Developed by the Women’s Health Research Program in the Monash University School of Public Health and Preventive Medicine, 2023.

The supporting notes for the Practitioner’s Toolkit for Managing Menopause are published, with free access, in Climacteric, the journal of the International Menopause Society.

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Endorsed by:

- Australasian Menopause Society
- BMS (British Menopause Society)
- ESA (European Society for Aesthetic Medicine)
- International Menopause Society
- Jean Hailes for Women's Health
- RANZCOG (Royal Australian and New Zealand College of Obstetricians and Gynaecologists)
Message from the research lead

I’m pleased to share this updated version of the Practitioner’s Toolkit for Managing Menopause, the major update since the first iteration was launched in 2014.

The Toolkit, again published with open access in Climacteric, in which it was first published, meets the needs of clinicians by providing clear, evidence-based advice as to how to address and manage symptoms of, or concerns about menopause during clinical consultations.

It includes pragmatic algorithms to assess menopausal status, including that of women with a past hysterectomy or endometrial ablation, and users of hormonal contraception; along with treatment options and symptom management algorithms.

This updated version – relevant for clinicians around the world – builds on the 2014 publication, incorporating updated advice based on new knowledge around the physiological basis of menopause and new therapeutics, as well as expanding into guidance on issues of bone health. It also cuts through many years of misinformation and confusion, to provide clear evidence-based guidance on the appropriate use of menopause hormone therapies (MHT) and non-hormonal therapies for women with menopause-associated symptoms.

For many years the discomfort, poor health and reduced quality of life often caused by menopause has been viewed as an unavoidable consequence of ageing, one that lacked a sense of urgency with many in society and the medical community. It’s been heartening to see a change in the seriousness with which menopause has been viewed over the last decade. This has been backed up by increased research funding, greater international collaboration, and louder women’s voices sharing their experiences and demanding positive action in the media. This document can serve as a comprehensive guide for shared decision-making with patients, and thus provide patient-informed care.

I hope the Toolkit will help health practitioners around the world deliver informed care that genuinely responds to the needs of all the women who have or will inevitably experience menopause.

I’d like to thank the team of dedicated researchers who assisted in this update: Dr Sasha Taylor, Dr Chandima Hemachandra, Dr Karen Magraith, Professor Peter R Ebeling, Dr Fiona Jane, and Dr Rakibul Islam, and Professor Rodney Baber for his advice.

About Professor Davis AO

Professor Susan Davis AO is a leading endocrinologist-researcher, who heads the Women’s Health Research Program within the School of Public Health and Preventive Medicine at Monash University, Australia. She has specific expertise in the role of sex hormones in women across the lifespan. She is a Fellow of the Australian Academy of Health and Medical Sciences, a co-founder of Jean Hailes for Women, a past President of the Australasian Menopause Society and of the International Menopause Society.

PROFESSOR SUSAN DAVIS AO
A Woman# (40 years+) presents with:

**Symptoms**
- Irregular bleeding
- Vasomotor – Hot flushes
- Night sweats
- Poor sleep
- Joint pain
- Anxiety/low mood
- Cognitive concerns
- Urogenital symptoms – Vaginal dryness/soreness
- Bladder/urinary Sx
- Lost interest in sex
- Central weight gain

**Concerns**
- Osteoporosis
- Cardiovascular risk
- Dementia
- Diabetes
- Obesity

**Is this Patient Pre/Peri/Postmenopausal?**

- Is this Patient Pre/Peri/Postmenopausal?
  - Removal of both Ovaries
    - NO
      - When was your last period?
      - Less than 3 months ago
        - Regular bleeding
          - Premenopausal
      - Less than 12 months ago
        - Irregular bleeding
          - Perimenopausal
      - More than 12 months ago
        - Age over 58 years?
          - NO
            - On systemic hormonal contraception or MHT?
              - NO
                - Hysterectomy, LNG-IUD or endometrial ablation?
                  - NO
                    - Postmenopausal
                  - YES
                    - P-contraception*
                      - YES
                        - COCP**
                          - MHT
                            - Postmenopausal
                      - NO
                        - Hot flushes/night sweats in pill free week?
                          - NO
                            - Postmenopausal
                          - YES
                            - Peri/Post menopausal
        - YES
          - Postmenopausal
      - NO
        - Nonmenopausal
  - YES
    - Nonmenopausal

# assigned female at birth; *diagnosis of menopausal status requires detailed reproductive history; ** In some women an option is to cease the COCP and then review

Women’s Health Research Program, Monash University
# What do you need to know?

