Contraceptive Pearls

Dr. Brienne Bodkin BHSc, MHA, MD, FRCSC
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Disclosures

- Speaker: Dr Brienne Bodkin

- I have no relationships with for-profit or not-for-profit organizations

Session Evaluation and Outcome Assessment

These short forms serve important functions!

- For **speakers**: Your responses help them understand their strengths and weaknesses, participant learning needs, and teaching outcomes
- For **the CEPD office**:
  - To plan future programs
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Please take 3-5 minutes to fill the evaluation form out. Thank you!

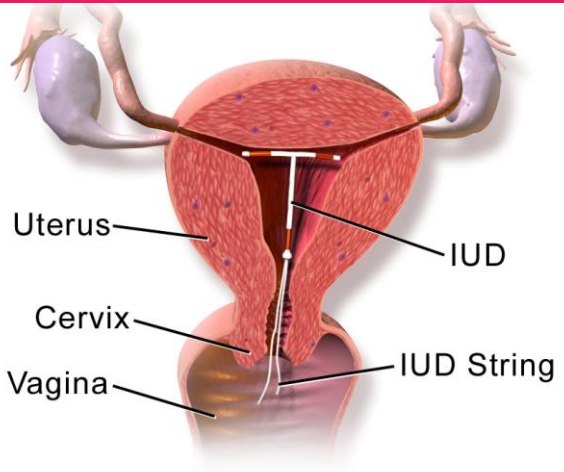
Learning Objectives

1. Discuss indications and contraindications of LARC, OCP and DMPA
2. Identify common myths and misperceptions about adverse effects and contraindications to each method of contraception
3. Be able to select an appropriate method of contraception for a particular patient

Table 2. Percentage of women experiencing unintended pregnancy within the first year of perfect and typical use, percentage of women continuing use at the end of the first year, and percentage of sexually active Canadian women using contraceptives

