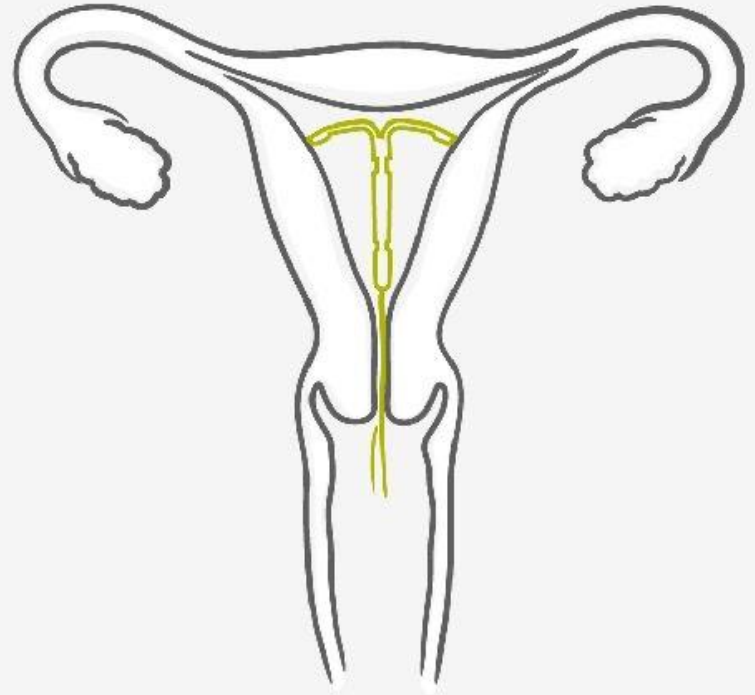


# INTRAUTERINE CONTRACEPTIVE DEVICES

TARUN GAMBHIR  
ROLL NO : 108



# IUCDs

## Types and Materials

- Made from plastic, copper, or hormone-releasing materials.
- Some **inert coils** (e.g., Lippes Loop) are plastic-only.
- **Copper-bearing IUDs**: Copper-7, Copper-T, Nova-T.
- **Hormone-releasing IUDs** like Mirena contain levonorgestrel (20 mcg/day in a reservoir and have arms to aid removal
- **others** :saf-t-coil.
- Introduced using an **introducer**, **retains shape** in uterus.

- **Highly effective, reversible, long term & modern contraceptive method.**
- Insertion is a brief procedure done by **trained healthcare professionals.**
- Causes mild to moderate discomfort.
- A fine nylon thread is left through the cervix into the vagina for future removal.
- Protects against intrauterine and ectopic pregnancy.
- If pregnancy occurs, higher risk of it being **ectopic.**

## **COMMONLY USED INTRAUTERINE CONTRACEPTIVE DEVICES**

|                    |                        |                        |
|--------------------|------------------------|------------------------|
| • <b>Cu T 200</b>  | • <b>Multiload 250</b> | • <b>Multiload 375</b> |
| • <b>Cu T 380A</b> | • <b>LNG – IUS</b>     | • <b>GyneFix</b>       |

