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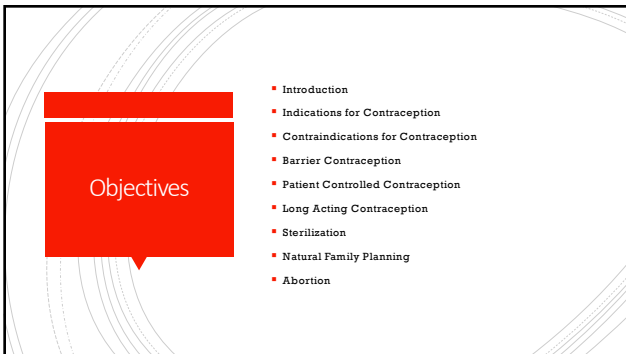
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Most effective contraception?

- Abstinence

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The Numbers

- ~48% of US pregnancies are UNintended
- Iowa population over 3.1 million
  - 226,420 (7.7%) aged 15-19y
- Iowa Youth Risk Behavior Survey 2019
  - 37.4% had sex
  - 8.3% had sex with >4 people
  - 54.9% used condoms
  - 28.8% used BC

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**The Numbers**

- 1 in 4 teens have never talked to parents about sex
- Average age of coitarche in US 17 years
- Average number of partners in high school grad = 4
- Average age of sexual abuse is 9 years

From highschool to wedding day  
I wanna find someone who will stand by  
my side the same way



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**Adolescence**

- "A time of psychosocial, cognitive and physical development as young people make the transition from childhood to adulthood"
- Health care professionals have an obligation to provide the best possible care to respond to needs of their adolescent patients
  - AT A MINIMUM includes sexuality education, counseling & mental health assessment, diagnosis/treatment of pubertal development, access to contraception & abortions, pregnancy care and prevention, diagnosis & treatment STIs



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**Iowa Codes**

- Minors may consent to BC and STI testing at 12y
  - Parental notification required if +HIV
  - Expedited partner therapy
    - By LAW can prescribe STI treatment for partner(s) without examination
- Plan B available to any age



Adolescent & Young Adult Health  
National Resource Center

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**Iowa Codes**

Minors may consent to abortion without parental permission but parent or grandparent must be notified 48h prior to abortion

- Exceptions: abuse, assault, incest, neglect, medical emergency

Mandates schools provide age-appropriate, research-based instruction in growth & dev in grades 1-12

- Required topics self-esteem, stress mgt, interpersonal relationships, human sexuality, domestic abuse, HPV & vaccine, HIV/AIDS
- May teach abstinence-only curricula
- Notify parents annually of content and parents may opt-out

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**US Supreme Court**

- Rights do not "come into being magically only when one attains the state-defined age of majority"
- Iowa
  - Explicitly allows all minors to consent to contraceptive services



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**Teen Pregnancy**

- 2019 Teen Birth Rates (per 1,000)
  - 16.9
- Since 1991, teen birth rate decreased by 45% to lowest number since 1945 (2019 CDC stats)
- United States has highest rate in developed countries
- 14 per 1,000 births to mothers 15-19 years in Iowa in 2019 (1,466 births)



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- [https://www.youtube.com/watch?v=XUcNmU-ucCY&feature=player\\_detailpage](https://www.youtube.com/watch?v=XUcNmU-ucCY&feature=player_detailpage)

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American College of OB/GYN

- Recommend first visit age 13-15 years
  - Health guidance
  - Screening
  - Preventive health care
  - Initiate physician-patient relationship
- Does NOT require pelvic examination



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Indications

- Suppression of menstruation
  - Dysmenorrhea
  - PMS or PMDD
  - AUB
  - Chronic pelvic pain
  - Bleeding disorders
  - Adolescents
  - Transgender, Non-Binary
  - Special needs
- Birth control

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**YOU ARE SO MUCH MORE THAN WHAT YOU WEIGH.**

- Pregnancy prevention**
  - ACOG & AAP recommends **AGAINST** OCP solely for treatment of amenorrhea due to eating disorder
    - Does **NOT** improve BMD
    - Can cause resumption of menses & unable to use as measure of clinical improvement
    - Weight restoration primary goal of therapy
  - Depo-provera – use with caution (BMD changes)
  - Copper IUD preferred method

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**Contra-indications HORMONAL BC**

- Uncontrolled hypertension  $\geq 160/100$
- Smokers age  $> 34$  yrs
- Thromboembolic event
- Ischemic heart disease
- Prior stroke
- Valvular heart disease
- Breast cancer
- Cirrhosis
- Migraine with aura
  - Migraines in women  $\geq 35$  yrs