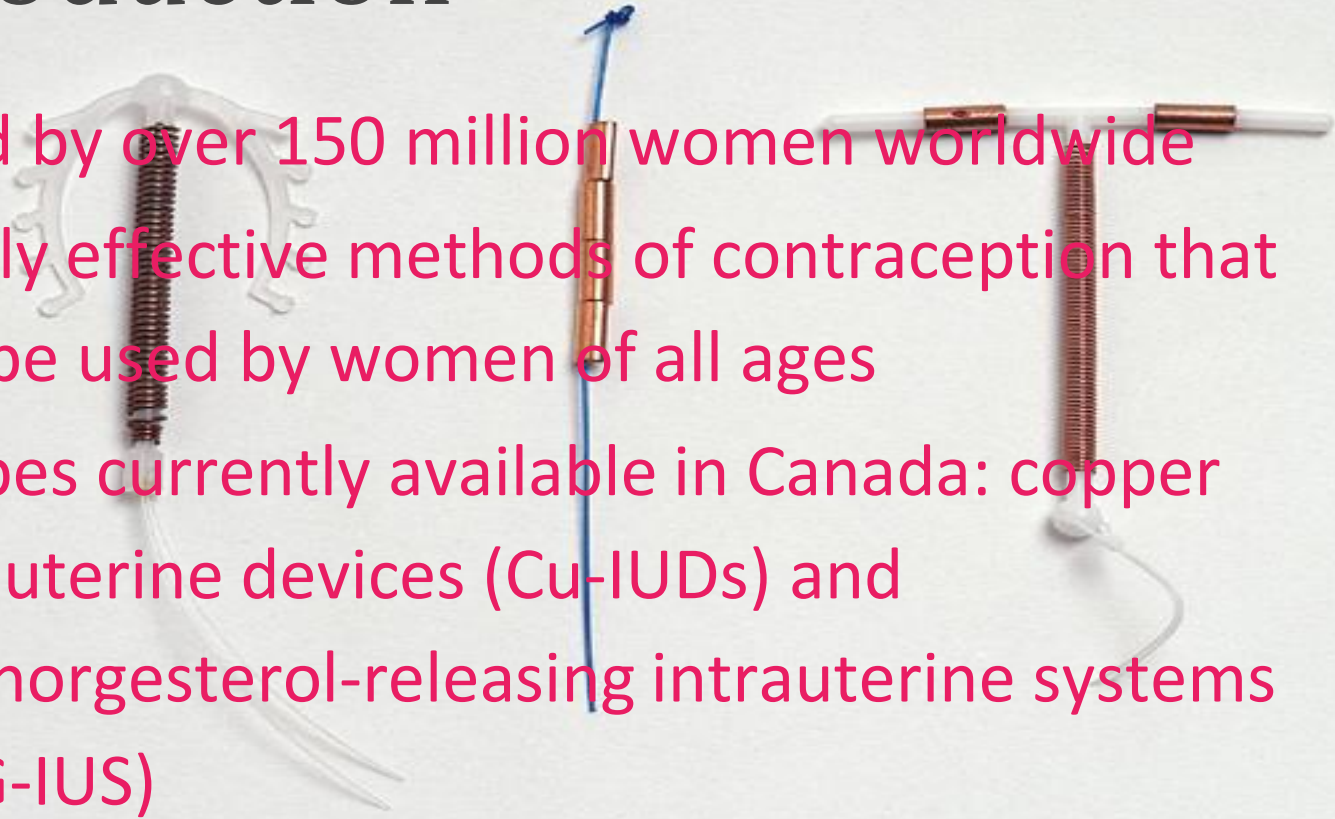
Tier of effectiveness	Contraceptive method	% of women experiencing a pregnancy within the first year of perfect use	% of women experiencing a pregnancy within the first year of typical use	% of women still using the method at the end of one year	% of sexually active Canadian women who are not trying to conceive using each method[17]
I	IUC progesterone-releasing (IUS)	0.2	0.2	80	2
I	IUC copper-releasing (IUD)	0.6	0.8	78	2.3
I	Implant (Implanon)	0.05	0.05	84	0.1
I	Vasectomy	0.5	0.5	100	7.4
I	Tubal ligation	0.1	0.15	100	6.0
II	Progesterone injection (Depo-Provera)	0.2	6	56	2.4
II	Combined hormonal contraceptive (pill, patch or ring)	0.3	9	67	45.5
III	Diaphragm	6	12	57	0.2
III	Male condom	2	18	43	54.3
III	Female condom	5	21	41	0.3
III	Sponge, spermicide	9–20	12–28	36–42	0.8
III	Coitus interruptus (“withdrawal”)	4	22	46	11.6
III	Natural family planning	0.4–5	24	47	2.5
	No method	85	85		14.9*

Intrauterine Contraception: Long Acting Reversible Contraception (LARC)



Intraunterine Device (IUD)

Introduction



- Used by over 150 million women worldwide
- Highly effective methods of contraception that can be used by women of all ages
- 2 types currently available in Canada: copper intrauterine devices (Cu-IUDs) and levonorgesterol-releasing intrauterine systems (LNG-IUS)

Table 5. Intrauterine contraceptives available in Canada[6,7,190–193]

Intrauterine contraceptive	Duration of use (years)	Strength (μg/day LNG) (surface area of Cu)	Length (mm)	Width (mm)
Mirena (LNG-IUS 52 mg)	5	20 μg/day	32	32
Jaydess (LNG-IUS 13.5 mg)	3	14 μg/day	30	28
Nova T-200	5*	200 mm^2	32	32
Flexi-T 300	5	300 mm^2	28	23
Flexi-T 300+	5	300 mm^2	32	28
Flexi-T 380+ (cuffs on T arm)	5†	380 mm^2	32	28
Liberte UT 380 Standard	5	380 mm^2	35.4	32
Liberte UT 380 Short	5	380 mm^2	28.4	32
Liberte TT 380 Standard (cuffs)	10†	380 mm^2	34	29.9
Liberte TT 380 Short (cuffs)	5	380 mm^2	29.5	23.2
Mona Lisa 10 (Cuffs)	10†	380 mm^2	35.85	31.85
Mona Lisa 5 Standard	5	380 mm^2	31.9	31.8
Mona Lisa N (ST 300)	5*	300 mm^2	29	23
Mona Lisa 5 Mini (380)	5	380 mm^2	24	30

