RUTGERS
BIOMEDICAL AND HEALTH SCIENCES

Navigating Contraceptives in Adolescents

Sari Bentsianov, MD
Assistant Professor of Pediatrics
Division of Population Health, Quality, & Implementation Sciences,
Section of Adolescent Medicine
Rutgers Robert Wood Johnson Medical School
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Disclosures

- No financial disclosures
- We will be discussing some off label uses of contraception and contraceptive devices

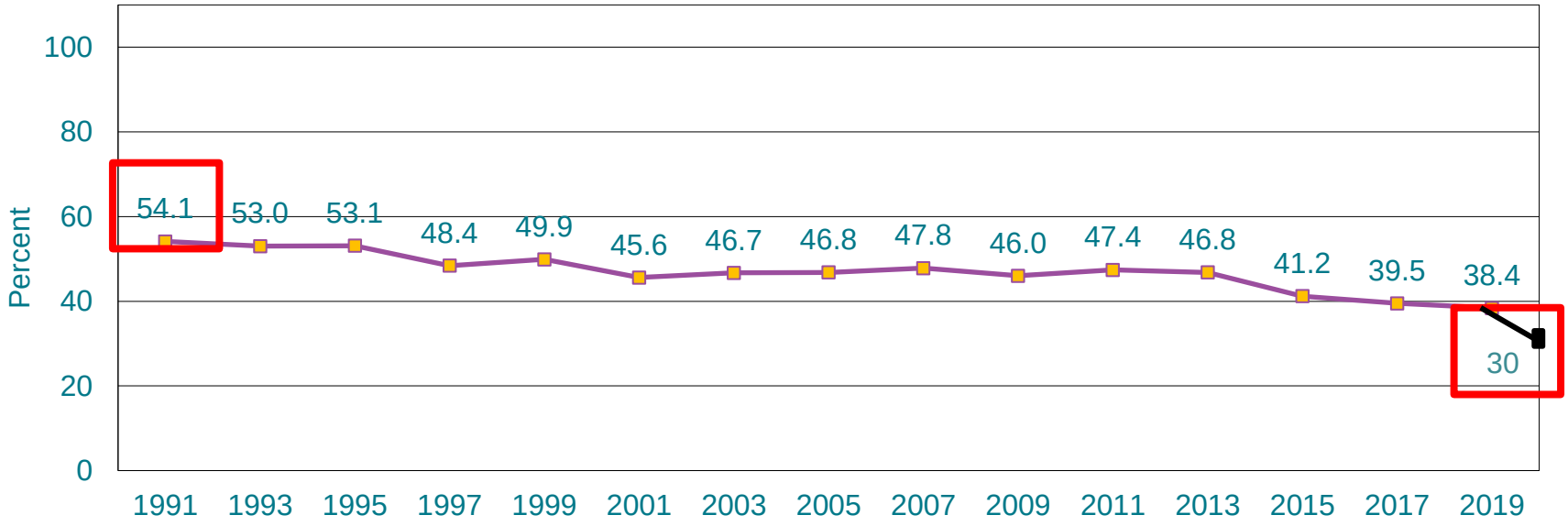
Learning objectives

- List available contraceptive options for use in adolescents
- Describe the non-contraceptive benefits of contraceptives
- Be able to implement quick start method for contraceptive initiation
- Identify common contraceptive related side effects and describe how to manage them


If you're not practicing birth control then you're trying to get pregnant.
Simple as that!
yourecards
someecards.com

How much sex are teens having?

- **2021 YRBSS Results**
  - 30% have ever had sexual intercourse
  - 20.7% were currently sexually active



