# IUD COMPLICATIONS: MISSING STRING(S)

## DEFINITION

If the IUD tailstrings are missing, it may mean that the tailstrings were cut too short, that the IUD has been expelled, that the tailstrings have been lifted into the endocervical or endometrial cavity or that the IUD has perforated the uterus. Management differs depending upon the position/location of the IUD, the patient’s pregnancy status and preference. If patient also has abnormal vaginal bleeding, see *IUD Complications: Abnormal Bleeding* protocol whether or not string(s) are present.

## Non-Pregnant: IUD tailstrings in endocervix

### SUBJECTIVE
1. Denies IUD expulsion.
2. IUD tailstrings not felt by patient.
3. LMP and recent coital history.
4. No abnormal vaginal bleeding or cramping.

### OBJECTIVE
1. Pelvic exam not suspicious for pregnancy or active infection (cervicitis or PID).
2. IUD tailstrings found in endocervical canal with cytobrush or endocervical speculum (with or without colposcopic enhancement).
3. Note presence or absence of IUD in canal (may need cervical os finder, uterine probe or endocervical speculum to assess).

### LABORATORY
Negative sensitive urine pregnancy test.

### ASSESSMENT
IUD tailstrings in endocervical canal.

### PLAN
1. If there are any signs or symptoms of cervical infection or PID, provide appropriate antibiotics (See *Gonorrhea Cervicitis* or *Chlamydia Cervicitis* protocols) prior to attempted removal, if possible.
2. If IUD not in endocervical canal, gently withdraw the tailstrings into the vagina and assess their length. If no evidence of significant lengthening suggestive of partial expulsion, IUD may be left in place.
3. If any part of the IUD itself is found to be in the endocervical canal:
   a. Offer/ provide hormonal method of emergency contraception (EC) (See protocol by same name) if patient has had any intercourse within last 5 days.
   b. Obtain patient’s informed consent to remove IUD.
   c. If patient requires antibiotic for endocarditis prophylaxis with IUD placement, provide same antibiotics prior to IUD removal.
   d. Remove IUD. See *IUD Removal* protocol for guidance on procedures to use for removal with Alligator forceps/Rocket forceps of London or other devices and for IUD testing recommendations after removal.
   e. Provide contraception (may place another IUD, if patient requests and/or she is still a candidate).

### Non-Pregnant: Tailstrings not in endocervix

### SUBJECTIVE
1. Denies IUD expulsion.
2. IUD tailstrings not felt by patient.
3. LMP and recent coital history.
4. No abnormal vaginal bleeding or cramping.

### OBJECTIVE
1. Pelvic exam not suspicious for pregnancy or active cervical or upper tract infection.
2. IUD tailstrings not found in endocervical canal.
3. IUD not found in endocervical canal.

### LABORATORY
Negative sensitive urine pregnancy test.
If cervicitis or other significant infection suspected, test for chlamydia and gonorrhea.

**ASSESSMENT**

Missing IUD tailstrings in non-pregnant patient with no tailstrings in endocervical canal.

**PLAN**

1. Management depends upon patient preference and pregnancy risk. Two options exist after treatment for cervicitis or PID, if indicated:
   a. Option 1: Prompt IUD removal:
      1) Obtain patient’s informed consent for IUD removal.
      2) If patient requires antibiotics for endocarditis prophylaxis with IUD placement, provide same antibiotics prior to removal.
      3) If experienced in intrauterine IUD removal, stabilize uterus with tenaculum. Attempt to localize and remove IUD with alligator forceps. Ultrasound guidance can be helpful. (See IUD Removal protocol for IUD testing recommendations). Alternate techniques include use of Emmitt Thread Removal or manual vacuum extractor, when trained and experienced staff available.
      4) If removal unsuccessful, obtain MD consult or refer for radiologic studies to localize IUD
      5) If IUD removed, provide hormonal EC if coitus in last 5 days (See Emergency Contraception [EC] protocol. Provide on-going contraception.
   b. Option 2: Locate the IUD with appropriate radiologic studies prior to attempting to remove IUD. Note: LNG-IUS is more difficult to visualize on ultrasound than is the copper IUD.
      1) If ultrasound promptly available, use it to localize IUD.
         a) If IUD is in uterine cavity (endometrium), allow patient to continue to use if patient chooses to retain IUD or remove it as described above with alligator forceps or thread retriever. [Plastic lamicel (poly vinyl alcohol sponge compressed to form a 3mm diameter firm cylindrical rod) has been reported to be helpful in retrieving IUDs not amenable to conventional forceps or plastic thread retrieval. (Discuss with MD)]
         b) If embedment (intramural IUD) or perforation suspected, refer to MD.
         c) If no IUD seen on ultrasound, provide contraception. Refer to MD if history not consistent with expulsion.
      2) If ultrasound not immediately available, provide other contraception, offer EC and refer for one of these studies:
         a) Ultrasound is preferred because it can define where the IUD is located (within or outside the uterus). Following ultrasound, manage as described above.
         b) X-ray studies can verify presence of copper IUD in pelvis, but cannot localize it in the intrauterine cavity. Markers must be placed in the uterine cavity and both anterior-posterior and lateral x-ray views are needed. The absence of any evidence of an IUD on abdominopelvic films supports the diagnosis of expulsion.

**REFER TO MD/ER**

1. IUD imaged in extrauterine or intramural location.
2. Removal of IUD in endometrial cavity if clinician is not experienced with removal techniques.
3. Difficult IUD removal.
4. Patient declines permission for IUD removal.

**Pregnant with missing IUD tailstring.**

**SUBJECTIVE**

1. Denies IUD expulsion.
2. IUD tailstrings not felt by patient.
3. LMP.
4. No vaginal bleeding. (If vaginal bleeding, see IUD Complications: Abnormal Bleeding protocol.)

**OBJECTIVE**

1. IUD tailstrings are not visible.
2. Pelvic exam may be consistent with pregnancy or active cervicitis or upper tract infection.
<table>
<thead>
<tr>
<th>LABORATORY</th>
<th>Positive pregnancy test.</th>
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<td>ASSESSMENT</td>
<td>Missing IUD tailstrings in a pregnant patient.</td>
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| PLAN       | 1. If patient has any signs or symptoms of an ectopic pregnancy, refer to ER.  
2. If fetal heart tones not heard:  
   a. Give ectopic pregnancy precautions.  
   b. Recommend prompt ultrasound to document IUD location and pregnancy location (rule out ectopic pregnancy).  
3. If fetal heart tones heard, order ultrasound to document IUD location  
4. Provide routine pregnancy options counseling.  
5. Refer for care with a note of possible IUD in utero. |
| PATIENT EDUCATION | 1. Stress importance of follow-up.  
2. Inform patient that the most likely reason that she became pregnant was that she had expelled IUD, but the IUD may be malpositioned, but that IUD localization is important to determine possible risks to pregnancy and to guide the provider in her care.  
3. Advise patient to tell her prenatal clinician that she may have an IUD.  
4. Advise patient considering pregnancy termination that IUD may be removed at time of procedure.  
5. Advise patient considering pregnancy continuation of risks of infection later in pregnancy and premature delivery if IUD is in utero. Describe warning signs such as fever, lower abdominal pain or flu-like symptoms.  
6. Reassure patient that copper IUD is not known to cause fetal malformation. Impact of LNG IUS not well known but no recurrent problems have been seen to this point. |
| REFER TO MD/ER | Women with any signs or symptoms of ectopic pregnancy or threatened abortion. |