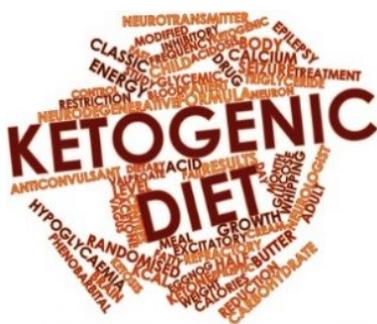


Ketogenic diets- Is it possible to "starve out" cancer?



During Lent many people give up some kind of food which they usually enjoy. And in keeping with this topic of ‘doing without something’ we are dedicating this blog to the ketogenic diet (KD); a diet low in carbohydrates. Oncological patients often come across statements in the media which claim that giving up carbohydrates – the ketogenic diet – could have a positive impact on cancer. The reason given for this is that the metabolism of tumour cells is dependent on carbohydrates. Depending on how the data is interpreted these diets promise either a direct influence on the growth of the tumour and metastasis, an improvement in the effectiveness of chemotherapy or radiotherapy and better tolerance of chemotherapy in particular. But is there any truth in these assertions?



Ketogenic diets have been successfully used in a clinical context for hard to control epilepsy and a few rare, congenital metabolic disorders for almost one hundred years. There are various types and definitions of these diets but what they all have in common is a very low intake of carbohydrate (maximum 60g carbohydrate per day). 70% to 90% of the total energy is consumed in the form of fat. Successful implementation of such diets requires a lot of cooperation on the part of the patients and their relatives. Meals and ingredients have to be selected in accordance with specific guidelines. The ratio of fat to carbohydrate also has to be calculated precisely and adapted to the individual. For these reason such diets only work in close collaboration with an interdisciplinary team, usually comprising at least one doctor and a specially-trained dietician.



The latest scientific evidence does not support the assertion that it is possible to “starve out” a tumour by following a special diet. This also applies to the KD. To date studies on the effect of the ketogenic diet on tumour growth have predominantly been carried out in cell cultures or on animals. Some studies show promising effects. Just as many studies also show evidence, however, that such diets promote tumour growth. Other studies have found that a tumour is able to adapt and can also feed off fat and protein. Only a few studies have involved humans.

In 2012 the nutrition working group of the ‘Prävention und Integrative Onkologie’ (PRIO) team of the German Cancer Society (DKG) published a [position paper on KD](#). This was updated in 2017 on the basis

of a systematic review of the studies. The professional associations came to the conclusion that, due to the low numbers of participants to date, no statistically significant statement can be made. Only a total of 330 cancer patients have been involved in studies on KD. Of these 330 patients, only 177 followed a ketogenic diet. Only 67 patients actually stuck to the diet through to the end of the study. The comprehensive analysis of the data showed: **None of the studies carried out on humans could prove an improvement in the effectiveness of therapy, a reduction in side effects, regression of tumours or a prolongation of survival on account of a ketogenic diet.**

Undesirable side effects



In all of the diets which limit the intake of carbohydrate to this extent and therefore aim to “starve out cancer cells”, undesirable side effects can occur. One consequence can be unintended weight loss which not only reduces body fat but also leads to muscle wasting – especially the loss of muscles in vital organs. These processes have a detrimental effect on the patient, the course of their illness and their chances of survival.

What can you do?



Draw new energy from a healthy, active lifestyle with a balanced and varied diet. Also seek help from officially-recognised experts. This is the only way to gain expert and informed nutritional advice which is suited to your special needs and personal health situation, and which is also based on the latest scientific findings. If you need support with nutritional questions or are looking for a suitable nutritional expert in your area, please get in touch with us. It is possible to arrange an appointment with us to gain some advice (free of charge). Or visit our info portal and the [nutrition counsellor search \(by postcode\)](#) on our homepage.

This blog post has been written in collaboration with the CCCM and Nicole Erickson (Coordinator of the Oncological Nutrition Team, Großhadern) Our thanks also go to PD Dr. Michl for his assistance.

Sources:

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