

Contraception

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Who uses contraceptives?

- More than 99% of reproductive aged women who have ever had sexual intercourse have used at least one contraceptive
- Among women who are at risk of unintended pregnancy, 89% are currently using contraceptives

Guttmacher Institute. Contraceptive Use in the United States. July 2012

Who needs contraceptives?

- 62 million U.S. women in their child bearing years (15-44)
 - 43 million (69%) are at risk of unintended pregnancy
- Couples who do not use any method of contraception have about an 85% chance of pregnancy over a year

Guttmacher Institute. Contraceptive Use in the United States. July 2012

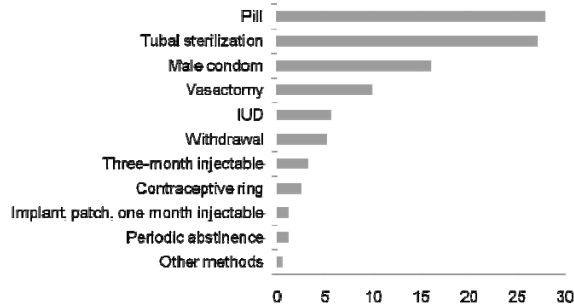
Teen contraceptive use

- Among teenage women who are at risk of unintended pregnancy, 81% are currently using a contraceptive method
- The male condom is the most commonly used method at first sex and at most recent sex among both teenage men and women

Guttmacher Institute. Contraceptive Use in the United States. July 2012

The majority of women who use contraceptives rely on the pill or sterilization

% of U.S. women aged 15-44 using contraceptives, 2006-2008



Long-acting reversible methods of contraception (LARC)

- IUDs and implants are top tier methods
 - Highly effective (pregnancy rates < 1%/yr)
 - High rates of satisfaction and continuation
- LARC methods eliminate the problem on inconsistent method use, which can lead to unintended pregnancy

Percentage of women experiencing an unintended pregnancy during the first year of use and percentage continuing use at the end of first year- U.S.

Method	Typical Use	Perfect Use	Use at Yr 1
Copper IUD	0.8%	0.6%	78%
LNG-IUD	0.2%	0.2%	80%
Implant	0.05%	0.05%	84%
3-month injectable	6%	0.3%	56%
Ring	9%	0.3%	68%
Patch	9%	0.3%	68%
Pills	9%	0.3%	68%
Male condom	15%	2%	49%

LARC methods- Advantages

- Independent from coitus
- Do not require frequent visits for re-supply
- No additional costs once they have been placed
- Highly cost effective
- Reversible, with rapid return to fertility after removal

LARC methods- Disadvantages

- **Barriers**
 - Low patient awareness
 - High upfront costs
 - Lack of healthcare provider awareness, knowledge, or skills.

Copper T380A IUD

- 10 year duration of action
- 380 mm² of copper surface area
- Typical use failure rate= 0.8%
- Mechanism of action:
 - Inhibition of sperm migration viability, change in transport speed of the ovum, and damage to or destruction of the ovum



Image from Wikipedia

LARC methods and adolescents

- ACOG published new recommendation in October 2012
 - Implants and IUDs should be first-line methods for sexually active adolescents

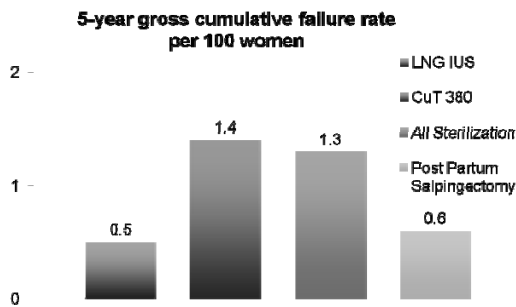
Levonorgestrel (LNG) IUD

- 5 year duration of action
- Contains 52 mg of levonorgestrel
 - Releases 20 mcg/day initially
 - Minimal systemic adverse effects
- Typical use failure rate: 0.2%
- Mechanism of action:
 - Thickens cervical mucus, prevents entry of sperm into upper genital tract
 - Endometrial suppression



Image from Wikipedia

IUD and Sterilization Efficacy



Andersson et al. *Contraception* 1994;49:56, Peterson et al. *Am J Obstet Gynecol* 1996;174:1161

Timing of IUD Insertion

- Any time of menstrual cycle if pregnancy ruled out
- During menstruation (ensures not pregnant, masks bleeding and cramps associated with insertion, more open cervical canal)
- Post-partum
 - Immediate (within 48 hrs) → slightly higher expulsion rate
 - 4-8 weeks
- Post-abortion (first trimester- immediate; second- 4-6 wks)

IUD Side Effects

- Increased uterine bleeding- may be heavier or more bleeding days (copper IUD)
- Dysmenorrhea (copper IUD)
- Initial irregular bleeding- 4 to 6 months (LNG IUD)
- Amenorrhea (LNG IUD)
 - Rates reported of 20% to 80%
- Functional ovarian cyst (LNG IUD)

IUD Contraindications

- Pregnancy
- PID (current or within past 3 months)
- Sexually transmitted diseases (current)
- Puerperal or post-abortion sepsis (current or within 3 months)
- Purulent cervicitis
- Undiagnosed abnormal vaginal bleeding
- Malignancy of the genital tract
- Known uterine anomalies
- Allergy to IUD components/Wilson's disease (copper IUD)

IUDs and Adolescents

- Do not increase an adolescent's risk of PID and STIs
- Do not affect the future fertility of adolescent users

ACOG Committee Opinion Number 539: Adolescents and long-acting reversible contraception: Implants and intrauterine devices.

Single rod progestin-only implants versus two-rod levonorgestrel implants?

Progestin-Only Contraceptive Implant

- 3 year duration of action
- Single rod, 40-mm x 2-mm, placed subdermally
 - Contains 68 mg of etonogestrel, (the active metabolite of desogestrel) dispersed in a core of ethylene vinyl acetate and wrapped in membrane of same material
- Typical use failure rate: 0.05%
- Mechanism of action
 - Inhibits ovulation
 - Thickens cervical mucous



Image from Wikipedia

Transdermal patch versus birth control pills

**Case #1:
A 24 year-old
woman who has
intercourse 2-3
times a year**

**Case #3:
A 19 year-old
who frequently
forgets to take
her birth control
pills.**

**Case #2:
A 46 year-old
woman entering
menopause with
an IUD in place.**

**Case #4:
A 30 year-old
woman on birth
control pills who
now wants to get
pregnant.**

**Case #5:
A 20 year-old
basketball player
who wants to
avoid periods
during sports
season**

**Case #7:
A 40 year-old
couple
considering
vasectomy versus
tubal ligation**

**Case #6:
A 25 year-old
woman who
wants to switch
from an IUD to a
progestin implant**

**Case #8:
Estrogen-
progestin pill
versus progestin-
only pill in a 21
year-old woman**

**Case #9:
28 year-old
woman with a
broken condom
last night**

**Case #11:
38 year-old woman
on estrogen-
progestin birth
control pills with
new hypertension**

**Case #10:
Drospirenone/ethinyl
estradiol (“Yaz”) in a
woman with pre-
menstrual moodiness?**

**Case #12:
Monophasic
versus
multiphasic birth
control pill in a 32
year-old woman**