A Quick and Dirty Guide to Contraception

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Objectives

- Discuss importance of contraceptive counseling
- Discuss *reversible* non-hormonal and hormonal options for contraception
- Review emergency contraception options

The Data

- What percentage of US pregnancies are unintended?
- **45%**

Figure 1

One in five sexually active women report that they are not using contraception

NOTES: Among women ages 18-44 who have had sex within the past 12 months. *Includes women who report that they or their partner are sterilized or they have a medical condition that makes it impossible to get pregnant.
SOURCE: Kaiser Family Foundation, *2017 Kaiser Women's Health Survey*.

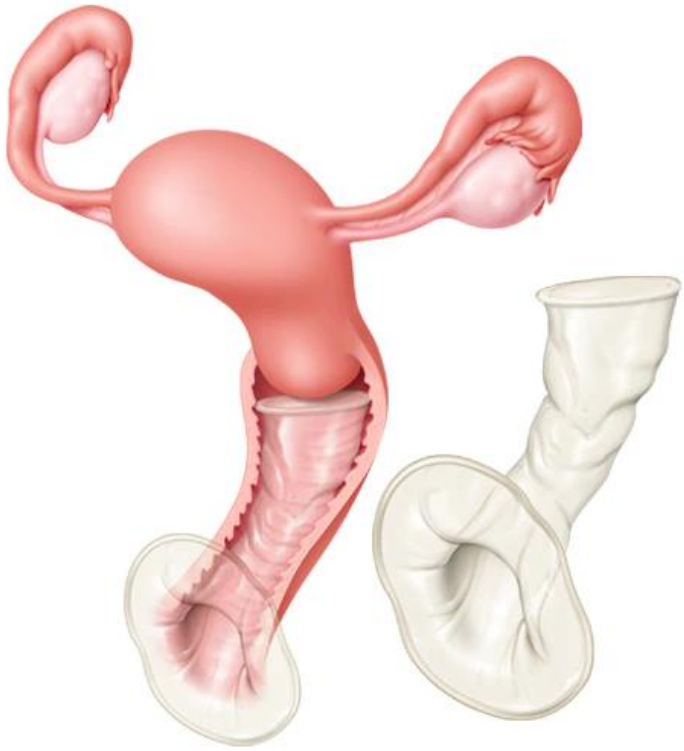
Hormone- Free Methods

Male condoms

- Barrier method that can be made of latex, natural membranes, synthetic materials
- Protects against STIs as well
- Requires partner cooperation
- Perfect use: **2%**
- Typical use: **18%**

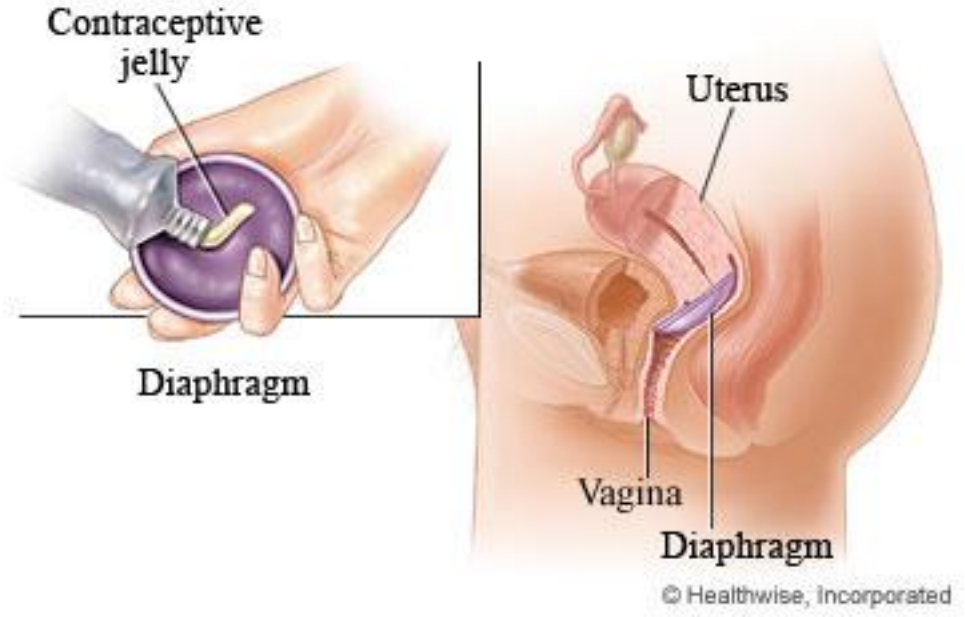
Vaginal Barriers

- Internal condom
- Similar function to male condoms and protect against STIs as well as prevent pregnancy
- More effective when used in conjunction with a spermicide
- Can place up to 2 hours prior to planned intercourse
- Can be used for vaginal or anal intercourse for any sex
- Perfect use: **5%**
- Typical use: **21%**



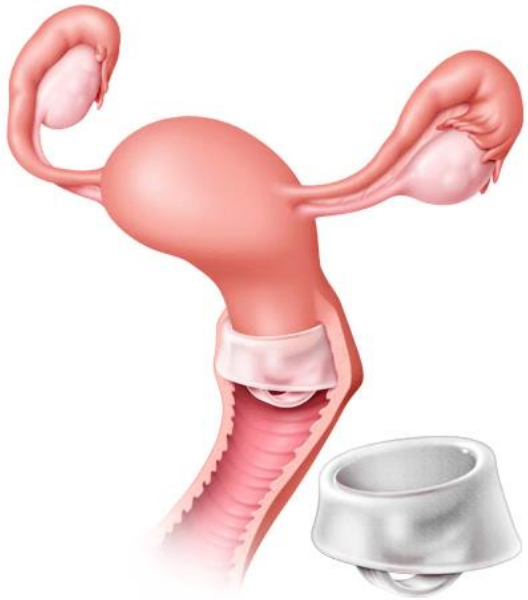
The Diaphragm

- Portable and reusable, inserted into vagina before intercourse
- Must be used with spermicide to be most effective
- Available by prescription
- Perfect use: **6%**
- Typical use: **12%**



