

Chapter 19

Menopause

The menopause marks the natural progression from ovarian competence to ovarian failure, defined as the permanent cessation of menses. In the United Kingdom, the age of menopause is averaged at 52 (Rees *et al.*, 2009), but perimenopausal symptoms can start many years before the menopause. The TREMIN research programme on women's health is the oldest ongoing study of menstruation and women's health in the world (Mansfield and Bracken, 2003), and prospectively collected menstrual cycle data from thousands of women (Treloar *et al.*, 1967). This source was used by Mansfield *et al.* (2004) to determine if women in their midlife moved in a uniform way from pre to perimenopause to postmenopause, according to the STRAW model (Soules *et al.*, 2001a;b). Unlike the STRAW model, Mansfield *et al.* (2004) found that there was a lack of uniformity as women progress through menopause, with between 8 and 20 different perimenopausal stage patterns observed. There are regional and ethnic differences in menopause, with women in Asia and Latin America who are of poorer socioeconomic status having a significantly earlier onset of menopause (Palacios *et al.*, 2010). A number of factors are thought to be responsible for the age at menopause, including genetic factors (Murabito *et al.*, 2005) and behavioural factors such as smoking (Parente *et al.*, 2008), alcohol consumption (Torgerson *et al.*, 1997) and obesity (Palmer *et al.*, 2003).

19.1 The Menopause and Health

Health-related research including health psychology is interested in the perimenopause because it has been associated with body weight changes, cardiovascular disease (Atsma *et al.*, 2006), perceived stress (Strickland *et al.*, 2007), osteoporosis (Gallagher, 2007) and changes in physical and psychological health (Bauld and Brown, 2009). The onset of menopause is also of health-related interest. Early menopause is associated with earlier infertility, which is problematic because there has been a shift in women leaving childbearing until later, and early menopause is associated with greater general mortality (Jacobsen, Knutsen and Fraser, 1999), whereas later menopause is associated with decreased mortality from cardiovascular disease, but an increased chance of developing cancer (Ossewaarde *et al.*, 2005). The age of greatest risk for cardiovascular disease for women is after the menopause. This transition period is accompanied by raised

insulin resistance, increase in low density lipoproteins and a decrease in high density lipoproteins (Currie, 2008). Evidence linking hormone replacement therapy (HRT) with cardiovascular disease is equivocal, but there is believed to be a link between cardiovascular disease and early menopause (Lobo, 2007). The age at menopause effects for cardiovascular disease in smokers are even more pronounced in smokers, as shown in Figure 19.1, an effect not found in never smokers.

The menopause marks a time of substantial change for women, not only in terms of reproductive capacity and elasticity of physical systems, but in terms of a new type of freedom. For example, menopausal women have a new sexual freedom with natural avoidance of pregnancy, a social freedom with children growing up (Dennerstein, Smith and Morse, 1994a) and improved wellbeing resulting from changes in demands of life through life course development (Bircher, 2005). Positive aspects of the menopause are documented in qualitative studies (Hvas, 2006), anthropological research (George, 1996; Rice, 1995), and larger scale community survey research (Cheng *et al.*, 2005). Some research suggests cultural factors determine the incidence of menopausal symptom reporting (Fuh *et al.*, 2001), others have blamed the negative media descriptions of menopausal discomfort for women's perceptions of negative menopausal symptomatology (Buchanan *et al.*, 2001). Social constructions of the menopause therefore take place within individuals' cultural (Cheng *et al.*, 2005) social (George, 2002), and personal career, family and friend contexts (Deeks and McCabe, 2004).

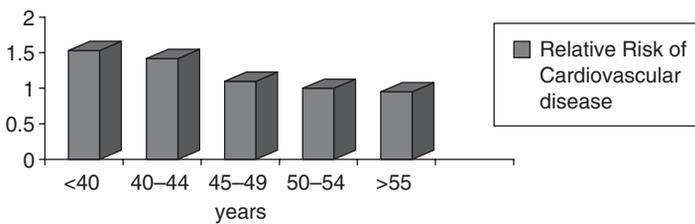


Figure 19.1 Age-related relative risk of cardiovascular disease and younger age at menopause, which is likely to be mediated by smoking status (adapted from Hu *et al.*, 1999).