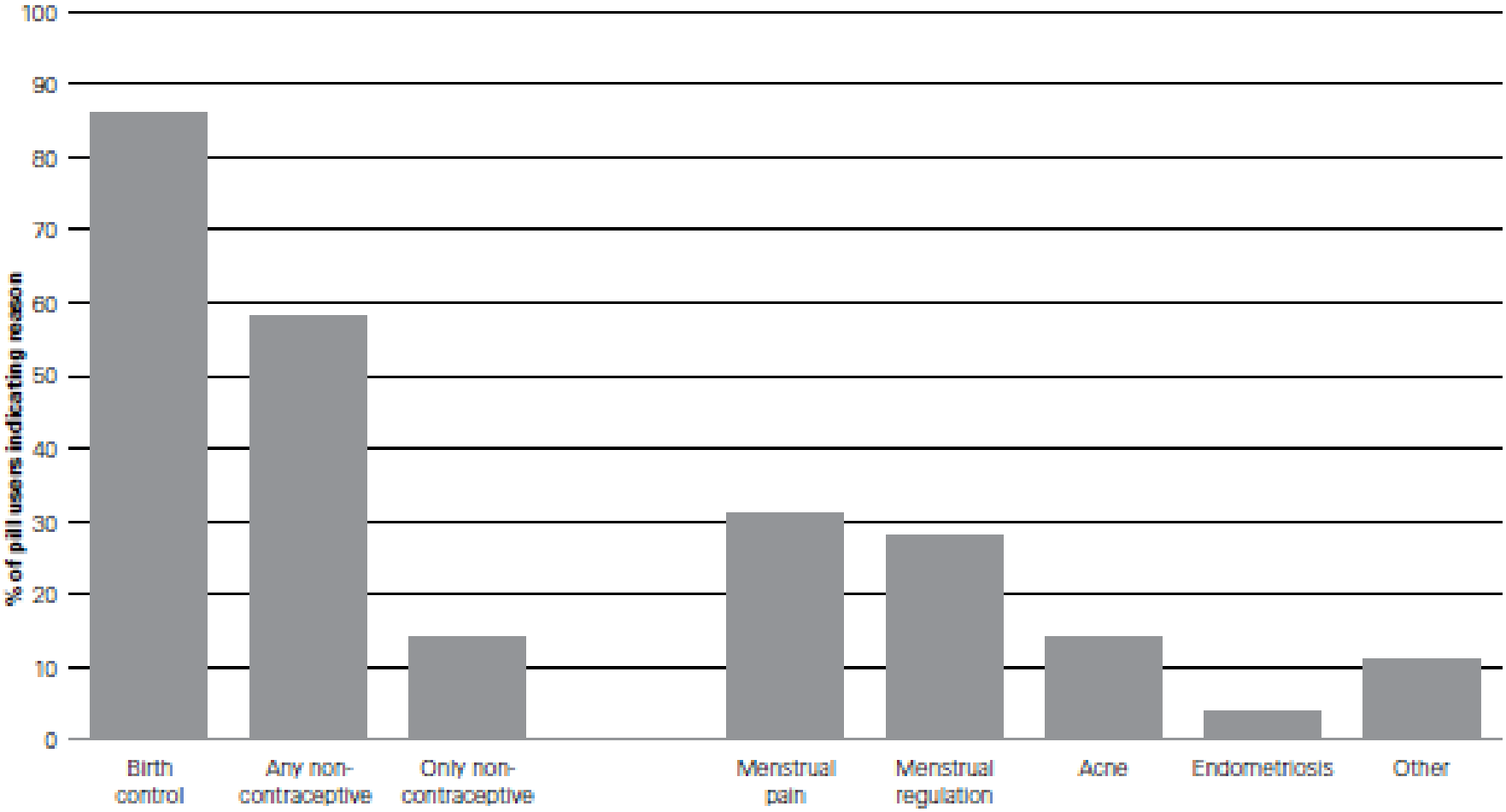
Percentage of High School Students Who Ever Had Sexual Intercourse, 1991-2019*

*Decreased 1991-2019, decreased 1991-2013, decreased 2013-2019 [Based on trend analyses using logistic regression models controlling for sex, race/ethnicity, and grade ($p < 0.05$). Significant linear trends (if present) across all available years are described first followed by linear changes in each segment of significant quadratic trends (if present).]
This graph contains weighted results.

National Youth Risk Behavior Surveys, 1991-2019

Non contraceptive use of contraception

FIGURE 1. Reasons women use oral contraceptive pills



- Jones RK, Beyond Birth Control: The overlooked Benefits of Oral Contraceptive Pills, New York: Guttmacher Institute, 2011.

