BEYOND BIRTH CONTROL:
EXPLORING THE NON-CONTRACEPTIVE PERKS OF DIFFERENT METHODS

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DISCLOSURES

- Leah Rashidyan has no financial relationships with commercial interests to disclose
- Any unlabeled/unapproved uses of drugs or products listed will be disclosed

LEARNING OBJECTIVES

1	Discuss how to categorize the **effects** associated with various contraceptive methods based on **hormonal profiles**
2	Describe effective patient engagement through focusing on their **preferences** and **priorities** to make scientifically based recommendations
3	Identify how to construct **personalized contraceptive recommendations** while considering advantages of different methods patients may opt between

CONTRACEPTIVE OVERVIEW IN THE UNITED STATES

- Long-acting reversible contraceptives(LARC)
  - Etonogestrel single-rod implant (placed in arm)
  - Intrauterine devices (IUDs)
    - 5 IUDs currently on US market, duration varying between three to twelve years
- Numerous oral contraceptives
  - Combined hormonal contraceptive (CHC)
  - Progesterone-only pill (POP)
- Bilateral tubal ligation (sterilization)

Contraceptive method used in the US:

- **Female Sterilization**: 18.1%
- **Oral Contraceptive Pills**: 14.0%
- **Long-Acting Reversible Contraceptives (LARCs)**: 10.4%
- **Male Condom**: 8.4%

LARC usage

- **Ages 20-29**: 13.7%
- **Ages 30-39**: 12.7%
- **Ages 15-19**: 5.8%
- **Ages 40-49**: 6.6%

(National Center for Health Statistics, 2023)

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		LNG-IUD		Implant		DMPA		POP		CHC	
		I	C	I	C	I	C	I	C	I	C	I	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		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‡												
	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‡ (*decompensated*)	1		3		3		3		3		4	
Cystic fibrosis‡		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		LNG-IUD		Implant		DMPA		POP		CHC	
		I	C	I	C	I	C	I	C	I	C	I	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‡	1		2		2		3		2		3/4*	
	d) Other vascular disease or diabetes of >20 years' duration‡	1		2		2		3		2		3/4*	
Dysmenorrhea	Severe	2		1		1		1		1		1	
Endometrial cancer‡		4	2	4	2	1		1		1		1	
Endometrial hyperplasia		1		1		1		1		1		1	
Endometriosis		2		1		1		1		1		1	
Epilepsy‡	(*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‡	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 ß-hCG levels	1*	1*	1*	1*	1*		1*		1*		1*	
	ii) Decreasing ß-hCG levels	2*	1*	2*	1*	1*		1*		1*		1*	
	iii) Persistently elevated ß-hCG levels or malignant disease, with no evidence or suspicion of intrauterine disease	2*	1*	2*	1*	1*		1*		1*		1*	
	iv) Persistently elevated ß-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‡	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‡	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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Condition	Sub-Condition	Cu-IUD		LNG-IUD		Implant		DMPA		POP		CHC	
		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 non-breastfeeding 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 condomreduces the risk of STDs and HIV.

CS314239-A

WHO SHOULD WE KEEP IN MIND?

A 38 year-old woman with hx of migraines with aura, and heavy bleeding; she is uninsured

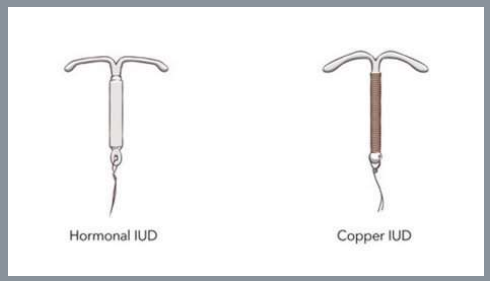
A 21 year-old breastfeeding woman at 3 months postpartum without any preferences

A 16 year-old who has never had a pelvic exam and is not sexually active, but has heavy periods and hormonal acne

A 32 year-old who has irregular periods, facial hair growth, and difficulty loosing weight

A 27 year-old non-binary individual who would like to avoid monthly bleeding and is not good at taking pills