Full assessment recommended for midlife women

## Medical History
Relevant gynae facts:
- Bleeding pattern or LMP
- Past surgery eg hysterectomy/oophorectomy
- Current use of any exogenous hormones
- +/- contraceptive needs

Major medical illnesses – ask about:
- DVT/PE
- Breast cancer/endometrial cancer
- Thyroid disease
- Cardio/cerebrovascular disease including HT
- Osteoporosis
- Diabetes
- Depression/anxiety/postnatal depression
- Recurrent UTI’s
- Liver disease

Family History:
- Cardio/cerebro vascular disease
- Osteoporosis/fractures
- Dementia
- Cancer

Smoking/alcohol use
Current medication including non prescription medications
Social history
Sexual wellbeing

## Examination
- Height and weight
- Blood pressure
- Breast exam (not required if recent breast imaging/breast checks)

## Investigations for menopause diagnosis

#### ≥ 45 years old
- Diagnosis symptom based; measure FSH and E only if atypical presentation

#### < 45 years old
- Measure FSH and E – Of no value in women on COCP
- Prog/LH/AMH levels of no diagnostic value

## Midlife women general health assessment:
- Cervical screen test
- Mammogram (if available)
- Lipid profile
- FBG
- TSH
- Renal and liver function
- FBE/ferritin
- FOBT
- Vit D in at risk women
Management of Perimenopause

**COCP**
- Review contraindications to COCP
- May control PMS/mastalgia/bleeding
- Low dose EE and 17βE/estetrol COCP preferred

**Continuous E and LNG-IUD**
- Reduces/eliminates bleeding but not cyclical symptoms

**Continuous E and cyclical P**
- Irregular bleeding may occur
- Cyclical symptoms may occur
- Not contraceptive

**Continuous E and cyclical 4mg drospirenone®/75 mcg desogestrel OCP®**
- Provides contraception
- Amenorrhea or irregular bleeding may occur

#off-label use, # desogestrel may not give adequate endometrial protection.
A Practitioner's Toolkit for Managing Menopause

Menopausal management

Identify and treat the main issues in addition to general health assessment and care

Urogenital Symptoms

Excluding dermatological or infective causes

Vaginal ± Non-hormonal therapy

Hormonal/hormone-like therapy

17β oestradiol or Estriol pessary, ring, cream or tablet
Prasterone Ospemifene

Moisturizers Lubricants

E+P Tibolone
E+bazedoxifene

IF HYSTERECTOMY:
E-only Tibolone

17β oestradiol or Estriol pessary, ring, cream or tablet
Prasterone Ospemifene

Systemic hormonal Therapy

Systemic non-hormonal Therapy

Concerns
No Symptoms

Discuss prevention of urogenital symptoms
Evaluate risk of osteopenia / osteoporosis and fracture

Sexual Dysfunction

Consider urogenital symptoms, medications, medical conditions, psychosocial & cultural factors, knowledge

Testosterone therapy only if sexual desire dysfunction identified

Caution

Contraindications

High breast cancer risk

Moderate to severe bothersome Menopausal Symptoms

Indications for non-oral E
- Hypertriglyceridemia
- Hepatobiliary disease
- Migraine#
- Age > 65 years and no prior MHT
- Established CVD
- Past VTE
- Diabetes

Estrogen dependent cancer
Active VTE disease/thrombophilia
Personal wish not to use hormones
Undiagnosed genital bleeding
Severe active liver disease
Untreated / uncontrolled CVD

*Caution due to side effects at therapeutic doses
# Migraine with aura requires early review to ensure no increase in migraine symptoms
A Practitioner’s Toolkit for Managing Menopause

General guide for bone health assessment and management of postmenopausal women with no minimal trauma fracture aged <65 years

Bone density measurement should be performed:
- Amenorrhoea >6 months and aged <45 years
- Hyperthyroidism
- Hyperparathyroidism
- Malabsorption/Coeliac Disease
- Chronic kidney disease
- Chronic liver disease
- Rheumatoid arthritis
- Glucocorticosteroid therapy >3m, dose ≥7.5mg/day prednisolone or equivalent
- Aromatase inhibitor therapy

Bone density measurement recommended when possible:
- Normal/low body weight
- Limited / immobility
- Poor overall health
- Smoker
- Alcohol > 2 standard drinks/day
- Diabetes mellitus
- Malnutrition
- Tissue transplant recipient
- HIV infection
- Other conditions known to impair bone turnover/mineralisation

