What is intrauterine contraception?
This Guidance provides recommendations and good practice points regarding the use of a copper intrauterine device for long-term contraception, the accepted abbreviation for which is IUD. The use of an IUD as emergency contraception (EC) was covered in previous Guidance. The IUD is a safe and effective method of contraception. Although use in the UK has increased in recent years, only 5% of contraceptive users aged 16–49 use contraception. Although use in the UK has increased in recent years, only 5% of contraceptive users aged 16–49 currently use an IUD. Recent years, only 5% of contraceptive users aged 16–49 currently use an IUD. Two balanced approaches to counselling by clinicians may allay myths and unfounded fears and further increase IUD use.

What should a clinician assess before inserting an IUD?
Women considering an IUD should be counselled regarding all contraceptive options, including the alternative levonorgestrel-releasing intrauterine system (IUS). Clinical history taking, including sexual history, should allow a clinician to discuss her individual sexual health risks with each woman. Examination and testing for sexually transmitted infections (STIs) (Chlamydia trachomatis and Neisseria gonorrhoea) may then be offered and performed if appropriate.

Who is medically eligible to use an IUD?

1. After counselling, an IUD is a safe contraceptive choice for the majority of women (Grade C).

The World Health Organization Medical Eligibility Criteria for Contraceptive Use (WHOMEC) provides evidence-based recommendations to enable women to choose a method of contraception without unnecessary medical contraindications. For most women, the benefits of IUD use outweigh risks (WHO 1, ‘unrestricted use’ and WHO 2, ‘benefits generally outweigh risks’) (Table 1). There are few circumstances where WHOMEC recommends that risks usually outweigh benefits (WHO 3) or that an IUD should not be used (WHO 4) (Table 1). This Guidance endorses WHOMEC unless otherwise stated. Outlined below are conditions where this Guidance suggests a less restrictive approach compared to WHOMEC.

Women at risk of sexually transmitted infections (STIs)

2. After counselling about other contraceptive methods, women who are assessed as at higher risk of STI may still choose to use an IUD (Grade C).

WHOMEC recommends that risks of using an IUD generally outweigh benefits for women who are at increased risk of STIs, such as those with multiple sexual partners (WHO 3). Although women may have risk factors for STI most will not have infection. The risk of pelvic inflammatory disease (PID) due to IUD use is unknown. The risk of PID in the month following IUD insertion did not increase significantly, even in the presence of C. trachomatis, compared to women without infection [relative risk (RR) 1.7; 95% CI 0.4–7.5]. The Clinical Effectiveness Unit (CEU) recommends that, after counselling regarding other methods, women who are at a higher risk of STI may still choose an IUD. Safer sex and condom use in addition should be promoted.

Women with PID currently or within the last 3 months

✓ After considering other contraceptive methods, a woman may use an IUD within 3 months of treated pelvic infection, provided she has no signs and symptoms.

WHOMEC recommends that an IUD should not be inserted when a woman has PID currently or within the last 3 months (WHO 4). The CEU considers that after discussing other contraceptive methods, if no other method is acceptable and pregnancy risk is substantial, a clinician may insert an IUD provided the woman has no abnormal signs and symptoms suggestive of PID following treatment and her partner has been appropriately tested and treated. Safer sex and condom use in addition should be promoted.
Table 1 Medical eligibility criteria for IUD use adapted from the WHO Medical Eligibility Criteria for Contraceptive Use

