Straight to the Point; Talking IUC

Step-by-step guidance to addressing concerns with intrauterine contraception

The Global INTRA Group is an independent panel of physicians with an expert interest in intrauterine contraception. Formation of the group and its ongoing work is supported and funded by Bayer AG.
**The INTRA group**

- **INTRA group**: Intrauterine coNtraception: Translating Research into Action
  - A panel of independent physicians with expert interest in intrauterine contraception
  - **Purpose**: To encourage more widespread use of intrauterine contraception (IUC) methods in a broad range of women through medical education

**Group members**

- Professor Carolina Vieira, Brazil
- Professor Kai Bühling, Germany
- Dr Brian Hauck, Canada
- Dr Josefina Lira, Mexico
- Dr Pamela Lotke, USA
- Dr Tina Peers, UK
- Professor Nikki Zite, USA

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Introduction

Despite the availability of an extensive range of contraceptive options, a high number of pregnancies are unplanned\(^1\).

Intrauterine contraception (IUC) is a highly effective method of contraception\(^2,3\).

Regardless of parity, in 95% of women IUC can be placed easily and successfully\(^4-7\), and the risk of complications is low\(^7,8\).

However, concerns around placement and potential complications prevent some HCPs from recommending IUC\(^9\).

The INTRA group provides step-by-step guidance to successfully manage these concerns, should they occur.

This guidance is based on the best evidence available and good practice recommendations (where no evidence exists).

For help in addressing your particular concern, click on the appropriate icon.
**Difficult placement**

**Perforation at time of placement (with sound)**

- Stop the procedure
- Monitor vital signs (blood pressure and pulse rate) and level of discomfort until stable
- Offer new IUC placement with ultrasound guidance in 4 weeks\(^{10}\) (if patient still motivated to use IUC)

**IUC placement unsuccessful**

- For example, due to severe pain
  - Counsel and reassure patient for another attempt at placement
  - Discuss other methods of contraception until IUC placement\(^{10}\)

**Ultrasound guidance**

- Confirm uterus position
- Ensure no creation of false passage
- Can improve success and placement accuracy\(^{11}\)

**Pain management**

- Consider local anaesthesia\(^{10,12,13}\)
- For post-placement pain go to **Pain**

**Mechanical help**

- Adequate traction with tenaculum
- Repositioning of tenaculum (to get round ‘kinks’ or ‘lip’ in cervical canal)
- Use of dilators (small 5mm Denniston; Hegar Cervical Dilators; Os finder or cytobrush\(^{12,14}\))
- Consider misoprostol prior to IUC placement (200 mcg 10 and 4 hours prior\(^{14,15}\)

**Additional information:**

- The recommendations included on this page should only be considered for difficult placements. In the vast majority of women, IUC is placed with ease, regardless of age or parity\(^{4,6}\)

**References**

**Disclaimer:** Please note that these statements and practical recommendations are based on the best evidence available and INTRA good practice recommendations (where no evidence exists)
In the vast majority of women, IUC is inserted with ease, regardless of parity.4-6

<table>
<thead>
<tr>
<th>Reference</th>
<th>Countries</th>
<th>Sample size</th>
<th>Type of IUC</th>
<th>% of successful IUC placements</th>
<th>% of IUC placements rated as ‘easy’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marions L, et al. 20114</td>
<td>Sweden</td>
<td>224 nulliparous women</td>
<td>LNG-IUS 20</td>
<td>97.4%</td>
<td>72%</td>
</tr>
<tr>
<td>Gemzell-Danielsson K, et al. 201216</td>
<td>Thirty-seven centres in Finland, Sweden, Norway, Hungary and UK</td>
<td>738 parous and nulliparous women</td>
<td>LNG-IUS 20 LNG-IUS 12 LNG-IUS 16</td>
<td>99.5%</td>
<td>94.0% (LNG-IUS 12/LNG-IUS 16) 86.2% (LNG-IUS 20)</td>
</tr>
<tr>
<td>Harvey C, et al. 201217</td>
<td>Australia and New Zealand</td>
<td>996 parous and nulliparous women</td>
<td>Cu-IUD</td>
<td>95%</td>
<td>90%</td>
</tr>
<tr>
<td>Bahamondes MV, et al. 20116</td>
<td>Brazil</td>
<td>159 nulliparous women</td>
<td>LNG-IUS 20</td>
<td>99.4%</td>
<td>81%</td>
</tr>
</tbody>
</table>
Difficult placement

References

Counselling points:
- IUC removal may be requested by the patient at any time
- If patient requests IUC removal, a cytobrush or IUS hook may be used
- Counsel on other contraceptive options

