



STAPH Meal: Society To Always Procure Healthfully Newsletter

OFFICIAL NEWSLETTER OF DR. MIKE: THE FOOD SHAMAN

IN THIS ISSUE: SUGAR AND CANCER

The Warburg Effect

“If only a small fraction of what is already known about the effects of sugar were to be revealed in relation to any other material used as a food additive, that material would promptly be banned.”

— Professor John M. Yudkin, 1972

Last week’s newsletter covered *savory* applications of cocoa. With good reason. This week we discuss the new findings linking sugar to cancer. It is the result of an intensive nine-year joint research project conducted by VIB, KU Leuven and VUB.

However, it is important to note up front that these findings deal only with the cellular use of glucose; not the consumption of sugar in the diet. This topic is discussed in detail in the forthcoming book, *Food Shaman: The Art of Quantum Food* (Post Hill Press); and is no less concerning in its health-related revelations.



New research reveals the sugar-cancer link at a cellular level

As the Food Shaman knows; as without, so within...

Nonetheless, the recent remarkable research has led to a crucial breakthrough in cancer research. Scientists have clarified how the Warburg effect, a phenomenon in which cancer cells rapidly break down sugars, stimulates tumor growth.

In contrast to normal cells, which rely primarily on the mitochondria within the

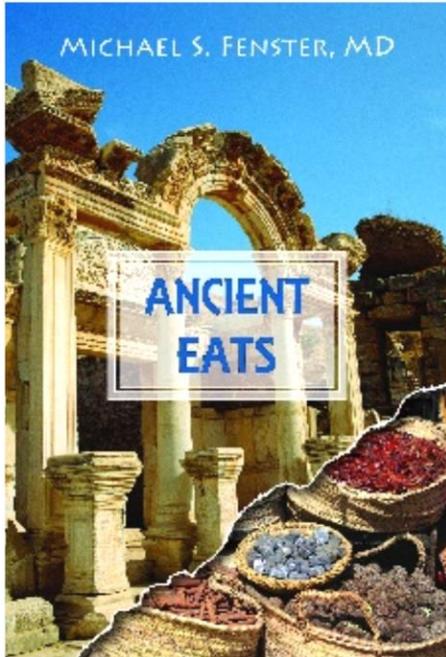
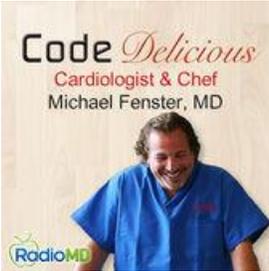
cell to generate the energy needed for cellular processes; most cancer cells instead rely on glycolysis. This is an inefficient, but mitochondrial independent, way to generate energy. In other words, instead of fully respiring in the presence of adequate oxygen, cancer cells ferment. This phenomenon is termed “the Warburg effect.”

Although inefficient, this process gives an advantage to cancer cells. However, until now the mechanism has been unclear. This discovery provides evidence for a positive correlation between sugar and cancer, which may have far-reaching impacts on tailor-made diets for cancer patients.

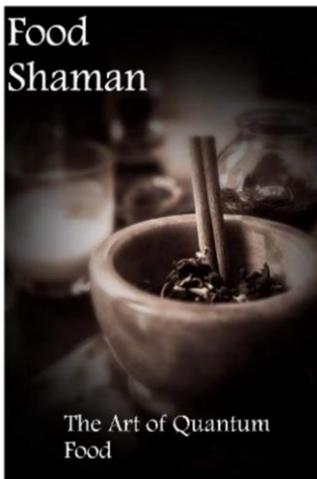
The Warburg effect, is the observation that tumors convert significantly higher amounts of sugar into lactate compared to healthy tissues. In other words, tumor cells become turbo-charged when exposed to sugar while normal, healthy cells are still driving 55.

(continued on page 2)

IT'S A CODE DELICIOUS!

