

Early Menopause / Premature Ovarian Insufficiency and Bone Health

This fact sheet explains how Premature Ovarian Insufficiency (loss of ovarian function before age 40)/ Early Menopause (loss of ovarian function before age 45) can affect your bone health, the risk factors for osteoporosis and what you can do to protect your bones.

Main Points:

- ❖ POI/EM is associated with an increased risk of osteoporosis.
- ❖ A bone density scan can be used to check your bone health.
- ❖ Healthy lifestyle habits can help to maintain good bone health.
- ❖ Hormone Replacement Therapy can reduce your risk of osteoporosis.

Risk Factors For Osteoporosis In POI/EM

The main risk for osteoporosis in women with POI/EM is **prolonged duration of low oestrogen levels**. Increased duration of oestrogen deficiency leads to a higher risk of osteoporosis. Some situations where this may be the case are:

- Young age at the time when menstrual periods stop or become irregular
- A delay in the diagnosis of POI/EM
- Not taking oestrogen replacement therapy regularly

POI/EM can be associated with other health issues that can have a negative impact on your bones, for example, rheumatoid arthritis, thyroid conditions and coeliac disease.

There are also other reasons why you may be at a higher risk of developing osteoporosis. The following checklist helps you to know some of your own risk factors:

- Family history of osteoporosis
- Previous minimal trauma fracture
- Certain medications (e.g. glucocorticoids, aromatase inhibitors, gonadotrophin releasing hormone agonists)
- Low body weight
- Lack of exercise
- A diet low in calcium
- Vitamin D deficiency
- Smoking
- Excessive alcohol intake

While some of these risks cannot be changed, many can be reduced by practising healthy lifestyle habits. Discuss your osteoporosis risk factors and bone health with your doctor so that strategies are set in place to manage your bone health. Osteoporosis Australia has developed a personalised risk calculator which is available at <http://www.knowyourbones.org.au/>

What Is Osteoporosis?

Osteoporosis is a condition where your bones become weaker and are more likely to fracture. Often there may be **no symptoms of osteoporosis** until a fracture occurs. Fractures can lead to serious health problems and significantly decrease your quality of life.

Osteoporosis is more common in women with Premature Ovarian Insufficiency (POI) and Early Menopause (EM), **affecting up to 15% of women with POI**. However, there are now many ways women can protect their bones.

POI/EM & Osteoporosis

POI/EM occurs when there is a loss of ovarian function at an age earlier than the age of natural menopause (around 51 years). POI/EM may occur spontaneously or as a result of medical treatments (chemotherapy, radiotherapy, surgical removal of both ovaries).

Oestrogen is an important hormone produced by the ovaries which helps to maintain bone strength. Falling levels of oestrogen after menopause can result in rapid bone loss as women may lose up to 2% of their bone mass every year after natural menopause. The sooner than expected decrease in oestrogen levels with POI/EM means that you may start to lose bone density at an earlier age. Over time, this can increase the risk of osteoporosis and fractures.

Screening For Osteoporosis

Your doctor may recommend **a bone density scan**, commonly known as a DXA (dual energy X-ray absorptiometry) when you are diagnosed with POI/EM to assess your risk of osteoporosis. As you may not know that you have osteoporosis until a fracture occurs, a bone density scan helps your doctor to monitor your bone health. This simple and painless test measures the density of your bones, usually at the hip and spine.

Results of the test indicates whether you have normal or low bone density (osteopenia) or osteoporosis. This information will help you and your doctor to individualise management of your bone health to suit your needs. The frequency of a repeat scan to monitor your bone health will depend on your initial bone density, osteoporosis risk factors and any osteoporosis treatment you may be on. Medicare subsidy for DXA scans is available if you have been diagnosed with POI/EM.

Your doctor may also order some blood tests to check your osteoporosis risk factors (e.g. vitamin D levels).

What Can I Do To Protect My Bones?

