Contraception in Perimenopausal Women

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What we will cover

• Definition
• What do we need to consider
• Contraceptive choices
• When to stop contraception
• HRT and contraception
Definitions

• Menopause - the last menstrual period (ave age 51 UK) (*menos/pausos*)

• Peri-menopause - Transition phase preceding the menopause from the first symptoms ending one year after the LMP.

• Climacteric/ menopause transition
Menopause timeline

Final menstrual period/menopause

--- Menopausal transition --- Postmenopause ---

Perimenopause

--- 12 months ---

Perimenopause

• Typically mid 40s lasting 4-5 years
• ↓E and P ↑FSH and LH
• Biochemical changes leading to symptoms
  Vasomotor
  Mood- depression/anxiety
  Sleep disturbance
  Joint/muscle pain
  Irreg cycles
  Urogenital sx
  Loss of libido
Changes in hormone level patterns over six months

Premenopause (180 days)

Perimenopause (180 days)

Postmenopause (180 days)

- Estrogen
- Progesterone
- FSH
- LH

What to consider

• Decline in fertility due to decrease in number and quality of eggs from age 38

• Spontaneous pregnancy rates 40-44 10-20%, 45-49 5-12%, > 50 rare

• Increase in adverse neonatal and maternal outcomes in women >40
  
  Age >40 MM x3 > age 20-24,
  
  Downs 1 in 28 age 45, 1 in 154 age 20

• Increase abortion rates compared with women in their 30s, 1 in 5 preg in > 40s unplanned 28% result in TOP

• STI rates inc most rapidly in women >40
The Dynamics of Perimenopause

OVARY RESERVE (Follicles) ~ 25,000

FSH

Estradiol

Progesterone

30  •  40  •  50  •  60

~ 38 Years
Ovary Reserve depletion rate increases dramatically - significantly decreases fecundity.

~ 51 Years
Ovary Reserve depleted (<1000) Average age of final menstrual period

This graph is intended to show the trends related to the perimenopausal years. The hormone dynamics are relative changes and do not represent absolute amounts. Of course, each woman will experience a unique transition.
What to consider - cont’d

Increase in background health risks

• CVD risk rises with age-underlying health conditions/smoking
• Breast/Ovarian/Endometrial cancer incidence increases
• Increase in menstrual disturbance- DUB, polyp, fibroids, hyperplasia
• Increased risk of Osteoporotic # due to decrease in BMD at menopause.
<table>
<thead>
<tr>
<th>UKMEC</th>
<th>Definition of category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>A condition for which there is no restriction for the use of the method.</td>
</tr>
<tr>
<td>Category 2</td>
<td>A condition where the advantages of using the method generally outweigh the theoretical or proven risks.</td>
</tr>
<tr>
<td>Category 3</td>
<td>A condition where the theoretical or proven risks usually outweigh the advantages of using the method. The provision of a method requires expert clinical judgement and/or referral to a specialist contraceptive provider, since use of the method is not usually recommended unless other, more appropriate methods are not available or not acceptable.</td>
</tr>
<tr>
<td>Category 4</td>
<td>A condition which represents an unacceptable health risk if the method is used.</td>
</tr>
</tbody>
</table>
# Age and Contraception

## Table 3: UK Medical Eligibility Criteria for Contraceptive Use (UKMEC) summary table for hormonal and intrauterine contraception methods

<table>
<thead>
<tr>
<th>Condition</th>
<th>Cu-IUD</th>
<th>LNG-IUS</th>
<th>IMP</th>
<th>DMPA</th>
<th>POP</th>
<th>CHC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>Menarche to &lt;20 = 2</td>
<td>Menarche to &lt;20 = 2</td>
<td>After menarche = 1</td>
<td>Menarche to &lt;18 = 2</td>
<td>After menarche = 1</td>
<td>Menarche to &lt;40 = 1</td>
</tr>
<tr>
<td></td>
<td>≥20 = 1</td>
<td>≥20 = 1</td>
<td></td>
<td>18–45 = 1</td>
<td></td>
<td>≥40 = 2</td>
</tr>
</tbody>
</table>

CHC, combined hormonal contraception; Cu-IUD, copper intrauterine device; DMPA, depot medroxyprogesterone acetate; IMP, progestogen-only implant; LNG-IUS, levonorgestrel intrauterine system; POP, progestogen-only pill.

