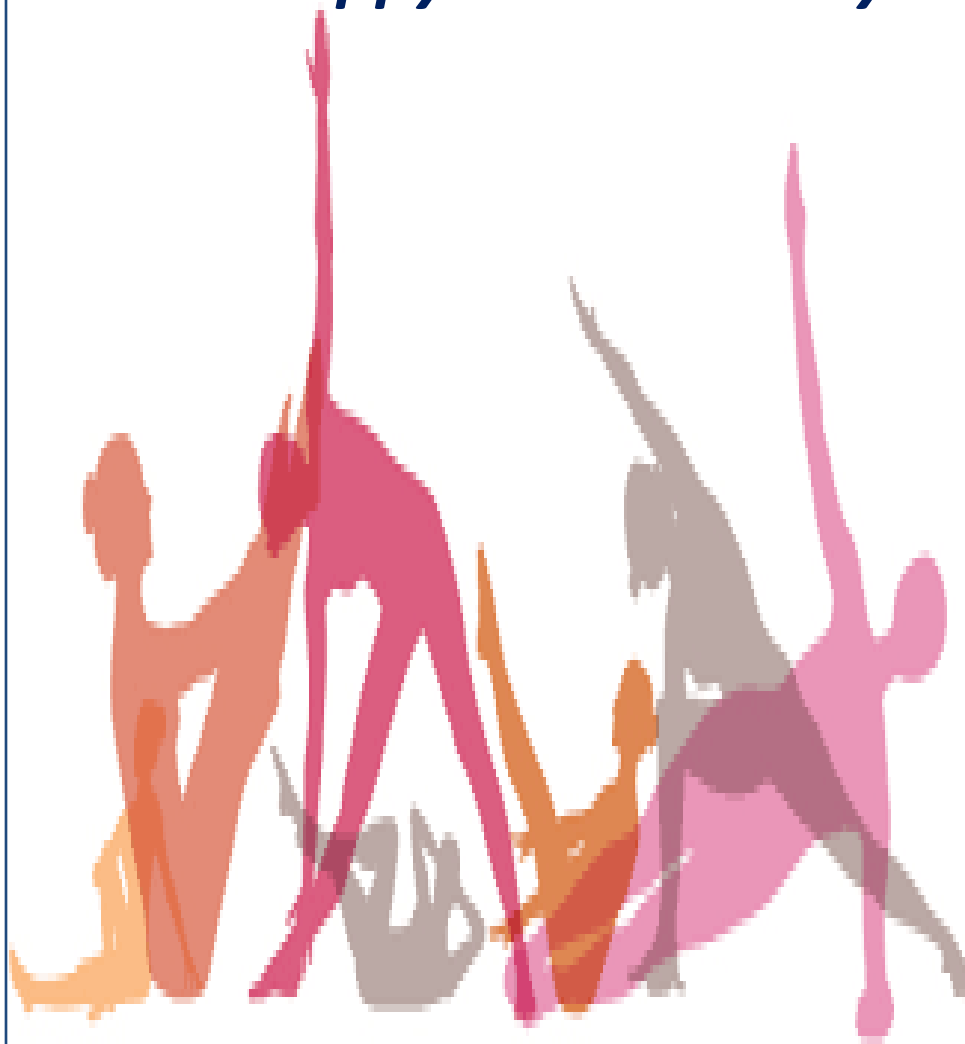




***Happy Women's Day !!!.....***



M: 9594285221

**Dr. Rupal M Shah**

B.Sc(P.T)M.I.A.P

Physiotherapist

*Specialist in Spine, Joints & Women's Health*

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**Clinic:**

54-57, Riddhi-Siddhi Apts,  
A/6 Ground Floor, R.A.K Rd,  
Opp. Amulakh High School,  
Matunga (E) – 400019  
Time: 5:30pm- 8:30pm  
Phone: 02224076854