19.2 Definition

How women perceive these social and personal changes can influence the way they cope with the changes associated with the menopause (Bertero, 2003). Two alternative explanations draw on the perception of the menopause within isolated communities.

- Women living in isolated or rural areas may not have easily accessible health care or information leading to complicated menopausal experiences.
- The lack of health care and information could lead to hardiness and resilience (Leipert and Reutter, 2005).

Although many women are aware that the menopause will affect them at some time during their midlife, the onset is often unexpected and can be accompanied by symptoms they are neither prepared for, or tolerate well. This perimenopausal state, which can last for years, may affect women's quality of life. Another variation of the normal menopause is called early menopause or premature ovarian failure (POF), which can be devastating for women who have not yet started or not yet finished their reproductive careers. All three are defined in Table 19.1.

Table 19.1 Definitions of the menopause

The menopause is characterized by the complete cessation of menses
The perimenopause characterizes the period from the onset of menopausal symptoms to the menopausal phase
Early menopause or premature ovarian failure (POF) refers to the early or premature cessation of menses before the natural age of menopause, commencing any time after menarche and before the age of 45

Menopausal status is further classified into three stages by the Stages of Reproductive Ageing Workshop (STRAW; Soules *et al.*, 2001) and is used as a classification internationally. The stages of reproductive ageing are shown in Table 19.2.

These classifications are useful for purposes of identification of stages of the reproductive ageing process and the determination of the need for intervention.

Table 19.2 International classification of stages of the menopause

Postmenopausal – characterized by no menstrual bleeding in the previous or last 12 months
Late perimenopause – characterized by having had menses in the previous 12 months, but not in the previous 2 months
Early (normal) menopause – characterized by increasing irregularity of menses without skipping periods

19.3 Causes of Menopausal Distress / Discomfort

The perimenopausal onset of menopausal symptoms occurs when ovarian function starts to decline leading to the menopausal phase. The menopausal cessation of menses is brought about by changes in the mechanisms of the follicles within the ovaries to respond to follicle stimulating hormone (FSH), until ovulation ceases to occur and oestrogen is depleted. Early menopause, or POF refers to the early or premature cessation of menses before the natural age of menopause, via the same ovarian failure mechanisms occurring in midlife during normal menopause. Some of the known primary (natural, organic) and secondary (caused by illness, interventions) causes for the early onset of POF are demonstrated in Tables 19.3 and 19.4, although in the majority of cases the cause is unknown.

Table 19.3 Primary causes of POF

Chromosomal abnormalities	Turners syndrome Fragile X syndrome
FSH receptor gene polymorphism	An inhibin B mutation (check if same thing)
Enzyme deficiencies	
Autoimmune disease	Diabetes Hypothyroidism lupus Crohn's disease Addison's disease Myasthenia gravis Rheumatoid arthritis
Ideopathic	
Viral Infections	

Table 19.4 Secondary causes of POF

Surgical menopause or hysterectomy with or without oophorectomy	
Uterine embolization	
Chemotherapy and radiotherapy	
Infections	HIV Mumps Tuberculosis

POF leaves women unable to have (further) children and can have other health consequences such as increasing their risk for cardiovascular disease and osteoporosis.

Menopausal symptoms can be varied and last from a few months to several decades (Lindh-Astrand *et al.*, 2010), and in a proportion of women the symptoms can affect their daily living adversely. Most women experience weight gain, particularly around the abdomen during their perimenopausal and menopausal years (Norman *et al.*, 2001). Symptoms can be vasomotor, vaginal / urinary (including bleeding problems) and psychological in nature as shown in Table 19.5.

