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# Menopause

RCN guidance for nurses, midwives and health visitors

Second edition

CLINICAL PROFESSIONAL RESOURCE



Endorsed by





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This publication is due for review in March 2024. To provide feedback on its contents or on your experience of using the publication, please email [publications.feedback@rcn.org.uk](mailto:publications.feedback@rcn.org.uk)

## Publication

This is an RCN practice guidance. Practice guidance are evidence-based consensus documents, used to guide decisions about appropriate care of an individual, family or population in a specific context.

## Description

This updated publication aims to help health care professionals gain awareness of the menopause and the safety and efficacy of modern therapy options.

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# Introduction

To provide support and advice to women it is important that all health care professionals understand the changes that women face at the time of their menopause and the issues related to improving health after menopause.

Those working specifically in women's health need to understand the safety and efficacy of modern therapy options and be aware of the myriad of complementary therapies. They also need to balance these options with the fact that for many women the menopause is an event that needs no intervention, and all that's required is general health promotion advice.

This publication aims to help all health care professionals gain awareness of these issues by reviewing what happens to the body during menopause and in the post-menopausal stage, examining the impact of these changes on women, and outlining the options for health after menopause. It also builds on the guidance published by NICE on the management of the menopause in 2015 (NICE, 2019).

Staff who work in women's health should recognise that there is much more to the subject than can be described here, and the reference section signposts additional sources for obtaining a deeper understanding of the subject. The main aim here is to encourage nurses to be more knowledgeable about the options available to women at and beyond menopause. By acting as women's advocates, nurses can ensure that

women (and their partners) have access to unbiased and accurate information.

A key advance, highlighted in the NICE guidance (NICE, 2019) was the need to have menopause specialists, their role is critical in enhancing the expertise available to women, and the role development has been progressing well in recent years, with standards set out by the British Menopause Society (BMS). In 2017, the RCN, in collaboration with the BMS, launched guidance on this. Details of how nurses can become experts in Menopause support and management are contained in the publication *Nurse Specialist in Menopause* (RCN, 2019) available at: [www.rcn.org.uk/publications](http://www.rcn.org.uk/publications)

It is always important to recognise that for many reasons the impact of the menopause may differ greatly for individuals. People who identify themselves as non-binary, transgender or from intersex communities may experience menopausal symptoms, and their menopause may be different.

Equally, health care professionals need to understand that the perceptions of the menopause may also differ in relation to disability, age, race, religion, sexual orientation and/or partnership status. The key is to always consider an individual in their own circumstances and support them according to their particular needs.

Visit the RCN's clinical web page on menopause at:  
[www.rcn.org.uk/clinical-topics/womens-health/menopause](http://www.rcn.org.uk/clinical-topics/womens-health/menopause)

# 1. The menopause

The menopause is defined as a physiological event thus:

Ovarian failure due to loss of ovarian follicular function accompanied by oestrogen deficiency resulting in permanent cessation of menstruation and loss of reproductive function.

NICE defines menopause as:

Menopause is when a woman stops having periods as she reaches the end of her natural reproductive life. This is not usually abrupt, but a gradual process during which women experience peri-menopause before reaching post-menopause (NICE, 2019).

The transitional phase known as peri-menopause describes the time leading up to a woman's final menstruation, and the endocrinological, biological, and clinical features of the approaching menopause. The length of this transition is usually about four years, but is shorter in smokers compared to non-smokers. However, 10% of women do not experience this phase and menses may stop abruptly.

The median age for menopause is 51 years, over an age range of 39–59 years.

## Changes in ovarian function

During a woman's middle age the exhaustion of the oocyte (egg) store in the ovaries leads to reduced production of the female hormone oestrogen. This in turn increases the production of gonadotrophin, the hormone released by the pituitary gland to stimulate the ovaries to produce oestrogen.

A woman's ovary becomes less responsive to gonadotrophin several years before her menstrual periods cease. As a result there is continuous decrease in oestrogen, but also a gradual increase in levels of follicle stimulating hormone (FSH) and luteinising hormone (LH) in the blood, both of which are produced by the pituitary gland to stimulate the ovaries. The unresponsiveness of the ovary results in anovulatory cycles, where no eggs are produced by the ovaries.

Throughout the menopausal transition these hormone levels can fluctuate markedly from pre- to post-menopausal values.

Eventually the follicles (the sacks which develop oestrogen and eggs) fail completely. Insufficient oestradiol production fails to stimulate the endometrium (womb lining), menstrual periods stop, and FSH and LH levels are persistently elevated.

## Terms used in the menopause

Other terms commonly used now include:

- climacteric - another term for menopause; this period is frequently termed the climacteric or peri-menopause but is increasingly referred to as the menopausal
- POI – premature ovarian insufficiency or premature menopause – see page 6.
- natural menopause – occurs in the vast majority of women as physiological development
- induced menopause – menopause may be induced through medication or treatment
- surgical menopause – menopause that occurs earlier than expected when both ovaries are surgically removed or permanently damaged by treatments, usually for carcinogenic illness (pelvic radiation or chemotherapy).

## 2. Diagnosing menopause

One of the questions most commonly asked by women in their late forties is: “Is it the change? Can I have a blood test?” In practice, it is rarely useful to perform blood tests as hormone levels fluctuate widely over a very short time span, making the results confusing and unreliable. Blood tests (for FSH) are usually only indicated when a premature menopause is suspected in a younger woman, or to rule out conditions – such as anaemia or thyroid disease – that may cause similar symptoms.

The best way to diagnose the menopause is by taking a thorough history of symptoms and menstrual irregularities. The current **NICE guidance** is that blood tests are not required to diagnose menopause (NICE, 2019).

**Table 1: Biochemistry assessment**

NICE recommends using the follicle stimulating hormone (FSH) blood test to diagnose menopause in the following groups of women provided they are not taking combined oestrogen and progestogen contraception or high-dose progestogen, as the diagnostic accuracy of the FSH blood test may be confounded by these treatments:

- women aged over 45 years with atypical symptoms
- women between 40–45 years with menopausal symptoms, including a change in their menstrual cycle
- women younger than 40 years in whom premature menopause is suspected.

### Contraception at peri-menopause

Women should be informed that effective contraception should be used in the peri-menopause, although there is a natural decline in fertility. The usual advice is that a woman who has her menopause before the age of 50 should use contraception for two years, and for one year after the age of 50.

No method of contraception is contraindicated in women aged over 40 years simply due to age. However, the risks and benefits of each contraceptive method should be discussed on an individual basis. The Faculty of Sexual and Reproductive Health (FSRH) clinical guidance on contraception for women aged 40 and above provides more detailed information on current evidence and recommended advice.

Further information can be obtained from the Faculty of Sexual and Reproductive Healthcare’s clinical guidance Contraception for women aged over 40 years (2019), which can be downloaded at: [www.fsrh.org](http://www.fsrh.org)

### Premature ovarian insufficiency (POI)

Premature ovarian insufficiency (POI) is the loss of ovarian function before the age of 40. It affects approximately 1% of women before the age of 40 and 5% before the age of 45, and is also known as early or premature menopause.

Women with POI may present with no periods, irregular periods, sub-fertility or menopausal symptoms. In any woman under 45 years of age (menstrual irregularity lasting longer than three months) should be investigated.

POI can also be as a result of radiotherapy, chemotherapy and surgery.

POI can be a devastating diagnosis, and affected women have special needs because they are facing the end of their fertility potential and will suffer the systemic consequences of oestrogen deprivation. Short-term menopausal symptoms are variable but may include hot flushes, night sweats, decreased libido, vaginal dryness and psychological symptoms. In the long term, women with POI are at increased risk of developing cardiovascular disease, osteoporosis and cognitive decline.

To alleviate short-term symptoms and reduce the long-term health risks of POI, oestrogen replacement therapy is recommended until the average age of natural menopause until at least the average age of 52 (NICE, 2019) and is given in the form of hormone replacement therapy (HRT) or the combined oral contraceptive pill (COCP).

Further information on management of POI can be found at NICE (2015 and 2016) and the European Society of Human Reproduction and Embryology (ESHRA) Guideline on the management of premature ovarian insufficiency (2015).

Women with spontaneous POI have a much reduced (about 5%) chance of becoming pregnant naturally. Sadly, no medical intervention can increase this and the only treatment option is egg

donation. However, it is important to remember that spontaneous pregnancies can occur, even after many years of amenorrhoea, and if pregnancy is not desired it is important to use contraception.

Further information on infertility treatments can be obtained from the Human Fertilisation and Embryology Authority ([www.hfea.gov.uk](http://www.hfea.gov.uk)), The Fertility Network (<https://fertilitynetworkuk.org>) and the Daisy Network ([www.daisynetwork.org](http://www.daisynetwork.org)).