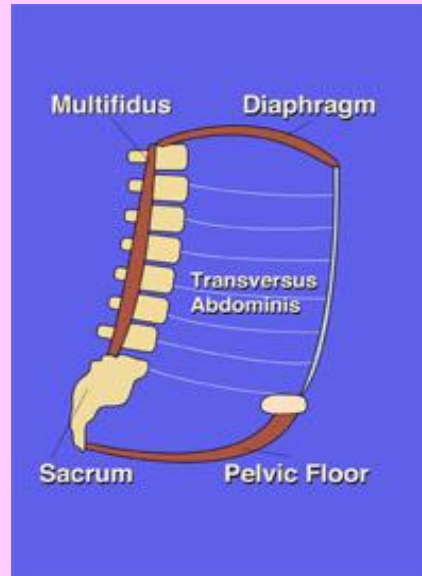
Jerbai Wadia Hospital  
CRP OPD  
Acharya Donde Marg  
Parel, Mumbai 400012  
Tuesday & Thursday  
11am - 1pm

# Pelvic Floor and the Core

## *Pelvic floor and its role in*

- Core Stability,
- Pelvic Organs Positioning and,
- Chronic Pelvic (Low Back) Pain.

## Where is your *core*?



The word 'core' refers to the area of your body between your diaphragm and your pelvic floor.

It includes all the joints of the lumbar spine as well as those of the low thorax (chest) and the pelvis

Core is the Stable base we work from,

----for creating movement and  
---power around a stable object.

The problem is that the object (your spine)  
doesn't stabilize itself –  
*it takes effort.*

**Diaphragm**



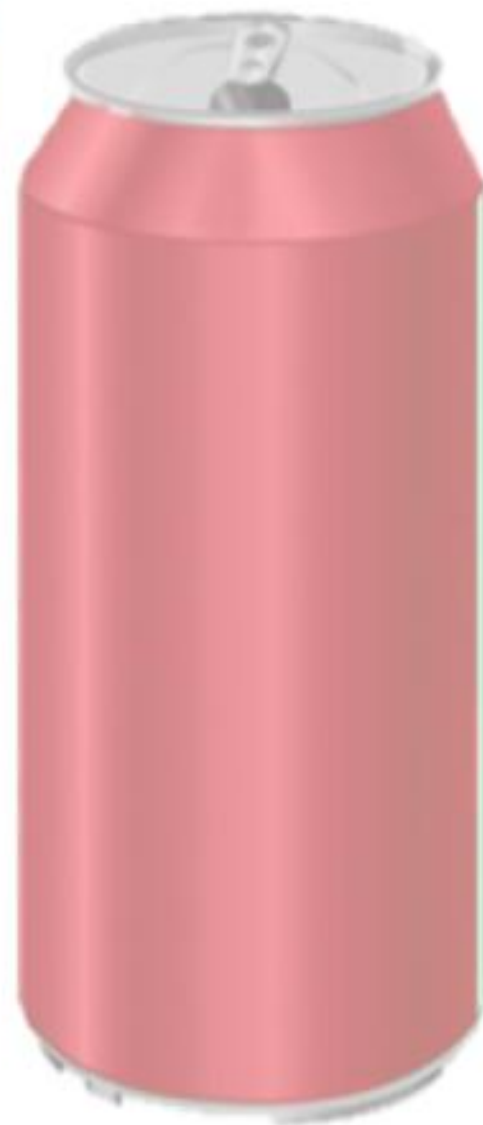
**Multifidus**



**Transverse  
Abdominis**



**Pelvic Floor**



# How the deep core muscles function

- Anticipatory
- Preparatory
- Works no matter what we do
- They are not ***Movement*** or ***Direction*** dependent.

