

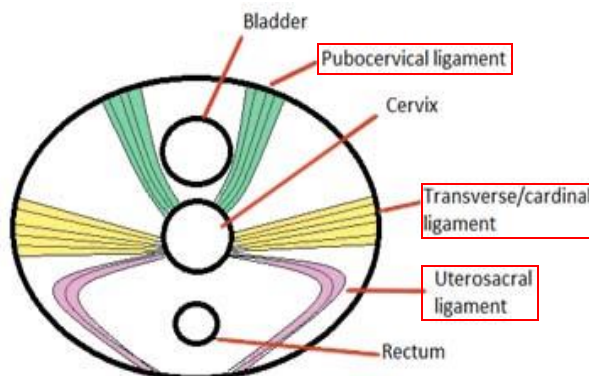


- **What is the definition of pelvic organs prolapse?**

- Downward displacement of the uterus and vagina from their normal position (associated with symptoms).

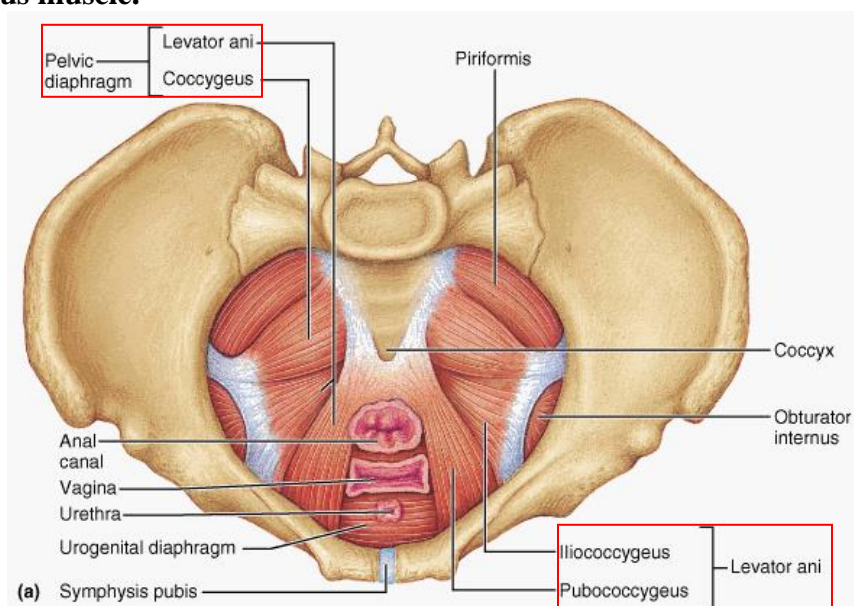
- **What are the ligaments which normally hold the uterus in its normal position?**

- **Transverse/ cardinal ligament.**
- **Pubocervical ligament:** extending from the pubis to the cervix.
- **Uterosacral ligament:** extending from the sacrum to the cervix.



- **What are the components forming the pelvic diaphragm which keeps the uterus in its position?**

- **Levator ani:** which is composed of
 - ✓ Iliococcygeus.
 - ✓ Pubococcygeus.
- **Coccygeus muscle.**

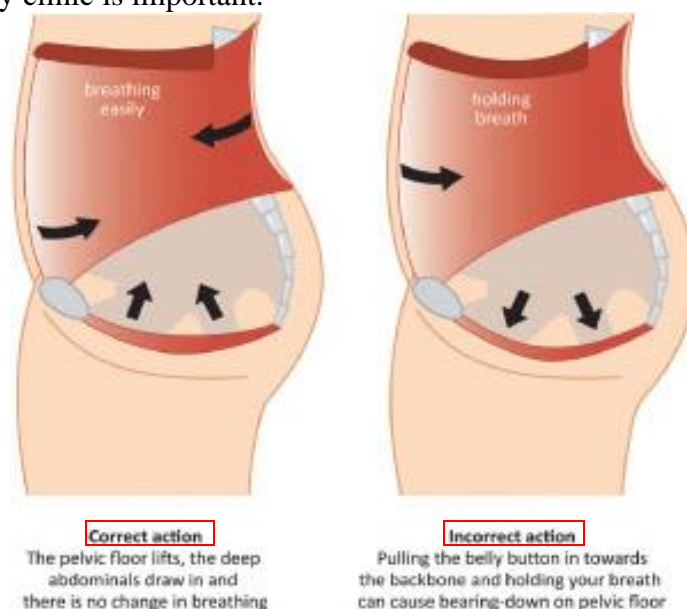


- **What weakens the structures mentioned above (ligaments and pelvic diaphragm):**

- **Multiple vaginal deliveries (the most common cause):** during which ligaments and pelvic fascia will be stretched. In addition, muscles might be torn due to increased pressure.
- **Prolonged 2nd stage of labour:** in which the internal rotation of the head of the baby compresses on ischial spines → resulting in further compression on the pudendal nerve which is innervating these structures.
- **Badly conducted vaginal delivery** (e.g. causing injury with the use of forceps).
- **Atrophy of the ligaments which especially occurs with advanced age.**
- **These structures have estrogen-dependent receptors which will be affected after menopause.**
- **Hysterectomy.**
- **Increased abdominal pressure:** most commonly with obesity where excessive fat is occupying the space of air. Other causes include chronic constipation and chronic cough (COPD).