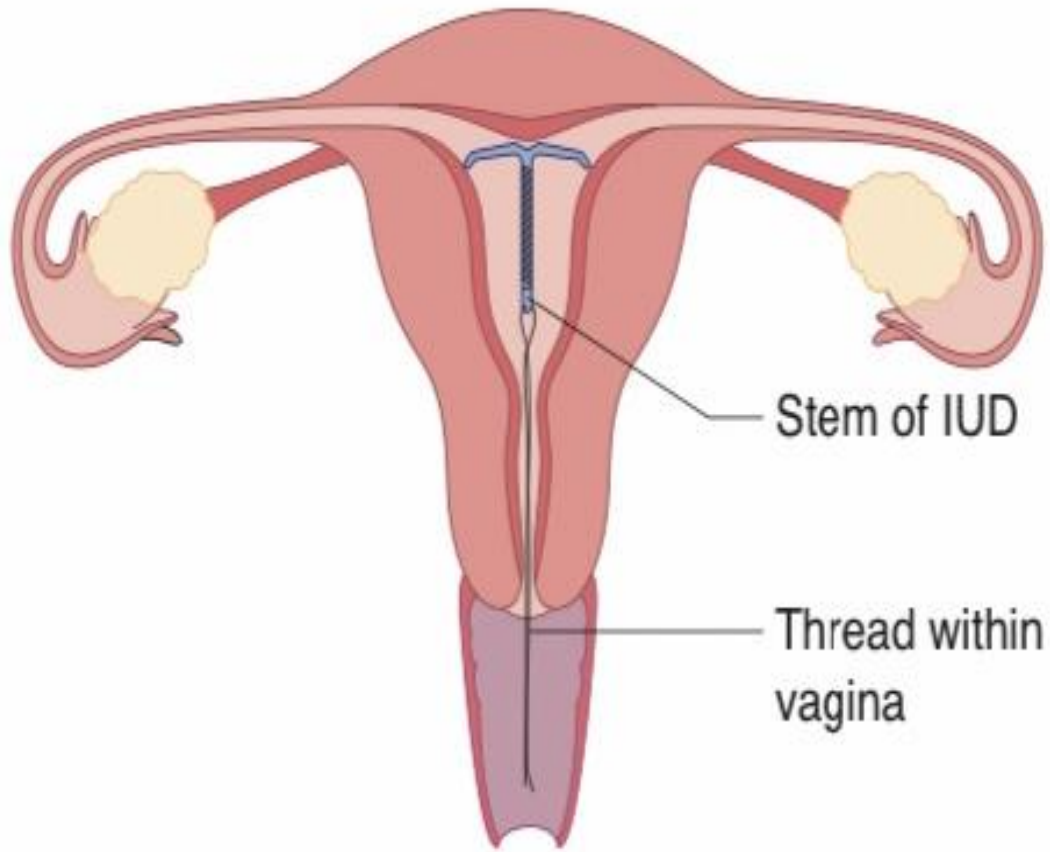


**Figure 7.10** Intrauterine device (IUD) in the uterine cavity.

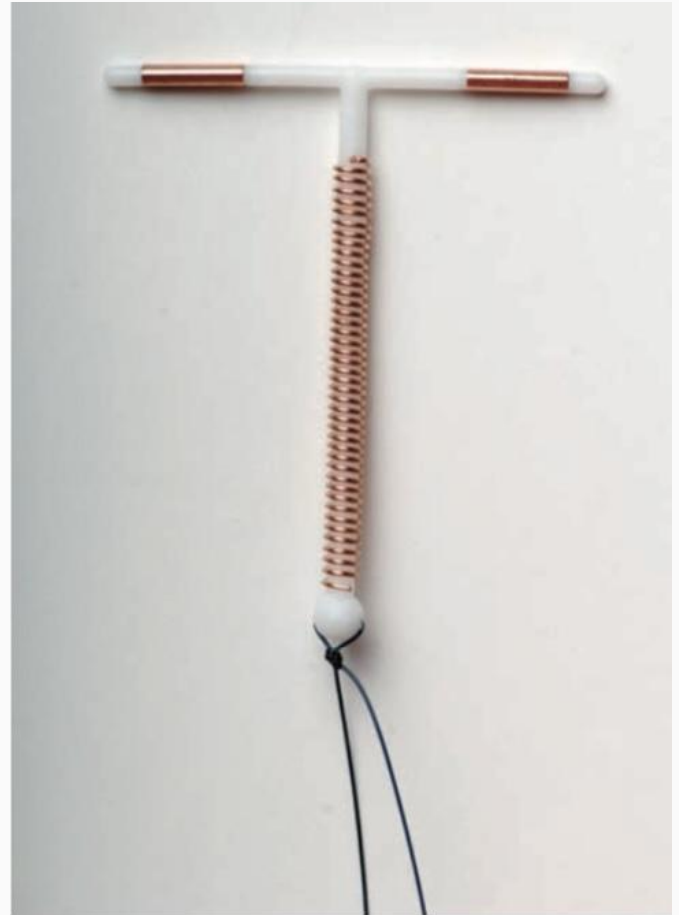


**Figure 7.11** Copper bearing IUD with copper on stem and arms. Photograph courtesy of Durbin Ltd.

# CLASSIFICATION

- **Open IUCDs** (safe in case of perforation):

Examples: **Lippes loop, Cu T, Cu 7, Multiload, Progestasert.**

- **Closed IUCDs** (obsolete due to risk of gut strangulation):

Examples: Grafenberg ring, Birnberg bow.

| Generation             | Description                                                                                                    |
|------------------------|----------------------------------------------------------------------------------------------------------------|
| First generation IUDs  | These are inert or non-medicated devices. e.g. Lippe's loop.                                                   |
| Second generation IUDs | It consists of copper or silver containing IUDs<br>e.g. T Cu-220 C, T Cu 380- Ag, Nova T, Multiload Cu 250/375 |
| Third generation IUDs  | This consists of hormone releasing IUDs. E.g. Progestasert, Mirena.                                            |

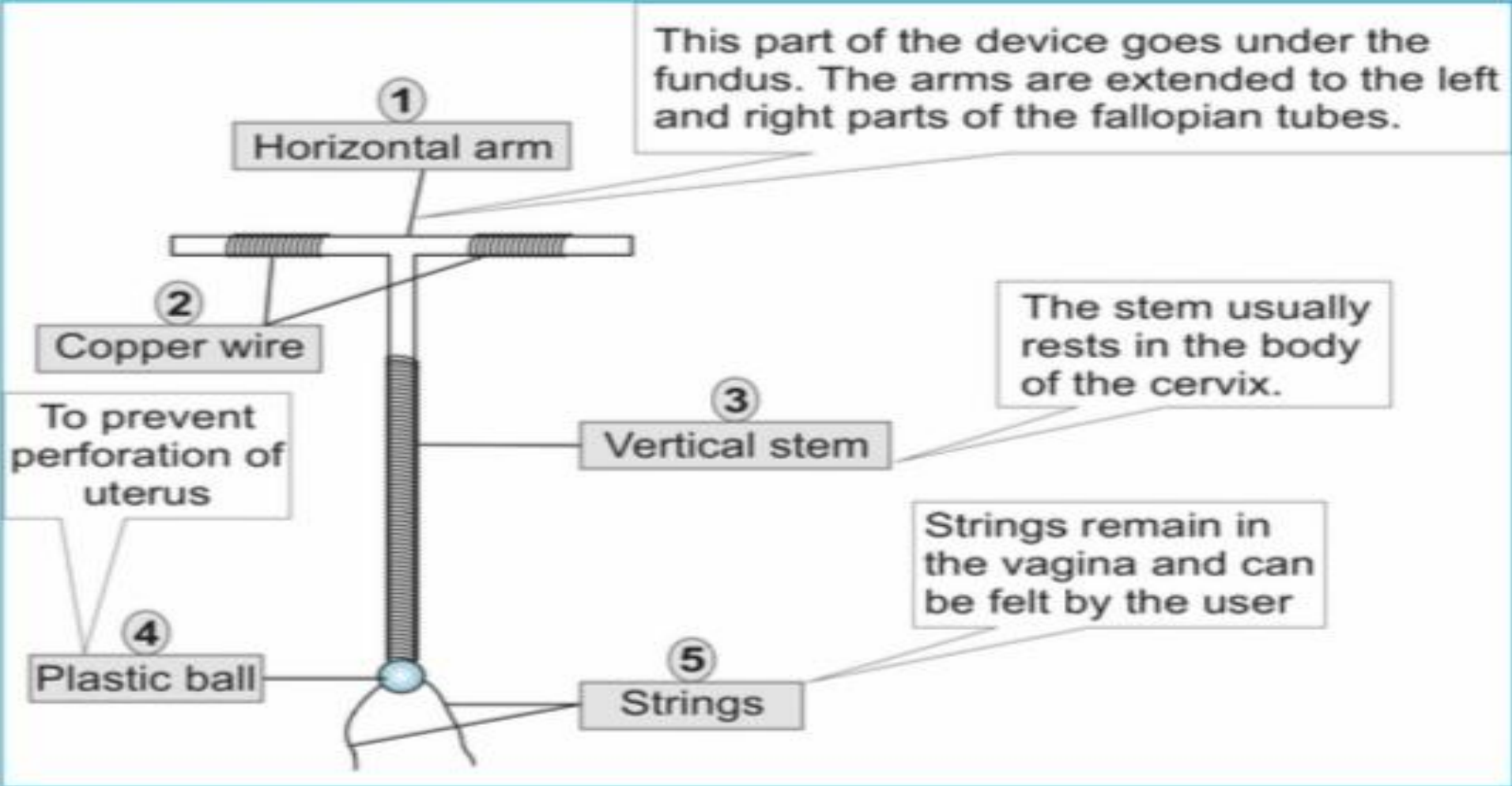


**Fig. 10.11: Parts of IUCD**

| Type                | Examples                                                                | Characteristics                                                                                                                                                                                                                                              | Duration of Use   | Other Notes                                                                                                                                            |
|---------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Non-medicated IUCDs | Lippes Loop                                                             | <ul style="list-style-type: none"> <li>• Double S-shaped polyethylene</li> <li>• Sizes: A, B, C, D (D = largest)</li> </ul>                                                                                                                                  | Obsolete in India | <ul style="list-style-type: none"> <li>• No longer used in India.</li> </ul>                                                                           |
| Copper-based IUCDs  | Copper T 200, Copper 7, Multiload 250, Copper T 380A (Paragard), Nova T | <ul style="list-style-type: none"> <li>• Copper elution: ~50 mcg/day</li> <li>• Available in various shapes and sizes</li> <li>• Cause less menstrual disruption than older plastic models</li> <li>• Effectiveness increases with copper content</li> </ul> | 3–10 years        | <ul style="list-style-type: none"> <li>• Copper release: 50 mcg/day (e.g., Copper T 380A)</li> <li>• Nova T has silver to increase lifespan</li> </ul> |