Able to confirm IUC – threads located with cytobrush

- Perform a speculum examination
- Use a cytobrush to retrieve threads

Unable to confirm IUC – threads not located with cytobrush

- Check for pregnancy

Able to confirm presence and positioning of IUC with ultrasound

- Immediate access to ultrasound
- Unable to confirm IUC with ultrasound
  - Abdominal/pelvic X-ray (or schedule if asymptomatic)
  - Counsel on other contraceptive options and consider emergency contraception if indicated

Position at the fundus

- Routine care
- Provide reassurance

Malpositioned IUC

- Positive pregnancy test
- Negative pregnancy test

Provide contraceptive counselling

IUC visualised (pelvis or abdomen)

- Recommend surgical management

IUC not visualised

- Assume expulsion
- Provide contraceptive counselling

Disclaimer: Please note that these statements and practical recommendations are based on the best evidence available and INTRA good practice recommendations (where no evidence exists)
Counselling points:

- IUC removal may be requested at any time
- If patient requests IUC removal: use cytobrush, palpation, IUS hook and packing forceps
- Counsel on other contraceptive options

No threads visible

Additional information

Using a cytobrush

- A cytobrush can be used during difficult placement to retrieve threads
- When IUC threads are noted to be missing, the first step in management is the use of a cervical cytology brush to sweep the threads from the endocervix
- This procedure alone is frequently effective and can be performed regardless of pregnancy status and whether the patient wishes to continue with the IUC or not
- In addition, a colposcope and/or endocervical speculum may be used to improve visualisation of IUC threads in the cervical canal

IUC visualised (pelvis or abdomen)  \[\rightarrow\]  Recommend surgical management

IUC not visualised \[\rightarrow\]  Assume expulsion \[\rightarrow\]  Provide contraceptive counselling

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Positive pregnancy test

Obtain ultrasound

Able to confirm intrauterine pregnancy

- Able to confirm position of IUC in uterus

- Counsel on pregnancy options

  - Continue pregnancy
    - Remove IUC if threads visible
  - If patient declines removal, counsel on possible adverse outcomes such as miscarriage and pre-term birth

- Termination of pregnancy (TOP)
  - Remove IUC at time of TOP

Unable to confirm intrauterine pregnancy

- Evaluate the possibility of ectopic pregnancy
- Manage according to local guidelines

- Intrauterine pregnancy confirmed
  - Refer to local guidelines

- Pregnancy of unknown location suspected
  - Ectopic pregnancy confirmed
  - Refer to local guidelines

- Unable to confirm intrauterine pregnancy
  - Unable to confirm intrauterine pregnancy

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Nonfundal location of IUC (identified or confirmed using ultrasound)

Asymptomatic
- IUC stem above internal os\(^1\)
- Detailed counselling: expectant management vs removal\(^1\)
- Retention of low-lying IUC is associated with lower pregnancy rates than removal\(^2\)

Symptomatic (pain and/or abnormal discharge or bleeding or dyspareunia)
- IUC stem below internal os: IUC within cervical canal\(^1\)
- Partial expulsion; remove IUC\(^1\)
- Counsel on other contraceptive options
- Detailed counselling: expectant management vs removal\(^1\)
- Retention of low-lying IUC is associated with lower pregnancy rates than removal\(^2\)
- Remove IUC if symptoms remain troublesome and/or persist beyond 3 months and counsel on other contraceptive options

Counselling points:
- If patient desires IUC replacement, consider use of ultrasound

Additional information:
- Over 90% of low lying IUCs can move upwards within 60-90 days of placement. Endometrial changes during menstrual cycle are a factor\(^1,2,3\)

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References

**Counselling point:**
- Before placement, counsel on the expected bleeding pattern associated with IUC use.10,23-26

- **Less than 3-6 months after IUC placement and symptoms** absent10,24,27
  - **Reassure about bleeding patterns**10,24
  - **Offer options to manage bleeding if bothersome:**
    - Nonsteroidal anti-inflammatories (NSAIDs) can be considered with LNG-IUS and Cu-IUD24,27-30
    - Combined oral contraceptives (COC) can be considered with LNG-IUS24 **
    - Tranexamic acid (500 mg) can be considered with Cu-IUD (N.B. studies show lack of efficacy with LNG-IUS)27,29-31

  If bleeding continues to be bothersome:
  - Counsel on other contraceptive options
  - Remove IUC if requested

- **Less than 3-6 months after IUC placement and symptoms** present10,23,24,27

- **More than 3-6 months after IUC placement with persistent bleeding or failed medication treatment or new symptom or bleeding pattern**10,24,27

