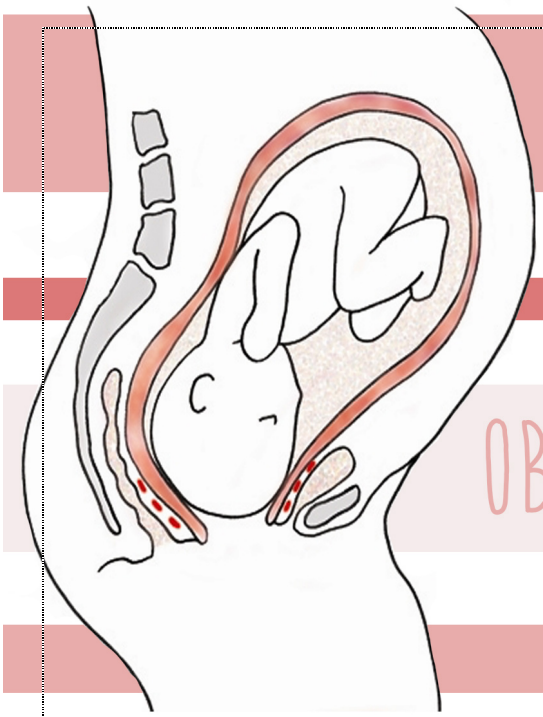

OBSTETRICS AND GYNECOLOGY

(19) Genital Prolapse

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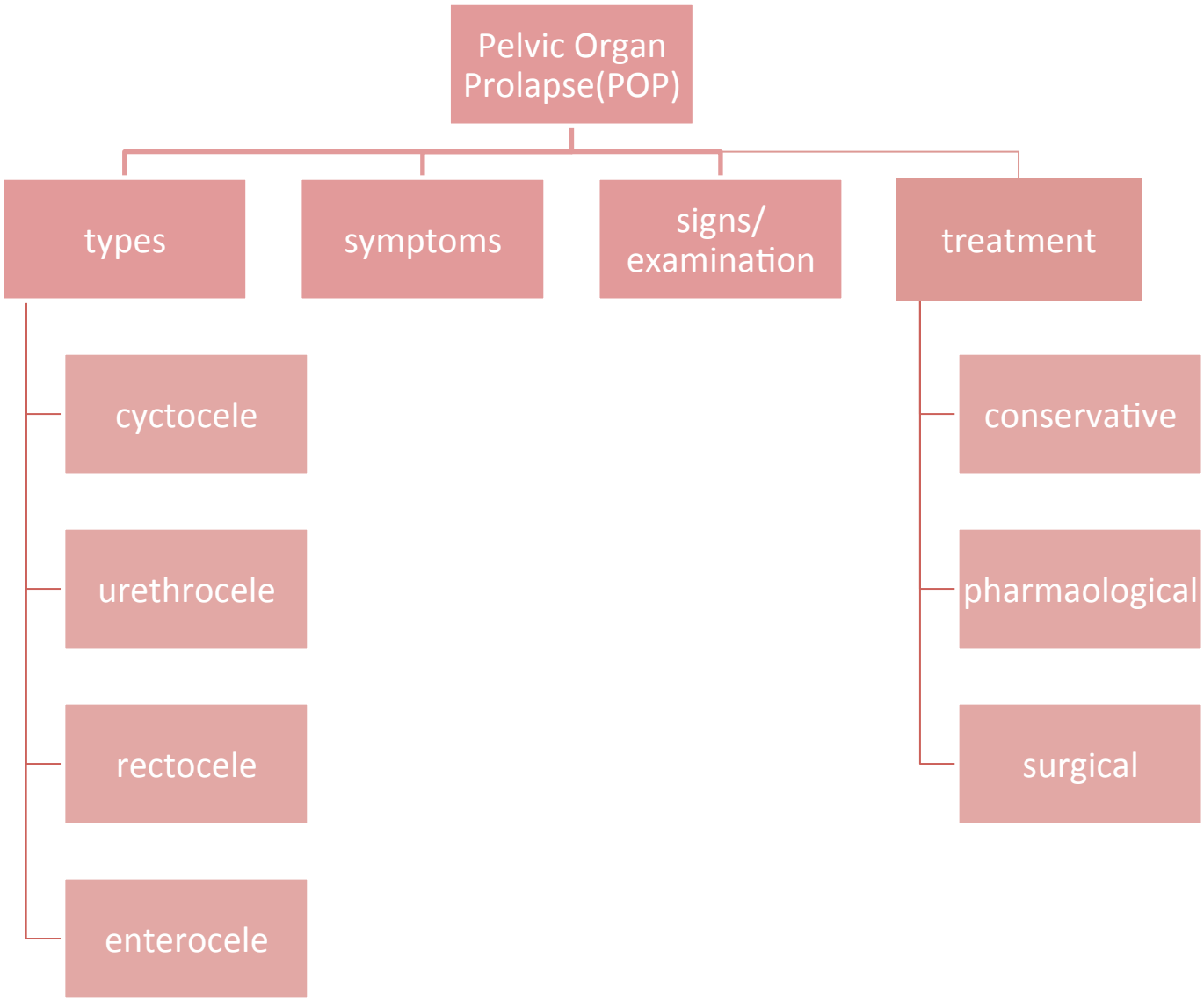
Revised by: Abrar AlFaifi