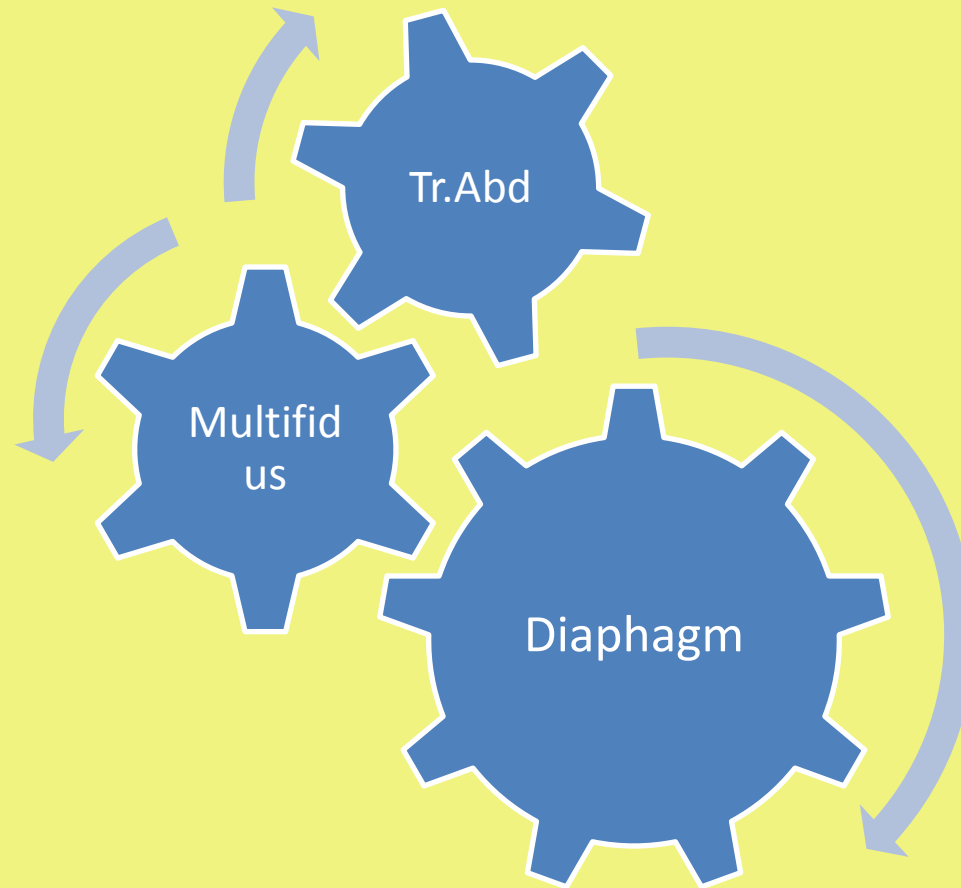


# Core functioning in health

## Core functions as a harmonious chord in synergy

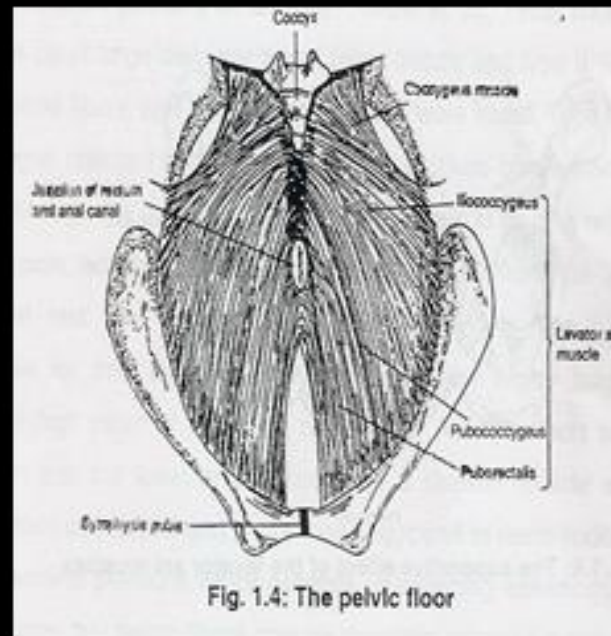
- a) Harmonious synergy in co-contraction
- b) Timing of synchronised co-contraction
- c) Amplitude