According to a recent systematic review, symptom frequency in other populations varies somewhat depending on geographical region and ethnicity (Palacios Henderson *et al.*, 2010), although the quality of the studies is variable, making interpretation somewhat less easy. In Western White populations the vasomotor symptoms (above) including hot flushes, sweating and vaginal dryness are the main symptoms, reported at a greater frequency in North America and European women compared to Latin American and Asian women (Dennerstein, 1996; Fuh *et al.*, 2001; Palacios Henderson *et al.*, 2010).

Table 19.5 Common vasomotor, vaginal / urinary and psychological symptoms occurring in 75–80% of menopausal women (Williams *et al.*, 2008)

The most common vasomotor symptoms include:	<ul style="list-style-type: none"> • Hot flushes • Night sweats • Sweating • Shivering • Palpitations • Feeling faint • Nausea • Vomiting
Vaginal and urinary symptoms include:	<ul style="list-style-type: none"> • Decreased libido • Pain with sex • Decreased lubrication • Decreased elasticity of vagina • Urinary frequency • Stress incontinence • Vaginal infections
Women frequently wake up during their sleep, and the psychological symptoms include:	<ul style="list-style-type: none"> • Nervousness / anxiety • Impaired concentration / confusion • Forgetfulness • Loss of confidence • Depression • Psychosexual dysfunction • Relationship problems

19.4 Epidemiology

The perimenopause with or without distressing symptoms occurs eventually in all women, as does the complete cessation of menses at the menopause. Menopause therefore affects millions of women across the world, and with increasing longevity well past the fifth decade of life, the incidence of menopausal symptomatology in many of these millions of women is of increasing concern. In the USA it is estimated that 80–85% of menopausal women report significant unpleasant symptomatology associated with the menopause and in more than half of these women, their quality of life was negatively affected by these symptoms (NAMS, 2000, cited in Elavsky and McAuley, 2005), as shown in Figure 19.2. The incidence of POF is approximately 1% of women under the age of 40. Post-menopausal weight gain, which may not be related to the menopause but to increasing ageing and increasing sedentary lifestyle at that stage in life, is becoming an increasing public health concern, leading to preventable morbidity and mortality.

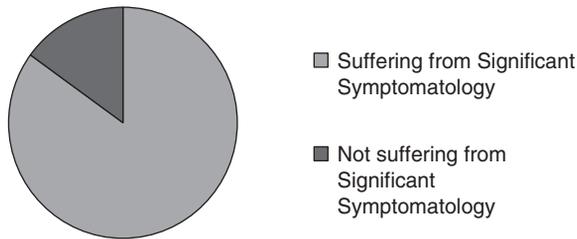


Figure 19.2 Percentages of menopausal women suffering from significant symptomatology affecting quality of life adapted from (NAMS, 2000, cited in Elavsky and McAuley, 2005).

19.5 Screening / Assessment

Health-care professionals such as General Practitioners and nurses are most likely to be in contact with women presenting with perimenopausal symptoms, the menopause or POF, and screening or assessment needs to inform the appropriateness of treatment. For example, for most women hormone replacement therapy (HRT) is the treatment of choice, particularly for younger women presenting with POF. However, there may be contraindications such as hormone-dependent malignancy or thromboembolic disease. There are other reasons why HRT may not be appropriate in the management of perimenopausal symptoms, the menopause or POF, such as lack of tolerance of HRT or significant side effects. Moreover, a proportion of women will experience the menopause relatively problem free if they are given the opportunity to understand the changes through reassurance, information and social support as was reported in a study of rural Canadian women by Price, Storey and Lake (2007). Similarly, individual differences in personality and in interpreting stress (Bosworth *et al.*, 2003), cultural expectations (Reece and Harkless, 2006) and physical activity (Elavsky and McAuley, 2005) have been linked with differential experiences of menopausal symptoms.

