UNINTENDED PREGNANCY:
- Can occur from no contraceptive method used, incorrect use of contraceptive method, contraceptive failure or sexual assault
- Can have adverse social, psychological, and economic consequences if the mother is not ready for parenting
- About 50% of pregnancies are unintended, and of those, about 45% will result in an induced abortion
- EC is a *"last chance to prevent unintended pregnancy after sex"*

ORAL HORMONE EMERGENCY CONTRACEPTIVE OPTIONS:

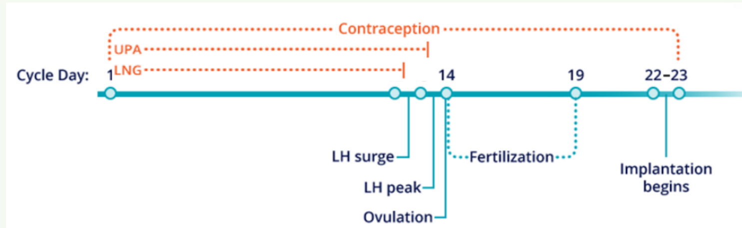
ULIPRISTAL ACETATE (UPA):
- UPA is a progesterone agonist/antagonist (related to mifepristone) 30 mg PO stat
- Given prior to LH peak, prevents follicular rupture, delays ovulation up to 6 days
- Highly effective (60-70%) up to 5 days after UPSI and well-tolerated

NOTES:
- UPA is anti-progestin and strongly binds to progesterone receptor → **delay start of progesterone-containing hormonal contraception** (ex// pills, patch, ring, injection) for 5 days, or may ↓↓ UPA effectiveness
  - Use condoms x 14 days after UPA
- If ECP requested due to **missed progesterone-containing HC, prescribe LNG** as lingering progesterone may block UPA from delaying ovulation
- Choose LNG if breastfeeding
- UPA metabolized by CYP3A4, so inducers (ex// St. John's Wort) may ↓ UPA effectiveness

LEVONORGESTREL (LNG):
- LNG is a progesterone only agent given as a single 1.5 mg dose (preferred) or two 0.75 mg pills 12 hours apart
- When given prior to LH surge, prevents follicular rupture, delays ovulation up to 2 days
- Moderately effective (50%) up to 3 days after UPSI, then declines

NOTES:
- Provide if progesterone containing OC were missed
- LNG metabolized by CYP3A4, so inducers (ex// St. John's Wort) may ↓ LNG effectiveness
- Effectiveness may be reduced if BMI ≥ 30
  - Preferred choice = Cu-IUD or UPA
- Contraception can start immediately, use condoms x 7 days

UPA VS. LNG:



- UPA is more effective than LNG at preventing or disrupting ovulation
- UPA works until just prior to LH peak; LNG works until just prior to the LH surge
- UPA maintains effectiveness up to 5 days after UPSI, while effectiveness of LNG gradually declines past 3 days

YUZPE REGIMEN: combined hormonal contraception
- Ovral (50 mcg ethinyl estradiol + 250 mcg LNG) was first ECP (1977), now D/C
  - LNG is the effective component, EE contributes to SEs
- Yuzpe regimen = 100 mcg ethinyl estradiol + 500 mcg LNG
- Yuzpe regimen is less effective (37-40%) with substantially more nausea and vomiting than LNG or UPA
  - Only recommended if UPA/LNG not available
  - Use condoms x 7 days

SIDE EFFECTS AND SAFETY:

Side effect	UPA %	LNG %	YUZPE %
Nausea	12.8	11.2	50.5
Vomiting	1	1.4	18.8 *
Dizziness	5.2	4.9	16.7
Menses occurred within 7 days of expected time **	76	71	77
Risk of taking EC if pregnant	No risk to baby		

* if vomit in < 1 hour, take another dose + antinauseant
** menstruation should occur within 21 days of refer/test

CAUTIONS:

Breastfeeding	UPA not recommended for 1 week as UPA excreted in breast milk; express breast milk and discard
Obesity	Limited evidence that LNG + UPA EC may be less effective among obese women
Severe CVD, migraine, severe liver disease	Benefits of EC outweigh risks
CYP3A4 inducers	Strong CYP3A4 inducers may reduce effectiveness of LNG + UPA ECs

NOTE: only effective for single act of UPSI, **subsequent UPSI will have higher risk of pregnancy**

COPPER IUDs for EC:

HOW DOES A CU-IUD WORK FOR EC?
- Cu-IUD can be inserted **up to 7 days after UPSI anytime during the menstrual cycle provided that a pregnancy test is negative**
- EC effectiveness is 99.99%
  - Consider as a 1st choice option for all eligible women, when > 5 days since UPSI, if BMI ≥ 35, and if suspect day of ovulation or after ovulation
- If Cu-IUD might not be inserted within 7 days, provide ECP

EFFECTIVENESS OF CU-IUD:
- 99.9% for EC w/in 7 d of UPSI; 99% for ongoing contraception
- Cu IUD T-shaped models with the largest total copper surface area (i.e. 380 mm^2 of copper) have the lowest failure rates
- A Cu-IUD inserted for EC can remain in place for ongoing contraception for 3-10 years depending on model

SIDE EFFECTS OF COPPER IUDS:
- Bleeding irregularities: are common; NSAIDs can inhibit prostaglandin release and reduce menstrual blood loss and spotting
  - Ibuprofen 400-800 mg BID-QID x 7-10 days beginning day of menses
- Copper allergy: clinically relevant allergic dermatitis rarely reported and resolves after IUD removed; pts will experience +ve patch test to copper
- Risks: PID is infrequent (< 1%), risk drops to baseline after first 20 days; risk of perforation lower with experienced clinician; expulsion rate 2-10% in 1st year
- Adolescents: pre-insertion counselling, pre-medication with ibuprofen, guidance on managing SEs will help with post-insertion pain and bleeding
- Women interested in ongoing LARC may benefit from switching from initial Cu-IUD for EC to an ongoing LNG IUD after first month