Food Cost Survey: September 2002

Dates of Publication
Surveys are conducted quarterly:
March, June, September and December

Cost of Food at Home for a Week in Alaska

Up to three stores in each of 21 communities were surveyed during September of 2002 for the cost of a specific set of food and non-food items. The 104 food items selected were taken, with some modification, from the USDA Low-cost Food Plan which is itself based on a nationwide survey of eating habits of Americans, conducted in 1977-78. In addition, the costs of such items as water, propane and electricity were collected. All costs were adjusted to reflect local sales tax where applicable.

The estimated prices of unavailable food items in various communities were calculated as the expected cost as judged from the prices of all available items relative to the price of those items in Anchorage. The percent of foods unavailable in each community are shown in the survey.

Weekly food consumption rates for a family of 4, children 6 - 11 years, form the basis of the expressed food costs. All other costs are ratios of that cost as calculated from the USDA Cost of Food at Home survey issued September 2002. The cost for this family of 4 can be calculated from the table by summing the individual members. For smaller families such a sum would be too low and should be adjusted up by 20%, 10% or 5% for families of 1, 2 or 3

persons respectively. Similarly, the sum for larger families would be too high and downward adjustments of 5% and 10% are suggested for 6 and 7 or more member families. These adjustments reflect that some economies may be realized when preparing foods for larger families.

Rows 19 through 23 represent historical food costs. The Anchorage column is a comparison of present to previous Anchorage costs. Similarly the U.S. Average column represents changes in U.S. average prices. A one (1) appearing in the Anchorage column indicates that the current Anchorage cost is 1% higher now than at that date. Therefore, rising food costs are indicated by positive values. The remaining columns are each community's cost relative to Anchorage at that date. For instance, a cell containing a one (1) indicates a community that was experiencing a food cost 1% higher than Anchorage at that date.

Biotin, Folic Acid, Vitamin B12

Organic substances, including all living matter, are based on the element carbon. The three vitamins considered here participate in single carbon chemistry, which is to say they work on one carbon at a time in metabolic processes.

Biotin

Biotin is found in egg yolks, an anti-biotin protein (avidin) is found in egg whites. Avidin is destroyed by cooking; so cooked eggs are good source of biotin whereas consumption of extreme quantities of raw eggs can cause a biotin deficiency. Although outright biotin deficiency is rare, a marginal deficiency may be more common than previously realized and have significance in pregnancy and recovery from malnutrition. Brewer's yeast and soy products are good sources of this vitamin. Biotin is necessary for glucose and fat metabolism.

Folic Acid

Folic acid (folate) and Vitamin B12 (below) function together in the formation of nucleic acids (DNA, RNA), a role not worked out

until the nucleic acids themselves were understood. Folate's role in DNA metabolism may be related to the observed inverse relationship between folate sufficiency and breast cancer: high folate intakes correlate with a low incidence of breast cancer. This observed effect appears to be enhanced by vitamins B6 and B12 sufficiency. Folate supplementation has become a recommended practice for pregnant women as a deficiency can result in neural tube defects. In that regard, fortification of cereals has become routine in Australia, Canada, the United Kingdom and the United States. Additional folate can reduce homocysteine levels, a risk factor in cardiovascular disease. Conversely, elevated folate can mask a vitamin B12 deficiency, a concern in the elderly.

Vitamin B12

This highly complex and exceptionally potent vitamin comes from animal sources although B12 synthesized internally by hindgut bacteria can also be absorbed. Primary dietary deficiency of vitamin B12 is thought to be rare, difficulties in absorption are the greater cause for B12 deficiency symptoms. Vitamin B12 functions with folate in nucleic acid metabolism as well as other reactions. Recent work indicates that prevention of neural tube defects by folate may be due to improved function of vitamin B12 dependent metabolism wherein vitamin B12 may in fact be the primary deficiency.

Sources

Berdanier, C. D. 1998. Advanced Nutrition: Micronutrients. CRC Press. Boca Raton.

Lockner, D.W., R. Wold, D. Waters, P.J. Garry and R.N. Baumgartner. 2002. Am. J. Clin. Nutr. 75:389S.

Mock, D.M., C. L. Henrich, N. Carnell and N. I. Mock. 2002. Am. J. Clin. Nutr. 76:1061-8.

Refsum, H. 2001. Brit. J. Nutr. 85:S109-113.

Shrubsole, M.J., F. Jin, Q. Dai, X.O. Shu, J.D. Potter, J.R. Hebert, Y.T. Gao and W. Zheng. 2001. Cancer Res. 61:7136-7141.

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