Bone density measurement with no recommended indications

Dual-energy X-ray absorptiometry (DXA) scan of lumbar spine and proximal femur

T score ≤ -2.5
- High 10-year risk of fracture
- Manage as per local osteoporosis guidelines

T score between > -2.5 and <-1.0
- Estimate absolute fracture risk (FRAX)

T score ≥ -1.0
- No treatment recommended

T score ≤ -1.8 but > -2.5
- Consider MHT / tibolone after risk assessment

T score <- 1.0 to > -1.8
- Estimate likely bone loss according to years since menopause
- If likely to have a T score ≤ -1.8 in the next 5 years, consider MHT tibolone after risk assessment

For all women: Review adequate vitamin D, calcium, magnesium and protein intake; vegans at risk of zinc deficiency. Encourage physical activity, minimising alcohol, and smoking cessation.

* Strong independent risk predictors and encompass other risk factors in the list (Miller et al Arch Intern Med. 2004)

# In women with BMI 27 kg/m2 (loss greater with lower BMI and less with higher BMI)
Lumbar spine loss ≈2.5%/year for first 2 years post final menstrual period/estimated menopause, >1%/years 2 to 5 years postmenopause, then ~0.7%/year with age.
Femoral neck loss ≈1.8%/year for first 2 years post final menstrual period/estimated menopause, >1%/years 2-5 years post menopause, then >0.5%/year with age.
(Greendale G et al JCEM 2012; Writing Group for PEPI Trial JAMA 1996).
## MHT Dosing*

<table>
<thead>
<tr>
<th></th>
<th>Low dose</th>
<th>Mid-range dose</th>
<th>Highest dose*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE</td>
<td>0.3 - 0.45 mg</td>
<td>0.625 mg</td>
<td>1.25 mg</td>
</tr>
<tr>
<td>17β estradiol</td>
<td>0.5 mg</td>
<td>1.0 mg</td>
<td>1.5 - 2.0 mg</td>
</tr>
<tr>
<td>Estradiol valerate</td>
<td>0.5 mg</td>
<td>1.0 mg</td>
<td>2.0 mg</td>
</tr>
<tr>
<td>Estriol</td>
<td>1.0 - 2.0 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transdermal estradiol patch</td>
<td>25 - 37.5 mcg</td>
<td>50 mcg</td>
<td>75 - 100 mcg</td>
</tr>
<tr>
<td>Estradiol gel</td>
<td>0.5 mg</td>
<td>1.0 mg</td>
<td>1.5 mg</td>
</tr>
<tr>
<td>Estradiol hemihydrate gel</td>
<td>0.75 mg (1 pump)</td>
<td>1.5 mg (2 pumps)</td>
<td>2.25 - 3.0 mg (3-4 pumps)</td>
</tr>
<tr>
<td>Estradiol hemihydrate skin spray</td>
<td>1.53 mg (1 spray)</td>
<td>3.06 mg (2 sprays)</td>
<td>4.50 mg (3 sprays)</td>
</tr>
</tbody>
</table>

### Sequential P – daily dose for 12-14 days per month for endometrial protection:

<table>
<thead>
<tr>
<th></th>
<th>With Low dose E</th>
<th>With mid to highest dose E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dydrogesterone (oral)</td>
<td>5 mg</td>
<td>10 mg</td>
</tr>
<tr>
<td>Micronized progesterone (oral)</td>
<td>200 mg (efficacy of lower dose not established)</td>
<td>200 mg</td>
</tr>
<tr>
<td>Medroxyprogesterone acetate (oral)</td>
<td>5 mg</td>
<td>5 -10 mg</td>
</tr>
<tr>
<td>Norethisterone acetate (oral)</td>
<td>1.25 mg-2.5mg</td>
<td>2.5-5mg</td>
</tr>
<tr>
<td>Transdermal norethisterone acetate (with estradiol) patch</td>
<td>releases 0.140 - 0.250mg / day</td>
<td></td>
</tr>
</tbody>
</table>