|                          |  |                                                                                                                                                                                                |           |                                                                                                                                |
|--------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------|
| Copper T 200             |  | <ul style="list-style-type: none"> <li>• 200 mm<sup>2</sup> copper on vertical stem</li> <li>• Previously common in India</li> </ul>                                                           | 3–4 years | <ul style="list-style-type: none"> <li>• Copper: 120–124 mg, Surface area: 200–215 mm<sup>2</sup></li> </ul>                   |
| Copper T 380A (Paragard) |  | <ul style="list-style-type: none"> <li>• T-shaped with 314 mm<sup>2</sup> copper on vertical stem + two 33 mm<sup>2</sup> copper sleeves</li> <li>• Used as emergency contraception</li> </ul> | 10 years  | <ul style="list-style-type: none"> <li>• Copper release: 50 mcg/day</li> <li>• May increase blood loss (~80 ml avg)</li> </ul> |
| Multiload Cu 250         |  | <ul style="list-style-type: none"> <li>• Copper emits 60–100 µg/day</li> </ul>                                                                                                                 | 3 years   |                                                                                                                                |
| Multiload Cu 375         |  | <ul style="list-style-type: none"> <li>• Surface area: 375 mm<sup>2</sup></li> </ul>                                                                                                           | 5 years   |                                                                                                                                |
| Cu Safe 300              |  | <ul style="list-style-type: none"> <li>• 300 mm<sup>2</sup> copper, more flexible, less painful</li> </ul>                                                                                     |           |                                                                                                                                |

|                              |                              |                                                                                                                                                                                                         |         |                                                                                                |
|------------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------|
| Hormone-releasing IUCDs      | Mirena (Levonorgestrel IUCD) | <ul style="list-style-type: none"> <li>• Contains 52 mg levonorgestrel, releases 20 mcg/day</li> <li>• Does not affect ovulation</li> <li>• Effectiveness comparable to female sterilization</li> </ul> | 5 years | <ul style="list-style-type: none"> <li>• Fertility returns immediately upon removal</li> </ul> |
| Progestasert                 |                              | <ul style="list-style-type: none"> <li>• 38 mg progesterone, releases 65 mcg/day</li> </ul>                                                                                                             | 1 year  |                                                                                                |
| Levonova                     |                              | <ul style="list-style-type: none"> <li>• 60 mg LNG, 20 mcg/day</li> </ul>                                                                                                                               | 5 years |                                                                                                |
| Mechanism of Action (Mirena) |                              | <ul style="list-style-type: none"> <li>• Thickens cervical mucus</li> <li>• Inhibits sperm function</li> <li>• Alters endometrium to prevent implantation</li> </ul>                                    |         |                                                                                                |

|                                 |                             |                                                                                                                                                                                                      |             |                                                                                                                                         |
|---------------------------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Non-contraceptive Uses (Mirena) |                             | <ul style="list-style-type: none"> <li>• Menorrhagia, Dysmenorrhea, Adenomyosis, Endometriosis</li> <li>• Endometrial hyperplasia, Fibroids</li> </ul>                                               |             | <ul style="list-style-type: none"> <li>• Hormone replacement during perimenopause</li> </ul>                                            |
| Drawbacks (Mirena)              |                             | <ul style="list-style-type: none"> <li>• Irregular bleeding</li> <li>• Amenorrhea in 20–50% by 1 year</li> <li>• Not suitable for emergency contraception</li> </ul>                                 |             |                                                                                                                                         |
| Frameless IUCDs                 | GyneFix / CuFix / Flexigard | <ul style="list-style-type: none"> <li>• Frameless, 6 copper sleeves on propylene thread</li> <li>• Suited for nulliparous females</li> <li>• Adapt to uterine shape, fewer complications</li> </ul> |             | <ul style="list-style-type: none"> <li>• Anchored into uterine fundus with a knot</li> <li>• Releases 14 mcg progestogen/day</li> </ul> |
| Essure Device                   |                             | <ul style="list-style-type: none"> <li>• Placed in fallopian tubes</li> </ul>                                                                                                                        | Under trial | <ul style="list-style-type: none"> <li>• Concept: Permanent sterilization</li> </ul>                                                    |



Cu T 200

**A**



Multiload 375

**B**



Cu T 380A

**C**



Levonorgestrel containing  
IUD (LNG-IUS)

**D**

**Fig. 29.2:** Commonly used IUD

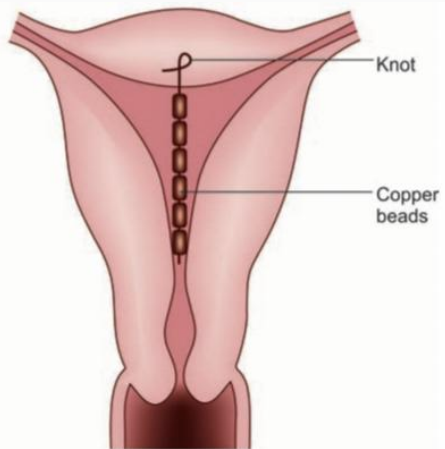


Figure 20.9 Frameless IUCD.

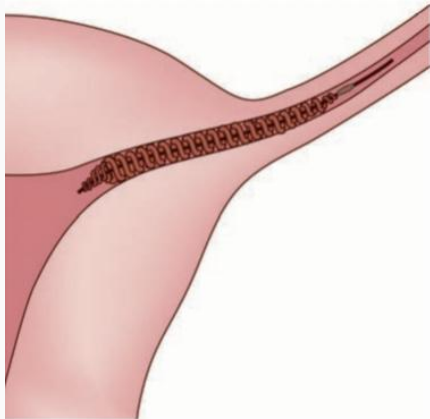


Figure 20.10 Essure device.

