lists of ketogenic diet formulas (Table 1) and modulars with alternatives (Tables 2-5), are available, as excerpted from the Ketogenic Diet Therapies for Neurological Disorders: Pocket Guide¹, generously shared by Beth Zuppek-Kania, RD, CDN, Charlie Foundation, and used here with permission.

Reference

1. Zuppek-Kania B, Vanatta L, Johnson M. Ketogenic Diet Therapies for Neurological Disorders: Pocket Guide – 3rd Edition. 2021. ©The Charlie Foundation. ISBN: 978-0-692-12192-4. Print edition available for purchase at: <https://charlifoundation.org/product/ketogenic-diet-therapies-for-neurological-disorders/>. Accessed February 2, 2022.

Table 1. Commercial ketogenic formulas 2021

Product (manufacturer)	Flavor, container size and type, total calories per package	Nutrient composition	Ingredients	Ordering information
Keto Peptide (Functional Formularies)	Unflavored 8 oz (227 g) Pouch 610 kcal/pouch	269 kcal/100 g 7.6 g pro/100 g 6.6 g cho/100 g 4.4 g fiber/100 g 24.7 g fat/100 g Water: 50.1% Protein: hydrolyzed organic pea protein Ratio: 2.5:1	Allergens: tree nuts (almonds) Carnitine: none Lactose: none MCT: 6.3 g/100 g Sweetener: none Other: organic ingredients and free of: gluten, dairy, soy, corn, BPA, added sugar, preservatives	24/case Product code: KEWS124 HCPCS code: B4161 and B4153 NDC: 57858-0004-24
KetoCal 2.5:1 LQ (Nutricia)	Vanilla 8 oz (237 mL) Tetra-Pak 363 kcal/tetra-pak	153 kcal/100 mL 4.5 g pro/100 mL 2.2 g cho/100 mL 1.1 g fiber/100 mL 14.3 g fat/100 mL Water: 76.7% Protein: casein and whey blend Ratio: 2.5:1	Allergens: milk, soy Carnitine: 8.3 mg/100 mL Lactose: 0.11 g/100 mL MCT: 3.6 g/100 mL Sweetener: sucralose	27/case Product code: 137246 HCPCS code: B4154 NDC: 49735-01-7246

Table 1 (cont'd)

Product (manufacturer)	Flavor, container size and type, total calories per package	Nutrient composition	Ingredients	Ordering information
KetoCal 3:1 (Nutricia)	Unflavored 11 oz (300 g) Can 2133 kcal/can	711 kcal/100 g 15.4 g pro/100 g 7.2 g cho/100 g 0 g fiber/100 g 68.6 g fat/100 g Displacement: 1 mL/g Protein: casein and whey blend Ratio: 3:1	Allergens: milk, soy Carnitine:43.9 mg/100 g Lactose: 5.09 g/100 g MCT: none Sweetener: none	6/case Product code: 77155 HCPCS code: B4154, B4157, B4162 NDC: 49735-0171-55
KetoCal 4:1 (Nutricia)	Vanilla 11 oz (300 g) Can 2115 kcal/can	705 kcal/100 g 14.4 g pro/100 g 8.2 g cho/100 g 5.3 g fiber/100 g 69.2 g fat/100 g Displacement: 1 mL/g Protein: casein and whey blend Ratio: 4:1	Allergens: milk, soy Carnitine: 45 mg/100 g Lactose: 0.25 g/100 g MCT: none Sweetener: sucralose	6/case Product code: 10177 HCPCS code: B4154 NDC: 49735-0166-70
KetoCal 4:1 LQ (Nutricia)	Unflavored and Vanilla 8 oz (237 mL) Tetra-Pak 356 kcal/tetra-pak	150 kcal/100 mL 3.09 g pro/100 mL 1.73 g cho/100 mL 1.12 g fiber/100 mL 14.8 g fat/100 mL Water: 77.8% Protein: casein and whey blend Ratio: 4:1	Allergens: milk, soy Carnitine: 8.3 mg/100 mL Lactose: 0.044 g/100 mL MCT: none Sweetener: Unflavored – sugar; Vanilla – sugar and sucralose	27/case <i>Unflavored</i> Product code: 80183 HCPCS code: B4154 NDC: 49735-0130-54 <i>Vanilla</i> Product code: 80810 HCPCS code: B4154 NDC: 49735-0187-96

Table 1 (cont'd)