## Surgical menopause

Surgical menopause may be performed for many conditions such as cancer, endometriosis, fibroids, risk-reducing surgery for women with BRCA (the term used to define genetic linked breast and ovarian cancers). The impact of surgical menopause can be that the symptoms of menopause are increased and more intense with an increased risk of long-term health problems which can be alleviated with long-term use of HRT unless it is contraindicated. Women with surgical menopause also lack testosterone so may need replacement. These women are normally under the care of a specialist in menopause (see *Nurse Specialist in Menopause* (RCN, 2019) for further information about such specialists).

## 3. Menopause symptoms

The fall in oestrogen levels that occurs at the menopause can cause a variety of symptoms. Although the list seems alarming, few women experience all of these symptoms and some women are fortunate enough to have no obvious problems. From a clinical perspective the immediate symptoms are mostly harmless, but it is the longer-term consequences of oestrogen deficiency that causes greater anxiety. However, recent studies suggest that younger women with symptoms are at more risk of CVD later on in life.

### Changes in menstrual pattern

As anovulatory cycles begin to predominate, the length of the menstrual cycle begins to vary and gaps of several weeks or months may occur between menstrual periods. Most women find their periods become lighter during the peri-menopause, but some experience more frequent and heavier bleeding. Because of the possibility of renewed follicular activity, women can become pregnant even at this stage of life and they should be advised to continue with contraception.

### Immediate effects of oestrogen deficiency

It is estimated that about  $\frac{3}{4}$  of women in the UK experience vasomotor symptoms. These symptoms are:

- hot flushes
- night sweats
- palpitations
- headaches.

Vasomotor symptoms are commonly worst in the two or three years before periods stop, and may continue for many years afterwards.

### Psychological problems

It is unclear why psychological symptoms occur at the menopause, and these may well have little to do with hormonal fluctuations. Life stresses at this age, as well as past problems, are an obvious causative factor. Many women do not realise that the following symptoms are very normal at this

stage of life and fear they may be on the verge of a breakdown:

- loss of confidence
- depressed mood
- irritability
- forgetfulness
- difficulty in concentrating
- panic attacks.

(RCN, 2019b)

### Medium-term effects of oestrogen deficiency

#### Urogenital symptoms

The vagina and distal urethra are oestrogen-dependent tissues. Falling oestrogen levels in post-menopausal women leads to a marked drop in vaginal and vulval capillary blood supply; the skin appears red and dry (atrophic vaginitis or genitourinary symptoms of menopause (GSM)). Additionally, there is a loss of collagen from the underlying tissues. These two factors cause the vaginal epithelium to become thinner and less elastic and the vagina narrower and shorter. As secretions lessen, the pH levels change and the vagina becomes more susceptible to infection (atrophic vaginitis). Many women will suffer from one of the following symptoms:

- - vaginal dryness
- - dyspareunia
- - vaginitis
- - urinary problems
- - frequency
- - urgency
- - dysuria.

#### Generalised connective tissue atrophy

Oestrogens help maintain the epidermis, so changes in the skin, nails and hair are common when oestrogen levels fall. Women may find their skin becomes dry, inelastic and is easily broken or bruised. The loss of thickness and elasticity is largely due to a decline in collagen levels. Other symptoms of connective tissue atrophy are brittle nails, hair loss, muscular aches and bone and joint pain.

## Long-term effects of oestrogen deficiency

### Cardiovascular disease

Cardiovascular disease (CVD) is the collective term for angina, myocardial infarction, stroke, and peripheral vascular disease. Despite an overall reduction in CVD in recent years, it is still the leading cause of avoidable death in both men and women.

In comparison to men, women are more likely to be under diagnosed and less likely to be on an appropriate treatment, and as such are at an increased risk of dying from CVD.

CVD is also age dependent. Less common in the premenopausal woman, the prevalence of CVD increases after the menopause. It is also known that women with a premature menopause, especially those with surgical oophorectomy, have an increased risk of coronary heart disease. By the time women reach 60 years of age CVD will be the most common cause of death (NICE, 2019).

Irrespective of age, prior to commencing HRT, every woman should have a health assessment to identify CVD risk factors like hypertension, diabetes mellitus, smoking, dyslipidemia, obesity and metabolic syndrome (IMS, 2017). Where risk factors are identified lifestyle changes and pharmacological intervention should be introduced, ideally in the peri-menopause. Where actual CVD is identified this should be aggressively managed (Read et al., 2014).

### Key points

- All peri-menopausal women should have an individual CVD risk assessment. Where modifiable risk factors are identified women should receive lifestyle advice (stopping smoking, weight reduction, healthy diet, increased regular exercise).
- Ensure that menopausal women and health care professionals involved in their care understand that HRT does not increase cardiovascular disease risk when started in women aged under 60 years and does not affect the risk of dying from cardiovascular disease.
- Health care practitioners need to be aware that the presence of cardiovascular risk factors is not a contraindication to HRT as long as they are optimally managed (NICE, 2019).
- HRT is not contraindicated in women with hypertension and in some cases treatment may even reduce blood pressure.
- In women with premature ovarian insufficiency hormone therapy is recommended until at least the average age of the natural menopause.

## Osteoporosis

Osteoporosis is a condition of the skeleton in which bone strength is compromised, predisposing the woman to an increased risk of fracture (NOS, 2017). In the UK, 1-in-3 women and 1-in-12 men over the age of 50 will suffer a fragility fracture due to osteoporosis (Torgeson et al., 2001). The most common fracture sites are the femoral neck, forearm and spine (NICE, 2017c).

As oestrogen levels decline, the risk of osteoporosis increases. The disease leads to weakness in the skeleton which can mean that bone fractures much more easily. Treating the affects of osteoporosis has huge financial implications for the NHS, and in personal and emotional terms for the individual and for carers.

Bone is a living tissue that is constantly remodelling itself. Old bone is broken down by osteoclasts and rebuilt by osteoblasts. In childhood osteoblasts work faster, enabling the skeleton to increase in density and strength, with bone mass reaching a peak by the late 20s. The balance between breakdown and formation remains stable until around age 35, when bone loss increases as part of the natural ageing process. After menopause, as oestrogen levels decline, bone turnover is increased and the reformation of bone cannot keep up with its breakdown. The end result is skeletal loss, leading to osteoporosis.

## Factors influencing the development of osteoporosis

The failure to reach optimal peak bone mass and/or accelerated bone loss in later life increases an individual's risk of osteoporosis. Peak bone mass is influenced by a combination of factors including race, heredity, diet, exercise, alcohol consumption, smoking and hormones.

## Factors increasing the risk of fragility fractures (NICE, 2017c)

- Age (risk of fracture increases with age).
- Low levels of oestrogen due to primary hypogonadism, premature menopause or prolonged anorexia nervosa.
- Long-term use of oral corticosteroid therapy.
- Low body mass index (<19 kg/m<sup>2</sup>).
- Maternal history of hip fracture.
- Smoking.
- History of previous fragility fracture.

Other risk factors include alcohol abuse, immobility, hyperthyroidism and conditions associated with the poor absorption of food, such as coeliac disease.

Young women (under the age of 40) experiencing menopause need particular advice about osteoporosis prevention and a baseline bone densitometry should be performed. Older women who had an untreated early menopause should also be assessed for risk of fracture.

## Testing for osteoporosis

Testing for osteoporosis involves measurement of bone mineral density (BMD) with a dual energy X-ray absorptiometry (DEXA) scan, usually of the hip and spine. A fracture risk assessment tool has been developed by the World Health Organization and is increasingly used by health professionals to identify those people at increased risk of osteoporotic fracture (FRAX, 2010), but this is not suitable for women with premature ovarian failure (POF). The National Institute for Health and Care Excellence (NICE) also has guidelines, *Osteoporosis: Assessing the*

*Risk of Fragility Fracture Clinical Guidelines*, CG146 (NICE, 2017).

Where a secondary cause of osteoporosis is suspected, diagnostic procedures may also include blood cell count, erythrocyte sedimentation rate, serum calcium, albumin, phosphate, alkaline phosphate and liver transaminases.

## Treatment for osteoporosis

The main aim of treatment is to prevent fragility fractures. The NICE has published technology appraisals relating to specific osteoporosis treatments (NICE, 2017).

## 4. The psychosocial impact of the menopause

### Confidence and sexuality

Some women view the menopause with confidence as an end to periods, pre-menstrual syndrome and contraceptive worries, and the start of the next enjoyable phase of their lives.

Others can be less positive as they struggle to deal with the impact of the loss of fertility and other physical symptoms, alongside the coincidental problems which arise in later middle age such as:

- children leaving home (or even returning home after some time away)
- increasing dependence of elderly parents
- fear of redundancy
- impending retirement
- a sense of failed expectations.