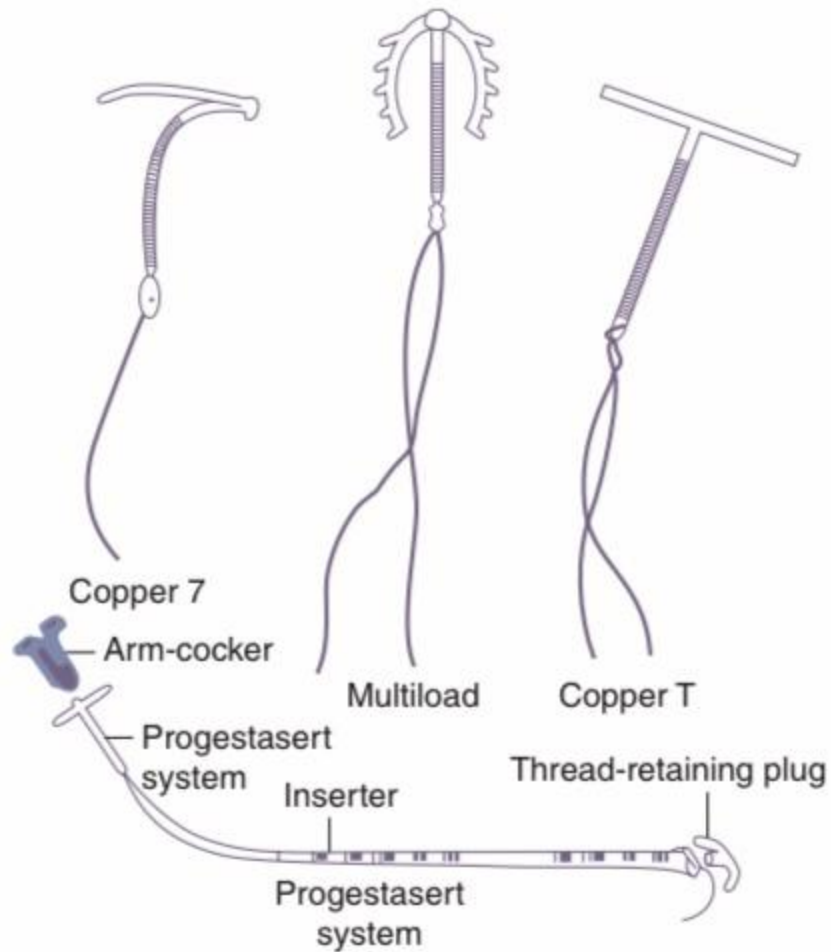


Figure 20.8 IUCDs in common use.

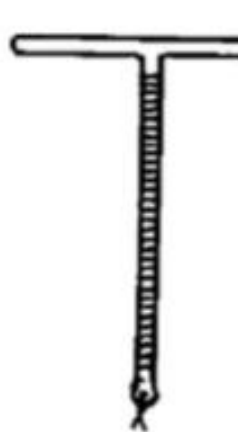


Hormone-releasing intrauterine system – graph courtesy of Bayer Schering Ltd.

|                                   | Copper IUD                                                             | Mirena                                                                                               |
|-----------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Failure rate in first year of use | 0.8%                                                                   | 0.1%                                                                                                 |
| Mode of action                    | Toxic effect on both sperm and egg, i.e. acting prior to fertilization | Local hormonal effect on the cervical mucus and endometrium                                          |
| Duration of use                   | 10 years                                                               | 5 years                                                                                              |
| Effect on menstrual cycle         | Periods can become heavier with more pain                              | Periods become irregular but much lighter. Women often become amenorrhoeic                           |
| Menstrual spotting                | Often more days of spotting before and after periods                   | Erratic spotting very common initially but usually settles                                           |
| Hormonal side effects             | None                                                                   | May cause greasier skin and acne, breast tenderness and mood swings. Symptoms often settle with time |
| Therapeutic benefits              | None                                                                   | Helps heavy and painful periods. Can use as part of a hormone replacement therapy regimen            |
| Average UK cost                   | £10                                                                    | £80                                                                                                  |



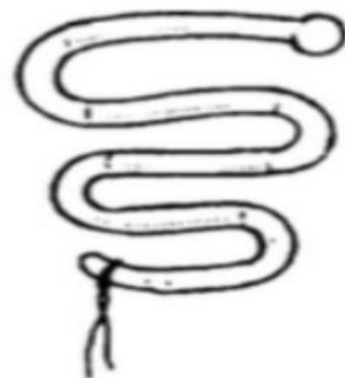
Novagard (Nova-T)



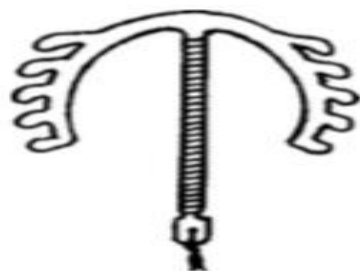
Copper-T



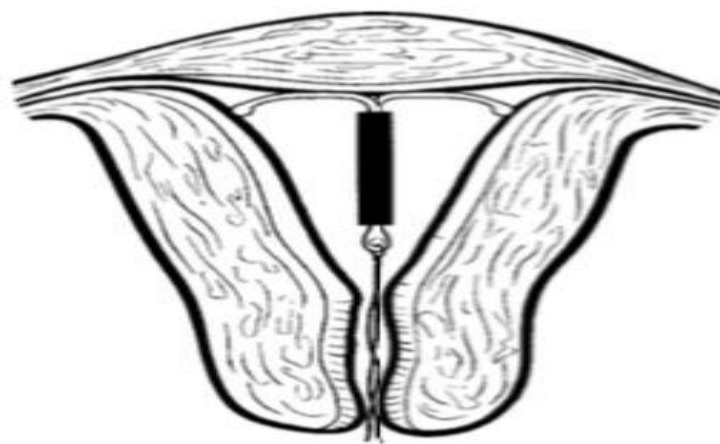
Copper-7 IUD in place



Lippes Loop



Multiload



Mirena



Saf-T-Coil



**Fig. 29.5:** Ultrasonogram showing the Cu T inside the

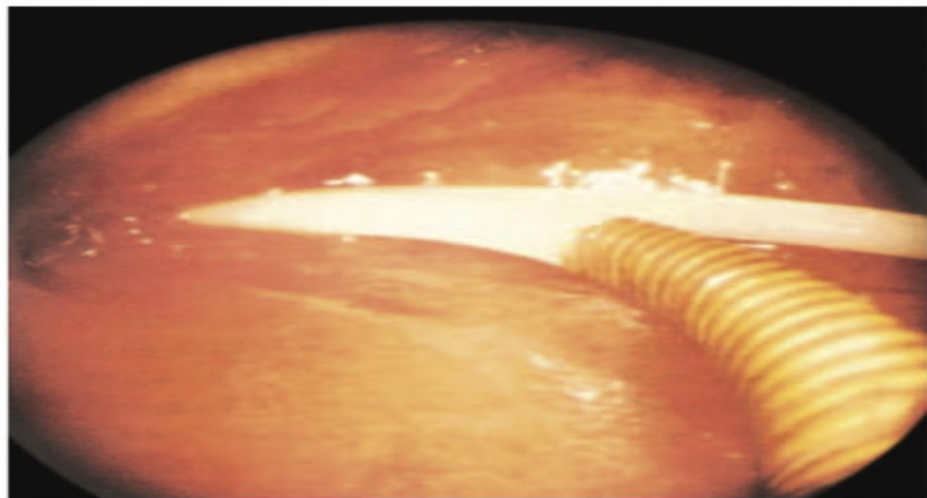


**Fig. 29.6:** Hysteroscopic view of IUCD in uterine cavity.



**Fig. 29.7:** Straight X-ray of the pelvis with an uterine sound placed inside the uterine cavity — (a) the displaced IUCD seems inside the uterine cavity with AP view. Lateral view is needed for confirmation [By courtesy: Dr Swati Shirodkar, HOD, Dept of Obst Gyn, MGM Medical College, Aurangabad]



**Figure 20.12B** Pelvic radiograph showing Lipples loop in the pelvic cavity (Courtesy: Dr K K Saxena, New Delhi.)

# EFFECTS ON MENSTRUATION

## **Non-hormonal IUDs:**

- May cause heavy, painful periods.

