

# Effect of pregnancy and childbirth on urinary incontinence and pelvic organ prolapse

# INTRODUCTI ON

- Pelvic floor disorders (PFDs) include:

1. pelvic organ prolapse (POP),
2. urinary incontinence
3. fecal incontinence.

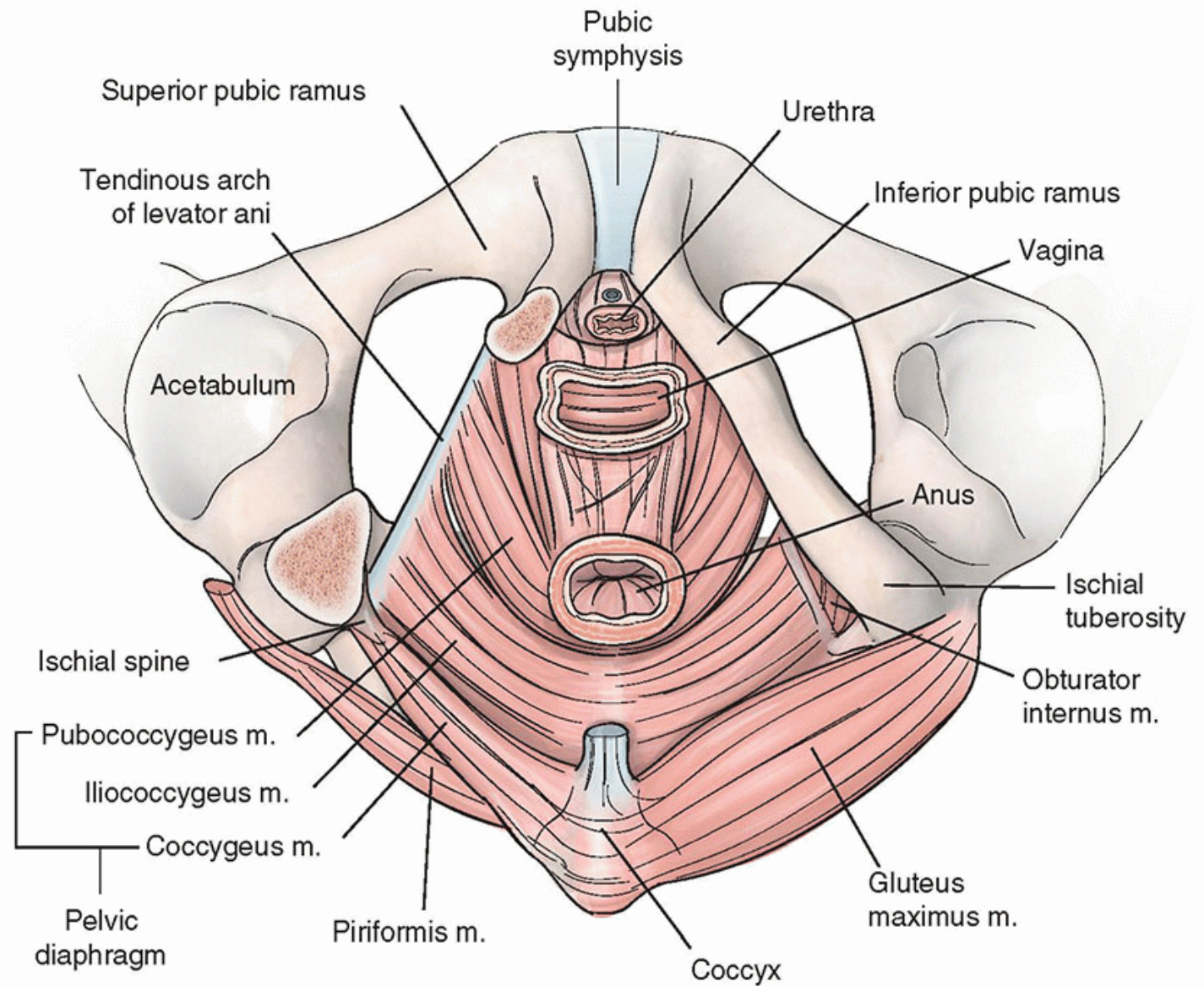
affect one-third of adult women in the United States,