<table>
<thead>
<tr>
<th>Unrestricted use (WHO 1)</th>
<th>Benefits generally outweigh the risks (WHO 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age ~ 20 years and over</td>
<td>Menarche to under 20 years</td>
</tr>
<tr>
<td>Parous women</td>
<td>Nulliparous women</td>
</tr>
<tr>
<td>Postpartum – four or more weeks postpartum in women who are breastfeeding, not breastfeeding or post-Caesarean section</td>
<td>Less than 48 hours postpartum in women who are breastfeeding, not breastfeeding or post-Caesarean section</td>
</tr>
<tr>
<td>First-trimester TOP</td>
<td>Second-trimester TOP</td>
</tr>
<tr>
<td>Past ectopic pregnancy</td>
<td>Anatomical abnormalities (including cervical stenosis, cervical lacerations) not distorting the uterine cavity or interfering with IUD insertion</td>
</tr>
<tr>
<td>History of pelvic surgery</td>
<td>Complicated valvular heart disease</td>
</tr>
<tr>
<td>Smoking – any age and amount</td>
<td>Heavy or prolonged bleeding (includes regular and irregular patterns) in the absence of significant pathology</td>
</tr>
<tr>
<td>Obesity – BMI 30 or more</td>
<td>Continuation with unexplained vaginal bleeding before evaluation</td>
</tr>
<tr>
<td>Multiple risk factors for cardiovascular disease</td>
<td>Endometriosis</td>
</tr>
<tr>
<td>Hypertension</td>
<td>Severe dysmenorrhoea</td>
</tr>
<tr>
<td>VTE</td>
<td>Continuation by women with cervical cancer awaiting treatment, endometrial cancer or ovarian cancer</td>
</tr>
<tr>
<td>Superficial venous thrombosis</td>
<td>Uterine fibroids without distortion of the uterine cavity</td>
</tr>
<tr>
<td>Current ischaemic heart disease</td>
<td>Vaginitis without purulent cervicitis</td>
</tr>
<tr>
<td>Known hyperlipidaemias</td>
<td>Continuation in women with current PID or within the last 3 months</td>
</tr>
<tr>
<td>Uncomplicated valvular heart disease</td>
<td>Women at high risk of HIV, who are HIV-positive or have AIDS, or women with an increased risk of STI</td>
</tr>
<tr>
<td>Headaches including migraine</td>
<td>Treated PID or STI within the last 3 months</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>Anaemia</td>
</tr>
<tr>
<td>Irregular bleeding (without heavy bleeding)</td>
<td>Thalassaemia</td>
</tr>
<tr>
<td>Benign ovarian tumour</td>
<td>Sickle cell disease</td>
</tr>
<tr>
<td>Cervical ectropion</td>
<td>Iron deficiency anaemia</td>
</tr>
<tr>
<td>Cervical intraepithelial neoplasia</td>
<td></td>
</tr>
<tr>
<td>Breast disease (benign and malignant)</td>
<td></td>
</tr>
<tr>
<td>Past PID with subsequent pregnancy</td>
<td></td>
</tr>
<tr>
<td>Schistosomiasis</td>
<td></td>
</tr>
<tr>
<td>Non-pelvic TB</td>
<td></td>
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<tr>
<td>Diabetes</td>
<td></td>
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<tr>
<td>Thyroid disease</td>
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<tr>
<td>Gallbladder disease</td>
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<tr>
<td>History of cholestasis</td>
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<tr>
<td>Viral hepatitis</td>
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</tr>
<tr>
<td>Past PID with subsequent pregnancy</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk factors usually outweigh the benefits (WHO 3)</th>
<th>Unacceptable health risk, should not be used (WHO 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postpartum insertion between 48 hours and 4 weeks postpartum in women who are breastfeeding, not breastfeeding or post-Caesarean section</td>
<td>Pregnancy</td>
</tr>
<tr>
<td>Current benign gestational trophoblastic disease</td>
<td>Puerperal sepsis</td>
</tr>
<tr>
<td>Ovarian cancer</td>
<td>Immediate post-septic abortion</td>
</tr>
<tr>
<td>Continuation in women with known pelvic TB</td>
<td>Distorted uterine cavity (any congenital or acquired abnormality distorting the uterine cavity in a manner that is incompatible with IUD insertion) including uterine fibroids</td>
</tr>
<tr>
<td>Insertion before evaluation of unexplained vaginal bleeding which is suspicious for serious conditions</td>
<td>Insertion for women with a current STI or PID</td>
</tr>
<tr>
<td>Current malignant gestational trophoblastic disease</td>
<td>Insertion for women with cervical cancer who are awaiting treatment, or endometrial cancer</td>
</tr>
<tr>
<td>Insertion in women with known pelvic TB</td>
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</table>

<table>
<thead>
<tr>
<th>Women who are HIV-positive</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>3 Women who are HIV-positive may be offered an IUD after testing for bacterial STIs (Grade B).</td>
<td></td>
</tr>
</tbody>
</table>

WHOMEC recommends that risks of IUD use outweigh benefits for women at risk of contracting the human immunodeficiency virus (HIV), those who are HIV-positive, or who have acquired immune deficiency syndrome (AIDS). This advice was based on theoretical concerns regarding increased rates of PID and HIV transmission but may deny women a long-term, reversible method of contraception which is unaffected by liver enzyme-inducing drugs. Much of the evidence is based on African cohort studies, which may be less relevant to UK practice. HIV status did not affect rates of PID following IUD insertion. Prospective cohort studies did not show significant differences in viral shedding or any increase in female-to-male transmission with IUD use. One cross-sectional study suggested increased acquisition of HIV for women using an IUD, but two subsequent studies did not support this. The CEU considers that women in the UK who are HIV-positive may use an IUD. Risk assessment and testing for STIs prior to IUD insertion is recommended.

Are there any drugs that may interact with an IUD?

4 There are no drugs that are known to affect IUD use and efficacy (Grade C).

Summaries of Product Characteristics suggest some anti-inflammatory medications may affect IUD action. No published evidence was identified of any effects of anti-inflammatory drugs (non-steroidal, corticosteroids, cyclo-oxygenase inhibitors) on IUD efficacy. No evidence was identified regarding the use of warfarin or heparin on IUD insertion and use.

Women who are HIV-positive

[3] Women who are HIV-positive may be offered an IUD after testing for bacterial STIs (Grade B).

[4] There are no drugs that are known to affect IUD use and efficacy (Grade C).
Which examinations, investigations and treatments are required prior to inserting an IUD?

The WHO Selected Practice Recommendations for Contraceptive Use (WHOSPR) provides recommendations on examinations and tests which should be performed before providing an IUD. This Guidance endorses the WHOSPR unless otherwise stated. Haemoglobin measurement is not recommended routinely prior to IUD insertion.

**Bimanual pelvic examination**

5 A bimanual pelvic examination should be performed before inserting an IUD (Grade C).

A bimanual pelvic examination to assess the size, shape and position of the uterus should be performed prior to IUD insertion.12

**Testing for STI**

6 STI risk assessment (history and examination) should be performed for all women considering an IUD (Grade C).

7 Women assessed to have a higher risk of STI should be offered testing for *C. trachomatis* (as a minimum) prior to IUD insertion (Grade C).

- Women assessed to have a higher risk of STI may also be offered testing for *N. gonorrhoea* prior to IUD insertion, depending on its local prevalence.
- There is no indication to test for other lower genital tract organisms in asymptomatic women attending for IUD insertion.

- Ideally, for women assessed as at higher risk of STI, the results of tests should be available and appropriate treatment provided prior to IUD insertion.

- For women assessed as at higher risk of STI, if results are not available and IUD insertion cannot be delayed, the use of prophylactic antibiotics may be considered.

