



Written to inform the food industry since 1994

by Carol T. Culhane, PHEc, MBA

Bioavailability

(Nutrient Supplementation)

Part 2 of 4

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Two basic schools of thought govern the purpose of nutrient supplementation.

Supplementation of the Diet

This perspective maintains that the abundant and affordable food supply of the Western world provides access to any and all nutrients. Supplementation requirements arise only when an individual's physiological condition leads to either a permanent or temporary nutrient inadequacy. Examples would be the increased requirement for iron during pregnancy, or, the increased need for calcium in the state of osteoporosis, for which iron and calcium supplementation are prescribed, respectively. The corollary is that the food supply does not require supplementation. This outlook has been largely embraced by Health Canada, and serves to partially explain the regulation of dietary supplements and food fortification in Canada. Heretofore, vitamin and mineral supplements have been regulated as OTC drugs (DIN – Drug Identification Number) and are now regulated as Natural Health Products (NPN -Natural Health Product Number). Canada's food fortification legislation is based on demonstrated. evidence-based, nutrient shortages in the food supply (i.e. addition of Vitamins A and D to milk), or loss of nutrients during processing (enrichment of grain products with several vitamins and minerals).

Supplementation of the Food Supply

The USA's approach suggests that the American food supply cannot meet the nutrient requirements of most individuals. The liberal DSHEA – Dietary Supplement and Health Education Act of 1994 – glutted the market with a wide variety of substances – botanical, nutrient, herbal, etc. Since then, market forces, amendments to the Act, as well as initiatives undertaken by government, healthcare professionals and the industry, have brought order and integrity to the USA supplement market. USA food fortification is not regulated as it is in Canada. One can buy food containing, say, 100% of the daily requirement for Vitamin C. This is market-based fortification – the market will bear it; it is legal as long as it is safe.

"Supplement" Defined

The <u>2007 Encarta Dictionary</u> - the engine driving Microsoft's thesaurus - provides a definition that recognizes and blends both perspectives into one:

4. PHARMACOLOGY **food:** "a substance with a specific nutritional value taken to make up for a real or supposed deficiency in diet"

Although not the most scientific authority, the universally-used Encarta is certainly, unwittingly, diplomatic.

🌣 A Sea Change in Canada

Just when it seemed never the two shall meet...For the first time since 1942, Canada's Food Guide to Healthy Eating includes dietary supplementation - for certain individuals. The 2007 edition recommends folic acid supplementation for all women of childbearing age to protect against infant spina bifida; iron supplementation for all pregnant women; and, Vitamin D supplementation (400 IU daily) for men and women over age 50 to facilitate calcium uptake in bone re-modeling.

The supplement industry has taken notice.

The future bodes well also. Health Canada's restrictive food fortification policy has been undergoing renovation since 1998. The eventual ratified regulations will permit discretionary fortification of a wide range of processed foods from a candy-store assortment of vitamins and minerals. Moreover, the revisions will permit the availability of nutritional supplements (bars, beverages, etc.) in gender and age-specific formats, thereby fulfilling particular nutrient requirements of consumers in any and all stages of the lifecycle.

🌣 Some Web sites

http://www.hc-sc.gc.ca/fn-

an/nutrition/vitamin/fortification_factsheet2-fiche2_e.html http://www.crnusa.org/

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