As many as 20 percent of women undergo surgical treatment for PFDs and approximately 17 percent of these women require reoperation

# Clinical anatomy of the pelvic floor

- levator ani , (paired puborectalis, pubococcygeus, and iliococcygeus) and coccygeus muscles.
- The urethral and anal sphincter muscles
- The endopelvic connective tissues
- The perineal membrane

The pudendal nerve innervates the external anal sphincter, whereas the levators, coccygeus muscles, and urogenital diaphragm appear to be innervated by a direct connection of S2, S3, and S4 nerve fibers



# Effect of pregnancy and childbirth

- **Neural injury:** (Risk factors for denervation and pudendal nerve damage include operative delivery, prolonged second stage, and high birth weight)
- **Injury to the levator ani and coccygeus muscles**

- **Fascial injury**

Paravaginal defects are associated with urethral hypermobility, SUI, and poor anterior vaginal support


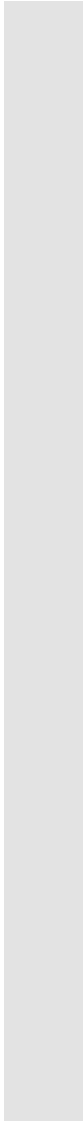
- **Impaired connective tissue remodeling**

# PREVALENCE IN PAROUS WOMEN

- pelvic floor disorders (PFDs) are more prevalent among women who have delivered at least one child
- rate of PFDs increases with increasing parity
- The effect of parity is prominent mainly in premenopausal women
- in postmenopausal women, the impact of age appears to override the impact of parity

# ROLE OF OBSTETRIC FACTORS

- Pregnancy
- Urinary incontinence is more common during pregnancy than before pregnancy
- The prevalence and severity of incontinence increase during the course of pregnancy
- Seventy percent of women with onset of urinary incontinence during pregnancy experience spontaneous resolution of symptoms postpartum , Specifically, within 12 months postpartum
- Pelvic Organ Prolapse Quantification (POP-Q) stage increases during pregnancy

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- Labor
  - Most of the available evidence suggests that labor, in the absence of vaginal delivery, has a negligible effect on the development of PFDs later in life.



## Mode of delivery

- Vaginal delivery appears to be an important risk factor for the development of PFDs, particularly SUI
- while observational studies have suggested that cesarean delivery is associated with a lower rate of future PFDs, it is important to note that cesarean delivery does not completely prevent PFDs
- Operative vaginal delivery
- vaginal delivery with forceps appears to increase the risk of developing POP , SUI ,fecal incontinence and overactive bladder
- Vacuum-assisted vaginal delivery does not appear to have the same impact on risk of prolapse or urinary incontinence
- At this time, the impact on PFD of liberal episiotomy use is uncertain

## OTHER FACTORS

- Maternal age
- Increasing maternal age is associated with an increased risk of pelvic floor disorders (PFDs)
- Birth weight
- Increasing infant birth weight appears to be associated with an increased risk of POP, but the relationship to urinary incontinence is unclear.

# APPROACH TO OBSTETRIC MANAGEMENT

- Effective strategy

1. Prophylactic pelvic floor muscle exercises( during pregnancy but not postpartum)
2. avoidance of forceps delivery
3. Selective use of episiotomy

- Ineffective strategy:

1. Coached pushing
2. perineal massage during labor and maternal position
3. Avoidance of protracted active labor
4. Cesarean delivery by maternal request

# OBSTETRIC CARE OF SPECIAL POPULATION S

- Women with urinary incontinence before or during pregnancy
- There is no evidence that elective cesarean delivery prevents persistent urinary incontinence in women with incontinence symptoms before or during pregnancy
- Women who have undergone surgical repair
- Typically, surgical treatment of incontinence or prolapse are deferred until childbirth is complete.
- there are insufficient data to adequately counsel patients about either (1) the effect of future pregnancies on recurrence of PFDs after prior surgical treatment or (2) the impact of surgery for pelvic floor disorders on future pregnancies [1]

Thanks