

PubMed

U.S. National Library of Medicine
National Institutes of Health

Display Settings: Abstract

Nutr Cancer. 2011 Feb;63(2):174-84.

Modulation of glioma risk and progression by dietary nutrients and antiinflammatory agents.

Kyritsis AP, Bondy ML, Levin VA.

Neurosurgical Research Institute, University of Ioannina, Ioannina, Greece.

Abstract

Gliomas are tumors of glial origin formed in the central nervous system and exhibit profound morphological and genetic heterogeneity. The etiology of this heterogeneity involves an interaction between genetic alterations and environmental risk factors. Scientific evidence suggests that certain natural dietary components, such as phytoestrogens, flavonoids, polyunsaturated fatty acids, and vitamins, may exert a protective effect against gliomas by changing the nature of the interaction between genetics and environment. Similarly, certain antiinflammatory drugs and dietary modifications, such as methionine restriction and the adoption of low-calorie or ketogenic diets, may take advantage of glioma and normal glial cells' differential requirements for glucose, methionine, and ketone bodies and may, therefore, be effective as part of preventive or treatment strategies for gliomas. Treatment trials of glioma patients and chemoprevention trials of individuals with a known genetic predisposition to glioma using the most promising of these agents, such as the antiinflammatory drugs curcumin and gamma-linolenic acid, are needed to validate or refute these agents' putative role in gliomas.

PMID: 21302177 [PubMed - in process] PMCID: PMC3047463 [Available on 2012/2/1]

[LinkOut - more resources](#)