Intrauterine Contraceptive Devices

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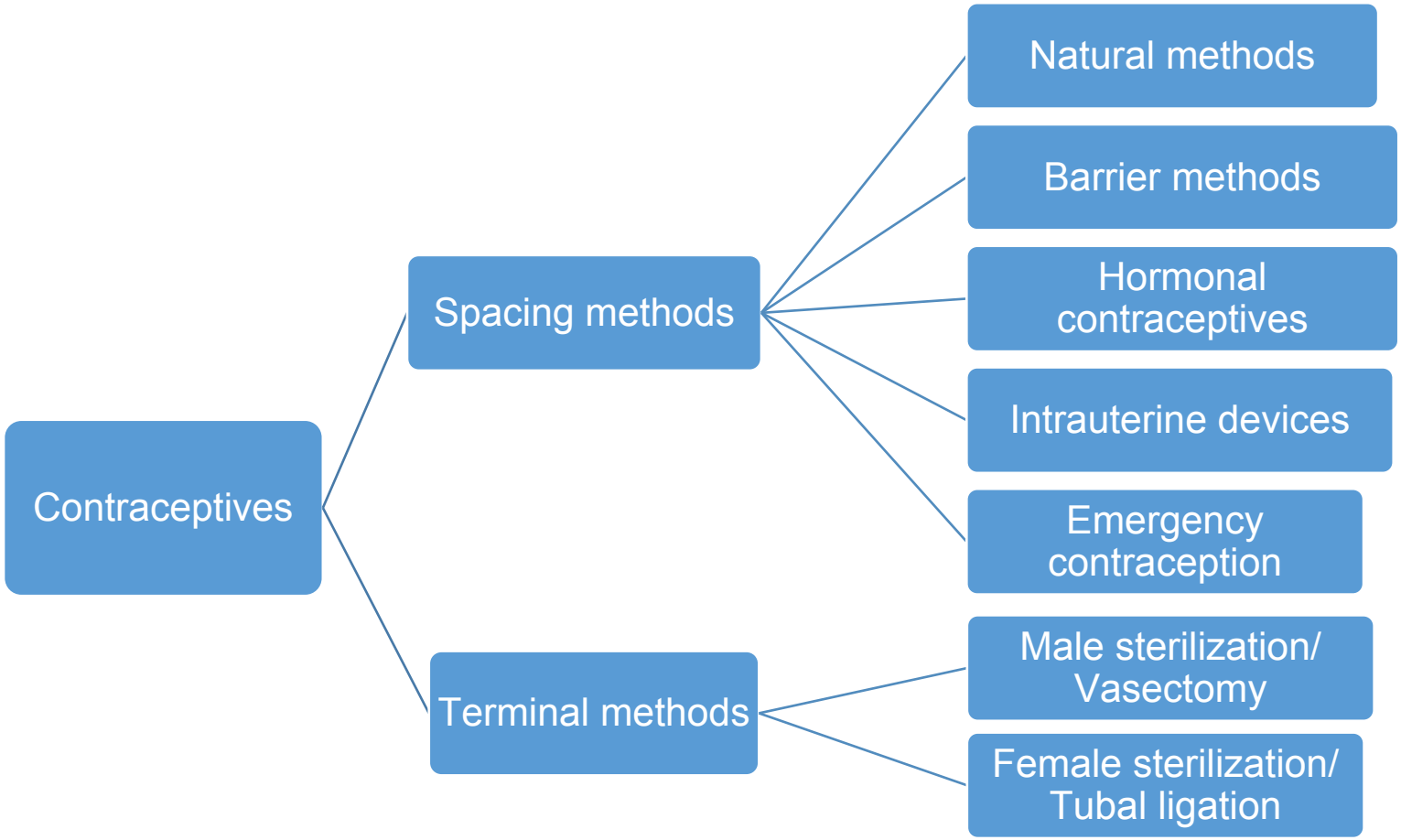
Outline

- Recap:
  - Definition of contraception
  - Classification of Contraceptives
  - Choosing a Method of contraception
- IUCDS
  - Types of IUCDs
  - Mode(s) Of Action
  - Advantages/Benefits
  - Who can/cannot use IUCDs…MEC criteria
  - Insertion
  - Removal
  - Side effects/Complications and their management

Definition

- Contraception is the use of various devices, drugs, agents, sexual practices, or surgical procedures to prevent conception or pregnancy