### Continuous P – daily dose for endometrial protection:

<table>
<thead>
<tr>
<th></th>
<th>Low dose E</th>
<th>With mid to highest dose E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dydrogesterone (oral)</td>
<td>2.5 - 5 mg</td>
<td>5 - 10 mg</td>
</tr>
<tr>
<td>Drospirenone (oral)</td>
<td>2.0 mg</td>
<td></td>
</tr>
<tr>
<td>Micronized progesterone (oral)^</td>
<td>100 mg</td>
<td>100 mg for mid dose E; (however, this dose may not always provide sufficient endometrial protection with highest dose E)</td>
</tr>
<tr>
<td>Medroxyprogesterone acetate (oral)</td>
<td>2.5mg</td>
<td>2.5-5mg</td>
</tr>
<tr>
<td>Norethisterone acetate (oral)</td>
<td>0.1mg with 0.5mg estradiol 0.5mg with 1.0mg estradiol</td>
<td>1.0mg - 2.5mg</td>
</tr>
<tr>
<td>Transdermal norethisterone acetate (with estradiol) patch</td>
<td>releases 0.140-0.250mg/day</td>
<td></td>
</tr>
<tr>
<td>Levonorgestrel (with estradiol) patch</td>
<td>releases 0.015mg/day</td>
<td></td>
</tr>
<tr>
<td>LNG-IUD</td>
<td>Device initially releasing 20 mcg/day</td>
<td></td>
</tr>
</tbody>
</table>

### Other options:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tibolone</td>
<td>1.25 - 2.5 mg/day</td>
</tr>
<tr>
<td>CEE + bazedoxifene</td>
<td>0.45 + 20 mg/day</td>
</tr>
</tbody>
</table>

* Availability of hormonal/non hormonal treatment and indications for use from regulatory bodies vary between countries; #“highest dose” refers to the highest approved prescription doses; ^ is occasionally prescribed to be use vaginally off-label.
### MHT Dosing for vaginal symptoms

<table>
<thead>
<tr>
<th>Inserts</th>
<th>Estradiol vaginal tablet</th>
<th>0.01 mg</th>
<th>Nightly for 2 weeks then 2-3 x/week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estriol</td>
<td>0.5 mg</td>
<td></td>
<td>Nightly for 3 weeks then 2 x/week</td>
</tr>
<tr>
<td>Prasterone (DHEA)</td>
<td>6.5 mg</td>
<td></td>
<td>Nightly</td>
</tr>
<tr>
<td><strong>Creams</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estradiol 0.01% cream</td>
<td>0.1 mg estradiol/g</td>
<td>2-4 g daily for 1-2 weeks, then 1 g, 1-2 x/week</td>
<td></td>
</tr>
<tr>
<td>Estriol</td>
<td>0.5 mg</td>
<td></td>
<td>Nightly for 3 weeks, then 2 x/week</td>
</tr>
<tr>
<td>CEE 0.625mg/g</td>
<td>0.625 mg/g</td>
<td></td>
<td>Cyclic use of 0.5 - 2 g intravaginally, daily for 21 days then off for 7 days</td>
</tr>
<tr>
<td><strong>Gel</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estradiol 0.050/g</td>
<td>Nightly</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vaginal Ring</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estradiol 2 mg</td>
<td>0.0075 mg/day</td>
<td>3 monthly</td>
<td></td>
</tr>
<tr>
<td>Estradiol acetate 12.5 mg, 24.8 mg</td>
<td>0.05, 0.1 mg/day</td>
<td>3 monthly</td>
<td></td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ospemifene tab</td>
<td>60 mg daily</td>
<td>3 monthly</td>
<td></td>
</tr>
</tbody>
</table>

### Evidence-based Non-Hormonal Treatments for vasomotor symptoms

<table>
<thead>
<tr>
<th>SSRI or SSRI/SNRI–low dose</th>
<th>Generally effective daily doses: venlafaxine 75mg, desvenlafaxine 100mg, citalopram 20mg, paroxetine 7.5–20mg, escitalopram 10-20mg/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fezolinetant*</td>
<td>45 mg daily</td>
</tr>
<tr>
<td>Clonidine*</td>
<td>25 to 100 mcg daily</td>
</tr>
<tr>
<td>Oxybutynin</td>
<td>2.5mg-5mg bd (oral); the dose of transdermal patch for VMS not established</td>
</tr>
<tr>
<td>Gabapentin</td>
<td>Start 100mg nocte up to 900mg/day</td>
</tr>
<tr>
<td>Hypnosis</td>
<td></td>
</tr>
<tr>
<td>Cognitive behaviour therapy</td>
<td></td>
</tr>
<tr>
<td>Weight loss for women with obesity</td>
<td></td>
</tr>
<tr>
<td>Stellate ganglion blockade – for treatment resistant VMS; requires expertise</td>
<td></td>
</tr>
</tbody>
</table>