The Cervical Cap

- Silicon rubber cap that covers the cervix
- Can be placed several hours before intercourse and be left in for up to 48 hours
- Available by prescription
- Perfect use: **n/a**
- Typical use: **14-29%**



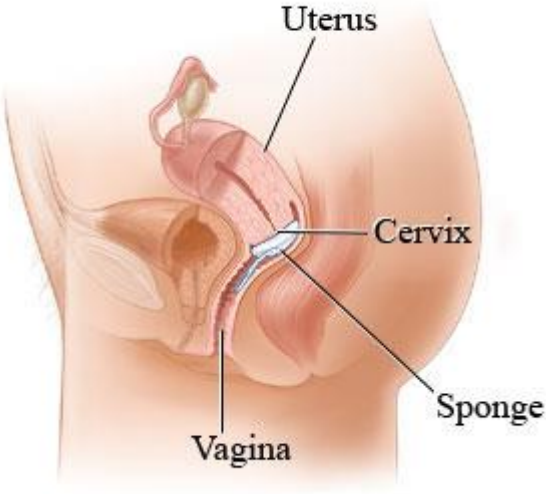
Spermicide

- Can be used by itself or with the methods described earlier
- Comes in gel, cream, foam, film, suppository
- Most commonly made of Nonoxynol-9
  - Destroys the sperm so immobile
- Also recently approved vaginal pH regular gel with lactic acid-citric acid-postassium bitartrate
  - Lower vaginal pH to 3.5-4.5
- Perfect use: **18%**
- Typical use: **28%**

The Sponge

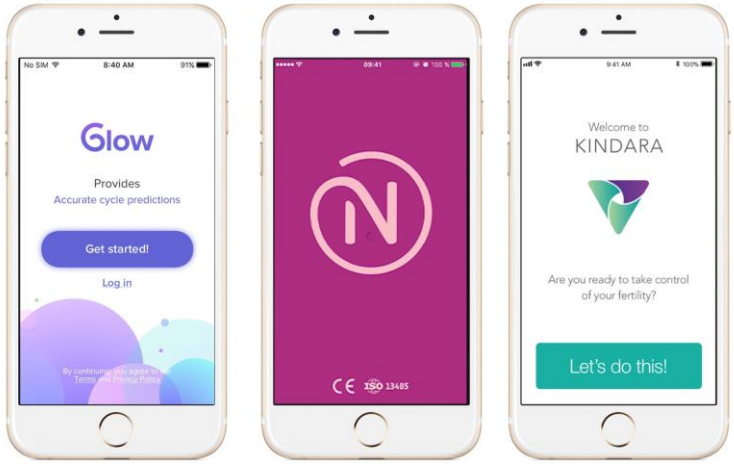
- Single use sponge with 1 gram of N-9 spermicide
- Available over the counter
- Perfect use:
  - Parous women **20%**
  - Nulliparous **9%**
- Typical use:
  - Parous women **24%**
  - Nulliparous women **12%**

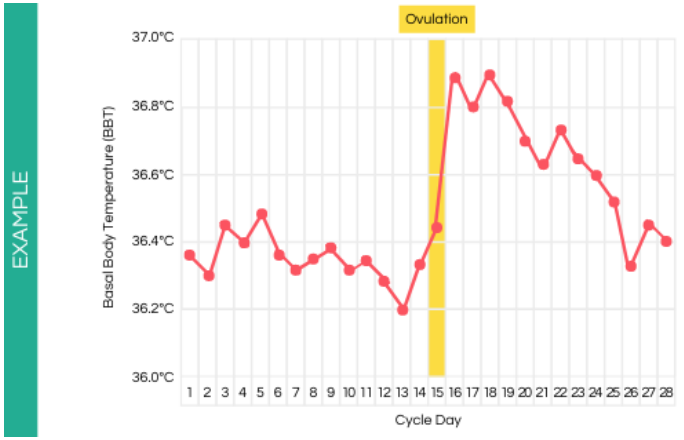

Sponge



Fertility Awareness

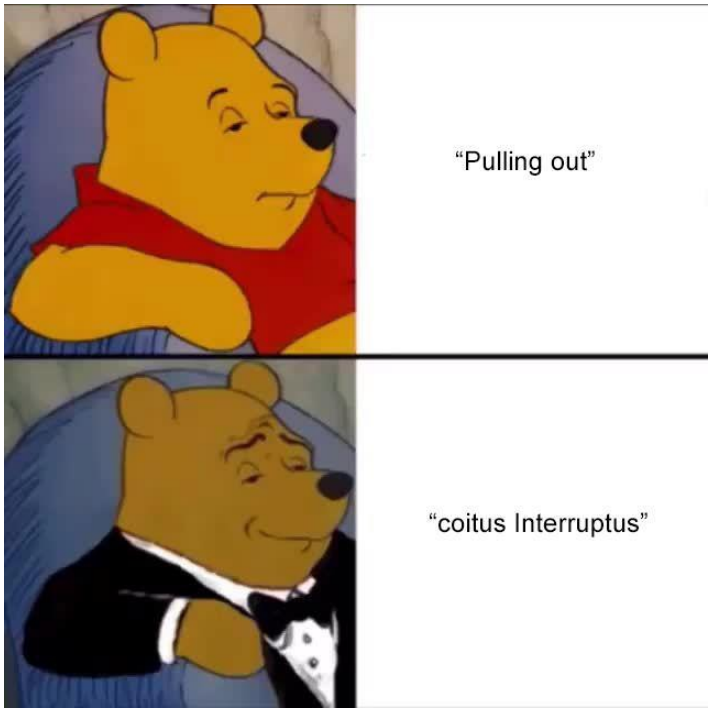
- Different methods:
  - Following Basal Body Temperature
  - Tracking menses (Standard Days Method)
  - Tracking cervical secretions and mucus (Twoday Method, Ovulation Method)
  - Or using 2-3 of the above (symptomthermal method)
- Tracker apps available (eg. Glow, Clue Period Tracker, etc)
- Can be difficult in patients with irregular cycles and may require male partner's cooperation during fertile times (using back-up method, or practicing abstinence)
- Perfect use: **0.4-5%**
- Typical use: **2-23%**





