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# **Premature Ovarian Insufficiency (POI)**

Premature Ovarian Insufficiency (POI) is when you have a menopause under the age of 40. Some people also refer to it as premature menopause or premature ovarian failure.

Usually, your ovaries produce an egg every month. But this stops in the menopause. The average age for a woman to reach the menopause in the UK is 51. In Premature Ovarian Insufficiency, the ovaries stop working at a younger than average age – under 40.

Your ovaries produce a number of hormones including the hormone oestrogen. When the ovaries slow down, the levels of oestrogen decrease, resulting in symptoms of the menopause. Periods become very infrequent or stop. There are also other long-term health consequences.

# How many women experience Premature Ovarian Insufficiency?

Around 1% of women go through the menopause under the age of 40.

## How is Premature Ovarian Insufficiency diagnosed?

Diagnosis is made by a combination of blood tests and history. It's usually made when periods have stopped for at least 4 months or are very infrequent. Your doctor will do blood tests that look for a raised follicular stimulating hormone (FSH) of greater than 25 iu/L, more than 4 weeks apart.

## What causes Premature Ovarian Insufficiency?

For the majority of women, there will be no underlying cause found for the premature ovarian insufficiency. There is still, unfortunately, a lot that we don't understand about it.

The following are known causes of POI:

## Surgical menopause

Surgery to remove the ovaries results in a surgical menopause – POI if this is under the age of 40. This may be because there are abnormalities of the ovaries, including cancer, endometriosis or cysts, or ovaries may be removed to help prevent cancer.

When the ovaries – the source of oestrogen – have been removed, the oestrogen levels drop.

Cancer treatment in the form of radiotherapy or chemotherapy can temporarily or permanently stop ovaries functioning.

#### Gene abnormalities

Some women have abnormalities in their genes. The most common gene abnormalities are Turner's syndrome and fragile X,but they are still rare within the population.

**Turner's syndrome** is a genetic condition that affects girls. A girl with Turner's syndrome has only one normal X chromosome instead of the usual two.

**Fragile X syndrome** is a genetic condition that causes a range of developmental problems including learning disabilities and cognitive impairment. Usually, males are more severely affected by this disorder than females.

Genetic causes are more common if there are other members of your family with POI or if you're diagnosed with POI when you're very young.

#### Autoimmune disease

Autoimmune disease can cause POI. Your immune system usually protects your body by attacking invading infections. In autoimmune disease, the immune system mistakenly attacks itself.

### Infections

Infections can be a rare cause of POI, including TB, mumps or malaria.

#### Risk factors

POI has been associated with the toxins found in cigarette smoke.

# What are the symptoms of Premature Ovarian Insufficiency?

The symptoms are the same as for any woman transitioning through the menopause – for example, hot flushes, cognitive impairment, difficulties with low mood, depression or anxiety.

Some women don't have symptoms apart from irregular periods or periods stopping. Sometimes the diagnosis is made during investigations when a woman is having difficulties getting pregnant.

# Premature Ovarian Insufficiency and fertility

This is so crucial for some women and the reason why this diagnosis can be absolutely devastating. Some women are diagnosed before they've started their family. Even if they have had children, some women mourn the loss of choice.

The chances of getting pregnant naturally may not be zero (unless you have POI because your ovaries have been removed) so if you don't want to get pregnant, you should use contraception. The chances of getting pregnant spontaneously are greater if there is no cause to the POI. If you have POI as a result of chemotherapy or radiotherapy, your specialist will usually advise you on the risks of becoming pregnant which can vary with the treatment given.

One-quarter of women with POI may have some ovarian function, especially early on, when the ovaries are just beginning to slow down. This means that sometimes you may have an 'out of the blue' period – or symptoms of premenstrual syndrome – warning signs that a period may be coming. Spontaneous conception can happen in 5-10% of women [1]

If you want to get pregnant, it's best to ask for a referral to a fertility clinic so that you can discuss all the options open to you. To get pregnant, an egg has to be fertilised by sperm, so you may need a donor egg. There are no treatments currently available that increase the activity of the ovaries if you've been diagnosed with POI.

IVF (in vitro fertilisation) with oocyte donation is an established option for fertility.

Many fertility clinics also have counsellors and psychologists to help provide the psychological support you may need.

# Why is it important to diagnose Premature Ovarian Insufficiency?

It's so important to make the diagnosis of POI, so you can start hormone replacement therapy to treat the symptoms and reduce the risk of long-term health consequences (see below).