Classification of contraceptives



Intrauterine contraceptive devices

- One of the highly effective **long-acting reversible contraceptive** (LARCs) methods
- Efficacy as high as that of implants and sterilization
- Several terms are used to describe intrauterine contraceptive devices:
  - intrauterine device (IUD)
  - intrauterine contraceptive (IUC)
  - intrauterine system (IUS)
  - Intrauterine contraceptive device (IUCD)
- Types:
  - Copper releasing
  - Hormone
  - Inert

Copper IUCDs

Mode Of Action

- Releases copper.
- Copper:
  - Causes changes in cervical mucus that inhibit sperm transport
  - Is thought to be spermicidal
  - Inhibits implantation by causing chronic inflammatory changes and thinning of the endometrium
  - Is thought to be ovicidal

Types of copper iucds

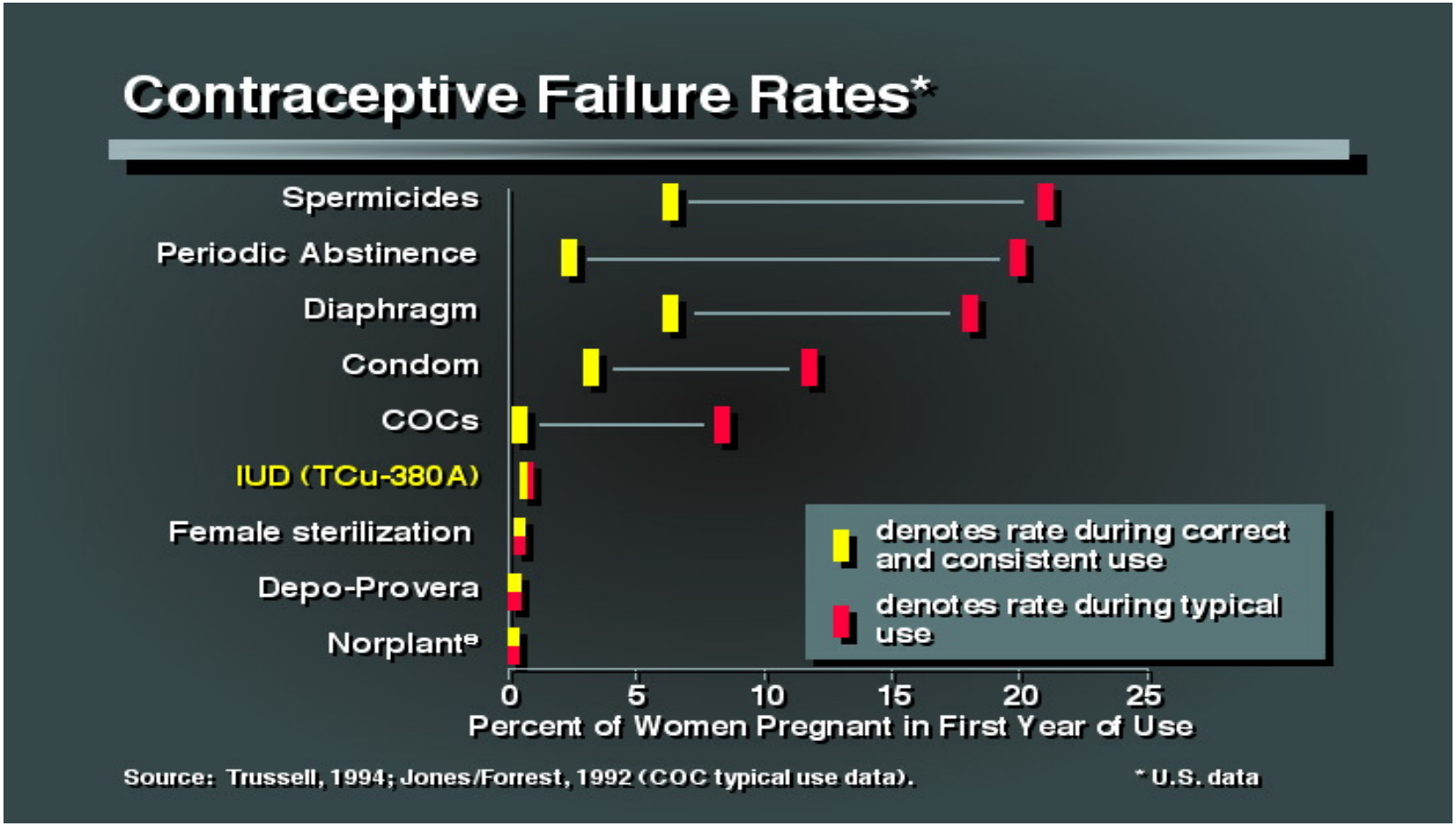
Device	Maximum duration of effectiveness
Copper T 380A	10- 12years
Copper T380S	8
Copper T200	8
Gynefix	8
NOVA T	5
Multiload 375	5
Multiload 250	3

