



A SYSTEMATIC REVIEW OF ORGANIC VERSUS CONVENTIONAL FOOD CONSUMPTION: IS THERE A MEASURABLE BENEFIT ON HUMAN HEALTH?

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The demand for organic products has risen rapidly over the last decades. The reasons why consumers may favour organic over conventional products are varied: for personal health and wellbeing, environmental considerations, animal welfare or perceived higher nutritional profile - which is true for some, but not all components. While the long-term safety of pesticide consumption through conventional food production has been questioned, organic foods clearly show lower levels of toxic metabolites, heavy metals and synthetic fertilizer and pesticide residues.

This systematic review aimed to assess the current evidence of organic diet consumption and human health compared to conventionally produced foods. Included were 35 papers on clinical trials and observational studies. The clinical trials studied pesticide and phytochemical excretion, antioxidant capacity, body composition, lipids and inflammatory markers. The observational studies were focused on fertility, foetal and childhood development, pregnancy, lactation and levels of pesticides in children and adults, as well as nutritional biomarkers and cancer risk in adults. An increased intake of organic produce in long-term studies appeared to reduce the incidence of infertility, birth defects, allergies, middle ear infection, pre-eclampsia, metabolic syndrome, high BMI, and non-Hodgkin lymphoma. Organic intake was also linked to reduced urinary levels of organophosphorus pesticides and herbicides. Yet, the author highlighted that organic consumers are more likely to be health conscious, physically active, eat a more plant-based diet, have higher education levels and income, and therefore are not representative of the general population. They also argue that the possible benefits from an organic diet may be partially due to the quality and composition of the diet rather than a direct effect of organic food consumption.

ORGANIC FOOD IN THE DIET OF RESIDENTS OF THE VISEGRAD GROUP (V4) COUNTRIES-REASONS FOR AND BARRIERS TO ITS PURCHASING

Soroka, A ; Mazurek-Kusiak, AK ; Trafialek, J
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The food market is changing dynamically. New food production technologies are emerging, especially those with high and enriched nutritional value and functional food. The aim of this study was to determine the differences in the frequency, reasons, and barriers against buying organic food by residents of the Visegrád Group member states. Results indicate that: - the Poles and Hungarians buy organic food very often, whereas the largest percentages of Slovaks and Czechs do so rarely. - the most important reasons for choosing organic food in all V4 countries were the absence of genetically modified organisms, chemicals and preservatives. - high prices is the main barrier limiting the purchase of organic food. - the differences in the consumption of organic products in individual V4 countries may result from the actual differentiation or different interpretations of the definition of organic products and confusion with home and locally produced food. Authors conclude that to fully utilize the potential of the organic farming sector and organic aquaculture and to ensure their sustainable development, it is necessary to define the goals and activities to be implemented by the Minister of Agriculture in individual countries to produce organic food together with its promotion.



INVERSE ASSOCIATION BETWEEN ORGANIC FOOD PURCHASE AND DIABETES MELLITUS IN US ADULTS

Sun, Y ; Liu, B ; Du, Y ; Snetselaar, LG ; Sun, Q ; Hu, FB ; Bao, W
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In recent years, accumulating evidence has highlighted the importance of modifiable risk factors, including diet and environmental factors, in the prevention of diabetes. The aim of this study was to examine the association of organic food purchases, as a proxy of organic food consumption, and the frequency of purchasing total and individual organic foods with diabetes prevalence in U.S. adults. The study population consisted of 8199 participants from the 2007–2008 and 2009–2010 cycles of the National Health and Nutrition Examination Survey. Results indicate an inverse association between the purchase of organic foods and diabetes in U.S. adults; more frequent purchase of organic foods was associated with lower odds of diabetes. Moreover, in terms of individual organic food items, the associations were more pronounced for organic milk, eggs, and meats than for organic fruits or vegetables. Authors conclude the further investigation is needed to comprehensively evaluate the long-term effects of organic food consumption on chronic diseases, including diabetes.



ORGANIC FOOD CONSUMPTION AND GLUTEN-FREE DIET, IS THERE A LINK? RESULTS IN FRENCH ADULTS WITHOUT COELIAC DISEASE.

Perrin, L ; Allès, B ; Julia, C ; Hercberg, S ; Touvier, M ; Lairon, D ; Baudry, J ; Kesse-Guyot, E
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The gluten-free diet (GFD) is a medical response for people with coeliac disease, a systemic autoimmune disorder for which GFD is the only available effective treatment. The aim of this study was to compare the consumption of organic products (as a whole and by food group) in individuals (partially or totally) avoiding gluten or not, and their places of food purchases of organic food.

Results indicate a positive association between gluten avoidance and contribution of organic food to the diet. A gradient was also observed with total avoiders consuming more of organic food than partial avoiders. This contribution was higher for all types of products, except milk and dairy products. Furthermore, the results appear consistent with the motives reported by individuals avoiding gluten. Authors conclude that their findings underline a strong positive correlation between gluten avoidance and organic food consumption.