But doctors don't always connect the dots, and may not consider POI as a diagnosis. If this happens, women can be misdiagnosed as having mental health disorders. Many women tell us that there was a delay in getting a diagnosis and this can cause frustration, upset and distress on top of the symptoms of the menopause.

# What are the long-term health consequences of Premature Ovarian Insufficiency?

Many women don't realise that, if left untreated – that is if the oestrogen that is lost is not replaced – the risk of heart disease and osteoporosis increases significantly, to the extent that life expectancy can decrease. The good news is that taking HRT reduces these risks.

Osteoporosis is a condition where the bones become weaker, less dense, and more prone to breaking. A DEXA scan can measure your bone density and set a baseline. This is repeated every few years (usually every 3 years) to keep an eye on your bone density.

<u>Heart disease</u> includes heart attacks, angina and strokes. An annual review can help monitor your modifiable risk factors for heart disease – high blood pressure, raised cholesterol, smoking, alcohol and weight.

It's also likely that the risk of dementia increases with POI, and we know that a diagnosis of POI can have a significant impact on psychological wellbeing and quality of life.

## HRT

Hormone replacement therapy (HRT) gives you back the oestrogen that's lacking because your ovaries have stopped working. HRT reduces the risk of heart disease and osteoporosis – and there's emerging evidence that it may also reduce the risk of dementia. It's the most effective way of treating symptoms of the menopause.

Many women worry about the length of time they're taking HRT for. We often hear those seeds of worry are planted by relatives and friends about being on HRT for so many years, and that it increases the risk of breast cancer. But there really is no need to worry. HRT has not been found to increase the risk of breast cancer before the age of the natural menopause of 51 years. If HRT is continued after this – and there is usually no reason not to continue to take it – there is a small risk of breast cancer depending on the type of HRT you're taking. The risk of breast cancer after 5 years of combined HRT is less than drinking 2 units of alcohol a day and is significantly less than the risk of breast cancer that results from being overweight or obese.

It's far more important for you to continue to take HRT at least until you're 51, to help reduce the risk of heart disease and osteoporosis.

## **Testosterone**

With the loss of ovarian activity comes a decrease in levels of testosterone, as well as oestrogen and progesterone.

<u>Testosterone</u> is important for some women for libido (sex drive) and general wellbeing. As far as doctors are aware, there's no risk of breast cancer or heart disease as a result of taking testosterone, although there's not much long-term data. You may want to take it if you still have low energy levels and libido after starting HRT. If taking testosterone hasn't helped your symptoms after 6 months, it's unlikely that it will, and you should stop taking it.

## Other things to consider

When you have a diagnosis of POI, it becomes really important that you look after yourself to help prevent the potential long-term health risks. Many of these things apply to everyone – exercising regularly, not smoking or drinking excessive amounts of alcohol and maintaining a healthy weight will all reduce the risk of heart disease and osteoporosis.

To keep your bones strong and reduce the risk of <u>osteoporosis</u> and fractures, weight-bearing exercise, and eating a diet that is rich in calcium and vitamin D can be helpful.

All people in the UK should take a vitamin D supplement in the winter when daylight hours are reduced – and this is more important if you have POI.

Some women choose to take the combined oral contraceptive pill for contraception and because it can help manage menopause symptoms. The combined oral contraceptive pill is the one that has both oestrogen and a progestogen – not the mini-pill which is progesterone only.

When it comes to protecting your bones though, the oestrogen in the combined pill is not quite as good as that in HRT. There's also a contraceptive pill called Zoelly, which contains the same oestrogen as HRT, so this could be a good option for you. If you need contraception and HRT, think about having a Mirena coil fitted and adding an oestrogen-containing HRT patch, gel, spray or tablet.

# What to do if you suspect you may have Premature Ovarian Insufficiency

If you are under the age of 40, start to experience symptoms of the menopause and your periods are changing, the first thing to do is contact your GP. They can arrange initial tests and refer you to gynaecology, a specialist menopause clinic or subfertility specialist (depending on whether you want to try to get pregnant), and local arrangements for services. If you think that you would like to try to get pregnant, don't delay in asking for a referral to a fertility clinic to start more tests and find out what your options are.

More support can be found through local services and https://www.daisynetwork.org.

### References

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## **Contact My Menopause Centre**

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