Non contraceptive benefits of Contraception

- Decreased risk of endometrial and ovarian cancers
- Treatment of irregular periods
- Treatment of heavy menstrual bleeding
- Treatment of dysmenorrhea
- Treatment of acne and hirsutism
- Treatment of anemia
- Treatment of PMS and PMDD
- Treatment of pelvic pain and endometriosis
- Induction of amenorrhea for lifestyle impacts

Practice Bulletin No. 110: Noncontraceptive Uses of Hormonal Contraceptives. Obstetrics & Gynecology 115(1):p 206-218, January 2010. | DOI: 10.1097/AOG.0b013e3181cb50b5

Your “typical” adolescent patient

- You are seeing a 17 year old female with a past medical history of {insert chronic illness} that is poorly controlled due to patient non-adherence with recommended treatment plans.
- The patient’s and her mother are arguing in front of you that she never takes her medicine and she needs to grow up and be more responsible and not spend so much time with her boyfriend.
- Mom is asked to leave the room and the patient breaks down and confesses her period is a week late. She rarely uses condoms because her boyfriend doesn’t like to. Besides, she didn’t think she could get pregnant because she hasn’t been pregnant yet despite not using condoms regularly. Her periods are usually regular so she’s a little worried.
- The urine point of care pregnancy test is negative. After relaying the results, you decide to start a conversation about pregnancy prevention.

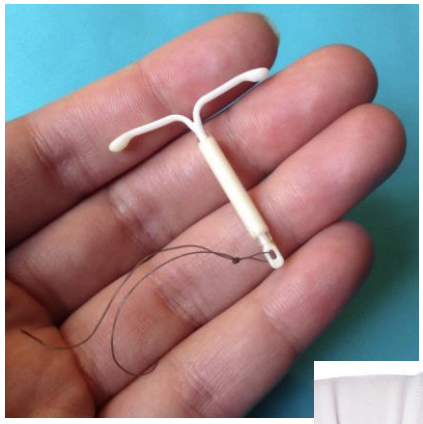
METHODS OF CONTRACEPTION

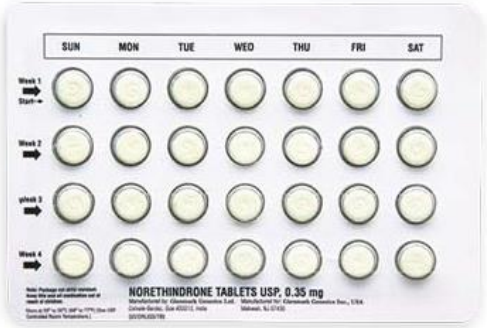
Hormonal Options

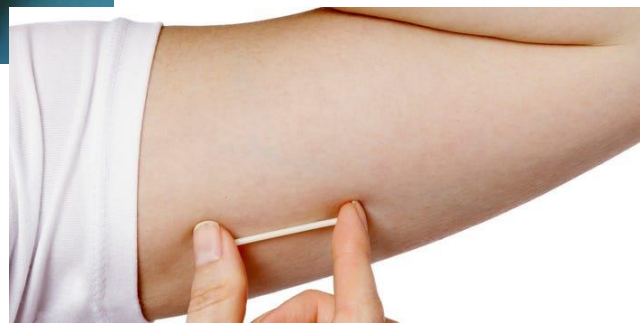
- *Combination* Estrogen-Progestin (CHCs)
  - Examples: oral pills, transdermal patches, intravaginal rings
  - Ethinyl Estradiol PLUS progestin
  - Mechanism of Action: thickening of cervical mucous, inhibition of ovulation
  - Advantages: regulates cycles, lighter bleeding, decreased cramping
    - Various dosing options, most well studied method
    - Multiple medical indications
  - Disadvantages: numerous side effects (nausea, breast tenderness, intermenstrual bleeding), difficult regimen, medical contraindications

Hormonal Options

- Progesterone Only
  - Examples: intrauterine system, subdermal implant, Depo Medroxyprogesterone Acetate injection, Norethindrone (progesterone only pill or Minipill)
  - Mechanism of Action: inhibits ovulation, thickens cervical mucous, thinning of the endometrium
  - Option for patients with contraindication to estrogen containing products
  - Variable impact on menses; can cause breakthrough bleeding