  - **Pregnancy test**
  - **Gynaecological examination**

  - **Negative pregnancy test**
    - **Gynaecological examination normal**
      - **Ultrasound**
        - **Normal ultrasound**
        - **Abnormal ultrasound**
          - **Treat accordingly**
          - **Nonfundal location**

  - **Positive pregnancy test**
    - **Gynaecological examination abnormal** (e.g. infection, cervical lesion)
      - **Treat accordingly**

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*Symptoms: pelvic pain, dyspareunia, abnormal vaginal discharge, heavy bleeding, postcoital bleeding*10,11,24,27

**Please note, this statement reflects current clinical practice which includes off-label use.**

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**References**
**Pain**

- Post-insertion (same day)
  - Gynaecological examination
    - Mild pain
      - Check position of IUC with ultrasound
        - No apparent cause
          - Perforation
            - Reassure
            - Offer symptomatic relief/analgesia
            - Follow-up
        - Nonfundal location
          - Reassure
          - Offer symptomatic relief/analgesia
          - Follow-up
    - Moderate/severe pain
      - Check position of IUC with ultrasound
        - No apparent cause
          - Perforation
            - Reassure
            - Offer symptomatic relief/analgesia
            - Follow-up
          - Nonfundal location
            - Reassure
            - Offer symptomatic relief/analgesia
            - Follow-up
          - Positive pregnancy test
            - Pregnancy test
              - Negative pregnancy test
                - Ultrasound
                  - Uterine abnormalities
                    - Treat accordingly
                  - No apparent cause
                    - Nonfundal location
                      - Perforation
                        - Reassure
                        - Start NSAIDs/heat
                        - Follow-up
                  - Nonfundal location
                    - Perforation
                      - Reassure
                      - Start NSAIDs/heat
                      - Follow-up

- Post-insertion (>1 day)
  - Gynaecological examination
    - No apparent cause
      - Infection
    - Threads visible
      - Pregnancy test
        - Positive pregnancy test
          - Ultrasound
            - Uterine abnormalities
              - Treat accordingly
            - No apparent cause
              - Nonfundal location
                - Perforation
                  - Reassure
                  - Start NSAIDs/heat
                  - Follow-up
          - Nonfundal location
            - Perforation
              - Reassure
              - Start NSAIDs/heat
              - Follow-up
        - Negative pregnancy test
          - Ultrasound
            - Uterine abnormalities
              - Treat accordingly
            - No apparent cause
              - Nonfundal location
                - Perforation
                  - Reassure
                  - Start NSAIDs/heat
                  - Follow-up
          - Nonfundal location
            - Perforation
              - Reassure
              - Start NSAIDs/heat
              - Follow-up

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**Please see INTRA Hints and Tips slide set at www.your-life.com/HCP**
**Additional information**

- For the vast majority of women, pain with IUC placement is mild to moderate, regardless of parity\(^{32-34}\)

<table>
<thead>
<tr>
<th>Reference</th>
<th>Countries</th>
<th>Sample (characteristic and size)</th>
<th>Type of IUC</th>
<th>Pain at IUC insertion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gemzell-Danielsson K, et al. 2016(^{32})</td>
<td>36 European countries</td>
<td>304 nulliparous and parous adolescents</td>
<td>LNG-IUS 8(\mu)g/day</td>
<td>20.5% none, 34.3% mild, 34.3% moderate and 10.9% severe</td>
</tr>
<tr>
<td>Hall AM &amp; Kutler BA. 2016(^{33})</td>
<td>US</td>
<td>109 nulliparous women</td>
<td>88 LNG-IUS 20(\mu)g/day and 21 Cu-IUD (T380A)</td>
<td>23% mild pain; 35% moderate pain and 42% severe pain</td>
</tr>
<tr>
<td>Hubacher D et al, 2006(^{34})</td>
<td>Chile</td>
<td>2019 nulliparous and parous women (randomised: 1008 to placebo and 1008 to ibuprofen group)</td>
<td>Cu-IUD (T380A)</td>
<td>Placebo group – 81.8% none or mild, 13.4% moderate and 4.9% severe Ibuprofen group – 84.7% none or mild, 12.6% moderate and 4.0% severe</td>
</tr>
</tbody>
</table>

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Infection

Asymptomatic

Swab positive for
- *Chlamydia trachomatis*
- *Neisseria gonorrhoeae*

Swab negative
- No clinical features of pelvic inflammatory disease (PID)

Symptomatic

Swab positive
- No features of PID

Swab negative
- No features of PID

Clinical features of PID:\(^{35}\)
- Pelvic or abdominal pain plus at least one of the following:
  - cervical motion tenderness or
  - uterine tenderness or
  - adnexal tenderness