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<b>Most Effective</b> 1 in 10,000 pregnancies per 100 women in a year <b>Implant</b> 0.05% <b>Reversible Intrauterine Device (IUD)</b> LNG - 0.2% Copper T - 0.8%	<b>Permanent</b> <b>Male Sterilization (Vasectomy)</b> 0.15% <b>Female Sterilization (Tubal Ligation, Hysterectomy)</b> 0.2%	<b>How to make your method most effective</b> After procedure, little or nothing to do or remember. <b>Neutrons and hysterectomy sterilization:</b> Use another method for first 3 months.
<b>Injectable</b> 6% <b>Pill</b> 9%	<b>Patch</b> 9% <b>Ring</b> 9% <b>Diaphragm</b> 12%	<b>Injectable:</b> Get repeat injections on time. <b>Pills:</b> Take a pill each day. <b>Patch, Ring:</b> Keep in place, change on time. <b>Diaphragm:</b> Use correctly every time you have sex.
<b>Male Condom</b> 18% <b>Fertility Awareness Based Methods</b> 24%	<b>Female Condom</b> 21% <b>Spermicide</b> 28%	<b>Condoms, spermicide, withdrawal, spermicide:</b> Use correctly every time you have sex. <b>Fertility awareness based methods:</b> Abstinence or use condoms on fertile days. Newest methods (Standard Days Method and TwoDay Method) may be the easiest to use and consequently more effective.
<b>Least Effective</b> 18 or more pregnancies per 100 women in a year <b>Least Effective</b> 24%	<b>Withdrawal</b> 22% <b>Sponge</b> 24% parous women 12% nulliparous women	

CONDOMS SHOULD ALWAYS BE USED TO REDUCE THE RISK OF SEXUALLY TRANSMITTED INFECTIONS.

Other Methods of Contraception:  
 Lactational Amenorrhea Method: LAM is a highly effective, temporary method of contraception.  
 Emergency Contraception: Emergency contraceptive pills or a copper IUD after unprotected intercourse substantially reduces risk of pregnancy.

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**Barrier Contraception**



Decreases risk HIV, GC/CT & trichomonas  
 70% reduction HPV transmission  
 Latex condoms  
 ↓ breakage & slippage  
 Polyurethane condoms  
 Equal STD protection & pregnancy prevention as latex condoms  
 Natural membrane condoms  
 Not recommended for STD prevention

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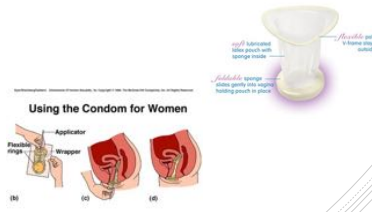
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**STD Prevention: Female Condom**

- Effective barrier to semen & viruses
- \$29 for box of 15 on amazon.com



Using the Condom for Women

Apply lubricant to the pouch with storage inside.  
 Flexible spring makes going in and out feeling smooth in pouch.

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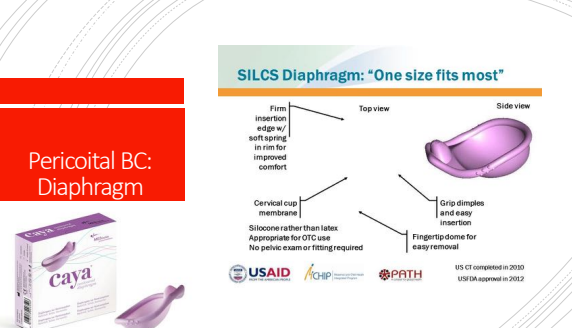
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**Pericoital BC: Diaphragm**

**SILCS Diaphragm: "One size fits most"**



Firm insertion edge w/ soft spring in rim for improved comfort

Cervical cup membrane

Silicone rather than latex  
 Appropriate for OTC use  
 No pelvic exam or fitting required

Top view

Side view

Grip dimples and easy insertion

Fingertip dome for easy removal

USAID ACP PATH US CT submitted in 2010 US DA approved in 2012

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Pericoital BC:  
Diaphragm

- One size fits most vs sizing in office
- Good for 2 years (refit after childbirth)
- Spermicide 1 hour prior and keep in place 6 hours after intercourse
- \$50-\$80 cost + \$20 nonoxonyl-9 spermicide (10 apps)

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Pericoital BC:  
Cervical Cap

Good for one year  
No fitting

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Pericoital BC:  
Sponge

\$15 for 3 pack  
Available OTC/online

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Phexxi

- Vaginal pH regulator
- Contains lactic acid, citric acid & potassium bitartrate
- \$270 for pack of 12 (before insurance)
- 1100 participants for 7 cycles reported 13.7% pregnancy rate



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Combination BC

- Small increased risk breast cancer
- Decreased risk ovarian, endometrial & colon cancer

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Combination BC

- Birth control pills



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Combination BC

- OrthoEvra (Xulane) patch
  - Higher estrogen content
  - Equivalent of 90mcg pill
  - BMI <30