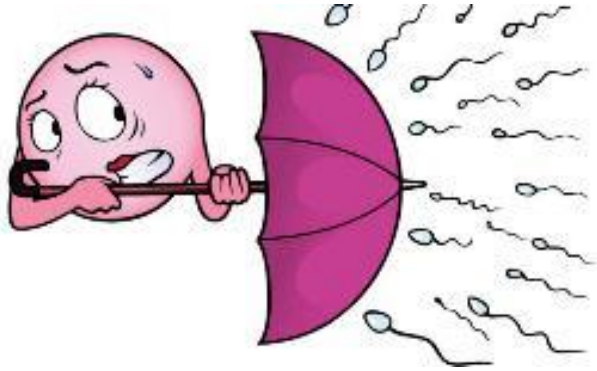






Hormonal Options

- Non Hormonal
  - Barrier Methods (condoms, spermicide, diaphragm, withdrawal)
  - Copper IUD



Emergency Contraception

- Cu and LNG IUD

- Ullipristal Acetate
  - 1 pill taken within 120 hours of unprotected sex
  - Delays or inhibits ovulation
  - Prescription only

- Levonorgestrel 1.5mg
  - 1 pill taken within 72 hours of unprotected sex
  - Delays or inhibits ovulation
  - Available over the counter regardless of age or sex

COUNSELING AND METHOD CHOICE

Starting the Conversation

- Ensure confidentiality and ask for permission to start the conversation
- Full medical history including menstrual history

Medical Contraindications to Contraception

- Absolute contraindications to **estrogen**
  - Acute DVT/PE or a history of one with a high risk of recurrence OR a history of a known thrombogenic mutation
  - Migraines WITH aura
  - Hypertension
  - Current breast or estrogen sensitive cancer
  - Severe decompensated cirrhosis
  - Longstanding diabetes with vascular changes, neuropathy, retinopathy, or nephropathy
  - Postpartum period
- **Progestin** Contraindications
  - Hormonal sensitive cancer
- IUD Contraindications
  - Anatomic abnormalities associated with the uterus
  - Current active cervical or pelvic infection
  - Current cervical or endometrial cancers
- Any undiagnosed abnormal bleeding needs to be investigated prior to method initiation

Medical Contraindications to Contraception

US MEC
US SPR

CDC

Summary Chart of U.S. Medical Eligibility Criteria

Curtis KM, Tepper NK, Jatlaoui TC, Berry-Bibee E, Horton LG, Zapata LB, Simmons KB, Pagano HP, Jamieson DJ, Whiteman MK. U.S. Medical Eligibility Criteria for Contraceptive Use, 2016. MMWR Recomm Rep. 2016 Jul 29;65(3):1-103. doi: 10.15585/mmwr.rr6503a1. PMID: 27467196.

