

Medicine for Managers

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The Menopause

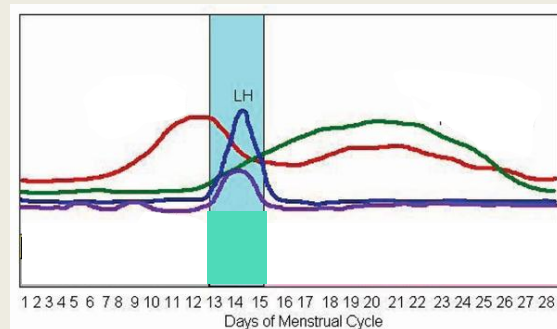
It happens to every woman. It is a burden for many women and a mystery for many men. It may occur without any significant symptoms or may result in multiple disparate effects lasting many years. At its worst it may be distressing and disruptive. It is probably the topic about which most advice is published. It is the menopause.

The menopause, also discouragingly called the change of life, occurs most commonly between the ages of 47 and 53. Sometimes, though, it may occur as early as 35 or as late as 60. The menopause itself is defined as the end of the last menstrual period. The years around the menopause are referred to as the **perimenopause** or climacteric

How does it happen? During reproductive life, the development, maturation and release of eggs (ova) from the ovaries on a monthly basis is controlled by a number of hormones produced by the ovaries themselves and by the anterior pituitary gland in the brain. The menopause occurs when the ovaries no longer respond to the pituitary hormones so that eggs are not produced and released, and oestrogen and progesterone, the female sex hormones, decline.

The diagram shows the variation of the hormones during a typical 28 day cycle in a woman of reproductive years. The red and green lines represent the levels of circulating

oestrogen and progesterone respectively. Both hormones are manufactured by the ovaries, the progesterone increasing only after ovulation



and declining again if a conception has not occurred by the latter part of the cycle. The blue and purple lines are the Follicle Stimulating Hormone (FSH) and the Luteinising Hormone (LH) levels respectively. FSH causes the developing ovum (egg) to mature and the LH, which has a peak mid-cycle, stimulates the release of the egg from the ovary. FSH and LH are both manufactured in the pituitary gland. In order for the cycle to occur smoothly and for the ovulation to occur reliably the ratio of all the hormones is important as well as the absolute concentrations. With the approaching menopause the ratios are disturbed and concentrations vary, commonly resulting in irregular cycles and ultimately in the cessation of bleeding.

Menopausal symptoms, which may start a few years before the cessation of menstruation and which may continue for some years afterwards, affect 80% of women and may vary from mild to very severe. Most common are **hot flushes** which most women experience. The flushes may be brief or prolonged, occasional or occurring over ten times a day. The sufferer may experience a hot glow, with or without sweating, and reddening of the skin. Following an episode the woman may shiver. They may occur at night and the accompanying sweating may soak bedclothes. These **night sweats** disturb sleep and the sleep of anyone in the same bed. Sleep may be disturbed even in the absence of night sweats as a result of the fall in oestrogen resulting in difficulty actually falling asleep and restlessness. The mechanism of flushing is not fully understood but occurs when the normal blood vessel autonomic controls become erratic.

Emotional changes may include irritability, anger, tearfulness, **depression** and dramatic mood swings. Other problems may be panic attacks and memory deterioration and difficulty in concentrating. For some women loss of libido is a feature due to a combination of hormonal changes together with associated problems such as loss of vaginal lubrication and elasticity (causing discomfort with penetration) and tiredness.

A range of other symptoms may include tiredness and lethargy, dry skin and loss of condition of the hair, aches and pains, headaches and dizziness. Women may suffer

cystitis around the time of the menopause because of a loss of tone in the musculature of the pelvic floor. Stress incontinence with coughing or laughing may also occur.

In the longer term the reduction of oestrogen is associated with a gradual increase in the risk of heart attack and stroke (although it never catches the level of risk experienced by men). There may also be a reduction in bone mass and strength resulting in the development of **osteoporosis**.

Of course, many of these symptoms can occur at around the time of the menopause but be related to other unrelated medical problems

such as depression, thyroid disease, anaemia, etc.

Menopausal symptoms can be treated in a variety of ways.

Sometimes bleeding becomes very heavy and it may be helped by using the non-steroidal **mefenamic acid** (*Ponstan*) to reduce pain and bleeding.

Tranexamic acid (*Cyklokapron*) also reduces bleeding by encouraging clotting of the raw internal uterine surface. The hormone **progesterone** is used to reduce bleeding and may be administered orally for three weeks (with a one week break) each month. Alternatively the drug is effective when inserted intra-vaginally as part of the *Mirena* coil system. The coil releases small amounts of hormone over a period of years controlling the blood loss (though it may take some months to work effectively). However it does not suit all women

"I don't have hot flushes; I have short private vacations in the tropics!"

and may produce side-effects including depression. Other initial side effects with HRT in general may be breast tenderness, nausea, bloating and sometimes weight gain. Occasionally headache or irritability may occur.

Hormone replacement therapy can be a very effective method of controlling menopausal symptoms through modification of hormone levels. For many women it produces dramatic improvements but its use should only be considered once risk factors and contra-indications have been reviewed and the benefits are understood. Medical problems such as hypertension, liver disease, migraine, endometrial cancer or deep vein thrombosis may result in the method being inappropriate. The risks of breast cancer¹, which have been widely publicised, and heart disease are increased as are the risks of having a stroke or a deep vein thrombosis or pulmonary embolism. HRT users may be at less risk of developing Alzheimer's disease, heart disease and bowel cancer.

HRT is effective in the treatment of hot flushes, night sweats, vaginal dryness and, often, it improves the sense of wellbeing.

HRT therapy involves the daily treatment with oestrogen and, in women who still retain their uterus, a progesterone drug as well, the two

¹ Breast cancer risk will be reviewed as a separate subject.

drugs being described as combination HRT. The treatment may be *sequential* and it reproduces pharmacologically the menstrual cycle with monthly bleeds. It is based on a 28-day regime and oestrogen is taken every day whilst the progesterone is included for the last 14 days of the cycle. For some women with scant bleeds there is a sequential form with three-monthly bleeds. When a woman has not had a (natural) menstrual bleed for a year she may have a continuous form of HRT where a continuous daily dose of oestrogen and progesterone is taken. The hormones may be taken orally but alternative administration methods are available such as patches, pellets or implants beneath the skin, a vaginal ring or a nasal spray.

For some women the heavy bleeding is too debilitating or unpleasant and **hysterectomy**

may be considered. Removal of the uterus is accompanied by the usual surgical and anaesthetic risks. It is a successful and well-tolerated procedure. The alternative procedure of **endometrial ablation** where the lining of the uterus is destroyed endoscopically is a lesser procedure. 70-90% of the lining is destroyed by cautery and

most women still get light menstrual bleeding from the remaining fragments of lining.

Interestingly uterus is a Latin word meaning 'womb'. Hysteros is a Greek word meaning 'womb'. Women have a uterus but surgical removal is hysterectomy

The British Menopause Society (www.thebms.org.uk/) has useful information about the menopause together with details of publications, etc.