Accurate assessment of the experience of menopausal symptoms is therefore necessary prior to the administration, or implementation of treatment regimes. Self-assessment scales can be used, such as the Hot Flush Rating Scale (HFRS, Hunter and Liao, 1995), or the Menopause Representation Questionnaire (MRO, Hunter and O’Dea, 2001). The HFRS measures hot flush and night sweats frequency and distress, and the MRO measures attributions of symptoms

experienced to the menopause, and determines beliefs held about the menopause. Alternatively, it is appropriate to use generic quality of life measures, which are translated into many different languages, or specifically designed menopause quality of life scales such as the Menopause Symptom List (Perz 1997); the Menopause Rating Scale (Schneider, 2000); or the Utian Menopause Quality of Life Scale (Utian *et al.*, 2002).

19.6 Theories / Models

Few psychological / behavioural theories have been applied to, or have specifically been adapted to determine specific pathways for menopausal experiences. Bandura’s (1986) self-efficacy model has been studied in research on adaptation to new situations, including perimenopausal health. According to this concept – described in more detail in Chapter 2, personal self-efficacy depends on an individual’s beliefs about their ability to control their own behaviour and environment. Individuals with high self-efficacy, therefore feel more able to adapt to change than those not high on self-efficacy. Women with high self-efficacy have been reported to experience the menopause as a positive event (Longworth, 2003) and higher perceptions of health during the perimenopause (Reece and Harkless, 2006).

Hunter (2003) proposed a cognitive behavioural therapy (CBT) model which may be useful for interventions for menopausal hot flashes. According to this model, cognitions are thought to mediate between the environment, subjective reactions and behavioural responses, much like Leventhal *et al.*’s (1984) self-regulatory model focusing on cognitive appraisals determining behavioural responses (see Chapter 2 for more detail). Hunter and O’Dea (2001) applied a cognitive behavioural model (see Figure 19.3) to women’s perceptions of hot flashes and reported that they made cognitive representations of the menopause early on.

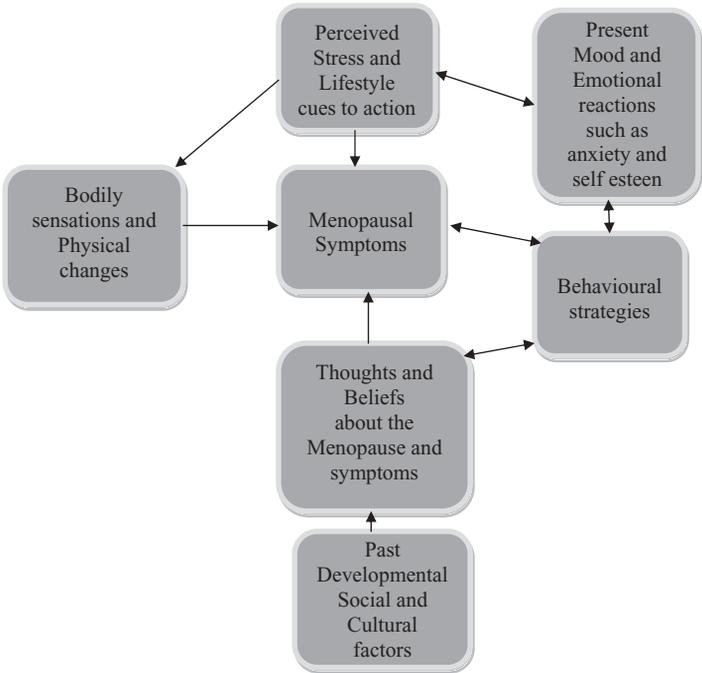


Figure 19.3 Cognitive behavioural model of menopausal hot flashes (adapted from Hunter, 2003).

Few studies have been carried out testing this model, but preliminary research has reported some success in using this as a framework for CBT for menopausal symptoms, with improvements in some psychological symptoms, including quality of life and hot flashes six months following treatment (Allen *et al.*, 2006). Furthermore, Reynolds (2000) reported that highly distressed women have more severe negative reactions to the physiological symptoms of the menopause, compared to less easily distressed or anxious women. A number of other studies have reported similar relationships. For example, lower levels of self-esteem (Bloch, 2002; Reynolds, 2002), low emotional intelligence (Bauld and Brown, 2009) and low perimenopausal self-efficacy (Reece and Harkless, 2006) increased reports of menopausal discomfort. This suggests that cognitive appraisals, based on present state such as anxiety, low emotional intelligence or low self-esteem / low self-efficacy, may increase subjective awareness and negative interpretation of menopausal changes.

