I have read the pending WHO report, "Diet, Nutrition and the Prevention of Chronic Diseases" and would like to comment on the sections (page 11, paragraph 1) in which you refer to palm oil. The report makes it sound as if palm oil was the only dietary saturated fat and the principal root of atherosclerosis. This is patently not so. Palm oil is in wide use throughout the world and there are no data showing a direct effect of palm oil on atherosclerosis. When palm oil was charged in public advertisements as being an underlying cause of heart disease in the United States, the FDA said that there was so little palm oil in the American diet that its putative effects were not worth pursuing. I'm not sure that much has changed in the last 20 years.

Atherosclerosis is clearly a disease of multi-factorial etiology. The recent findings regarding early infection with cytomegalovirus or *chlamydia pneumoniae* as possible initiating factors in atherosclerosis tend to reduce the onus cast on diet in general and saturated fat in particular. Saturated fat certainly contributes to atherosclerosis risk but palm oil is not the sole dietary source of saturated fat, even in Asia. KC Hayes has shown that dietary palm oil contributes to hypercholesterolemia only if dietary cholesterol intake exceeds 250-300 mg/day. I think the remarks should be amended to voice concern over saturated fat and total calories without indicting any particular dietary component. There are a number of factors contributing to atherosclerosis of which hypercholesterolemia is only one. It is misleading to place so much blame on palm oil.

Red palm oil, which is under study in many laboratories is a rich source of carotenoids and has been shown to be as effective as Vitamin A fortification in raising the plasma Vitamin A levels in children. These results have been obtained in both India and South Africa. The overall effects of red palm oil deserve further investigation without the oil bearing the stigma of being a major contributor to disease.

I have been studying effects of diet and fat in experimental atherosclerosis for a half century. Red palm oil is significantly less atherogenic than palm oil. We have also found that the atherogenicity of a fat is affected by the amount of palmitic acid at the SN2 position. Despite the high palmitic acid content (41%) of palm oil, only 13-14% is present at the SN2 position. In contrast, almost all of the 24% of palmitic acid found in lard (experimentally, a highly atherogenic fat) is at SN2.

Sincerely,

David Kritchevsky, PhD
Institute Professor and Caspar Wistar Scholar
The Wistar Institute
3601 Spruce Street
Philadelphia, PA 19104
t: 215-898-3713
f: 215-898-3995
e: kritchevsky@mail.wistar.upenn.edu

Institution:
Established in 1892, The Wistar Institute, was the first independent medical research facility in the USA. Wistar's mission is to pursue basic scientific research in medicine; to develop treatment and prevention of chronic and acute disease. Wistar is a National Cancer Institute Cancer Center, funded by endowment, the National Institutes of Health and private foundation grants.

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David Kritchevsky, PhD
Institute Professor