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Reply

SIR—We welcome this response to our article on the associations between moderate drinking in older community living populations and cognitive outcomes [1]. We agree that it is important that this piece of research should be seen in context, and we certainly have no wish to distract from the potentially serious impact of alcohol abuse or addiction on older people.

Crome and Crome are correct that our analysis was intended only to refer to older people who can live independently, and that we did not separate the 50–64 age group from the 65+ age group. In fact, we did not find any statistically significant differences in outcomes between these age groups.

The definition of 14 g of alcohol as ‘one drink’ (following the convention in the USA) could be confusing, since in the United Kingdom ‘one unit’ is equivalent to 8 g of alcohol. International differences in alcohol measures mean that choosing any particular categorisation is somewhat arbitrary; our choice was intended to allow comparison with US studies, which provide most of the relevant evidence.

We recognise that the CAGE questionnaire is not the optimal tool for identifying problem drinking in older people but it is regarded as useful and was the best tool available in the dataset we used. We agree it is arbitrary: our choice was intended to allow comparison with US studies, which provide most of the relevant evidence.

Excessive alcohol consumption at any age should be discouraged and we would take this opportunity to repeat, as we did in our article, that we do not advocate an increase in drinking in older people. If our findings were to be taken as justification for the denial of effective treatment for older people with serious psychological and physical problems as a result of alcohol use we would be both puzzled and dismayed.

Letters to the Editor

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The role of vitamin D3 in preventing infections

SIR—The recent research letter on vitamin D3 supplementation of 800 IU per day to prevent infections reported non-significant results [1]. This result conflicts with the findings of a similar study conducted in Mineola, New York [2] in response to the suggestion that some of the marked seasonal variation in incidence rates of influenza may be accounted for in part by seasonality of solar ultraviolet-B (UVB) levels [3].

Influenza in North America and Europe, for example generally reaches epidemic peaks during December–March [3]. These are the months during which the UVB irradiance and serum levels of 25-hydroxyvitamin D3 are lowest in the population. Although seasonal variations in temperature and relative humidity also play important roles in respiratory infections [4], it appears that vitamin D3 can greatly reduce the risk of influenza.

In the New York Study [2], there was a post-hoc analysis of incidence rates of influenza and common colds in a prospective double-blind trial of supplemental vitamin D3 for the prevention of bone disease in 208 African–American postmenopausal women aged 60 ± 6 (mean ± standard deviation) years living in or near Mineola, New York. The women were enrolled in a 3-year randomised clinical trial. Half were given 800 IU per day of vitamin D3 in the first 2 years, and 2,000 IU per day in the third year, and half were administered a placebo. Every 3 months, the women were interviewed and asked whether they had experienced a cold or influenza in the previous 3 months. Twenty-six women taking the placebo reported having at least one of these illnesses, compared to seven women taking 800 IU/day, and only one taking 2,000 IU/day.

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In reviewing the RECORD study [5], no benefit was found for vitamin D3 and/or calcium supplementation with respect to low-trauma falls. One reason might be that the participants had an average age of 77 ± 6 years. Absorption and utilisation of vitamin D decreases with age, so that higher doses may have been needed to substantially reduce the risk of falls.

The immune response in the RECORD Study did show some response to vitamin D3 supplementation, but other aspects of the ageing subjects’ immune systems, such as lymphocyte count and B-cell responsiveness, may have deteriorated to the point where 800 IU/day of vitamin D3 could not overcome the effects of ageing on immunity. Compliance with the supplement protocol deteriorated with time, but was not much different between those on the supplement arms with vitamin D3 and the other arms, other than calcium. Lack of compliance creates misclassification error, and can hide associations, even when it occurs to a similar degree in various arms of a trial.

Conflict of interest
WBG receives funding from the UV Foundation, McLean, VA, and the Vitamin D Society, Canada.

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C-reactive protein levels and delirium in a rehabilitation ward

SIR—In their research letter recently published in this journal [1], Macdonald found that high levels of C-Reactive Protein (CRP) independently predict the incidence of delirium, while low CRP levels predict the recovery from delirium at any time during hospitalisation.