Doctor's note Team's note Not important Important 431 teamwork

Objectives:


Pelvic Organ Prolapse(POP)
types
symptoms
signs/ examination
treatment
cyctocele
urethrocele
rectocele
enterocele
conservative
pharmaological
surgical

Anatomy and causes of POP

♣ The pelvic floor, closing the outlet of the pelvis is made up of a number of muscular and facial structures → the most important of which is the **LEVATOR ANI.**

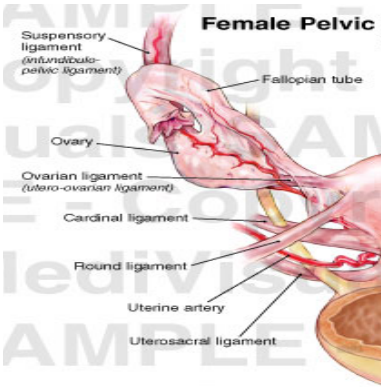
♣ These structures are pierced by the RECTUM, VAGINA & URETHRA. → passing through the exterior of the body.

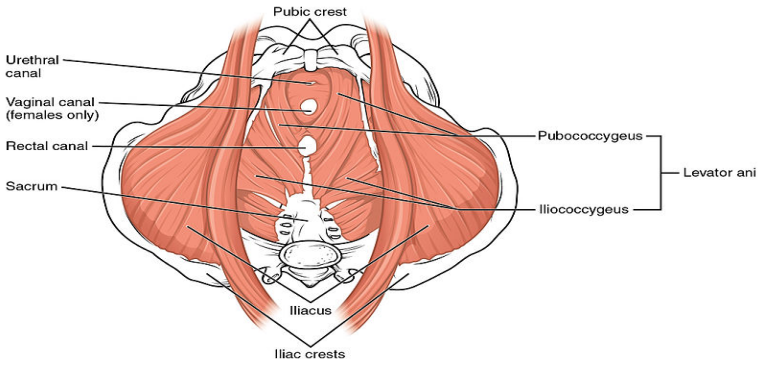
♣ These structures are supported in place by:

- ligaments (cardinal and uterosacral ligaments).
- condensation of fascia (endopelvic fascia).

Anatomy. The pelvic floor is made up of the diaphragm and perineal membrane.

- **Pelvic diaphragm.** The pelvic diaphragm consists of the levator ani and coccygeus muscles. The levator ani consists of 3 muscles: puborectalis, pubococcygeus, and ileococcygeus.
- **Perineal membrane.** This is a triangular sheet of dense fibromuscular tissue that spans the anterior half of the pelvic outlet. The vagina and the urethra pass through the perineal membrane (urogenital diaphragm).
- **Uterine support.** The main structures that support the uterus are the cardinal ligaments, the uterosacral ligaments, and the endopelvic fascia.





Pelvic diaphragm (superior view)

A relaxed vaginal outlet is usually a sequel to more → **OVERSTRETCHING** of the perineal supporting tissues as a result of previous parturition (childbirth).

