

THE HORMONAL CONTRACEPTIVE, DEPO PROVERA AND OSTEOPOROSIS



What is Depo Provera?

Depo Provera is a contraceptive injection for women that contains a progestogen called medroxyprogesterone acetate. It is given every twelve weeks.

It works by releasing progestogen slowly into the body suppressing oestrogen and other hormone levels. This thickens mucus from the neck of the womb and makes the lining of the womb thinner as well as preventing the ovaries releasing an egg. Depo Provera has a very low failure rate as a contraceptive, has few general side effects and is becoming increasingly popular, especially as it now has a licence for long term use. It also provides an option for women who cannot take a contraceptive pill containing oestrogen because of high blood pressure or thrombosis risks.

What roles do the sex hormones, oestrogen and progesterone, play in keeping bones healthy?

Adequate levels of oestrogen in women help to develop and maintain healthy bones. When oestrogen levels drop sharply at the menopause, there is a loss of bone density and bones become thinner.

At the moment, it is unclear how progesterone (the natural hormone produced by the body) affects bone health. Some forms of progestogen (the manufactured form of progesterone in Depo Provera) may improve bone density in high enough doses, at least in post menopausal women.

Does Depo Provera cause osteoporosis (low bone density) or associated fragility fractures (bones that break easily) because it suppresses oestrogen hormone levels?

No one knows the answer to this. Depo Provera lowers oestrogen levels, so in theory, bone loss may occur. However, oestrogen levels are not generally as low as after the menopause and it is also not clear from research studies, whether having low oestrogen whilst on Depo Provera does cause a reduction in bone density.

Several research studies have shown that women on Depo Provera have lower bone density than other women of the same age and some studies demonstrated that bone loss occurred in adolescent girls using this contraceptive (long term users under 21 years had the lowest bone density, especially if they started at a young age). However, it appears that bone density improves when a woman stops Depo Provera (before the menopause) and that, in general, the risk of low bone density does not increase the longer it is used.

However, there have been no studies of women following them through into the menopause after long term use of Depo Provera to see if they are more likely to have osteoporosis or fragility fractures. Nor have there been any studies to look at the long term effects of using Depo Provera at a younger age.

Are there some women who should avoid using Depo Provera because of effects on bone?

The World Health Organisation (WHO) has suggested that Depo Provera should be used with caution by women who are under 18 (when bone density is being built up rapidly) and in women over 45 (who are approaching the menopause). However, it comments that even in these age groups, the advantages will generally outweigh the disadvantages. Some doctors feel that until there is more evidence available, Depo Provera should be avoided in these groups of women, particularly women under 16.

Depo Provera should also be used with caution by women between 18 and 40 who have other risk factors for osteoporosis, especially those who take corticosteroid tablets. (Corticosteroid tablets are used to treat inflammation in conditions such as asthma). Other risk factors would include low body weight, especially with eating disorders such as anorexia nervosa, strong family history and smoking. For information of risk factors for osteoporosis, contact the National Osteoporosis Society on 01761 471771 e-mail info@nos.org.uk or visit our Website www.nos.org.uk

However, decisions will need to be made on an individual basis and if there are no other suitable methods of contraception, Depo Provera may be prescribed for these women. For most women, avoiding pregnancy will be the priority.

Should women have a scan to measure bone density before starting Depo Provera or after taking it for a while?

It is not practical or useful for all women using Depo Provera to have a bone density scan. Some women who have other risk factors for osteoporosis may benefit from a bone density scan so that those with bone density below the normal range can consider another method of contraception. It may also be appropriate to consider bone density scanning for women who want to use Depo Provera as they approach the menopause because this is a time when risks of breaking a bone start to increase and low bone density may be significant.

In practice, risk factors for osteoporosis will probably be more useful when make decisions about using Depo Provera.

Do women need their oestrogen hormone level checked with a blood test while on Depo Provera and are there some women using this injection who should take oestrogen tablets to help reduce bone loss?

Probably not. As explained above, it is not clear from research studies whether having low oestrogen levels whilst on Depo Provera **does** cause reductions in bone density. As

a result, checking oestrogen levels and giving oestrogen replacement to women on Depo Provera is no longer recommended. Some doctors however, continue to prescribe additional oestrogen to women as a safety measure if they want to use Depo Provera in their 40s as they approach the menopause. (For further discussion about different ways doctors are making decisions about Depo Provera use, you can telephone the National Osteoporosis Society Helpline on 0845 450 0230).

At the present time, all women considering Depo Provera should be aware of possible (although not proven) effects on bone density and osteoporosis risks. Lifestyle measures to prevent osteoporosis include eating a well balanced, calcium rich diet, increasing physical activity including weight bearing exercise, avoiding excessive alcohol and not smoking as well as keeping body weight within the normal range. Those with risk factors for osteoporosis may consider other contraceptive measures as preferable.

For further information on Depo Provera and other methods of contraception, contact:

The Family Planning Association
2/12 Pentonville Road
London N1 9FP

Helpline 0845 310 1334

Website www.fpa.org.uk or your doctor or local family planning clinic.

For further information on osteoporosis and bone health contact:

The National Osteoporosis Society
Camerton
Bath
BA2 0PJ
Telephone 01761 471771
E-mail info@nos.org.uk
Website www.nos.org.uk

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