Contraceptive Overview with Clinical Cases

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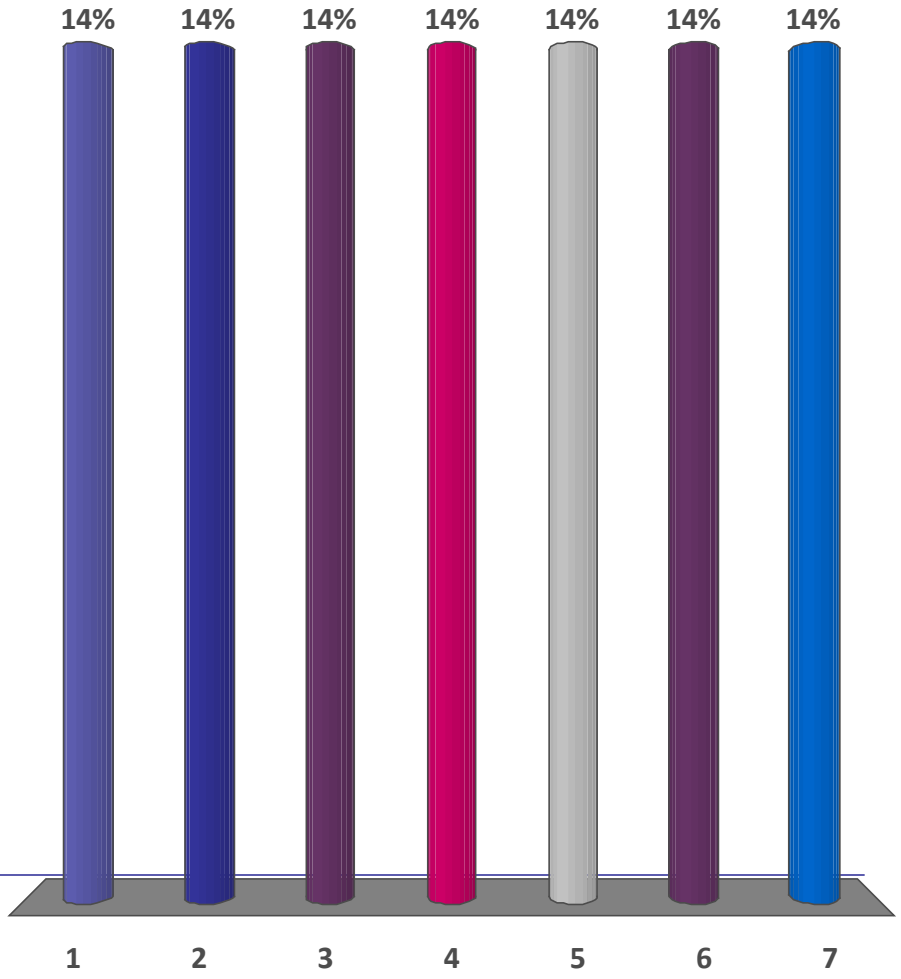
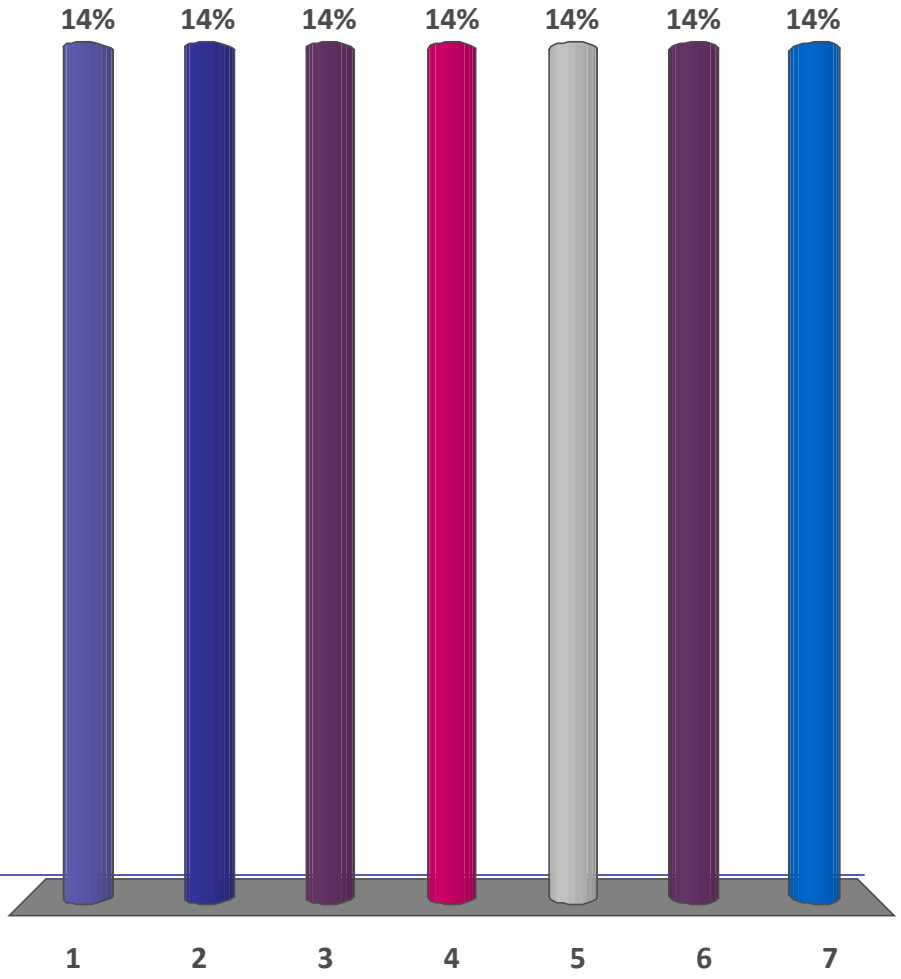
What is your favorite contraceptive method?

1. Sterilization
2. IUD
3. Implant
4. DMPA
5. Oral Contraceptive Pills
6. Condoms
7. Withdrawal method



Which contraceptive method works the best?

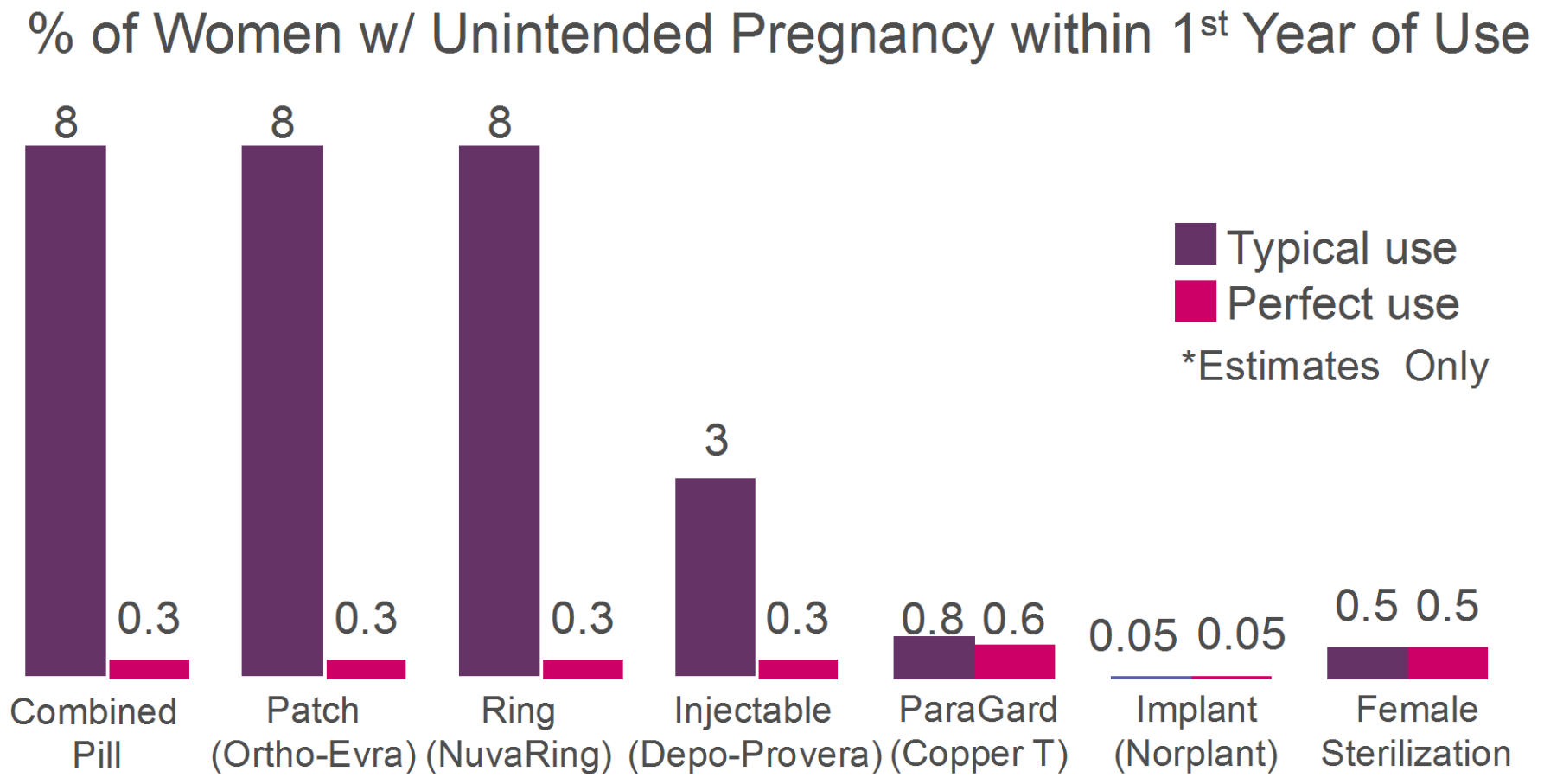
1. Sterilization
2. IUD
3. Implant
4. DMPA
5. Oral Contraceptive Pills
6. Condoms
7. Withdrawal method



Contraceptive Failure

- Defined as the proportion of women initiating use of a method who become pregnant during their first year of use
- The following data represent U.S. based studies/statistics

Typical Vs. Perfect Use



Hatcher R, et al. Contraceptive Technology. 2004.