## **Mirena:**

- Reduces menstrual blood loss.
- **Alleviates dysmenorrhoea due to:**
  - Local progestin effect on endometrium.
  - Muscle relaxant effect on myometrium.

| Type of IUD                                                 | Mechanism of Action                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Non-medicated IUDs                                          | <ul style="list-style-type: none"> <li>- Act as a foreign body in the uterus.</li> <li>- Induce sterile inflammatory response and mild tissue injury, which is spermicidal.</li> <li>- Prevent sperm from reaching the ovum — block both intrauterine and ectopic pregnancies.</li> <li>- Increase uterine contractility and tubal peristalsis.</li> </ul> |
| Copper-containing IUDs                                      | <ul style="list-style-type: none"> <li>- Release copper ions, which are toxic to sperm and ova.</li> <li>- Alter enzymatic activity and endometrial metabolism.</li> <li>- Change cervical mucus and endometrial secretions, making them hostile.</li> <li>- Induce local inflammation that prevents fertilization and implantation.</li> </ul>            |
| Hormonal IUDs (Progestin-releasing, e.g., LNG-IUS / Mirena) | <ul style="list-style-type: none"> <li>- Release levonorgestrel (progestin) locally into endometrium.</li> <li>- Cause decidualization and atrophy of endometrial glands—makes implantation unlikely.</li> <li>- Thicken cervical mucus, blocking sperm penetration and capacitation.</li> <li>- Inhibit ovulation in ~40% of users.</li> </ul>            |

## General Effects (All IUDs)

- Create a spermicidal, gametotoxic environment.
- Trigger leukocytic infiltration, destroying the ovum.
- Do not prevent ovulation (except hormonal types in some cases).
- Act within the uterine cavity—not abortifacients.
- May provoke uterine contractions via prostaglandins.

## Infection Consideration

- Risk of infection from ascending bacteria during insertion or via threads.
- Hormonal IUDs reduce risk by thickening cervical mucus, forming a protective barrier.

# INDICATIONS

- Desires long-term reversible contraception
- Low STD risk
- Cannot tolerate oral/barrier methods
- Can be used in nursing mothers, HIV-positive women on ART

## **Clinical uses**

- Regular contraception
- Postcoital (emergency) contraception
- Treatment in AUB, HRT, endometrial hyperplasia

# CONTRAINDICATIONS

| Category                                    | Details                                                                                                                                                                                                                         |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Contraindications                   | - Active pelvic infection (e.g., STI) - Undiagnosed genital bleeding - Suspected pregnancy (including post-abortion/postpartum) - Uterine anomalies, severe dysmenorrhea, history of ectopic pregnancy - <6 weeks post-cesarean |
| CuT-Specific                                | - Wilson's disease - Copper allergy (Use LNG-IUS instead)                                                                                                                                                                       |
| LNG-IUS Specific                            | - Breast cancer - Liver disease - Severe arterial disease                                                                                                                                                                       |
| Absolute Contraindications (WHO Category 4) | - Confirmed pregnancy - Puerperal sepsis - Gestational trophoblastic disease - PID or STI (current or within last 3 months) - Pelvic TB - Cervical or endometrial cancer                                                        |

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Relative Contraindications         | <ul style="list-style-type: none"> <li>- Uterine cavity distortion (e.g., large fibroids, congenital anomalies)</li> <li>- Wilson's disease (for CuT)</li> <li>- Breast cancer (for Mirena)</li> </ul>                                                                                                                                                                                                     |
| Infection – Special Considerations | <ul style="list-style-type: none"> <li>- Slightly increased infection risk in the first few weeks post-insertion.</li> <li>- No long-term PID risk in monogamous women.</li> <li>- IUDs do not protect against STIs.</li> <li>- Mirena lowers infection risk via progestogen.</li> <li>- Routine antibiotics not needed.</li> <li>- Consider prophylaxis if high STI risk or limited screening.</li> </ul> |
| Ectopic Pregnancy Risk             | <ul style="list-style-type: none"> <li>- IUDs reduce overall ectopic and intrauterine pregnancy risk.</li> <li>- If pregnancy occurs:             <ul style="list-style-type: none"> <li>• Ectopic risk 3–5%, &lt;1% with Mirena</li> <li>• &lt;1.5/1000 woman-years for copper IUD</li> </ul> </li> </ul>                                                                                                 |

# IUCDs IN EMERGENCY CONTRACEPTION

## **Timing:**

- Up to 120 hours (5 days) after unprotected intercourse.
- Most effective within 72 hours.

## **Common Methods:**

- IUCD (CuT 380A): Also used within 5 days.

# TIMING OF INSERTION

- **Interval:** 2–3 days post menstruation or anytime in cycle.
- **Postabortal:** Immediately after abortion (also prevents synechia).
- **Postpartum:** Preferably after 6 weeks; can be done postplacental (higher expulsion rate).

# PRE-INSERTION STEPS & EVALUATION

## **1. History & Examination**

- General and pelvic exam to exclude contraindications (e.g., PID, anomalies, pregnancy).

## **2. Patient Counseling & Consent**

- Discuss side effects and complications. Show the device. Obtain informed consent.

## **3. Setting**

- Done in OPD under aseptic conditions, without anesthesia.
- NSAID (e.g., Ibuprofen 200–400 mg) may be given 30 mins before to reduce cramping.

# INSERTION TECHNIQUES

## A. Preparation

1. Patient empties bladder.
2. Place in lithotomy position.
3. Pelvic exam to confirm uterine size & position.
4. Insert posterior speculum, cleanse vagina/cervix with antiseptic.
5. Grasp anterior cervix with Allis forceps.
6. Pass uterine sound to determine length & direction of uterus.

## B. Device Loading

- No-touch technique:** Load device without touching sterile parts or vaginal walls.

## **C. Insertion Methods**

### **1. Withdrawal Technique (Preferred for Cu T 380A)**

- Inserter introduced up to the fundus, then withdraw outer tube, leaving device in place.
- Reduces risk of perforation.

### **2. Push-in Technique**

- Less preferred. Device is pushed out of inserter using plunger

### **3. LNG-IUS**

- Arms are released about 2 cm below fundus.