WHOSPR recommends risk assessment (clinical history and physical examination) and testing for STIs and HIV prior to IUD insertion.12 The validity of risk assessments in different clinical settings has not been confirmed but risk may be assessed individually, taking into consideration local prevalence of STIs, the woman’s age and her sexual activity. A large UK sample of women aged 16–24 years attending family planning, general practice, genitourinary medicine, antenatal clinics and termination services identified a prevalence of *C. trachomatis* of 9.8–11.2%.13 A UK pilot study in women attending for IUD insertion identified *C. trachomatis* in 4% (95% CI 2%–8%).14

For women undergoing uterine instrumentation, including IUD insertion, the Royal College of Obstetricians and Gynaecologists (RCOG) recommended that sexually active women aged less than 25 years should be screened for infection.15 More recently, the Scottish Intercollegiate Guidelines Network (SIGN)16 recommended testing for *C. trachomatis* in all sexually active women aged less than 25 years having an IUD inserted. Women who are widowed, divorced or separated comprise 4% of IUD users and may embark upon new sexual relationships. SIGN also recognises that sexual activity, as well as age, is an important risk factor for STI and recommend testing for women aged over 25 years with two or more partners, or a change of sexual partner, in the last year who are having an IUD inserted. Clinicians should involve all women considering an IUD in assessing their own risk of STI and their need for testing. Following this, appropriate STI testing should be offered to those who want it.

STI testing prior to IUD insertion should cover *C. trachomatis*, as a minimum. Testing for *N. gonorrhoea* may be included depending on age, STI risk and local prevalence. There is no indication to test routinely for other lower genital tract organisms in asymptomatic women attending for IUD insertion, since the results would not affect management.

Ideally, STI testing should be performed in advance of insertion to allow infection to be identified and treated. However, no evidence was identified to suggest that this decreases the incidence of post-insertion PID. A prospective cohort study showed that 10% of women (95% CI 1%–33%) with unsuspected *C. trachomatis* at the time of IUD insertion developed pelvic infection post-insertion.17 A cohort study suggested that when women had *C. trachomatis* identified at the time of IUD insertion, risk of PID in the following month was not increased significantly compared to women without *C. trachomatis* (RR 1.7; 95% CI 0.4–7.5).5 Women with *N. gonorrhoea* at the time of IUD insertion, however, were at an eight-fold increased risk of developing PID compared to non-infected women (RR 8.3; 95% CI 2.4–28.8). A systematic review18 highlighted the lack of good-quality evidence to identify the risk of PID following IUD insertion in the presence of *C. trachomatis* or *N. gonorrhoea* compared to women not having an IUD inserted. For women assessed at higher risk of STI, if results are not available prior to insertion, the use of prophylactic antibiotics may be considered if IUD insertion cannot be delayed.

**Measurement of pulse and blood pressure**

- Pulse rate should be measured and documented post-IUD insertion.

WHOSPR does not recommend routine blood pressure (BP) measurement before IUD insertion.12 UK practice varies regarding measurement of BP and pulse rate before and after IUD insertion but the CEU advises that a post-insertion measurement of pulse rate is good practice. When bradycardia is associated with clinical signs and symptoms (pallor, light-headedness, nausea) BP should also be measured and recorded.

**Prophylaxis to prevent pelvic infection**

8 Prophylactic antibiotics are not recommended for routine IUD insertion (Grade A).

A meta-analysis concluded that the use of prophylaxis prior to IUD insertion did not confer benefit19 and the WHOSPR does not recommend prophylactic antibiotics routinely for IUD insertion.12 WHOSPR recommends that prophylaxis may be considered in settings of high STI prevalence and limited testing, but this is not relevant to UK practice. Prophylactic antibiotics may be considered for women who are at increased risk of STI if an IUD is to be inserted prior to results of tests being available.

**Prophylaxis to prevent bacterial endocarditis**

9 Women with previous endocarditis or with a prosthetic heart valve require intravenous antibiotic prophylaxis to protect against bacterial endocarditis during IUD insertion or removal (Grade C).
Women with valvular heart disease can safely use an IUD but prophylaxis against bacterial endocarditis may be required at the time of insertion. A small study identified transient bacteraemia from vaginal organisms in 13% of women within 10 minutes of IUD insertion. Conflicting advice is provided by the American Heart Association and the British National Formulary. The CEU considers that the BNF guidance should be adopted. There is no advice specifically relating to IUD insertion. For gynaecological procedures, the BNF recommends antibiotic prophylaxis only for women with prosthetic valves or who have had endocarditis previously. In these circumstances an intravenous regimen is advised. In the absence of specific guidance, the CEU considers that such prophylaxis should be used for both insertion and removal.

What do women need to know when considering an IUD?

**Mode of action**

### 10 Women should be informed that the primary mode of action of an IUD is prevention of fertilisation (Grade B).

It is widely accepted that IUDs work primarily by inhibiting fertilisation due to direct toxicity. A systematic review on mechanisms of action of IUDs showed that pre- and post-fertilisation effects contribute to efficacy. An inflammatory reaction within the endometrium may have an anti-implantation effect should fertilisation occur but an IUD is not an abortifacient. Alterations in the copper content of cervical mucus are seen, which may inhibit sperm penetration.

**Efficacy**

### 11 Women should be advised of the low failure rate of IUDs, i.e. around 1% (Grade C).

### 12 IUDs containing at least 300 mm² of copper should be used as they have the lowest failure rates (Grade A).

### 13 IUDs such as T-Safe Cu380A represent a reversible alternative to female sterilisation.

Dr. David Carlin described the duration of use of an IUD as follows:

**Duration of IUD use**

13 IUDs with the longest licensed duration of use should be used to minimise the established risks associated with re-insertion (Grade C).

