Artemis P. Simopoulos, M.D.

President

The Center for Genetics, Nutrition and Health

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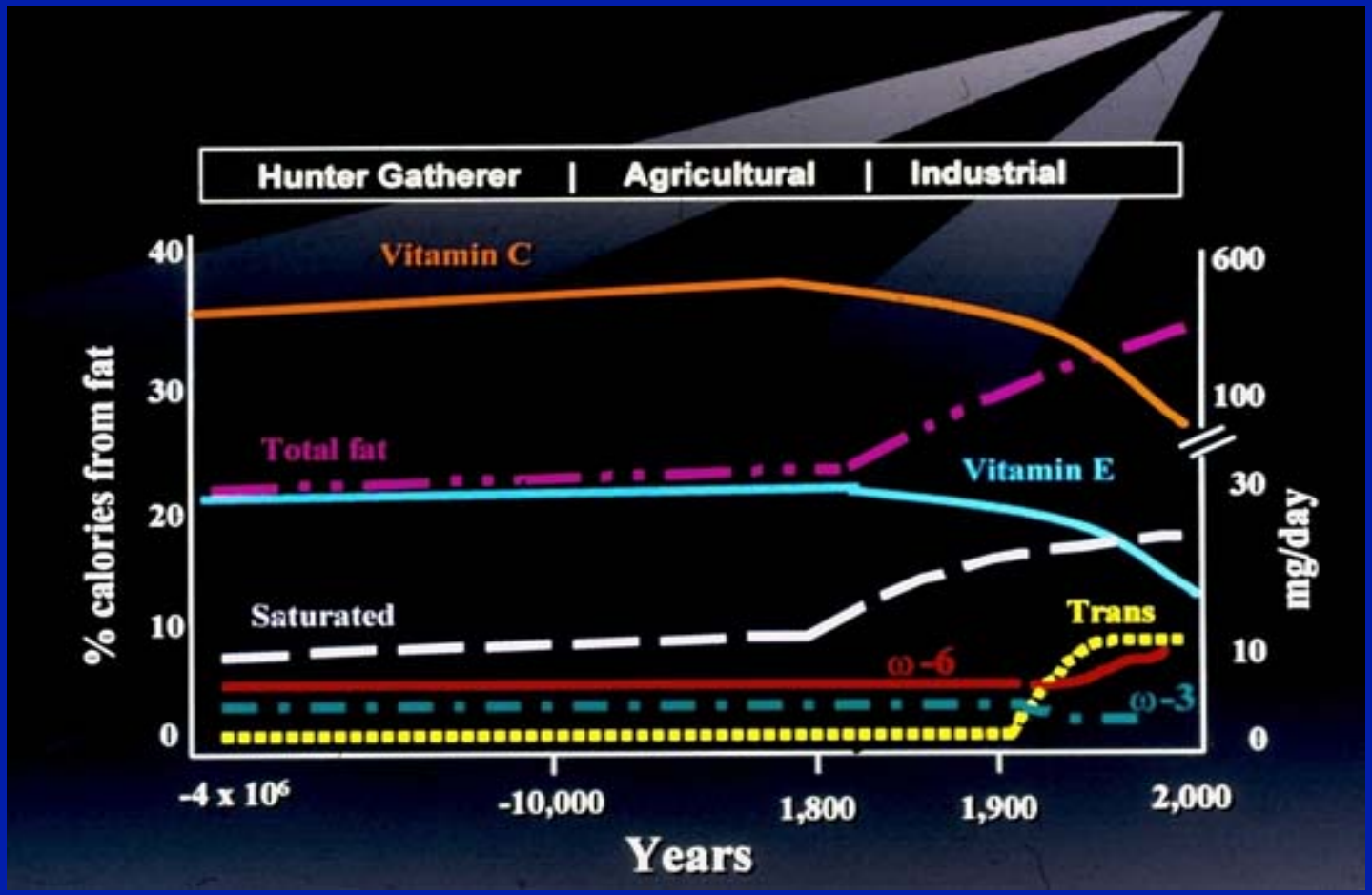