jaydess®

13,5 MG LEVONORGESTREL

Mirena®

(levonorgestrel-releasing intrauterine system) 52 mg

Kyleena™

19.5 MG INTRAUTERINE DELIVERY SYSTEM
LEVONORGESTREL

5 years. Low dose.

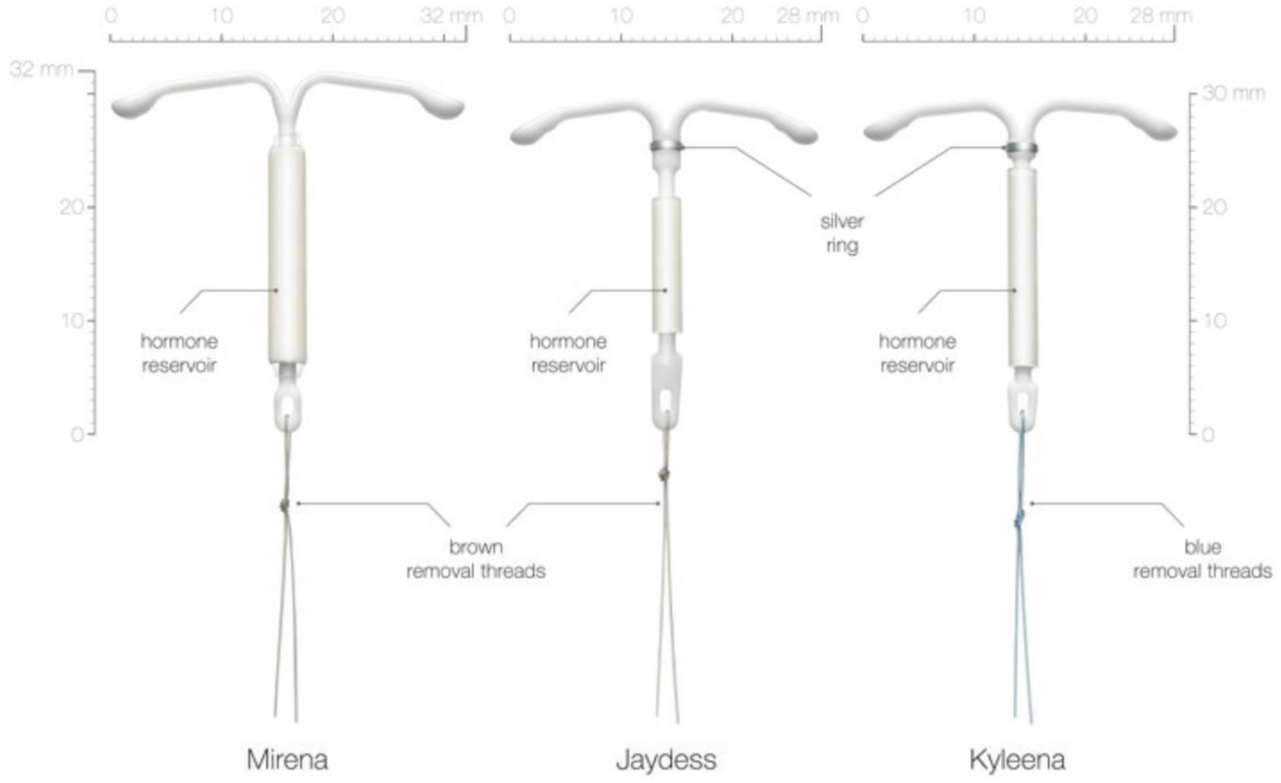
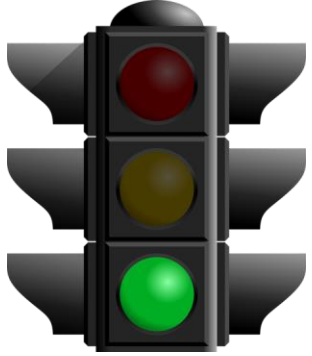