Follow your local antibiotic policy

- IUC removal is not routinely required nor recommended in PID\(^{10,19,35}\)
- Removal should be considered if there is no response to treatment (after 48 – 72 hours)\(^{10,19,35}\)
- If a woman requires IUC removal, it should be done after antibiotics have been initiated to prevent bacterial spread\(^{19,35}\)

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**Additional information**

- Studies involving women of various ages, parity and risk of sexually transmitted infection (STI) show that the risk of pelvic inflammatory disease (PID) with IUC use is low (<1%)\(^7,36,37\)

<table>
<thead>
<tr>
<th>Reference</th>
<th>Countries</th>
<th>Sample (characteristic and size)</th>
<th>Type of IUC</th>
<th>Incidence of PID (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufrin CB, et al. 2012(^36)</td>
<td>USA</td>
<td>57,728 women, aged 14 to 49 years</td>
<td>LNG-IUS</td>
<td>0.54</td>
</tr>
<tr>
<td>Birgisson NE, et al. 2015(^37)</td>
<td>USA (CHOICE Study population)</td>
<td>7,611 women, aged 14 to 45 years, interested in reversible contraception</td>
<td>Cu-IUD LNG-IUS</td>
<td>0.46</td>
</tr>
<tr>
<td>Gemzell-Danielsson K, et al. 2015(^7)</td>
<td>Argentina, Canada, Chile, Finland, France, Hungary, Mexico, Netherlands, Norway, Sweden and USA</td>
<td>2,884 women, aged 18 to 35 years, requesting contraception and considered suitable for IUC insertion</td>
<td>LNG-IUS 8 LNG-IUS 13</td>
<td>0.42</td>
</tr>
</tbody>
</table>
Perforation with the IUC

- Monitor vital signs (blood pressure and pulse rate) and level of discomfort until stable
- Offer new IUC placement after 4 weeks (if patient still motivated to use IUC)
- Discuss alternative contraceptive method until IUC placement
- Consider ultrasound guidance for placement of another IUC

Threads visible:
- Remove immediately

Threads not visible:
- Confirm position with pelvic ultrasound or abdominal/pelvic X-ray
- Consider expulsion
- Consider diagnostic hysteroscopy or laparoscopy to confirm expulsion
- Consider laparoscopic or hysteroscopic removal
- If patient is still motivated to use IUC:
  - Consider placement during removal under direct laparoscopic guidance
  - Or offer new IUC placement after 4 weeks:
    - Discuss alternative contraceptive method until IUC placement
    - Consider ultrasound guidance for placement

Counselling point:
- Counsel regarding other contraceptive options
- Provide guidance about interim contraception options whilst awaiting confirmation of IUC position

Disclaimer: Please note that these statements and practical recommendations are based on the best evidence available and INTRA good practice recommendations (where no evidence exists).
**Suspected perforation**

- **Counselling point:**
  - Counsel regarding other contraceptive options
  - Provide guidance about interim contraception options whilst awaiting confirmation of IUC position

### Additional information

- The EURAS-IUD study shows a low risk of uterine perforation with IUC within the total patient population, incidence of perforation was \( \approx 1/1,000 \) placements\(^8\)

- Breastfeeding and time since last delivery are independent risk factors for uterine perforation, irrespective of type of IUC placed\(^8\)

- **Uterine perforation incidence per 1000 placements for the entire study cohort (parous women, \( n=60,213 \))\(^1\)**

<table>
<thead>
<tr>
<th>Time since last delivery</th>
<th>Yes</th>
<th>No</th>
<th>Relative risk (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \leq 36 ) weeks</td>
<td>5.6 (3.9–7.9)</td>
<td>1.7 (0.8–3.1)</td>
<td>3.3 (1.6–6.7)</td>
</tr>
<tr>
<td>&gt;36 weeks</td>
<td>1.6 (0.0–9.1)</td>
<td>0.7 (0.5–1.1)</td>
<td>2.2 (0.3–16.3)</td>
</tr>
<tr>
<td>Relative risk (95% CI)</td>
<td></td>
<td></td>
<td>3.4 (0.5–24.8)</td>
</tr>
<tr>
<td><em>Relative risk in 2017 re-analysis (95% CI)^2</em></td>
<td>2.9 (0.4–21.4)</td>
<td>1.9 (0.8–4.8)</td>
<td></td>
</tr>
</tbody>
</table>

- None of the perforations resulted in serious sequelae, such as bowel or bladder injury, septicemia or peritonitis\(^8\)

* A re-analysis, looking only at complete perforations, found slightly reduced risk estimates\(^2\)

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References