Life changing events such as these coupled with troublesome menopausal symptoms, including vaginal dryness, lowered self esteem and body image, and the possibility of a faltering relationship, can all have a negative effect on a woman's view of her sexuality.

As health care professionals we should be alert to potential problems and be proactive in acknowledging that sexuality has an important part to play in every woman's life. We should always view a woman and her symptoms holistically, and link discussion about sexuality with other health problems. Asking open-ended questions can help establish such links.

### Cultural differences

Different cultures view the menopause in different ways, which may affect women's social standing or the attitudes of others towards them.

In eastern cultures, the older woman becomes a well-respected member of the family group, to whom younger family members frequently turn for advice. Loss of regular bleeding is beneficial for some Muslim women and Orthodox Jewish women, as they are no longer seen as 'impure' during menstruation and can enter the temple,

handle and prepare food, or continue to have sexual intercourse throughout the month.

Conversely, in some cultures the menopause is viewed negatively, as it signals the end of fertility and the loss of a woman's 'usefulness' for procreation. Western society has a somewhat negative attitude towards women ageing, particularly with the so-called loss of femininity and the attractiveness associated with it. Culture, ethnic group and socio-economic status are all linked into the overall wellbeing of women and the symptoms that they may experience.

Menopausal symptoms also vary significantly between countries and amongst different ethnic and religious groups within the same countries. Symptom data is difficult to compare because of varying cultural, dietary and lifestyle factors and the differences in language used to describe climacteric symptoms – for example, in Japanese there is no word to describe a hot flush and women have a significantly later menopause. The SWAN – Study of Women's Health Across the Nation studies (SWAN, 2017) demonstrate wide variation in women's symptoms between different ethnic groups in terms of symptoms, attitudes and general health at the menopause.

Nurses talking to women from the many cultures present in the UK need to be sensitive to these differing attitudes and symptoms.

### Keeping women informed

All women approaching the menopause should have the opportunity to learn about the changes they may experience and the potential benefits to be derived from hormone replacement therapy.

Health professionals need to keep abreast with changes in the management of the menopause in order to maintain the standard of care to women, and to make sure that their clients and patients have access to unbiased and accurate information.

## 5. Lifestyle advice and choices for women at menopause

Many women only consult health care practitioners for advice about their health when they are approaching or are at the menopause. They have concerns about living well for the rest of their lives, and some say that they do not want to grow old the way their mother or grandmother did. When women present with these concerns it is a good opportunity to review their lifestyle with them.

Women want sensitive, unbiased and up-to-date information, and an explanation of normal menopausal changes. General health advice is the same throughout a woman's life, but there is a particular emphasis on certain factors for menopausal woman, primarily the effects that the menopause has on cardiovascular and bone health as well as the day-to-day symptoms of menopause.

The key areas to cover are:

- smoking status
- diet and nutrition
- exercise
- alcohol consumption
- weight control
- psychological aspects of the menopause
- reinforcing breast awareness
- encouraging attendance for breast and cervical screening
- assessing cardiovascular risk
- osteoporosis risk assessment
- reducing the impact of symptoms.

### Healthy living

#### Stopping smoking

Smoking has many negative effects:

- cigarette smoking can increase the risk of having a heart attack by two or three times; coronary heart disease (CHD) is the most common cause of death in women
- smokers are 1.5 times more likely to have a stroke

- smoking tends to increase blood cholesterol levels and adversely effects the HDL/LDL ratio
- smokers have an increased level of atherosclerosis in their coronary arteries
- smoking leads to an earlier menopause – up to two years earlier when compared with non-smokers
- smokers are at greater risk of developing osteoporosis
- smokers are more likely to experience vasomotor symptoms.

Make yourself aware of smoking cessation initiatives, so that you can make these resources available to support women who want to stop smoking.

#### Diet and nutrition

Nutrition is important for all women around the time of the menopause, and a healthy, balanced diet should be low in fat, low in salt and rich in calcium.

Facts about nutritional health – calcium and salt:

- high salt intake is linked with the development of high blood pressure
- women with hypertension excrete higher amounts of calcium in their urine than people with low blood pressure
- it is thought that calcium lost in the urine is replaced through calcium stripped from the bone, and that salt plays an important role in speeding calcium loss
- it should be possible to get all the calcium needed from a healthy diet; adults need 700mg a day, although those with osteoporosis may need more (NOS, 2017)
- vitamin D is necessary for the effective absorption of calcium from the gut, most being obtained from direct sunlight; a smaller amount is obtained from the diet. Supplements of 10mcg vitamin D may be necessary for for some women (NICE, 2017d).

Everyone should consider vitamin D supplements of 10mcg, from November to March. People from minority ethnic groups with dark skin such as those of African, African-Caribbean and South Asian origin might not get enough vitamin D from sunlight in summer so they should consider taking a daily supplement containing 10µg vitamin D throughout the year (NHS, 2016).

The National Osteoporosis Society provides detailed information on good sources of calcium (NOS, 2017).

Facts about nutritional health – fats:

- saturated fatty acids raise blood cholesterol levels
- total fat consumed should be reduced, with no more than one third of calories coming from fat
- saturated fats should be replaced with polyunsaturated fat and monounsaturated fat
- cholesterol is mainly made in the liver from the saturated fats in food
- polyunsaturated fatty acids have been found to help lower the amount of low density lipoproteins in the blood.

Facts about nutritional health – general:

- diet should be high in fruit and vegetables, containing at least five portions daily
- fruit and vegetables contain antioxidant vitamins and minerals which are crucial in preventing the damaging effects of free radicals
- smokers use antioxidants faster
- you should aim for at least two portions of fish a week, one of which should be oily fish
- maintaining a healthy weight is important as obesity is a major risk factor for CHD and is associated with high blood pressure, heart attacks, heart failure and diabetes. Women should aim for a health body mass index (BMI) of 20–25.

## Exercise

The following key points relate to the importance and benefits of exercise:

- regular exercise is necessary to remain active, healthy and independent

- physical activity reduces both the risk of developing CHD and of having a stroke by lowering blood pressure
- exercise increases energy levels, muscle strength and bone density
- exercise can reduce stress, anxiety and likelihood of depression
- exercise helps weight loss and improves sleep
- weight-bearing exercise such as brisk walking, dancing, skipping, aerobics, tennis and running stimulate bone to strengthen itself
- cycling and swimming are both good cardiovascular exercises
- exercise should be varied and should be taken for at least 30 minutes on five or more days of the week for maximum benefit
- regular exercise may help to reduce hot flushes.

## Alcohol

It is recommended that women drink no more than three units of alcohol a day, with a weekly consumption of fewer than 14 units. One to two alcohol-free days per week are recommended.

The following are useful facts about alcohol:

- keeping alcohol levels low can lower the risk of heart disease and stroke
- too much alcohol is damaging to bone turnover
- heavy drinking increases the risk of heart disease and stroke, and raises blood pressure which can lead to depression, stress, difficulty in sleeping and relationship problems. It can also cause dementia
- alcohol can trigger vasomotor symptoms at menopause and increased alcohol intake can increase the risk of breast cancer.

## Weight control

It is not inevitable that women will put on weight at the menopause, but many do. This is due in part to a decline in muscle mass and a subsequent slow-down in the basal metabolic rate, combined with a failure to reduce food and alcohol intake when taking little or no exercise.

Women should be advised to:

- eat a healthy diet
- exercise regularly; start slowly and gradually increase
- lose extra weight slowly and steadily.

### Psychological aspects

Depression, anxiety, tiredness, loss of concentration and memory problems are all common experiences during or after the menopause. To help these aspects, note that:

- regular mental stimulation seems to maintain cognitive ability
- regular exercise can make sleeping easier
- a balanced diet will ensure an adequate intake of essential minerals and vitamins
- social activity improves mental function
- concentration can be improved with crosswords, puzzles, quizzes and so on
- learning new skills or languages improves mental function.

### Reducing the impact of symptoms

There are a number of simple measures that may reduce the impact of some symptoms of the menopause. Women have found the following measures helpful:

- hot flushes may be triggered by particular activities such as smoking, eating spicy foods, and drinking alcohol and caffeine and avoiding or modifying a known trigger may help; wearing natural fabrics that can 'breathe' and using lightweight cotton bedding may also help
- exercise can help general wellbeing and mood as well as improving stamina and fitness
- relaxation or stress reduction techniques will improve coping strategies
- cognitive behavioral therapies, including counseling may help to deal with life events that are causing anxiety
- vaginal symptoms may be relieved by regular use of vaginal moisturisers, or non-systemic oestrogen.