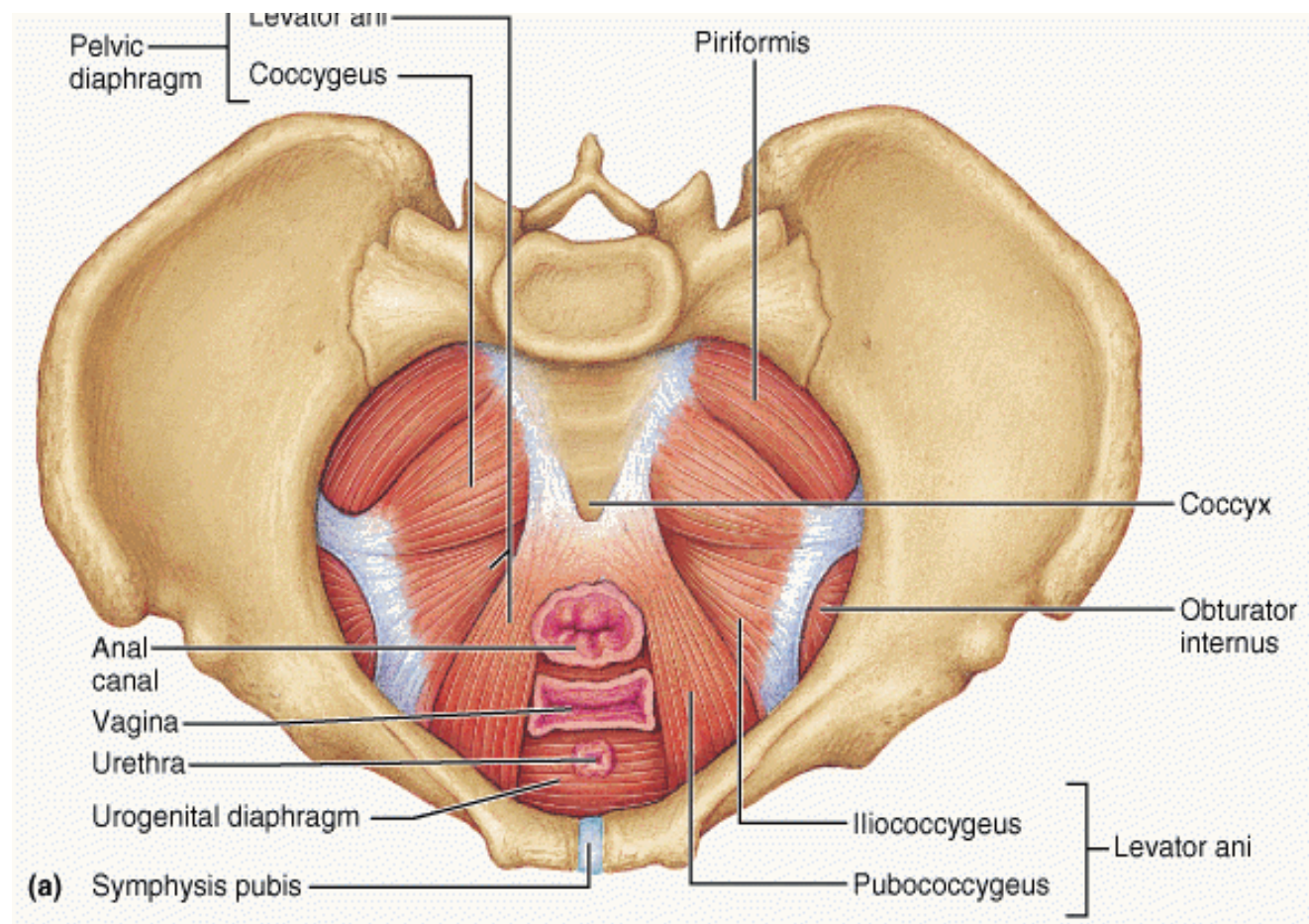
# *Gears*

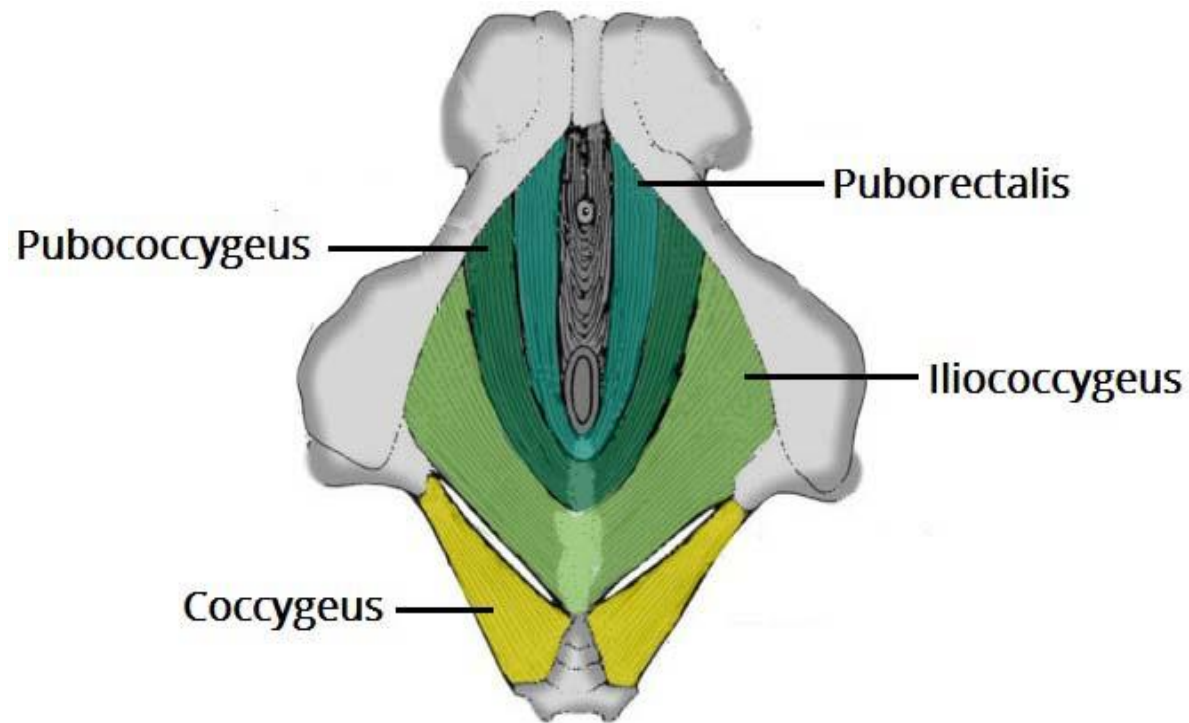


# Anatomy of the Pelvic Floor

- **Levator Ani**
  - **Pubococcygeus (Puborectalis)**
  - **Iliococcygeus**
- **Superior & inferior Fasciae**
- **Somatic & autonomic nerve supply**
  - **Pudendal nerve, Hypogastric nerves, Parasympathetic**
- **Vascular supply**
- **Perineum**