➢ **Muscular atony** and loss of elastic tissue in later life → **lack of hormone** (aging and menopause).

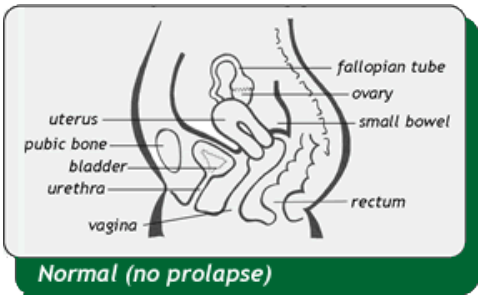
➢ **DENERVATION** due to damage to perineal or pelvic nerves → delivery and pelvic surgery - Chronic increase in intra-abdominal pressure - constipation – chronic cough and obesity.

Types of genital prolapse

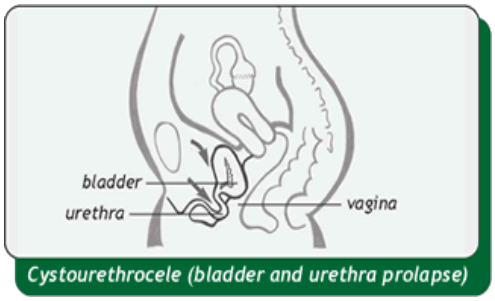
PELVIC ORGAN PROLAPSE (POP)

1. **CYSTOCELE** (Anterior vaginal prolapse, usually combined with urethrocele) -most common-
    a. = As a result of defect in the pubo-cervical facial plane which support the bladder anteriorly
    b. = it tends to permit the bladder to sag down below and beyond the uterus
2. **URETHROCELE** (Lower vaginal prolapse)
    a. = when the defective facie involves the urethra
3. **RECTOCELE** (Lower vaginal prolapse)
    a. = due to attenuation in the pararectal fascia → permits the rectum to bulge through
4. **ENTEROCELE** (Lower vaginal prolapse)
    a. =Peritoneal hernial sac along the anterior surface of the rectum
    b. = Often contains loops of small intestine
5. Uterine Prolapse (Apical vaginal prolapse)

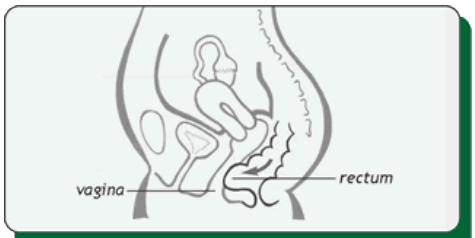
Weakening of the cardinal and uterosacral ligaments



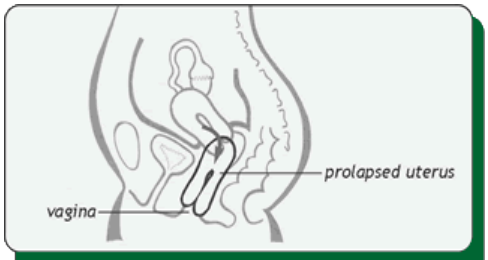
Normal (no prolapse)



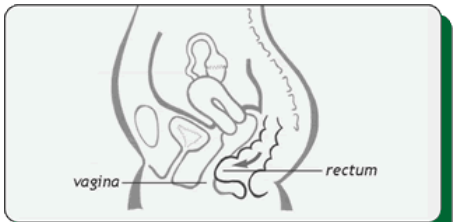
Cystourethrocele (bladder and urethra prolapse)



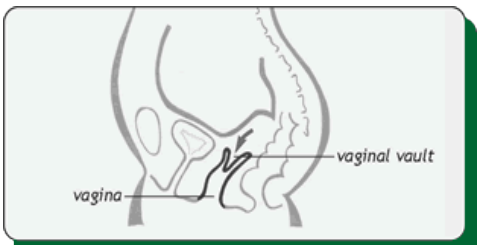
Rectocele (prolapse of the rectum into the vaginal wall)



Uterine prolapse



Rectocele (prolapse of the rectum into the vaginal wall)