*Women should be given information on the device inserted and its licensed duration of use to avoid unnecessary early removal. This information should also be documented in the case notes.*

Clinical trials show that most of the widely used copper IUDs are effective for at least 5 years and many are effective for longer (Table 2). Currently, the T-Safe Cu380A is the only device licensed for up to 8 years’ use, although clinical trial data suggest it appears effective up to 12 years. The GyneFix® T380 is no longer available in the UK but women with this device may continue to use it for its 10-year licensed duration. It is accepted UK practice to recommend that a copper IUD inserted at age 40 years or over may be retained beyond the licensed duration until contraception is no longer required.

**Pelvic infection**

14 Women should be advised that a small increase in risk of pelvic infection occurs in the 20 days following IUD insertion but the risk is the same as the non-IUD-using population thereafter (Grade A).
Ectopic pregnancy

A meta-analysis of case-control studies showed no increased risk of PID, especially in the 3–4 weeks after insertion. A review of 12 randomised and one non-randomised WHO trial, covering 22 908 IUD insertions and over 51 399 woman-years of follow up, identified a low overall rate of PID of 1.6 per 1000 woman-years. After adjusting for confounding factors, although a six-fold increase in the risk of PID was identified in the 20 days following IUD insertion, the overall risk was low. Beyond the first 3 weeks, the risk was very low and remained low for up to 8 years. Women should be advised to look out for symptoms of PID, especially in the 3–4 weeks after insertion. 

Expulsion

Expulsion of an IUD occurs in approximately 1 in 20 women, and is most common in the first 3 months after insertion and usually during menstruation. A meta-analysis of three clinical trials investigated expulsion for GyneFix and T-Safe Cu380A. There is insufficient evidence that the reported problems of early expulsion for GyneFix have been overcome.

Fertility

A case-control study found that previous IUD use in nulliparous women did not increase the risk of tubal occlusion and infertility, whereas infection with Chlamydia trachomatis did. A cohort study compared parous IUD users and non-users and showed no difference in fertility after discontinuation of contraception. Data for nulliparous women from this same cohort study suggested that long-term IUD use was associated with fertility impairment. This finding could be explained by bias (IUD users differed from non-IUD users in that they were older, had a lower rate of previous miscarriage, termination and ectopic pregnancy) or confounding factors (STIs may have accounted for these findings rather than the IUD itself). Overall return to fertility and pregnancy outcomes were good following IUD removal in a prospective study from New Zealand. A randomised study showed that the mean time to pregnancy following IUD removal was 3 months. This was also shown in a more recent multicentre prospective study. The balance of evidence suggests that the use of an IUD does not affect return to fertility.

Check for IUD threads

Each IUD user should be offered instruction on how to check for the IUD and its threads and advised that if they are unable to feel them it may be that the device has been expelled. Alternative contraception should then be used until medical advice has been sought.

Table 2 IUDs currently available in the UK

<table>
<thead>
<tr>
<th>Device (manufacturer)</th>
<th>Copper dose (mm²)</th>
<th>Suitable with a minimum uterine length (cm)</th>
<th>Net BNF price</th>
<th>Licensed duration of use (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-Safe® Cu380A (FP Sales)</td>
<td>380</td>
<td>6.5</td>
<td>£9.40</td>
<td>8</td>
</tr>
<tr>
<td>Multiload® Cu375 (Organon)</td>
<td>375</td>
<td>6</td>
<td>£9.24</td>
<td>5</td>
</tr>
<tr>
<td>Nova-T® 380 (Schering Health)</td>
<td>380</td>
<td>6.5</td>
<td>£13.50</td>
<td>5</td>
</tr>
<tr>
<td>Flexi-T® 300 (FP Sales)</td>
<td>300</td>
<td>5</td>
<td>£8.65</td>
<td>5</td>
</tr>
<tr>
<td>GyneFix® (FP Sales)</td>
<td>330</td>
<td>All uterine sizes</td>
<td>£24.75</td>
<td>5</td>
</tr>
<tr>
<td>Multiload® Cu250 (Organon)</td>
<td>250</td>
<td>6</td>
<td>£7.13</td>
<td>3</td>
</tr>
<tr>
<td>Multiload® Cu250 Short (Organon)</td>
<td>250</td>
<td>5</td>
<td>£7.13</td>
<td>3</td>
</tr>
</tbody>
</table>

The Gyne-T® 380 (Janssen-Cilag) is not available in the UK now, however some women may still be using this device. It can be used until the licensed duration of use (10 years) is attained. The British National Formulary. 

15 Women should be informed of the symptoms of pelvic infection and advised how and where to seek medical help if these occur, particularly in the first 3–4 weeks after insertion (Grade C).

16 Women should be informed that the overall risk of ectopic pregnancy is reduced with IUD use compared to using no contraception (Grade B).

17 Women may be informed that previous use of an IUD does not affect fertility (Grade C).

18 Women should be advised that the most likely cause of IUD failure is expulsion. The risk of this happening is around 1 in 20 and is most common in the first year of use, particularly within 3 months of insertion (Grade B).

19 Women may be informed that uterine perforation occurs in fewer than 1 in 1000 insertions (Grade B).

Women should be offered instruction on how to check for the IUD and its threads and advised that if they are unable to feel them it may be that the device has been expelled. Alternative contraception should then be used until medical advice has been sought.