How to start the conversation

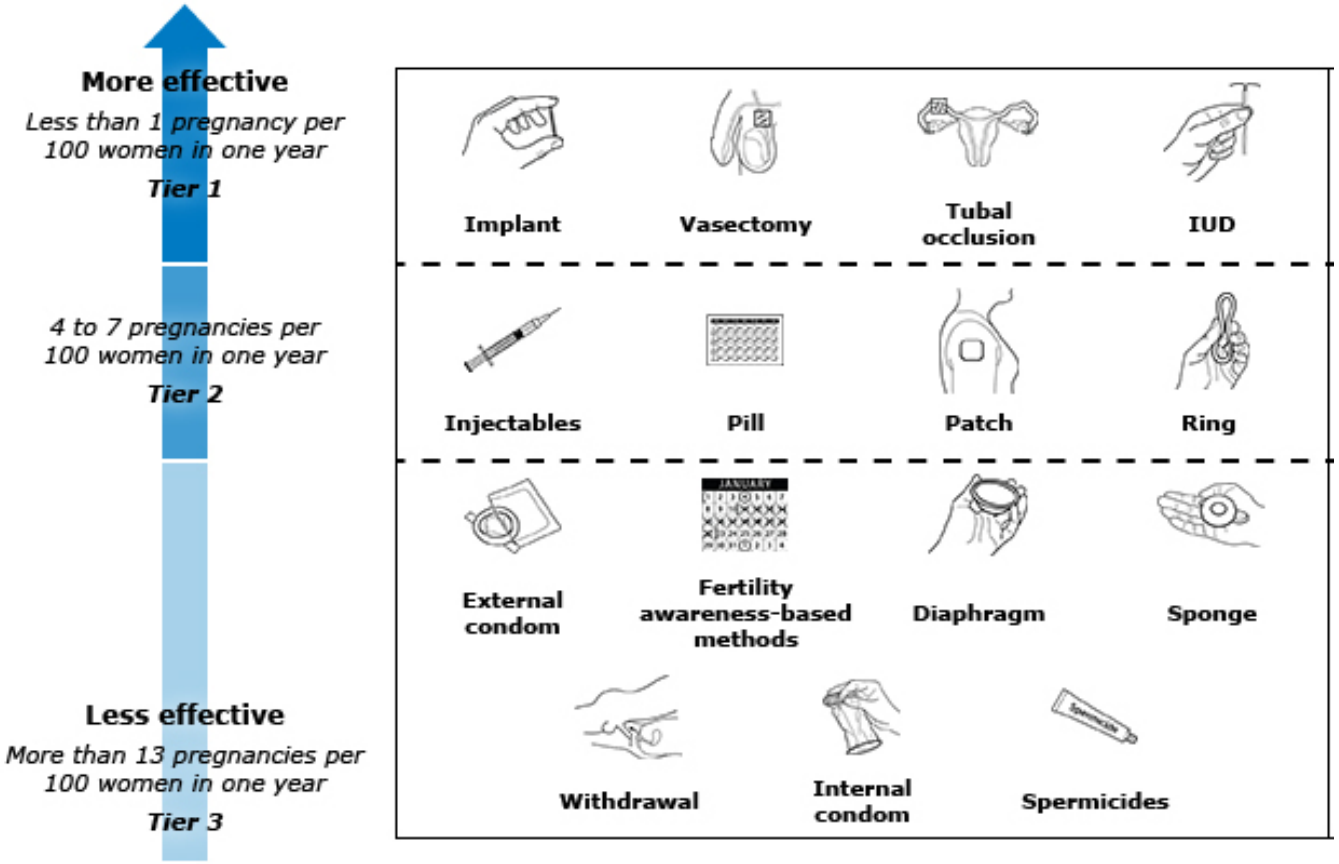
- Ensure confidentiality and ask for permission to start the conversation
- Full medical history including menstrual history
- Sexual history taking
  - What is the risk of pregnancy or STI?
  - Past experience with contraception
  - Priorities with method use

How to start the conversation

- Ensure confidentiality and ask for permission to start the conversation
- Full medical history including menstrual history
- Sexual history taking
- Understanding efficacy rates and discussion about adherence

Presenting the Options

- AAP and ACOG recommend presenting options in order of effectiveness, starting with the most effective options



IUD: intrauterine device.

COMMITTEE ON ADOLESCENCE, Paula K. Braverman, William P. Adelman, Elizabeth M. Alderman, FSHAM, Cora C. Breuner, David A. Levine, Arik V. Marcell, Rebecca F. O'Brien; Contraception for Adolescents. *Pediatrics* October 2014; 134 (4): e1244–e1256. 10.1542/peds.2014-2299

American College of Obstetricians and Gynecologists Committee on Adolescent Health Care. Counseling Adolescents About Contraception. No 710. Nov 2017.

How to start the conversation

- Ensure confidentiality and ask for permission to start the conversation
- Full medical history including menstrual history
- Sexual history taking
- Understanding efficacy rates and discussion about adherence
- Patient factors: Cost, Insurance coverage, personal preferences, confidentiality protections

- Adolescents have been shown to demonstrate capacity for medical decision making surrounding hormonal contraception.
  - Wilkinson TA et al. Assessment of adolescent decision-making capacity for pharmacy access to hormonal contraception. *Contraception,* Vol 123. https://doi.org/10.1016/j.contraception.2023.110002.