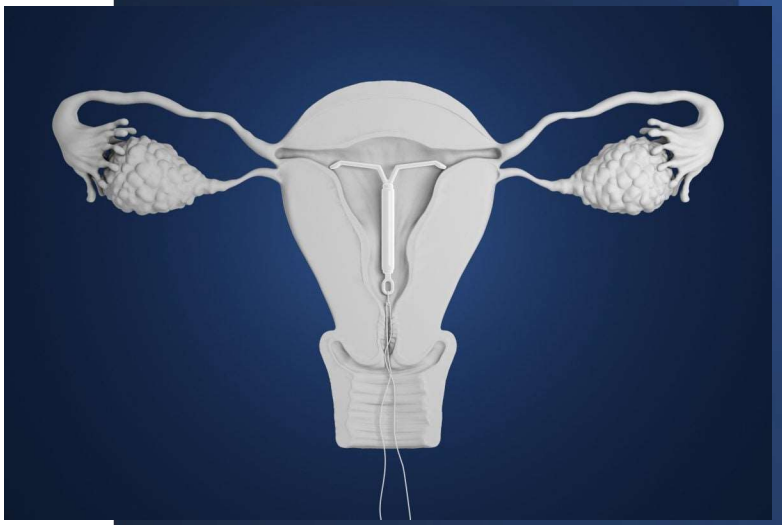
LONG-ACTING REVERSIBLE CONTRACEPTIVES (LARCS)