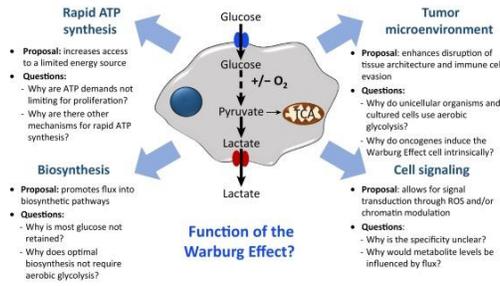


Ancient Eats-NOW AVAILABLE!!
 You can now order Dr. Mike's latest book, *Ancient Eats Volume I: The Ancient Greeks & The Vikings*, on Amazon.com here: [Ancient Eats](#)



Be on the lookout for Dr. Mike's latest groundbreaking book, *Food Shaman: The Art of Quantum Food* (Post Hill Press) coming soon!

Sugar
 (continued from Page 1)



The Warburg Effect and cancer

As one of the most prominent features of cancer cells, this phenomenon has been extensively studied and even used to detect brain tumors, among other applications. But thus far, it has been unclear whether the effect is merely a symptom of cancer, or a cause.

Prof. Johan Thevelein (VIB-KU Leuven) said: "Our research reveals how the hyperactive sugar consumption of cancerous cells leads to a vicious cycle of continued stimulation of cancer development and growth. Thus, it is able to explain the correlation between the strength of the Warburg effect and tumor aggressiveness. This link between sugar and cancer has sweeping consequences. Our results provide a foundation for future research in this domain, which can now be performed with a much more precise and relevant focus."

Specific proteins found in tumor cells, known as Ras proteins appear involved in the process. The mechanism can be observed in the common yeast cell.

Prof. Johan Thevelein (VIB-KU Leuven): "We observed in yeast that sugar degradation is linked via the intermediate fructose 1,6-biophosphate to the activation of Ras proteins, which stimulate the multiplication of both yeast and cancer cells. It is striking that this mechanism has been conserved throughout the long evolution of yeast cell to human.

The caveat here, again, is that sugar in the diet, while increasing health risks, is NOT the same as the sugar used by cancer cells. But these insights are powerful!

HEALTHY BYTES BY THE NUMBERS

69%

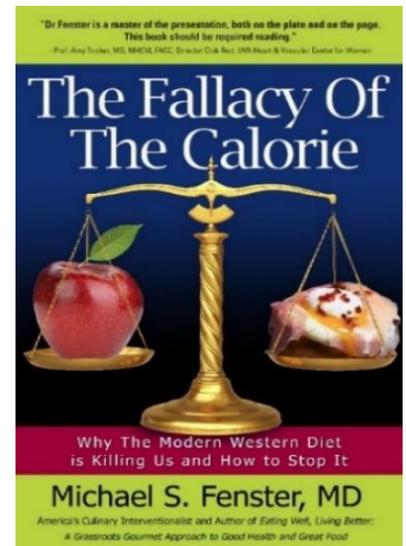
The increased risk of pancreatic cancer comparing highest users versus lowest

5%

The 5-year survival rate for pancreatic cancer

Peeters, Ken; Van Leemputte, Frederick; Fischer, Baptiste; Bonini, Beatriz M.; Quezada, Hector; syttonok, Maksym; Haesen, Dorien; Vanthienen, Ward; Bernardes, Nuno; Gonzalez-Blas, Carmen Bravo; Janssens, Veerle; Tompa, Peter; Versées, Wim; Thevelein, Johan M. Fructose-1,6-bisphosphate couples glycolytic flux to activation of Ras: Nature Communications 8(922),2017. doi:10.1038/s41467-017-01019-z

Learn more about salt, sugar, fats and real versus processed foods in the groundbreaking book, *The Fallacy of The Calorie!*



Pick up your copy of the critically acclaimed book at Amazon.com.

Don't miss a new show every Wednesday at 7am Eastern on [RadioMD.com](#) or catch the podcasts on [iTunes](#) or [iheartradio.com](#)!