Coitus Interruptus (Withdrawal)

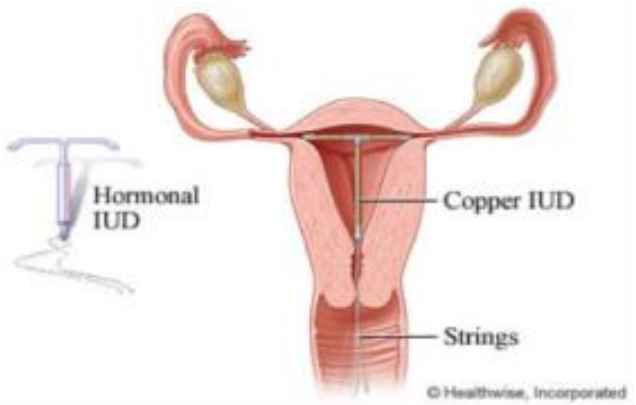
- Entails withdrawing penis out of the vagina before ejaculation
- Can be difficult method as must time withdrawal correctly every time
- Can be used in with other methods to increase efficacy (eg. with barrier methods, etc.)
- Perfect use: **4%**
- Typical use: **22%**



The Copper IUD

PARAGARD® 73804
intrauterine copper contraceptive

- The only non-hormonal LARC available
- Common adverse effects: irregular bleeding/spotting, heavier menses, more cramping can occur during first year of use
- MOA: 1) "Foreign body effect", 2) Increases copper ions, etc that impair sperm function and motility
- Perfect use: **0.6%**
- Typical use: **0.8%**



Hormonal Methods

Oral Contraceptive Pills

- Incudes our **COCPs** (Combined Oral Contraceptive Pills) and our **POPs** (Progestin Only Pill)
- Timing is important and requires patient to have to remember to take the pill correctly.
- MOA:
  - COCPs: primarily inhibits ovulation
  - POPs : causes endometrial atrophy, thickens cervical mucus
- Adverse effects for the first few months include irregular bleeding, breast soreness, nausea, bloating
- Perfect use: **0.3%**
- Typical use: **9%**

Absolute Contraindications to CHCs

- Active breast cancer
- Breastfeeding
  - <21 days post-partum decreases milk supply
- < 21 days post partum – risk for VTE
- Hx of and current DVT/PE, both currently on or not currently on anticoagulation
  - Estrogen increases plasma concentrations of *clotting factors*
- Major surgery with prolonged immobilization
- Diabetes with sequelae of neuropathy, nephropathy, retinopathy, and vascular dz
- Migraines with aura
  - Without aura, given a level 2 "advantages generally outweigh theoretical or proven risks"

Absolute Contraindications to CHCs

- Hypertension w/ or w/o vascular disease, mainly in not well controlled HTN.
- Current and hx of ischemic heart disease
- Liver tumors, specifically hepatocellular adenomas or malignant hepatomas
- Decompensated cirrhosis
- Smoking, but $\geq$ 35
  - Below age 35 actually gives it level 2
- Lupus with Positive (or unknown) antiphospholipid antibodies
  - VTE high risk patient
- Complicated valvular heart disease
- Peripartum cardiomyopathy

The US MEC

Summary Chart of U.S. Medical Eligibility Criteria for Contraceptive Use

Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion

Condition	Sub-Condition	Cu-IUD I	Cu-IUD C	LNG-IUD I	LNG-IUD C	Implant I	Implant C	DMPA I	DMPA C	POP I	POP C	CHC I	CHC C
Age		Menarche to <20 yrs: 2		Menarche to <20 yrs: 2		Menarche to <18 yrs: 1		Menarche to <18 yrs: 2		Menarche to <18 yrs: 1		Menarche to <40 yrs: 1	
		≥20 yrs: 1		≥20 yrs: 1		18-45 yrs: 1		18-45 yrs: 1		18-45 yrs: 1		≥40 yrs: 2	
						>45 yrs: 1		>45 yrs: 2		>45 yrs: 1			
Anatomical abnormalities	a) Distorted uterine cavity	4		4									
	b) Other abnormalities	2		2									
Anemias	a) Thalassemia	2		1		1		1		1		1	
	b) Sickle cell disease[2]	2		1		1		1		1		2	
	c) Iron-deficiency anemia	2		1		1		1		1		1	
Benign ovarian tumors	(*including cysts*)	1		1		1		1		1		1	
Breast disease	a) Undiagnosed mass	1		2		2*		2*		2*		2*	
	b) Benign breast disease	1		1		1		1		1		1	
	c) Family history of cancer	1		1		1		1		1		1	
	d) Breast cancer[3]												
	i) Current	1		4		4		4		4		4	
	ii) Past and no evidence of current disease for 5 years	1		3		3		3		3		3	
Breastfeeding	a) <21 days postpartum					2*		2*		2*		4*	
	b) 21 to <30 days postpartum												
	i) With other risk factors for VTE					2*		2*		2*		3*	
	ii) Without other risk factors for VTE					2*		2*		2*		3*	
	c) 30-42 days postpartum												
	i) With other risk factors for VTE					1*		1*		1*		3*	
	ii) Without other risk factors for VTE					1*		1*		1*		2*	
	d) >42 days postpartum					1*		1*		1*		2*	
Cervical cancer	Awaiting treatment	4	2	4	2	2		2		1		2	
Cervical ectropion		1		1		1		1		1		1	
Cervical intraepithelial neoplasia		1		2		2		2		1		2	
Cirrhosis	a) Mild (*compensated*)	1		1		1		1		1		1	
	b) Severe[4] (*decompensated*)	1		3		3		3		3		4	
Cystic fibrosis[5]		1*		1*		1*		2*		1*		1*	
Deep venous thrombosis (DVT)/Pulmonary embolism (PE)	a) History of DVT/PE, not receiving anticoagulant therapy												
	i) Higher risk for recurrent DVT/PE	1		2		2		2		2		4	
	ii) Lower risk for recurrent DVT/PE	1		2		2		2		2		3	
	b) Acute DVT/PE	2		2		2		2		2		4	
	c) DVT/PE and established anticoagulant therapy for at least 3 months												
	i) Higher risk for recurrent DVT/PE	2		2		2		2		2		4*	
	ii) Lower risk for recurrent DVT/PE	2		2		2		2		2		3*	
	d) Family history (*first-degree relatives*)	1		1		1		1		1		2	
	e) Major surgery												
	i) With prolonged immobilization	1		2		2		2		2		4	
	ii) Without prolonged immobilization	1		1		1		1		1		2	
	f) Minor surgery without immobilization	1		1		1		1		1		1	
Depressive disorders		1*		1*		1*		1*		1*		1*	