Vaginal vault prolapse

Diagnosis of POP

- **SYMPTOMS:**
- Often symptomless (don't need t treat)
- Symptoms are not specific to the type of the prolapse and they are divided into anatomical and functional symptoms.
- symptoms :
- Pressure and heaviness in the vaginal region
- Sensation of "everything dropping out"
- Bearing down discomfort in the lower abdomen
- Backache

- **Other associated problems:**

- Fecal incontinence (e.g. with complete perineal laceration) and often with loose of stools.
- Difficulty in emptying the bladder with marked cystocele bladder is kinking the urethra so patient has to manually press on the bladder to urinate
- Cystitis → due to residual urine

  → ascending UTI

  → frequency of micturition
- Urinary incontinence → stress incontinence.
- Difficulty in defecation and constipation with rectocele

  → hemorrhoids
- Sexual problems

- **Lump/Mass protruding through →is marked prolapse, could be hematoma or abscess or collection of vaginal discharge.**

Cystocele	Rectocele
• Postmenopausal woman • Anterior vaginal wall protrusion • Urinary incontinence	• Postmenopausal woman • Posterior vaginal wall protrusion • Digitally assisted removal of stool

Signs/examination

Accurate history

- **Presence of risk factor include vaginal delivery, older women, high BMI, previous surgery for prolapse, genetic factors, white ancestry.**
- **Vaginal protrusion/bulge**
- **Sensation of vaginal pressure**

Accurate Examination

Position: Dorsal lithotomy position also in the left lateral position with with knees bent to the chest

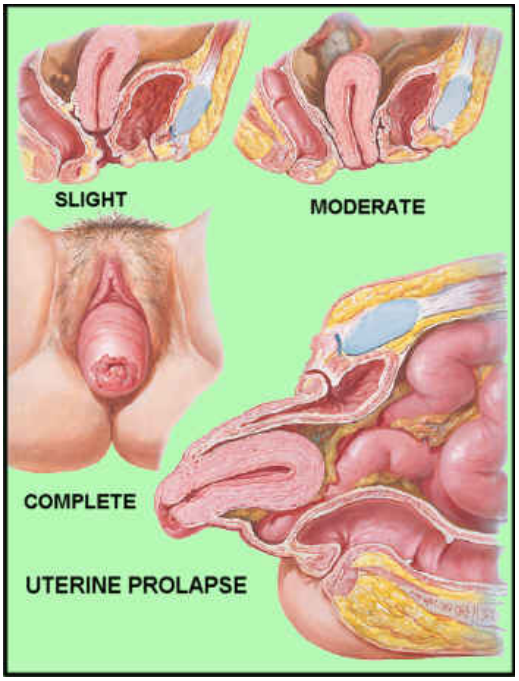
Bimanual examination, including speculum examination (use single blade or simps speculum) at rest and with straining and cough.

→ Inspection

- **Gaping introitus**
- **Perineal scars**
- **Visible cystocele and rectocele / urethral**
- **Uterine prolapse→ Cervix Ulceration (contact) =Decubitus ulcer**

→ Degree of prolapse

- **Classification by grade:**



Grade 0 no prolapse

Grade 1 above midpoint

Grade 2 below midpoint

Grade 3 beyond the introitus

Grade 4 outside the vagina

- **Another classification by dividing the vagina into upper and lower part:**

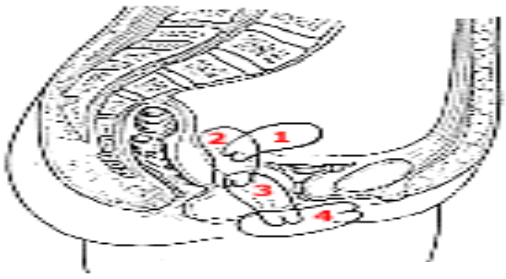
Above midpoint is 1st degree, grade 1, mild prolapse

Below midpoint is moderate, grade 2

Outside vagina is complete, grade 4

Note: grade 3 and 4 are considered complete and it patient is symptomatic at any grade you must intervene

Diagram to illustrate the degrees of prolapse to the uterus.