Important Counseling Points

- No method is permanent. If you are unhappy with your current method, we can change it at any time.
- No method works the first day you take it.
- It takes time for side effects to improve.
- It is completely healthy to not get your period if you are on a method of birth control designed to suppress it.
- Condoms are the only way to protect against STIs and HIV.
- Support and encourage abstinence

GETTING STARTED

Preinitiation counseling

- Provide written instruction on how to use the method, warning signs to look out for, and who to call for questions or concerns
- STI prevention and screening
- Emergency contraception
  - Offer a prescription for provisional use
- Issues related to removal or discontinuation including lack of pregnancy prevention

Initiation

- Quick start method:
  - Start on the day of the office visit if you can reasonably rule out pregnancy
    - When was the first day of their last menstrual period?
    - When was the last time they had unprotected sex?
    - What is the result of today's pregnancy test?
- Use a backup method (condoms or abstinence) x 7 days
- Provide guidance on returning for a pregnancy test

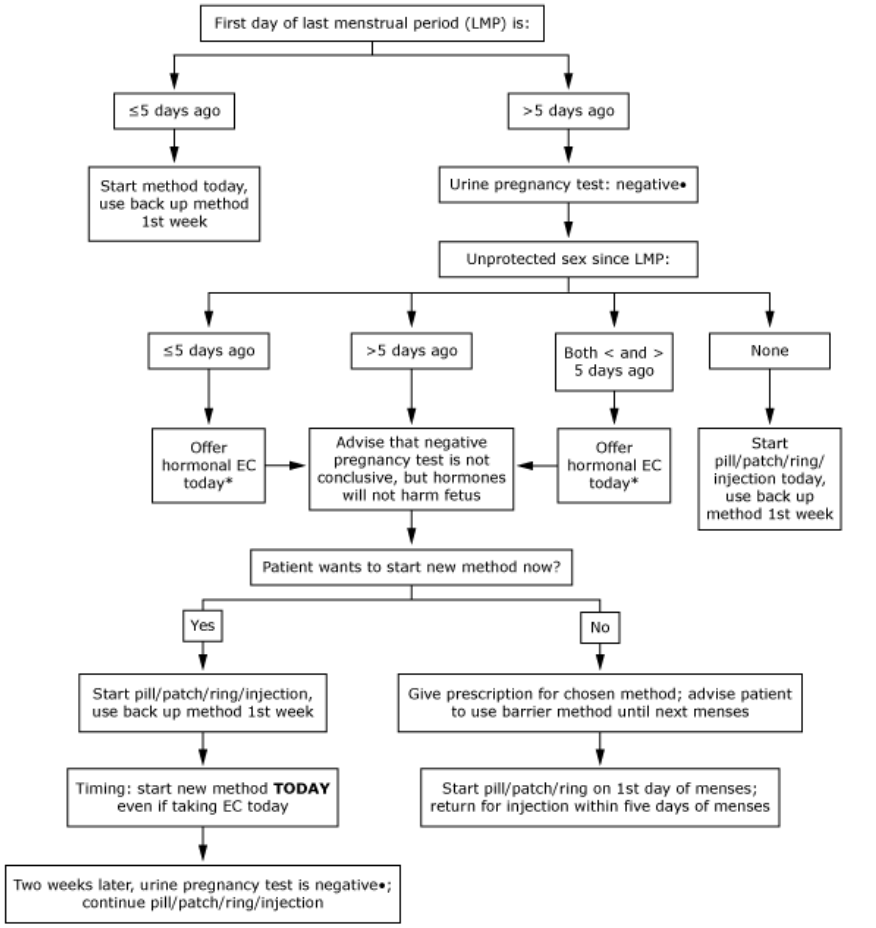
- Quick start method has been shown to improve continuation rates of short acting contraceptive methods

Westhoff C et al. Initiation of oral contraceptives using a quick start compared with a conventional start: a randomized controlled trial. Obstet Gynecol. 2007 Jun;109(6)

Lara-Torre E et al. Adolescent compliance and side effects with Quick Start initiation of oral contraceptive pills. Contraception. 2002 Aug;66(2).

Edwards SM et al. Initiation of oral contraceptives--start now! J Adolesc Health. 2008 Nov;43(5).