Typical Effectiveness of Contraceptive Methods

Most effective

< 1 pregnancy/ 100 women in 1 year

Implant

Vasectomy

Female Sterilization

IUC

6−12 pregnancies/ 100 women in 1 year

Injectable

Pills

Patch

Ring

Diaphragm

Least effective

>17 pregnancies/ 100 women in 1 year

Male Condoms

Female Condoms

Sponge

Withdrawal

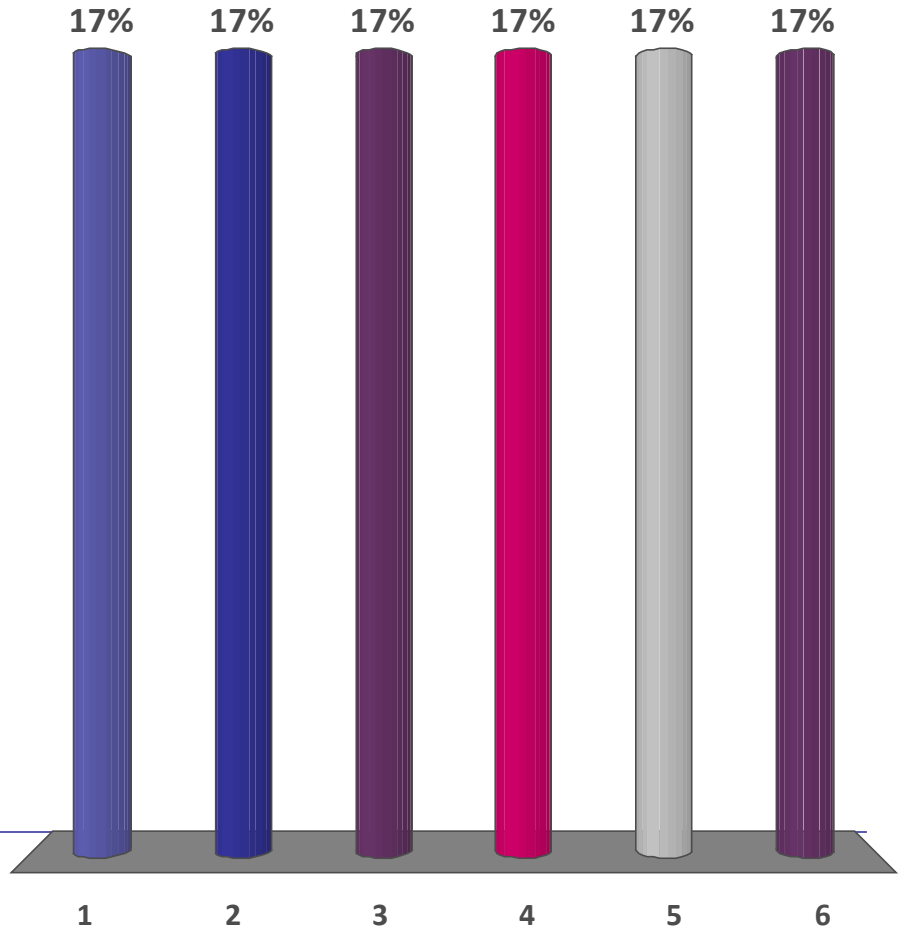
Spermicides

Fertility Awareness–Based Methods

Trussell J, et al. In: Hatcher RA, et al., eds. *Contraceptive Technology*. 2011. Chart adapted from WHO 2007.

Gloria is a 35 yo G5P5 who presents for HOPE screening. She is done with child bearing. Which type of contraceptive would you recommend?

1. DMPA
2. Oral Contraceptive Pills
3. Implant
4. Withdrawal
5. Sterilization
6. Condoms

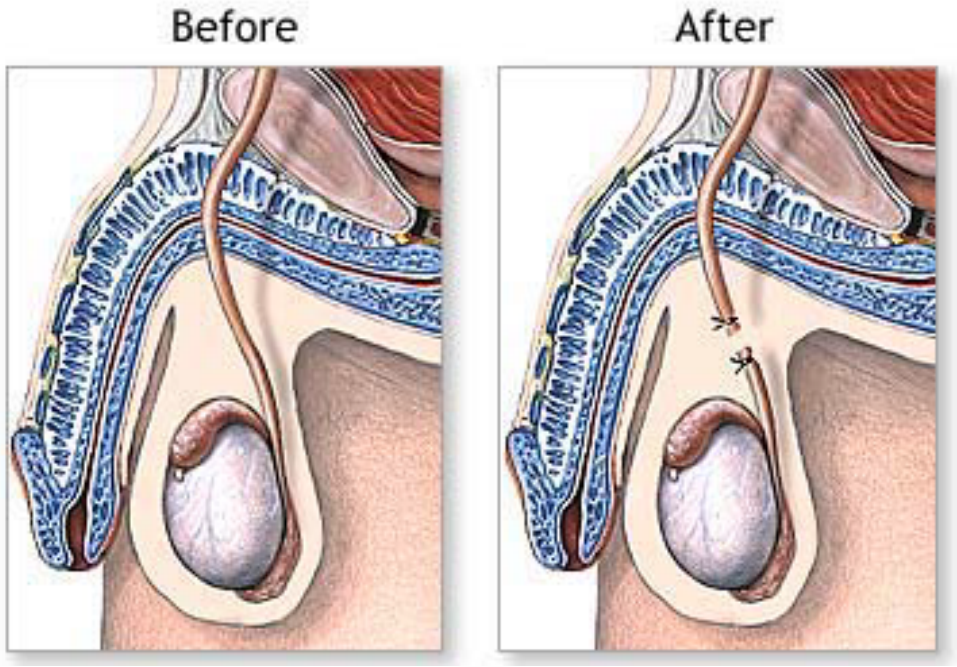


Extremely Effective

Male Sterilization

Standard of care = no-scalpel vasectomy (NSV)

- Small (few mms) opening is made in the scrotal sac skin to deliver vas deferens
- Ligate/cauterize
- No scalpel
- No sutures

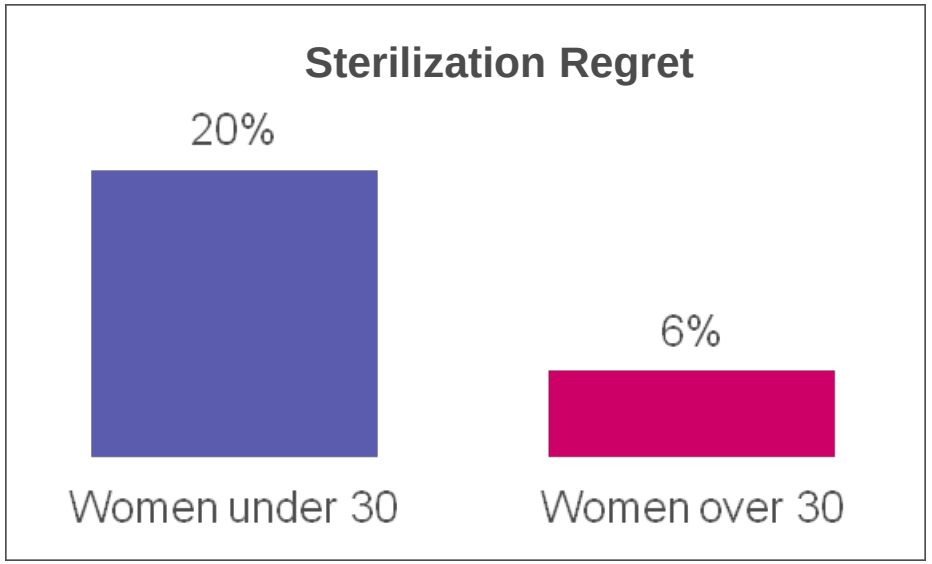


Hillis SD. *Obstet Gynecol*. 1999. The New York Times 2009. Nirapathpongporn A. *The Lancet*. 1990. Peterson H. *U.S. Collaborative Review of Sterilization*. 1996. Pollack AE. Contraceptive Technology. 2007. Trussel J. Contraceptive Technology. 2011.

Extremely Effective

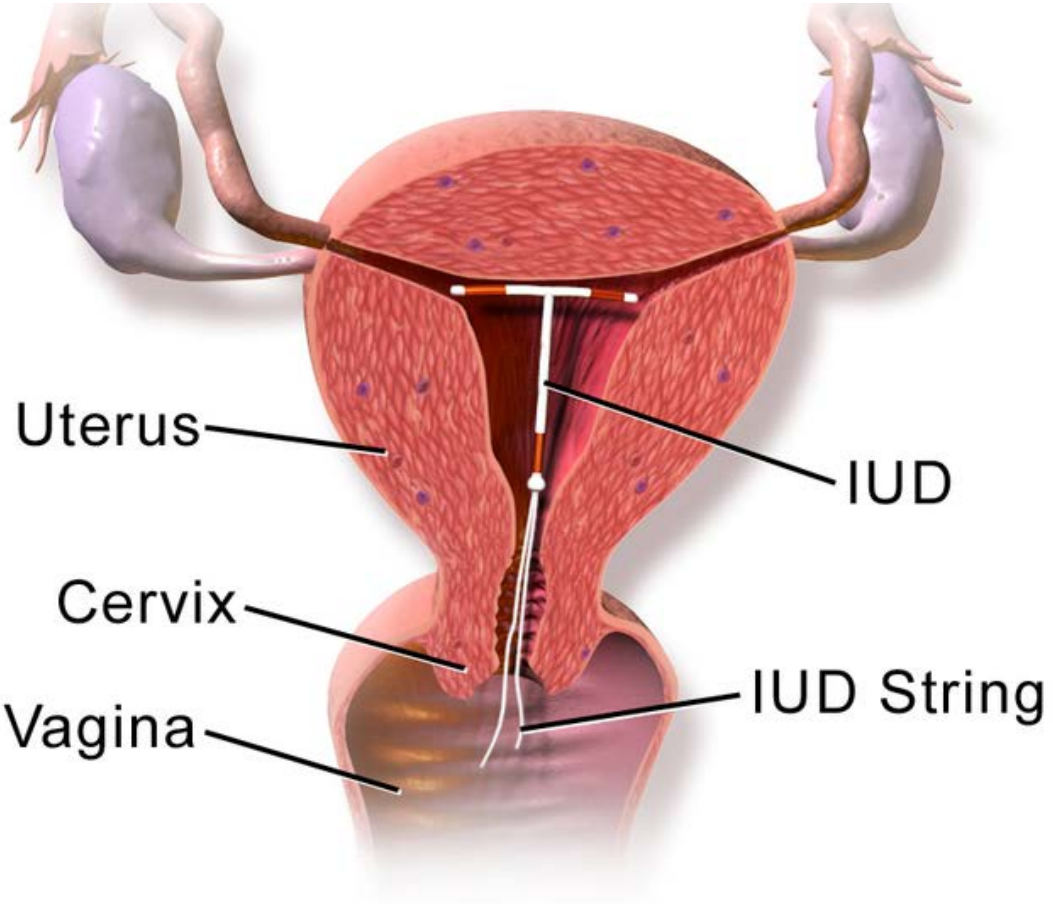
Female Sterilization: Surgical Tubal Occlusion

- Ligating (using suture)
- Blocking (clips or rings)
- Cauterizing



Peterson H. U.S. Collaborative Review of Sterilization. 1996. Hillis SD. Obstet Gynecol. 1999. Pollack AE. Contraceptive Technology. 2007. Ogburn T. Obstet Gynecol Clin North Am. 2007. et al.

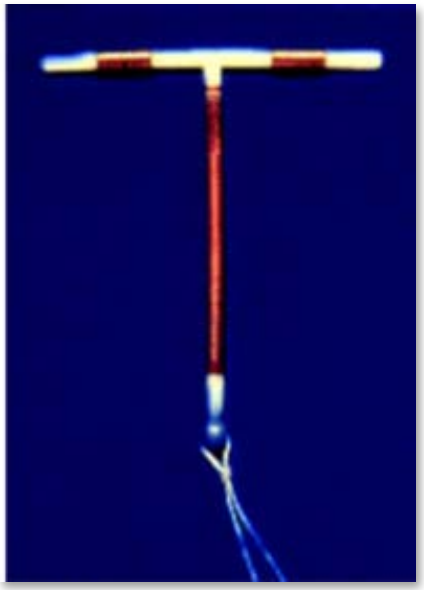
What would be another good option for Gloria?



