Discussion points

1. **Do we need to routinely measure serum oestradiol levels in long-term users of Depo-Provera® in order to assess risk of osteopenia?** In nearly all women, after up to 5 years of Depo-Provera® use, serum oestradiol levels remain above those found in postmenopausal women and serum levels of oestradiol are maintained in the range found in the early follicular phase of women with ovulatory cycles. Besides, there are no published studies showing a linear relationship between oestradiol levels and BMD in these patients. One cross-sectional study[6] and a prospective longitudinal study[7] did show that there was no significant correlation between bone density and serum oestradiol levels.
2. **Does the degree of bone loss in long-term users of Depo-Provera® put them at risk of osteoporosis?** Most of the data from the different studies show bone density measurements within 1 SD of the mean value of peak bone mass in young normal women, and therefore not at a level for intervention according to WHO criteria.[19]
3. **Do adolescents who use Depo-Provera® recover lost bone after discontinuing it and if not should they be given 'add-back' oestrogen during long-term use?** For women under 18 years of age, there are theoretical concerns regarding the hypo-oestrogenic effect particularly due to DMPA use. The WHO medical eligibility criteria consider Depo-Provera® to be generally acceptable for women aged 18 years or younger, because the proven benefits of using the method outweigh the theoretical risk (Category 2).[51] However, data from available studies do not provide any indication of the extent of recovery of lost bone in adolescents following discontinuation of Depo-Provera®. Although some prescribe it, there is no evidence that 'add-back' oestrogen given during long-term use might reduce the amount of bone loss or at what point to commence the treatment. A pragmatic approach might be to avoid use of Depo-Provera® under the age of 16 years until evidence to the contrary becomes available.
4. **Do former long-term Depo-Provera® users have lower bone density at the menopause and therefore a greater risk of osteoporosis and fractures?** There is concern that there may be residual osteopenia in former users such that their postmenopausal fracture risk is increased. Only one study has addressed this issue and the results are reassuring. Overall, there were no significant differences in bone density at any site between the women who had previously used Depo-Provera® and never-users. There was no correlation between bone densities and the duration of Depo-Provera® use, the age at discontinuation of Depo-Provera®, or the time between Depo-Provera® discontinuation and the menopause. It was therefore concluded that any residual effects of Depo-Provera® use on postmenopausal bone density are small and therefore unlikely to have a substantial impact on fracture risk in the postmenopausal years.

F A C T **Faculty Aid to CPD Topics**

A **CPD** Self-Assessment Test

QUESTION SHEET

Review No. 2002/01

To be reviewed not later than 31st March 2007

Depo-Provera® and bone density

Indicate your answer by ticking the appropriate box for each question

		True	*False*
1.	All hormonal contraceptives suppress ovarian production of oestrogen to some degree.	☐	☐
2.	Depo-Provera® works mainly by suppression of ovulation.	☐	☐
3.	Most of the bone mass in the hip and vertebral bodies is accumulated in young women by 18 years of age.	☐	☐
4.	All studies of long-term users of Depo-Provera® have shown significant loss of bone mass compared to non-users.	☐	☐
5.	Some studies have shown bone mass loss of up to 25% following long-term use of Depo-Provera®.	☐	☐
6.	Women have a higher bone mass than do men at all ages, with a rapid loss at the expected age of menopause.	☐	☐
7.	Bone mass loss following long-term use of Depo-Provera® does not persist after the menopause.	☐	☐
8.	Serum oestradiol level is the best predictor of risk of future fracture and should be measured routinely in users of Depo-Provera®.	☐	☐
9.	Since low bone density at various sites is predictive of fracture for groups of women, it can identify individuals who will fracture.	☐	☐
10.	After using Depo-Provera® for 5 years, all women should have their serum oestradiol and bone density measured.	☐	☐

Turn to page 50 for answers