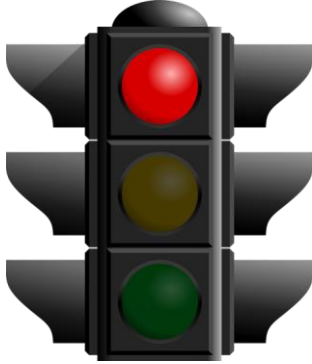
Figure 1: Physical appearance of Mirena, Jaydess, and Kyleena

Indications



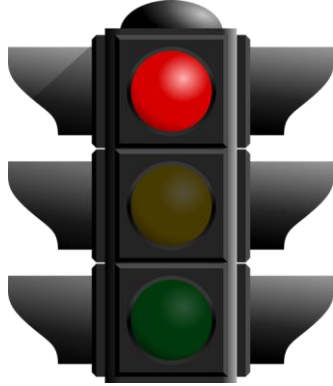
- Anyone !!
- Any woman seeking an effective, reversible, coitally independent method of contraception
- Longer term contraception, forgettable, invisible
- Do not wish to take hormones, have CI to estrogen or breast feeding

Contraindications



- The World Health Organization and the Centers for Disease Control and Prevention have developed guidelines that categorize medical conditions into 1 of 4 categories based on their level of risk
  - Category 4: a condition that represents an unacceptable health risk if the contraceptive method is used
  - Category 3: theoretical or proven risks generally outweigh the advantages. Benefit from expert consultation before advising against the method

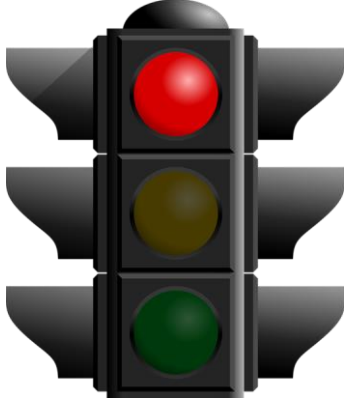
Contraindications



Category 4

- Pregnancy
- Current PID or cervicitis
- Puerperal sepsis
- Immediately post septic abortion
- Known distorted uterine cavity
- Abnormal vaginal bleeding that has not been adequately evaluated
- Cervical or endometrial cancer awaiting treatment
- GTN with elevated Bhcg levels
- Current progestin receptor breast cancer
- Pelvic tuberculosis

Contraindications



- Category 3
  - Past history (>5 years) progestin-positive breast cancer
  - Severe decompensated cirrhosis, hepatocellular adenoma or malignant hepatoma
  - Complicated solid organ transplant (graft failure, rejection, cardiac allograft vasculopathy)
  - Post-partum >48 hours-4 weeks