There are many simple but important **lifestyle changes** that you can make to reduce your risk of osteoporosis:

- Stop smoking
- Reduce your alcohol, caffeine and salt intake
- Maintain your weight in the healthy range
- Adequate calcium (1000 mg to 1200mg/day), best obtained from dietary sources
 - <https://www.osteoporosis.org.au/calcium>
- Enough Vitamin D through safe sun exposure or supplements
 - <https://www.osteoporosis.org.au/vitamin-d>
- Regular weight-bearing and resistance exercises (3-5 times a week, for at least 30 minutes)
 - <https://www.osteoporosis.org.au/exercise>

More information about healthy lifestyle habits can be found at the links provided above.

Osteoporosis Management Options

Hormone Replacement Therapy (HRT)

For most women with POI/EM, **starting and continuing HRT until the natural age of menopause (around 51 years)** reduces the risk of osteoporosis and fractures. HRT helps to reduce bone loss by restoring your body levels of oestrogen. There are many different HRT options that you can discuss with your doctor to find one that is best suited to your needs.

Most of the currently available information about long-term risks of HRT are specifically written for older women who continue using HRT after the natural age of menopause. These risks are often not applicable to younger women. It is important to discuss your individual risk with your doctor.

It is important for you **to take your HRT regularly for it to be effective**. Bring up any concerns that you may have with your doctor. For further information about HRT, visit <https://jeanhailes.org.au/health-a-z/menopause/premature-early-menopause>

Other Osteoporosis Treatments

HRT may not be suitable for some women (e.g. women who have been diagnosed with an oestrogen sensitive cancer). In these situations, you may need advice from specialists about other osteoporosis medicines (e.g. bisphosphonates, denosumab).

Complementary Medicines

There is limited evidence about the safety and effectiveness of complementary medicines. Although soy foods are a good source of calcium and protein, the impact of plant-oestrogens (isoflavones) in soy products on bone health is not clear. Also, it is uncertain if soy products are safe in women who have an oestrogen sensitive cancer.

Where Can I Get More Information?


For more information about **Osteoporosis:**

 **Osteoporosis Australia**
<https://www.osteoporosis.org.au/>

For more information about **POI/EM:**

 **Jean Hailes Foundation for Women**
<https://jeanhailes.org.au/>

 **Australasian Menopause Society**
<https://www.menopause.org.au/>

 **European Society Of Human Reproduction
And Embryology-Patient Version**
<https://www.eshre.eu/Guidelines-and-Legal/Guidelines/Management-of-premature-ovarian-insufficiency.aspx>

 **The Daisy Network**
<https://www.daisynetwork.org.uk/>

For more information about **POI/EM and breast cancer:**

 **Cancer Australia**
https://canceraustralia.gov.au/sites/default/files/publications/bcmc-breast-cancer-early-menopause-v2_504af03adb71c.pdf

 **Breast Cancer Network Australia**
<https://www.bcna.org.au/media/4152/bcna-fact-sheet-bone-health-dec-2016.pdf>

Questions To Ask Your Doctor:

1. What are my specific risk factors for osteoporosis?
2. Can you explain the results of my bone density scan?
3. How frequently should I have bone density scans?
4. What are some example of exercises which are helpful for bone health?
5. What are the types of food which are beneficial for bone health?
6. What are the different options of HRT that are available?
7. What are the risks and benefits of HRT?
8. If HRT is not suitable for me, what are my alternatives?
9. My Questions:

References

1. Baber RJ, Panay N, Fenton A. 2016. IMS Recommendations on women's midlife health and menopause hormone therapy. *Climacteric*. 2016;19(2):109-50.
2. European Society for Human R, Embryology Guideline Group on POI, Webber L, Davies M, Anderson R, Bartlett J, et al. ESHRE Guideline: management of women with premature ovarian insufficiency. *Hum Reprod*. 2016;31(5):926-37.
3. Osteoporosis Australia. Osteoporosis Australia. [Online]. Available from: <https://www.osteoporosis.org.au/>. [Accessed 4 June 2018].
4. Vujovic S, Brincat M, Erel T, Gambacciani M, Lambrinoudaki I, Moen MH, et al. EMAS position statement: Managing women with premature ovarian failure. *Maturitas*. 2010;67(1):91-3.



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