Product (manufacturer)	Flavor, container size and type, total calories per package	Nutrient composition	Ingredients	Ordering information
KetoVie 3:1 Unflavored (Ajinomoto Cambrooke)	Unflavored 8.5 oz (250 mL) Tetra-Pak 260 kcal/tetra-pak	104 kcal/100 mL 2.8 g pro/100 mL 0.9 g cho/100 mL 0.4 g fiber/100 mL 10.0 g fat/100 mL Water: 85% Protein: whey Ratio: 3:1	Allergens: milk Carnitine: 13 mg/100 mL Lactose: 0.32 g/250 mL MCT: 2.4 g/100 mL Sweetener: None Other: 10 mEq citrate/250 mL, kosher	30/case Product code: 50403 HCPCS code: B4154 NDC: 24359-0504-03
KetoVie 4:1 Chocolate (Ajinomoto Cambrooke)	Chocolate 8.5 oz (250 mL) Tetra-Pak 390 kcal/tetra-pak	156 kcal/100 mL 3.4 g pro/100 mL 2.5 g cho/100 mL 2.1 g fiber/100 mL 15.4 g fat/100 mL Water: 78% Protein: whey Ratio: 4:1	Allergens: milk, soy Carnitine: 20 mg/100 mL Lactose: 0.2 g/250 mL MCT: 4.8 g/100 mL Sweetener: Sucralose Other: 8 mEq citrate/250 mL, kosher	30/case Product code: 50103 HCPCS code: B4154 NDC: 24359-0501-03
KetoVie 4:1 Peptide (Ajinomoto Cambrooke)	Unflavored 8.5 oz (250 mL) Tetra-Pak 373 kcal/tetra-pak	149 kcal/100 mL 3.2 g pro/100 mL 1.4 g cho/100 mL 1.0 g fiber/100 mL 14.8 g fat/100 mL Water: 79% Protein: extensively hydrolyzed whey Ratio: 4:1	Allergens: milk, soy Carnitine: 20 mg/100 mL Lactose: <0.5 g/250 mL MCT: 2.4 g/100 mL Sweetener: Stevia Other: 10 mEq citrate/250 mL, kosher	30/case Product code: 50303 HCPCS code: B4161 and B4153 NDC: 24359-0503-03
KetoVie 4:1 Unflavored (Ajinomoto Cambrooke)	Unflavored 8.5 oz (250 mL) Tetra-Pak 375 kcal/tetra-pak	150 kcal/100 mL 3.4 g pro/100 mL 2.1 g cho/100 mL 2.0 g fiber/100 mL 14.5 g fat/100 mL Water: 79% Protein: partially hydrolyzed whey Ratio: 4:1	Allergens: milk, soy Carnitine: 20 mg/100 mL Lactose: 0.02 g/250 mL MCT: 4 g/100 mL Sweetener: None Other: 10 mEq citrate/250 mL, kosher	30/case Product code: 50306 HCPCS code: B4161 and B4153 NDC: 24359-0506-03

Table 1 (cont'd)

Product (manufacturer)	Flavor, container size and type, total calories per package	Nutrient composition	Ingredients	Ordering information
KetoVie 4:1 Vanilla (Ajinomoto Cambrooke)	Vanilla 8.5 oz (250 mL) Tetra-Pak 360 kcal/tetra-pak	144 kcal/100 mL 3.4 g pro/100 mL 1.9 g cho/100 mL 1.8 g fiber/100 mL 14.2 g fat/100 mL Water: 80% Protein: whey Ratio: 4:1	Allergens: milk, soy Carnitine: 20 mg/100 mL Lactose: 0.2 g/250 mL MCT: 4.8 g/100 mL Sweetener: Sucralose & Ace K Other: 10 mEq citrate/250 mL, kosher	30/case Product code: 50203 HCPCS code: B4154 NDC: 24359-0502-03
Soy-based Formula (requires carbohydrate and fat modular)				
Ross Carbohydrate Free (Abbott)	Unflavored 13 oz (384 g) Can 311 kcal/can	81 kcal/100 mL 4.0 g pro/100 mL 0.07 g cho/100 mL 0 g fiber/100 mL 7.2 g fat/100 mL Water: 88% Protein: soy protein isolate	Allergens: Soy Carnitine: 3 mg/100 mL Lactose: none MCT: 1.3 g/100 mL Sweetener: none Other: kosher, halal	12/case Product code: 00108 HCPCS code: B4155

Table 2. Modulators that may be incorporated into ketogenic diet therapies: Carbohydrate Powders**Carbohydrate Modulators - Powder**

Product: Manufacturer	Container Size and Type, Total Calories per Package	Product Information	Source	Reimbursement Information
Cornstarch	Varies	3.8 kcal/g 87 g cho/100 g	Corn	-
Dextrose: Now Foods	10 lb. canister = 4536 g 15876 kcal/canister	3.5 kcal/g 90 g cho/100 g	Corn	-
Fructose	Varies	3.7 kcal/g 100 g cho/100 g	Fructose	-
Solcarb: Solace Nutrition	1 can = 227 g 853 kcal/can	3.76 kcal/g 94.5 g cho/100 g	Maltodextrin (Corn)	HCPCS: B4155 NDC: 57771-0001-24
Sucrose	Varies	3.9 kcal/g 100 g cho/100 g	Cane or Beet Sugar	-