Condition	Sub-Condition	Cu-IUD I	Cu-IUD C	LNG-IUD I	LNG-IUD C	Implant I	Implant C	DMPA I	DMPA C	POP I	POP C	CHC I	CHC C
Diabetes	a) History of gestational disease	1		1		1		1		1		1	
	b) Nonvascular disease												
	i) Non-insulin dependent	1		2		2		2		2		2	
	ii) Insulin dependent	1		2		2		2		2		2	
	c) Nephropathy/retinopathy/neuropathy[2]	1		2		2		3		2		3/4*	
	d) Other vascular disease or diabetes of >20 years' duration[3]	1		2		2		3		2		3/4*	
Dysmenorrhea	Severe	2		1		1		1		1		1	
Endometrial cancer[3]		4	2	4	2	1		1		1		1	
Endometrial hyperplasia		1		1		1		1		1		1	
Endometriosis		2		1		1		1		1		1	
Epilepsy[2]	(*see also Drug Interactions*)	1		1		1*		1*		1*		1*	
Gallbladder disease	a) Symptomatic												
	i) Treated by cholecystectomy	1		2		2		2		2		2	
	ii) Medically treated	1		2		2		2		2		3	
	iii) Current	1		2		2		2		2		3	
	b) Asymptomatic	1		2		2		2		2		2	
Gestational trophoblastic disease[3]	a) Suspected GTD (immediate postevacuation)												
	i) Uterine size first trimester	1*		1*		1*		1*		1*		1*	
	ii) Uterine size second trimester	2*		2*		1*		1*		1*		1*	
	b) Confirmed GTD												
	i) Undetectable/non-pregnant β-hCG levels	1*	1*	1*	1*	1*		1*		1*		1*	
	ii) Decreasing β-hCG levels	2*	1*	2*	1*	1*		1*		1*		1*	
	iii) Persistently elevated β-hCG levels or malignant disease, with no evidence or suspicion of intrauterine disease	2*	1*	2*	1*	1*		1*		1*		1*	
	iv) Persistently elevated β-hCG levels or malignant disease, with evidence or suspicion of intrauterine disease	4*	2*	4*	2*	1*		1*		1*		1*	
Headaches	a) Nonmigraine (mild or severe)	1		1		1		1		1		1*	
	b) Migraine												
	i) Without aura (includes menstrual migraine)	1		1		1		1		1		2*	
	ii) With aura	1		1		1		1		1		4*	
History of bariatric surgery[3]	a) Restrictive procedures	1		1		1		1		1		1	
	b) Malabsorptive procedures	1		1		1		1		3		COCs: 3 P/R: 1	
History of cholestasis	a) Pregnancy related	1		1		1		1		1		2	
	b) Past COC related	1		2		2		2		2		3	
History of high blood pressure during pregnancy		1		1		1		1		1		2	
History of Pelvic surgery		1		1		1		1		1		1	
HIV	a) High risk for HIV	1*	1*	1*	1*	1		1		1		1	
	b) HIV infection					1*		1*		1*		1*	
	i) Clinically well receiving ARV therapy	1	1	1	1	If on treatment, see Drug Interactions							
	ii) Not clinically well or not receiving ARV therapy[6]	2	1	2	1	If on treatment, see Drug Interactions							

Key:

1 No restriction (method can be used)	3 Theoretical or proven risks usually outweigh the advantages
2 Advantages generally outweigh theoretical or proven risks	4 Unacceptable health risk (method not to be used)

Abbreviations: ARV = antiretroviral; C=continuation of contraceptive method; CHC=combined hormonal contraception (pill, patch, and, ring); COC=combined oral contraceptive; Cu-IUD=copper-containing intrauterine device; DMPA = depot medroxyprogesterone acetate; I=initiation of contraceptive method; LNG-IUD=levonorgestrel-releasing intrauterine device; NA=not applicable; POP=progestin-only pill; P/R=patch/ring; SSRI=selective serotonin reuptake inhibitor; + Condition that exposes a woman to increased risk as a result of pregnancy. *Please see the complete guidance for a clarification to this classification: https://www.cdc.gov/reproductivehealth/contraception/contraception_guidance.htm