## Screening

### Breast awareness

Breast cancer is the most common cancer in women, with a woman's lifetime risk being one in seven women (Cancer Research UK, 2020). The exact cause of breast cancer is not fully understood, but certain risk factors will predispose women to develop the disease. Breast and cervical screening should be offered in line with national programmes and in addition to bowel screening. No additional screening is needed. Health care professionals should therefore aim to educate women about these risks factors, helping to support them in addressing those that are modifiable.

Health care professionals, women and their partners can access posters, leaflets and information booklets that inform women about the breast screening programme from the information resources section of the NHSBSP website at: [www.gov.uk/topic/population-screening-programmes/breast](http://www.gov.uk/topic/population-screening-programmes/breast). A British Sign Language DVD and audio CD set, as well as information for women with learning difficulties, is also available.

### Bowel screening

Men and women who are eligible for screening will receive an invitation letter explaining the programme and an information leaflet entitled *Bowel Cancer Screening – The Facts*. Further information on the screening programme can be found at [www.gov.uk/topic/population-screening-programmes/bowel](http://www.gov.uk/topic/population-screening-programmes/bowel)

About a week later, a faecal occult blood (FOB) kit test will be sent out along with step-by-step instructions for completing the test at home.

It is estimated that around 98 people in 100 will receive a normal result.

### Cervical screening

Cervical screening aims to detect pre-cancerous abnormalities which may, if left untreated, progress into cervical cancer. The cervical screening programme invites women between 25 and 45 years of age every three years for a screening test, while those aged between

50 and 64 years of age are invited every five years. *Human Papillomavirus (HPV) Cervical Screening and Cervical Cancer: RCN Practice Guidance* (RCN, 2020).

In the UK, liquid-based cytology (LBC) has superseded the conventional 'smear test' and now cervical screening is triaged by an HPV test first and if positive then cytology is performed. There is a strong association (almost 99.7%) between HPV infection (mainly HPV 16, 18, 45 and 31) and cervical cancer (of which HPV 16 and 18 carry the highest risk). While HPV infection is common and the majority of those infected clear their infection, it is thought that persistent HPV infection increases the likelihood of the progression to cancer.

### HRT and cervical screening

After the menopause the vagina and cervix undergo atrophic change. Atrophic epithelium can have a detrimental effect on the quality of sample obtained and smears taken in the post menopausal woman, with basal and para basal cells being present at the surface.

Local oestrogen HRT has a beneficial effect on the vaginal and cervical epithelium. This beneficial effect may enable a more adequate sample to be obtained, especially if a smear has been reported as inadequate.

## Hormone replacement therapy (HRT)

HRT will effectively relieve hot flushes and sweats, improve vaginal dryness and may help with some of the others symptoms which women may experience around the time of the menopause. It will also have a positive effect on bone density, delaying the skeletal loss which occurs after the menopause and preventing subsequent osteoporotic fractures (NICE, 2019).

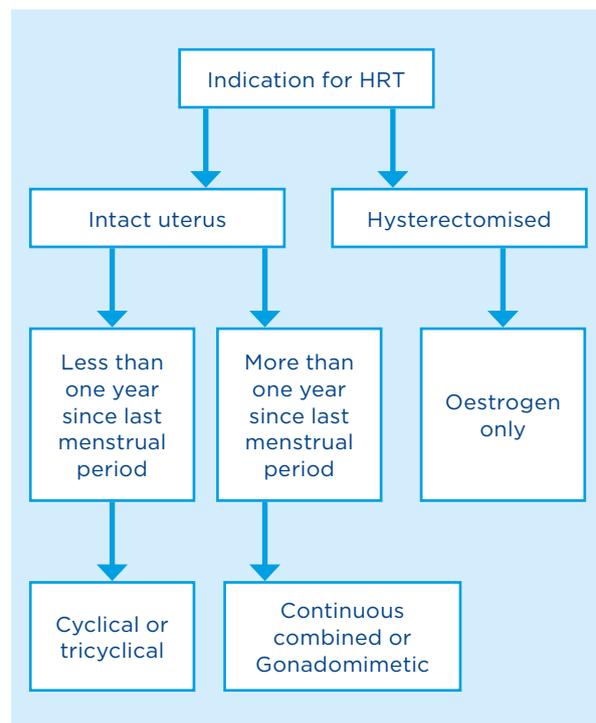
HRT usually comprises two hormones – oestrogen and progestogen. Women who have had a hysterectomy may use oestrogen on its own, whereas women with an intact uterus generally use a combination oestrogen/progestogen regimen. This is to prevent endometrial hyperplasia (thickening of the womb) which may occur with oestrogen-only therapy (Grady et al., 1995).

Progestogens are given in one of three ways:

- cyclical – usually resulting in a monthly bleed
- tricyclical – usually resulting in bleeds every three months
- continuous – 'no-bleed' therapy (some irregular bleeding initially) for post-menopausal women.

HRT can also be given as a gonadomimetic, a synthetic hormone which comprises oestrogenic, progestogenic and androgenic properties.

**Figure 7: Regimens of hormone replacement therapy**



### Who might use HRT?

There are several groups of women where the use of HRT might be indicated:

- those experiencing symptoms of the menopause, such as hot flushes, sweats or genitourinary symptoms
- those who have had an early menopause
- as a second-line therapy for osteoporosis protection in women over 50 years old.

**Who should not use HRT?**

Very few women cannot take HRT, but the following are contra-indications (Rymer, 2000):

- active or recent thromboembolic disease
- severe active liver disease
- pregnancy
- otosclerosis
- history of oestrogen dependent tumour, for example, breast or endometrium (refer to specialist)
- undiagnosed vaginal bleeding, for example, bleeding more than one year after the menopause (refer for investigations).

Women with conditions considered as contra-indications may still receive HRT under the care of a specialist clinic, if the benefits outweigh potential risk.

**The benefits of HRT**

The benefits of HRT include:

- relief of vasomotor symptoms
- relief of some psychological symptoms
- reduced urogenital atrophy
- reduction in osteoporotic fracture
- reduced incidence of colorectal cancer.

(NICE, 2019)

**The risks of HRT**

The risks of HRT include:

- in the first year of use, the risk of venous thrombosis increases slightly from 1 per 10,000 to 3 per 10,000; this risk may be lower with transdermal preparations and a risk of stroke and risk of breast cancer has also been reported (NICE, 2019).
- the VTE risk NICE (NG23, 2015) states that:
  - the risk of venous thromboembolism (VTE) is increased by oral HRT compared with baseline population risk
  - the risk of VTE associated with HRT is greater for oral than transdermal preparations

- the risk associated with transdermal HRT given at standard therapeutic doses is no greater than baseline population risk.

NICE (2015) reports that the baseline risk of breast cancer for women around menopausal age varies from one woman to another according to the presence of underlying risk factors, stating that HRT with oestrogen alone is associated with little or no change in the risk of breast cancer. HRT with oestrogen and progestogen can be associated with an increase in the risk of breast cancer. Any increase in the risk of breast cancer is related to treatment duration and reduces after stopping HRT. Recent research by the Collaborative Group on Hormonal Factors in Breast Cancer (2019) shows that risk of breast cancer with HRT use may persist for longer than previously thought, after treatment has stopped. For more information go to: <https://thebms.org.uk>

**Are there side effects?**

Minor side effects are common in the first few weeks of HRT treatment. Women are advised to persevere during this period. After this settling time side effects can be minimised by adjusting doses, and the types or routes of HRT. Such side effects may include:

- breast tenderness
- nausea
- leg cramps.

Side effects may be related to the progestogen component; for example, symptoms similar to premenstrual tension such as headaches, irritability, and bloating. These can often be resolved by changing the type or route of progestogen dose.

**Figure 9: Routes of administration for hormone replacement therapy**

Oestrogen	Progestogen
Spray	
Tablet	Tablet
Patch/gel	Patch (with oestrogen)
Implant	Intrauterine (IUS)
Vaginal - local	

## Bleeds

Women who still have periods (even erratically) and start HRT will be prescribed a cyclical form of HRT which usually results in a monthly withdrawal bleed. Tricyclic treatments are available which result in a three-monthly bleed. An alternative to this is the Ius (mirena) which can be used as part of HRT and can give no bleed therapy to women who are still peri-menopause.

Women who are post-menopausal and have had at least one year since their last period, may use a continuous combined form of HRT. This is described as 'period free' or 'no bleed', as the aim of the treatment is to have no bleeding at all. However, the settling phase can take three to four months, during which it is common to experience some breakthrough bleeding.

## Initiating and monitoring HRT

Nurses are often involved with decision making about HRT, with baseline investigations of women and the ongoing monitoring of their treatment.

NICE (2015 and 2016) suggests that the monitoring of women on HRT should take place every three months until they are stable and then yearly after this. Nurses within all environments can undertake this. The RCN has developed guidance on the role of the specialist nurse in menopause care (RCN, 2017a).