Intraunterine Device (IUD)

Extremely Effective

Copper-T IUD

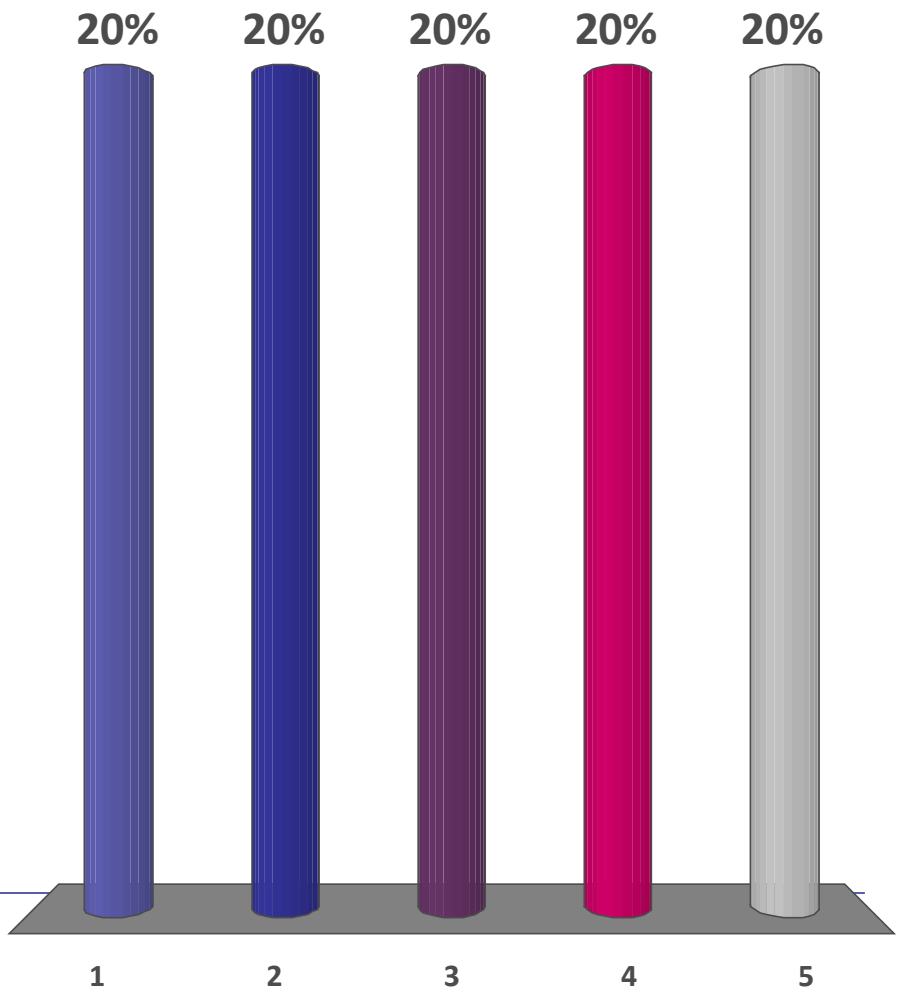


- Brand name: ParaGard®
- Copper ions
- Approved for 12 years of use
- Can be used as emergency contraceptive

Thonneau, PF. Am J Obstet Gynecol. 2008. Forrtney JA. J Reprod Med. 1999. Trussel J. Contraceptive Technology. 2011.

How do IUDs primarily prevent pregnancy?

1. Preventing ovulation
2. Preventing Ovulation
3. Scarring fallopian tubes
4. Voodoo
5. None of the above

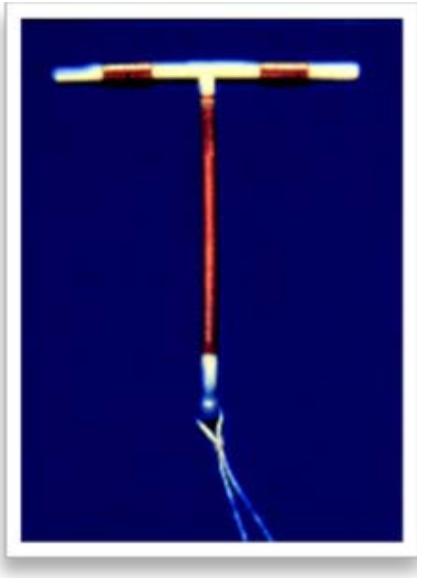


Mechanism of Action: Copper T IUD

- Primary mechanism is prevention of fertilization
- Reduce motility and viability of sperm
- Inhibit development of ova

Also inhibits implantation and is effective as emergency contraception

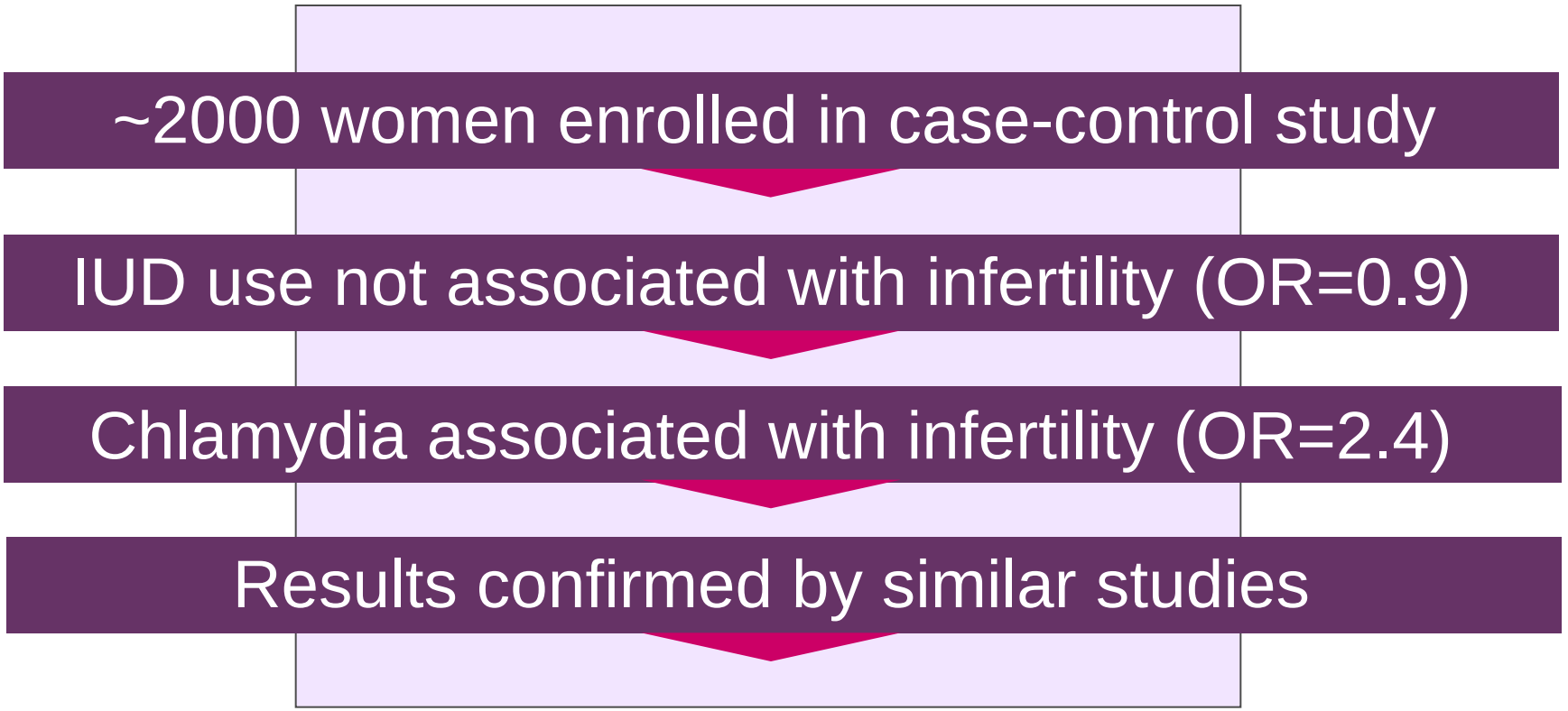
Does not interfere with an implanted pregnancy



Alvarez F, et al. *Fertil Steril*. 1988; Segal SJ, et al. *Fertil Steril*. 1985; ACOG. *Statement on Contraceptive Methods.* 1998.

Extremely Effective

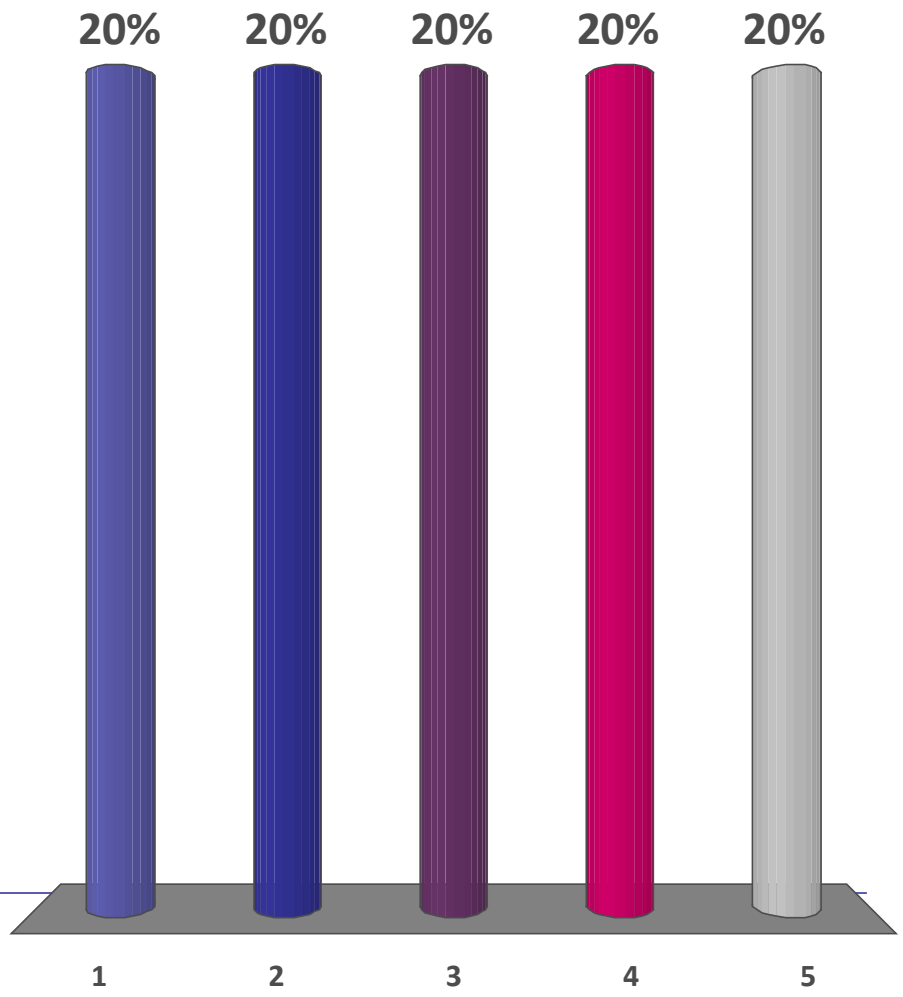
Intrauterine Contraception and Fertility



Hubacher D, et al. *NEJM*. 2001.