  - **region of urogenital diaphragm (sup. Fascia) to**





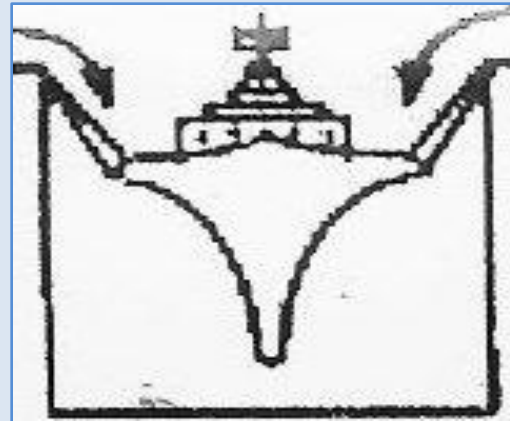
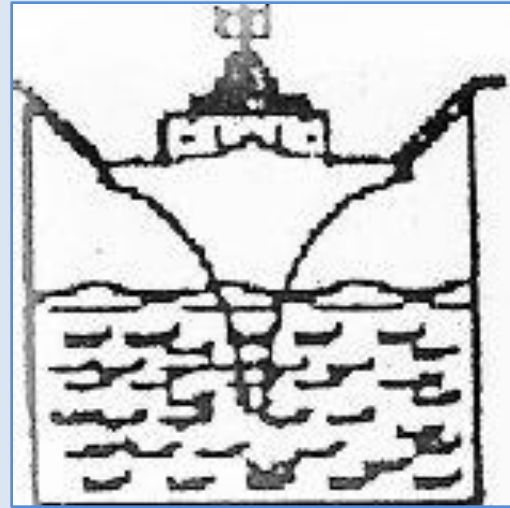






# DeLancey 'moored boat' theory

- boat = organs
- moorings = ligaments
- water = pelvic floor



# Physiology of Levator Ani

Approximately 70% of Type 1 fibers ( *Slow Twitch* )  
> Lower Max. Force, when there is a greater proportion of type 1 fibers.

