Folate and vitamin B12 in older Australians

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Publication Details
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Abstract
The recent viewpoint by Kamien1 and letter by Gunasekera2 rightly highlight the benefits of folate fortification and the unlikely occurrence of masking pernicious anaemia. Food Standards Australia New Zealand recently submitted a proposal supporting the mandatory fortification of bread-making flour to increase folate intakes in women of child-bearing age, with the aim of reducing the risk of children being born with neural tube defects.3 This proposal has had extensive public comment and will be considered by the Australia and New Zealand Food Regulation Ministerial Council. Several public groups and individuals continue to raise concerns that higher dietary folate levels could increase B12 deficiency. Our data, collected from a population-based sample of 2596 older people in the Blue Mountains region, from 1997 to 2000, do not suggest that this is a likely outcome.

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THE HEART OF THE MATTER

When should you call the heart clinic? When you are over 40? When you are overweight? When you are a smoker? When your blood pressure and cholesterol are too high? When your chest is tight? When your breathing is short? When your heart beats irregularly?

While your heart beats … before you have a heart attack, not after.

This advertisement, played incessantly on commercial radio, targets the “worried well” and invites them to make contact with a heart check clinic for potential cardiac and vascular testing. Given the commercialisation of medicine, self-referral clinics are to be expected. Medicare provides a reliable revenue stream, and aggressive advertising is the key to throughput and success.

Indeed, the business of heart clinics must be booming. In the past 2 years, Medicare statistics reveal an unprecedented doubling in claims for vascular testing. In turn, the federal Minister for Health is considering instituting a ban on radio advertising for heart testing, noting: “I am far from convinced that [they are] a good thing, on public policy grounds.”

Herein lies the rub. Direct advertising to the public by pharmaceutical firms and doctors is either illegal or unprofessional. In contrast, advertising by commercial concerns is relatively laissez faire, as ads for erectile dysfunction, prostate problems, and attention deficit hyperactivity disorder choke the airwaves.

But more fundamental issues are at stake. Firstly, self-referral clinics usurp the traditional “gatekeeper” role of general practitioners. Secondly, the Medicare Benefits Schedule (MBS) provisions for health screening are readily exploitable.

The solutions are simple. The analysis of Medicare payments needs to be more rapid and focused. More importantly, the MBS provisions for health screening need to be reviewed urgently by informed professionals.

It’s time to get to the heart of the matter.

Martin B Van Der Weyden

From the Editor’s Desk

LETTERS

Priorities for reducing the burden of injuries in sport: the example of Australian football
321 Belinda J Gabbe, Caroline F Finch, Peter A Cameron

Folate and vitamin B₁₂ in older Australians
321 Victoria Flood, Paul Mitchell

Exposure to environmental tobacco smoke in cars increases the risk of persistent wheeze in adolescents
322 Peter D Sly, Marie Deverell, Merci M Kusel, Patrick G Holt

Immunisation coverage in refugee children
323 Kylee J Parsons, Maggi Osbourn, David N Durrheim, Murray T Webber

Mistakes and misconduct in the research literature: retractions just the tip of the iceberg
323 Alison Poulton

In the wake of hospital inquiries: impact on staff and safety
324 Gavin H Mooney

Hendra virus infection in a veterinarian
325 Paul Prociv

The Australian Health News Research Collaboration
326 Simon Chapman, Ross MacKenzie

The adventures of an alienist
326 Bruce H Peterson

Characteristics of Australian women who test positive for HIV: implications for giving test results
327 Carol A Hopkins, Rosey A Cummings, Tim RH Read, Christopher K Fairley

Prisons: mental health institutions of the 21st century
327 Gordon RW Davies

Patient privacy and Latin: my father’s story
328 Katherine A Haley

SNAPSHOT

Pulmonary artery aneurysm
314 Zubair Ahmad, Imrana Masood, Saurabh K Singh

OBITUARY

Cyril Charles Julius Minty
314 by Thomas F Sandeman

274 IN THIS ISSUE
320 IN OTHER JOURNALS

Cover: Stages of macular degeneration. Courtesy of Associate Professor Robyn Guymer, Macular Research Unit, Centre for Eye Research Australia, University of Melbourne, VIC, Australia.
Priorities for reducing the burden of injuries in sport: the example of Australian Football
Belinda J Gabbe, Caroline F Finch and Peter A Cameron

To the Editor: Safe sports participation has become a key national issue, especially in view of the potential for concerns about safety to inhibit sports participation, in a nation where obesity rates are rising and more exercise is recommended. Australians participate in many sports, but the safety of the football codes is especially criticised by the media and the community because of the intense focus on injuries to players at the elite level. This is particularly the case for Australian Football (AF) and its elite game, the Australian Football League (AFL).

National reports released in 2006 have identified AF as the sport most associated with injury admissions to hospital and with private health insurance claims. These have sparked media commentary about the safety of AF. Response to these injury reports prompted an unprecedented media release from the country’s peak sports medicine body, Sports Medicine Australia, detailing issues with the report figures, urging caution in their interpretation and supporting the efforts of the football codes in improving participant safety.

The modified version of the game (Auskick), which is played by children, has been shown to be safer, but there is a progression to adult rules by the under-15 age group, and the umbrella of safety provided by modified rules is eventually gone, raising the question of how safe the non-modified version is. Recently released AFL figures suggest that injury rates at the elite level are at a historical low, but the report provided insufficient information to assess whether this represents a significant decline since 1997, and the data are already one season behind. Equivalent information for the more than 450 000 adult, non-elite participants is not available.

