

Oestrogen Dominance

Oestrogen dominance is a way of saying that the **oestrogen/progesterone balance is out of synch**: in other words there is too much oestrogen compared to progesterone. This imbalance plays a part in many women's diseases including pre-menstrual tension (PMT), polycystic ovary syndrome (PCOS), fibrocystic breast disease (lumpy breast syndrome), the menopause and breast cancer. A drop in progesterone typically causes symptoms such as anxiety, sleep disturbance and brain fog. A multitude of factors in today's world is playing havoc with hormones, especially female hormones.

Oestrogen is also a driver in many cancers. In breast cancer 75% of cancers are triggered by oestrogen. However it is also a trigger in many other cancers including prostate, testicular, colon, ovarian endometrial, brain and lung cancers. It can also stimulate cancer spread (metastasis). In all these cancers it is worth understanding the role of oestrogen.

Oestrogen is typically produced by the ovaries in women but can also be produced from fat stores in both males and females (see below). This is an important source of oestrogen after the menopause.

Basically four types of oestrogen compete for your oestrogen receptors: natural oestrogens, pharmaceutical oestrogens (the contraceptive pill, HRT), xenoestrogens and phytoestrogens. Generally speaking phytoestrogens are beneficial and protective, xenoestrogens are harmful and carcinogenic; natural and pharmaceutical oestrogens vary in their effect, depending on their ratio.

The Menstrual Cycle

In a normal menstrual cycle oestrogen starts increasing from day 7 of the cycle (the start of period being day one). Ovulation occurs about day 14 and after this progesterone is produced by the follicle so from then on both oestrogen and progesterone are circulating until about day 26.

However this often goes wrong for the following reasons: 1) Ovulation might not occur (especially in the build up to the menopause) and so no progesterone is produced. 2) Excess oestrogens in the food and environment disturb the balance. 3) The wrong oestrogens are produced.

Basically too much oestrogen is not good for health and oestrogen levels are now much higher than they were in the past.

In the first situation (no ovulation) periods may be (but are not always) irregular and progesterone (usually measured at day 21) is low.

In the second situation (excess oestrogens), oestrogens in food, oestrogens produced by other parts of the body and xenoestrogens from the environment overload and unbalance the hormone ratio.

The main source of oestrogen in food is **milk** (and milk products) as 80-90% of milk produced today contains milk from pregnant cows which have high levels of hormones. However, **sugar** increases insulin which in turn increases oestrogen. The main source of oestrogen from other parts of the body (apart from the ovary) is from fat, particularly abdominal fat and the adrenal glands. So even after the menopause oestrogen is still produced in many women and can cause symptoms. (An obese man or post-menopausal woman can produce more circulating oestrogen than a lean premenstrual woman).

There is another source of oestrogen today. Gender-bender chemicals in the environment, called **xenoestrogens**, are a major problem today. There are thought to be at least 17,000 xenoestrogens in the environment. These lock on to oestrogen receptors. Oestrogen receptors are present in all the glands of the body but also in the brain. Unlike normal hormones (which are cleared from the receptor within 30 minutes) xenoestrogens can remain for long periods of time. They have a measurable affect even if they only block 0.1% of the receptors. These mainly come from plastics, pesticides and personal care products but can **also be found in tap water (as drugs like the pill get into the water supply as they are passed in the urine)**. It makes sense to use organic foods where possible, to avoid wrapping, and particularly microwaving, foods in plastic avoid using plastic-lined kettles and to reduce chemical exposure as much as possible. **Many personal care products (which are absorbed easily through the skin), fragranced products, aerosols (absorbed easily through the lungs) contain oestrogenic chemicals.**

Note phytoestrogens from plants also lock onto oestrogen receptors. These are weak oestrogens but are useful as they block the receptors stopping the more dangerous oestrogens and xenoestrogens attaching and

hence protect against oestrogen excess. (They do the same job as the cancer drug tamoxifen which blocks oestrogen receptors). Good sources are green vegetables, lentils, kale, pulses, chickpeas, broccoli and cabbage.

