Centre for Allied Health Evidence

CAHE *Allied Health News in Review*

Are vitamins recommended for adults?

Article Hypothesis

We intend to review an article that strongly recommends the intake of vitamins by all adults. The article was published in *Healthy Life* news magazine, Spring 2008.

The origin of evidence:

This news report was based on a scientific review published in the *Journal of the American Medical Association* (JAMA) and conducted by researchers from the Harvard medical school (Boston).

The objectives of research:

To explore the evidence that vitamins are associated with chronic disease in adults.

The nature of evidence:

Scientific Review - narrative in nature, easy to read, summarises large information on a subject and provides recommendations from clinical experts.

Interventions utilised:

Vitamin intake

Outcome measures:

Unclear

Key findings:

- Most people do not consume an optimal amount of all vitamins by diet alone. Strong evidence from randomised trials suggests all adults to take vitamin supplements.
- Suboptimal intake of some vitamins, above levels causing classic vitamin deficiency is a risk factor for chronic diseases and common in general population, especially the elderly.
- Suboptimal folic acid levels along with suboptimal levels of vitamin B6 and B12 are risk factors for cardiovascular disease, neural tube defects and colon and breast cancer, low levels of the antioxidant vitamins (vitamins A, E and C) may increase risk for several chronic diseases.
- There is limited evidence base for tailoring the contents of multivitamins to specific characteristics of patients such as age, sex and physical activity and for testing vitamin levels to guide specific supplementation practices.

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Recommendations made by the review article:

- Authors recommend that all adults take one multivitamin daily.
- Vitamin supplementation is not an adequate substitute for a good diet.
- Authors recommend multivitamins rather than individual vitamins, because multivitamins are simpler to take and cheaper than individual vitamins taken separately and because a large population of the population needs supplements of more than one vitamin.
- Physicians should make specific efforts to learn about their patients' use of vitamins to ensure that they are taking vitamins they should, such as folate supplementation for women in the child bearing years and avoiding dangerous practices such as high doses of vitamin A during pregnancy or massive doses of fat-soluble vitamins at any age.

Validity of methodology and reliability of the conclusions:

JBI-Notari[1] score for this review is 4/6 points. The methodology section of the article was not mentioned at all. Also, the findings of the studies were not elaborate in terms of outcomes, outcome measures, etc. There was no clear description of the included studies. Thus, it is impossible to judge the validity and reliability of the conclusions without a clear knowledge of the above. Therefore, the completeness of the information and the conclusions must be taken at face value.

Clinical implications:

The methods for data collection and synthesis and interpretation were not reported. Therefore, the completeness of the information and the conclusions must be taken at face value.

Reference:

Fletcher RH, Fairfield KM. Vitamins for chronic disease prevention in adults: clinical applications. JAMA 2002; 287(23); 3127-3129.

Article Reference:

Report published in *Healthy Life* news magazine, Spring 2008. Journal of the American Medical Association announces recommendation that all adults should take vitamins.

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[1] http://www.unisa.edu.au/cahe/CAHECATS/#46

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