Published literature related to injury prevention highlights a dearth of knowledge relating to the causes of injuries in non-elite participants and a very small evidence base for ways to prevent injuries in AF. With AF played almost exclusively in Australia, the onus to provide evidence for improving the safety of participation clearly falls on the stakeholders of the sport here. Gains in reducing both the public health impact of football injuries and the fear of injury associated with participation will only come from substantial investment in large-scale trials at the non-elite level, and a multidisciplinary approach to safety and injury issues across all levels of play. This will require active and committed collaboration of key stakeholders such as clinicians, allied health practitioners, researchers, clubs, sports administrators, coaches and the participants themselves.

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Folate and vitamin B12 in older Australians
Victoria Flood and Paul Mitchell

To the Editor: The recent viewpoint by Kamien and letter by Gunasekera rightly highlight the benefits of folate fortification and the unlikely occurrence of masking pernicious anaemia. Food Standards Australia New Zealand recently submitted a proposal supporting the mandatory fortification of bread-making flour to increase folate intakes in women of child-bearing age, with the aim of reducing the risk of children being born with neural tube defects. This proposal has had extensive public comment and will be considered by the Australia and New Zealand Food Regulation Ministerial Council. Several public groups and individuals continue to raise concerns that higher dietary folate levels could increase B12 deficiency. Our data, collected from a population-based sample of 2596 older people in the Blue Mountains region, from 1997 to 2000, do not suggest that this is a likely outcome.

We recently reported the prevalence of low serum vitamin B12 levels in the Blue Mountains Eye Study cohort of people aged 50

<table>
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<th>Mean serum vitamin B12 levels in a population of older Australians, for various folate intakes (from diet and supplements) (n = 2596)</th>
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<tbody>
<tr>
<td>Folate intake</td>
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<tr>
<td>Folate (μg DFE)</td>
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<tr>
<td>Quintile 1–4 (&lt; 57.18) (n = 2077)</td>
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<tr>
<td>Quintile 5 (&gt; 57.18) (n = 519)</td>
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<tr>
<td>P</td>
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<tr>
<td>Folate cut-points</td>
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<tr>
<td>&lt; 500 μg DFE (n = 1828)</td>
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<tr>
<td>500–1000 μg DFE (n = 645)</td>
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<td>&gt; 1000 μg DFE (n = 123)</td>
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<td>P for trend</td>
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DFE = dietary folate equivalents.
years and older. We found that 22.9% had low serum B12 levels (<185 pmol/L).4 New data from this study show that higher intakes of folate (from diet and supplements) did not increase the likelihood of low serum B12 levels; in fact, people whose diets included folate in the highest quintile of intake had significantly higher serum B12 levels than those consuming lower dietary folate (Box), after accounting for age and sex (P < 0.001). After also adjusting for vitamin B12 from diet and supplements, there was no significant difference in mean serum B12 levels for the various quintiles of folate intake.

We also investigated older people who reported consuming high amounts of folate (>500 μg dietary folate equivalents [DFE] [n = 645] and >1000μg DFE [n = 123]) and found higher mean serum B12 levels in these groups than in people who consumed <500 μg DFE, after adjusting for age and sex (P for trend < 0.001). After further adjustment for vitamin B12 intake, there were no significant differences in mean serum B12 levels for these high dietary folate intakes (Box).

We also examined the frequency of macrocytic anaemia in our cohort (n = 6, 0.2%); two of these had low serum B12 levels (0.3% of subjects with low serum B12 levels).

In the United States, where mandatory folate fortification began a decade ago, a study of the presence of anaemia in people with B12 deficiency found no significant change in the proportion with anaemia before and after the introduction of mandatory fortification.5

Although many older Australians have low serum levels of vitamin B12, our data show that higher intakes of folate do not increase the likelihood of low serum B12 levels. Given the relatively high prevalence of low serum B12 levels among older people, it would seem reasonable for this to be monitored more frequently in this age group. We suggest that this is not a valid concern that should prevent moves to proceed with mandatory folate fortification of key foods in Australia.


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Exposure to environmental tobacco smoke in cars increases the risk of persistent wheeze in adolescents

Peter D Sly, Marie Deverell, Merci M Kusel and Patrick G Holt

To the Editor: The adverse health effects of environmental tobacco smoke (ETS) are well documented. Workplaces are increasingly smoke-free, and restrictions on smoking in restaurants, pubs and clubs are increasing. Paediatricians counsel parents to make their children’s home smoke-free and to smoke outside if they can not quit. In Australia, attention is turning to ETS exposure in cars, in the belief that the confined space may result in increased exposure, even if the windows are wound down. However, few, if any, objective data on the health effects of ETS exposure in cars have been published.

We report here the risks of current wheeze at the age of 14 years in children exposed to ETS in their parents’ car. Questionnaire data were available from parents of 1427 children taking part in the 14-year assessment of a longitudinal birth cohort in Perth. Characteristics of the cohort have been described elsewhere.1 Information about current wheeze (defined as the occurrence of wheeze in the previous 12 months) and asthma risk factors, including ETS exposure in the house and car, was obtained. Standard spirometry, metha-