

### The 5 basic components

The nutritional concept following Dr. Coy is based fundamentally on 5 building blocks, which attack the cancer cells at various points in the metabolism.

100 mg tocotrienols per day Carbohydrate reduction to 1 g per kg body weight daily Secondary phytochemicals (especially polyphenols) in sufficient quantities

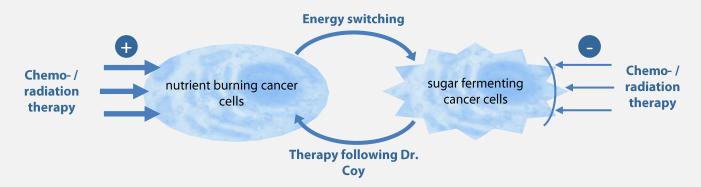
10 mg omega fatty acids and 10 g MCT fats daily

1.5 g lactate daily

### Therapeutic principle

Through the treatment following Dr. Coy the cancer cells are forced by way of various, aligned mechanisms to switch from energy generation through sugar fermentation to energy generation through the burning of nutrients. To this end, the interplay of the individual components is essential.

Many standard therapies such as radiation and certain methods of chemotherapy aim at processes in the mitochondria, the "cell power plants". By returning to energy generation through respiration, the cells become sensitive again to these standard treatments<sup>1</sup>.



The therapeutic principle was confirmed in the prestigious Journal Nature Review Cancer of April 2010:

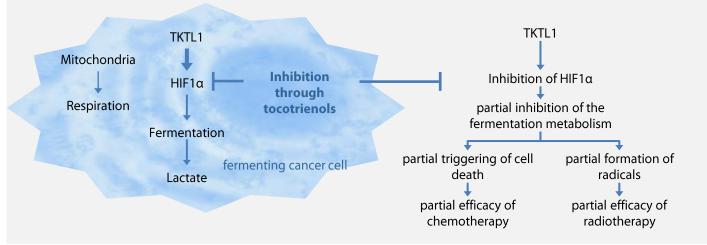
- The reactivation of the normal metabolism of cancer cells caused chemotherapy and radiotherapy to have an effective impact again<sup>2</sup>.
- TKTL1 is of fundamental importance<sup>2</sup>.
- A variety of pharmacological inhibitors are being developed. Of particular importance, however, is the development of a selective therapy, which is non-toxic to healthy cells<sup>2</sup>.



### **Tocotrienols**

#### → 100 mg daily

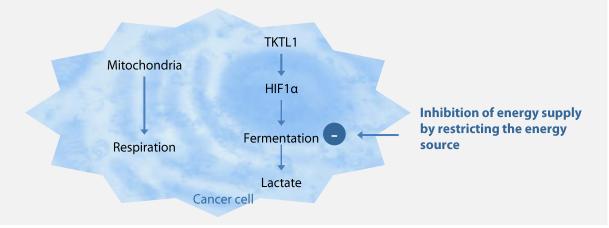
Tocotrienols are special unsaturated forms of Vitamin E that occur in large quantities in nature, especially in palm fruit. Different effects on cancer cells were already detected in the laboratory. Thus, tocotrienols inhibit, among others, HIF1 $\alpha$  (hypoxia-inducible factor)<sup>3</sup>, one of the key factors in the fermentation metabolism<sup>4</sup>. HIF1 $\alpha$  plays an important role in the resistance to chemotherapy and radiotherapy<sup>5</sup>.



## Carbohydrate reduction

#### → to maximally 1 g per kg body weight daily

Conventional sugar and starch provide the preferred energy sources for fermenting cancer cells and are particularly of vital importance for the oxygen-deficient regions regions in the tumour<sup>6,7</sup>. Provisioning of the key energy suppliers can be largely restricted by reducing the carbohydrate intake. Healthy body cells, as well as brain cells, however, are able to obtain their energy from the burning of fats and partially of protein building blocks (ketogenic amino acids).

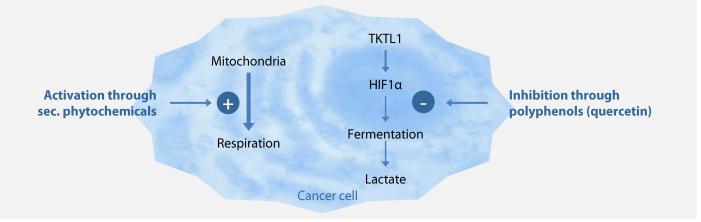




## Secondary plant compounds

#### → provided in sufficient quantities

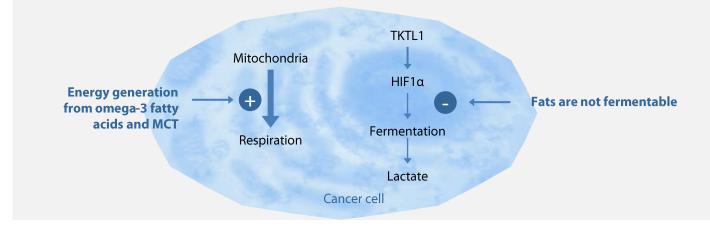
In many studies, secondary phytochemicals have shown to be cancer inhibiting and cancer resisting. Particularly valuable are the group of polyphenols that occur mainly in berries, red-violet vegetables and tea, but also glucosinolates as in broccoli, for example. Secondary phytochemicals also improve the mitochondrial function and in the process stabilise the energy generation through respiration<sup>8</sup>. Polyphenols (quercetin) also inhibit the fermentation and promote fat burning in the mitochondria.



## Omega-3 fatty acids + MCT

#### → in combination

Omega-3 fatty acids are essential fatty acids that occur especially in high-fat-sea fishes and high-quality oils such as linseed, hemp and walnut oil. Fats with medium chain fatty acids (MCT) are contained primarily in coconut oil, are preferred by the body and are converted into ketone bodies. In combination, both represent ideal energy sources for fat burning and optimise respiration in the mitochondria<sup>9</sup>. On the contrary, fermenting cancer cells can not use these for energy generation.

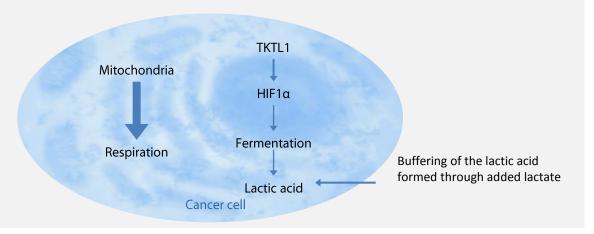




### Lactate

#### → 1.5 g daily

Fermenting cancer cells form large amounts of lactic acid that they take from cells for their own protection. Through the acids, the tissue surrounding the tumour is destroyed (matrix degeneration) and the invasive spread of the cancer cells is facilitated10. The lactate added during the Dr. Coy treatment is broken down in the liver to form bicarbonate and buffers - as base - the lactic acid formed by the cancerous tumour<sup>11</sup>. Matrix degradation is reduced, and inhibits the formation of metastasis.



### **Summary**

Inhibition of fermenting metabolism through tocotrienols



Limitation of the main Inhibition of fermentation Optimisation of the source of energy by reducing carbohydrates

Fermen-Respiratation tion

and activation of respiration through polyphenols



respiration through omega-3 fatty acids and MCT fats

Fermen-Respira tation tion

Buffering of the tissuedamaging lactic acid by added lactate



#### Literature

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