### **4. Multiload IUD**

- Insert entire applicator into uterus and withdraw, allowing device to uncoil in cavity.

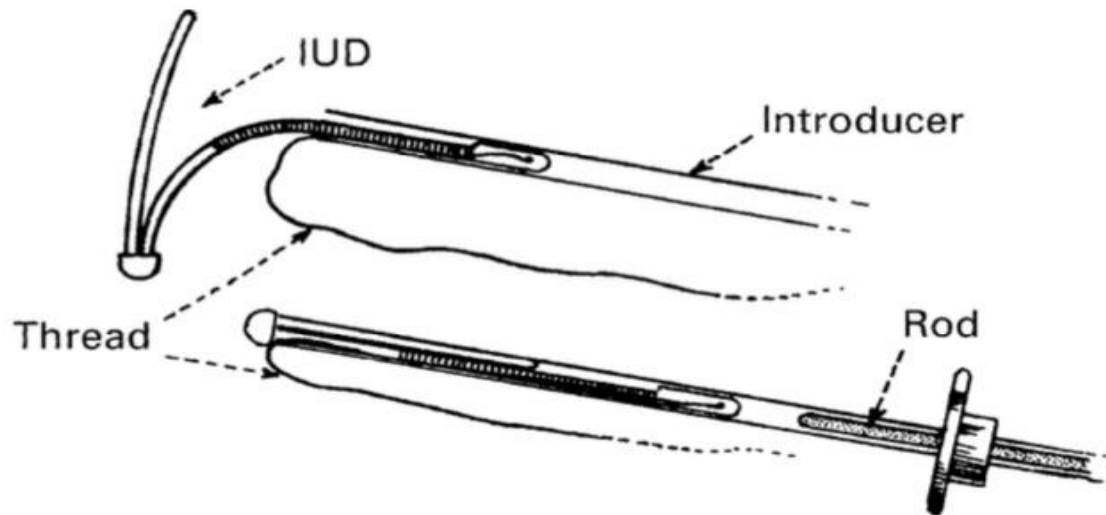
# POST -INSERTION

- Cut thread to 2–3 cm from external os.
- Remove forceps and speculum.
- Instruct patient to check for thread weekly.
- **Follow-up:** 1 month post-insertion, then annually.

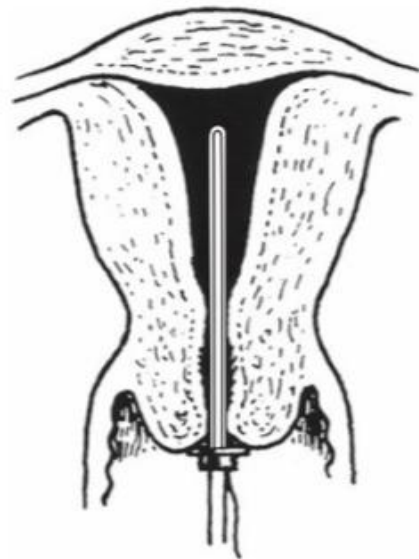
# PRINCIPLE OF INSERTION OF IUDs

## Insertion Technique

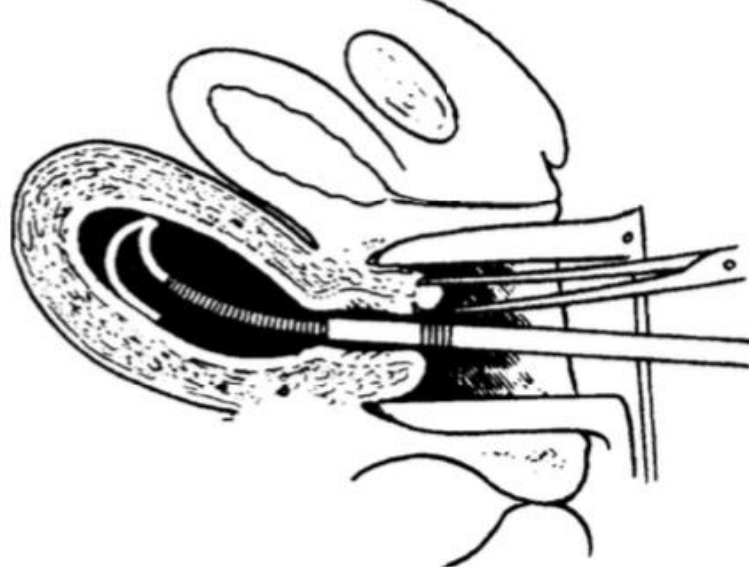
Insertion of an IUD is always easier when a woman has had a previous vaginal delivery. Coil insertion can also be achieved in nulliparous women. The woman should be examined vaginally to assess the size and direction of the uterus, to reduce the risk of uterine perforation.



1. The IUD is first of all folded and pulled into a plastic tube called the introducer.



2. The introducer is then inserted into the uterus until it reaches the fundus.



3. The surrounding introducer is drawn back holding the rod in place so that the device has now opened out in the uterine cavity.

4. The rod and introducer is now removed carefully and the threads are trimmed to about 4 cm.

A local anaesthetic and a tenaculum forceps can be useful. The Mirena has a specific introducer that makes insertion simpler, although it is very slightly thicker than most copper coils, at 4 mm.

Occasionally some sedation or even a general anaesthetic may be required to insert a coil.