The transactional model of stress and coping (Lazarus and Folkman, 2008) has been used in previous research to extrapolate factors underlying adaptation to prolonged physiological changes (Gold *et al.*, 2008; Provencher, 2007), including menopausal research (Simpson and Thompson, 2009). According to this theory, adaptation to a stressor depends upon psychological appraisal of the primary and secondary event as stressful as well as on the coping strategies used. Personal and environmental factors, additional stressors and outcome of coping strategy used, are incorporated within this model, mediating adaptation to the stressor. According to Reynolds (1999)'s earlier study, and Igarashi *et al.* (2000), coping resources may be reduced or ineffective in women around the time of their menopause. However, Simpson and Thompson (2009) reported coping style and psychological appraisal does not mediate the psychological discomfort and distress in their study of menopausal women. It is therefore possible that other factors mediate the experience of significant distress and symptomatology in some women during the menopause, such as physiological factors or other psychosocial variables, including women's previous attitude to themselves pre-menopausally, and attitudes to ageing and the menopause (Holte and Mikkelsen, 1991).

19.7 Processes and Factors Affecting the Problem

Since depression in women tends to reach a peak when they are between the ages of 45 and 54 years (Kessler *et al.*, 1993), it was thought possible that the menopausal status could be responsible for this concentration of increased depression. However, research has failed to demonstrate a clear link between depression and menopause (Matthews *et al.*, 1990; Mitchell and Woods, 1996). Research has evaluated the possibility that the perimenopause itself, which is the time of most discomfort and symptomatology, could be associated with the increased depression, possibly via hormonal pathways. Research testing the efficacy of HRT to act as antidepressants would have provided a possible association to such a pathway. A number of studies have shown that HRT alleviates mood and physical symptoms in perimenopausal women (Griffin, 1995; Pearlstein, 1997), but more rigorous research has not been able to confirm this link (Iatrakis *et al.*, 1986; Myers *et al.*, 1990). Bosworth *et al.* (2001) assessed the incidence of depression in women with menopausal symptoms and reported a relationship between depressive symptoms, menopausal symptoms such as difficulty sleeping, memory problems and mood swings, and use of oestrogen / progesterone combination preparations.

However, women report experiencing the midlife and menopausal years positively (Dennerstein *et al.*, 1999; Hvas, 2006). Other research suggests that any negative experiences during the menopausal years can be attributed to life events and other changes coinciding with the menopausal changes in a woman's life (Woods, Mariella and Mitchell, 2006). A number of factors affecting the experience of the menopause as problematic include those listed in Table 19.6.

Table 19.6 Factors associated with menopausal depression

Sociodemographic factors	Holte and Mikkelsen (1991)
Smoking and BMI	Dennerstein <i>et al.</i> (1999)
Previous health problems	Kaufert, Gilbert and Tate (1992)
History of previous psychological problems	Kuh, Wadsworth and Hardy, (1997)
Stressful life events	Cooke and Greene (1981)
Attitudes to the menopause and to ageing	Dennerstein, Smith and Morse (1994b)
The onset of visible signs of ageing	Hunter and O'Dea (1997)
Physical activity	Elavsky and McAuley (2009)

The research findings reported in Table 19.6 above clearly show that previous psychosocial and behavioural / lifestyle factors, among others, tend to have a stronger relationship with psychological symptoms during the menopause than stage of the menopause itself (Woods, Mariella and Mitchell, 2006).