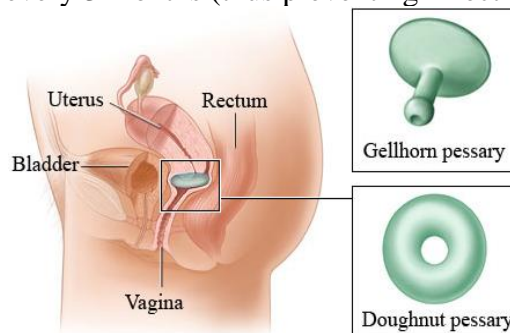
- Pelvic organs prolapse is prevalent but not in hospitals because patients usually will not present to the hospital unless symptoms appear.
- What are the symptoms of pelvic organs prolapse?
 - **A bulge protruding from the vulva.**
 - **Sliding hernia:** during prolapse, the vagina will descend pulling with it urinary bladder (anteriorly) and rectum (posteriorly). This is going to result in:
 - ✓ Residual urine: which might lead to cystitis that is characterized by frequency and urgency of urination.
 - ✓ Sense of incomplete defecation/ evacuation.
 - **The patient will suffer from sexual dysfunction.**
 - **There might also be pain which is referred to lower back especially while standing (due to the stretching of nerves: S2-S4).**
- Classification of prolapse depends on measuring the degree of descent of vagina or uterus.
- When a patient presents to your clinic with pelvic organs prolapse → your physical examination will include the following:
 - **Body Mass Index (BMI):** because as it was mentioned previously, obesity is one of the causes.
 - **Chest examination:** because infection/chronic cough increases intra-abdominal pressure.
 - **Pelvic examination:**
 - ✓ Valsalva maneuver: if prolapse is present, the bulge will become obvious.
 - ✓ Bimanual vaginal examination must be done.
 - ✓ PR-examination must also be done to make sure that the anal sphincter is not damaged.
- Management of prolapse:
 - First line: life-style modification (controlling diet to decrease weight).
 - Try to improve chest infection.
 - Control diabetes and/or hypertension (if they are present and not controlled before repairing through surgery).
 - Pelvic floor muscle exercises: at least this must be done for 6 months and frequently (everyday). You might notice that most patients will not be compliant thus follow-up in physio-therapy clinic is important.



- **Surgery (vaginal hysterectomy):**
 - ✓ Definition: it is a surgical procedure to remove the uterus through the vagina (ovaries and fallopian tubes are usually not removed).



- ✓ Vaginal hysterectomy involves a shorter time in the hospital, lower cost and faster recovery than an abdominal hysterectomy (which requires an incision in the lower abdomen).
- ✓ Why is it done?
 - ❖ Removal of large fibroids.
 - ❖ Endometriosis (tissue lining the uterus grows outside the uterus to involve ovaries, fallopian tubes or other organs). Mostly, abdominal hysterectomy is performed.
 - ❖ Gynecologic cancer: mostly, abdominal hysterectomy is performed.
 - ❖ Uterine prolapse.
- ✓ What are the complications of vaginal hysterectomy?
 - ❖ Heavy bleeding.
 - ❖ Blood clots in legs or lungs.
 - ❖ Infection.
 - ❖ Damage to surrounding organs.
 - ❖ Adverse reaction to anesthesia (usually general anesthesia).
- ✓ How is it performed?
 - ❖ You will lie on your back in a position similar to the one you are in for a Pap-test. You may have a urinary catheter inserted to empty your bladder. A member of your surgical team will clean the surgical area with a sterile solution before surgery.
 - ❖ Your surgeon makes an incision inside your vagina to get to the uterus.
 - ❖ Using long instruments, your surgeon clamps the uterine blood vessels and separates your uterus from the connective tissue, ovaries and fallopian tubes.
 - ❖ Your uterus is removed through the vaginal opening, and absorbable stitches are used to control any bleeding inside the pelvis.
 - ❖ Except in cases of suspected uterine cancer, the surgeon may cut an enlarged uterus into smaller pieces and remove it in sections (morcellation).
- **Pessaries:** a ring is placed in the vagina after reducing the prolapse. This needs follow-up to change it every 3 months (thus preventing infections).



- In congenital connective tissue weakness (such as Murphans syndrome which is rare), prolapse occurs at a very young age (20's).
- Ethnicity is important in pelvic organs prolapse (how?) → non-Caucasians are protected from prolapsed because of a stronger connective tissue/ collagen.