## Table 4: Percentage of women, by age group, using contraception

<table>
<thead>
<tr>
<th>Contraceptive method</th>
<th>Age (years)</th>
<th>20–24</th>
<th>35–39</th>
<th>40–44</th>
<th>45–49</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td>22</td>
<td>23</td>
<td>25</td>
<td>28</td>
</tr>
<tr>
<td>Pill</td>
<td></td>
<td>54</td>
<td>27</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>Male condom</td>
<td></td>
<td>50</td>
<td>24</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>Withdrawal</td>
<td></td>
<td>7</td>
<td>5</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>LNG-IUS</td>
<td></td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Cu-IUD</td>
<td></td>
<td>6</td>
<td>12</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Injection</td>
<td></td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Implant</td>
<td></td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Patch</td>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>–</td>
</tr>
<tr>
<td>Natural method</td>
<td></td>
<td>–</td>
<td>2</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Female sterilisation</td>
<td></td>
<td>3</td>
<td>10</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>Vasectomy</td>
<td></td>
<td>1</td>
<td>22</td>
<td>28</td>
<td>30</td>
</tr>
</tbody>
</table>

Adapted from ONS survey on contraception and sexual health (2009). Cu-IUD, copper intrauterine device; LNG-IUS, levonorgestrel intrauterine system.
Combined Hormonal Contraception

Benefits

• Decrease in pain
• Bleeding decreased and more predictable
• Decrease in endometrial and Ovarian cancer
• Positive effect on BMD
• Relieve vasomotor symptoms- reduce HFI
CHC –cont’d

Risks

• VTE up to x3 > in women >40, also depends on Progestogen used lowest risk with levonorgestrel and Norethisterone, consider smoking/FH/obesity

• CVD and Stroke conflicting data on risk of MI and stroke and CHC, maybe dose dependent with EE lower dose may have lower risk. No good data on progestogen type.

• Breast cancer- inc risk with CHC but ? No additional inc risk with age

• Natural oestrogen pills Zoely/ Qlaira theoretically lower risk but not enough data to be specific.
Table 7: UK Medical Eligibility Criteria (UKMEC) categories for the use of combined hormonal contraception with cardiovascular risk factors

<table>
<thead>
<tr>
<th>Condition</th>
<th>UKMEC Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple risk factors for cardiovascular disease</td>
<td>3</td>
</tr>
<tr>
<td>Adequately controlled hypertension</td>
<td>3</td>
</tr>
<tr>
<td>Consistently elevated BP levels (properly taken measurements):</td>
<td></td>
</tr>
<tr>
<td>Systolic &gt;140–159 mmHg or diastolic &gt;90–99 mmHg</td>
<td>3</td>
</tr>
<tr>
<td>Systolic ≥160 mmHg or diastolic ≥100 mmHg</td>
<td>4</td>
</tr>
<tr>
<td>Vascular disease</td>
<td>4</td>
</tr>
<tr>
<td>History of high BP during pregnancy</td>
<td>2</td>
</tr>
<tr>
<td>Current and history of ischaemic heart disease</td>
<td>4</td>
</tr>
<tr>
<td>Stroke (history of cerebrovascular accident, including transient ischaemic attack)</td>
<td>4</td>
</tr>
<tr>
<td>Known dyslipidaemias</td>
<td>2</td>
</tr>
<tr>
<td>Obesity</td>
<td></td>
</tr>
<tr>
<td>BMI ≥30–34 kg/m²</td>
<td>2</td>
</tr>
<tr>
<td>BMI ≥35 kg/m²</td>
<td>3</td>
</tr>
<tr>
<td>Smoking</td>
<td></td>
</tr>
<tr>
<td>Age &lt;35 years</td>
<td>2</td>
</tr>
<tr>
<td>Age ≥35 years</td>
<td></td>
</tr>
<tr>
<td>&lt;15 cigarettes/day</td>
<td>3</td>
</tr>
<tr>
<td>≥15 cigarettes/day</td>
<td>4</td>
</tr>
<tr>
<td>Stopped smoking &lt;1 year</td>
<td>3</td>
</tr>
<tr>
<td>Stopped smoking ≥1 year</td>
<td>2</td>
</tr>
</tbody>
</table>
When should CHC be stopped?