Some research has used wellbeing as an indicator for measuring the processes involved in the transition to menopause and for its outcome (Crosnoe and Elder, 2002). Despite the symptomatology reported to be associated with the menopause, there is research showing women accept the menopausal transition as a normal part of midlife development (Kagawa-Singer *et al.*, 2002), although research considering wellbeing has specifically looked at the absence of symptoms to confirm well being (Schwartz *et al.*, 2007). Other research has demonstrated that positive affect (used as an indicator of wellbeing) was not a reliable indicator of symptomatology and was affected by life events other than the menopause (Dennerstein, Leher and Guthry, 2002). Women who are able to use skills and behaviours to manage new situations or environments, also termed 'mastery' (see Chapter 2) (Meleis *et al.*, 2000) are much more likely to be able to create environments compatible with their psychological, social and physical needs (Keyes and Ryff, 1999), including the menopause (Smith-DiJulio, Woods and Mitchell *et al.*, 2008). Social supportive relationships have contributed to buffering the demands of midlife transitions (Markus *et al.*, 2004).

19.8 Treatment / Management

Treatment of the menopause is common even though it is a natural biological event. A number of different treatments are used to alleviate menopausal symptoms, including lifestyle changes, medications such as hormonal preparations and complimentary medicine. Behavioural or life style changes are recommended for all women because the menopause provides a good opportunity for women to re-evaluate their health habits. Moreover, evidence that lifestyle changes may help women through the menopause are increasingly being reported, as listed in Table 19.7.

Numerous other factors, including those listed in Table 19.8 are believed to affect the experience of the menopause.

Table 19.7 Positive effects on the menopause through changes in lifestyle

<i>Lifestyle</i>	<i>Effect</i>	<i>Authors</i>
Exercise	Decrease general symptoms	Moriyama <i>et al.</i> (2008)
Weight reduction	Decrease vasomotor symptoms	Brockie (2008)
Moderating alcohol and caffeine intake	Improve symptoms	Grenndale and Gold (2005)
Quitting smoking	Delay menopausal onset	Parente <i>et al.</i> (2008)

Table 19.8 Other factors affecting the experience of the menopause

<i>Factors affecting the experience of the menopause</i>	<i>Authors</i>
Genetic, personal attitudes, lifestyle related factors	Caltabiano and Jolzheimer (1999)
Stress	Hunter (1992)
Avoidant coping	Igarashi <i>et al.</i> (2000)
Trait or dispositional characteristics	Gannon, Hansel and Goodwin (1987)
Psychopathology	Facchinetti (2001)

Since the symptoms are experienced differently by different women and the effect of the symptoms of the women's perceived quality of life varies according to the individual's interpretation of the severity of the discomfort, individual psychological therapies have been used to treat the way the menopausal events are interpreted. Olofsson and Collins (2000) have argued that affective symptoms are best explained via psychological pathways and would therefore be treatable via the same route. Few studies have attempted to use psychological treatment such as CBT on women reporting significant impairment with menopausal symptoms. A number of small-scale studies have reported improvements in menopausal symptoms, particularly hot flashes, and improvements in coping with the symptoms or reinterpreting the symptoms using CBT (Allen *et al.*, 2006; Hunter and Liao, 1996; Keefer and Blanchard, 2005).

The economic costs of medical treatments for menopausal symptoms are substantial and therefore need to be weighed up against the benefits. There is ample evidence showing poor health outcomes are in part predicted by health illiteracy (Agency for Healthcare Research and Quality: AHRQ, 2004), and by self-efficacy (Wolf *et al.*, 2007). It is therefore essential for treatment providers to ensure their patients have the ability to understand the treatments offered, to be able to make informed decisions and use HRT appropriately. Legare *et al.* (2003) applied the theory of planned behaviour to adherence to HRT, and found that being perimenopausal affected intentions to use HRT, subjective norm, perceived behavioural control and moral norm. Treatment decision making in perimenopausal women is therefore affected by their beliefs about social pressures, perceived control over treatment taking behaviours and moral obligations. (See Box 19.1.) A study by Benyamini *et al.* (2008) carried out on three groups of women from ethnically different origins demonstrates this well. They found that some women (long-term residents) reported differential preventive behaviours and primary care use in midlife, compared to Arab women, and that these differences were based on cultural beliefs (such as unavailability of a physician of the same culture and gender) not financial factors.