Before initiating HRT, the prescriber may request some of the following investigations:

- blood pressure – it has become established practice to record women's blood pressure as a baseline measurement and in ongoing monitoring; there is no evidence to suggest that blood pressure will be altered simply by the use of HRT (NICE, 2019)
- weight – useful as a baseline measurement. Being overweight will not in itself preclude the use of HRT
- pelvic examination – not routinely performed before treatment, but clinically indicated in women with a history of fibroids, ovarian cysts, pelvic pain, abnormal vaginal bleeding, endometriosis, prolapse or urinary leakage
- breast examination – not routinely indicated but may be clinically indicated before HRT

use in women with symptomatic disease, personal or family history of breast cancer.

Other investigations that may be performed include:

- follicle stimulating hormone (FSH) – not usually helpful for diagnosis, but can be useful in women with early menopause (serial tests), or women with hysterectomy and ovarian conservation
- thyroid function – when flushes do not improve on HRT or if thyroid disease is suspected on clinical examination
- lipid profile – women with a family history of coronary heart disease
- thrombophilia screen – women with a personal or family history of venous thrombosis
- bone densitometry – women considered at high risk of osteoporosis
- endometrial assessment – women with abnormal vaginal bleeding (pelvic examination, ultrasound and/or hysteroscopy and biopsy).

Regular assessments of blood pressure, weight, symptom control and bleeding should be included as well as time for the woman to ask questions or raise any anxieties she may have. Each visit is the opportunity to re-evaluate the need for treatment and consider the safety of continuing. NICE (2015 and 2016) suggest that the follow up is three monthly and then yearly. In between this time women should have contact details if they have queries. This becomes even more crucial when women have been on HRT for over five years after the age of fifty. It also provides an opportunity to discuss other health issues and encourage an attitude of health promotion post-menopause.

Contrary to initial advice following publication of the Women's Health Initiative study (2002) which raised questions regarding the safety of HRT, recent re-analysis and studies clearly show that HRT is low risk in younger women (aged 50-59 years). There is evidence that the age at which HRT is started and the time since menopause could be critical in determining the effect of HRT on CVD.

There may be a beneficial effect for women who start HRT within 10 years of the menopause

and this is thought to be due to the healthier state of the underlying vasculature and the lower baseline CVD risk.

### Hormone replacement therapy and osteoporosis

Women who are on HRT for menopausal symptoms will continue to benefit from osteoporosis prevention whilst on treatment.

Although HRT is a proven effective treatment for the prevention of bone loss, it is only specifically indicated in:

- women with a premature menopause
- post-menopausal women with an increased risk of fracture who are unable to tolerate other treatments ([National Osteoporosis Society's Position statement on hormone replacement therapy in the prevention and treatment of osteoporosis](#)) (Bowring and Francis, 2011).

HRT may be the treatment choice for menopausal women needing bone protection, especially those who have an early menopause or have their ovaries removed before they reach the age of 45. Other groups for whom HRT is recommended for bone preservation include women with Turner Syndrome, diseases of the pituitary gland, and women with amenorrhoea (no periods) because of anorexia nervosa or over-exercise.

### Locally applied oestrogen

Vaginally administered oestrogen may be prescribed, even to women in whom systemic HRT is contraindicated. Weakly absorbed oestriol or oestradiol preparations used at the correct dose will not cause endometrial proliferation, treating only the local vaginal symptoms (NICE, 2019). Vaginal oestrogen should not be used as a sexual lubricant, but rather used on a regular, twice-weekly basis for relief of vaginal dryness. Long-term use is agreed by NICE with no monitoring of the endometrium or progestogen needed. Women with breast cancer may be able to use local oestrogens – seek specialist advice.

A novel treatment for vaginal symptoms is Dehydroepiandrosterone, better known as DHEA, a steroid hormone and can be used daily

as a pessary. Contraindications are similar to vaginal oestrogen usage.

Ospemifene is a selective oestrogen receptor modulator that has an oestrogen-like effect in the vagina, increasing the cellular maturation and mucification of the vaginal epithelium. It is taken as a tablet daily.

### Prescribed alternatives to HRT

These are not first line treatments but may be used with selective women who can not take hormones.

#### Selective serotonin reuptake inhibitors (SSRIs) and serotonin and norepinephrine reuptake inhibitors (SNRIs)

Emerging evidence that there are a variety of mechanisms and hormones involved in hot flushes has led to trials of medication that have previously been used as SSRI anti-depressants. Studies have shown these provide relief of hot flushes in some women, although the treatment remains unlicensed currently. Treatments include venlafaxine in lower doses of 37.5mg-150mg daily, paroxetine, fluoxetine and citalopram (Barton et al., 2003; Loprinzi et al., 2000; Stearns et al., 2003); the treatments can improve depression, however some such as paroxetine may have some interaction with Tamoxifen (Kelly et al., 2010).

#### Clonidine

Clonidine was originally developed to treat hypertension, but can be effective in treating hot flushes in some women. Studies have shown that clonidine is better than a placebo (Nelson et al., 2006) at reducing the number and intensity of hot flushes. The recommended dose is 50-75mcg twice daily. Side effects include dry mouth and dizziness. This is currently the only prescribed alternative that is licensed for the treatment of hot flushes.

#### Gabapentin

Gabapentin is a gamma-aminobutyric acid analogue and is used to treat epilepsy and migraine. Limited early evidence shows it is

better than a placebo at relieving hot flushes and sweats. It is not licensed for this indication.

### Non-hormonal vaginal lubricants and moisturisers

Women may get relief from vaginal dryness by the regular use of vaginal moisturisers which can be purchased without prescription, although some are available on prescription. Lubricants, used at the time of sex, can help with dyspareunia.

### Libido and testosterone replacement

The drop in oestradiol level at the time of the menopause has a significant negative effect on sexual arousal and interest for some women. The post-menopausal ovary is an important source of androgen production, and total and free testosterone levels have been shown to be reduced by more than 40% in hysterectomised women with bilateral oophorectomy relative to menopausal women who have not undergone surgery.

In women, around two-thirds of circulating testosterone is bound to steroid hormone binding globulin (SHBG) and around a third to albumin, leaving only 2% in the free or unbound state. A free testosterone index (normal range 0.4-0.8 ng/dl) accurately reflects the tissue androgen status but is not widely available; total testosterone measurements are influenced by fluctuating levels of SHBG and are less meaningful.

Several studies have shown the benefit of testosterone therapy in post-menopausal women but mainly in those using oestrogen.

There are currently no licensed testosterone replacement therapy available in the UK. In its guideline, NICE (NG23) mentions: "At the time of publication (November 2019), testosterone did not have a UK marketing authorisation for this indication in women. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information. *Testosterone Replacement in Menopause* (BMS, 2020) is available at: <https://thebms.org.uk/publications/tools-for-clinicians/testosterone-replacement-in-menopause>

## The therapeutic approach

The way in which menopause is perceived and experienced is influenced by its timing, personal meaning and severity of bodily symptoms which can mimic symptoms of chronic stress. Stressors may be external and circumstantial (for example redundancy, bereavement, acting as a carer) or internal (for example bitterness and regret at past choices or losses, fear of the future). Stressors may be exacerbated in the absence of positive mediators such as supportive relationships.

Specialist counselling can help promote emotional selfmanagement and a sense of personal control through validating the experience and supporting or introducing personal coping strategies which may lessen the impact of bodily symptoms. Challenging negative thinking, developing coping strategies to reduce the impact of hot flushes and/or night sweats on daily life, guided imagery work and learning relaxation techniques have generally resulted in reduced problematic impact, increased sleep quality, increased self confidence, and a greater sense of optimism and empowerment.

### Cognitive behavioural therapy

Cognitive behavioural therapy (CBT) is used to address a variety of different problems such as depression, premenstrual syndrome (PMS), and compulsive disorders, and aims to make sense of problems by sub dividing these to make it easier to see how these are connected and the effects. Typically issues are divided into parts of an event/experience to explore a particular situation, from which thoughts/physical feelings and emotions can be extracted and considered. These can then be translated into positive actions/action plans.

There have been promising trials of women with breast cancer who have CBT individually or in groups and find they are able to cope with the symptoms better after the sessions.

Further information can be found in *Cognitive Behaviour Therapy (CBT) for Menopausal Symptoms* available at: <https://thebms.org.uk/publications/tools-for-clinicians/cognitive-behaviour-therapy-cbt-menopausal-symptoms>

## Complementary approaches

NICE looked at alternatives and gives a summary within its guidance, there is a caution for women with hormone dependent cancers that they should always discuss alternatives with their health care provider.

### The placebo effect

When exploring alternatives to conventional treatment for the menopause, it is helpful to be aware of the importance that psychological factors play, not only in giving rise to symptoms, but also in determining a patient's response to a treatment.