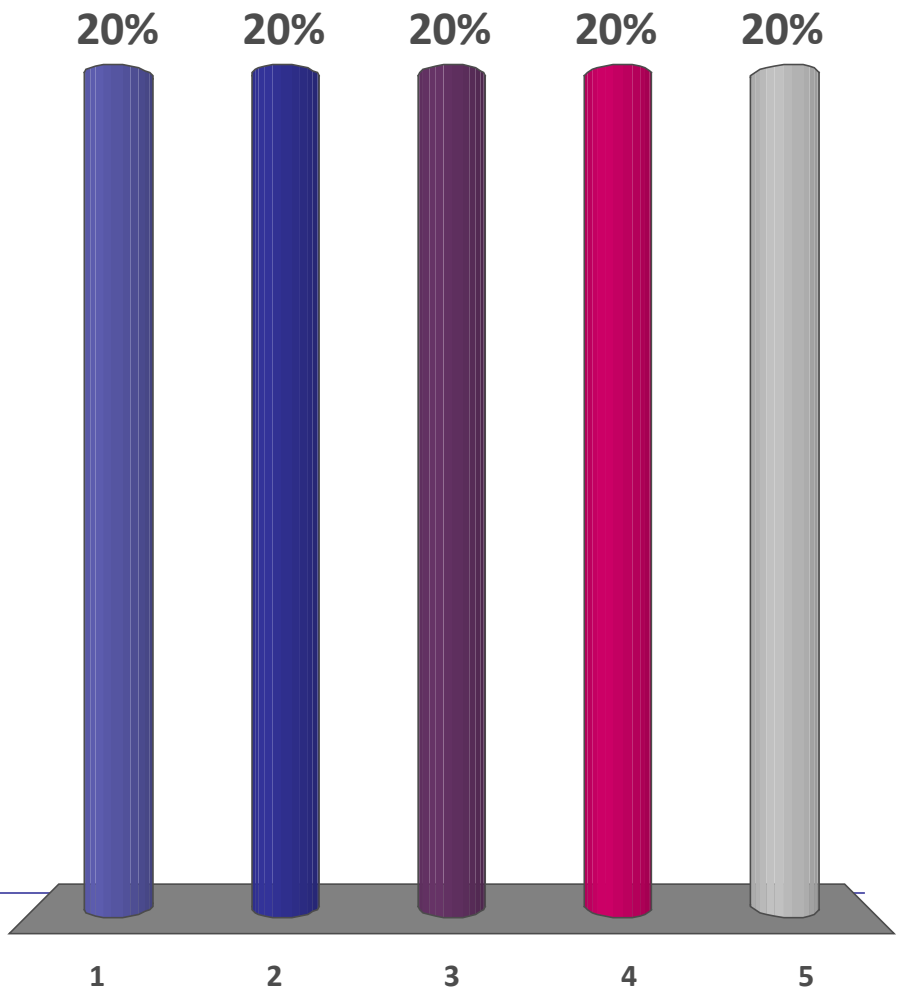
How soon after removing an IUD can a woman get pregnant?

1. Immediately
2. 7 days
3. 1 month
4. 3 months
5. 6 months



What is a contraindication to IUD insertion?

1. Age <18 years old
2. History of PID
3. HIV infection
4. Active cervicitis
5. Nulliparity



Extremely Effective

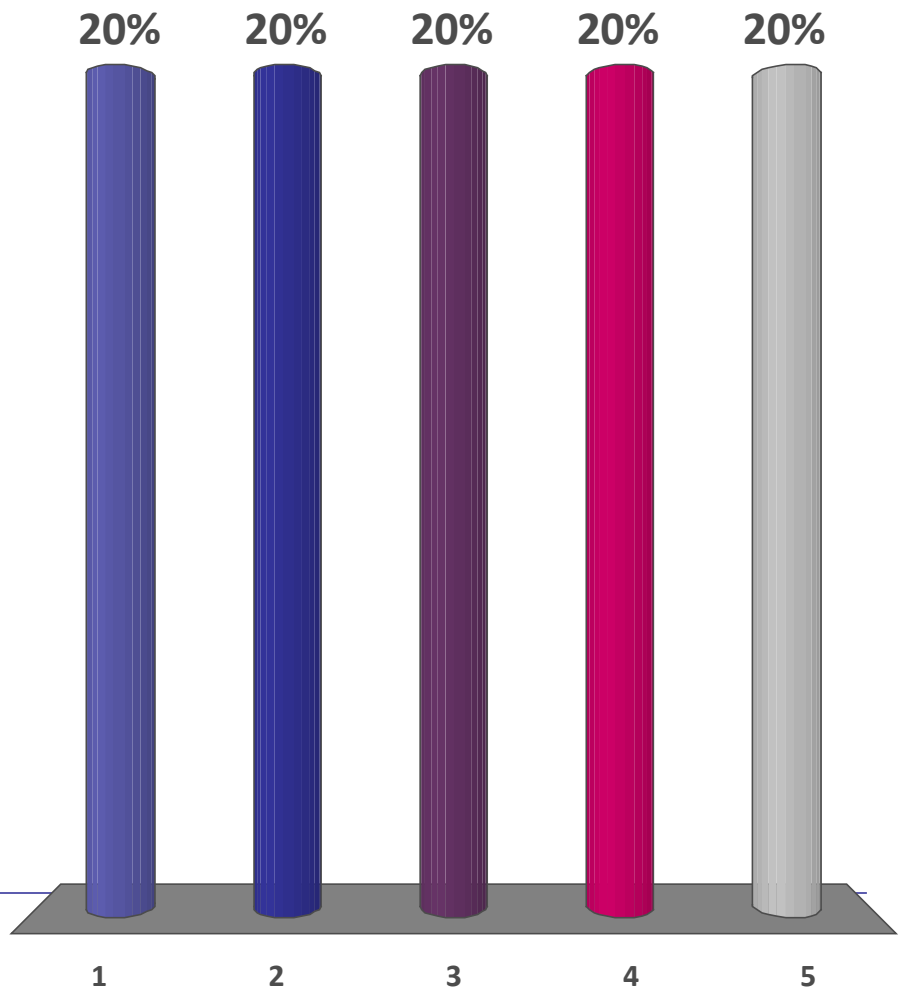
Dispelling Myths about Intrauterine Contraception

- ***Can*** be used:
  - in women with multiple partners
  - in women with history of STDs or PID
  - in nulliparous women
  - in teens
  - immediately postpartum
  - immediately post-abortion
  - in women with past ectopic pregnancy

MacIsaac L. *Obstet Gynecol Clin N Am*. 2007. Toma A. *Pediatr Adolesc Gynecol*. 2006. Otero-Flores JB. *Contraception.* 2003. Suhonen S. *Contraception*. 2004. WHO. 2004.

Gloria elects to have an IUD placed. You tell her that the risk of insertion are:

1. Pelvic Inflammatory Disease
2. Uterine Perforation
3. Pain
4. Bleeding
5. All of the above



The long term risks of the IUD do NOT include:

- Ectopic Pregnancy
- Contraceptive failure
- Pelvic inflammatory disease
- Increased menstrual bleeding
- Increased menstrual cramping
- IUD expulsion

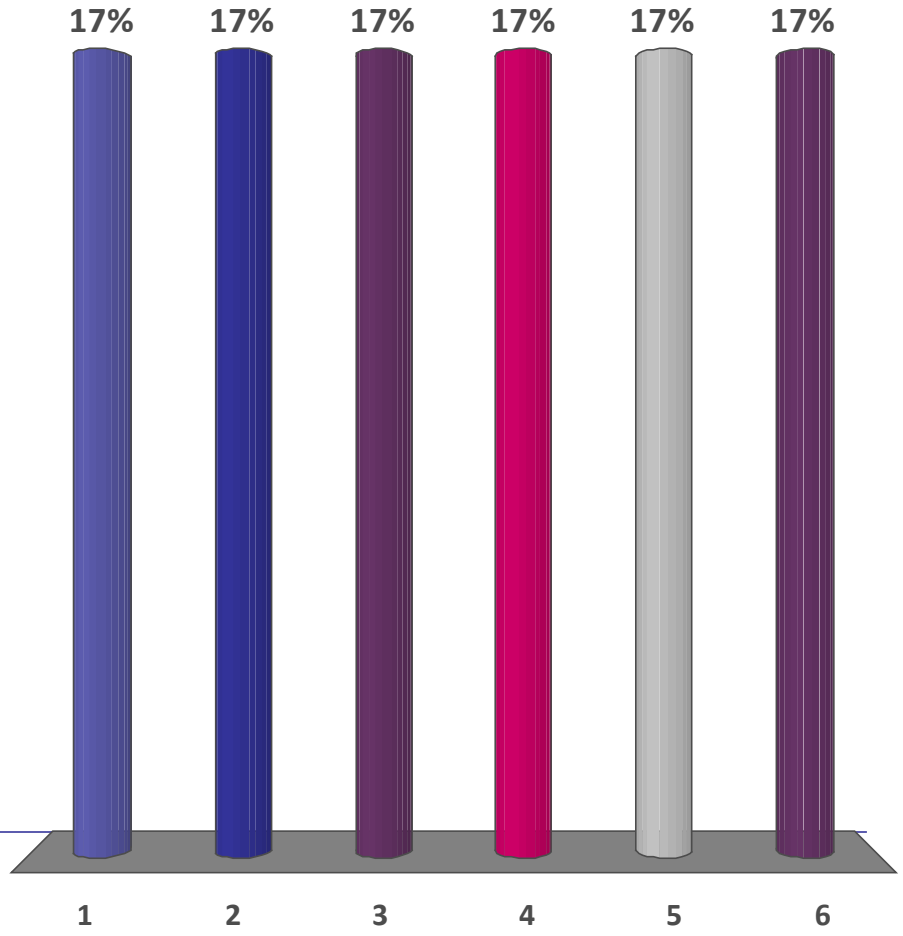
IUDs Do Not Cause PID

- PID incidence for IUC users is similar to that of the general population
- Risk is increased only during the first month after insertion
- Preexisting STI at time of insertion, not the IUCD itself, increases risk

Svensson L, et al. *JAMA*. 1984; Sivin I, et al. *Contraception*. 1991;
Farley T, et al. *Lancet*. 1992.

Precious is a 16 yo who presents for MTN 034 screening. What is your favorite contraceptive method for teenagers?