Fertility

Women may be informed that previous use of an IUD does not affect fertility (Grade C).
**Menstrual abnormalities**

20 Women should be informed that menstrual abnormalities (including spotting, light bleeding, heavy or longer menstrual periods) are common in the first 3–6 months of IUD use (Grade C).

21 Women should be informed that unacceptable bleeding is one of the most common reasons for requesting IUD removal (Grade B).

✓ Women should be advised to seek medical advice, to exclude infection and gynaecological pathology, if menstrual abnormalities persist beyond the initial 6 months of use.

Although IUDs do not affect ovulation, the luteal phase of the cycle is shorter and the onset of menstrual bleeding occurs earlier. Menstrual abnormalities, including spotting and light bleeding or heavy or longer periods, are common in the first 3–6 months of IUD use and persist in a minority of women. These bleeding patterns are not harmful and usually decrease over time, but women should be advised to seek medical advice, to exclude gynaecological pathology and infection, if bleeding problems persist. Studies have shown that menstrual bleeding alone and bleeding with pain are the most common reasons cited for requesting IUD removal.

No differences were identified in rates of removal for bleeding alone or bleeding with pain between GyneFix and T-Safe Cu380A.

**Dysmenorrhoea and pain**

22 Women should be informed that dysmenorrhoea is a common reason for requesting IUD removal (Grade B).

Women should be counselled fully regarding pain associated with IUD use. A Cochrane Review of framed and frameless devices was unable to identify whether frameless devices were less likely to cause pain in nulliparous women (because only parous women were included in the randomised trials reviewed).

<table>
<thead>
<tr>
<th>Circumstances when IUD can be inserted</th>
<th>Recommendations for timing of IUD insertion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women with regular menses</td>
<td>If pregnancy can be excluded an IUD can be inserted at any time during the menstrual cycle. Pregnancy can be reasonably excluded if there are no symptoms or signs of pregnancy and any of the following criteria are met:</td>
</tr>
<tr>
<td></td>
<td>– no sexual intercourse since last normal menses</td>
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<tr>
<td></td>
<td>– correct and consistent use of a reliable method of contraception</td>
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<tr>
<td></td>
<td>– within 7 days of starting normal menses</td>
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<tr>
<td></td>
<td>Up to 5 days after the first episode of sexual intercourse in a menstrual cycle or up to 5 days after the earliest calculated time of ovulation in a regular cycle</td>
</tr>
<tr>
<td>Women who are amenorrhoeic</td>
<td>Any time at the woman’s convenience, if it is reasonably certain that she is not pregnant (as above)</td>
</tr>
<tr>
<td>Women who are postpartum</td>
<td>For women who are fully or nearly fully breastfeeding, amenorrhoeic and less than 6 months postpartum (including Caesarean section) an IUD can be inserted within 48 hours of delivery or 4 or more weeks postpartum</td>
</tr>
<tr>
<td>Following termination of pregnancy</td>
<td>At the time of a first- or second-trimester surgical TOP. Following medical or surgical termination suggested within the first 48 hours otherwise wait until 4 or 4 more weeks post-termination</td>
</tr>
<tr>
<td>Switching from another method of contraception</td>
<td>Any time if it is reasonably certain that the woman is not pregnant (as above). There is no need to wait for the next menstrual period</td>
</tr>
</tbody>
</table>

24 An IUD can be inserted at any time in the menstrual cycle if it is reasonably certain the woman is not pregnant (Grade C).

**Endometrial and cervical cancer**

23 Women may be informed that there is no evidence of an increase in reproductive tract cancer with IUD use (Grade B).

A systematic review of non-contraceptive benefits of IUD suggested a reduction in the risk of endometrial cancer (RR 0.51; 95% CI 0.3–0.8). Most studies are case-control and, as always, should be interpreted with caution. No effect on risk of cervical cancer was shown.

**When should an IUD be inserted?**

25 An IUD may be inserted safely 4 or more weeks postpartum (Grade C).

WHO has advised that pregnancy can be reasonably excluded if a woman has no symptoms or signs of pregnancy and meets any of the following criteria: no intercourse since last normal menses; correct and consistent use of a reliable method of contraception; is within 7 days of the start of normal menses; is within 4 weeks postpartum (for non-lactating women); is within the first 7 days post-abortion or miscarriage; is fully or nearly fully breastfeeding, amenorrhoeic and less than 6 months postpartum, or is within 5 days of the earliest expected date of ovulation. Having reasonably excluded pregnancy, an IUD may be inserted at any time during the menstrual cycle (Table 3).

**Postpartum**

Established practice in the UK has been to delay insertion until 6–8 weeks postpartum. WHOMEC, however, recommends that the benefits of IUD use 4 or more weeks after delivery outweigh any risks (WHO 1). This unrestricted use includes women who are breastfeeding.
Following termination of pregnancy

**26 An IUD can be inserted safely immediately following a first-trimester or second-trimester TOP (Grade C).**

Insertion of an IUD immediately following induced abortion has advantages in that the woman is known not to be pregnant, her motivation for effective contraception is likely to be high, and she is present in a health care setting. Systematic reviews show that the insertion of an IUD at the time of surgical abortion is safe and practical. However, these multicentre trials employed IUDs that are rarely used currently in the UK (Lippes Loop®, Copper 7® and T-Safe® Cu200®). Expulsion rates were higher after second-trimester abortion than after earlier procedures. Delaying insertion following second-trimester termination of pregnancy (TOP) was advised, but no timescale was given. WHOMEC recommends that an IUD can be inserted immediately following induced (or spontaneous) first-trimester abortion (WHO 1) and, although risk of expulsion following a second-trimester abortion is higher, generally the benefits of IUD insertion still outweigh the risks (WHO 2).