Copper IUDs

Efficacy

- The probability of pregnancy in the first year
  - 0.6% with perfect use
  - 0.5- 0.8% with typical use
- After **prolonged continuous use, cumulative pregnancy rate rises to:**
  - 1.6% at seven years
  - 2.2 % at 8 and 12 years
- Overall, the failure rate is <1 per 100 women per year

Contraceptive failure rates



Advantages and benefits of IUCDs

Contraceptive Benefits

- Highly effective and safe
- Effective immediately
- Long acting
- Cost effective
- Immediate return to fertility upon removal

Non-contraceptive benefits

- Do not interfere with intercourse
- Safe during breastfeeding
- Do not interfere with menses
- Reduction in dysmenorhoea, menorrhagia…medicated only
- No systemic effects

Who can/cannot use IUCD?

Recap WHO MEC Criteria

WHO Medical Eligibility Criteria for Contraceptive Use

Category	Description	When clinical judgment is available	When clinical judgment is limited
1	No restriction for use	Use the method under any circumstances	Use the method
2	Benefits generally outweigh risks	Generally use the method	
3	Risks generally outweigh benefits	Use of method not usually recommended, unless other methods are not available/acceptable	Do not use the method
4	Unacceptable health risk	Method not to be used	

Source: WHO, 2004.

Women who can use IUCD

MEC1: No restriction

- Any age above 20years
- Breastfeeding women more than 4 weeks
- Hypertension
- DVT/PE
- SLE
- AUB
- Smoking
- Uncomplicated heart disease
- Liver disease/tumours/hepatitis
- Migraine headaches
- Anaemia
- Breast cancer/family history
- Epilepsy
- Thyroid disorders
- obesity