Greater proportion of Type 2 fibers in voluntary  
Urethral & Anal Sphincters ( *Fast Twitch* )  
> Higher force but Faster Fatiguing



## Some factors that weakens the Pelvic floor

- Gender – female
- Pregnancy – hormonal , mechanical
- Child birth process
- Menopause
- Obesity
- UTI, Asthma, Chronic cough
- Obesity , Posture, Heavy labour jobs,
- Genetic collagen weakness etc

# Fit Pelvic Floor

- Alignment

&

- Positioning

# Core Training Exercises

- Exercises for the core that focus on timing and co-activation with other muscles of the core are called core training exercises.

# How do you engage your core?



# Classic Core Exercises

- Bridges
- Planks and side planks
- Push-ups
- V-sits
- Crunches (side, reverse, oblique, etc..)
- Sit-ups

- Russian twists
- Squats
- Hip lifts
- Oblique twists
- Lunge with twists
- Supermans

# 6 AB EXERCISE



PLANK

BICYCLE  
CRUNCH



MOUNTAIN CLIMBER



RUSSIAN TWIST



SIDE PLANK



WINDSHIELD WIPER BUTT RAISE

## **Things to remember when doing core stability exercises:**

- 1.** Do not let your whole stomach tense up. If your upper abdominal muscles “bulge” outwards it means you have cheated by using the large rectus abdominus (six pack) instead of the transversus abdominus (lower abdominals).
- 2.** Do not brace your lower abdominals too hard; a gentle contraction will suffice.  
You are trying to improve endurance rather than maximum strength. Only clench them about 50%



## **Cont**

**3.** Do not hold your breath as this is a signal that you are not relaxed. You must learn to breathe normally since you will need to breathe when you are running!

**4.** It is a good idea to do core stability as part of your cool down after running, or on a cross-training day.

# Core Strengthening Exercises

- Exercises that then take a well-timed and
- co-activated core and load it are called core strengthening exercises.

Any guesses ?









## Positions for exercise

- Supine
- Hip-knee flexion
- Side lying
- Sitting
- All fours
- Mini-squat
- Walk, duck walk
- Hydro therapy

# What equipment will help strengthen your core?

- Stability balls
- Medicine balls
- Kettlebells
- Wobble boards
- Bosu Balls

- Kettlebells Bosu Ball



## Physiological benefits of Pelvic Floor strengthening

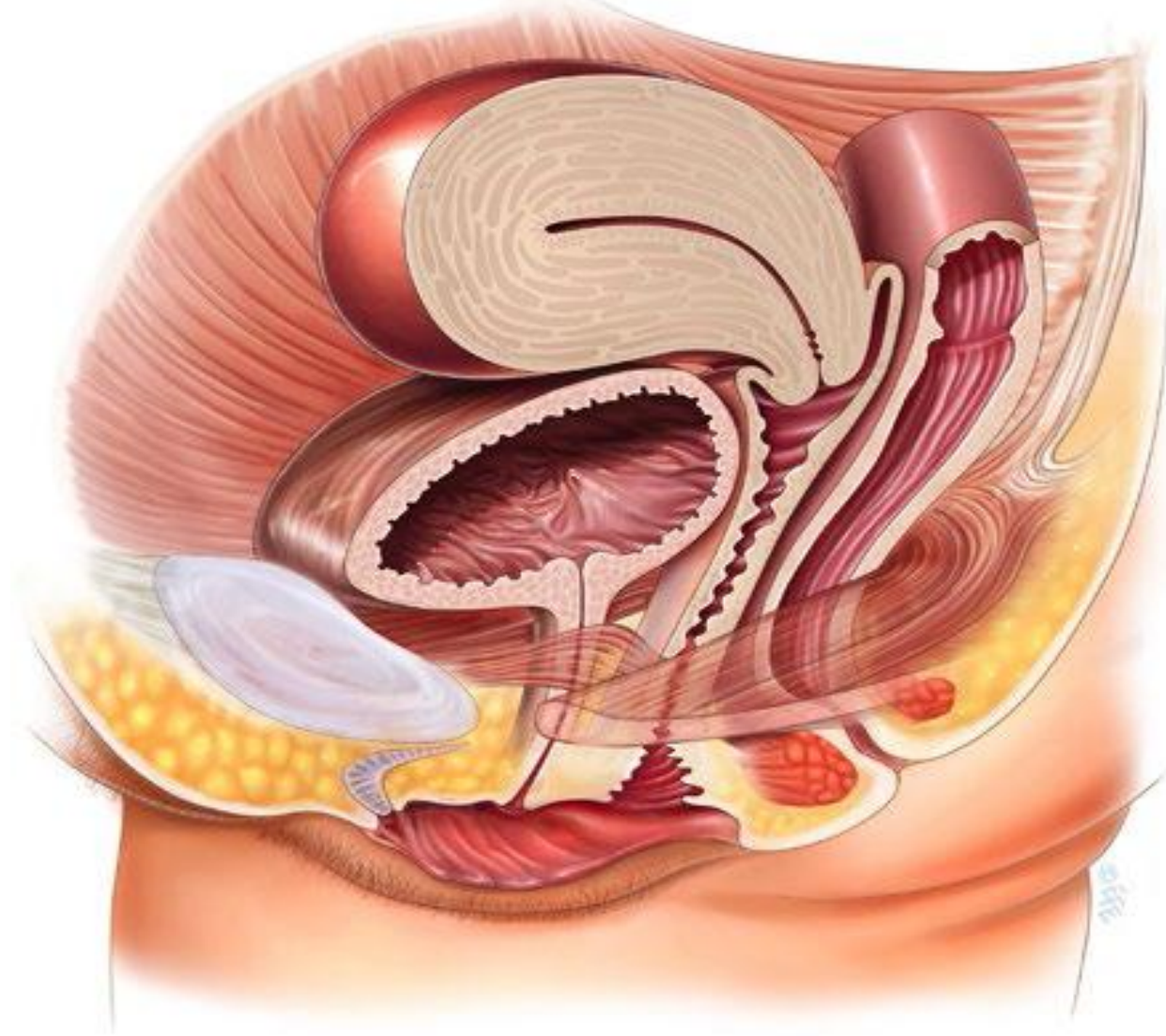
- Increase bulk of muscle tissue
  - Of pelvic floor
  - Of external/voluntary urethral sphincter
- Better neuro muscular control
  - Less fatigue
  - more reflex contraction with functional activity