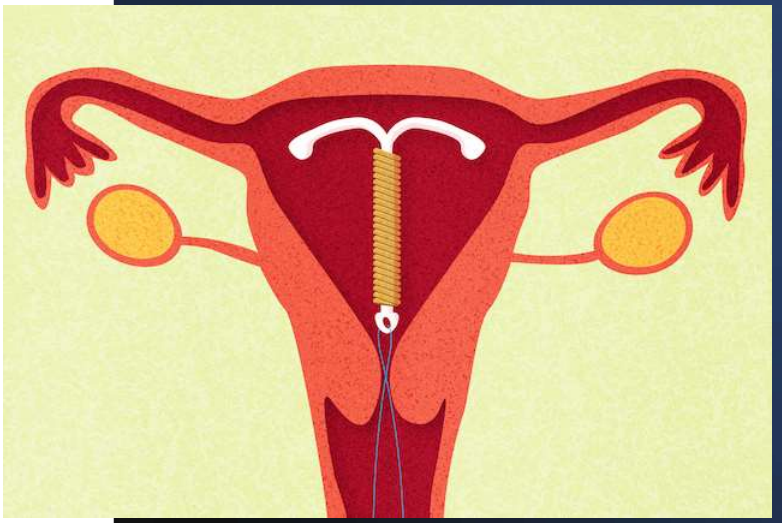


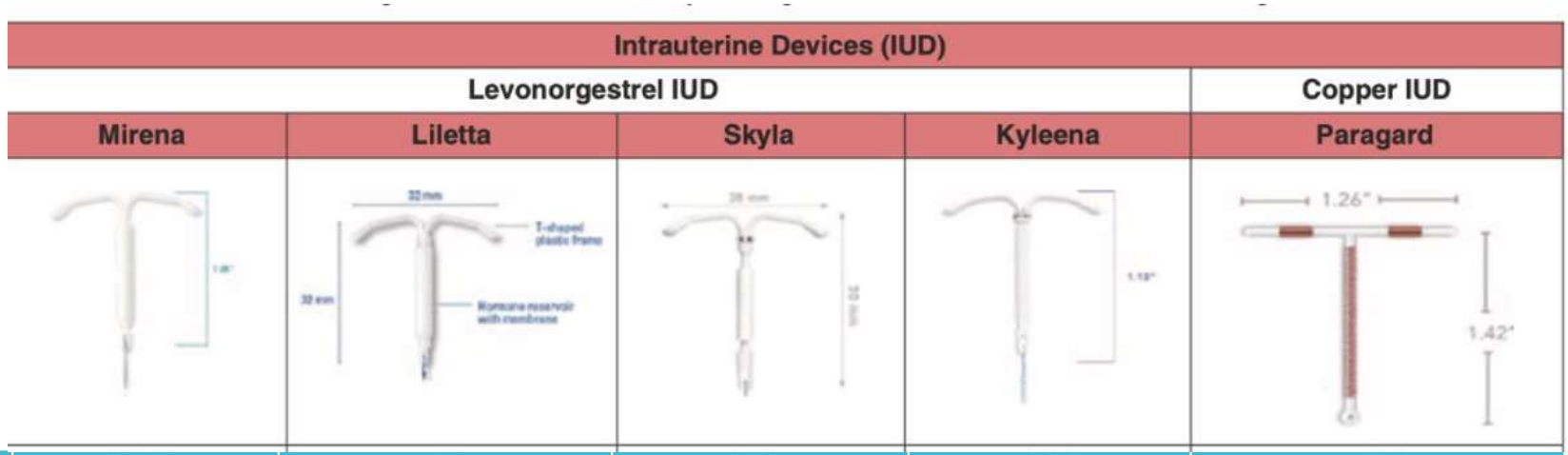
ACTION OF IUD'S

Levonogestrel IUDs: Change in quantity and viscosity of cervical mucus which sperm has difficulty penetrating, in addition to a change in the build-up of the endometrial lining

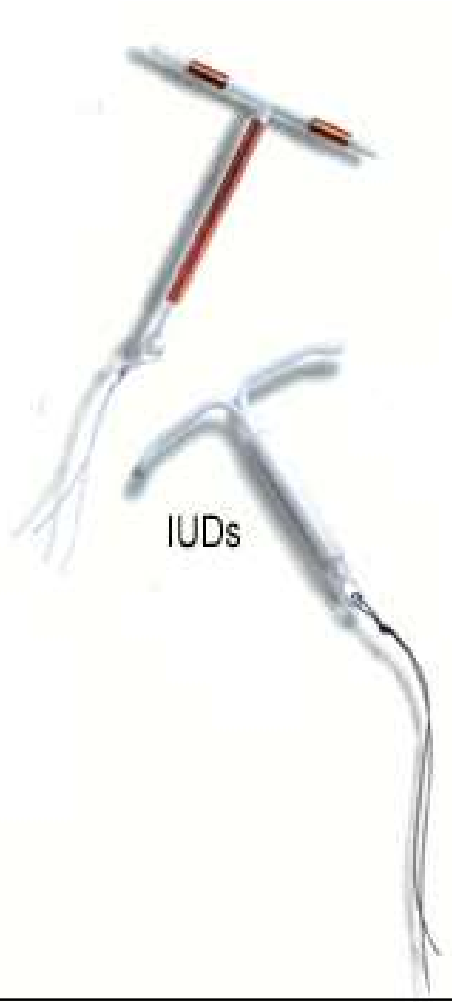
Copper IUDs: The copper in the stem impairs sperm motility and viability, as copper ions are toxic to sperm. It also creates an inflammatory reaction to the lining of the uterus, perhaps making implantation less likely





	Intrauterine Devices (IUD)				
	Levonorgestrel IUD				Copper IUD
	Mirena	Liletta	Skyla	Kyleena	Paragard
					
Approved duration	**8 years**	**8 years**	**3 years**	**5 years**	**10 years**
Total hormone	52 mg	52 mg	13.5 mg	19.5 mg	N/A
String color	Brown	Blue	Brown	Blue	White
Notes	FDA approved for HMB		Smallest IUD, Silver ring notable on US	Silver ring notable on US	EC within 5 days

INTRA-UTERINE DEVICE ELIGIBILITY



- Person with a **normally shaped** uterus who desires an IUD
- Nulliparous and grand multips are eligible!
- Appropriate for use in adolescents
- Postpartum use is timing dependent but effective

INTRA-UTERINE DEVICE INDICATIONS

Heavy menstrual bleeding

- BOTH Levonorgestrel 52mcg IUDs are FDA approved for this use (USFDA, 2009; USFDA, 2023)

Endometriosis

- Levonorgestrel-releasing IUD (52mcg) is endorsed by the CDC on the MEC chart, noting it has improved pelvic pain and dyspareunia (CDC, 2023)

Contraception (of course)

- Copper IUD: Emergency contraception within 5 days of unprotected intercourse (CDC, 2021)

A REAL-WORLD CASE

A 23 year old G1P1 presents to her routine wellness visit c/o vague pelvic pain and a "poking" feeling with intercourse last night. She had a Mirena IUD placed 3 months ago without difficulty, and has a negative UPT today. On speculum exam, you are able to visualize strings and the bottom of the IUD rod at the cervix.