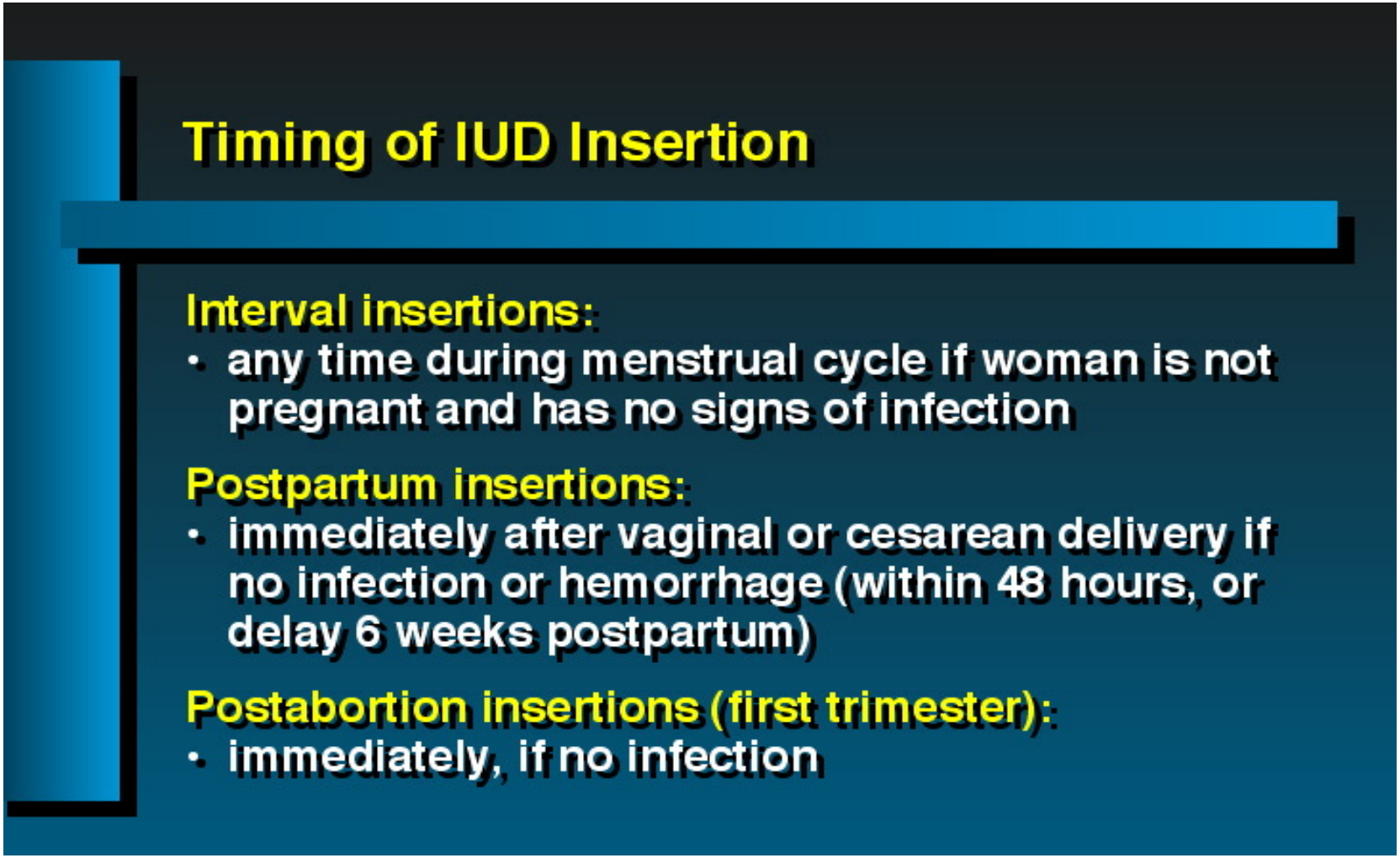
MEC 2: use with caution

- Nulliparity/age below 20years
- Past PID
- Increased risk of HIV/STIs
- HIV stable on HAART
- Endometriosis/dysmenorrhea
- Women with complicated valvular heart

Women who cannot use IUCD(MEC3/4)

- Women who are pregnant
- Between 48hrs and 4 weeks after delivery
- Puerperal sepsis/post septic abortion
- Unexplained vaginal bleeding
- GTD
- Pelvic cancer
- Fibroids distorting the endometrial cavity
- Congenital uterine/cervical anomalies
- Current PID/cervicitis
- High individual likelihood of exposure to gonorrhea/Chlamydia