Quick start approach to initiation of new birth control method: Pill, patch, ring, injection



EC: emergency contraception.
* Because hormonal EC is not 100 percent effective, check urine pregnancy test two weeks after EC use.
• If pregnancy test is positive, provide options counseling.

Which pill do I choose?

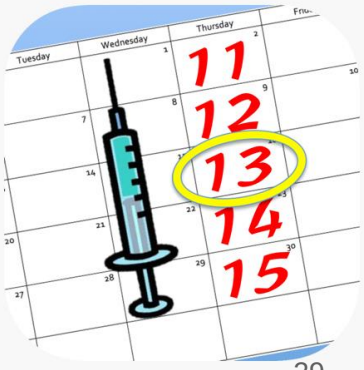
- Combined pills: Ethinyl Estradiol (EE) plus a progestin
  - Choose pill based on dose of estradiol
  - Standard dose: 30-35mcg ethinyl estradiol
  - “Low” dose: 20 or 25mcg ethinyl estradiol
  - Monophasic vs. Triphasic
  - Extended cycle pills (Ethinyl Estradiol/Levonorgestrel [Seasonique®])

- Contraceptive patch: EE/Norelgestromin (Xulane®) or EE/Levonorgestrel (Twirla ®)
- Contraceptive Ring: EE/Etonogestrel (NuvaRing®) or EE/Segesterone (Annovera®)

Progestin Only Options

- Progestin Only pills:
  - Norethindrone (Micronor); Drosperinone (Slynd™)
  - There are no placebo pills with POPs
  - Breakthrough bleeding is common.

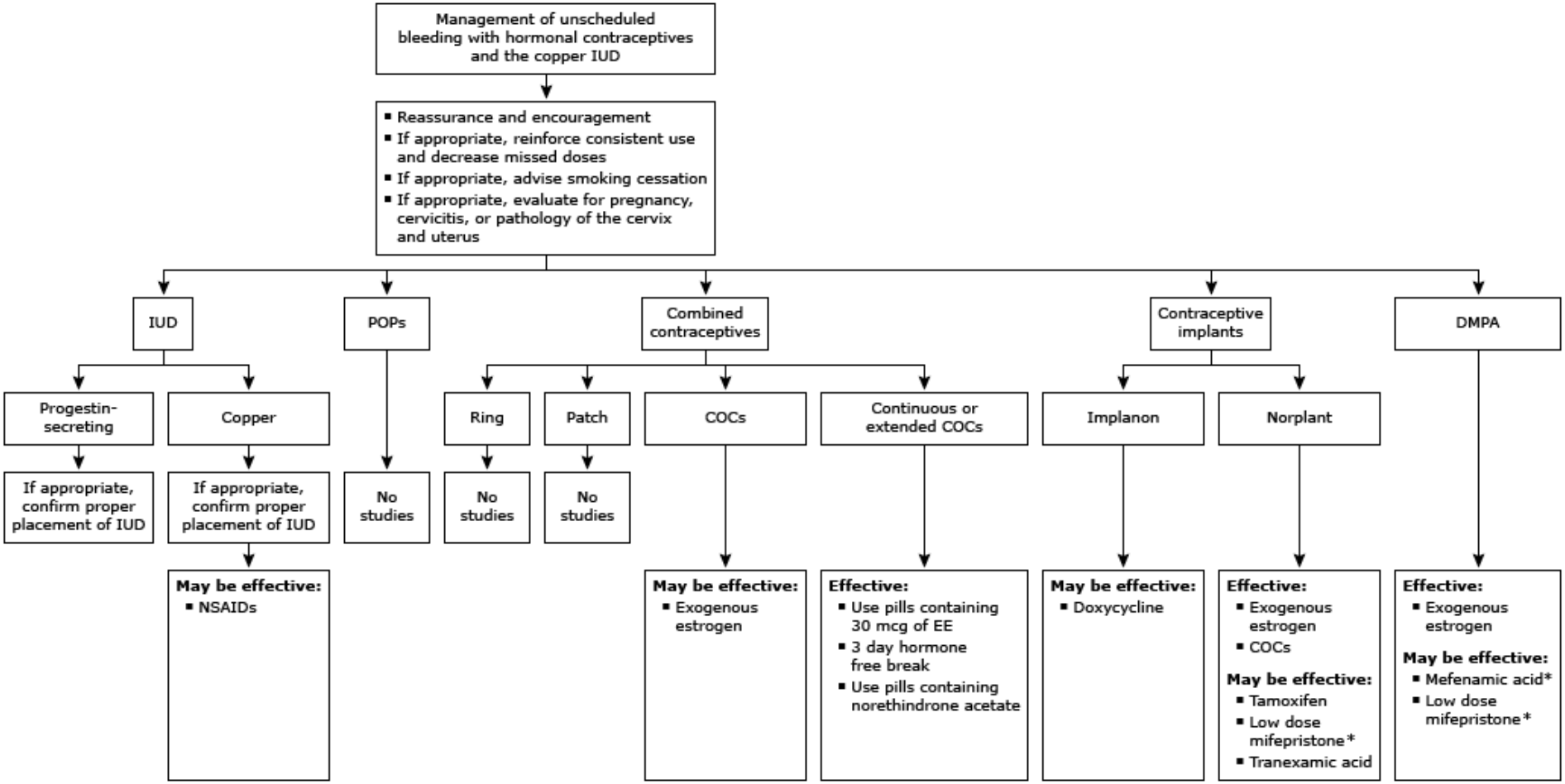
- Depo Medroxyprogesterone Acetate
  - 150mg/ml intramuscular injection
  - Send Rx to pharmacy (or order from hospital formulary) and have patient return for administration
  - Injection needs to be administered every 11-13 weeks
  - Black box warning and bone density