The most appropriate counseling to provide the patient is:
A) Reassurance that the IUD is still in-place and providing contraceptive protection
B) Refer her to GYN for a pelvic pain evaluation
C) Recommend removing the IUD, as it is no longer effective and discuss alternatives
D) Collect STI testing for her pelvic pain, and await results

Etonogestrel single-rod implant: Nexplanon

Is now FDA approved for 4 years, and is commonly used for 5 years (Ali et al, 2016)

Most common side effect is an irregular bleeding profile

Table 1. Long-Acting Reversible Contraception Continuation Rates From the CHOICE Project ⇦

Method	Continuation, % (95% CI)		
	1 Year	2 Year	3 Year
Levonorgestrel-20 IUD	87.3 (85.8–88.6)	76.7 (74.8–78.5)	69.8 (67.6–71.8)
Copper IUD	84.3 (80.7–87.3)	76.2 (72.1–79.9)	69.7 (65.1–73.7)
Implant	81.7 (78.3–84.7)	68.7 (64.7–72.3)	56.2 (51.8–60.3)
LARC methods overall	85.8 (84.5–87.0)	75.2 (73.6–76.7)	67.2 (65.4–68.9)
Non-LARC methods overall*	55.8 (54.2–59.4)	39.5 (36.9–42.1)	31.0 (28.5–33.5)

Abbreviations: CHOICE, The Contraceptive CHOICE Project; IUD, intrauterine device; LARC, long-acting reversible contraception.

*Non-LARC methods were depot medroxyprogesterone acetate, oral contraceptive pills, contraceptive patch, and vaginal ring.

Data from Diedrich JT, Zhao Q, Madden T, Secura GM, Peipert JF. Three-year continuation of reversible contraception. Am J Obstet Gynecol 2015;213:662.e1–8.

A REAL WORLD CASE

A 16 year old G0P0 presents for contraceptive counseling for heavy menstrual bleeding that is bothersome and interfering with her quality of life. She requests to review contraceptive methods as she may become sexually active soon. This is her first-ever GYN visit, and she denies having been sexually active in the past. She has no significant medical history, and does not take any daily medications.

The method that is most likely to appeal to this patient is:

A) A Mirena IUD placement

B) A Nexplanon contraceptive rod

C) A Paraguard IUD placement

D) A progesterone-only pill to be initiated today

HORMONAL CONTRACEPTIVES: HOW TO CHOOSE?

CONSIDERATIONS:	safety FIRST	complaints today?
menstrual history?	PCOS symptoms? (acne, facial hair growth, BMI, etc)	prior history with other methods, side effects, etc

Contraindications for Combined Hormonal Contraceptives

- Migraines with AURA is level 4- not to be used
- BP >160/100 is level 4- not to be used
- Otherwise, BP >140/90 or even "adequately controlled HTN" is level 3
- History of DVT or "thrombogenic mutations" is level 3
- Smoker and >35yo is level 3 or 4 (depending on amount)
- Within 42 days postpartum- level 3 or 4
- "Multiple risk factors for atherosclerotic CVD" - level 3 or 4

Contraindications for Progesterone-only Pill

- Severe cirrhosis or liver tumors- level 3
- Systemic Lupus, + APA -level 3
- Breast cancer- level 3 or 4
- Hx of malabsorptive bariatric surgery- level 3
- On anticonvulsants or rifampin- level 3
- Ischemic heart disease- level 3

DOCUMENTATION FOR EVERY PATIENT CONTINUING OR INITIATING COMBINED HORMONAL CONTRACEPTION:

Any current high-blood pressure, smoking or vaping, or diagnosis of migraines (with or without aura)?

Any personal or family history of a clotting disorder?

Education on ACHES Warning Signs

- A-Abdominal Pain; C-Chest Pain; H-Headache; E-Eye Problems; S-Severe Leg Pain

PREMENSTRUAL DYSPHORIC DISORDER: DROSPIRENONE/ETHINYL ESTRADIOL

- "Yaz is **also indicated for the treatment of symptoms of premenstrual dysphoric disorder (PMDD)"**
- "The effectiveness of Yaz for PMDD when used for more than three menstrual cycles has not been evaluated."
- "In this disorder, these symptoms occur regularly during the luteal phase and remit within a few days following onset of menses; the disturbance markedly interferes with work or school, or with usual social activities and relationships with others."