IUCD insertion



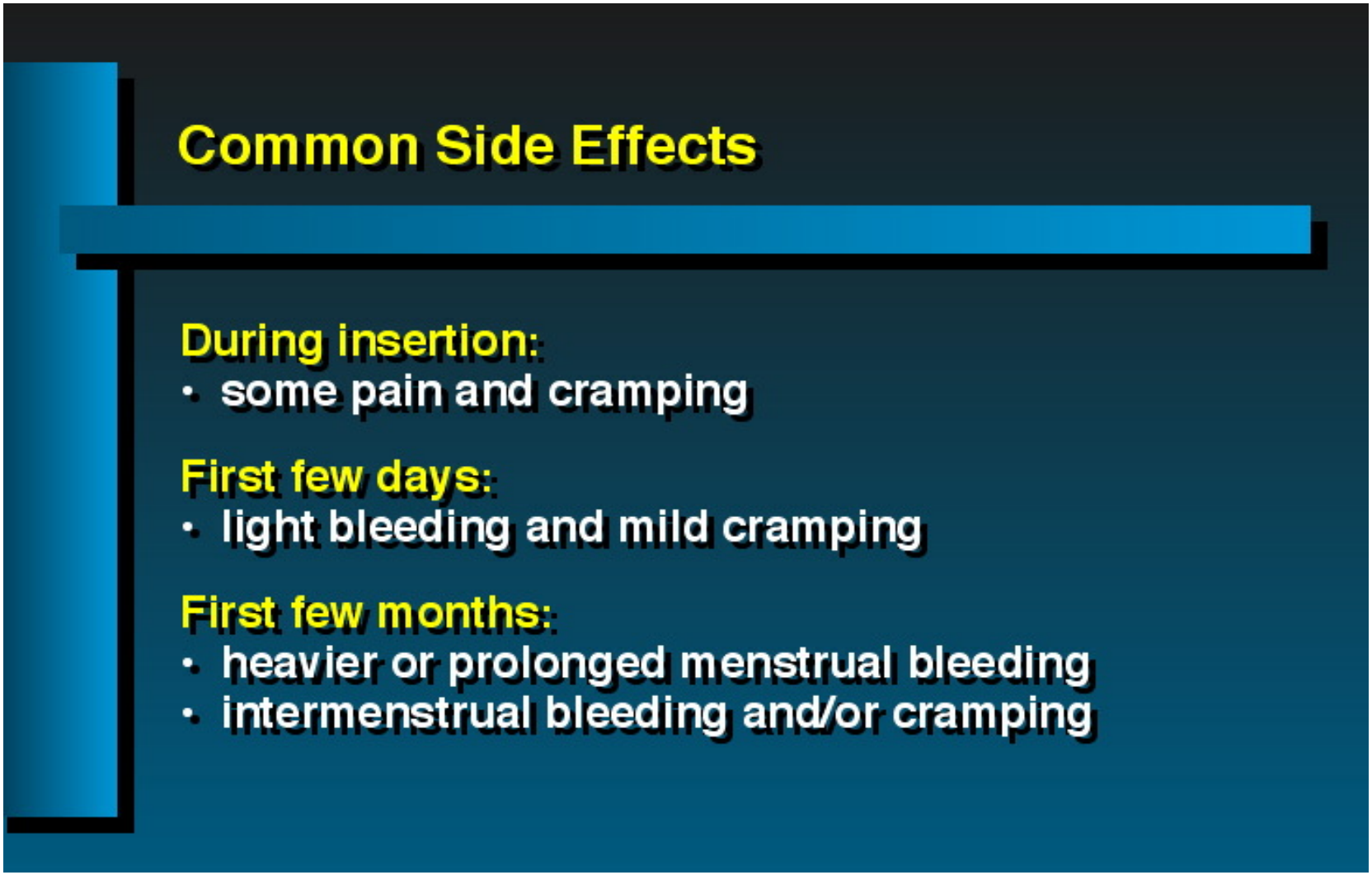
IUCD Insertion videos

- https://extranet.who.int/rhl/resources/videos/insertion-technique-copper-t380a-iud
- https://www.youtube.com/watch?v=TAmL4WN3P54
- https://www.youtube.com/watch?v=aVZoH0Pda-4
- https://www.youtube.com/watch?v=X3Ge3FCEfww
- https://www.youtube.com/watch?v=tvIoM8imf40

Insertion procedure

- Greet the patient
- Explain the procedure, get verbal consent
- Empty bladder
- Ask the patient to lie supine/low lithotomy position
- Scrub, wear sterile gloves
- Disinfect vagina, do a vaginal examination: inspection, bimanual
- Introduce speculum, disinfect cervix under direct vision
- Stabilize the uterus by grasping the anterior lip of cervix by tenaculum
- Sound the uterus to determine size, position
- Insert iud
- Cut strings ~2cm
- Remove the speculum

