

IUD's (Intrauterine Devices)

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Basics

- Top tier of birth control
 - Safest
 - As effective as sterilization but rapidly reversible
 - Least number of side effects
 - Once placed, no user compliance required for 3 – 10 years
 - Skyla IUD- 3 years
 - Mirena IUD- 5 years
 - Copper IUD- 10 years
- One of most cost effective methods of birth control
- Excellent option for adolescents
- Has several health benefits outside of contraception
- Ideal for women who cannot take estrogen
- Placed and removed with simple office procedures

Design

- Plastic (non-latex) shaped T with flexible arms
- Arms folded into small tube for placement
 - Tube passed through cervix into uterus
 - Tube is then removed allowing arms to unfold
 - T matches shape of uterine cavity

- String on bottom of T allows later removal of IUD
- **Do not work by aborting pregnancies**
 - Copper IUD
 - destroys sperm before they reach the fallopian tubes
 - Mirena & Skyla IUDs
 - thicken cervical mucous
 - Prevents sperm from entering uterus
 - Toxic to sperm
 - Inhibits binding of sperm to egg
 - Inhibit release of egg from ovary in some

Misinformation Limiting Use

- May be residual from problems with Dalcon Shield IUD
 - Used in 1960's
 - Multiple serious problems and a great deal of litigation
 - Was not very effective birth control
 - Used before reliable tests for chlamydia & gonorrhea
 - Now done prior to placement of any IUD
 - Design flaw in string on bottom of IUD
 - Braided instead of single fiber
 - Provided pathway for bacteria to enter uterus
- Correcting common misconceptions about modern IUD's.
 - Modern IUD's

- Do not cause infections
- Do not “grow into wall of uterus”
- Do not cause infertility
- Do not cause weight gain
- Do not increase risk of tubal pregnancy
- Do not work by aborting pregnancies

Available IUD's

- TCU380A (Paraguard)
 - Copper releasing IUD
 - Approved for 10 years use
- LNg20 (Mirena)
 - Levonorgestrel (progesterone)releasing IUD
 - Approved for 5 years use
- LNg14 (Skyla)
 - Levonorgestrel (progesterone) releasing IUD
 - Approved for 3 years use

Paraguard (TCu380A) IUD

- Non-latex plastic T
- Arms & vertical stem wound with a fine copper wire
 - Slowly releases copper into uterine cavity
- Monofilament string on bottom of string for removal

- How it works
 - Copper ions create environment toxic to sperm
- Approved for 10 years use
 - However, good evidence supports longer use
 - Women between 25 & 34 at time of placement may leave in place for 12 years
 - Women 35 & older at time of placement may leave in place until menopause
- Pregnancy risk
 - 1st year perfect use 0.6%
 - woman checks string weekly for expulsion
 - 1st year typical use 0.8%
 - Prolonged typical use
 - 1.4% at 5 years 2.1% at 10 years
- Return to normal fertility soon after removal
- Beware of counterfeit IUD's
 - Sold by some online pharmacies
 - Less copper = higher rate of failure
- Typically causes menses to become heavier & more painful
 - Most common reason for early removal

Mirena (LNg20) IUD

- T shaped polyethylene (no-latex) frame

- Has collar around the vertical stem with 52 mg of dispersed Levonorgestrel
 - A progesterone (contains no estrogen)
- Has stiff monofilament string attached to bottom of T for removal
 - Often felt by partner during intercourse- can be removed
- Has local progesterone effect on uterus
 - Local progesterone concentration is 1000x higher than with the Levonorgestrel arm implant (Implanon, Nexplanon)
- Blood level of progesterone highest during 1st few weeks then declines
 - 100-200 pg/ml 1st few weeks vs
 - 350 pg/ml with implants
 - 1500-2000 pg/ml with progestin only pills
- Approved for 5 years use
 - Limited data indicates may be effective to 7 years
 - However, insufficient to advise use beyond 5 years
- Pregnancy risk
 - 1st year perfect use 0.1%
 - 1st year typical use 0.1-0.2%
 - 5 year 0.5-1.1%
- Typically causes lighter menses after 3 months use
 - 50% of women have no menses
- May cause hormonal side effects
 - However most have none or minimal