Box 19.1 Using HRT

Health-care provider–patient communication needs to impart understandable information to a huge range of patients who are differentially able to make decisions about their health, medications and expected outcomes of these treatments (O'Connor, Tait, Stacey and Legare, 2003).

Self-efficacy and knowledge are both necessary to ask health-care related questions and make judgements and decisions about medical treatments offered to post menopausal women considering HRT (Torres and Marks, 2009).

Perimenopausal women's continued use of HRT tends to be patchy (Kaufert, 1986), with approximately half of women who are prescribed HRT discontinuing its use after the first prescription (Vihtamaki *et al.*, 1999; Reynolds *et al.*, 2001).

In addition to HRTs, medical treatments for menopausal symptoms include antidepressant medications. The effectiveness of antidepressants have been reported for, for example, selective serotonin reuptake inhibitors (SSRIs) on hot flushes (Nelson *et al.*, 2006); and gabapentin has been reported to decrease hot flushes as well as general aches and pains (Reddy *et al.*, 2006). Of the numerous HRT preparations available, evidence exists showing a low dose oestrogen supplement can assist with urogenital problems (Rees *et al.*, 2009) and continuous combined HRT (oestrogen and progesterone) has been reported to be helpful with menopausal symptoms (Beral *et al.* 2005). HRT has been associated with decreased vasomotor symptoms (MacLennan, 2001); urogenital atrophy (Cardozo, 1998); improving cardiovascular disease, hip and spine fractures and some breast and colon cancers (MacLennan, 2008); and quality of life (Welton *et al.*, 2008). Unfortunately, despite the benefits, there are substantial side effects associated with oestrogen and progesterone preparations as shown in Figures 19.4 and 19.5, respectively.

In addition to the side effects of HRTs there are health risks associated with some HRT intakes (MHRA Drug Safety Update, 2007), such as breast cancer particularly for oestrogen-only preparations. These health scares have led women and health-care providers to seek refuge in non-hormonal preparations.

Less evidence based research has been carried out on the effectiveness of complementary or alternative medicine in the treatment of menopausal symptoms, and many of these are costly and sold without prescription. Systematic reviews have concluded alternative medicines are not effective at treating menopausal symptoms and if these compounds are taken without full knowledge of their effects, the consequences can be harmful (Nedrow *et al.*, 2006; Singh and Ernst, 2008). For example, black cohosh can cause liver toxicity, although it has been reported to assist with menopausal vasomotor symptoms (Wuttke *et al.*, 2003). MacLennan (2009) failed to find evidence for the effectiveness of bio-identical hormones, which are untested, and imported hormones mixed together using pseudo-scientific arguments, and not approved by The Therapeutic Goods Administration (Australia) or the comparable Federal Drugs Administration (USA). The effectiveness of acupuncture has been evaluated in randomized control trials and although the results are varied, women tend to report increased wellbeing (Borud and White, 2010). Other alternative therapies which do not involve the administration of alternative medicines carried out with claims of more success include relaxation techniques (Hunter and

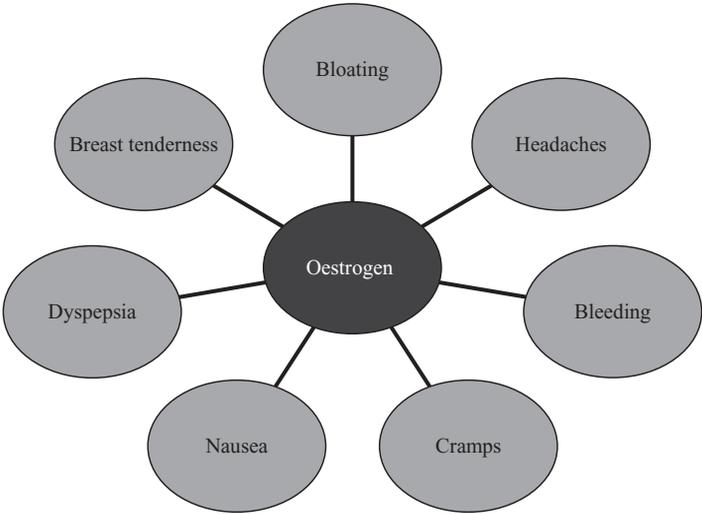


Figure 19.4 Common side effects for oestrogen.