(USFDA, 2012)

HIGH-ANDROGEN SYMPTOMS, "PCOS"

- With diagnosis of PCOS, OCPs are an "off-label treatment" as there are no FDA approved OCPs for the sole treatment of PCOS (Vitek, Alur, & Hoeger, 2015)
- "Oral contraceptives containing **norethindrone acetate, norgestimate**, and **drosperinone** are approved for acne vulgaris, and medroxyprogesterone acetate is indicated for the control of menstrual irregularity and amenorrhea which are common in PCOS."(Vitek, Alur, & Hoeger, 2015)

CONSIDER THE ANDROGENIC ACTIVITY OF PROGESTERONES

(CASEY, 2023)

Table. Androgenic Activity by Progestin Type[9,10]

Progestin type	Androgenic activity
Levonorgestrel	High
Norgestrel	High
Norethindrone	Medium
Norethindrone acetate	Medium
Ethynodiol diacetate	Low
Norgestimate	Very low
Desogestrel	Very low
Drospirenone	Anti

"MODERATE" ACNE VULGARIS

- OCP with Ethinyl estradiol and/or
  - Drosperinone (USFDA, 2009)
  - norethindrone
  - norgestimate

  (Vitek, Alur, & Hoeger, 2015)
- Also reasonable to trial vaginal ring (perhaps transdermal patch), supported by a Cochrane review reporting improvement in acne with method (Casey, 2023)

PROGESTERONE-ONLY PILLS

- New "over the counter" pill containing **0.075mg Norgestrel (Opill)**
- Norethindrone 0.35mg (Micronor), commonly AKA "Mini-pill"
- "Suppress ovulation in approximately **half** of the cycles in users"
- "thickening the cervical mucus to inhibit sperm penetration, lowering the midcycle LH and FSH peaks, slowing the movement of the ovum through the fallopian tubes, and altering the endometrium."
- "By 24 hours after drug ingestion, serum levels are near baseline, making efficacy dependent upon rigid adherence to the dosing schedule."

(USFDA, 2017)

PROGESTERONE-ONLY PILLS

- Also option for Drospirenone 4mg (Slynd); works primarily by suppressing ovulation

(USFDA, 2017)

Consider the data discussed earlier relating to acne, and androgen profiles to apply how this pill may be beneficial!