1. Condoms
2. Abstinence
3. Implant
4. IUD
5. Pills
6. DMPA



Extremely Effective

Implant Systems

6-Rod Norplant

216 mg levonorgestrel
7 years

2-Rod Jadelle

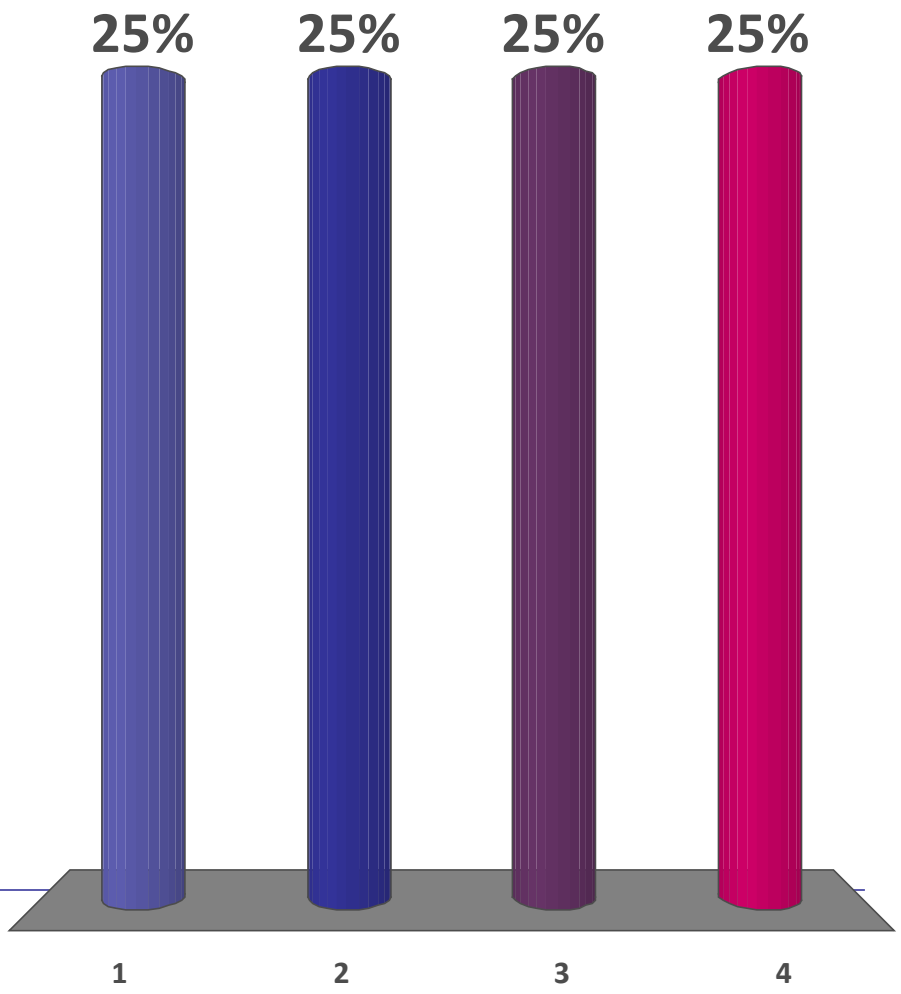
75 mg levonorgestrel
5 years

1-Rod Implanon

68 mg etonogestrel
3 years

Precious asks how long it takes to put in an implant. You tell her:

1. Less than 5 mins
2. 10-15 mins
3. 15-30 mins
4. 30-45 mins



Short Insertion and Removal Time

Insertion

< 1 minute

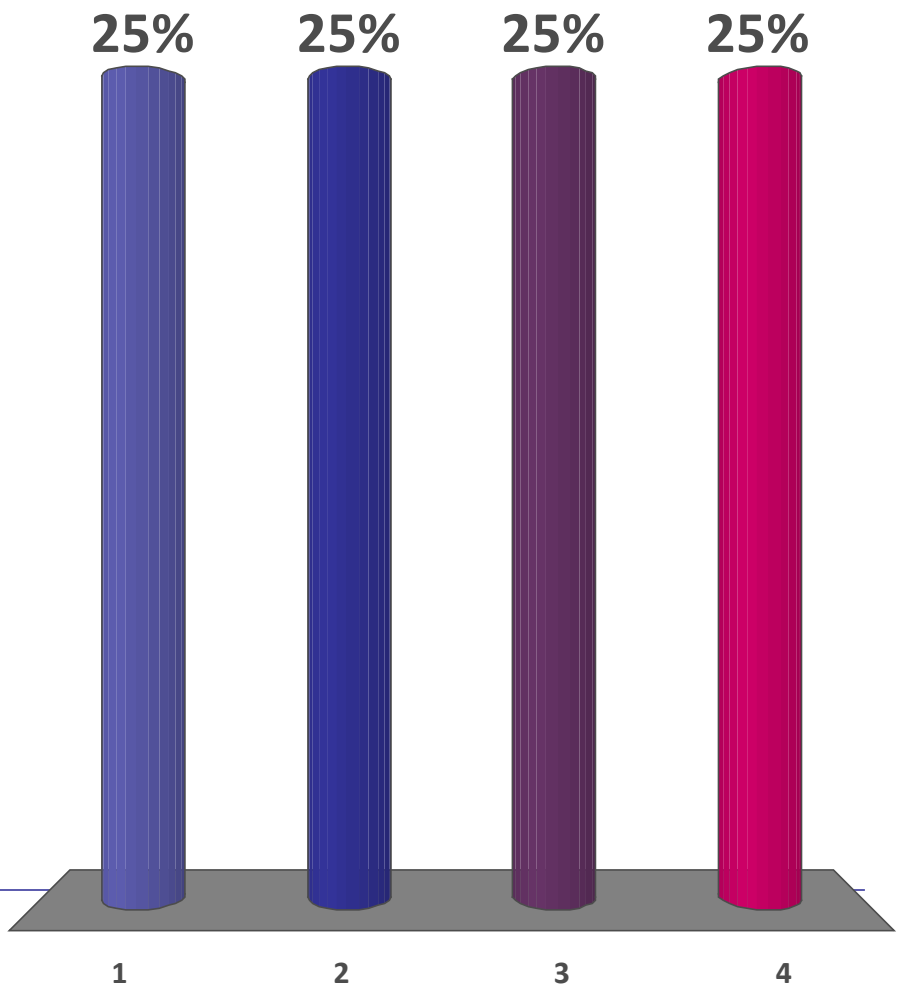
Removal

< 3 minutes

Zheng SR, et al. *Contraception*. 1999.

When can an implant be inserted?

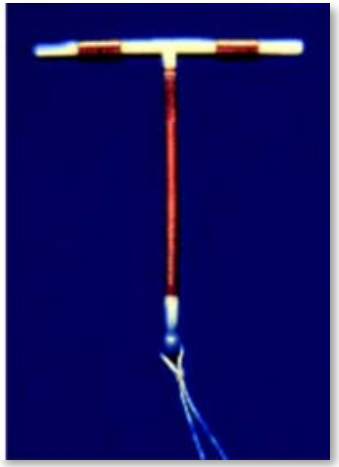
1. Only during menses
2. Anytime with a negative pregnancy test
3. Anytime with a negative pregnancy test AND no unprotected intercourse in the last 2 weeks
4. Full moon

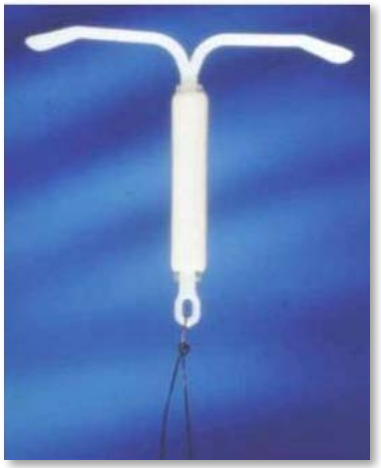


Extremely Effective

Timing of IUD/IUS/Implant Insertion

Anytime during menstrual cycle when pregnancy can be excluded (confirmed by negative pregnancy test and no report of unprotected sex in past two weeks)

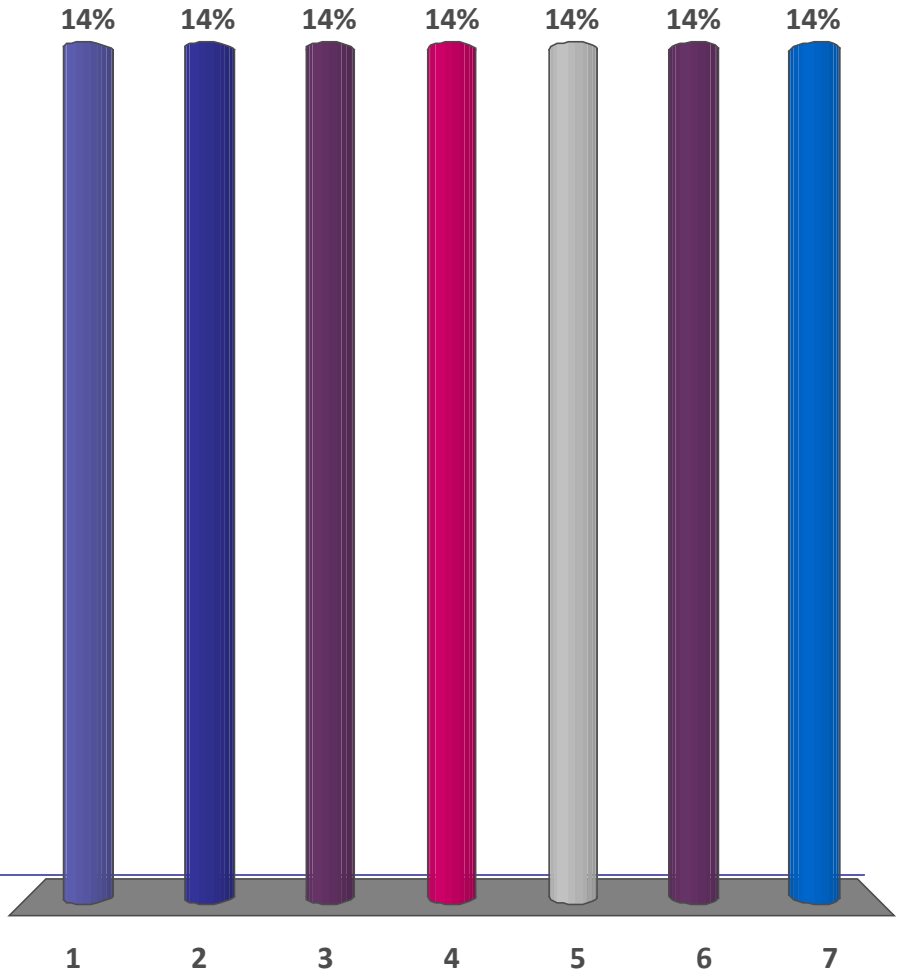


Alvarez PJ. *Ginecol Obstet Mex*. 1994. O'Hanley K, et al. *Contraception*. 1992.

What is the most common side effect of the implant?

1. Headache
2. Bloating
3. Weight gain
4. Irregular bleeding
5. Pregnancy
6. Expulsion
7. Infection



Side Effects

- Mild adverse events are common
  - Nearly all implant users will experience one
- Serious adverse events are rare
- Counseling prior to insertion is important
  - Impacts satisfaction and continuation rates
  - Reassurance that these adverse events rarely represent a risk to client's health

Bleeding is the MOST Common AE

- Unpredictable level of estradiol among implant users
- Most common in the first 6-9 months
- Typically decrease with time
- But pattern is not predictable
- Overall most women tolerate bleeding changes
- 86% of women had changes
- 69% said they were not or only slightly bothered by changes
- Amenorrhea among LNG implant users is lower than among injectable users (about 11%)

Affandi B. *Contraception*. 1998.
Zheng SR, et al. *Contraception*. 1999.