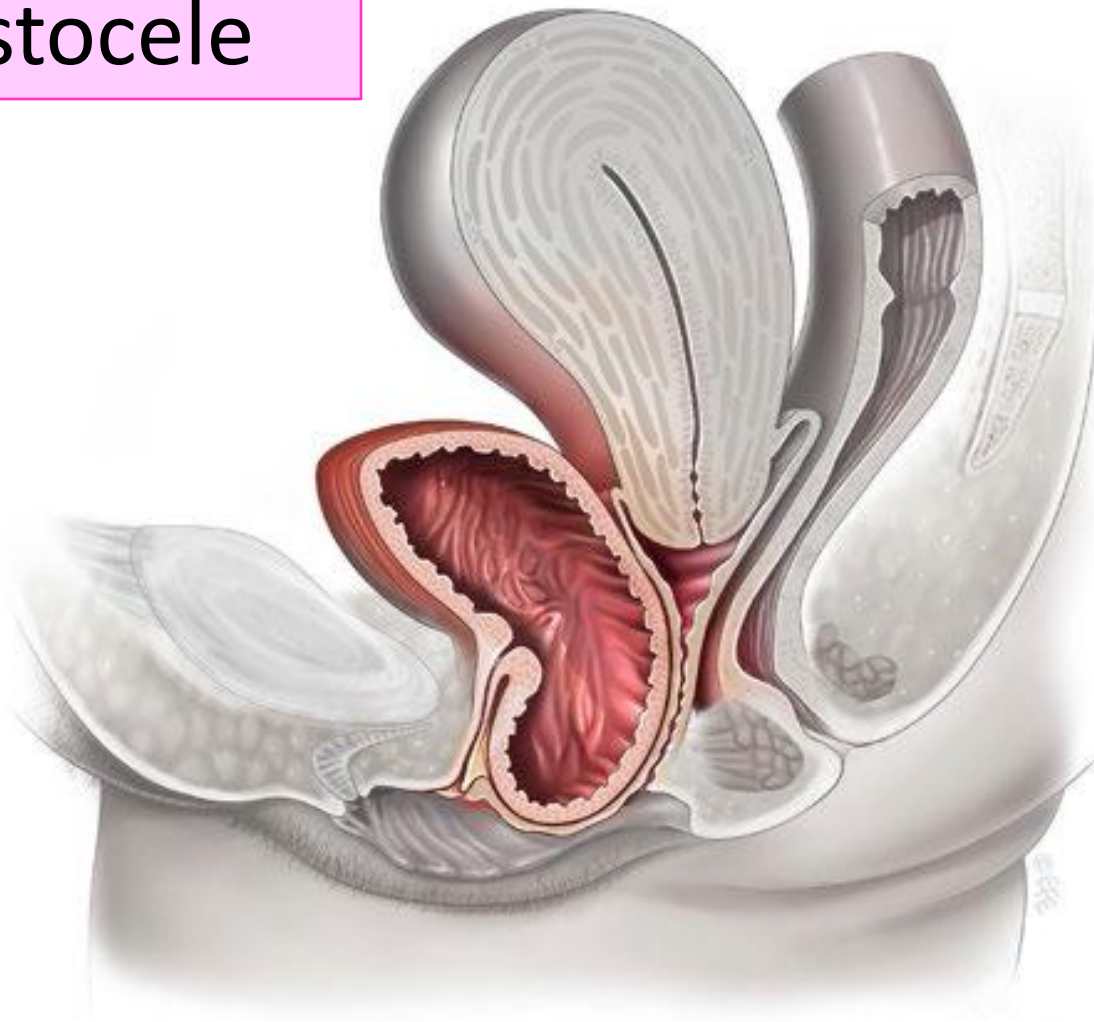
## Pelvic organ prolapse (POP)