* has regulatory approval for VMS in some countries; higher doses can be used but side effects more likely

Availability of hormonal/non hormonal treatment and indications for use from regulatory bodies vary between countries
A Practitioner’s Toolkit for Managing Menopause

Review of Treatment

Non MHT

MHT

Vaginal E therapy

6-12 weeks review after initiation

NO symptom relief or has side effects

Change dose or therapy

NO symptom relief or has side effects

Specialist review

Symptom relief

6-12 monthly review

Review of:
- Efficacy
- Side effects
- Risks

Review of Treatment

Non MHT

MHT

Vaginal E therapy

6-12 weeks review after initiation

NO symptom relief or has side effects

Change dose or therapy

NO symptom relief or has side effects

Specialist review

Symptom relief

6-12 monthly review

Review of:
- Efficacy
- Side effects
- Risks

Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>AMH</td>
<td>Anti-mullerian hormone</td>
</tr>
<tr>
<td>β</td>
<td>Beta</td>
</tr>
<tr>
<td>BMI</td>
<td>Body mass index</td>
</tr>
<tr>
<td>CBT</td>
<td>Cognitive behaviour therapy</td>
</tr>
<tr>
<td>CEE</td>
<td>Conjugated equine estrogen</td>
</tr>
<tr>
<td>COCP</td>
<td>Combined oral contraceptive pill</td>
</tr>
<tr>
<td>CVD</td>
<td>Cardiovascular disease</td>
</tr>
<tr>
<td>DHEA</td>
<td>Dehydroepiandrosterone</td>
</tr>
<tr>
<td>DVT</td>
<td>Deep vein thrombosis</td>
</tr>
<tr>
<td>E</td>
<td>Estrogen</td>
</tr>
<tr>
<td>EE</td>
<td>Ethynylestradiol</td>
</tr>
<tr>
<td>FBE</td>
<td>Full blood examination</td>
</tr>
<tr>
<td>FBG</td>
<td>Fasting blood glucose</td>
</tr>
<tr>
<td>FOBT</td>
<td>Faecal occult blood test</td>
</tr>
<tr>
<td>FRAX</td>
<td>Fracture risk assessment tool</td>
</tr>
<tr>
<td>FSH</td>
<td>Follicle stimulating hormone</td>
</tr>
<tr>
<td>g</td>
<td>Gram</td>
</tr>
<tr>
<td>HIV</td>
<td>Human immunodeficiency virus</td>
</tr>
<tr>
<td>HT</td>
<td>Hypertension</td>
</tr>
<tr>
<td>inc</td>
<td>including</td>
</tr>
<tr>
<td>IUD</td>
<td>Intrauterine device</td>
</tr>
<tr>
<td>LH</td>
<td>Luteinising hormone</td>
</tr>
<tr>
<td>LMP</td>
<td>Last menstrual period</td>
</tr>
<tr>
<td>LNG-IUD</td>
<td>Levonorgestrel IUD</td>
</tr>
<tr>
<td>mcg</td>
<td>microgram</td>
</tr>
<tr>
<td>mg</td>
<td>milligram</td>
</tr>
<tr>
<td>MHT</td>
<td>Menopausal Hormone Therapy</td>
</tr>
<tr>
<td>NK3R</td>
<td>Neurokinin 3 receptor</td>
</tr>
<tr>
<td>OCP</td>
<td>Oral contraceptive pill</td>
</tr>
<tr>
<td>P</td>
<td>Progestogen</td>
</tr>
<tr>
<td>PE</td>
<td>Pulmonary embolism</td>
</tr>
<tr>
<td>PMS</td>
<td>Premenstrual syndrome</td>
</tr>
<tr>
<td>Prog</td>
<td>Progesterone</td>
</tr>
<tr>
<td>SNRI</td>
<td>Selective noradrenaline reuptake inhibitor</td>
</tr>
<tr>
<td>SSRI</td>
<td>Selective serotonin reuptake inhibitor</td>
</tr>
<tr>
<td>Sx</td>
<td>Symptoms</td>
</tr>
<tr>
<td>TSH</td>
<td>Thyroid stimulating hormone</td>
</tr>
<tr>
<td>UTI</td>
<td>Urinary tract infection</td>
</tr>
<tr>
<td>VMS</td>
<td>Vasomotor symptoms</td>
</tr>
<tr>
<td>VTE</td>
<td>Venous thromboembolism</td>
</tr>
</tbody>
</table>