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## Preventing osteoporosis: outcomes of the Australian Fracture Prevention Summit

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TO THE EDITOR: We were interested to read the recent supplement on preventing osteoporosis.[1] We could find only one reference to cigarette smoking, on page S13, where it is noted that "the role of lifestyle changes (including specific exercise regimens, changes in diet and quitting smoking) has not been evaluated adequately".

The orthopaedic literature is replete with information and evidence on the adverse effects of cigarette smoking on bone density, healing of fractures, incorporation of bone grafts, etc. A meta-analysis[2] has suggested that smokers have greater bone loss over time than non-smokers.

Granted, there may as yet be no direct evidence that quitting smoking reduces "the fracture burden". However, to discuss osteoporosis and management of fractures without discussing the major adverse effects of cigarette smoking is akin to discussing the prevention of melanoma and the outcomes of treatment without discussing unprotected exposure to sunlight (for example).

Could the "writing group" tell us what steps are being taken to inform Australians of the adverse effects of cigarette smoking on their bones, quite apart from the other public health issues surrounding this extraordinarily harmful habit?

1. Sambrook PN, Seeman E, Phillips SR, Ebeling PR. Preventing osteoporosis: outcomes of the Australian Fracture Prevention Summit. *Med J Aust* 2002; 176 Suppl Apr 15: S1-S16.
2. Ward KI, Klesges RC. A meta-analysis of the effects of cigarette smoking on bone mineral density. *Calcif Tissue Int* 2001; 68: 259-270. ❑

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*IN REPLY:* On behalf of the writing group, I wish to thank Carey and Plehwe for their perceptive comment on the effects of cigarette smoking on bone health. The focus of our supplement was the prevention of fragility fractures, and unfortunately there is no evidence that smoking cessation reduces fracture rate. However, the authors are correct to emphasise the negative impact of cigarette smoking on fracture healing, bone graft incorporation and bone density, the last factor being a strong predictor of fragility fracture.

The meta-analysis that Carey and Plehwe refer to[1] showed that hip bone mineral density (BMD) in current smokers was one-third of a standard deviation below that of people who had never smoked. This meta-analysis and another recent study[2] showed that these effects are greatest in men and are dose-dependent. Prospective studies also show that smokers have higher rates of bone loss than non-smokers. Extrapolations from these BMD data suggest smoking increases the lifetime risk of vertebral fracture by 13% in women and 32% in men, while hip fractures are increased by 31% and 40%, respectively.

In response to the question of what steps are being taken to publicise the effects of smoking on bone health, we would like emphasise that

- further prospective studies are urgently required to assess the effect of smoking cessation on fracture risk, BMD and bone turnover; and
- the message that smoking has a negative impact on BMD should be incorporated into public education campaigns run by government and non-government organisations for both osteoporosis prevention and smoking cessation.

This area of bone health is eminently suited to successful intervention.

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## The *MJA* and the search for evidence

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TO THE EDITOR: I applaud the ideology of the Journal in its pursuit of evidence-based excellence, drawn to our attention by Rosselli in a recent letter.[1]

Based on data that the *MJA* is at the top of the list of English-language journals publishing "evidence-based medicine" ref-