- Return to normal fertility soon after removal

Skyla (LNg14) IUD

- Same design as Mirena but
 - Has smaller frame and insertion tube
 - Has less Levonorgestrel
 - Lower local & blood levels
- Approved for 3 years
 - No data supporting longer use
- Pregnancy risk
 - 1st year typical use 0.4%
 - 3 years 0.9%
- Less pain with insertion than with Mirena
- Frequent, unpredictable bleeding common 1st 3-6 months
- Fewer women have complete absence of menses
 - 13% vs 24% with Mirena
- Same incidence of hormonal side effects as Mirena
- Rapid return to fertility after removal

Choosing to Use an IUD

- Candidates for IUD use
 - Should have low risk of sexually transmitted diseases
 - Requires removal if infected with chlamydia or gonorrhea
 - Should use condoms to reduce STDs if at risk of STD's

- Not planning another pregnancy for at least one year
- Want highly effective but reversible birth control
- Want or need to avoid exposure to estrogen-based methods
- May be used in
 - Women who have never been pregnant
 - Adolescents
 - Women who have had pelvic inflammatory disease
 - Women who have had an ectopic pregnancy
- Avoid using an IUD when
 - There is a severe abnormality of the uterine cavity
 - When the uterus is less than 6 cm deep
 - There is an active STD or pelvic inflammatory disease(PID)
 - May place after treatment
 - Wait 3 weeks after STD treatment if retest is negative
 - Wait 3 months after PID treatment
 - There is unexplained, abnormal bleeding
 - Pregnant or suspected of being pregnant
 - Wilson's disease or copper allergy (Copper IUD only)
 - Current breast cancer (Mirena & Skyla only)
 - Active liver disease (Mirena & Skyla only)
 - Women who need combined estrogen-progesterone

- Ex.- for treatment of acne, abnormal hair growth & low bone density near time of menopause

Reasons to choose a Copper (Paraguard) IUD

- Want to avoid hormone use
 - Ex- within 5 years of breast cancer treatment
- History of progesterone side effects
- Want to continue monthly menses
- Want continuous birth control longer than 5 years
 - Note- Mirena may be replaced after 5 years
- Need emergency contraception
- Reduces cervical and endometrial (uterine lining) cancer risks

Reasons to not choose a Copper (Paraguard) IUD

- Heavy, painful menses frequent problem
 - 38% have more painful bleeding, 66% have heavier bleeding
 - Both decreased after one year
 - May be reduced with ibuprofen or Naprosyn or aspirin
- Does not protect against STD's
 - Greater risk of developing pelvic inflammatory disease if exposed to an STD compared to Mirena use

Reasons to choose a Levonorgestrel (Mirena) IUD

- Want hormonal birth control with minimal hormonal side effects
- Decreased menstrual flow and decreased pain with menses

- Including patients who take blood thinners
- Not clear if effective with bleeding caused by fibroids
- At 2 years of use
 - 50% have complete loss of menses (returns after removal)
 - 25% have reduced menses
 - 11% have only monthly spotting
- May initially have frequent, unpredictable bleeding after placement
- Nonsurgical treatment for *endometrial hyperplasia*
 - Precancerous, abnormal growth of cells lining uterine cavity
 - Not clear yet if effective when hyperplasia is *atypical* (high risk)
- May be, but not yet clear, treatment for low grade endometrial cancer
- Protects against developing endometrial hyperplasia in those at risk
 - Women with *polycystic ovarian syndrome*
 - Women taking estrogen hormone replacement
 - Women taking Tamoxifen (for breast cancer)
 - Should 1st clear with doctor treating the breast cancer
- Treatment for endometriosis
- Protects against developing pelvic inflammatory disease when exposed to a sexually transmitted disease
 - Due to thickening of cervical mucous
- Reduces cervical cancer risk

IUD's are Acceptable with

- Many chronic medical conditions
 - See [World Health Organization](#)
- Women who had problems in past IUD use
- Immunocompromised (ex- HIV) women
- Adolescents
- Women who have never been pregnant
- Women who had an ectopic (tubal) pregnancy
- Women immediately following delivery or abortion
- Women who are breastfeeding
- Women who need emergency contraception
 - Copper IUD only
- Women who have valvular heart disease
- Women who have blood clotting disorders
- Women who have had a c-section
- Most gyn problems
- Fibroids that do not severely distort the uterine cavity
- Women with *osteoporosis* (bone thinning)
- Women having an MRI

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