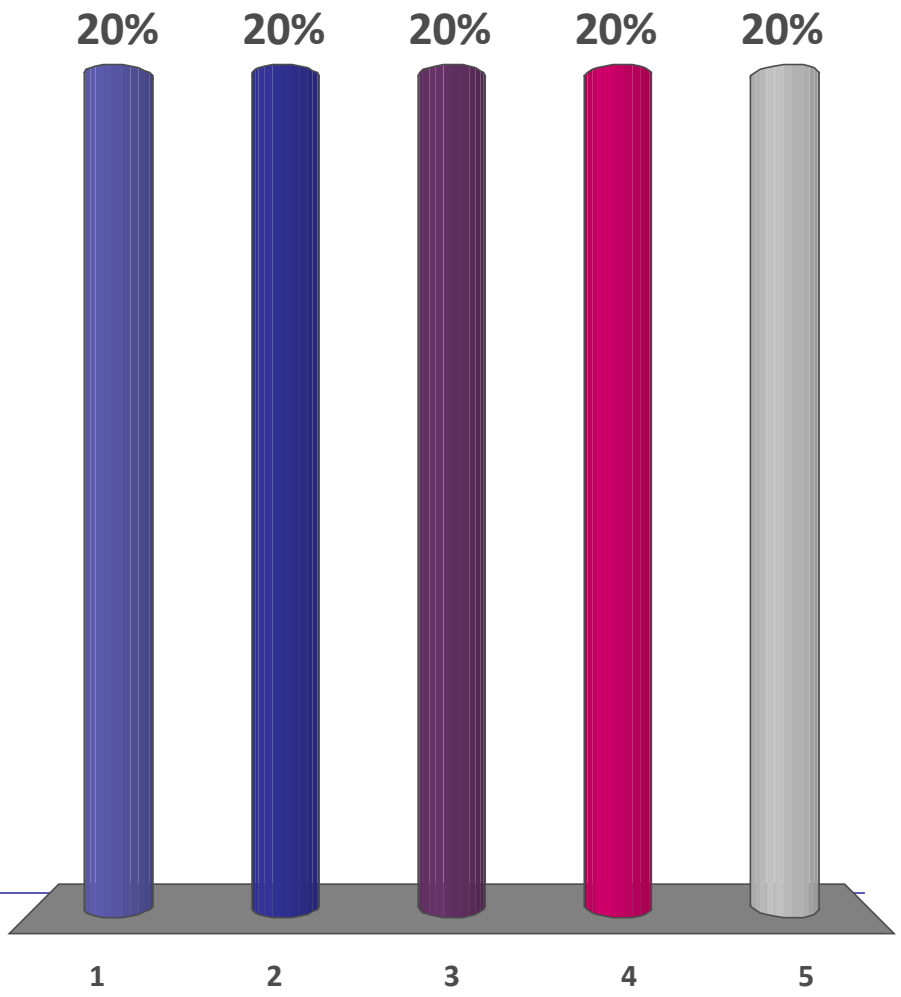
Implanon vs. Jadelle Bleeding Patterns

- Amenorrhea among LNG implant users is lower than among injectable users (about 11%)
- Use of ENG implants may be associated with fewer bleeding or spotting episodes and significantly more amenorrhea (22% in one study) than LNG implant users.
- Despite bleeding irregularities, hemoglobin levels rise with implant use

Polis CB, et al. *Best Practices & Research Obstet Gynecol*, 2014

Precious presents 3 months after getting the implant with irregular bleeding. How can you help her?

1. Removing the implant
2. Prescribing ethinyl estradiol
3. Prescribing NSAIDs
4. Prescribing combination oral contraceptives
5. Any of the above



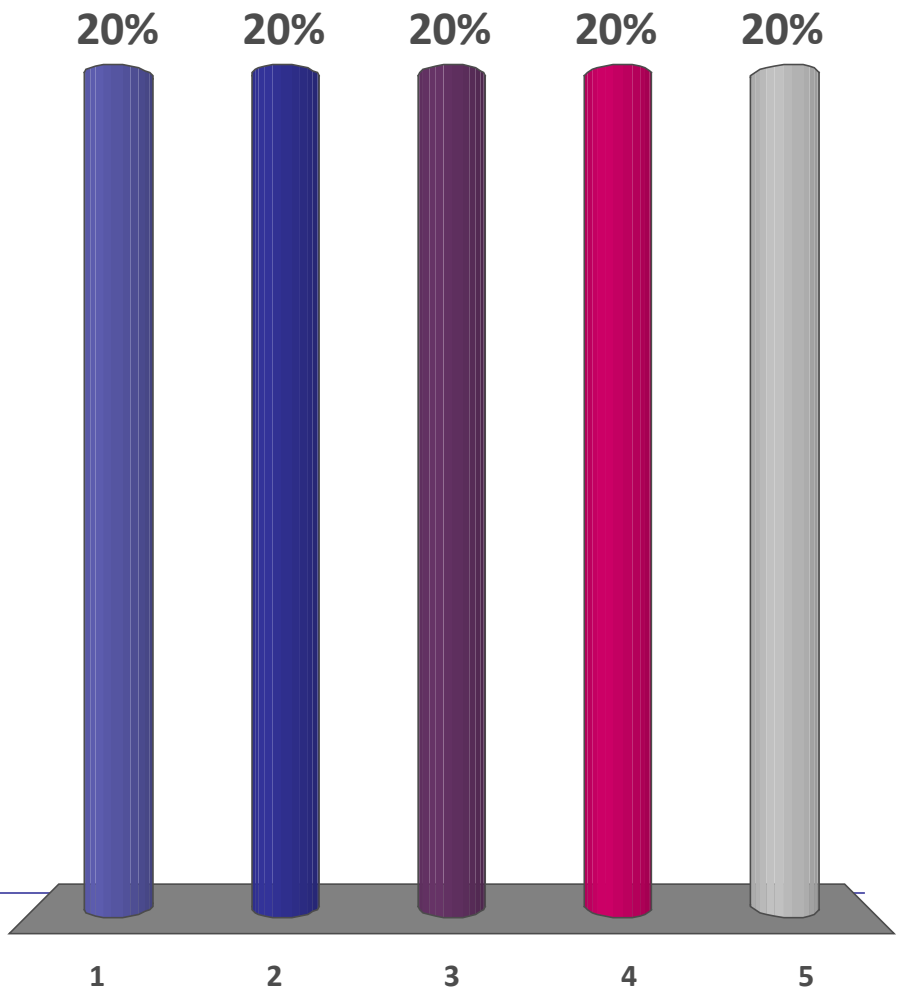
Management of Bleeding

- Few data available
- Considerations
  - Ethinyl estradiol
  - NSAIDs
  - Combination OCs
  - Watchful waiting

Meirik O. *Hum Reproduct Update*. 2003
Weisberg E. *Hum Reprod*. 2006

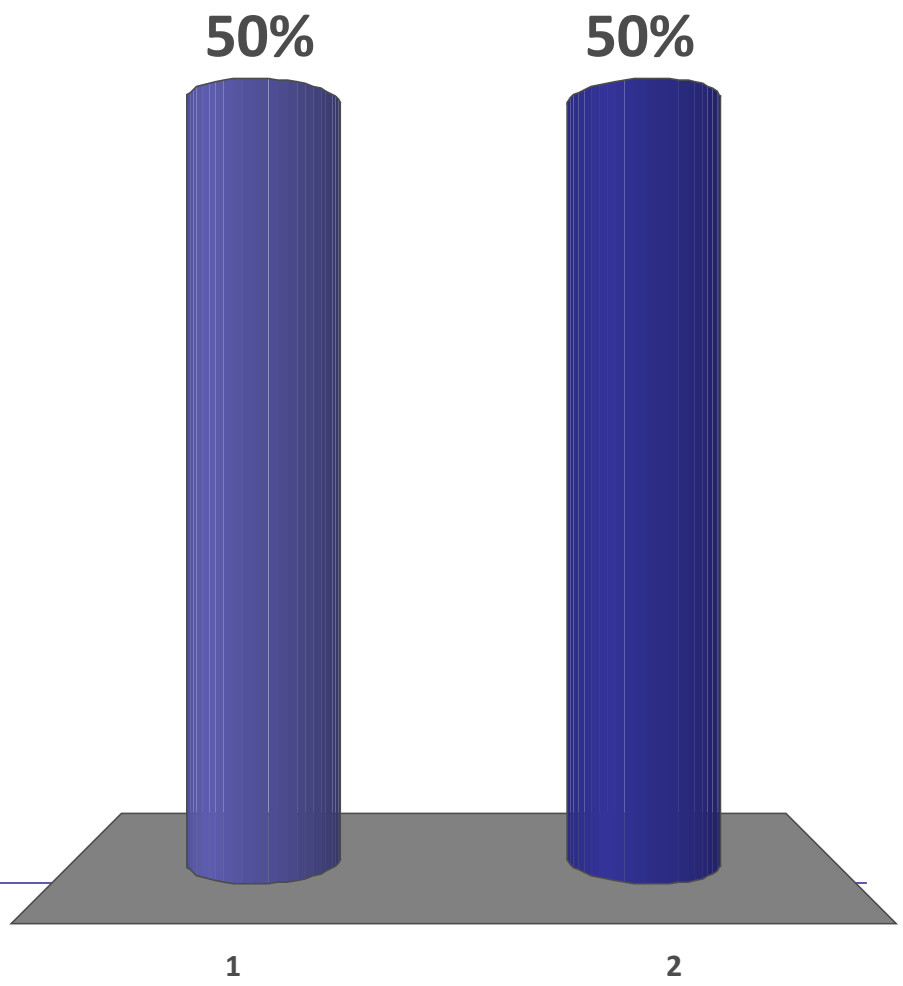
Nothing helps and Precious wants the implant removed. How big is the incision for removal?

1. 0.5 mm
2. 2-3 mm
3. 5 mm
4. 1 cm
5. No incision is necessary



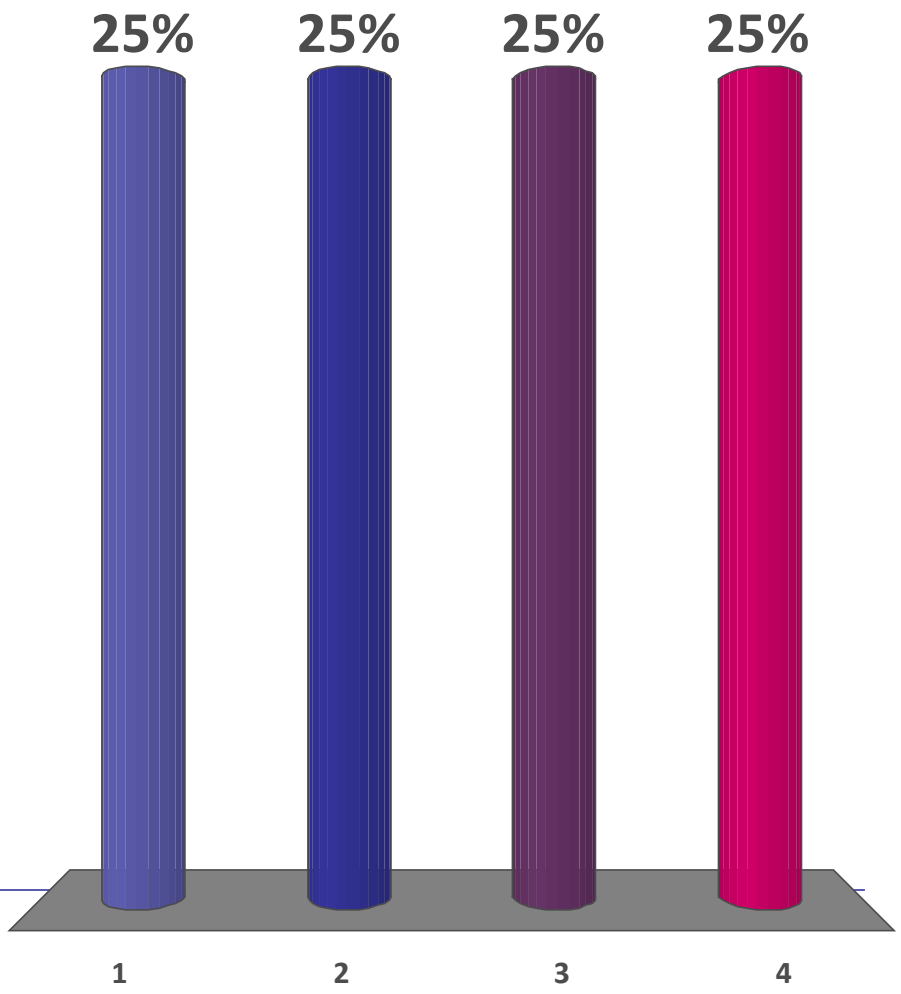
Have you removed an implant?