We want to contribute to this topic from our own personal data, with reference to our experiences in managing delirium in our rehabilitation and aged care unit (RACU). From 1 June 2005 to 31 December 2006, 110 patients underwent a diagnosis for delirium, on admission (prevalent) or during their hospital stay (incident). Source of admission were orthopaedic or medical wards, while 29 patients came from home. The diagnosis for delirium was performed by experienced geriatricians (GB and SS), using the Confusion Assessment Method (CAM) [2]. All patients underwent a multidimensional assessment, including demographics, clinical (Charlson Index, APACHE II score [3]), nutritional (Body Mass Index and albumin serum levels), cognitive (Mini-Mental State Examination, Clinical Dementia Rating scale) and functional (Barthel Index on admission and Instrumental Activities of daily living) status. The CRP serum levels (quantitative determination; Konelab) were available for 98 cases of prevalent delirium and in 12 cases of incident delirium. Among individuals with prevalent delirium, 41 had surgical causes, 33 had infective causes (i.e. pneumonia or urinary tract infections) and 24 had a mix of non-infective causes (stool or urinary retention, dehydration, and iatrogenesis). Eight individuals with incident delirium had infective causes, while four had non-infective causes. Table 1 shows the characteristics of different patient groups.

As expected, CRP serum levels changed coherently with the phases of delirium (onset and resolution) across groups. In fact, in patients with prevalent delirium, the CRP levels are elevated on admission and low at delirium resolution either in those with surgical, infective, or non-infective causes; in patients with incident delirium, the CRP levels are lowest on admission (when patients are not delirious), highest when delirium develops and, again, low at delirium resolution, both in the infective and non-infective groups. Although the CRP levels were higher on admission in patients developing incident delirium for infective causes in comparison to those with non-infective causes, the change from admission to delirium onset in CRP levels was similar for both groups.

However, it should be underlined that in patients with prevalent delirium for non-infective causes, the CRP serum levels were lower when compared to the levels of patients with infective and surgical causes, suggesting that physiopathological mechanisms precipitating delirium significantly influence the amount of inflammatory response.

Table 1 shows the characteristics of different patient groups. From 1 June 2005 to 31 December 2006, 110 patients underwent a diagnosis for delirium, on admission (prevalent) or during their hospital stay (incident). Source of admission were orthopaedic or medical wards, while 29 patients came from home. The diagnosis for delirium was performed by experienced geriatricians (GB and SS), using the Confusion Assessment Method (CAM) [2]. All patients underwent a multidimensional assessment, including demographics, clinical (Charlson Index, APACHE II score [3]), nutritional (Body Mass Index and albumin serum levels), cognitive (Mini-Mental State Examination, Clinical Dementia Rating scale) and functional (Barthel Index on admission and Instrumental Activities of daily living) status. The CRP serum levels (quantitative determination; Konelab) were available for 98 cases of prevalent delirium and in 12 cases of incident delirium. Among individuals with prevalent delirium, 41 had surgical causes, 33 had infective causes (i.e. pneumonia or urinary tract infections) and 24 had a mix of non-infective causes (stool or urinary retention, dehydration, and iatrogenesis). Eight individuals with incident delirium had infective causes, while four had non-infective causes. Table 1 shows the characteristics of different patient groups. As expected, CRP serum levels changed coherently with the phases of delirium (onset and resolution) across groups. In fact, in patients with prevalent delirium, the CRP levels are elevated on admission and low at delirium resolution either in those with surgical, infective, or non-infective causes; in patients with incident delirium, the CRP levels are lowest on admission (when patients are not delirious), highest when delirium develops and, again, low at delirium resolution, both in the infective and non-infective groups. Although the CRP levels were higher on admission in patients developing incident delirium for infective causes in comparison to those with non-infective causes, the change from admission to delirium onset in CRP levels was similar for both groups.

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