Case-control studies show the risk of uterine perforation following IUD insertion within 30 days of a TOP is low and only three perforations were identified in 2348 such insertions in a WHO study. Re-admission rates for pelvic infection were not increased by IUD insertion immediately following a first-trimester TOP.

There are few data specifically relating to IUD insertion following medical TOP. The CEU suggests that an IUD may be inserted immediately (i.e. within 48 hours) following first- or second-trimester medical TOP. Otherwise, insertion should be delayed until 4 weeks following medical TOP (as for postpartum insertions).

**What procedures and documentation are required for IUD insertion?**

RCOG guidelines on gynaecological examinations recommend that all patients should give verbal consent before pelvic examination; patients should be provided with private, warm and comfortable changing facilities.

**Chaperones**

27 A chaperone should be offered to all women having a pelvic examination and the offer documented in the case notes, together with the chaperone’s identity, if accepted (Grade C).

A chaperone (who need not be a trained health professional) should be offered for any gynaecological examination, irrespective of the gender of the clinician. The presence and identity of the chaperone should be documented in the case notes, as should the offer of a chaperone, in instances where this offer is declined.

**Assistants**

28 An appropriately trained assistant should be present during IUD insertion to help in the event of an emergency (Grade C).

A survey of experienced family planning doctors suggested that only 75% always have an assistant for IUD insertion. Medical emergencies (such as vasovagal attack and anaphylaxis) may occur during IUD insertion. An assistant, who is appropriately qualified and trained to deal with likely emergencies, should be present when inserting an IUD.

**Emergency equipment for IUD insertion**

29 Emergency equipment must be available in all settings where IUDs are inserted and local referral protocols must be in place for patients requiring further medical input (Grade C).
Gloves should be worn on both hands for pelvic examination. There is no recommendation regarding sterile gloves for IUD insertion. If a "no touch" technique is used (i.e. one whereby anything that is to be inserted into the uterine cavity is held only by the handle) sterile gloves are unnecessary. Gloves should be changed after the pelvic examination and before proceeding to uterine instrumentation to avoid contaminating other surfaces.

Cervical priming

Case reports, but no randomised trials, have described the use of prostaglandins for cervical priming pre-IUD insertion. Randomised trials have shown that misoprostol improves the ease with which the cervix can be dilated and reduces complications in premenopausal women, postmenopausal women and nulliparous women undergoing operative hysteroscopy.

Analgesia and anaesthesia

There is a lack of randomised controlled trials investigating the use of oral analgesia or topical or intracervical anaesthesia during IUD insertion. The experience of immediate post-insertion pain appears to be independent of age, parity or day of cycle but related to expected pain and cervical resistance. Topical local anaesthetic gel has been shown in small randomised studies to reduce pain during tenaculum placement and at the time of IUD insertion. In a survey of clinicians, topical gel was the most commonly used method of anaesthesia for IUD insertion.

Use of forceps and assessing length of the uterine cavity

An appropriate type of forceps (such as Allis or tenaculum) should be used, and an assessment of the length of the uterine cavity made, to reduce the risk of perforation and facilitate fundal placement of the IUD.

Who can insert an IUD?

The prescriber holds ultimate responsibility for a device or medication prescribed and has a responsibility to report any defect noted to the Medicines and Healthcare products Regulatory Agency (MHRA).

Training requirements

3 Clinicians who insert IUDs are responsible for ensuring that they are appropriately trained and maintain their clinical competence (Grade C).
The FFPRHC has specific training requirements for doctors wishing to obtain a letter of competence in intrauterine techniques (LoC IUT). A multicentre randomised trial\(^7\) and a prospective cohort study\(^8\) support IUD insertion by any appropriately trained clinician. The Royal College of Nursing outlines training requirements for nurses wishing to insert IUDs.\(^9\) Competence in gynaecological examination and the assessment, management and investigation of women with IUD problems are required for all clinicians inserting IUDs. Recertification should ensure continuing competence. The LoC IUT should be updated every 5 years, with at least 2 hours of relevant continuing education and a log of at least 12 insertions in 12 months or six in 6 months using at least two different types of device in unanaesthetised patients. A large prospective study, which included 17 469 Multiload Cu375 insertions by 1699 doctors, showed that doctors inserting fewer than 10 IUDs in a 6-year period reported significantly more perforations than those inserting between 10 and 100 IUDs.\(^3\)

**What follow-up is required following IUD insertion?**

**34** A follow-up visit should be advised after the first menses, or 3–6 weeks, after IUD insertion (Grade C).

**35** Women should be advised to seek medical help at any time if they develop symptoms of pelvic infection, pain, persistent menstrual abnormalities, missed period or non-palpable threads (Grade C).

The WHOSPR recommends a follow-up visit after the first menses, or 3–6 weeks after insertion,\(^12\) to exclude infection, perforation or expulsion. A woman should also be advised to return at any time to discuss problems, or if she wants to change her method. Women should be counselled about when and why to seek medical advice.

**How are IUD problems managed?**

**Suspected perforation**

- **✓** If uterine perforation at insertion is suspected, the procedure should be stopped and vital signs and level of discomfort monitored until stable. Urgent and specific follow-up should be arranged to include ultrasound scan and/or plain abdominal X-ray to locate the device if it has been left in situ.

