

Reviewer's report

Title: The emerging role of dietary fructose in obesity and cognitive decline

Version: 1 **Date:** 3 May 2013

Reviewer: Charles Halsted

Reviewer's report:

General comment: This is an excellent review of a very timely topic. It is well written, well referenced, and interesting to read, even for someone not working directly in the field. The following specific comments focus on several areas where clarity can be improved, at your discretion.

Specific comments:

P3 second para: Ref 10 is to elderly veterans, a subclass of all US residents. P 3, second paragraph: reference 11 is to global prevalence, not US as implied by the previous sentence.

P4, second para: Reference 27 was published in 2001, and current original and more easily accessible references to the increase of HFCS in the North American diet should be substituted (e.g. see work of Bray G and Popkin B) . Ref 31 does not specifically address the statement on the independent contribution of fructose to MetS, and should be substituted. Ref 31 to omega-3 fatty acids is better applied to the next paragraph.

P5, second para: Unclear here whether the high protein calorie supplement was given to the pregnant and lactating mothers, and how can this be compared to offspring not receiving a supplement? Do you mean that mothers received or did not receive the supplements? Better wording is suggested.

P6, 7 - 8: Specify whether the cited studies on the association of obesity with altered cognition addressed the potential role of co-existent T2D, hypertension, or hyperlipidemia, which seem more likely as developed in the next section.

P11, line 6: modify this sentence to indicate that "it was assumed that..."

P 12, first para: recommend addition of Stanhope KL. Annu Rev Med. 2012;63:329-43. as the most comprehensive recent review on the role of HFCS in MetS development.

P13, first para: Since the title of ref 31 only refers to omega 3 deficient diets, it is important to indicate whether fructose in the drinking water was a separate regulated variable in the study. In other words, there would have to be a control, no fructose group to prove the fructose effect on insulin resistance and cognitive function.

P14, top: similar to above, please specify whether fructose was studied separately from the other sugars, providing a specific effect.

P14, second para: Are you implying that the effect of sucrose is due to its

fructose component (which is present in about the same percentage as in HCFS)? Please be specific.

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I have no competing interests to declare.