Anteverted by the round ligaments

1. Normal position.
2. Retroversion and first degree prolapse.
3. Retroversion and second degree prolapse-cervix protruding from vulva on straining.
4. Procidentia (complete prolapse) with retroversion, the whole uterus being outside the contour of the body.

Reference: Sir Dugald Baird, ed. Combined Textbook of Obstetric Gynaecology. ES Livingstone Ltd; 1962.

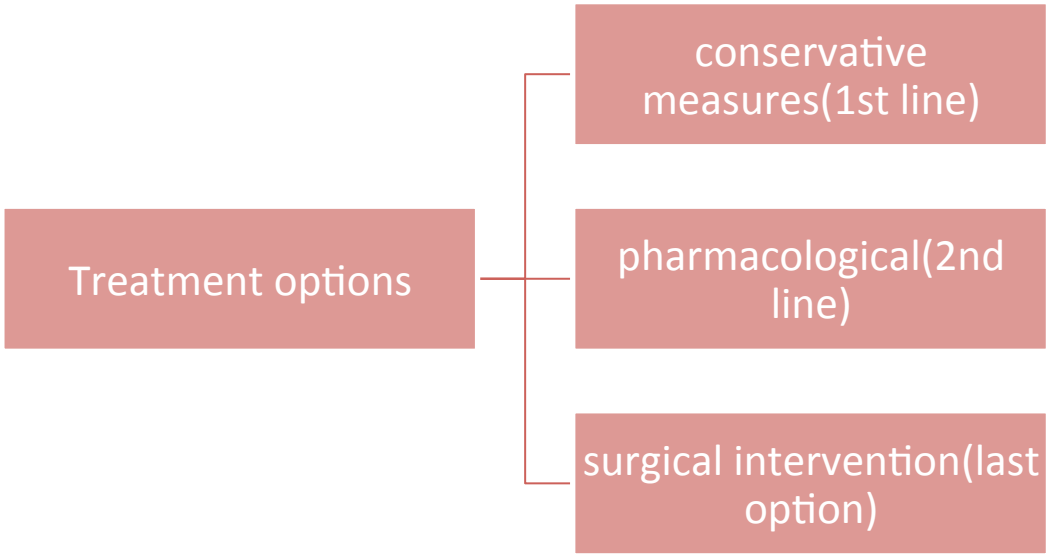
Treatment

for: 1- incontinence 2- POP

No treatment for asymptomatic patient

Objective:

- **To provide cure or improvement**
- **Treatment options, risks, benefits and outcomes should discuss.**



▪ Treatment of incontinence

1-CONSERVATIVE TREATMENT:

- **Life style interventions**
- **Physical therapy (PFMT) pelvic floor muscle training / Kegel's Exercise**
- **Bladder training**
- **Electrical stimulation**
- **Behavioural strategies**
- **Anti- incontinence devices**

2- PHARMACOLOGICAL TREATMENT:

A.Drug used for Urgency Incontinence and OAB (overactive bladder). To relax the detrusor muscle

1. Antimuscarinic (anticholinergic) agents

- Muscarinic receptors (M2 & M3) are predominant in the bladder.

- These can be blocked by anti-muscarinic which act by competing with ACH a=on the muscarinic receptors mainly during the storage phase.

e.g.

- **Oxybutinin**
- **Tolterodine**
- **Solifenacin**
- **Darifanacin**

→ **Tertiary amines**

- **Propiverine** → **Quarternary amines**

- Very good efficacy profile

- Side effects:

- **Dry mouth**
- **Constipation**
- **Blurred Vision**
- **Cardiovascular effect – palpitations / tachycardia**

-Contraindication:

- **Narrow angle glaucoma**

2. Bothulinum Toxin (BTX) botox - types A & B

- local intravesical injection

- Blocks the release of Ach from presympathetic nerve endings at the myoneuronal junction → ↓ muscle contractility

Lasts for 3 to 6 months (temporary)

B.DRUGS FOR (SUI) stress urinary incontinence: (not so many drugs are used for SUI)

1- Duloxetine (antidepressant)

= combined norepinephrine and serotonin re-uptake inhibition (SSNRI- selective serotonin norepinephrine reuptake inhibitor)

→ ↑ Sphincter muscle activity during filling phase of micturition

→ Significant ↓ in incontinence Episode frequency (IEF) >50% from baseline is improvement in quality of life

SIDE EFFECTS:

- **Nausea**
- **Others → fatigue, dry mouth, headache, dizziness**

C.ESTROGENSIC

Controversial→ little effect in the management of SUI

Treatment

3.SURGICAL TREATMENT FOR INCON.