• Eligible women up to age 50 provided no CI as outlined in UKMEC. although other methods have decreased risks. Consider swapping progestogen or reducing EE

• At age 50 due to inc VTE risk advise switch from CHC to non hormonal method or non injectable Progesterone methods

• If want to continue >50 individualised approach

• CHC suppress FSH so measurement unreliable stop CHC for at least 2 weeks if measuring FSH.
Injectable Progestogens

2 currently available in the UK-Depot medroxyprogesterone Acetate DMPA and Sayana Press (s/c)

Benefits
• Control of bleeding- amenorrhea is likely, use in HMB NICE
• Relief of menstrual and endometriosis symptoms
• ? Protective effect endometrial and ovarian cancer

Risks
• Bone Health-small loss in in BMD, greatest decline in first year of use, recovered after stopping. No additional loss with menopause attributed to DMPA
Inj Prog- cont’d

When to stop
• Women >50 swap to other contraception
• Age >45 UKMEC cat 2 consider alternatives especially if other risks for bone loss
• Continuing >50 consider risk/benefit regular review
• In general 2 yearly monitoring but no recommendation on BMD scans

Maybe useful in women >45 who want to continue
POP and Implant

Benefits

• Implant decrease in menstrual associated pain
• POP (as often ovulation inhibited) decrease in menstrual assoc pain, endometriosis symptoms, and often bleeding
# Intrauterine System (IUS)

<table>
<thead>
<tr>
<th></th>
<th>mg LNG</th>
<th>Duration of Contraception</th>
<th>Licensed for HMB</th>
<th>Liscenced for Endom prot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mirena</td>
<td>52</td>
<td>5 years</td>
<td>Yes</td>
<td>Yes (4 years) (5)</td>
</tr>
<tr>
<td>Levosert</td>
<td>52</td>
<td>5 years</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Kyleena</td>
<td>19.5</td>
<td>5 years</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Jaydess</td>
<td>13.5</td>
<td>3 years</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
Benefits

• Decrease in menstrual bleeding and pain. 52 mg treatment for HMB NICE (Mirena & Levosert)

• 52 mg Endometrial protection from exog estrogens (HRT) (mirena only one licensed) faculty guidelines 5 years and protection from endometrial hyperplasia.

Risks

• Breast cancer- conflicting results but CI to use in women with current or past breast cancer

• Cardiovascular Health- probably no inc risk no limitation to use
IUS removal or replacement

Contraception

• Evidence 52mg works for up to 7 years
  NICE if inserted > 45 + amenorrhea 7 years
  Faculty >45 until menopause regardless of bleeding
  Age 55 or raised FSH +1 year if over 50

• Other IUS as licensed

HMB

• If only used for this indication can use until no longer effective

Endometrial protection

• 5 years generally adopted clinically
IUD

• Risks- heavier more painful periods
• In UK Cu 5 or 10 year license
• FSRH Support extended use of Cu IUD containing $>= 300\text{mm}^2$ if inserted AFTER age 40
• Remain in situ 1 year after LMP if $>50$, 2 years if $<50$
Other Methods

• Barrier user dependant but lower fertility rates makes them more effective and condom added benefit protection STIs. Note diaphragms and prolapse/ vaginal atrophy.

• Natural Family Planning- relies on a predictable cycle so not so good in Perimenopause where cycle length can often vary

• Sterilisation-vasectomy more reliable and less risk, other LARC methods as effective and less risk than female sterilisation
When to stop contraception

Age

• LMP <50 after 2 years of amenorrhea
• LMP >50 after 1 year amenorrhea
• Age 55 spontaneous conception very rare even if menstruating

FSH measurement

• In general FSH >30 IU indicates a degree of ovarian insufficiency but does not indicate sterility.
• Single measurement unreliable in <50 so restricted for use in women > 50 on POC
When to stop contraception - contd

• > 50 on POC if FSH > 30 IU continue POC for 1 year then discontinue

• FSH maybe lowered by DMPA best time to check FSH is immediately prior to next injection

• FSH decreased by CHC (including HFI) measurement unreliable

• FSH decreased by HRT difficult to predict menopause in perimenopausal women on cyclical HRT.