1. Yes
2. No



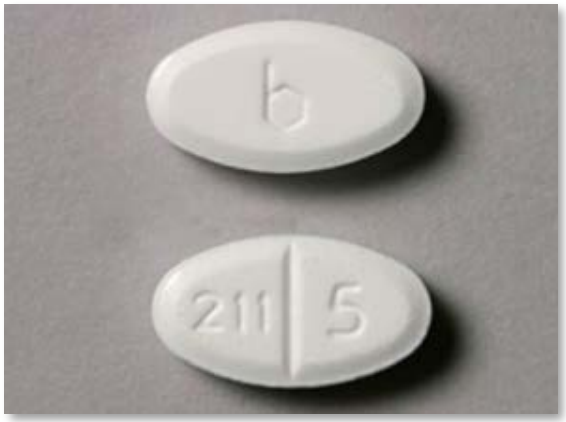
In ASPIRE, what contraceptive method would participants use if they actually wanted to get pregnant?

1. DMPA
2. IUD
3. Implant
4. Oral Contraceptive Pills



Very Effective

Progestin-Only Oral Contraceptives

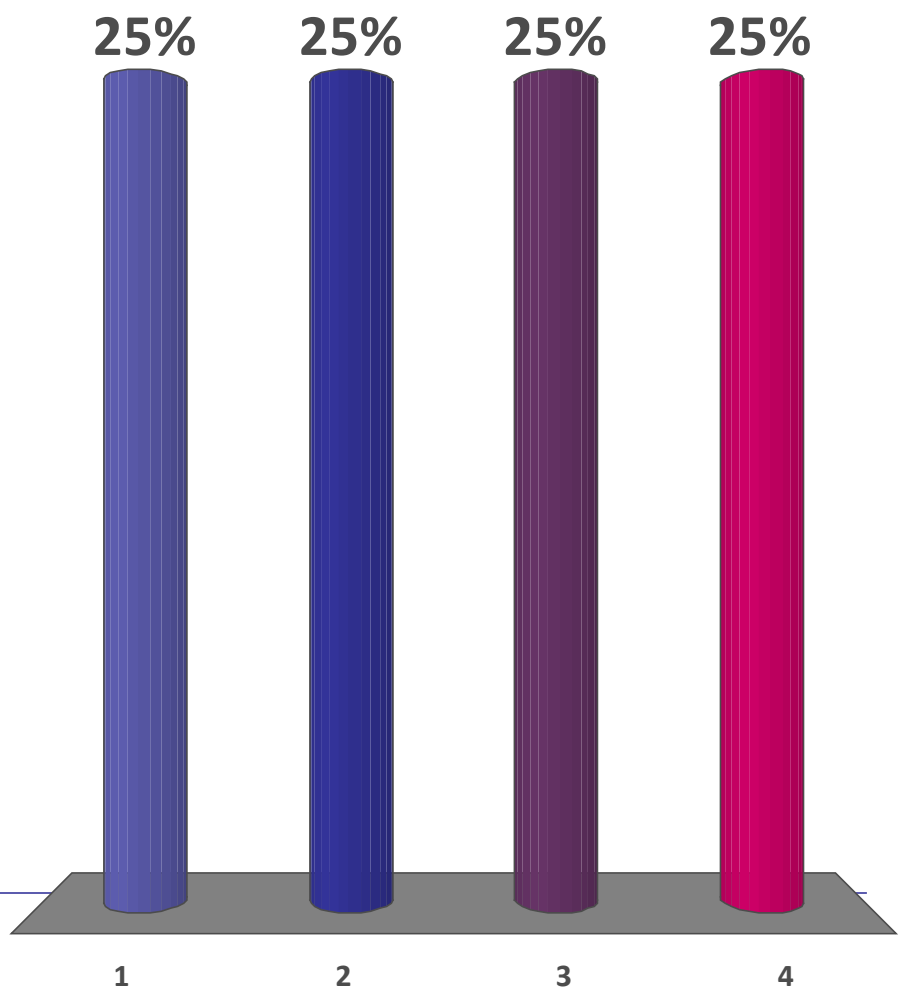


- Called the “mini-pill”
- Two formulations: norethindrone & norgestrel
- No placebo week
- Timing of pill-taking is crucial

Apgar BS. AFP. 2000. WHO MEC. 2004. Contraception Report. 1999. Apgar BS. AFP. 2000. et al.

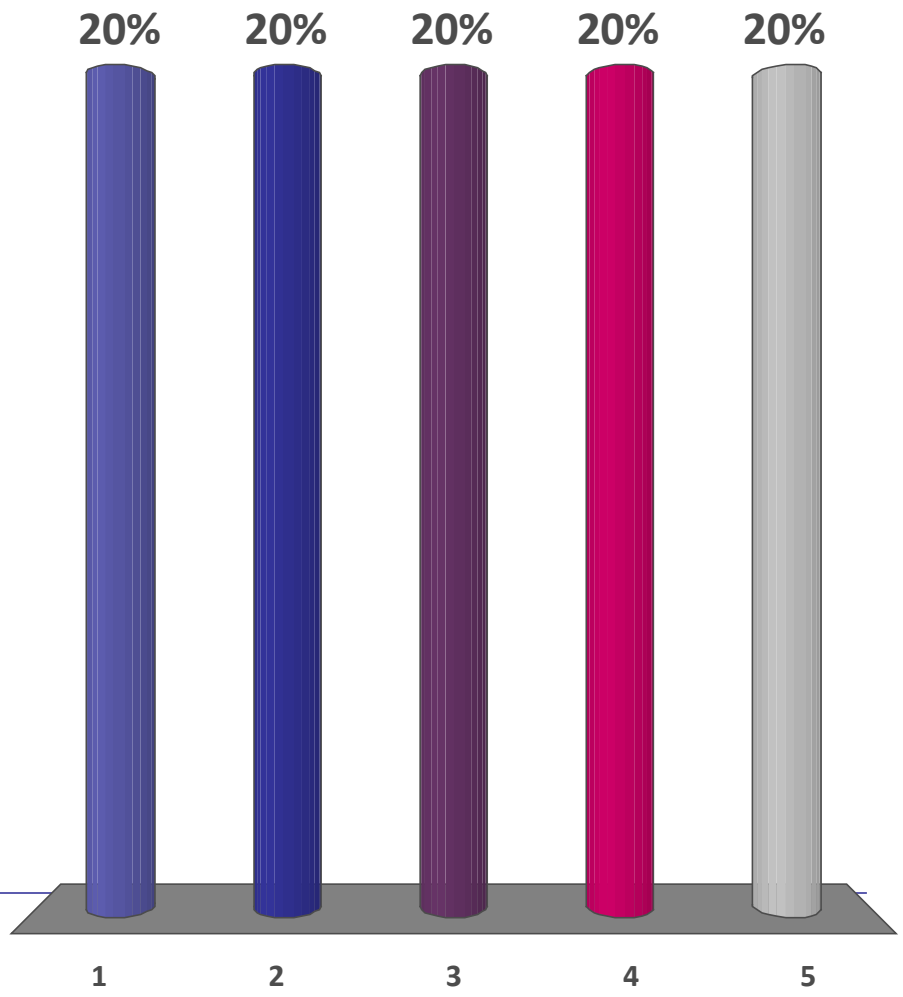
The biggest risk for low dose pill failure happens when a woman…

1. Takes a five day course of amoxicillin while on the pill
2. Misses a dose at the end of the pack
3. Starts a new pack one day late
4. Changes the timing of her pill use from the morning for the first 2 weeks to the evening for the second two weeks of the pack



In three studies of COC use, the average weight gain associated with low dose COC use was..

1. 8 kg
2. 5 kg
3. 2 kg
4. No weight gain
5. 3 kg weight loss



Very Effective

Side Effects: Hormonal Contraception

Progestin-Related

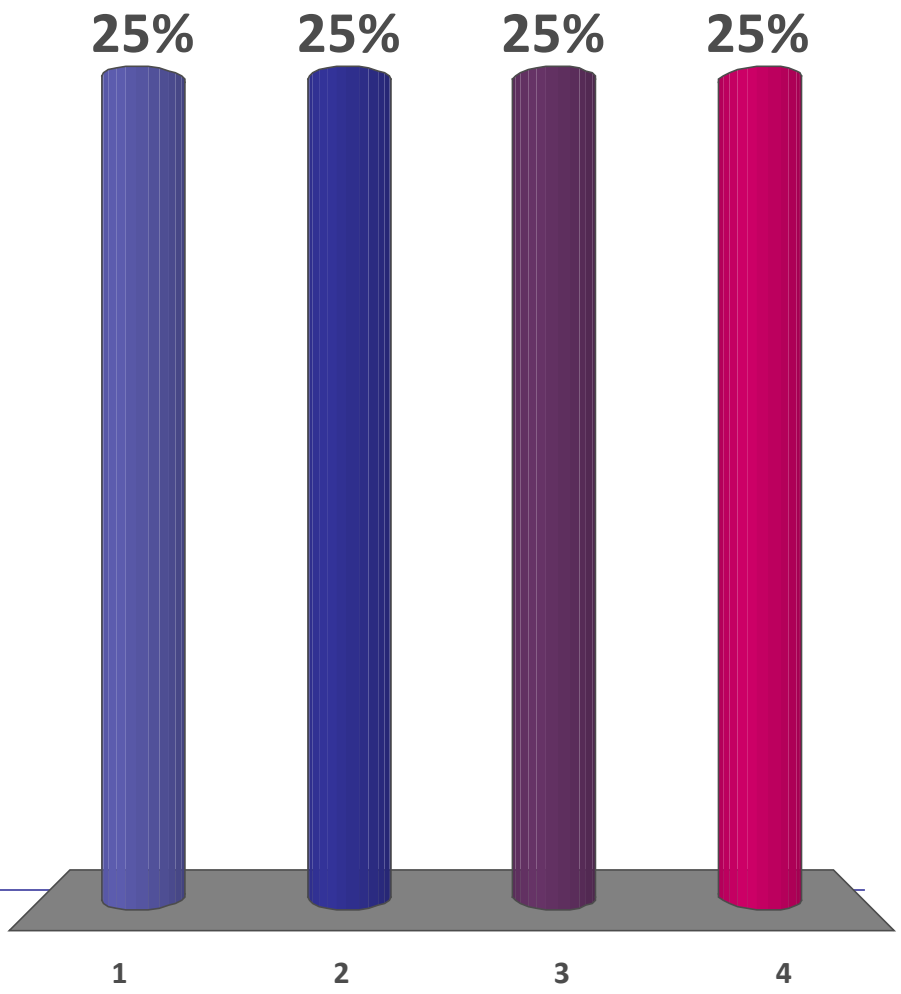
- Bloating
- Anxiety
- Irritability
- Depression
- Menstrual irregularities
- Reduced libido

Estrogen-Related

- Breast tenderness
- Nausea
- Vomiting
- Headaches
- Elevated blood pressure (rare)

A participant is interested in using combined oral contraceptive pills. When reviewing her medical history, which of the following would be a contraindication?