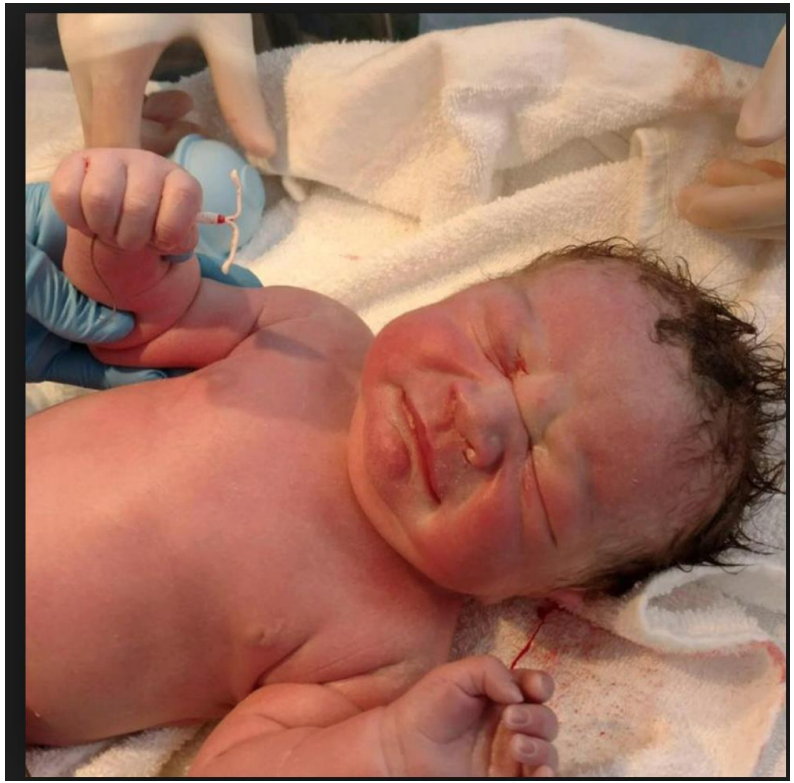
Table 4. Excluding pregnancy before inserting an IUC

You can be reasonably certain a woman is not pregnant if she has no signs or symptoms of pregnancy and meets any of the following criteria[120]:

1. Is $\leq$ 7 days after the start of a normal menses
2. Has not been sexually active since her last normal menses
3. Is consistently and correctly using an effective method of contraception
4. Is $\leq$ 7 days of a spontaneous or induced first or second trimester abortion
5. Is within 4 weeks postpartum
6. Is fully or nearly fully breastfeeding,* amenorrheic, and $<$ 6 months postpartum

If any of the above criteria are met, a pregnancy test is not required. In most other cases, a negative high sensitivity urine pregnancy test will reasonably exclude pregnancy.

Myths and Misperceptions



Myths and Misperceptions

1. IUCs are not suitable for adolescents or nulliparous women

Fact

- nulliparous women and adolescents who desire a highly effective method of contraception should be offered an IUC
- Numerous additional non-contraceptive benefits including:
    - Reductions in menstrual blood loss of 74-98%
    - Treatment for Endometriosis and Adenomyosis

Myths and Misperceptions

2. IUCs increase the risk of ectopic pregnancy

Fact

- IUCs do not increase the risk of ectopic pregnancy
- Less than half the risk of an ectopic than women who are not using contraception

If they conceive with a IUC in place the diagnosis of ectopic should be excluded

Myths and Misperceptions

3. IUCs increase the risk of infertility

Fact

- IUCs do not increase the risk of infertility
- Women are able to conceive at the same rate as women who have never used an IUC

Myths and Misperceptions

4. IUCs increase the long-term risk of PID

Fact

- the incidence of PID among women using an IUC is less than 2 episodes per 1000 similar to that of the general population
- Pre-screening does not reduce the risk of post insertion infection
- The risk of PID is highest in the first 20 days post insertion
- Infection is related to the insertion process

Myths and Misperceptions

5. IUCs are not effective contraceptives

Fact

- IUCs are the most effective method of reversible contraception available in Canada
  - effectiveness is not dependent on the user
  - Low failure rates

    As effective as tubal ligation

Table 2. Rate of pregnancy during the first year of intrauterine contraceptive use (per 100 women-years)

Intrauterine contraceptives	Perfect failure rate	Typical failure rate	Overall failure rate	Rate of ectopic pregnancy
Copper IUD	0.6*	0.8*	1.26† 0.52‡	0.25† 0.08‡
LNG-IUS 52 mg	0.2*	0.2*	0.09† 0.06‡	0.02† 0.02‡
LNG-IUS 13.5[16] mg			0.4§	0.1§

IUD: intrauterine device; LNG-IUS: levonorgestrel-releasing intrauterine system.

*Cu-T 380[8].

†Cu-T 200[10].