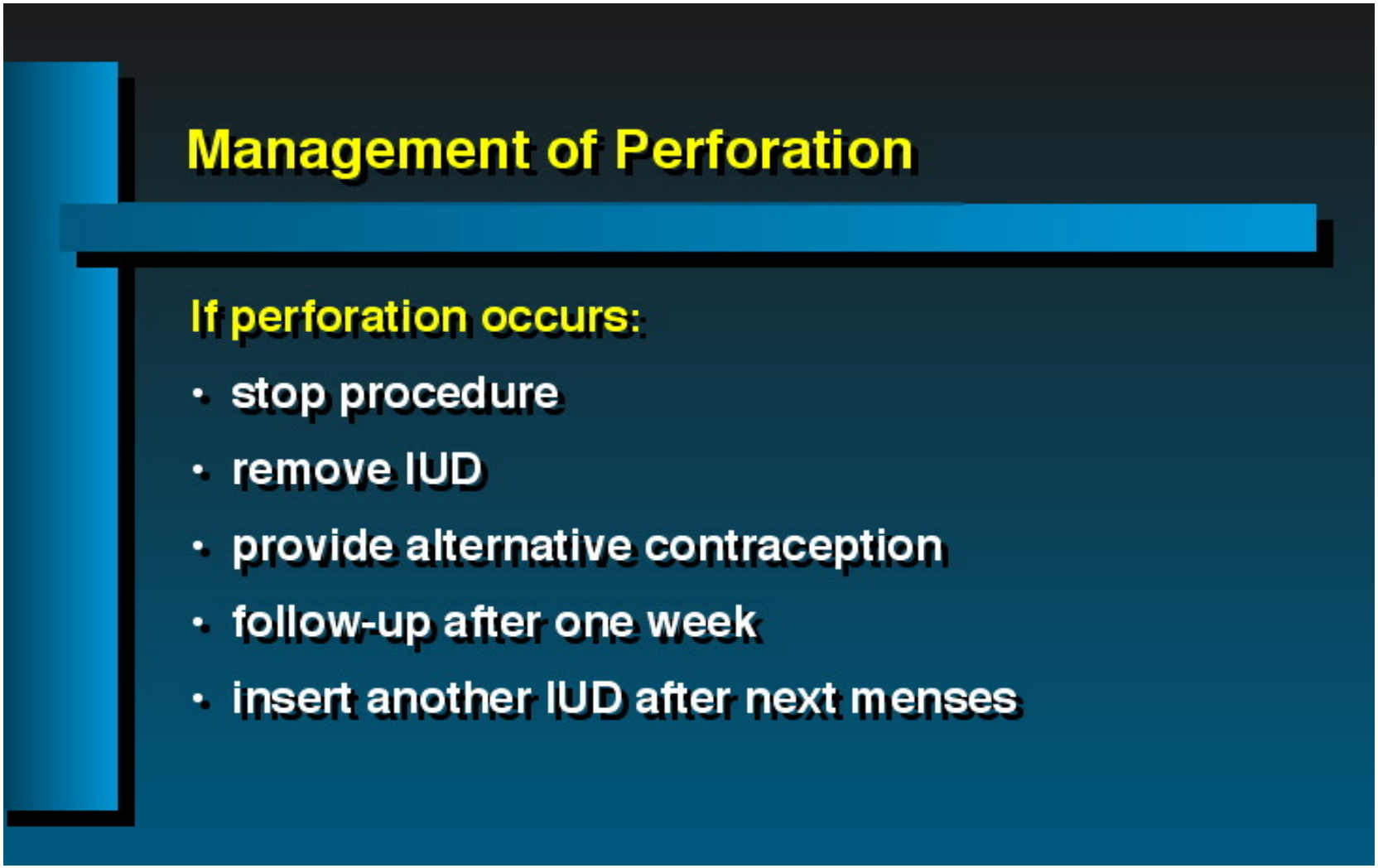
Common side effects



Possible complications

- Uterine perforation (rare 1:1000 insertions)
- Increases risk of pelvic inflammatory disease **in high risk patients**
- Missing strings
- Expulsion
- Pregnancy with IUCD

Management of complications



Management of Cramping

Mild:

- recommend ibuprofen or other pain reliever

Severe or prolonged:

- examine for partial expulsion, perforated uterus or PID
- remove IUD if cramping is unacceptable to client

Management of Heavy Bleeding

If lasting more than 3 months:

- examine for infection or tumors
- check for signs of anemia; if present, recommend iron tablets and iron-rich foods
- ibuprofen may reduce bleeding
- remove IUD if health risk or unacceptable to client

Management of Missing Strings

- Determine risk of pregnancy
- Perform pelvic exam; probe for strings in cervical canal
- Give choice of another contraceptive method
- Tell client to check for strings after next menses

Insert another IUD if expulsion is confirmed and:

- woman is not pregnant
- there is no damage from perforation

Management of Pregnancy

Ask about exposure and signs/symptoms of pregnancy and perform pregnancy test

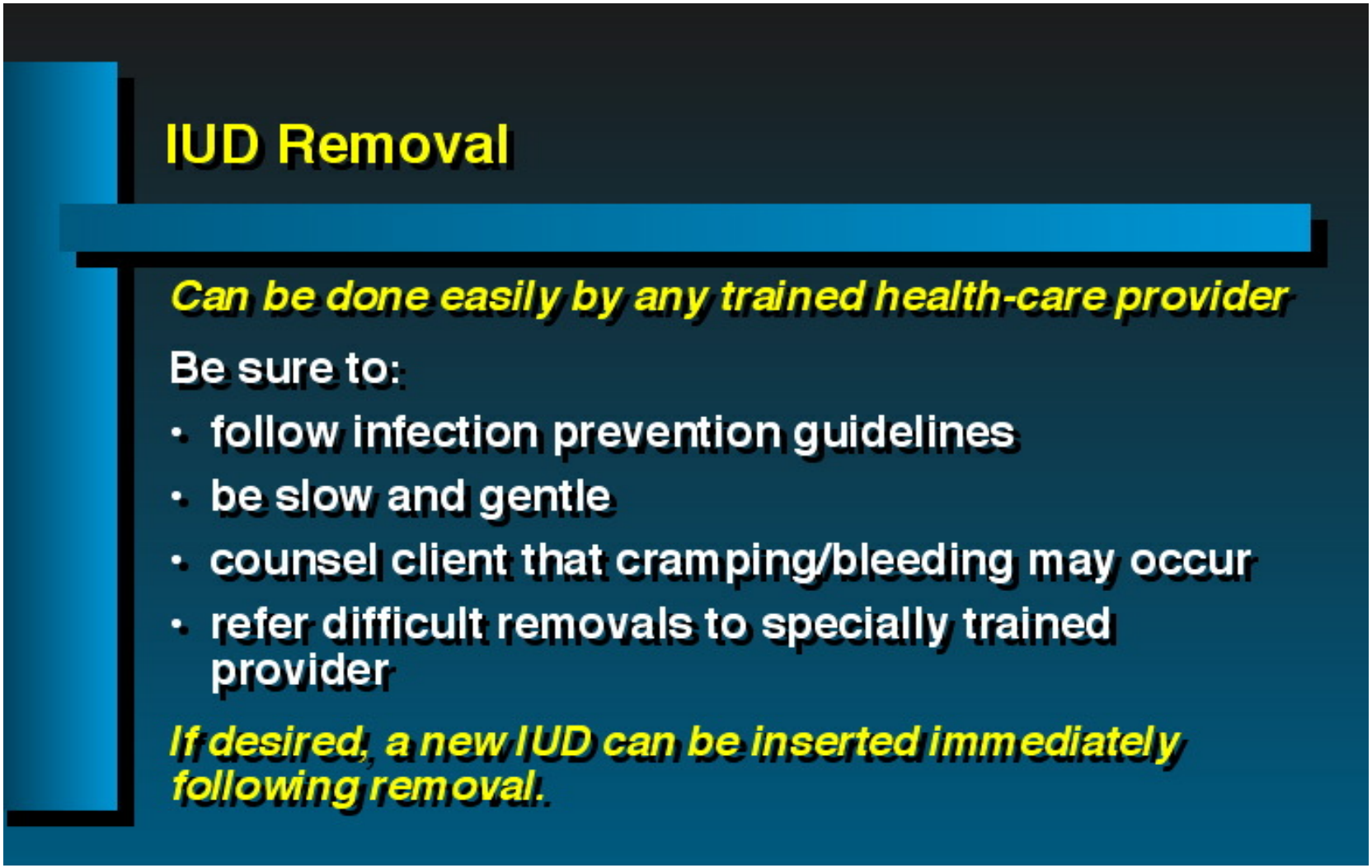
If pregnant:

- examine for possible ectopic pregnancy
- if possible, remove IUD
- if not possible, counsel client on risks of pregnancy with IUD in place

Management of STI/PID

- Administer appropriate antibiotics
- remove IUD

IUCD Removal



Hormone releasing IUCDs

- They are also called intra-uterine systems (IUS)
- They release **levornogestrel**, a progesterone hormone,
- Two types of hormonal-releasing IUDs are available:
  - Mirena®: contains 52mg of levornogestrel
  - Skyla: contains 13.5 mg of levornogestrel

Types of Hormone releasing IUCDs

Type	Duration of effectiveness
Mirena	5years
Lingus	5years
Skyla	3 years

Mechanism of Action

- Release a progestin, levonorgestrel.
- Levonorgestrel:
  - suppresses ovulation
  - thickens cervical mucus, prevents sperm penetration
  - makes the endometrium thin, hence unsuitable for implantation

Who cannot use medicated iucd

- Acute DVT/Pulmonary Embolus
- Severe liver cirrhosis/Hepatocellular carcinoma
- Breast cancer
- SLE
- Migraine headaches with aura
- Breastfeeding women before 4 weeks postpartum