Studies have shown that patients' expectations concerning a treatment, their experience of the treatment and their attitudes towards their health care provider can all affect the impact of a treatment. Such factors as these can all be brought together under the term 'placebo effect'. This is the therapeutic impact of non-specific or incidental treatment ingredients, as opposed to the therapeutic impact that can be directly attributed to a specific, characteristic action of the treatment. Despite a lack of understanding of the exact mechanisms through which the placebo effect may operate, research clearly shows that the effect exists and can have a significant impact on health.

When reviewing the evidence of therapies for menopausal symptoms, it can be difficult to find studies of complementary therapies compared with placebo. Such lack of evidence may be partly due to lack of investment in research, but also lies in a belief amongst some practitioners that in studying such therapies it is difficult to have a control group which is blind to the therapy as complementary therapies often consist of many components and may include therapeutic processes which are unique.

It is also important to recognise that menopausal symptoms are usually, by their nature, self limiting and will generally improve over time.

A wide range of complementary therapies may be used to reduce or stop the short-term symptoms of the menopause, but do not prevent or treat osteoporosis.

Each therapy has benefits and pitfalls. For the majority, there is a lack of randomised control trials or hard evidence of use, although many appear to have been used successfully for years. Since many are taken by individuals and are available over the counter, they are difficult to study in a traditional medical setting. Most treatments claim to work by treating the whole person, rather than a specific disease, balancing health and realigning the person's own healing properties. A major downside of all these therapies is cost, as most are not available on the NHS.

When you are advising patients about the use of complementary therapies, they should be encouraged to consult a reputable practitioner. If you are the practitioner offering the complementary therapy you have a responsibility to ensure you are educated and prepared to offer the therapy at a safe level.

### Herbal treatments

Herbal medicine, for example commonly used herbs are black cohosh, uses plant products for their therapeutic properties.

Many women see the use of herbal remedies as a more natural way of managing their menopausal symptoms than conventional medicines. Indeed, herbs have been used for centuries to relieve an assortment of ailments. There are now a wide variety of products available which can be obtained from many sources such as health food shops, supermarkets, pharmacies, herbalists and even via the internet.

Although many women find herbal remedies useful in reducing menopausal symptoms, there is a lack of data concerning their efficacy and safety, and little overall proof to back up the claims made for these remedies. This appears to be due more to the lack of appropriate scientific studies rather than any absence of effect. More rigorous analyses may yet demonstrate clear efficacy for some of these preparations.

Like all medicines, herbal treatments may cause side effects. At present there appears to be no effective way of reporting these. Not only is the cost of some herbal treatments prohibitive to many women, but they may also contain potential harmful contaminants.

Herbal remedies should be used with caution in women who have a contra-indication to oestrogen, as some herbs may have oestrogenic properties. Herbal remedies are currently registered as food substances and are not therefore under the review of the Committee for Safety of Medicines.

Figure 10 shows the common herbs used at menopause. However, there are many other herbs not listed that some women may use around the menopause but which have no specific properties for menopausal symptoms.

**Figure 10: Common herbs used at the menopause**

Herb	Comments
Black cohosh	Recognised as a menopausal treatment by WHO and German authorities. Data on effectiveness is mixed and there have been reports of liver toxicity
Evening primrose oil	Useful for breast tenderness
Dong quai	Not found to be better than placebo, can interact with warfarin
Ginkgo biloba	Little evidence improves menopause symptoms; can interact with warfarin and may cause bleeding
Ginseng	No better than placebo at relieving hot flushes; can cause PMB and interacts with warfarin and alcohol
Agnus castus (chasteberry)	No evidence
Sage	May cause bleeding; interacts with tamoxifen
St John's wort	Good for depression, irritability and fatigue and reducing anxiety; multiple drug interactions
Sea buckthorn	Used for mucus membrane dryness
Valerian	Lack of data
Liquorice root	Lack of data
Wild yam cream	Little data that it works as humans are unable to convert the active ingredients

## Phytoestrogens

Phytoestrogens are naturally occurring, oestrogen-like compounds derived from plants. They have a similar chemical structure to

oestrogen and bind to oestrogen receptors. For more than 25 years, much interest has focused on phytoestrogens as an alternative therapy for relief of menopausal symptoms, particularly vasomotor symptoms such as hot flushes.

Women in Japan and Asia appear to have fewer menopausal symptoms and have less risk of cardiovascular disease and of cancers of the breast, endometrium, ovary and colon. They also have lower rates of osteoporosis. This has been linked with diet. Typical Japanese diets may contain 20-50mg per day of phytoestrogens, while the Western diet probably contains less than 1mg per day. However, high consumption of fish in Japan means a high intake of essential fatty acids which could also explain the lower incidence of disease and illness.

The two main dietary groups of phytoestrogens are lignans and isoflavones (see box). Lignans are found in cereals (oats and barley), seeds (linseed), fruits and vegetables, while isoflavones are found in beans and pulses (chickpeas, lentils and red clover), particularly soya beans and soy products. Evidence for the use of isoflavones for relief of menopausal symptoms is encouraging and further research is ongoing. Various dietary supplements of isoflavones are commercially available.

Isoflavins	Lignans
Chickpeas, legumes, lentils Soya beans/soy-based products Tofu Red clover	Cereals (oats/barley) Linseed Fruit and vegetables

## Efficacy

Isoflavones are thought to work differently in pre- and post-menopausal women, which complicates testing and reviewing results.

A review of placebo-controlled studies of a standardised 40mg red clover isoflavone demonstrated a reduction in the number of hot flushes experienced compared with placebo (Nachtigall, 2006).

Howes et al. (2006) showed a slight to modest reduction in hot flushes and that benefit may be more apparent in women experiencing a high number of hot flushes per day. A Cochrane review (2007) of 30 trials regarding the

effectiveness of phytoestrogens in vasomotor symptoms concluded that there was no evidence of effectiveness in alleviation of menopausal symptoms as those trials that did show effect were low quality and underpowered. Most trials demonstrated a strong placebo effect.

Several short duration studies have investigated bone density.

A one-year study suggested that, through attenuation of bone loss, isoflavones may have a potentially protective effect on the lumbar spine in women (Atkinson, 2004). While the effects appear positive, Cassidy (2003a) concludes that the optimal dose is as yet unknown.

Isoflavones may also have a role in preventing vaginal atrophy.

A prospective double-blind, placebo controlled cross-over study demonstrated positive effect on vaginal tissue with no increase in endometrial thickness (Woods, 2004).

Isoflavones may also have a small beneficial effect on lipids but cardiovascular outcomes have not yet been measured (Chedraui, 2008).

### Safety

No significant alterations in serum biochemical or haematological markers were seen in a placebo-controlled study using a 40mg red clover isoflavone for a 12-week period (Baber, 1999).

Powles et al. (2008), in a randomised placebo-controlled trial over a three-year period, showed red clover supplements did not adversely affect breast density.

A Cochrane review (2007) indicated that there was no evidence that phytoestrogens caused estrogenic stimulation of the endometrium when used for up to two years. However, in a randomised, placebo-controlled study (Unfer et al., 2004) demonstrated that five years' use of soy isoflavones does appear to increase the risk of endometrial hyperplasia.

### Standardisation

Like all non-medicinal products, isoflavones are registered as food substances and therefore are not under review by a regulatory authority such as the MHRA. There are discrepancies between

label contents and active ingredients. Setchell et al. (2001) compared isoflavone content of 33 products in the United States and showed that many manufacturers claimed their product contained more isoflavones than were present on testing.

### Dosage

The recommended dose of red clover isoflavones is 40mg per day, depending on severity of vasomotor symptoms. It is important to take red clover with a meal that includes carbohydrate to aid absorption and to take it regularly at the same time each day. Approximately one third of women may not convert or absorb dietary isoflavones which renders them ineffective, meaning there will be no symptom improvement even after three months' use (Faughnen, 2004).

### Drug interactions

There may be contaminants in some preparations studied, so it is difficult to extrapolate whether side effects relate to the action of isoflavones, drug-herb interactions or a contaminant. There are no reports of drug interactions in clinical trials of a standardised 40mg red clover isoflavone to date (Cassidy, 2003b).

Other considerations include:

- proton pump inhibitors or H<sub>2</sub> receptor agonists may reduce efficacy of isoflavones
- antibiotic use reduces gut flora and may affect absorption of isoflavones and could therefore affect efficacy for approximately six weeks; increased intake of lacto acidophilus (probiotic) may help
- isoflavones may inhibit effect of some drugs metabolised by liver enzymes (Boullata, 2005)
- women receiving warfarin should be monitored regularly when changing their diet or commencing a dietary supplement
- in the absence of definitive research data, it is recommended that isoflavone supplements should not be used concomitantly with oestrogen, progestogen, or androgen therapy due to possible competitive inhibition

(Food Standards Agency, 2003).