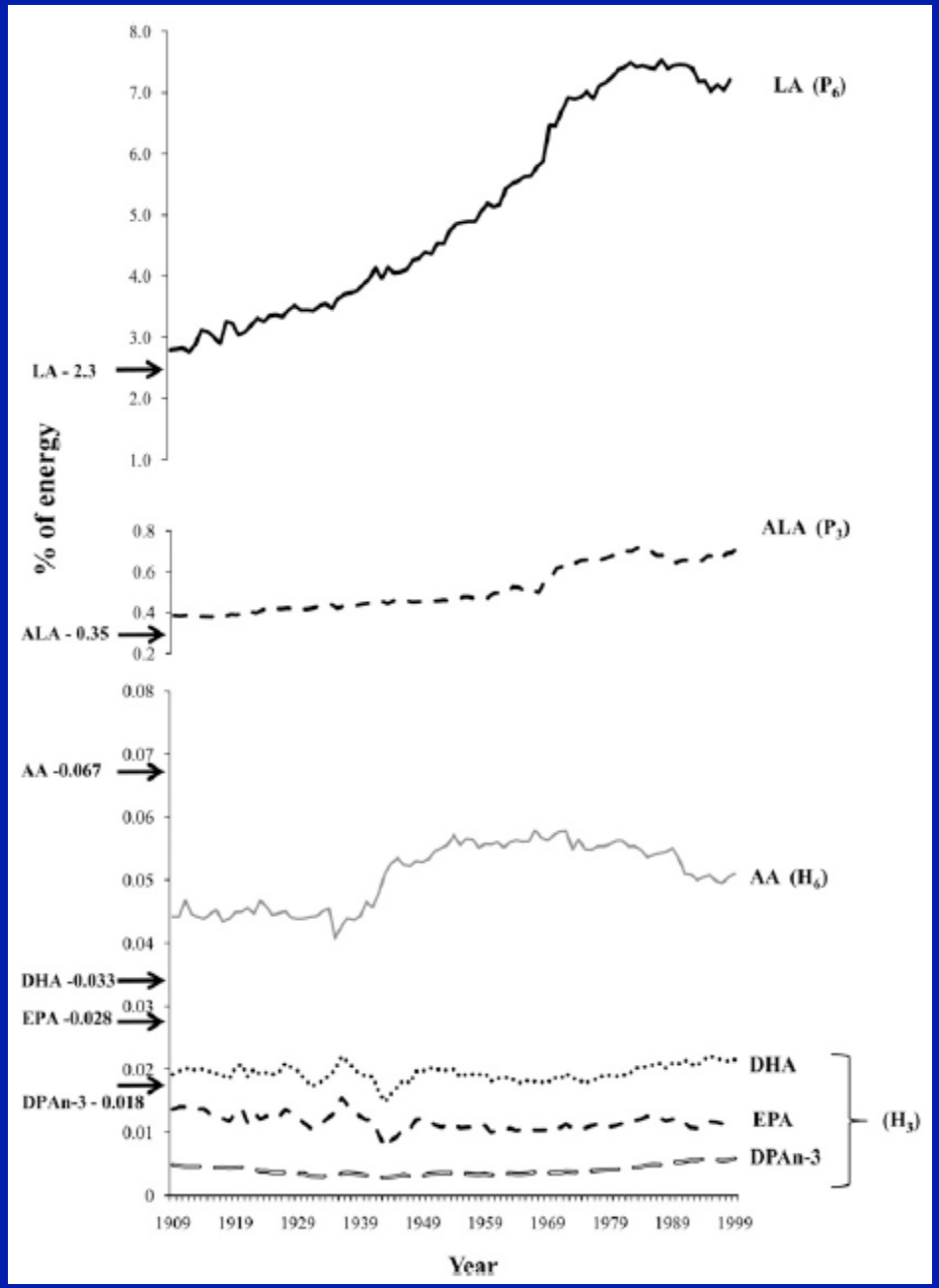
Hypothetical scheme of fat, fatty acid (ω6 and ω3, trans and total) intake (as percent of calories from fat) and intake of vitamins E and C (mg/d)