A.SURGERY FOR SUI:

1.Intra urethral injection therapy (for young patients who can't tolerate surgery and doesn't want to affect her future deliveries)

2.Cysto-urethapexies

3.Low-tension vaginal tape (most common)

-TVT

-TOT

4.Classical sling procedures

5.Artificial sphincters

B.SURGERY FOR URGNECY INCONT. (UUI)

last option and rarely used

1.Augmentation cystoplasty

2.Auto-augmentation

3.Sacral nerve stimulation

- ## Treatment of pelvic organ prolapse (nonsurgical-surgical)

Considerations before treatment: (team431)

- Degree of prolapse
- Associated symptoms
- Age (menopausal or premenopausal)
- Future plans for reproduction

Let the patient choose, we try to treat conservatively, unless it does not work.

1-Conservative treatment:

Pelvic floor exercise (Keigel's exercise) >>> physiotherapy

Pesssaries for intravaginal support:

- Can be considered when patient is not a candidate for surgery (unfit, pregnant, post partum).
- They're good to allow cubital ulcers to heal before surgery
- Should be removed, cleaned then re-inserted every 6-12 weeks.
- If neglected, they can cause ulceration and irritation, leading to fistulas, impaction,bleeding, infection. (Source: Essentials)

2-Pharmacological treatment:

no drugs available

3- Surgery:

Surgery is "repair":

- Anterior vaginal wall repair is called: anterior repair or anterior colporrhaphy
- Posterior repair: also called posterior colporrhaphy
- Perineal repair: perineorrhaphy
- For uterine prolapse surgical repair:

- Hysterectomy + repair, if patient completed her family

- plication of fascia: Uterosacropexy, done laparoscopically (we're not expected to know all details)

- Vaginal vault repair: colpopexy

(Counsel the patient about: Recurrence rate 30 % after surgery Complications of surgery)

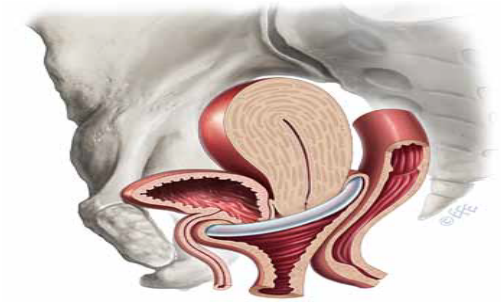
- **Mesh is not used for vaginal prolapse because of infections and erosions**
- **Hysterectomy is a possibility for old patients.**

Management. The management of pelvic relaxation includes non-surgical and surgical treatment.

- **Non-surgical.** Used when there is a minor degree of relaxation. **Kegel** exercises involve voluntary contractions of the pubococcygeus muscle. **Estrogen** replacement may be useful in postmenopausal women. **Pessaries** are objects inserted into the vagina that elevate the pelvic structures into their more normal anatomic relationships.

- **Surgical.** Used when more conservative management has failed. The **vaginal hysterectomy** repairs the uterine prolapse, the anterior vaginal repair repairs the cystocele, and the posterior vaginal repair repairs the rectocele. The **anterior and posterior colporrhaphy** uses the endopelvic fascia that supports the bladder and the rectum, and a plication of this fascia restores normal anatomy to the bladder and to the rectum.

Pessary



Hysteropexy: is used as a treatment for women with prolapse of their womb (uterus).

It is a womb-sparing procedure, as it does not involve removing the womb (hysterectomy). It is chosen by those women who for whatever reason are keen to not have their uterus removed

Summary

Levator ani is the most important muscle that support the pelvic organs.

The etiology of pelvic prolapse/relaxation is commonly related to childbirth.