Managing Complications-Common Side effects

- Nausea, headaches, breast tenderness: typically resolves after the first month
  - If persistent, change to a low dose pill or progestin only method
- Breakthrough or unscheduled bleeding: most common early side effect
  - Typically improves after a few months of use
  - Less likely to occur in pills with ≥30 mcg Ethinyl Estradiol
  - More common in progestin only methods
  - Rule out pregnancy, STIs, or gyn causes when appropriate
  - Assess adherence to regimen
- Amenorrhea: more common with extended cycle regimens but possible in 21/7 regimens.
  - More common with progestin only methods; e.g. depo
  - Reassurance!

Managing Unscheduled Bleeding



Evaluation and management of unscheduled bleeding in individuals using hormonal contraception. uptodate.com

Debunking Common Myths

- Weight gain:
  - No association between OCPs and weight gain
  - Cochrane Review, 2014: Gallo MF, Lopez LM, Grimes DA, Carayon F, Schulz KF, Helmerhorst FM. Combination contraceptives: effects on weight. Cochrane Database Syst Rev. 2014 Jan 29;(1):CD003987. doi: 10.1002/14651858.CD003987.pub5. PMID: 24477630.
- Infertility:
  - Resumption of ovulation occurs within 90 days of pill cessation, no impact on fertility
  - Cronin M et al. Rate of pregnancy after using drosperinone and other progestin-containing oral contraceptives. Obstet Gynecol. 2009; 114(3): 616.
- Libido:
  - No conclusive evidence of impact on sexual function and libido
- Mood changes/Depression:
  - No association between OCPs and impact on mood
  - No evidence that OCPs should be restricted in individuals with depression
  - Pagano et al. Safety of hormonal contraception and intrauterine devices among women with depressive and bipolar disorders: a systematic review. Contraception. 2016; 94(6).
  - Lundin C et al. Psychoneuroendocrinology. 2017. 76: 135.


9 MONTHS FROM NOW THE ONLY THING I'M EXPECTING IS TO BE MORE AWESOME.
Thanks, Birth Control
#THXBIRTHCONTROL
BEDSIDER.ORG

Resources

- Powertodecide.org
- https://www.reproductiveaccess.org/
- https://youngwomenshealth.org/
- CDC Medical Eligibility Criteria: https://www.cdc.gov/reproductivehealth/contraception/mmwr/mec/summary.htm
- Advocates for Youth: advocatesforyouth.org
- Guttmacher Institute: https://www.guttmacher.org/

Practice Guidelines

- AAP Policy Statement October 2014: "Contraception for Adolescents"
- ACOG: Committee Opinion 710; "Counseling Adolescents About Contraception"