## Contraindications

Isoflavones are not recommended for use during pregnancy or in women with undiagnosed vaginal bleeding. For women who have had hormone-dependent tumours such as breast cancer, it has not been established whether weekly oestrogenic supplements affect disease recurrence. Further studies are needed to determine the role and safety of phytoestrogens supplements in menopausal women.

## Other therapies

You may find that some women have used some of the following therapies. There is little evidence these therapies reduce symptoms as such, but they may offer an improvement in quality of life, probably because of practitioner care and support.

The following are therapies women may have used/ask advice on:

- **acupuncture** uses needles put into the skin at specific points on the body, whereas acupressure uses pressure on these points. These points then correspond to meridian or energy channels, which are believed to link to internal organs and unblock energy and balance the flow, correcting illness and psychological problems. Although acupuncture has been used for thousands of years, there are few good quality trials on its use in treating menopause. Those studies that have been conducted have shown no harm, and some have shown benefits in relieving hot flushes, night sweats and general mood, especially when site-specific points for menopause have been used (Cohen, 2003). Acupuncture has also been used in women with breast cancer and tamoxifen-induced hot flushes, increasing general wellbeing (Walker et al., 2004). However a systematic review has failed to show a specific benefit for hot flushes (Lee et al., 2009) but Borud and White (2010) in a review article have suggested that there is a reduction in hot flushes
- **homeopathy** aims to cure like with like, and stimulate the body into healing itself. There are some studies that have shown that this is beneficial in women in the menopause, both natural and induced menopause. Homeopathic remedies have been demonstrated to reduce hot flushes and to improve quality of life (Jacobs et al., 2005; Thompson and Reilly, 2003). Traditional homeopathic practitioners select and administer an individual 'constitutional' remedy based on the totality of a woman's symptoms and her physical, mental and emotional state. This is thought to strengthen the body's vital defences and restores a healthy balance and sense of wellbeing. Most of the major homeopathic remedies may be used to treat the symptoms of menopause however, scientific evidence is limited to support usage
- **reflexology** uses the energy channels and meridians similar to those in acupuncture and acupressure, but contained within the feet or hands. It aims to help the body's energy circulate effectively and claims to be effective in PMS and menopause, although there is little published data
- **yoga** is the use of mental and physical disciplines to meditate and adopt postures. It may help to control flushes through relaxation, improve balance, and decrease falls
- **hypnotherapy** aims to improve the health of a patient through inducing a trance-like state, with therapist and patient working together
- **aromatherapy** treats illness with concentrated plant oils, most commonly applied through massage. The oils can also be administered as an inhalation or in a bath.

## 6. Conclusions

The menopause is a natural phenomenon that occurs in most women, it is as different and individual as women are, and for some it is merely another change in their life cycle that will take place. For many women, it can be challenging and the symptoms may require some or significant management and support. Some women will experience POI and require specialist support, whilst others may undergo surgical menopause as part of wider health issues.

The requirements will vary, as identified throughout the guidance, and nurses are well placed to provide professional evidence-based support and referral to specialists where necessary.

The *Nurse Specialist in Menopause* (RCN, 2019) is a career opportunity for nurses engaged in women's health care, and provides a pathway to advancing nursing care in an area that can enhance the health and wellbeing of all women; both those who come in contact as patients and clients, those encountered in social, educational or employment environments, including partners and family and friends who may be concerned about the impact of the menopause.

The nurse specialist guidance recognised that women are seen in both primary and secondary care and by nurses of various disciplines, so the title of the nurse has been left deliberately broad to encompass all nurses who work at this advanced level of practice. It also acknowledges that nurses will be working at all levels within menopause services and is aimed at nurses who are running services for complex women.

The role of the nurse specialist in menopause in managing and supporting women with menopause has been defined to take account of the need to:

- facilitate a better understanding and the potential health implications of a well-managed menopause among all nurses coming in contact with women
- lead and develop specialist menopause services
- support these services and ensure they are linked with all areas of care.

Taken from *Nurse Specialist in Menopause* (RCN, 2019).

Following the publication of the NICE guidelines (NICE, 2019) for the management of menopause the BMS has defined a specialist as:

A menopause specialist in the UK is defined as a health care professional who has obtained the British Menopause Society (BMS)/Faculty of Sexual Reproductive Health (FSRH) Advanced Menopause Certificate, or completed the (Royal College of Obstetrics and Gynaecology (RCOG)/BMS Advanced Training Skills Module (ATSM)\* in Menopause Care (or equivalent, eg, the menopause and premature ovarian failure module of the subspecialty training programme in reproductive medicine) and who:

- is a member of the British Menopause Society (BMS)
- attends a National (BMS), European or International Menopause Society conference at least once every three years (BMS, 2017)
- provides a minimum of 100 menopause related consultations per year, of which at least 50 are new
- has the responsibility documented as part of their job plan and discussed at their annual appraisal.

\*Please note the ATSM is only available currently to medical staff.

Health professionals wishing to register as a specialist do so at: <https://thebms.org.uk/nice-guideline/menopause-specialists>

All nurses and midwives are encouraged to develop skills and knowledge to enhance best practice, provide advice and the appropriate support of women and their partners during this life event.

The RCN supports the need for all nurses, midwives and health care professionals to have a basic understanding of the symptoms and potential issues that may affect a woman wellbeing during this period. The RCN also supports the development of the nurse specialist in menopause role to provide an enhanced service for all women, but particularly those requiring specialist care for complex needs.

# References and further reading

- Bagness C and Holloway D (2016) 'Managing the menopause at work', *Practice Nursing*, Vol 26, No 11
- Bowel Cancer Screening: The Facts – Gov. uk (2016). [www.gov.uk/topic/population-screening-programmes/bowel](http://www.gov.uk/topic/population-screening-programmes/bowel)
- Bowring CE and Francis RM (2011) 'National Osteoporosis Society's Position statement on hormone replacement therapy in the prevention and treatment of osteoporosis', *Menopause Int.* 2011 Jun;17(2):63-5. doi: 10.1258/mi.2011.011012. <https://journals.sagepub.com/doi/abs/10.1258/mi.2011.011012>
- British Menopause Society (2019) *Management of the menopause. The essential handbook for health care professionals working in post-reproductive health*, London: BMS. [www.thebms.org.uk](http://www.thebms.org.uk)
- British Menopause Society (2016) *Menopause specialists*. [www.thebms.org.uk/nice-guideline/menopause-specialists](http://www.thebms.org.uk/nice-guideline/menopause-specialists)
- Cancer Research UK (2020) *Breast cancer statistics*. [www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/breast-cancer](http://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/breast-cancer)
- Collaborative Group on Hormonal Factors in Breast Cancer (2019) Type and timing of menopausal hormone therapy and breast cancer risk: individual participant meta-analysis of the worldwide epidemiological evidence, *The Lancet*. [www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)31709-X/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31709-X/fulltext)
- Department of Health (2015) *Annual Report of the Chief Medical Officer, 2014: the Health of the 51%: Women*. [www.gov.uk/government/publications/chief-medical-officer-annual-report-2014-womens-health](http://www.gov.uk/government/publications/chief-medical-officer-annual-report-2014-womens-health)
- ESHRA (2015) *Guideline on the management of premature ovarian insufficiency*. [www.eshre.eu/Guidelines-and-Legal/Guidelines/Management-of-premature-ovarian-insufficiency.aspx](http://www.eshre.eu/Guidelines-and-Legal/Guidelines/Management-of-premature-ovarian-insufficiency.aspx)
- FSRH (2019) *FSRH Clinical Guidance: Contraception for Women Over 40*. [www.fsrh.org/standards-and-guidance/fsrh-guidelines-and-statements/contraception-for-specific-populations/aged-over-40](http://www.fsrh.org/standards-and-guidance/fsrh-guidelines-and-statements/contraception-for-specific-populations/aged-over-40)
- IMS (2017) *IMS Menopause Live HRT and cardiovascular disease*. [www.menopause.org.au/members/ims-menopause-live/991-hrt-and-cardiovascular-disease](http://www.menopause.org.au/members/ims-menopause-live/991-hrt-and-cardiovascular-disease)
- NHS (2016) *The new guidelines on vitamin D – what you need to know* (web). [www.nhs.uk/news/food-and-diet/the-new-guidelines-on-vitamin-d-what-you-need-to-know](http://www.nhs.uk/news/food-and-diet/the-new-guidelines-on-vitamin-d-what-you-need-to-know)
- NICE (2019) *Menopause: diagnosis and management NICE guideline [NG23]*. Available at: [www.nice.org.uk/guidance/NG23](http://www.nice.org.uk/guidance/NG23) (accessed 27 September 2017)
- NICE (2017) *Menopause Quality standard [QS143]* (web). Available at: [www.nice.org.uk/guidance/qs143](http://www.nice.org.uk/guidance/qs143)
- NICE (2017b) *Vitamin D: supplement use in specific population groups*, Public health guideline [PH56]. [www.nice.org.uk/guidance/ph56](http://www.nice.org.uk/guidance/ph56)
- NICE (2017) *Osteoporosis: assessing the risk of fragility fracture (CG146)*. [www.nice.org.uk/guidance/qs149/resources/osteoporosis-pdf-75545487906757](http://www.nice.org.uk/guidance/qs149/resources/osteoporosis-pdf-75545487906757)
- NOS (2017) *National Osteoporosis Society – Healthy eating for strong bones* (web). <https://nos.org.uk/information/healthy-living-and-risk/healthy-eating-for-strong-bones/>
- Reid R, Abramson BL, Blake J, Desindes S, Dodin S, Johnston S, Rowe T, Sodhi N, Wilks P, Wolfman W (2014) 'Managing Menopause', *Journal of Obstetrics and Gynaecology*, Canada (2014) 36 (9) pgs 830-830
- Royal College of Nursing (2020) *Menopause and work: guidance for RCN representatives*, London: RCN. [www.rcn.org.uk/professional-development/publications/rcn-menopause-and-work-uk-pub-009327](http://www.rcn.org.uk/professional-development/publications/rcn-menopause-and-work-uk-pub-009327)
- Royal College of Nursing (2020) *Genital examination in women: a resource for skills development and assessment*, London: RCN. Available at: [www.rcn.org.uk/professional-development/publications/rcn-genital-examination-in-women-pub007961](http://www.rcn.org.uk/professional-development/publications/rcn-genital-examination-in-women-pub007961)
- Royal College of Nursing (2019) *Nurse Specialist in Menopause*, London: RCN. Available at: [www.rcn.org.uk/professional-development/publications/pub-007732](http://www.rcn.org.uk/professional-development/publications/pub-007732)

