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**THE HEALTH SUPPLEMENTS INFORMATION SERVICE COMMENTS ON
THE BENEFITS OF VITAMIN D**

27 May 2008 – Further to a study published on line in the May 27 issue of the Journal of the National Cancer Institute¹ on blood levels of vitamin D and risk of prostate cancer, HSIS would like to make the following comment.

Pamela Mason, spokesperson for the Health Supplements Information Service (HSIS) says: "Vitamin D is essential for promoting the absorption of calcium and the health of the bone, and lack of vitamin D is emerging as a public health concern throughout the world. Frank deficiency of vitamin D, ie rickets, is still seen in the UK, particularly in poor urban areas and in certain ethnic groups of the population. Research in UK adults indicates a high risk of low vitamin D blood levels.² There is also growing evidence that lack of vitamin D is involved in the development of a number of other chronic conditions including osteoporosis, poor muscle function, colon cancer, cardiovascular disease, diabetes mellitus, multiple sclerosis, rheumatoid arthritis and other autoimmune conditions.³

In this prospective study involving 749 men with prostate cancer, it is important to note that there was no significant difference in the overall risk of prostate cancer with increasing vitamin D concentrations in the blood. Though the researchers found some evidence of an increased risk of aggressive prostate cancer with higher blood levels of vitamin D, the trend was not statistically significant.

¹ Ahn J et al. Serum vitamin D concentration and prostate cancer risk: a nested case-control study. Journal of the National Cancer Institute. Published on line, May 27, 2008. DOI: 10.1093/jnci/djn152

² Hypponen E, Power C. Hypovitaminosis D in British adults at age 45 y: nationwide cohort study of dietary and lifestyle predictors. Am J Clin Nutr 2007;85(3):860-8.

³ Zitterman A. Vitamin D in preventive medicine: are we ignoring the evidence? British Journal of Nutrition 2003;89:552-572.

Moreover, it is important to look at this research in the context of other studies. Some studies have found that high doses of vitamin D inhibit the growth of prostate cells and prostate cancer cells.⁴⁵ In addition, a large study in Finland⁶ found that higher blood levels of vitamin D were associated with reduced risk of prostate cancer. Of note in the Finnish study is that 50% of the men were vitamin D deficient while in the current US study, only 20% of the men were vitamin D deficient. Given that Britain and Finland are both northern countries with a relative lack of sunlight, and therefore a higher risk of vitamin D deficiency, the results from the Finnish study showing a reduced risk of prostate cancer in association with higher blood levels of vitamin D are noteworthy and particularly relevant in Britain.

Furthermore, the results of this current US trial are based on a single blood measurement in the men participating in the study. Measurements in individuals do vary with time and the associations found in this study could have been different if multiple measures had been taken.

Pamela concludes: "Given the fact that the British population is at risk of poor vitamin D status and the well documented evidence that increased vitamin D levels are likely to have a beneficial effect on the risk of chronic disease, a vitamin product containing vitamin D is likely to have a positive benefit on overall health."

For further information or to arrange an interview with an HSIS spokesperson, please contact:

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⁴ Skowronski RJ et al. Vitamin D and prostate cancer: 1,25-dihydroxyvitamin D3 receptors and actions in human prostate cancer. cell lines . *Endocrinology* . 1993;132 (5):1952 – 1960 .

⁵ Peehl DM et al. Antiproliferative effects of 1,25-dihydroxyvitamin D3 on primary cultures of human prostatic cells . *Cancer Res.* 1994 ; 54 (3) : 805 – 810 .

⁶ Ahonen MH et al. Prostate cancer risk and prediagnostic serum 25-hydroxyvitamin D levels (Finland) . *Cancer Causes Control* . 2000 ; 11 (9) : 847 – 852 .