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Combination BC

- NuvaRing



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Depo Provera

- Depo Provera (FDA black box warning)
  - Birth control shot every 3 months
    - Very effective with failure rate 2-3%
  - Evidence shows partial or full recovery of BMD after discontinuation
    - Pregnancy decreases BMD by 2-8%
    - Breastfeeding decreases BMD by 3-5%
  - Bottom line: safe, effective form of birth control and recommend daily exercise, adequate calcium and vitamin D intake
- Reduced sickle cell crisis
- Reduced seizures

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Pregnancy..... prevention

- Barriers to long-acting contraception
  - Lack of health care provider knowledge
  - Low patient awareness
  - High upfront cost

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Long Acting Contraception

- ACOG Statement
 

"Health care providers should consider LARC methods for adolescents and help make these methods accessible to them."
- AAP Statement
 

"First-line contraceptive choice for adolescents who choose not to be abstinent is a Long Acting Reversible Contraceptive (LARC)"

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IUD Myths Dispelled

- MYTH: IUDs are too difficult to place in nulliparous
- MYTH: IUDs increase risk of PID
- MYTH: IUDs cause infertility
- MYTH: You need neg STI screen before placement
- MYTH: If you get STI, IUD must be removed
- FACT: 96.5% first attempt success rate study 1,177 women 13-24y (89% multiparous)
- FACT: No studies showing increased risk of PID
- FACT: No evidence IUDs associated with infertility
- FACT: Do not delay insertion – obtain testing & treat if +
- FACT: Do NOT insert if current +GC/CT (wait 3 mos w/retest)

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**Nexplanon**

- Radioopaque
- 68 mg etonogestrel
- Effective 3 years
- Backup contraception for 1 week
- 10-20% remove for bleeding irregularity



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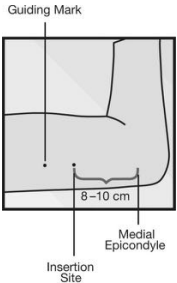

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Guiding Mark

8-10 cm

Medial Epicondyle

Insertion Site

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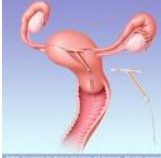

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**ParaGard**

- Copper IUD
- Effective for 10 years
- May have 40% increase bleeding & cramping
- Mechanism of action
  - Interferes with sperm transport & fertilization
  - NOT abortifacient



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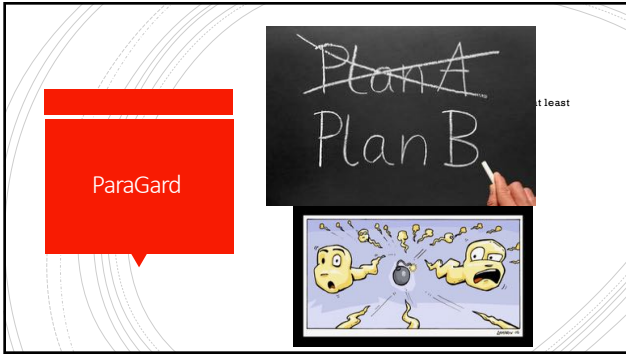
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ParaGard

~~Plan A~~  
Plan B



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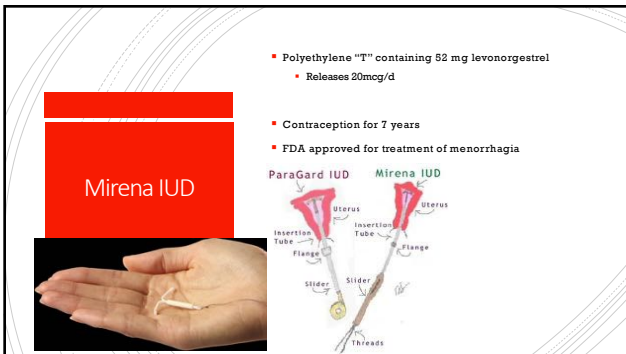
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Mirena IUD

- Polyethylene "T" containing 52 mg levonorgestrel
  - Releases 20mcg/d
- Contraception for 7 years
- FDA approved for treatment of menorrhagia

ParaGard IUD    Mirena IUD



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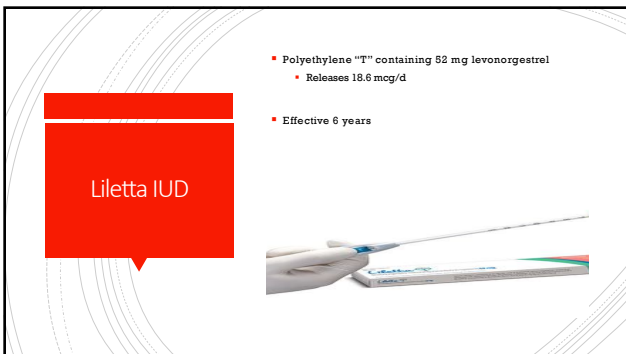
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Liletta IUD

