

# Complications of Procedural Abortion & Prevention Strategies

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# Defining Complications for Procedural Abortion

## Major Complications

- ◀ Hemorrhage
- ◀ Unanticipated surgery
- ◀ Infection
- ◀ Perforation
- ◀ Death (very rare)

## Minor Complications

- ◀ Cervical Laceration
  - ◀ Re-aspiration
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## Complication Rates for Procedural Abortion

- ◀ First trimester → **0.07%**
  - ◀ Second trimester → **0.6%**
  - ◀ Abortion procedures are very safe.
  - ◀ Safer than carrying a pregnancy to term
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# Measuring Complications of Procedural Abortion

Complication	Ways to Measure
Hemorrhage	<ul style="list-style-type: none"><li>• Transfusion</li><li>• Blood loss &gt; 250mL (1<sup>st</sup> trimester) / 500mL (2<sup>nd</sup> trimester)</li><li>• Re-aspiration</li><li>• % drop in hemoglobin</li></ul>
Infection	<ul style="list-style-type: none"><li>• Fever</li><li>• Need for antibiotics</li></ul>
Perforation	<ul style="list-style-type: none"><li>• Clinical versus surgical diagnosis</li></ul>
Unanticipated surgery	<ul style="list-style-type: none"><li>• Laparoscopy</li><li>• Laparotomy</li><li>• Re-aspiration</li></ul>
Cervical laceration	<ul style="list-style-type: none"><li>• Chemical cauterization</li><li>• Suture repair</li></ul>



# Estimating Blood Loss: Familiar Objects

Object	Unit	Volume (mL)	Diameter	PRBC
Orange	1 cup	250mL	5cm	1 unit
Softball	2 cups	500mL	10cm	2 units
Manual Uterine Aspirator	-----	60mL	-----	-----
Soda can	12oz	355mL	-----	-----





## Case 1: MM

- ◀ 18-year-old G0 presents for an abortion
  - ◀ She/her pronouns
  - ◀ Gestational age
    - ◀ 7-weeks by last menstrual period (LMP)
    - ◀ 13-weeks by physical exam
  - ◀ Counseling and consent
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## Key Questions for Assessing Risk

- ◀ What complications is *she* at risk for?
  - ◀ What *measures* can you take to decrease her risk of complications?
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## Baseline Risk Factors for Complications

- ◀ Patient age
  - ◀ Pregnancy dating
  - ◀ Parity
  - ◀ Concerns for abnormal placentation
  - ◀ Previous uterine or cervical procedure
  - ◀ Uterine fibroids
  - ◀ History of hemorrhage
  - ◀ History of coagulopathy
  - ◀ History of severe anemia
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# Risk for Complications of Procedural Abortion

	1 <sup>st</sup> trimester	2 <sup>nd</sup> trimester
Overall	0.07%	0.6%
Hemorrhage	0.01%	0.88 – 2.1%
Infection	0.1 – 0.4%	0.3 – 0.6%
Perforation	0.1%	0.4%
Cervical laceration	-----	0.1 – 0.8%
Retained products	0.3 – 2%	0.4 – 2.7%





## Pertinent Factors for MM

- ◀ Patient age
- ◀ Gestational age (discrepancy between LMP and exam)
- ◀ Experience of the clinicians and staff



## Levels of Evidence

- ◀ **A:** Randomized controlled trials
  - ◀ **B:** Observational studies (cohort, case-control)
  - ◀ **C:** Case series or expert opinion
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# Evidence for Preoperative Measures to Prevent Complications





## Step One: Confirm Gestational Age

- ◀ Ultrasound (**Level B evidence**)
  - ◀ Agreement between physical exam and ultrasound
    - ◀ Highly trained clinicians (95%)
    - ◀ Training settings (75%)
  - ◀ Obtain an ultrasound to confirm dating before procedural abortion
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## Step Two: Determine Cervical Preparation

- ◀ Cervical preparation with first trimester (**Level C**)
  - ◀ Society of Family Planning recommends cervical preparation for:
    - ◀ Adolescents
    - ◀ Training settings
    - ◀ Risk factors for inadequate dilation
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## Step Three: Pre-procedure Hemoglobin

- ◀ Always in 2<sup>nd</sup> trimester, maybe in 1<sup>st</sup> trimester
- ◀ National Abortion Federation (NAF) on patients with a history of anemia (**Level C**)





# Cervical Preparation Guidelines

## **Royal College Obstetrics & Gynaecology (U.K.)**

- ◀ < 18 years old
- ◀ All patients >10 weeks

## **World Health Organization**

- ◀ < 18 years old
  - ◀ Nulliparous >9 weeks
  - ◀ All patients >12 weeks
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## Patient Factors in favor of Cervical Preparation

- ◀ Nulliparous
  - ◀ Gestational age >10 weeks
  - ◀ Plan cervical preparation with same day misoprostol (most common) or same-day dilators
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# Pain Control Options for Abortion Procedures

## First trimester:

- ◀ Cervical block
- ◀ Oral/IV NSAIDS
- ◀ Oral/IV benzodiazepine
- ◀ Oral/IV opiate
- ◀ Nonpharmacological methods

## Second trimester:

- ◀ Cervical block
  - ◀ IV benzodiazepine
  - ◀ IV opiate
  - ◀ IV deep sedation (e.g. propofol, ketamine)
  - ◀ General anesthesia
  - ◀ Nonpharmacological methods
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# Measures to Prevent Complications

## Intraoperative Measures

- ◀ Antibiotic prophylaxis  
(**Level A**)
- ◀ Intraoperative ultrasound to reduce uterine perforation (**Level B**)
- ◀ Vasopressin in paracervical block to reduce blood loss in 2<sup>nd</sup> trimester (**Level A**)

## Postoperative Measures

- ◀ Visual inspection of products of conception to reduce retained products & re-aspiration (**Level C**)
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## Conclusions

- ◀ Complications are incredibly rare
    - ◀ Slightly higher after the first trimester
  - ◀ Measures to prevent complications
    - ◀ Preoperatively
    - ◀ Intraoperatively
    - ◀ Postoperatively
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