

Letter to the Editor

Reply: Calcium, dairy, and prostate cancer

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British Journal of Cancer (2007) 96, 1009. doi:10.1038/sj.bjc.6603681 www.bjcancer.com
Published online 6 March 2007
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Sir,

We agree with Dr. Heaney that it is unclear whether there is any association between intakes of dairy products and/or calcium and prostate cancer risk. We had conducted our study, investigating the possibility that higher intakes of dairy products and/or calcium may be associated with increased risk, because calcium suppresses 1,25-dihydroxyvitamin D [$1,25(\text{OH})_2\text{D}$], which inhibits the proliferation of prostate cancer cells and promotes their differentiation (Koh *et al*, 2006).

We respectfully disagree with Dr. Heaney's statement that serum $1,25(\text{OH})_2\text{D}$ is unrelated to prostate cancer risk. The data are presently not clear: some studies have shown strong (Corder *et al*, 1993) or weak inverse associations (Gann *et al*, 1996), while others

have observed U-shaped (i.e., increased prostate cancer risk with both low and high levels of $1,25(\text{OH})_2\text{D}$) (Tuohimaa *et al*, 2004) or null associations (Nomura *et al*, 1998). Additionally, two other studies have reported inverse associations between serum 25-hydroxyvitamin D [25(OH)D] (Ahonen *et al*, 2000) or predicted serum 25(OH)D levels and prostate cancer risk (Giovannucci *et al*, 2006).

Thus, it is biologically plausible – although not proven – for high intakes of dairy products and/or calcium to be related to increased prostate cancer risk. While our study and others (Severi *et al*, 2006) did not observe any association, other large, well-conducted studies have reported that high intakes are indeed predictive of increased prostate cancer risk (Giovannucci *et al*, 1998; Chan *et al*, 2001). Further studies are needed to clarify the association.

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Published online 6 March 2007