- Polyethylene "T" containing 52 mg levonorgestrel
  - Releases 18.6 mcg/d
- Effective 6 years



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Sklya IUD

- Polyethylene "T" containing 13.5 mg levonorgestrel
  - Releases 14 mcg/d
  - 3 years



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Kyleena IUD

- Polyethylene "T" containing 19.5 mg levonorgestrel
  - Releases 17.5 mcg/d
- Effective 5 years



Kyleena is small and Flexible

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Emergency Contraception

Plan B

- Initiate within 72 hrs unprotected intercourse
- If no menses in 21 days, then evaluation

Paragard

- Inserted within 5 days unprotected intercourse

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Options for emergency contraception

Method	Dose	Reported efficacy
Levonorgestrel	0.75 mg given twice, 12 hours apart or 1.5 mg given as a single dose	59 to 94 percent of pregnancies prevented
Estrogen plus progestin (Yuzpe regimen)	100 to 120 micrograms ethinyl estradiol plus 500 to 600 micrograms levonorgestrel in each dose, given twice, 12 hours apart	47 to 89 percent of pregnancies prevented
Mifepristone*	Single 600 mg dose	99 to 100 percent
Copper intrauterine device	Inserted within 120 hours after intercourse	at least 99 percent
Ulipristal	Single oral dose of 30 mg	98 to 99 percent

\*Not available for emergency contraception in the United States.

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## Sterilization

- Vasectomy
  - 98% effective
  - 82% done by urologists, 6.4% by FP & 11% by other surgeons
  - 4 out of 5 performed in the office
  - \$350 to \$1000



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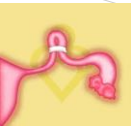

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## Sterilization

- Tubal occlusion
  - Falloope rings
  - Hulka clips
  - Fishie clips
  - Cauterization
- Salpingectomies
  - Partial
  - Full

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**Lactation Amenorrhea Method**

- Exclusively breastfeeding
- Amenorrhea
- Up to 6 months postpartum
- Approximately 98% effective



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**Natural Family Planning**

- Fertile window 5 days before ovulation & up to 24 hours after ovulation
- Ovum viability 12-24 hours
- Sperm viability 3-5 days

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**Natural Family Planning**

- Mobile apps
  - Clue Birth Control (formerly Dot)
  - Natural Cycles
- Perfect use 3-8% failure rate
- Typical use 3-8% failure rate



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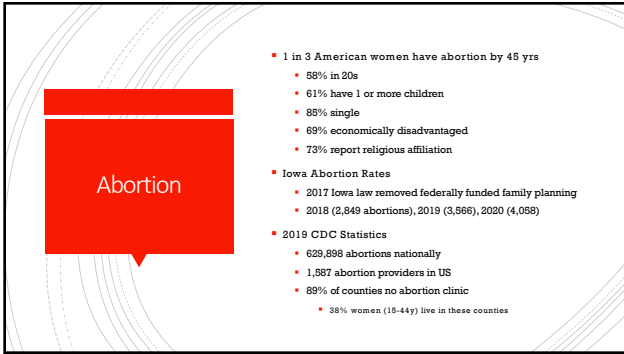
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**Abortion**

- 1 in 3 American women have abortion by 45 yrs
  - 88% in 20s
  - 61% have 1 or more children
  - 88% single
  - 69% economically disadvantaged
  - 73% report religious affiliation
- Iowa Abortion Rates
  - 2017 Iowa law removed federally funded family planning
  - 2018 (2,849 abortions), 2019 (3,566), 2020 (4,058)
- 2019 CDC Statistics
  - 629,898 abortions nationally
  - 1,887 abortion providers in US
  - 89% of counties no abortion clinic
    - 38% women (18-44y) live in these counties

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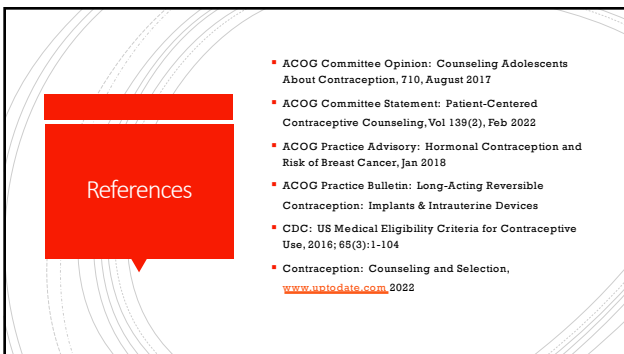
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Questions?  
Abingaman  
[@broadlawns.org](mailto:@broadlawns.org)

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