The third situation arises because there are normally three oestrogens produced by the ovary. **They are normally perfectly balanced** with two of them, oestradiol and oestrone, being proliferative and growth-promoting whilst the other, oestriol, being anti-proliferative and reduces cell growth. The balance is critical. Normally the anti-proliferative oestrogen, oestriol makes up 90% of oestrogens whereas the proliferative oestrogens, oestradiol and oestrone only make up 7% and 3% respectively. Unfortunately, the pill and HRT only use oestradiol. The ratio is known to be important in breast cancer and it is probably important in PCOS, fibrocystic breast disease and endometriosis. Some foods, such as cruciferous vegetables, help to produce the right ratio. Iodine also does this (see separate leaflet).

At the menopause oestrogens only drop by 60% whereas progesterone levels drop 97% aggravating any imbalance.

Aromatase

Sex hormones (androgens) are converted by the enzyme aromatase to oestrogen. For this reason, aromatase inhibitors are used in breast cancer to cut levels of oestrogen. These include Arimidex (anastrozole). However, many natural substances also block aromatase including zinc, selenium, green tea, citrus isoflavonoids, resveratrol and quercetin. All these are beneficial in reducing oestrogen and in any cancers triggered by oestrogen.

Grapefruit may increase aromatase, and is best avoided in these conditions, although the data is conflicting.

What to Do

- 1) Change the diet: Reduce milk**, use organic food where possible, and eat cruciferous vegetables (broccoli, sprouts, cauliflower, cabbage, kale) which alter the ratio of oestrogen in favour of oestriol. Flaxseed does the same and reduces oestradiol, oestrone and testosterone. Mushrooms also protect

against excess oestrogen and inhibit angiogenesis (extra blood vessel formation linked to cancers).

Consider filtering water. If there is midline obesity, this is usually due to eating too much sugar, alcohol and refined carbohydrates (white flour, bread, white rice). Cut down on these.

2) Use Supplements: Consider using some of the following. Indol-3-carbinol is a substance found in cruciferous vegetables. It is available as a supplement. It breaks down harmful oestrogens and favours the production of oestriol. The dose is usually 200mg daily (available health foods shops, Amazon etc). Consider using iodine (see separate leaflet) which is anti-oestrogenic and also produces a favourable oestrogen ratio. Iodine is essential for normal hormone function, not just for the thyroid. Deficiency of iodine is common and is associated with over-production of oestrogen. Other compounds which reduce oestrogen are curcumin and natural vitamin E (mixed tocopherols).

Supporting the liver makes sense. It breaks down oestrogen and is under stress in the modern world. You can do this by taking silymarin (milk thistle) or alpha-lipoic acid (available health food shops). Some oestrogen is reabsorbed from the gut. In some cases, it is worth blocking this by using calcium-D-Glucarate (500mg three times daily before meals) which blocks oestrogen and reduces hormone levels. The supplement Co-enzyme Q10 is also anti-oestrogenic.

3) Increasing Progesterone. It is difficult to increase progesterone as there are potential problems associated with synthetic progesterones. Sterols in the diet can both increase progesterone and reduce oestrogen production and these can be found in raw nuts, seeds and olives.

Never use natural progesterone: I have personally seen this trigger breast cancer.

Good nutrition is critical to producing enough progesterone. For instance, Vitamin B6 helps increase progesterone.

<https://pubmed.ncbi.nlm.nih.gov/17478435/#:~:text=Am%20J%20Epidemiol,Epub%202007%20May%202>. Vitamin C has also been shown to increase progesterone.

[https://pubmed.ncbi.nlm.nih.gov/12909517/#:~:text=Fertil%20Steril,0282\(03\)00657%2D5](https://pubmed.ncbi.nlm.nih.gov/12909517/#:~:text=Fertil%20Steril,0282(03)00657%2D5). Other nutrients such as zinc, magnesium, Vitamin E and L arginine can help increase progesterone.

Some people have found homeopathic progesterone 200c three times daily from day 14 to 28 is helpful (from Ainsworth or Helios Homeopathic pharmacies).

4) Remove harmful oestrogens from environment:

Reduce exposure to plastics and pesticides, eat organic where possible, use natural personal care and cleaning products, avoid aerosols and filter water.