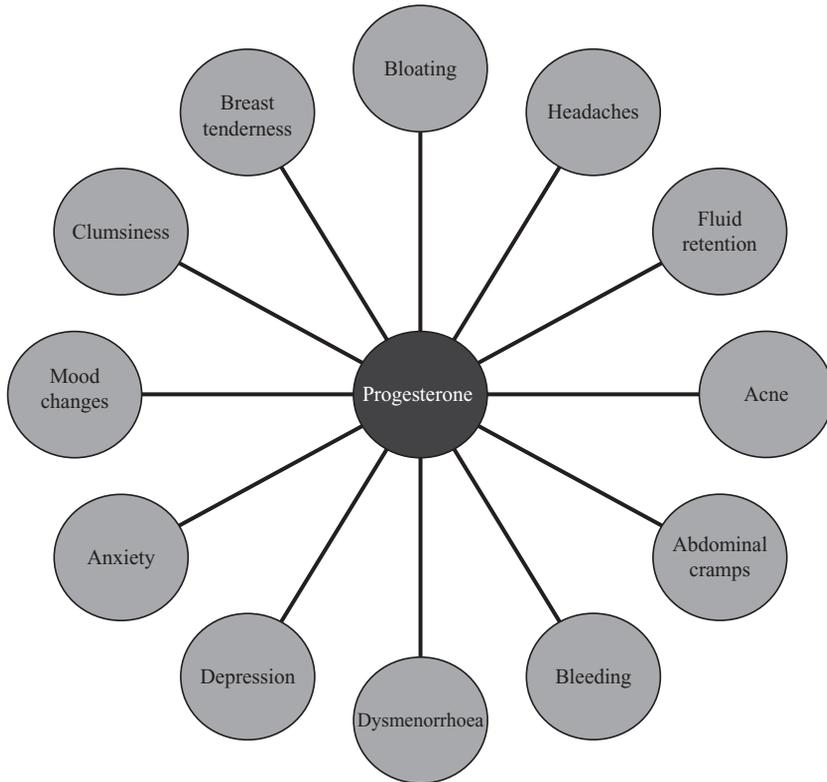


Figure 19.5 Common side effects for progesterone.

Liao, 1995; Stevenson and Delprato, 1983; Wijma *et al.*, 1997). However, a recent review of therapies of the menopause has shown that there is no evidence for the effectiveness of chiropractic manipulation, reflexology, magnetic bracelets, yoga or acupuncture (MacLennan, 2009).

19.9 Guidelines

Guidelines should focus on epidemiological details, including cultural, acculturation and social aspects of health services usage. Socioeconomic variables (Scaife *et al.*, 2000), including poverty, which is often confounded by educational and ethnic background (Cable, 2002) are powerful determinants of health-care seeking behaviours. Individual differences in perceptions of needs in relation to perceived health status are highly relevant (DeSalvo *et al.*, 2005). With increasing mobility of populations across the world, these differences need to be taken into account in future policy formation thereby ensuring that at all stages of life, people's needs are catered for effectively.

19.10 Summary

Perimenopausal, menopausal, and POF symptoms can be mild, moderate or severe, and numerous social, cultural and individual differences are thought to mediate or account for the experience of the symptoms associated with menopause. Some symptoms will require interventions

or treatment, but not all are risk free or effectively target the symptoms experienced. Side effects are commonly experienced. Women need to make balanced decisions about the costs and benefits of pursuing interventions. Understanding symptoms, coping with life transitions and the culture in which these changes take place all affect health-care utilization and access, individual needs and sociocultural and economic possibilities. Optimization of health care requires identifying predictors of screening or preventive behaviours and needs, and this chapter has shown that psychological variables, individual differences and sociocultural factors are key to research addressing health-care needs and utilization.

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