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		I	C	I	C	I	C	I	C	I	C	I	C
Hypertension	a) Adequately controlled hypertension	1*		1*		1*		2*		1*		3*	
	b) Elevated blood pressure levels (*properly taken measurements*)												
	i) Systolic 140-159 or diastolic 90-99	1*		1*		1*		2*		1*		3*	
	ii) Systolic ≥160 or diastolic ≥100[†]	1*		2*		2*		3*		2*		4*	
	c) Vascular disease	1*		2*		2*		3*		2*		4*	
Inflammatory bowel disease	(*Ulcerative colitis, Crohn's disease*)	1		1		1		2		2		2/3*	
Ischemic heart disease[†]	Current and history of	1		2	3	2	3	3		2	3	4	
Known thrombogenic mutations[§]		1*		2*		2*		2*		2*		4*	
Liver tumors	a) Benign												
	i) Focal nodular hyperplasia	1		2		2		2		2		2	
	ii) Hepatocellular adenoma[§]	1		3		3		3		3		4	
	b) Malignant[§] (hepatoma)	1		3		3		3		3		4	
Malaria		1		1		1		1		1		1	
Multiple risk factors for atherosclerotic cardiovascular disease	(e.g., older age, smoking, diabetes, hypertension, low HDL, high LDL, or high triglyceride levels)	1		2		2*		3*		2*		3/4*	
Multiple sclerosis	a) With prolonged immobility	1		1		1		2		1		3	
	b) Without prolonged immobility	1		1		1		2		1		1	
Obesity	a) Body mass index (BMI) ≥30 kg/m²	1		1		1		1		1		2	
	b) Menarche to <18 years and BMI ≥ 30 kg/m²	1		1		1		2		1		2	
Ovarian cancer[†]		1		1		1		1		1		1	
Parity	a) Nulliparous	2		2		1		1		1		1	
	b) Parous	1		1		1		1		1		1	
Past ectopic pregnancy		1		1		1		1		2		1	
Pelvic inflammatory disease	a) Past												
	i) With subsequent pregnancy	1	1	1	1	1		1		1		1	
	ii) Without subsequent pregnancy	2	2	2	2	1		1		1		1	
	b) Current	4	2*	4	2*	1		1		1		1	
Peripartum cardiomyopathy[‡]	a) Normal or mildly impaired cardiac function												
	i) <6 months	2		2		1		1		1		4	
	ii) ≥6 months	2		2		1		1		1		3	
	b) Moderately or severely impaired cardiac function	2		2		2		2		2		4	
Postabortion	a) First trimester	1*		1*		1*		1*		1*		1*	
	b) Second trimester	2*		2*		1*		1*		1*		1*	
	c) Immediate postseptic abortion	4		4		1*		1*		1*		1*	
Postpartum (*nonbreastfeeding women*)	a) <21 days					1		1		1		4	
	b) 21 days to 42 days												
	i) With other risk factors for VTE					1		1		1		3*	
	ii) Without other risk factors for VTE					1		1		1		2	
	c) >42 days					1		1		1		1	
Postpartum (*in breastfeeding or nonbreastfeeding women, including cesarean delivery*)	a) <10 minutes after delivery of the placenta												
	i) Breastfeeding	1*		2*									
	ii) Nonbreastfeeding	1*		1*									
	b) 10 minutes after delivery of the placenta to <4 weeks	2*		2*									
	c) ≥4 weeks	1*		1*									
	d) Postpartum sepsis	4		4									

Condition	Sub-Condition	Cu-IUD		LNG-IUD		Implant		DMPA		POP		CHC	
		I	C	I	C	I	C	I	C	I	C	I	C
Pregnancy		4*		4*		NA*		NA*		NA*		NA*	
Rheumatoid arthritis	a) On immunosuppressive therapy	2	1	2	1	1		2/3*		1		2	
	b) Not on immunosuppressive therapy	1		1		1		2		1		2	
Schistosomiasis	a) Uncomplicated	1		1		1		1		1		1	
	b) Fibrosis of the liver[‡]	1		1		1		1		1		1	
Sexually transmitted diseases (STDs)	a) Current purulent cervicitis or chlamydial infection or gonococcal infection	4	2*	4	2*	1		1		1		1	
	b) Vaginitis (*including trichomonas vaginalis and bacterial vaginosis*)	2	2	2	2	1		1		1		1	
	c) Other factors relating to STDs	2*	2	2*	2	1		1		1		1	
Smoking	a) Age <35	1		1		1		1		1		2	
	b) Age ≥35, <15 cigarettes/day	1		1		1		1		1		3	
	c) Age ≥35, ≥15 cigarettes/day	1		1		1		1		1		4	
Solid organ transplantation[‡]	a) Complicated	3	2	3	2	2		2		2		4	
	b) Uncomplicated	2		2		2		2		2		2*	
Stroke[§]	History of cerebrovascular accident	1		2		2	3	3		2	3	4	
Superficial venous disorders	a) Varicose veins	1		1		1		1		1		1	
	b) Superficial venous thrombosis (acute or history)	1		1		1		1		1		3*	
Systemic lupus erythematosus[†]	a) Positive (or unknown) antiphospholipid antibodies	1*	1*	3*		3*		3*	3*	3*		4*	
	b) Severe thrombocytopenia	3*	2*	2*		2*		3*	2*	2*		2*	
	c) Immunosuppressive therapy	2*	1*	2*		2*		2*	2*	2*		2*	
	d) None of the above	1*	1*	2*		2*		2*	2*	2*		2*	
Thyroid disorders	Simple goiter/ hyperthyroid/hypothyroid	1		1		1		1		1		1	
Tuberculosis[‡] (*see also Drug Interactions*)	a) Nonpelvic	1	1	1	1	1*		1*		1*		1*	
	b) Pelvic	4	3	4	3	1*		1*		1*		1*	
Unexplained vaginal bleeding	(suspicious for serious condition) before evaluation	4*	2*	4*	2*	3*		3*		2*		2*	
Uterine fibroids		2		2		1		1		1		1	
Valvular heart disease	a) Uncomplicated	1		1		1		1		1		2	
	b) Complicated[†]	1		1		1		1		1		4	
Vaginal bleeding patterns	a) Irregular pattern without heavy bleeding	1		1	1	2		2		2		1	
	b) Heavy or prolonged bleeding	2*		1*	2*	2*		2*		2*		1*	
Viral hepatitis	a) Acute or flare	1		1		1		1		1		3/4*	2
	b) Carrier/Chronic	1		1		1		1		1		1	1
Drug Interactions													
Antiretrovirals used for prevention (PrEP) or treatment of HIV	Fosamprenavir (FPV) All other ARVs are 1 or 2 for all methods.	1/2*	1*	1/2*	1*	2*		2*		2*		3*	
Anticonvulsant therapy	a) Certain anticonvulsants (phenytoin, carbamazepine, barbiturates, primidone, topiramate, oxcarbazepine)	1		1		2*		1*		3*		3*	
	b) Lamotrigine	1		1		1		1		1		3*	
Antimicrobial therapy	a) Broad spectrum antibiotics	1		1		1		1		1		1	
	b) Antifungals	1		1		1		1		1		1	
	c) Antiparasitics	1		1		1		1		1		1	
	d) Rifampin or rifabutin therapy	1		1		2*		1*		3*		3*	
SSRIs		1		1		1		1		1		1	
St. John's wort		1		1		2		1		2		2	