Table 3. Modulators that may be incorporated into ketogenic diet therapies: Carbohydrate Liquids**Carbohydrate Modulators - Liquid**

Product: Manufacturer	Container Size and Type, Total Calories per Package	Product Information	Source	Reimbursement Information
Corn Syrup	Varies	4 kcal/mL 92 g cho/100 mL	Corn starch	-
Fructose	Varies	2.8 kcal/mL 76 g cho/100 mL	Fructose	-
Apple Juice	Varies	0.46 kcal/mL 0.45 kcal/g 11 g cho/100 g	Glucose and Fructose	-
Prune Juice	Varies	0.76 kcal/mL 0.71 kcal/g 17 g total cho/100 g 1 g fiber/100 g	Fructose and Sorbitol	-

Table 4. Modulators that may be incorporated into ketogenic diet therapies: Fat Liquids**Fat Modulators – Liquid**

Product: Manufacturer	Container Size and Type, Total Calories per Package	Product Information	Source	Reimbursement Information
Canola Oil	Varies	8.1 kcal/mL 92 g fat/100 mL	Canola seed (derived from rapeseed)	-
Corn Oil	Varies	8.1 kcal/mL 92 g fat/100 mL	Corn	-
MCT Oil: Nestle Health Science	1 quart bottle (946 mL) 7284 kcal/bottle	7.7 kcal/mL 8.3 kcal/g 115 kcal/Tbsp 14 g fat/Tbsp (15 mL)	Coconut and/or Palm Kernel Oil	HCPCS: B4155 NDC: 41679-0365-13
	3 fl oz bottle (88.7 mL) 399 kcal/bottle	4.5 kcal/mL 67.5 kcal/Tbsp 7.5 g fat/ Tbsp (15 mL)	Safflower Oil Contains: Soy	HCPCS: B4155 NDC: 41679-0087-02
Olive Oil	Varies	8.8 kcal/mL 8.84 kcal/g 93 g fat per 100 mL	Olives	-
Liquigen	8.5 fl oz bottle(250 mL) 1125 kcal/bottle	4.5 kcal/mL 50 g fat/100 mL	Refined Vegetable Oil: Palm Kernel and/or Coconut Oil	HCPCS: B4155 NDC (Case of 12): 49735-0119-57 NDC (Unit of 4): 49735-0195-73 WIC eligible in all states.
Flaxseed (Linseed) Oil	Varies	8.84 kcal/ g 100 g fat/100 g	Flaxseeds	-
Avocado Oil	Varies	8.84 kcal/g 100 g fat/100 g	Avocado	-
Betaquik: VitaFlo (Nestle Health Science)	8.5 fl oz tetra-pak (250 mL) 18 /case 472 kcal/tetra-pak	1.89 kcal/mL 21 g fat per 100 mL	Fractionated Coconut Oil	Product Code: 57853 HCPCS: B4155 NDC: 50600-0578-53
Carbzero: VitaFlo (Nestle Health Science)	8.5 fl oz tetra-pak (250 mL) 18/case 450 kcal/tetra-pak	1.80 kcal/mL 20 g fat per 100 mL	Refined Canola Oil Contains: Soy	Product Code: 57846 HCPCS: B4155 NDC: 50600-0578-46

Note: Microlipid: Nestle Health Science was discontinued in 2021.

Table 5. Modulators that may be incorporated into ketogenic diet therapies: Protein Powders**Protein Modulators - Powder**

Product: Manufacturer	Container Size and Type, Total Calories per Package	Product Information	Source	Reimbursement Information
Beneprotein: Nestle Health Science	1 packet/scoop (serving) = 7 g 227 g Can 810 kcal/can	3.57 kcal/g 25 kcal/packet or scoop 6 g protein per 7 g powder 0 g carbohydrate 0 g fat	Whey protein isolate Contains: Soy	HCPCS Code: B4155 NDC (Canister): 43900-0284-10 NDC (Packets): 43900-0284-30
Complete Amino Acid Mix: Nutricia North America	200 g Can (6 per case) 656 kcal/can	3.28 kcal/g 82 g protein per 100 g 0 g carbohydrate 0 g fat	Amino Acid	Product Code: 553341 HCPCS: B4155 NDC: 49735-0101-24 WIC eligible in all states.

Tables 1-5 Source: Used with permission. Ketogenic Diet Therapies Pocket Guide. 2021. ©The Charlie Foundation. ISBN: 978-0-692-12192-4.¹