‡Pearl indices are calculated over the 5-year study.[11]

§LNG-IUS 52 mg and > 30 types of Cu-IUD (< 300 mm and ≥ 300 mm).[11]

Myths and Misperceptions

6. An IUC needs to be removed to treat an STI or PID

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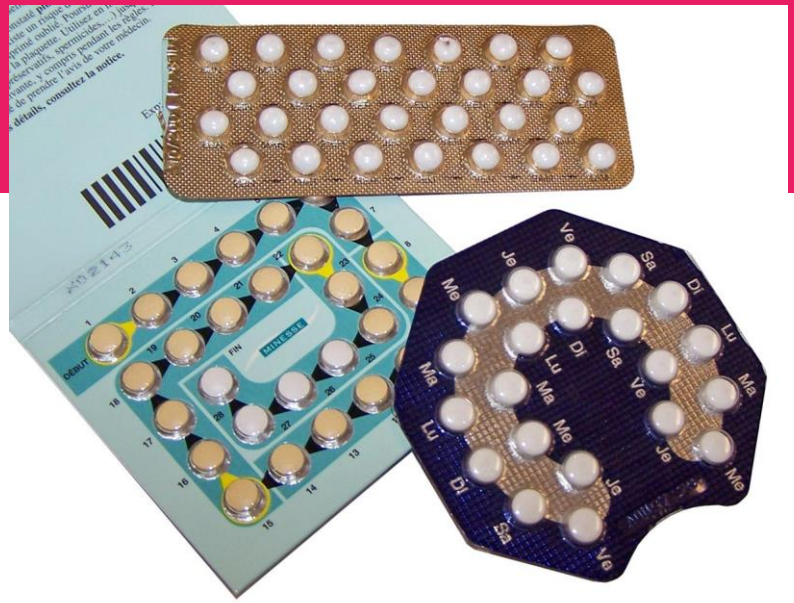
Fact

- The IUC can remain in place and the women should be treated with appropriate antibiotics
- In the case of PID it is not necessary to remove the IUC unless there is no clinical improvement after 48-72 hours of appropriate antibiotic
  - If the women requests removal it should be done after antibiotics have been initiated to avoid potential bacterial spread

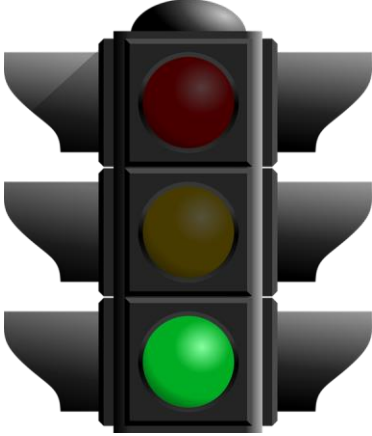
Combined Hormonal Contraceptives



Introduction

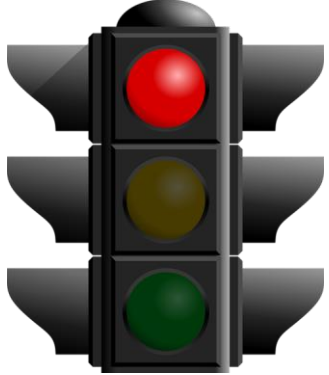
- 1.3 million women using a COC (43%)
- Perfect use failure 0.3% typical use failure 9%
- BMI is controversial
- Extended regimens may have lower failure rates
- MOA: Inhibit ovulation and impairs sperm transport

Indications



- Any women seeking a reliable, reversible coitally independent method of contraception
- No contraindications