Updated in 2020. This summary sheet only contains a subset of the recommendations from the U.S. MEC. For complete guidance, see: https://www.cdc.gov/reproductivehealth/contraception/contraception_guidance.htm. Most contraceptive methods do not protect against sexually transmitted diseases (STDs). Consistent and correct use of the male latex condom reduces the risk of STDs and HIV.

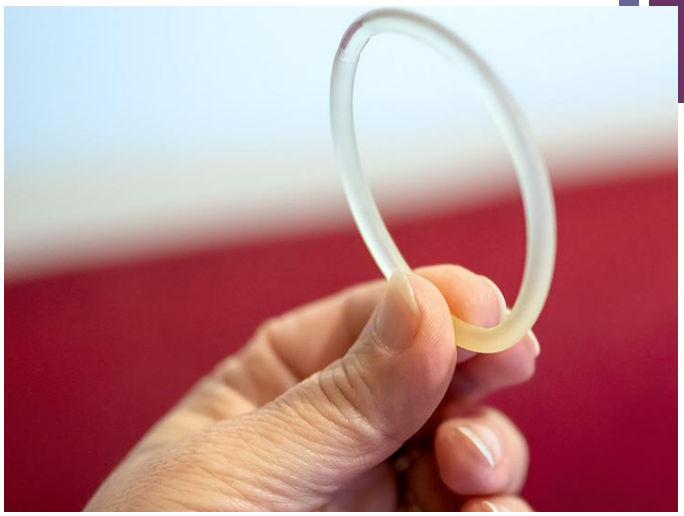
CS314239-A

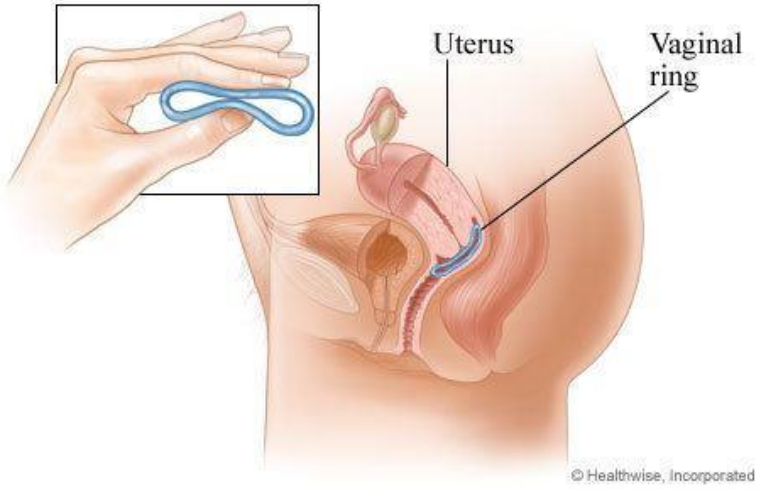
Contraceptive Patch

- Combined hormonal transdermal patch similar to COCPs
- Applied to buttocks, upper arm, lower abdomen or upper torso (except breast)
- MOA: Inhibits ovulation and also thickens cervical mucus
- Adverse effects similar to those experienced in users of COCPs
- Compared to our COCPs, is more convenient and more "forgiving"
- Perfect use: **0.3%**
- Typical use: **9%**

Vaginal Contraceptive Ring

- Combined hormonal flexible ring made of ethylene vinyl acetate copolymer that is placed vaginally
- Follows 28 day cycle similar to the other combine hormonal contraceptives
- MOA: Inhibits ovulation and also thickens cervical mucus
- Adverse effects similar to the other combine hormonal contraceptives discussed, and some vaginal symptoms
- Perfect use: **0.3%**
- Typical use: **9%**





Injectable Contraceptives

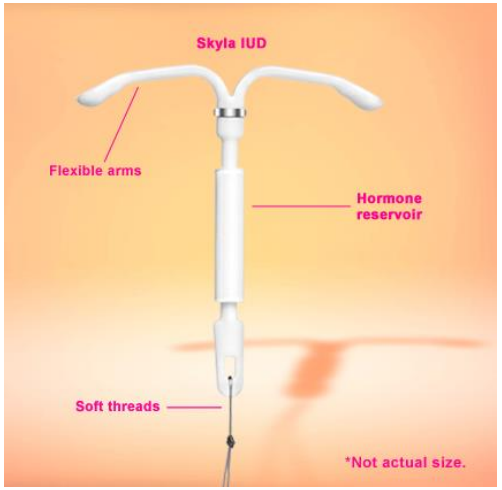
- Most commonly used injectable is depot medroxyprogesterone acetate (DMPA)
- Only contains progestin
- Given either IM or SQ, every 12 weeks/3 months
- MOA: inhibits LH surge so prevents follicular maturation and ovulation; changes endometrium to prevent implantation; increases thickness of cervical mucus to prevent sperm migration
- Adverse effects: irregular bleeding, *reversible* bone density decrease, weight gain, depression
- Perfect use: **0.2%**
- Typical use: **6%**