DECIDING BETWEEN HORMONAL METHODS

Generic or brand name	Progestin	Progestin dose	Ethinyl Estradiol (same in all)	Estrogenic	Progesterone	Androgenic	Type	Prog Generation	Indications, education	CO Medicaid Coverage
Aviane / Lessina / Lutera	Levonorgestrel	0.1mg	20mcg	E:17	P:0.5	A:0.31	Monophasic	2nd	Safest	
Levora / Altavera	Levonorgestrel	0.15mg	30mcg	E: 25	P: 0.8	A:0.45	Monophasic	2nd	Safest; same pill Seasonale	
Enpresse	Levonorgestrel	0.05/0.075/0.125mg	30/40/30mcg	E: 28	P: 0.5	A:0.29	**Triphasic**	2nd	Safest	
Apri / Reclipsen	Desogestrel	0.15mg	30mcg	E: 30	P: 1.5	A: 0.17	Monophasic	3rd	low (13%) BTB rate	Yes
Azurette / Mircette	Desogestrel	0.15mg	20mcg	E: 22	P: 1.5	A: 0.17	Biphasic	3rd	Acne & PCOS. Take every pill.	Yes
Velivet	Desogestrel	0.1/0.125/0.15mg	25mcg	E: 25	P: 1.2	A: 0.14	Triphasic	3rd	Acne & PCOS.	Yes
Ocella/ Syeda (Yasmin)	Drospirerone	3mg	30mcg	E: 30	P: 1.5	A:0	Monophasic	4th	Acne & PCOS.	Yes
Nikki/ Jasmiel/ Gianvi/ Loryna (Yaz)	Drospirerone	3mg	20mcg	E:20	P:1.5	A:0	Monophasic	4th	24 active pills. Acne & PMDD.	Yes
Slynd	Drospirerone	4mg	**NONE**				Monophasic	4th	24 active pills. Breastfeeding, Acne & PMS.	No
Errin / Lyza / Norethindrone (generic Micronor)	Norethindrone Acetate	0.35mg	**NONE**	E: 0	P: 0.4	A: 0.13	all active pills	1st	Strict adherence within 3hrs every day	
Tilia Fe / Estrostep Fe	Norethindrone Acetate	1mg	20/30/35mcg	E: 16	P: 1.2	A: 0.53	**Triphasic**	1st		
Balziva (generic Ovcon)	Norethindrone	0.4mg	35mcg	E: 40	P: 0.4	A: 0.15	Monophasic	1st	low (11%) BTB rate	Yes
Generess / Kaitlib	Norethindrone	0.8mg	25mcg	E: 27	P: 0.8	A: 0.27	Monophasic	1st		No
Microgestin (generic Loestrin)	Norethindrone Acetate	1mg	20mcg	E: 20	P: 1.2	A:0.53	Monophasic	1st		Yes
Junel 1.5/ Hailey 1.5	Norethindrone Acetate	1.5mg	30mcg	E: 30	P: 1.7	A: 0.8	Monophasic	1st		Yes
Lo Loestrin Fe	Norethindrone Acetate	1mg	**10mcg**	E: 12	P: 1.4	A: 0.64	Monophasic	1st	LOW estrogen dose, 52% BTB by 3rd cycle	Yes
Low-Ogestrel	Norgestrel	0.3mg	30mcg	E: 25	P: 0.8	A: 0.46	Monophasic	2nd	low (9.6%) BTB rate	Yes
Tri-Linyah (generic Ortho Tri-Cyclen)	Norgestimate	0.18/0.215/0.25	35mcg	E: 35	P: 0.2	A: 0.15	**Triphasic**	3rd	Acne & PCOS	Yes
Sprintec / Mili / etc (generic Ortho-Cyclen)	Norgestimate	0.25mg	35mcg	E: 35	P: 0.4	A: 0.18	Monophasic	3rd	PCOS	
Zovia	Eth Diacetate	1mg	35mcg	E:19	P:1.4	A:0.21	Monophasic	1st	Acne & PCOS	No
Jolessa (generic Seasonale)	Levonorgestrel	0.15mg	30mcg	E: 32	P: 1	A: 0.56	Monophasic	2nd	84 active tabs, 7 inert; 15% BTB rate	Yes
Amethia /Ashlyna/ (generic Seasonique)	Levonorgestrel	0.15mg	30mcg	E: 32	P: 1	A: 0.56	Biphasic	2nd	91active, last 7 of 10mcg EE; 14% BTB rate	Yes
Xulane patch	Norelgestromin	1.5mg	35mcg				Monophasic	3rd	patch changed q7days x3	Yes
TWIRLA TD patch	Levonorgestrel	1.2mg	30mcg				Monophasic	2nd	BTB in 40-60% of pts	No
Nuvaring / EluRyng / vaginal ring	Etonorgestrel	0.12mg/day	15mcg/day				Monophasic	3rd	in-place x21 days, then removed	yes
Depo-provera	Medroxyprogesterone	150mg	None					1st	IM: provides 12 wks of protection	yes

Data referenced from Dickey & Seymour (2021). Indications and education notes my own, may be off-label from FDA approval.

HORMONAL PROFILES AND EFFECTS

- Heavy menstrual bleeding
  - Levonogestrel IUD (52mcg most effective)
  - Etonogestrel single-rod implant (Nexplanon) or Medroxyprogesterone IM
  - Or transition to COCs if possible
- Vulvodynia or dyspareunia (sudden onset after OCP initiation)
  - Trial methods that bypass first-pass metabolism in the liver
    - Patch, ring, IM Depo, LARCs

HORMONAL PROFILES AND EFFECTS

- Ovarian cysts and prevention of ovarian cancer
  - Methods that suppress ovulation will be more effective (not IUDs)
- Endometriosis
  - Depoprovera
  - Continuous pill (Seasonale, Seasonique)
  - ANY method other than Cu-IUD that prevents endometrial lining from building up!

A REAL WORLD CASE

A 36 year old G2P2 presents for a primary care visit at 3 months postpartum. She is currently exclusively breastfeeding, and will return to full-time work in 4 weeks. She did resume intercourse 3 weeks ago, and did not use protection at that time; otherwise, she has not had intercourse since. Her menstruation has not resumed and her urine pregnancy test is negative today. She desires to initiate a contraceptive method. Her vitals are WNL, and she had an uncomplicated pregnancy and birth. She has a history of PCOS and irregular menstruation, and inquires as to options to manage those symptoms.

A REAL WORLD CASE- WHAT WOULD YOU DO?

The best contraceptive counseling to provide to this patient would be:

A) A combined hormonal contraceptive pill to be initiated on the first day of her next menses

B) A progesterone only pill to be initiated today

C) A return visit for IUD placement in 2 weeks after a negative pregnancy test and Gc/Ct result is obtained

D) No contraceptive method is indicated as she has not resumed menses

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