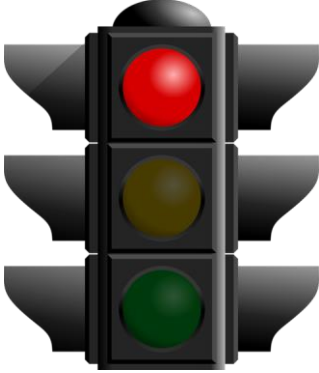
Contraindications



Category 4

- <4 weeks PP and breastfeeding
- <21 days postpartum not breastfeeding
- Smoker >35 (>15 cigarettes/day)
- Vascular disease
- Hypertension >160/100)
- Acute DVT/PE
- History of DVT/PE not receiving anticoagulant therapy with higher risk for recurrent VTE (history estrogen –associated DVT/PE, pregnancy-associated DVT/PE, idiopathic DVT/PE, known thrombophilia)
- Major surgery with prolonged immobilazation
- Known thrombophylia
- Current and or history of ischemic heart disease
- History of stroke
- Complicated valvular disease
- SLE with positive antiphospholipid antibodies
- Migraines with aura
- Post partum cardiomyopathy with mod-severe imparied cardiac function
- Postpartum cardiomyopathy with normal/midly impaired cardiac function <6 months
- Current breast cancer severe decompensated cirrhosishepatocellular adenoma
- Malignant hepatoma
- Complicated solid organ transplant

Contraindications



Category 3

- 4-6 weeks post partum breast feeding
- 3-6 weeks not breast with other risks for VTE
- DVT/PE on established anticoagulation therapy with no other risk factors
- DVT/PE with lower risk of recurrent DVT/PE (no other risk factors)
- MS with prolonged immobility
- Smoker aged >35 (<15 cigarettes a day)
- CVD
- Adequately controlled hypertension
- Hypertension (systolic 140-159 diastolic 90-99)
- Peripartum cardiomyopathy with normal/mildly impaired cardiac function > 6 months
- History of breast cancer and no evidence of disease for 5 years
- Symptomatic gallbladder disease
- Acute or flare viral hepatitis
- Diabetes with nephropathy/retinopathy/neuropathy, other vascular disease or diabetes >20years duration
- Past COC related cholestasis
- History of malabsorptive bariatric procedures (roux-en-y gastric bypass)
- Certain anticonvulsant use (phenytoin, topiramate, lamotrigine)
- Rifampicin or rifabutin therapy
- FPV ART therapy

Myths and Misperceptions

Myths and Misperceptions

1. COC users should take periodic “pill breaks”

Fact

- Completely unnecessary.
- Places women at risk for unintended pregnancy and cycle irregularity
- Safe to continue till contraception is no longer required

Myths and Misperceptions

2. COC has a negative effect on future fertility

Fact

- Fertility is quickly restored within 1-3 months to a woman's baseline fertility once the pill is discontinued
- 1 year pregnancy rates 79-96%
- Longer term pill use (>2 years) is associated with higher pregnancy rates

Myths and Misperceptions

3. The COC causes birth defects if a woman becomes pregnant while taking it

Fact

- There is no evidence that COCs cause birth defects

Myths and Misperceptions

4. The COC must be stopped in all women over 35

– – –

Fact

- healthy non-smoking women may continue to use the COC provided they have no contraindications
- Limited evidence in women over 45
- Contraindicated in women over the age of 35 who smoke >15 cigarettes/day

Myths and Misperceptions

5. The COC causes acne

Fact

- acne improves in most women due to a decrease in circulating free androgens
- Pills that contain drospirenone or cyproterone acetate exhibit direct antiandrogenic effect
- (***Diane 35)*** cyproterone acetate and EE approved for treatment of moderate to severe acne and hirsutism also a contraceptive

Myths and Misperceptions

6. The COC causes cancer

Fact

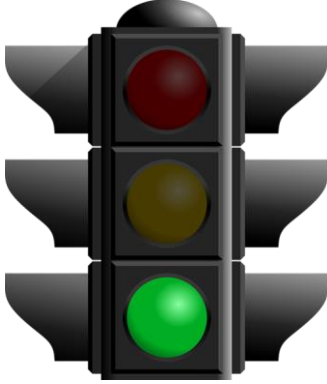
- The combined relative risk of cancer of the uterus, ovary and cervix is decreased in women who have used the pill compared to those that have never used it
- The risk of endometrial cancer is reduced by 50%
- Lifetime reduction in ovarian cancer risk of 50% for a woman taking the OCP for more than 10 years
- May be a protective effect in colorectal cancer
- Association between COC use and cervical cancer but causation has not been demonstrated