- A study from New Zealand of almost 17 500 insertions reported an incidence of perforation of 1.6 per 1000 insertions.\(^3\) Of the 28 perforation events reported, 27 were related to IUD insertion and one was related to the uterine sound prior to insertion of the device. This reported incidence is almost certainly an underestimate, as events not requiring hospital treatment may not have been reported. An older study, using an international dataset of over 21 500 insertions, estimated the perforation rate to be 1.9–3.6 per 1000 insertions.\(^100\) The analysis suggested previous Caesarean section as a risk factor. The little evidence that is available suggests that the risk of serious sequelae from uterine perforation with a sound in non-pregnant women is low, that surgical intervention is seldom needed, and that conservative management is appropriate. There is no evidence to provide guidance on the time interval after which it would be appropriate to repeat an attempt at IUD insertion following suspected perforation. On a pragmatic basis, a 6-week interval after an asymptomatic, suspected perforation would seem reasonable.

**‘Lost threads’**

- **✓** If no threads are seen and uterine placement of the IUD cannot be confirmed clinically, an ultrasound scan should be arranged to locate the device and alternative contraception recommended.

- **✓** If an ultrasound scan cannot locate the IUD and there is no definite evidence of expulsion, a plain abdominal X-ray should be arranged to identify an extrauterine device.

If no threads are visible on speculum examination and uterine placement of the IUD cannot be confirmed clinically, some clinicians may prefer to refer women immediately for an ultrasound scan to locate the device. If no threads are seen, IUD thread retrievers (Retrievet\(^8\) or Emmett\(^9\)) have been shown in a randomised trial to assist in thread retrieval. In this same study prior to randomisation, the use of Spencer Wells forceps for initial exploration of the endocervical canal was useful in identifying lost threads.\(^101\) Experienced clinicians may attempt to use a sound to identify if the IUD is lying within the endocervical canal, or within the uterine cavity, but the accuracy of this procedure is unknown. Care should be taken not to displace the device. If the IUD is confirmed as intrauterine, it can be retained or consideration given to replacement. The risk of infection when changing a device whose threads are not palpable, but which is still within its lifespan, must be discussed.

If the IUD is not visible on ultrasound scan, a plain abdominal X-ray should be arranged to determine if the IUD is extrauterine. An IUD should not be assumed expelled until a negative X-ray is obtained, unless the woman has witnessed expulsion. Hysteroscopy is not readily available in all settings, but can be useful if the ultrasound scan is equivocal. Surgical retrieval of an extrauterine IUD is advised.

**Abnormal bleeding**

- **37** Gynaecological pathology and infection should be excluded if abnormal bleeding persists beyond the first 6 months following IUD insertion (Grade C).

- **38** NSAIDs (mefenamic acid) can be used to treat spotting, light bleeding and heavy or prolonged menstruation. Antifibrinolytics (tranexamic acid) may be used for heavy or prolonged menstruation (Grade A).

WHOSPR recommends a short course of non-steroidal anti-inflammatory drugs (NSAIDs), taken during the days of bleeding, to treat spotting or light bleeding.\(^12\) Heavier and longer menstrual bleeding can be treated with NSAIDs (mefenamic acid) or antifibrinolytics (tranexamic acid). This approach is supported by small clinical trials.\(^102–104\) Gynaecological pathology, pregnancy and infection should be excluded if abnormal bleeding persists. A cohort study showed that complaints of bleeding are not associated with a misplaced device on ultrasound scan but this should be considered in women with persistent bleeding.\(^105\)
39 Most pregnancies occurring in women using an IUD will be intrauterine, but ectopic pregnancy must be excluded (Grade C).

40 Women who become pregnant whilst using an IUD should be informed of the increased risks of second-trimester miscarriage, preterm delivery and infection if the IUD is left in situ (Grade B).

41 Women who are pregnant with an IUD in situ, and who wish to continue with the pregnancy, should be informed that, when possible, IUD removal would reduce adverse outcomes. However, removal itself carries a small risk of miscarriage (Grade C).

42 Whether or not the IUD is removed, a pregnant woman should be advised to seek medical care if she develops heavy bleeding, cramping pain, abnormal vaginal discharge or fever (Grade C).

If there is no evidence that the IUD was expelled prior to pregnancy, it should be sought at delivery or TOP and, if not identified, a plain abdominal X-ray should be arranged to determine if the IUD is extrauterine.

WHOSPR provides recommendations on the management of women using an IUD who become pregnant. Approximately 6% of pregnancies occurring in women using an IUD are ectopic. If diagnosis is in any doubt, ectopic pregnancy must be excluded.

Women with an intrauterine pregnancy and an IUD in situ should be advised of an increased risk of second-trimester miscarriage, preterm delivery and infection if the IUD is left in situ (Grade B).

Advice regarding IUD removal varies with the reason. The primary mode of action of an IUD is prevention of fertilisation. Ovulation still occurs, and with the untimely removal of an IUD an ovum could potentially be fertilised and implant. If sexual intercourse with no additional contraception has occurred in the preceding 7 days, removal of the device may leave the woman at risk of pregnancy. Women should therefore be advised to use condoms or abstain from sexual intercourse for 7 days before IUD removal, even when replacement is planned. When sexual intercourse has occurred in the preceding 7 days, the need for IUD removal and use of EC should be discussed.

No evidence was identified regarding the optimal timing of pregnancy following IUD removal. A small, 10-year retrospective study investigated the outcomes of pregnancies occurring in women who became pregnant whilst using an IUD. The numbers included were very small but no evidence of fetal malformations was identified.

Presence of actinomyces-like organisms

43 An IUD can be removed at any time in the cycle if it is to be replaced immediately with another IUD. However, women should be advised to use condoms or abstain from sexual intercourse for 7 days before the exchange, in case a new IUD cannot be inserted immediately.

