

Visual Purple Food Pigment: Harvest and Physiology

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Received: 09 Jun 2021

Accepted: 24 Jun 2021

Published: 29 Jun 2021

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Citation:

Aggarwala KRG. Visual Purple Food Pigment: Harvest and Physiology. Japanese J Gastro Hepato. 2021; V6(19): 1-3

1. Fable is Foible

It is known from antiquity from fables driven into the minds of young children that carrots are good for the eye; but this is a foible: the evidence remains anecdotal. Increased yellowness of the skin and excess serum carotene concentration was detected in a recent study [1] after 2 to 4 weeks consuming a fruit-vegetable combination typically approved by the American Cancer Society. A mistaken viewpoint to which many doctors and scientific researchers have succumbed repeatedly for many decades is that tissue nutrient elemental composition reflects necessity for any particular elemental nutrient to be significantly functional for homeostatic maintenance. The role of vitamin-A for preventing corneal xerosis in malnourished children is well known but the conversion of beta-carotene into vitamin-A must necessarily require hitherto unspecified dietary mineral co-factors and liver enzyme biochemical regenerative mechanisms. Reasoning that beta-carotene supplementation resulting in lung cancer was MAINLY contingent upon concomitant cigarette smoking might be today open to question. A 2009 review provides a cogent understanding of prior literature and in summary, beta-carotene showed close to zero effect as a scavenger of free radicals [2] posited incorrectly yet widely promoted by nutrition supplements and internet health coaches.

2. Photo-Catalysis and Xanthophylls

It is a strange mystery that more than 90 years of biochemical tests on plant nutrient composition did not yield the discovery that the Tobacco plant might NOT require xanthophylls/carotenoids to enable catalytic synthesis of complex [ingestible] molecules [3] using natural solar radiation/light-heat-ultraviolet and the root vascular transport

physiology. The multiples of hundreds of xanthophylls molecule-diversity known thus far to exist among member species of the plant kingdom appear most poorly understood when perhaps mostly one among these [beta carotene] is considered important and ubiquitous.

3. Fruiting Versus Aerial Parts

3.1. Is it possible that we humans have excessively consumed carrot tubers for several thousand years that were meant only for the kindred of the rabbit?

A report from 2019 on the effectiveness of ingesting green leafy aerial parts [4] of the rooted planted carrot vegetable prove beyond a doubt that the human harvest might have been intended by Mother Nature as sustainable plucking of green leaves and NOT as an uprooting of the tuber. Above the soil-surface aerial parts of other plants [such as turnip, radish, and wild cardoon] have untapped benefits [5] for ailing patients and we might just as well leave the rooted plant sitting until the next season instead of demanding its replanting year upon year.

4. Cryptoxanthin Importance

Although nine popular vegetables and five popular fruit varieties appear adequate for the people of Spain, seasonal variation of the important xanthophylls lycopene and cryptoxanthin [6] can be clinically a cause for concern. Plasma beta-cryptoxanthin was shown to be a better indicator for diverse fruit-veggie dietary ingestion [7] compared to lutein concentrations: which provided index biomarker for vegetables alone. Tangerine, pumpkin, and red peppers are highly concentrated sources of cryptoxanthin contributing to retinol (Vitamin A) with tissue building (anabolic) effects [8] preventing losses of cartilage and bone.

5. Infection and Sepsis Biomarkers

Infestation of the liver tissue with parasitic organism infection was linked with lower blood retinol vitamin levels [9] in cattle. Parasitic cestodes can evade vertebrate immune mechanisms [10] and cell counts based on segmented nuclei of lymphocytes could be used effectively as an indicator for inflammation secondary to infection. Lowering by a criterion amount in the concentration of serum cytokines [11] can be regarded as an important indicator that impending sepsis [12] might NOT lead to mortality. Non-coding strips of genetic material are found to exit the cell-membrane [13] and frequency of such detected micro-RNA among extra-cellular crannies might be difficult to quantify. Measured in serum, beta-carotene molar quantity was NOT found to be any different [14] between infected and non-infected groups. This is a clear indication that the immune-enhancing effect known to be a regular feature of visual purple, the retinol molecule of Vitamin A, is NOT a feature of Beta Carotene, the orange-red pigmented xanthophylls of sub-surface carrot vegetables. Another study showed that enteric tapeworm helminthic infection of liver was compounded in Persian pastoral grazing quadrupeds leading to subsequent detrimental alterations of lung tissue [15] integrity.

6. Functional Versus Imaging Tests

Functional changes in the retina have a long-established editorial review success history [16] going back in the annals of submitted scientific journal articles. Electrophysiology and psychophysics have been amenable to research scientists and publishing doctors. These provide graded quantification [17] of clinical disease physiology parameters. Compared to the CAT scan and MRI; such methods might be less uncomfortable for the patient and could provide greater diagnostic value for clinical inference and repeat testing. CAT scan and MRI scanned images must be subjected to mathematical computer-assisted contrast-edge detection algorithms that require local segregation of visual features. It is assumed that acquired camera images do in fact represent dysfunctional anatomical region segregated from nearby normal tissue. Such assumptions are mostly untenable; and imaging technologies might NOT be effective for detection of early changes which are mostly of a biochemical, endocrine and neurological mechanism.

7. Cardiology and Lab Tests

Example being, dysfunctions of cardiac and vascular physiology, quantified by specialized electrical input lead-wire locations of the EKG and shape of waveform, could accurately find a history of drug abuse [self-medication or iatrogenic] where a high-resolution scan of the heart yields nothing more than a shadow even for the most accomplished radiologist. Tests for laboratory quantification of liver enzymes, cytokines, lactate [fatigue biomarker] and food metabolites and co-factors play a similar role for clinic decision-making process. It is hoped that patients with a known diagnosis can get more stringent tests specific to disease physiology that would be sensitive to alterations of life circumstance.

8. Agro Harvest

This paper demonstrates that molecular Vitamin A [Retinol] is better than supplementing Beta Carotene capsules; that harvesting the leafy aerial parts is better than damaging the underground tubers of carrot, turnip and radish; and these findings are relevant for agricultural practice and householder and community ethical and morality functional norms that have economic significance at the national level.

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