Injectable Progestin: DMPA (Depo-Provera)

Introduction

- Highly effective method of contraception
- Used by 2% of Canadian women who use contraception
- Highest in 20-29 year olds
- Available in 150mg/ml given as a IM injection every 12 weeks
- Perfect use failure rate of 0.2% and typical failure rate of 6%
- Works by suppressing ovulation, increases cervical mucous and induces endometrial atrophy

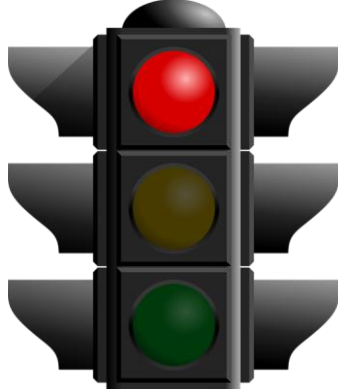
Indications



Considered by any woman seeking a reliable, reversible, discrete and coitally independent method of contraception

- Women with known contraindications or sensitivity to estrogen
- Women over the age of 35 who smoke
- Women with migraine headaches
- Women who are breastfeeding
- Women with endometriosis
- Women taking anticonvulsant medications
- Women who require menstrual suppression
- Women with heavy menstrual bleeding, anemia or dysmenorrhea

Contraindications



Category 4

- Current diagnosis of breast cancer

Category 3

- History of breast cancer and no evidence of current disease for 5 years
- Unexplained vaginal bleeding
- Severe decompensated cirrhosis
- Benign hepatocellular adenoma or malignant hepatoma

Myths and Misperceptions

1. DMPA administered inadvertently during pregnancy is associated with birth defects

Fact

- No evidence that fetuses exposed to DMPA in utero are at increased risk of congenital anomalies

Myths and Misperceptions

2. All DMPA users will gain weight

– – –

Fact

- Weight gain associated with DMPA due to appetite stimulation and mild anabolic effect
- 40% will discontinue due to weight gain
- Mean weight gain of 2kg up to 12 months
- Adolescents who experience 5% weight gain after 6 months of DMPA use may be at risk of continued excessive weight gain.

Myths and Misperceptions

3. DMPA should not be given to breastfeeding women

– – –

Fact

- Can be used safely by most breastfeeding women
- Studies show little to no effect on breast milk production or on infant development
  - Women at risk for breast feeding difficulties (poor lactation history, perinatal complications, maternal BMI>30 and neonatal complications) may be more vulnerable to progestin-only contraceptives on breast milk supply

Myths and Misperceptions

4. DMPA causes cancer

Fact

- Decreased risk of ovarian and endometrial cancer
- No increase risk of breast cancer

Myths and Misperceptions

5. DMPA increases the risk of osteoporosis and fractures

Fact

- Transient and reversible decrease of BMD
- Greatest loss during the first 1-2 years then stabilizes
- Never below 1 standard deviation of normal levels
- Similar to BMD reduction during pregnancy and breast feeding
- No evidence that DMPA causes osteoporosis or increases the risk of fracture

Myths and Misperceptions

6. Depression is a contraindication to DMPA

Fact

- Mood changes are reported and may lead to discontinuation
- No evidence that DMPA leads to an increase in depressive symptoms even in the post partum period
- Depressive disorder is not a contraindication however be cautious in untreted vulnerable populations


QUESTIONS

References

1. SOGC Clinical Practice Guidelines: Canadian Contraception Consensus (Part 3 of 4): Chapter 7 Intrauterine Contraception
2. SOGC Clinical Practice Guidelines: Canadian Contraception Consensus (Part 3 of 4): Chapter 8 Progestin only contraception
3. SOGC Clinical Practice Guidelines: Canadian Contraception Consensus (Part 4 of 4) Chapter 9: Combined Hormonal Contraception

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Selling your idea
thank you
danke
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