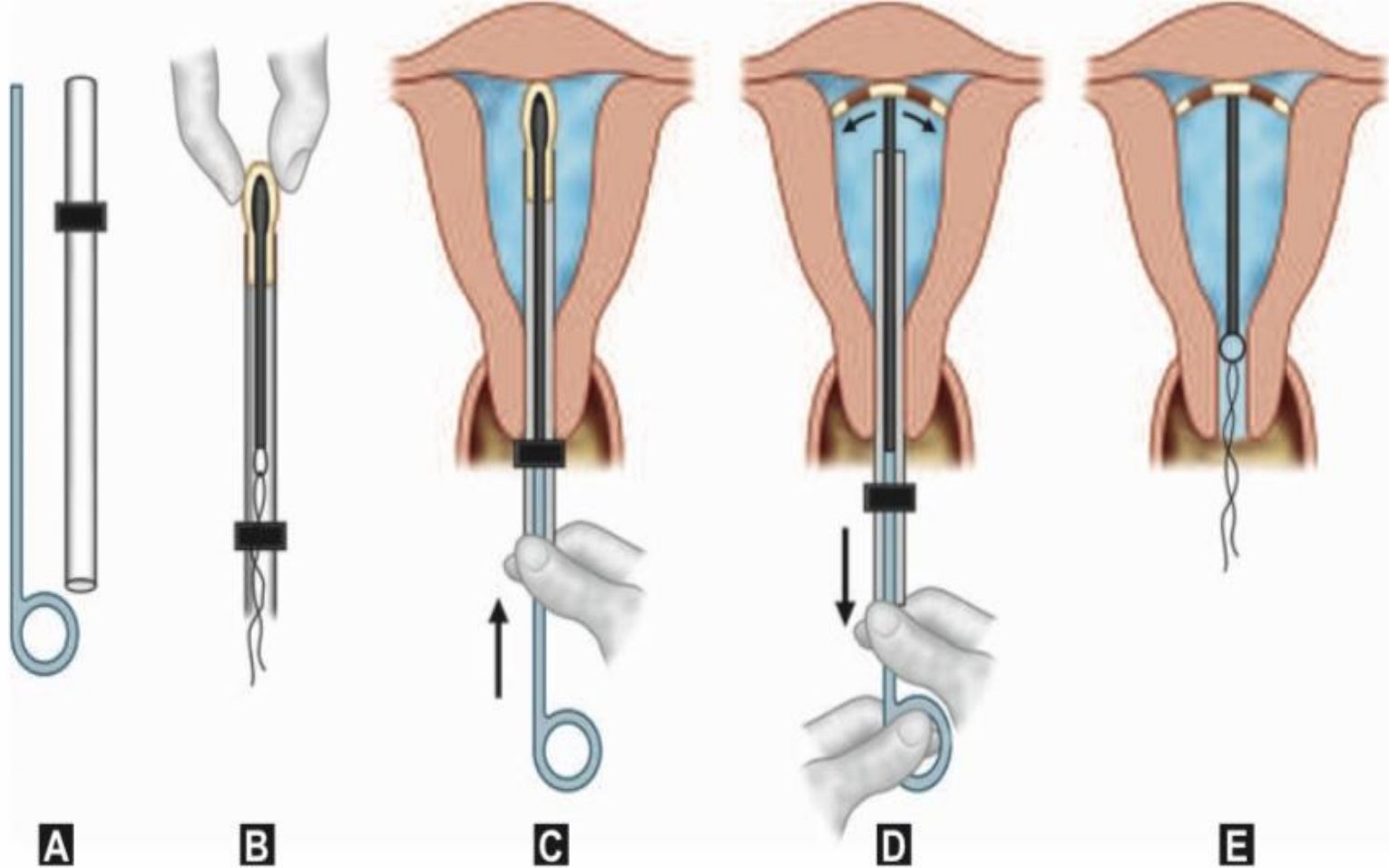


**Fig. 29.3:** Withdrawal technique of insertion of Cu T

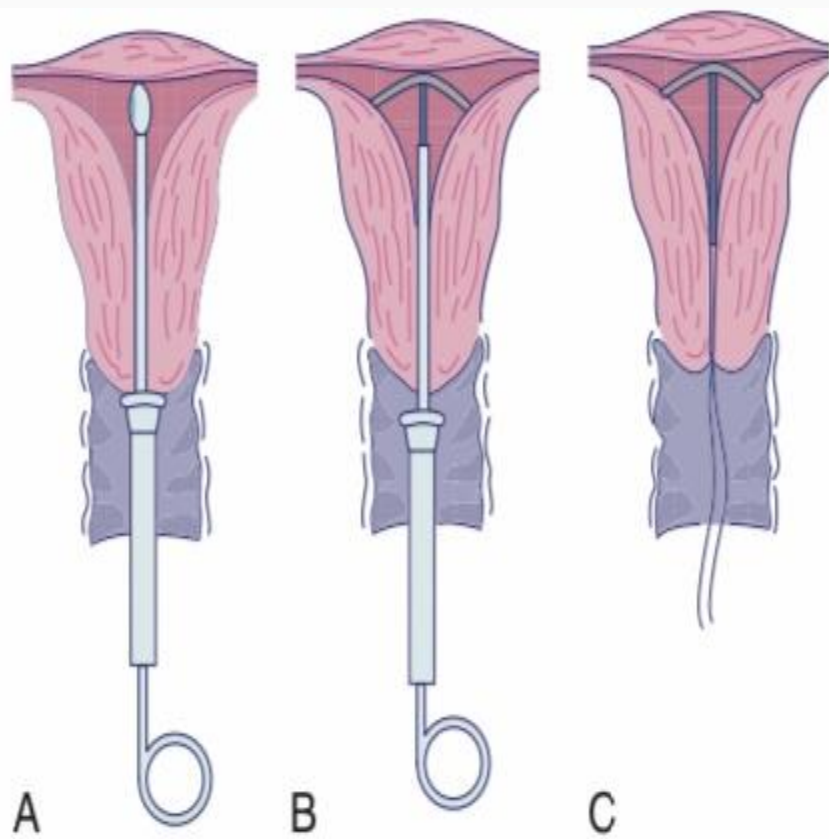


**Figure 20.11** (A) IUCD inserted. (B) Inserter withdrawn. (C) IUCD released.

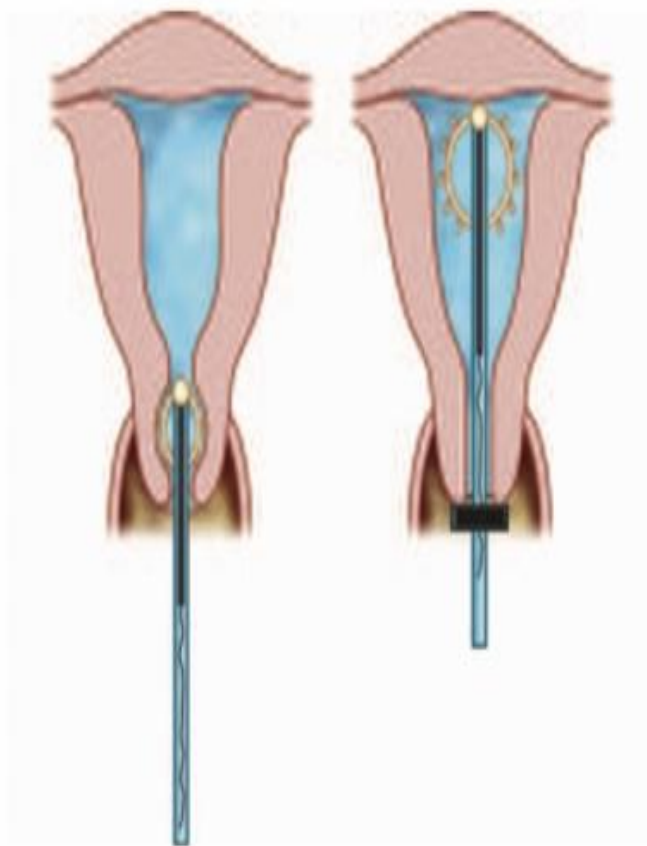


**Fig. 29.4:** Technique of insertion of Multiload IUCDs

# COMPLICATIONS

| Category  | Complication           | Details / Notes                                                                                 |
|-----------|------------------------|-------------------------------------------------------------------------------------------------|
| Immediate | 1. Cramping Pain       | Common post-insertion;<br>managed symptomatically.                                              |
|           | 2. Vasovagal Syncope   | Especially in nulliparous<br>women or small uterus<br>during insertion.                         |
|           | 3. Uterine Perforation | Usually at time of insertion;<br>risk higher during lactation.                                  |
| Remote    | 1. Pain                | Due to myometrial stretch or<br>embedment of device.                                            |
|           | 2. Abnormal Bleeding   | Includes heavy, prolonged,<br>intermenstrual bleeding.<br>Management: Tranexamic<br>acid, iron. |