Simopoulos AP: Genetic variation and evolutionary aspects of diet. In: Antioxidant Status, Diet, Nutrition, and Health, Papas AM (Editor), CRC Press, Boca Raton, 1999, pp. 65-88.

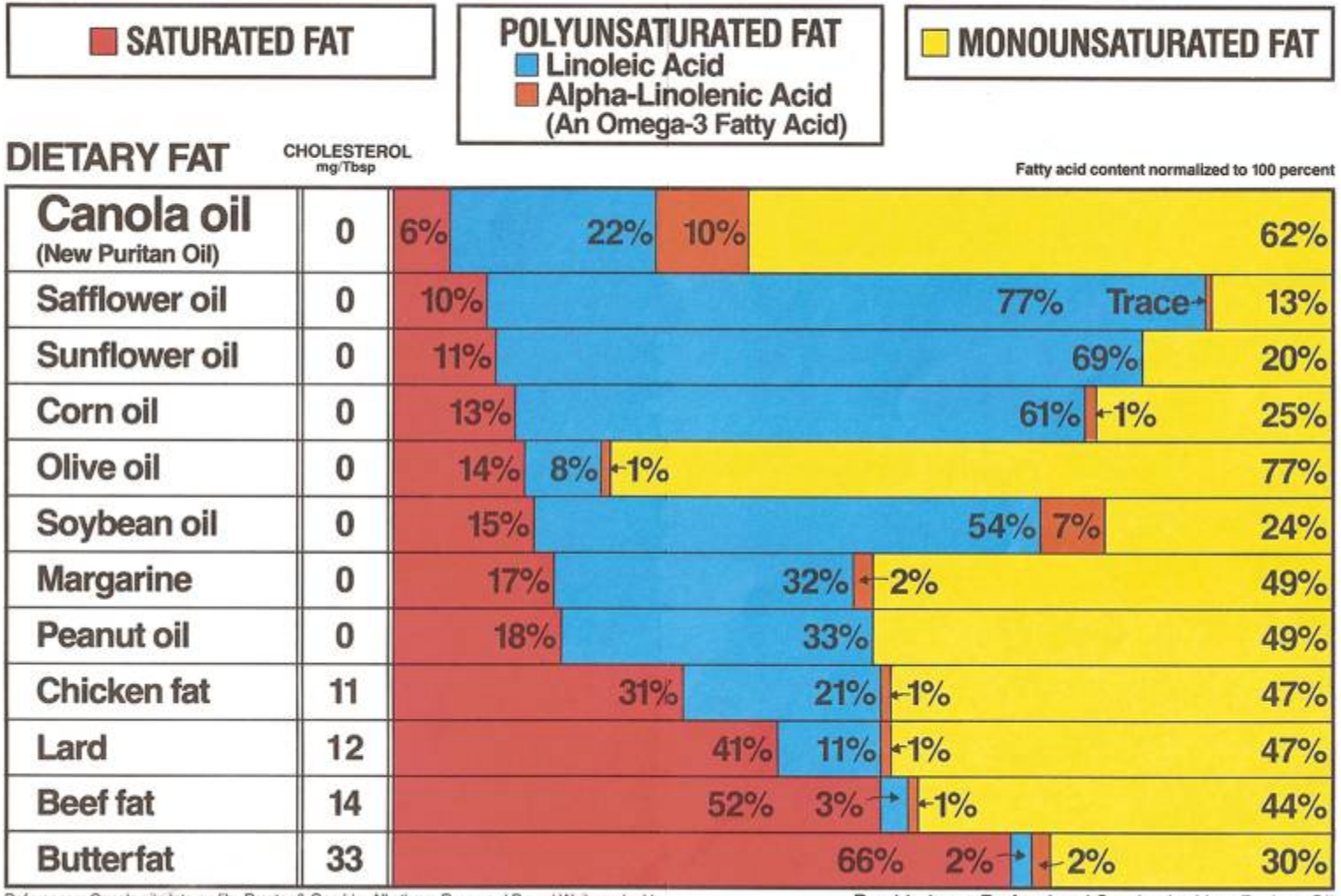
Essential Fatty acid intake in the 20th Century



Availability of essential fatty acids from 1909 to 1999. 1909-T data are indicated by solid arrows for LA (2.23% of energy), ALA (0.35% of energy), arachidonic acid (AA) (0.67% of energy), docosahexaenoic acid (DHA) (0.033% of energy), eicosapentaenoic acid (EPA) (0.028% of energy), and docosapentaenoic acid (DPAn23) (0.018% of energy).

Blasbalg TL et al. Am J Clin Nutr. 2011;93:950-62.

COMPARISON OF DIETARY FATS



References: Canola oil: data on file, Procter & Gamble. All others: Reeves, J.B. and Weihrauch, J.L. *Composition of Foods, Agriculture Handbook No. 8-4.* Washington, D.C.: United States Department of Agriculture, 1979.