Royal College of Nursing (2019b) *Menopause and Mental Health pocket cards*. London: RCN. [www.rcn.org.uk/professional-development/publications/pub-007813](http://www.rcn.org.uk/professional-development/publications/pub-007813)

Royal College of Nursing (2020) *Human papillomavirus (HPV) cervical screening and cervical cancer: RCN Practice Guidance*, London: RCN. [www.rcn.org.uk/professional-development/publications/rcn-hpv-cervical-screening-cervical-cancer-pub007960](http://www.rcn.org.uk/professional-development/publications/rcn-hpv-cervical-screening-cervical-cancer-pub007960)

SWAN (2017) Swan Annotated Bibliography Published Manuscripts. [www.swanstudy.org/publications/swan-research-findings](http://www.swanstudy.org/publications/swan-research-findings)

Hillard T, et al., (2017) *Handbook management of the menopause*, The essential handbook for health care professionals working in post-reproductive health (BMS Publication)

# Useful contacts and resources

## Useful contacts

British Acupuncture Council  
[www.acupuncture.org.uk](http://www.acupuncture.org.uk)

British Association for Counselling & Psychotherapy  
[www.bacp.co.uk](http://www.bacp.co.uk)

British Association for Sexual and Marital Therapy  
[www.basrt.org.uk](http://www.basrt.org.uk)

Breakthrough Breast Cancer  
[www.breakthrough.org.uk](http://www.breakthrough.org.uk)

British Homeopathic Association  
[www.britishhomeopathic.org](http://www.britishhomeopathic.org)

**British Menopause Society** – a multidisciplinary professional organisation for health professionals working in the menopause field – quarterly journal. [www.thebms.org.uk](http://www.thebms.org.uk)  
 Menopause education for nurses.  
<https://thebms.org.uk/training/menopause-education-for-nurses>

Cancer Research UK  
[www.cancerresearchuk.org](http://www.cancerresearchuk.org)

**The Continence Foundation** – provides information for health professionals and the public. [www.continence-foundation.org.uk](http://www.continence-foundation.org.uk)

**Daisy Network** – a support group for women suffering from premature menopause.  
[www.daisynetwork.org](http://www.daisynetwork.org)

**Faculty of Sexual and Reproductive Healthcare** [www.fsrh.org](http://www.fsrh.org)

**Family Planning Association (FPA)** – information for health professionals and the public on issues related to reproductive and sexual health.  
[www.fpa.org.uk](http://www.fpa.org.uk)

The General Regulatory Council for Complementary Therapies  
[www.grcct.org](http://www.grcct.org)

The Hysterectomy Association  
<https://healthyhappywoman.co.uk>

Institute for Complementary Medicine  
[www.icnm.org.uk](http://www.icnm.org.uk)

Institute of Psychosexual Medicine  
[www.ipm.org.uk](http://www.ipm.org.uk)

**The Menopause Exchange**  
[www.menopause-exchange.co.uk](http://www.menopause-exchange.co.uk)

**Manage my Menopause**  
[www.managemymenopause.co.uk](http://www.managemymenopause.co.uk)

**Menopause Matters** – aims to provide easily accessible up-to-date information about the menopause, menopausal symptoms and treatment options including HRT and alternative therapies. [www.menopausematters.co.uk](http://www.menopausematters.co.uk)

Royal Osteoporosis Society – provides literature for health professionals and lay public on many issues related to osteoporosis.  
<https://theros.org.uk>

**NHS England** – cancer screening programmes (cervical, breast and bowel) can be accessed at [www.cancerscreening.nhs.uk](http://www.cancerscreening.nhs.uk)

**NHS HPV** – detailed information on the vaccination programme can be obtained from [www.nhs.uk](http://www.nhs.uk)

**Relate** – co-ordinates the activities of local marriage guidance centres and relationship counselling for couples or families.  
[www.relate.org.uk](http://www.relate.org.uk)

Research Council for Complementary Medicine  
[www.rccm.org.uk](http://www.rccm.org.uk)

RCN Direct – information and advice for RCN members. Tel: 0345 772 6100

**Royal College of Obstetricians and Gynaecologists** – menopause and women's health in later life. [www.rcog.org.uk/en/patients/menopause](http://www.rcog.org.uk/en/patients/menopause)

**Women's Health Concern** – provides information on women's health issues, particularly those relating to the menstrual cycle and the menopause. Local helplines available.  
[www.womens-health-concern.org](http://www.womens-health-concern.org)

## Resources

All Wales NHS Menopause Policy (2018) [www.nhsconfed.org/-/media/Confederation/Files/Wales-Confed/Wales-Employers/FINAL-NHS-Wales-Menopause-Policy-19-Dec-18.pdf](http://www.nhsconfed.org/-/media/Confederation/Files/Wales-Confed/Wales-Employers/FINAL-NHS-Wales-Menopause-Policy-19-Dec-18.pdf)

British Association for Applied Nutrition & Nutritional Therapy [www.bant.org.uk](http://www.bant.org.uk)

Devlin R (2019) How can we support patients through the menopause if the NHS can't support staff?, *Nursing Standard* website, 9 May. <https://rcni.com/nursing-standard/opinion/comment/how-can-we-support-patients-through-menopause-if-nhs-cant-support-staff-148391>

The Faculty of Occupational Medicine (2018) Guidance on menopause and the workplace, *Nursing Management*. 25, 1, 15-15. doi: 10.7748/nm.25.1.15.s12

Holloway, D (2015) Managing the menopause: symptoms, consequences and treatment, *Primary Health Care*, 26, 7, 40-49

NHS Employers (2020) *New guidance on menopause at work*. [www.nhsemployers.org/case-studies-and-resources/2020/03/new-guidance-on-menopause-at-work](http://www.nhsemployers.org/case-studies-and-resources/2020/03/new-guidance-on-menopause-at-work)

The NHS Live Well campaign contains easy-to-access advice on healthy eating [www.nhs.uk/livewell/healthy-eating](http://www.nhs.uk/livewell/healthy-eating)

Royal College of Nursing's Menopause clinical page [www.rcn.org.uk/clinical-topics/womens-health/menopause](http://www.rcn.org.uk/clinical-topics/womens-health/menopause)

Royal College of Nursing (2019) *Menopause and mental health*. London: RCN. [www.rcn.org.uk/professional-development/publications/pub-007813](http://www.rcn.org.uk/professional-development/publications/pub-007813)



The RCN represents nurses and nursing, promotes  
excellence in practice and shapes health policies

RCN Online  
[www.rcn.org.uk](http://www.rcn.org.uk)

RCN Direct  
[www.rcn.org.uk/direct](http://www.rcn.org.uk/direct)  
0345 772 6100

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