1. Pelvic Inflammatory Disease
2. Hypotension
3. Severe migraines
4. History of deep vein thrombosis



Very Effective

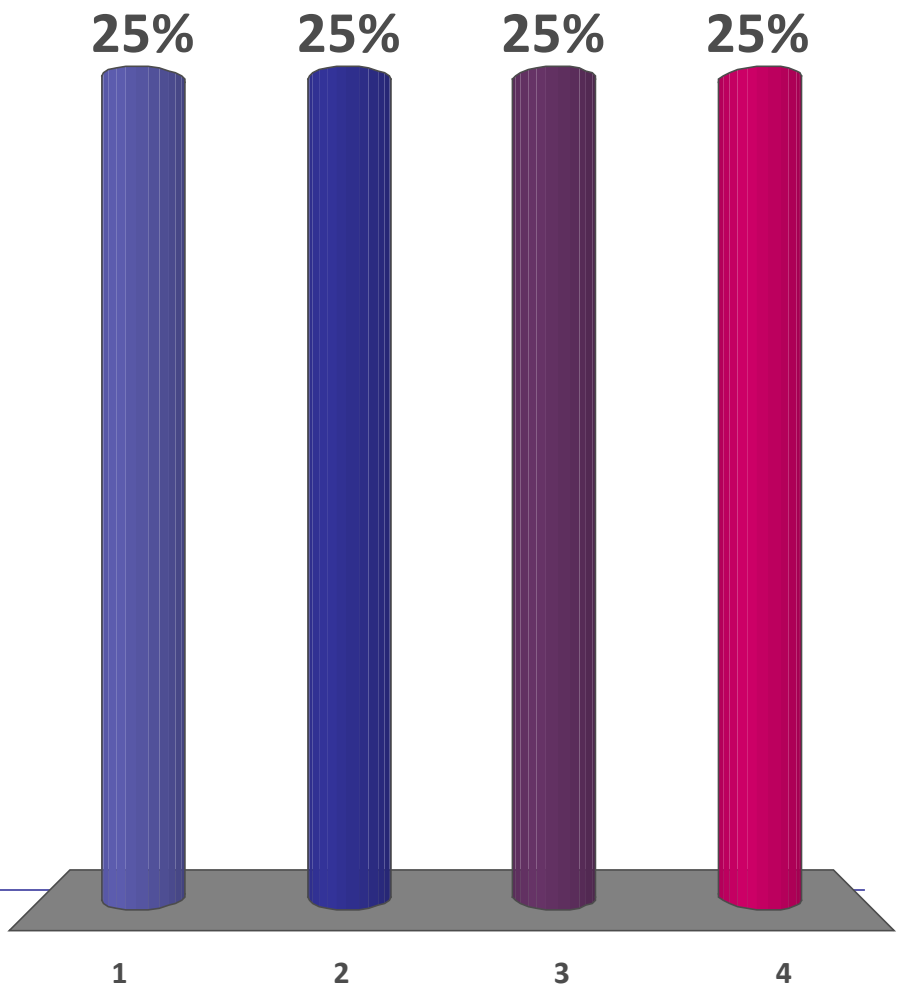
Contraindications: Combined Hormonal Contraception

- Clotting disorders
- History of deep vein thrombosis or pulmonary embolism
- Migraine with aura or focal neurological deficit
- Uncontrolled hypertension

WHO. 2000.

Participant presents for HOPE screening. She is getting married in the next few months and would like to fall pregnant in 1 years time. Which contraceptive method has the slowest time fertility return?

1. Implant
2. Oral contraceptive pills
3. IUD
4. DMPA



Very Effective

Injectable

- Depot Medroxyprogesterone Acetate (DMPA)
- Brand name: Depo-Provera®
- Intramuscular or subcu-taneous injection every 3 months

Trussel J. Contraceptive Technology. 2011. Cromer BA. Am J Obstet Gynecol. 2005. Trussel J. Contraception. 2004.; Westhoff C. Contraception. 2003. et al.

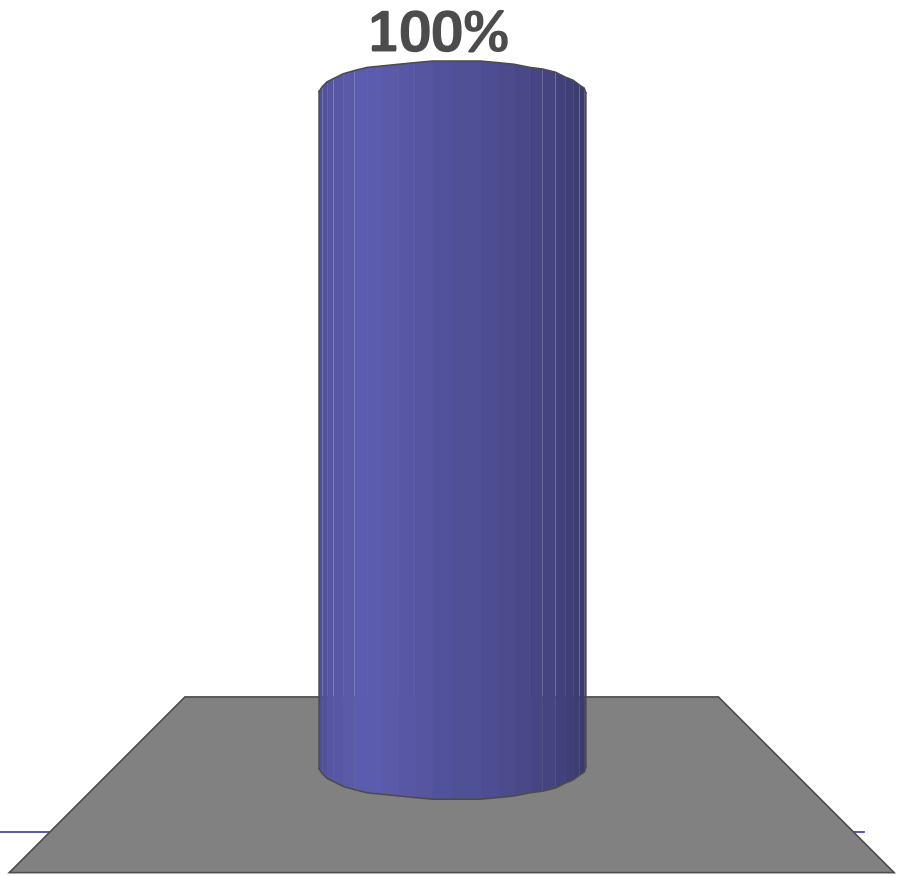
Ovulation Return

- MPA can be detected in the serum for as long as nine months after a single injection of 150 mg
- Return to ovulation
  - DMPA = 3 to 10 months
  - NET-EN = 2 to 6 months
  - COC = 1-3 months
  - Implant = 3 weeks to 3 months
  - IUD = Immediate

Mishell D. J Repro Med. 1996

She has always used DMPA. All her friends use DMPA. And she wants to continue to use DMPA. You:

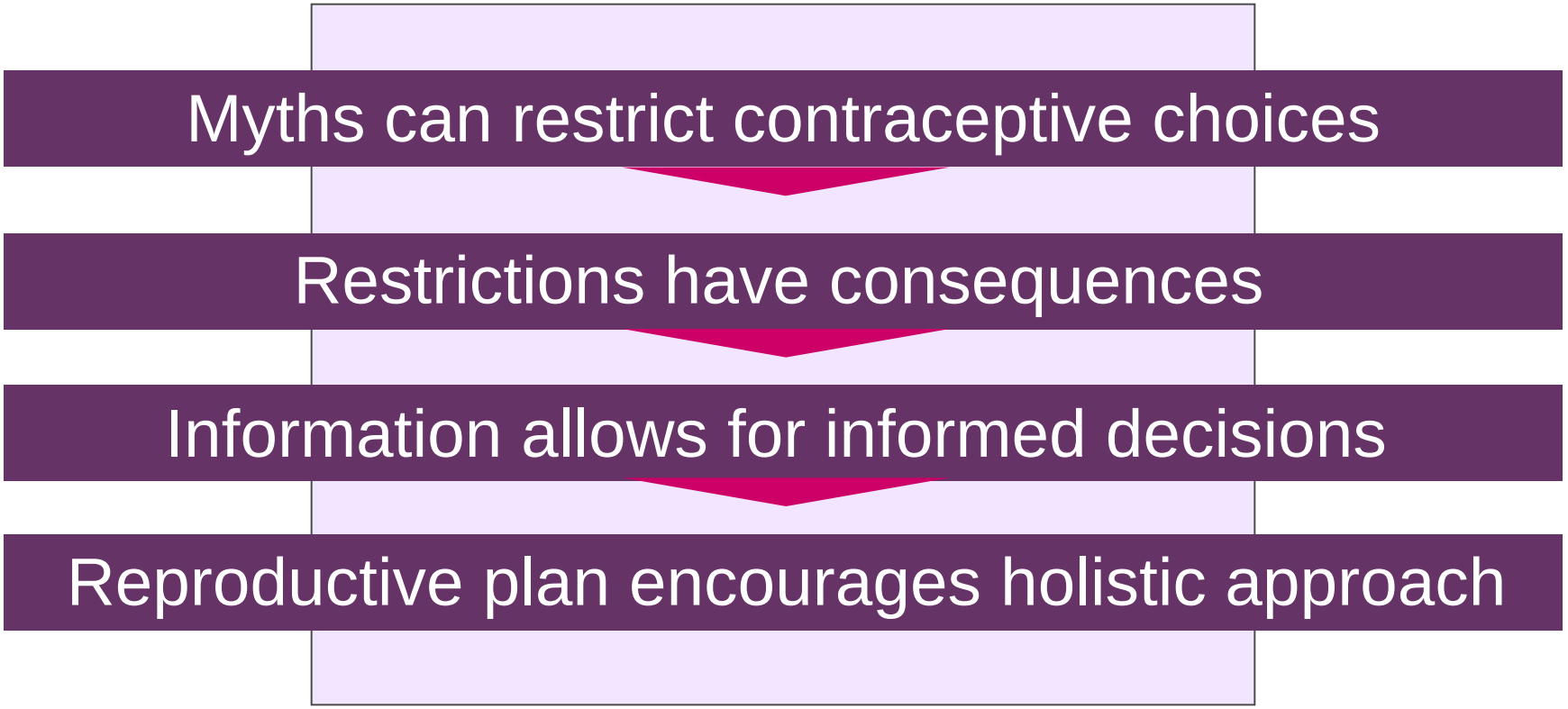
1. Enter answer text...



Reproductive Health Plan

?	How important is it to you to avoid pregnancy now?
?	What would you do if you became pregnant now?
?	What is your desired family size?
?	What is your intended timing for pregnancy?
?	Are there health issues that you need to address before you become pregnant?

Take-Home Points



Contraceptive Options

Extremely effective	Very effective	Moderately effective	Effective
Effective >99% of the time	Effective >92% of the time	Effective ~80% of the time	Effective up to 75% of the time
Male/Female Sterilization	Pills	Male/Female Condom	Fertility Awareness
IUD	Injectables	Withdrawal	Cervical cap
Implants		Sponge	Spermicide
		Diaphragm	