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Dietary Phytochemicals in Fiber, Fruits and Vegetables, Why is this Still Relevant?

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Editorial

A simple internet search on PubMed shows that over 500 articles have so far been published on the role of dietary phytochemicals/fiber and cancer prevention since 2010. This almost double increase in number of articles perhaps also indicates an increased public interest and awareness in this area compared to the last decade. The total funding from the three major government funding agencies such as the USDA towards dietary phytochemical research have drastically increased from 2010 compared to a decade ago. Most recent published information indicates dietary phytochemicals play a tremendous role in the prevention of cancer if consumed in adequate quantities and in combination with other lifestyle choices. Mostly positive epidemiological association have been reported between dietary phytochemical consumption and colon cancer, breast cancer, stomach cancer, prostate cancer, ovarian cancer, endometrial and other cancers [1-3]. The amount of dietary phytochemicals consumed in most of these studies is typically determined by food recalls, food questionnaires, and food diaries analyzed through different diet analysis software. So, why is this still relevant today? It is relevant because the vast majority of the population still seem not know what dietary phytochemicals are or even how to obtain them from diet. Most people are not aware that the best source for these nutrients is through the consumption of adequate amounts of fiber, fruits, vegetables and whole grain goods. Data from both the 2010-2015, 2015-2020 USDA dietary guidelines clearly shows that fruits, vegetables and whole grains are the least consumed foods among the American people. Why does this seem to be case? According to the recent publications and surveys, perceptions that affect dietary phytochemical consumption from these food groups relate to many factors [4]. A few identified here such as sensory, cognitive, physiological, environmental, economics, lifestyle, availability and other socio-economic factors have exclusively been reported on. In the United States, the most identifiable factors are environmental, economic and lifestyle choices. These factors are compounded by lack of education, food affordability and accessibility. In a recent intervention study that targeted the family environment, removal of lack of education, food affordability, and accessibility by a weekly delivery of fruits and vegetables, together with a twice a week home-visit by a researcher/nutritionist have shown an increase in dietary phytochemical consumption but also identified other social, cultural and intra-familial influences to still have a significant impact on dietary phytochemical consumption [5-7]. In another study, mitigation of income disparities through school food programs also show positive influences on fruit and vegetable consumption. However, food preferences among grade school children and young adolescents seem to minimize these gains even with the best managed school food programs. Many studies report parental preferred food choices as being a major factor influencing a child's fruit and vegetable intake. Parents who advocate for healthy choices seem to be doing it with some kind of intentionally well knowing the benefits of dietary phytochemical consumption [8]. So, from these studies, it seems like the removal of barriers to consumption of dietary phytochemicals did not eliminate the many challenges associated with dietary phytochemical consumption. The intra-familial nature of this issue, the social, economic and cultural perceptions may still be the same years from now and impede achievement of any significant gains. This would of course continue to prevent society as a whole from ripping the cancer preventive benefits (among other benefits) from the dietary phytochemical consumption. To help deal, with the issue, I am proposing several different kinds of intervention all targeting the economic aspect of this challenge. What if Americans were allowed to make a federal tax deduction from their fresh fruit, whole grain and vegetation consumption each year? Simply put, families would keep their receipts from fresh fruit, vegetable, and whole grain purchases, tally them up at the end of the year and deduce them on their federal income taxes [9-11]. A challenge of this would the amount of paperwork involved both from the individual level and at the federal level for verification purposes. Another suggestion would be what if the federal/state/local governments created specific tax breaks/initiatives for the sale of fresh fruits, vegetables and whole grain? What if sale taxes were completely removed from the sale of fresh fruits, vegetables and whole grain products? What if policies were enacted to award individuals with grocery points for the purchase of fresh fruits, vegetables and whole grain products? These points would accumulate and be redeemed for a cash value supported by a tax break/initiative that the grocery store would apply for to get a tax refund at the end of the year. What if other aspects of corporate America were brought on board and encouraged to use their platform to educate the American people and tasked with promoting ideals which could change the American culture/perception on fruits, vegetable and whole grain consumption? I know, so many what-ifs with no specifics being offered. But sadly, that is where we stand today. Therefore, it is clear to see from above, that 1) dietary phytochemicals are still very relevant today because of their associated benefits to cancer prevention among other benefits; 2) food groups rich in these nutrients are the least consumed foods within the American population and the challenges to increase the consumption of these foods still remain mostly unanswered as the obesity epidemic continues to grow.

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