44 Symptomatic IUD users with ALOs detected on a cervical smear should be advised there is no reason to remove the IUD unless signs or symptoms of infection occur (Grade B).

Actinomyces israelii are commensals of the female genital tract. They may be identified on cervical smears, but this is not diagnostic or predictive of any disease. Actinomyces-like organisms (ALOs) are found in women with and without an IUD. The role of ALOs in infection in IUD users is unclear. Limited evidence suggests that the IUD should be removed in a symptomatic woman, with appropriate antibiotic treatment provided and referral to GUM or gynaecology. There is no evidence to support the routine removal of an IUD in an asymptomatic woman with ALOs or to support periodic ALO screening.

Previous recommendations suggest follow-up every 6 months for a woman retaining her IUD. However, currently there is little evidence to support routine follow-up unless symptoms occur. A 2-year follow-up of asymptomatic women with untreated ALOs who retained their IUDs did not identify PID in any women. More common causes of pelvic pain, such as STIs, should be investigated and managed appropriately.

Pelvic inflammatory disease

45 For IUD users with PID, appropriate antibiotics should be started. There is no need to remove the IUD unless symptoms fail to resolve (Grade B).

For IUD users with clinical PID, testing for relevant organisms and appropriate antibiotics should be initiated.
WHOSPR recommends that there is no need to remove the IUD. However, if the woman wishes IUD removal, it should be removed after antibiotic treatment has occurred. If the condition does not improve within 72 hours, generally the course would be to review the diagnosis, remove the IUD and continue antibiotics. All women with confirmed or suspected PID should be followed up to ensure: resolution of symptoms and signs; treatment of their partner when appropriate; completion of the course of antibiotics; STI risk assessment; counselling regarding safer sex; and partner notification.

Postmenopausal removal

Postmenopausal women should be advised to have their IUDs removed 1 year after their LMP if this occurs when they are over the age of 50 years, and 2 years after their LMP if aged less than 50 years.

It is generally accepted that an IUD can be removed 1 year after the last menstrual period (LMP) in a woman over the age of 50 years and 2 years after the LMP in women under the age of 50 years. It is advised that IUDs are removed, rather than left in situ, after the menopause. Cases of ALOs, endometrial cancer and pyometra have been reported in postmenopausal women with IUDs. If the IUD cannot be removed easily in an outpatient setting, consideration should be given to the benefits and risks of hysterectomy versus retention of the IUD.

References
43 Rowe PJ, Reinpwoon D, Koetswong S, et al. The TCu 380A IUD
This Guidance was developed by the Clinical Effectiveness Unit (CEU) of the Faculty of Family Planning and Reproductive Health Care (FPFPRHC); Gillian Penney (Director), Susan Brechin (Unit Co-ordinator) and Alison de Souza (Research Assistant) in consultation with the Clinical Effectiveness Effectiveness Unit (CEU), which includes service user representation and an Expert Group of health care professionals involved in family planning and reproductive health care. The Expert Group comprised: Urszula Bankowska (Consultant in Sexual and Reproductive Health Care, The Sandyford Initiative, Glasgow); Toni Belfield (Director of Medical Information, Ipsa, London); Maggie Gormley (Clinical Nurse Specialist, Margaret Pyke Centre, London); Mary Olliver (Head of Reproductive Health, Winchester and Eastleigh NHS Trust/Education Committee Member); Naomi Hampton (Consultant in Sexual and Reproductive Health Care, Ealing Primary Care Trust, London/Education Committee Member); Ruth Howlett-Shiple (Specialist Registrar in Public Health Medicine, South West Region/Trainee Member of the CEU); Sarah Hughes (Consultant in Contraception and Sexual Health, Victoria Health Centre, Nottingham); Noel Mack (General Practitioner, Kemnay Health Centre, Aberdeenshire ); Paul O’Brien (Senior Clinical Medical Officer, Westside Contraceptive Services, Westminster Primary Care Trust, London); Sam Rowlands (Clinical Director, bpas, London); Karen Trewinnard (Staff Grade Doctor, Ella Gordon Unit, St Mary’s Hospital, Portsmouth).

This guidance is also available online at www.fprhc.uk. Evidence tables are available on the FPFPRHC website. These summarise relevant published evidence on IUDs for long-term contraception, which was identified and appraised in the development of this Guidance. The clinical recommendations within this Guidance (i.e. the text appearing within the red and blue boxes) are based on evidence whenever possible.

### Grades of Recommendations

A Evidence based on randomised-controlled trials (RCTs)

B Evidence based on other robust experimental or observational studies

C Evidence is limited but the advice relies on expert opinion and has the endorsement of respected authorities

✓ Good Practice Point where no evidence exists but where best practice is based on the clinical experience of the Expert Group

Electronic searches were performed for: MEDLINE (Ovid version) (1996–2003); EMBASE (1996–2003); PubMed (1996–2003); the Cochrane Library (to September 2003) and the US National Guideline Clearing House. The searches were performed using relevant medical subject headings (MeSH), terms and text words. The Cochrane Library was searched for systematic reviews, meta-analyses and controlled trials relevant to copper-bearing intrauterine contraception. Previously existing guidelines from the FPFPRHC, the Royal College of Obstetricians and Gynaecologists (RCOG), the World Health Organization (WHO) and reference lists of identified publications were also searched. Similar search strategies have been used in the development of other national guidelines. Selected key publications were appraised according to standard methodological checklists before conclusions were considered as evidence. Evidence was graded as above, using a scheme similar to that adopted by the RCOG and other guideline development organisations.