Contraceptive Implant

- Thin rod that releases progestin, inserted into the arm
- Effective for 5 years, though marketed for 3 years
- MOA: inhibits ovulation and thickens cervical mucus inhibits LH surge so prevents follicular maturation and ovulation; changes endometrium to prevent implantation; increases thickness of cervical mucus to prevent sperm migration
- Adverse effects: irregular menses (ranging from amenorrhea, prolonged menses)
- Perfect use: **0.05%**
- Typical use: **0.05%**

Hormonal IUD

- Progestin only
- Include: Mirena, Kyleena, Liletta,and Skyla – differ by length of time they are effective
  - Mirena, Liletta – 7 years
  - Kyleena – 5 years
  - Skyla – 3 years
- MOA: 1) "Foreign body effect", 2) thickening of cervical mucus, suppressing endometrium, and impairs sperm function and ovulation
- Perfect use: **0.2%**
- Typical use: **0.2%**



Brand Name	Dose per day	Total dose	Duration: FDA	Duration: Evidence	Device Cost: Commercial	Device Cost: 340B	Size in mm	String Color	Amenorrhea at 1 year
Mirena	20 mcg	52 mg	5 years	7 years	$954	$338	32x32	black	20%
Liletta	18.6 mcg	52 mg	5 years	7 years*	$750	$50	32x32	blue	19%
Skyla	14 mcg	13.5 mg	3 years	3 years	$794	$450	29x30	black	6%
Kyleena	17.5 mcg	19.5 mg	5 years	5 years	$954	$560	28x30	blue	12%

Emergency Contraception

When to use it?

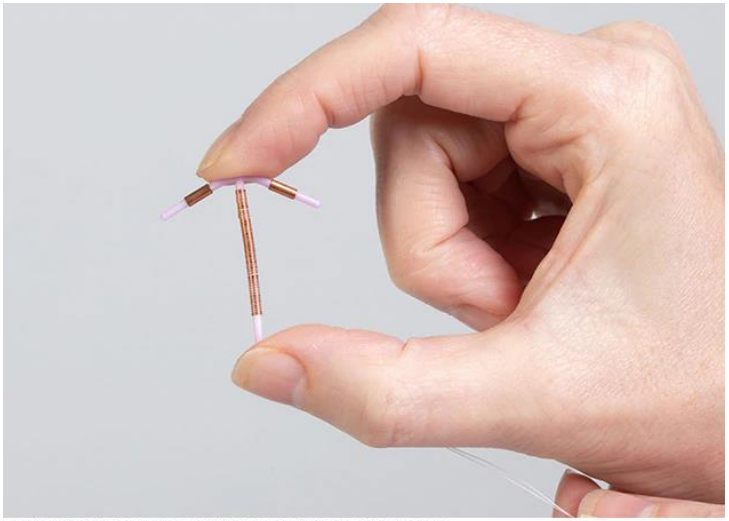
- Used post-coitally
  - For contraceptive failure
  - In cases of a failure to use contraception at time of intercourse
- Administered as soon as possible after intercourse
- Meant to PREVENT pregnancy but does NOT terminate an existing pregnancy

What are your options?

- Copper IUD
- Selective Progesterone Receptor Modulators
- Progestin Only Pill
- Combined Progestin-estrogen pills

Copper IUD

- In addition to long-term contraception, can also be used for emergency contraception if placed within **5 days** of intercourse
- Effectiveness: **99.9%**
- Must be placed by a trained provider, so can be difficult to access in the appropriate time frame
- Not affected by weight in regards to efficacy



Selective Progesterone Receptor Modulators

- One pill of Ulipristal acetate 30 mg
- Requires a prescription -- can give patients an RX in advance to have a a back-up
- MOA: Binds to progesterone receptor and inhibits or delays ovulation
- Effective up to **5** days after unprotected intercourse, and does not decrease in efficacy over that time
- Adverse effects: nausea, headache, irregular bleeding, abdominal pain, dizziness, breast tenderness
- Effectiveness: **62-85%**
- Must delay starting hormonal contraceptives by 5 days after using
- Less effective in obese women

Progestin Only Pill

- One pill of 1.5 mg of levonogestrel (much higher dose of levonogestrel than in other forms of contraception)
- Available OTC and online; no age requirement
- MOA: Interferes with LH peak
- Effective up to **3** days after unprotected intercourse, but each day with decreasing effectiveness
- Adverse effects: nausea, headache, irregular bleeding, abdominal pain, dizziness, breast tenderness
- Effectiveness: **52-100%**
- Less effective in obese women

Combined Progestin-estrogen pills (Yuzpe Method)

- Two doses of a combination estrogen/progestin OCP taken 12 hours apart
  - 100 mcg ethinyl estradiol
  - 1 mg dl-norgestrel (equivalent to 0.5 mg levonogestrel)
- Different formulations based on the COCP chosen
- Convenient as it uses COCP pills that may already
- MOA: Inhibits ovulation
- Adverse effects: Nausea, vomiting
- Can be used up to **5** days after intercourse, but most effective up to **3** days after intercourse
- Effectiveness: **56-89%**