AMH

• Unreliable as often undetectable in late 40s
<table>
<thead>
<tr>
<th>Contraceptive method</th>
<th>Age 40–50 years</th>
<th>Age &gt;50 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-hormonal</td>
<td>Stop contraception after 2 years of amenorrhoea</td>
<td>Stop contraception after 1 year of amenorrhoea.</td>
</tr>
<tr>
<td>Combined hormonal contraception</td>
<td>Can be continued</td>
<td>Stop at age 50 and switch to a non-hormonal method or IMP/POP/LNG-IUS, then follow appropriate advice.</td>
</tr>
<tr>
<td>Progestogen-only injectable</td>
<td>Can be continued</td>
<td>Women ≥50 should be counselled regarding switching to alternative methods, then follow appropriate advice.</td>
</tr>
<tr>
<td>Progestogen-only implant (IMP)</td>
<td>Can be continued to age 50 and beyond</td>
<td>Stop at age 55 when natural loss of fertility can be assumed for most women.</td>
</tr>
<tr>
<td>Progestogen-only pill (POP)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levonorgestrel intrauterine system (LNG-IUS)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

FSH, follicle-stimulating hormone; IU, international unit.

- If a woman over 50 with amenorrhoea wishes to stop before age 55, FSH level can be checked.
- If FSH level is >30 IU/L the IMP/POP/LNG-IUS can be discontinued after 1 more year.
- If FSH level is in premenopausal range then method should be continued and FSH level checked again 1 year later.

A Mirena® LNG-IUS inserted ≥45 can remain in situ until age 55 if used for contraception or heavy menstrual bleeding.
HRT and Contraception

• HRT is not licensed for contraception. It only inhibits ovulation in 40% of users
• If on HRT in Perimenopause will require contraception
• IUS is an ideal choice as endometrial protection and contraception, also added benefit of non bleed preparation in perimenopausal women, relatively low dose and reduced s/e of progestogen
• Barrier and IUC- no restrictions
HRT and contraception

• POC- no restrictions. DMPA likely to protect endometrium but is not licensed, either continue or if BMD concerns switch to other POC

• CHC is not appropriate as inc risk with increase in estradiol although can be used as an alternative to HRT in women under 50
When to stop contraception on HRT

- HRT in Perimenopause will mask natural menopause
- Cannot rely on FSH
- Advise contraception until age 55 unless discontinues HRT and then other considerations will apply
KEY POINTS

• Sexually active women do require contraception until the menopause
• In the Perimenopause background health risks maybe increased which may affect contraceptive choices
• Non contraceptive benefits are also important considerations in choosing the contraceptive method eg IUS for HMB
• Changes in bleeding patterns in the perimenopause are more common and may require investigation to rule out pathology
Key Points cont’d

• Women using non hormonal contraception can stop it 1 year post LMP if over 50 or 2 years if under 50
• By age 55 spontaneous pregnancy is rare and it is safe to stop contraception even if still menstruating
• Women using POC can be advised to stop contraception at 55 or 1 year after FSH measurement of 30 IU if over 50
• FSH is an unreliable indicator in perimenopausal women and in women on CHC
• HRT is not contraceptive and contraception should be advised in the perimenopause.
Resources

• FSRH Guidelines www.fsrh.org.uk
  Contraception for women aged over 40 years
  Combined Hormonal Contraception
• NICE guidelines www.nice.org.uk
  Heavy Menstrual Bleeding: assessment and management
• BMJ learning tool Contraception in the perimenopause
  www.bmj.com
• TOG journal 2017
• NATSAL 3
To guard against any surprises, the advice is to keep using contraception until the age of 55

CREDIT: JONATHAN CARLSON