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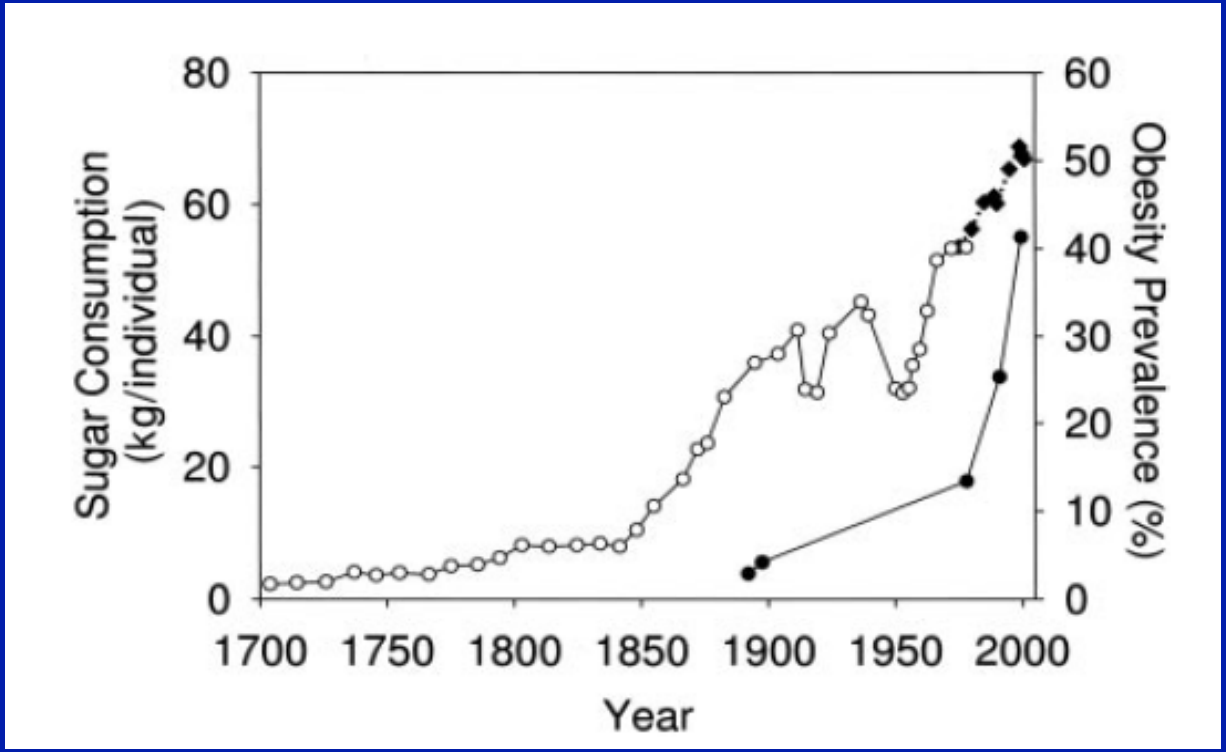
ω6:ω3 ratios in various populations

Population	ω6:ω3	Reference
Paleolithic	0.79 [a,b]	Eaton et al, 1998
Greece prior to 1960	1.00-2.00	Simopoulos, 1999
Current United States	16.74	Eaton et al, 1998
United Kingdom and northern Europe	15.00	Sanders, 2000
Japan	4.00	Sugano and Hirahana, 2000
India rural	5-6.1	Pella et al, 2003
India urban	38-50	Pella et al, 2003

[a]Data from Eaton et al. (1998), World Rev Nutr Diet.

[b]Assuming an energy intake of 35:65 of animal: plant sources.

Sugar and the Cardiorenal Disease Epidemic



Sugar intake per capita in the United Kingdom from 1700 to 1978 (30, 31; E) and in the United States from 1975 to 2000 (32;) is compared with obesity rates in the United States in non-Hispanic white men aged 60–69 y (17; F). Values for 1880-1910 are based on studies conducted in male Civil War veterans aged 50–59 y (18).

Johnson RJ et al. Am J Clin Nutr. 2007;86(4):899-906.

Conclusions

Dietary recommendations at the population level will continue to be made, but customized dietary recommendations at the individual level are the expectation for the future. Combined efforts including changes in lifestyle (exercise), controlled and selective nutrition, could bring about the reversal of diseases or at least slow down disease processes and enhance survival. The establishment of Regional Centers on Genetics Nutrition and Fitness for Health may make this possible.