Table 2. Yuzpe Method: Oral Contraceptives Used for Emergency Contraception

Brand	*Pills per dose**	*Ethinyl estradiol per dose (mcg)*	*Levonorgestrel per dose (mg)*
Altavera	Four peach	120	0.60
Amethia	Four white	120	0.60
Amethia Lo	Five white	100	0.50
Amethyst	Six white	120	0.54
Aviane	Five orange	100	0.50
Camrese	Four light blue-green	120	0.60
Camrese Lo	Five orange	100	0.50
Cryselle	Four white	120	0.60
Enpresse	Four orange	120	0.50
Introvale	Four peach	120	0.60
Jolessa	Four pink	120	0.60
Lessina	Five pink	100	0.50
Levora	Four white	120	0.60
Lo/Ovral	Four white	120	0.60
Loseasonique	Five orange	100	0.50
Low-Ogestrel	Four white	120	0.60
Lutera	Five white	100	0.50
Ogestrel	Two white	100	0.50
Portia	Four pink	120	0.60
Quasense	Four white	120	0.60
Seasonique	Four light blue-green	120	0.60
Sronyx	Five white	100	0.50
Trivora	Four pink	120	0.50

**—Two doses taken 12 hours apart, beginning as soon as possible after unprotected intercourse. Dosage based on standard dosing of 100 mcg of ethinyl estradiol and 0.5 mg of levonorgestrel.*

Adapted with permission from the Office of Population Research at Princeton University and the Association of Reproductive Health Professionals. The Emergency Contraception Website. Answers to frequently asked questions about types of emergency contraception. Updated August 26, 2013. http://ec.princeton.edu/questions/dose.html. Accessed September 9, 2013.

Table 1. Available Methods of Emergency Contraception ⇦

Regimen	Formulation	Timing of Use After Unprotected Sexual Intercourse*	Access	FDA Labeled for Use as Emergency Contraception
Selective progesterone receptor modulator	1 tablet, containing 30 mg of ulipristal acetate	Up to 5 days	Requires a prescription	Yes
Progestin only	1 tablet, containing 1.5 mg of levonorgestrel	Up to 3 days	Available over the counter without age restriction	Yes
	2 tablets, each containing 0.75 mg of levonorgestrel	Up to 3 days	Available over the counter to those 17 years and older with photo identification	Yes
Combined progestin–estrogen pills	A variety of formulations can be used†	Up to 5 days	Requires a prescription	No‡
Copper IUD§	N/A	Up to 5 days	Requires office visit and insertion by a clinician	No‡

Abbreviations: FDA, U.S. Food and Drug Administration; IUD, intrauterine device; N/A, not applicable.

*Emergency contraception is best used as soon as possible after unprotected sex.

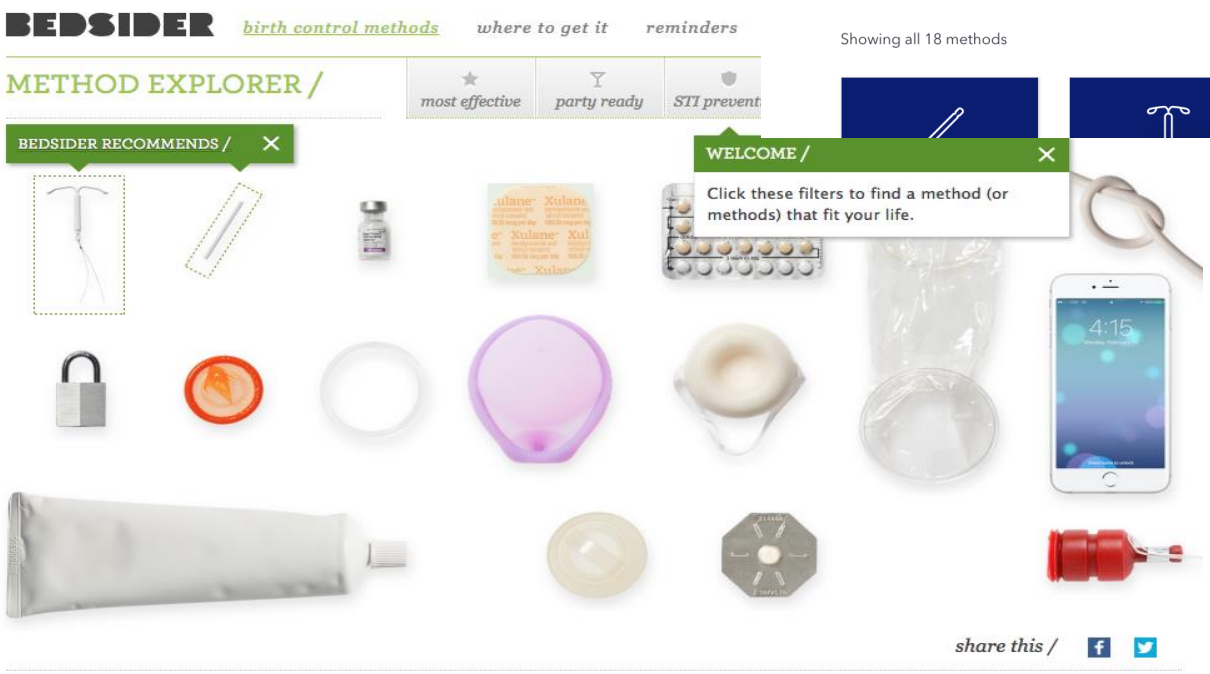
†A variety of formulations of combined oral contraceptives can be used for emergency contraception. For a list of appropriate formulations, see http://ec.princeton.edu/questions/dose.html#dose.

‡Although these methods are not FDA labeled for use as emergency contraception, they have been found to be safe and effective when used for emergency contraception and can be used off-label for this indication.

§The copper IUD is the most effective method of emergency contraception.

Resources to give patients

- Bedsider.org
- Planned Parenthood



Take home points

- Lots of different options – hormonal, non-hormonal
- The best contraception is the one that the patient will use and be consistent about using
- Counsel patients about realistic expectations for each method (eg. adverse reactions, adherence, etc)
- There is a lot of room to make changes and help patients find the right contraception for them

Sources

- www.plannedparenthood.com
- www.bedsider.org
- https://www.who.int/news-room/fact-sheets/detail/emergency-contraception
- ACOG Practice Bulletin on Emergency Contraception
- The Contraceptive Technology Book

Thank you!

"Who should take responsibility for protection and contraception, the bird or the bee?"