|  |                                      |                                                                                                                                     |
|--|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|  | 3. Pelvic Inflammatory Disease (PID) | Risk increased 2–10x, especially within first 3 weeks post-insertion.                                                               |
|  | 4. Expulsion                         | Occurs in ~5% cases; higher risk after abortion or delivery.                                                                        |
|  | 5. Pregnancy                         | Failure rate: 0.8–2 per 100 woman-years. Ectopic pregnancy risk: ~0.02%.<br>Remove if threads visible; if not, monitor and counsel. |
|  | 6. Missing Thread                    | Could be due to: - Coiled inside uterus - Torn or expelled - Perforation - Uterine enlargement (e.g., pregnancy)                    |

# MISSING THREAD EVALUATION AND MANAGEMENT

- 1.Exclude pregnancy
- 2.Ultrasound – Preferred
- 3.Sounding uterine cavity
- 4.X-ray with radiopaque uterine sound
- 5.Hysteroscopy – For direct visualization/removal

## **Misplaced IUCD**

- Causes: pregnancy, curled thread, perforation, expulsion
- Diagnosed via X-ray/USG
- Hysteroscopy/laparotomy may be needed for retrieval

## **Pregnancy with IUCD**

- Occurs in 1–3 per 100 woman-years
- Ectopic risk increased (1:30 pregnancies)
- Remove IUCD if threads visible
- If not visible, consider termination or counsel risks

## **Removal Options:**

**A. Inside uterus** – blunt hook, artery forceps, curette, hysteroscopy.

**B. Outside uterus** – laparoscopy or laparotomy.

# INDICATIONS FOR REMOVAL

| Category                | Details                                                                                                                                                                                                                                                                                                  |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Indications for Removal | <ul style="list-style-type: none"><li>- Persistent bleeding or PID</li><li>- Uterine perforation</li><li>- Partial expulsion</li><li>- Pregnancy with IUD in situ</li><li>- Desire for conception</li><li>- Missing thread</li><li>- Menopause (1 year post)</li><li>- Expired device lifespan</li></ul> |
| Removal Method          | <ul style="list-style-type: none"><li>- Simple: Grasp thread with forceps and gently pull.</li><li>- Complicated (e.g., perforation): Requires laparoscopy or laparotomy.</li></ul>                                                                                                                      |

|                                    |                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. Increased Menstrual Loss</p> | <p>- Caused by increased fibrinolytic activity around IUD. - Management:</p> <ul style="list-style-type: none"> <li>• Tranexamic acid (antifibrinolytic)</li> <li>• NSAIDs (mefenamic acid, diclofenac)</li> <li>• Hormonal IUDs reduce bleeding</li> </ul>                                                                                                           |
| <p>2. Infection</p>                | <p>- Higher PID risk, especially early after insertion. - Long-retained inert IUDs → actinomycosis. - Contraindicated in active infection. - Management:</p> <ul style="list-style-type: none"> <li>• Mild: Treat with antibiotics; coil can remain.</li> <li>• Severe/persistent: Remove coil.</li> </ul> <p>- LNG-IUS lowers risk via thickened cervical mucus.</p> |

|                                |                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3. Pregnancy                   | <ul style="list-style-type: none"> <li>- Occurs in 1–1.5/100 woman-years (mostly in 1st 2 years).</li> <li>- Ectopic risk increases if pregnancy occurs with IUD in place.</li> <li>- Lower pregnancy rate with Cu IUDs (0.1/100 with Mirena).</li> </ul>                                                                                                                      |
| 4. Expulsion                   | <ul style="list-style-type: none"> <li>- Occurs in 5–10%, mainly in first 6 months.</li> <li>- Follow-up at 6 weeks post-insertion.</li> <li>- If threads not visible: Do ultrasound.</li> </ul>                                                                                                                                                                               |
| 5. Translocation (Perforation) | <ul style="list-style-type: none"> <li>- IUD may migrate through uterine wall into peritoneal cavity or ligament.</li> <li>- Often from faulty insertion.</li> <li>- Detection:             <ul style="list-style-type: none"> <li>• Intrauterine coil: USG</li> <li>• Extrauterine: Abdominal X-ray.</li> </ul> </li> <li>- Management: Laparoscopy or laparotomy.</li> </ul> |

| Advantages                                                           | Disadvantages                                                                         |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| High efficacy with <1% failure rate                                  | Expensive, especially hormonal IUDs (LNG-IUS)                                         |
| Long-acting protection (5–10 years)                                  | Limited availability — LNG-IUS often not available in government setups (e.g., India) |
| Low expulsion rate                                                   | Amenorrhea (~5%), may lead to discontinuation                                         |
| Reduced ectopic risk                                                 | Risk of malposition or device failure over time                                       |
| Improved anemia, reduced menstrual bleeding, especially with LNG-IUS | Requires patient motivation and follow-up                                             |

|                                                                                                                                                                                                                                             |                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| LNG-IUS Non-contraceptive benefits: - Relief from menorrhagia, dysmenorrhea, PMS - Management of DUB, adenomyosis, fibroids, endometriosis - Endometrial hyperplasia/cancer - Alternative to hysterectomy - Supportive HRT in perimenopause | Limitations in use for women with uterine anomalies or PID                               |
| Inexpensive (Cu T) – Provided free via government programs                                                                                                                                                                                  | Risk of adverse local effects: menstrual irregularities, PID, pelvic pain, heavy periods |
| Simple insertion technique — Minimal training required                                                                                                                                                                                      | Slight risk of ectopic pregnancy, though lower than in non-users                         |
| Highly cost-effective and suitable for rural or low-resource settings                                                                                                                                                                       |                                                                                          |
| No systemic side effects — Safe in hypertension, breastfeeding, epilepsy                                                                                                                                                                    |                                                                                          |
| Reversible — Prompt return to fertility after removal                                                                                                                                                                                       |                                                                                          |

1. Howkins & Bourne Shaw's Textbook of Gynaecology 16th edition
2. D.C. Dutta's Textbook of Gynecology
3. Gynecology by Ten Teachers 19th edition
4. Gynecology Illustrated 6th edition
5. Sakshi Arora Self Assessment and Review Gynecology 9th edition

# REFERENCES

THANK YOU