Table II-2-1. Vaginal Prolapse

Anterior	Cystocele
Posterior	Rectocele
Pouch of Douglas	Enterocele

Diagnosis → through pelvic examination.

Treatment:

→ conservative (pelvic floor muscle training)…

→pharmacological (for urgency incontinence: 1-antimuscurinic 2-botox)

(for stress incontinence: Duloxetine)

→ surgical for stress incontinence, urgency incontinence and pelvic organ prolapse.

MCQ's

65-year-old woman presents to your office for evaluation of genital prolapse. She has a history of chronic hypertension well-controlled with the calcium channel blocker she has had three full term spontaneous vaginal deliveries. The last baby weighed 9lb and required forceps to deliver the head. She says she had a large tear the vagina involving the rectum during the last delivery. She has a history of chronic constipation and often uses a laxative to help her have a bowel movement. She has smoked for more than 30 years and has a smoker's cough. She entered menopause at age 52 but has never taken hormone replacement therapy .which of the following factors is least important in the subsequent development of the genital prolapse in this patient?

A-Chronic cough

B-Chronic constipation

C-Chronic hypertension

D-Child birth trauma

E-Menopause

A patient presents to your office approximately two weeks after having a total vaginal hysterectomy with anterior colporrhaphy and Burch procedure for uterine prolapse and stress urinary incontinence. She complains of a constant loss of urine throughout the day. She denies any urgency or dysuria which of the following is the most likely explanation for this complaint?

A-Failure of the procedure

B- Urinary tract infection

C- Vesicovaginal fistula

D-Diabetic neuropathy

38 year-old woman G4 P4 is undergoing evaluation for fecal incontinence. She has no diagnosed medical problems. Which of the following is the most likely cause of this patient's condition?

A- Rectal prolapse

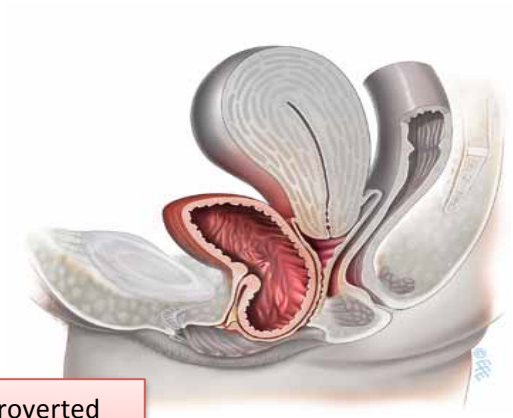
B- Diabetes

C- Obstetric trauma

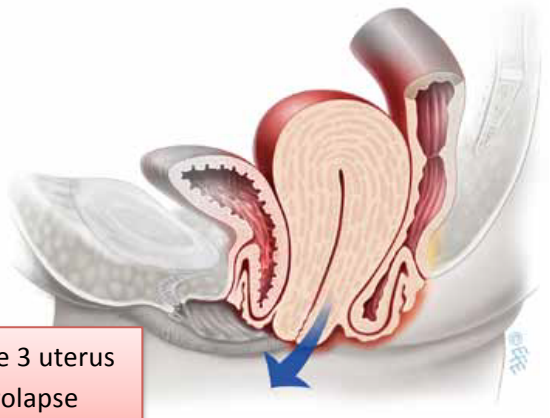
D- Presenile dementia

E- Excessive caffeine intake

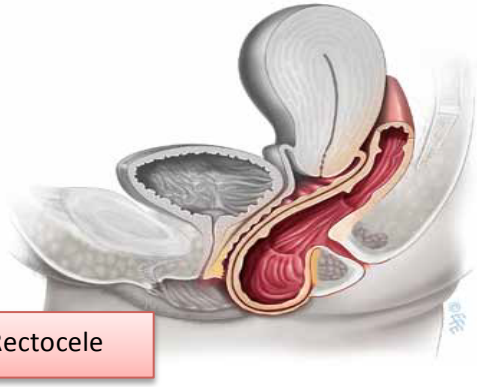
(c-c-c)



Retroverted uterus



Grade 3 uterus prolapse



Rectocele

For feedback or mistakes

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