

# Keto-Drink

Supportive Sip feed for chemo- and radiotherapy



- high caloric
- sugar-free
- ketogenic nutritional profile
- with valuable ingredients such as omega-3 fatty acids, MCT fat, vitamin E (tocotrienols), vitamin D3 + K2 and lactate
- well-tolerated: plant protein, free from gluten, soy, lactose & milk
- suitable also for tube feeding

Detailed information is available under [www.keto-drink.de/en/](http://www.keto-drink.de/en/)

*We support patients with handpicked products*

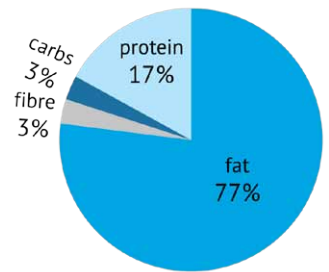
# Why Keto-Drink?

Keto-Drink is a ready for use, balanced sip feed whose nutrient ratio corresponds to a ketogenic diet. Through the temporarily exclusive nutrition with Keto-Drink, a slight ketosis may be achieved within 2-3 days. Simultaneously, Keto-Drink provides high-quality vegetable protein, vitamins and minerals as well as antioxidative vitamin E in the form of highly active tocotrienols, vitamin D3 in combination with K2, omega-3 and MCT-fat as well as lactate, specifically for the cancer therapy.

## Background:

Many doctors and scientists observed that fasting shortly before a chemotherapy, may enhance its therapeutic effect and weaken side effects<sup>1,2</sup>.

The total absence of nutrition, however, poses an additional risk for cancer patients, especially with regard to their nutritional status (malnutrition, cachexia). A ketosis caused by a ketogenic diet, is creating a metabolic state similar to fasting with comparable effects on body and cancer cells. At the same time, it may provide the patient with valuable energy and nutrients.



## Experience from the Leopoldina Hospital based in Schweinfurt, Germany:

A ketogenic diet is a secure supporting measure to standard therapy contributing to maintaining the muscle mass and is generally well received by the patients<sup>4</sup>.

## The particular advantage in case of cancer:

Many, especially aggressive and metastasising cancer cells show a modified energy metabolism (aerobe glycolysis) contributing to protection against radicals and against apoptosis as well as to resistance to chemo- and radiotherapy. This characteristic, however, leads to glucose dependence and limits the ability of the cancer cells to adapt themselves to a light ketosis, just like healthy cells. Fats can barely be used by them as an energy source. Limiting the sugar supply massively weakens the cancer cells and renders them more sensitive against chemo- or radiotherapy<sup>4,5</sup>.

1. Raffaghello L. et al. (2010): Fasting and differential chemotherapy protection in patients. *Cell Cycle*, 9 (22): 4474-4476
2. Lee et al. (2012): Fasting Cycles Retard Growth of Tumors and Sensitize a Range of Cancer Cell Types to Chemotherapy. *Science Translational Medicine*, 2012, 7; 4 (124)
3. Klement RJ, Sweeney RA (2016): Impact of a ketogenic diet intervention during radiotherapy on body composition: I. Initial clinical experience with six prospectively studied patients. *BMC Res Notes*, 9: 143.
4. Rieger J. et al. (2014): ERGO: A pilot study of ketogenic diet in recurrent glioblastoma. *Int. J. Oncology*, 44 (6): 1843-52
5. Schroeder U et al. (2013): Decline of Lactate in Tumor Tissue After Ketogenic Diet: In Vivo Micro-dialysis Study in Patients with Head and Neck Cancer. *Nutr Cancer*, 65(6): 843-849

# Administration

In preparation for the therapy, we recommend the following taking scheme.

## Accustoming phase

For accustoming the digestive tract to the high-fat diet, initially 1-2 meals a day may be optionally replaced by a Keto-Drink (250 ml each) before the actual adaptation.

## Adaptation phase

To adapt the body to the ketogenic metabolism, exclusively Keto-Drink is taken prior to therapy.

For covering the energy requirement of 2.000 kcal, we recommend:

- Keto-Drink Neutral: 4 drinks a day
- Keto-Drink Banana: 5 drinks a day\*

## Therapy day

3 Keto-Drinks as addition to a low carbohydrate largely sugar-free diet

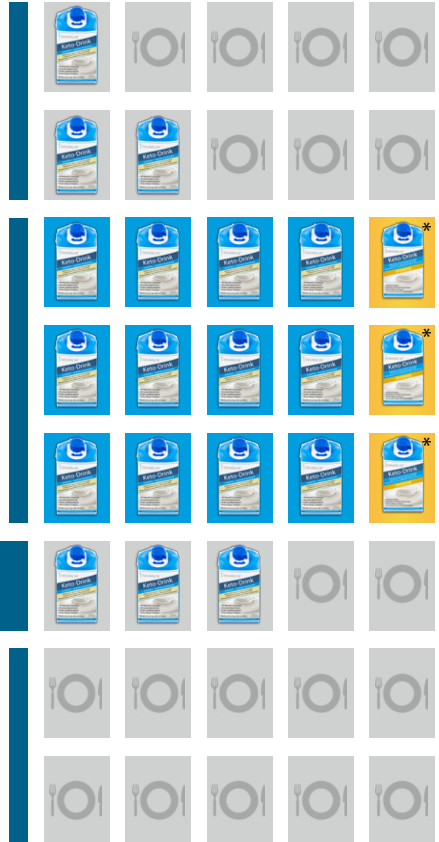
## Therapy aftercare

We recommend to avoid or at least to reduce considerably food high in carbohydrates or food with a high glycaemic index.

## Repeating the taking scheme in case of continuous therapy:

During daily therapy: repetition any 14 days

In weekly or seldom therapy: repetition before every 2<sup>nd</sup> therapy day



\*The new, Keto-Drink BANANA optimized in terms of taste and content, due to the modified composition provides per drink (250 ml) 413 kcal, so as to covering the energy requirement of 2.000 kcal, 5 drinks are necessary.

# Flavour variations

Keto-Drink neutral can be (sugar-free) refined at your convenience and the present taste preferences.

- **Thinned** with water, unsweetened espresso or tea
- **sweet** with erythritol, stevia erylite, vanilla powder, cinnamon, cocoa powder
- **spicy** with pepper and salt, curry powder, paprika powder, fresh herbs
- **as Soup** mixed with 200 ml hot water and seasoned with tomato purée, herbs and spices

Keto-Drink is now available with new composition and a delicate banana flavour. That way, Keto-Drink is even subtler as regards taste. Keto-Drink banana may be enjoyed purely or may be refined sweetly or spicily.



New flavour:  
**BANANA**

# Reimbursement

German statutory health insurance bear the cost of Keto-Drink in the case of a diagnosed malnutrition (body mass index <18, 5 kg/m<sup>2</sup> or a significant weight loss of 10% in the last 6 months or of 5% in the last 3 months). Reimbursement in other countries: please inform yourself at your local health insurance.

# Sources of supply

Keto-Drink may be easily ordered without prescription in our online shop or by telephone. On prescription, Keto-Drink is merely available in German pharmacies.



Online: [www.tavarlinshop.de](http://www.tavarlinshop.de)



By telephone: +49 (0)69 – 66 81 245 50



Pharmacies:	Keto-Drink Neutral	PZN-10753628 ( 1 x 250 ml)
		PZN-10753611 (15 x 250 ml)
	Keto-Drink Banana	PZN-12476972 ( 1 x 250 ml)
		PZN-12476989 (18 x 250 ml)