can occur when the PC or pelvic floor muscles weaken and one or more organs shift out of their normal positions into the vaginal canal.

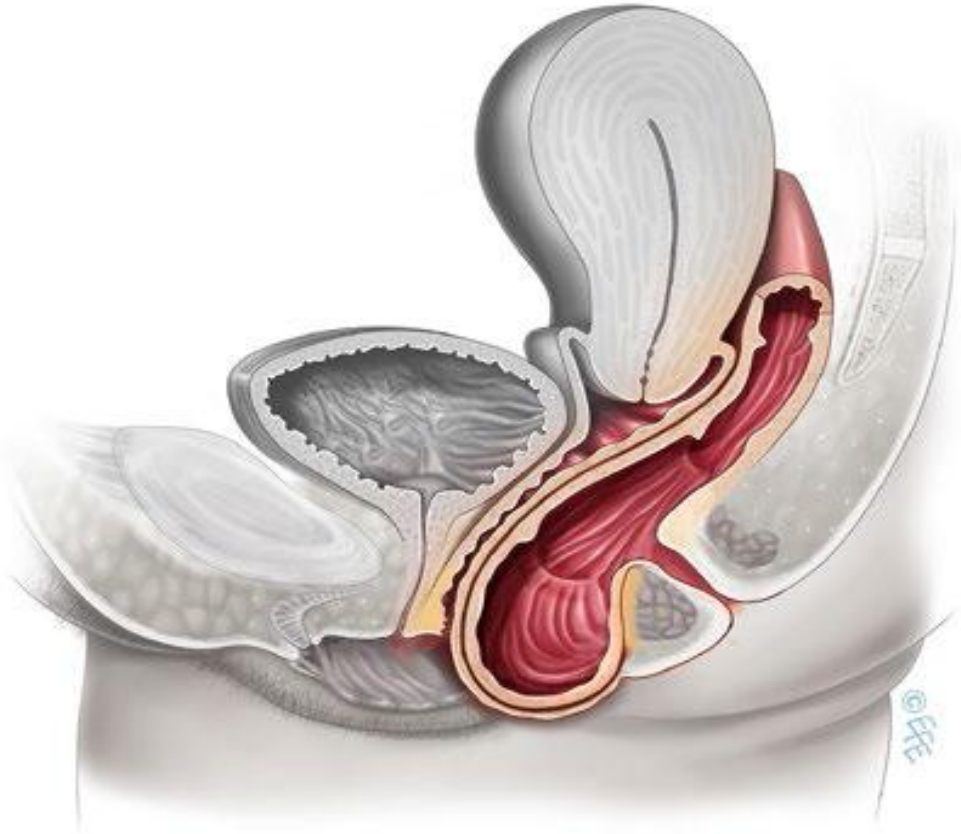
# Normal Pelvic Organ Positions



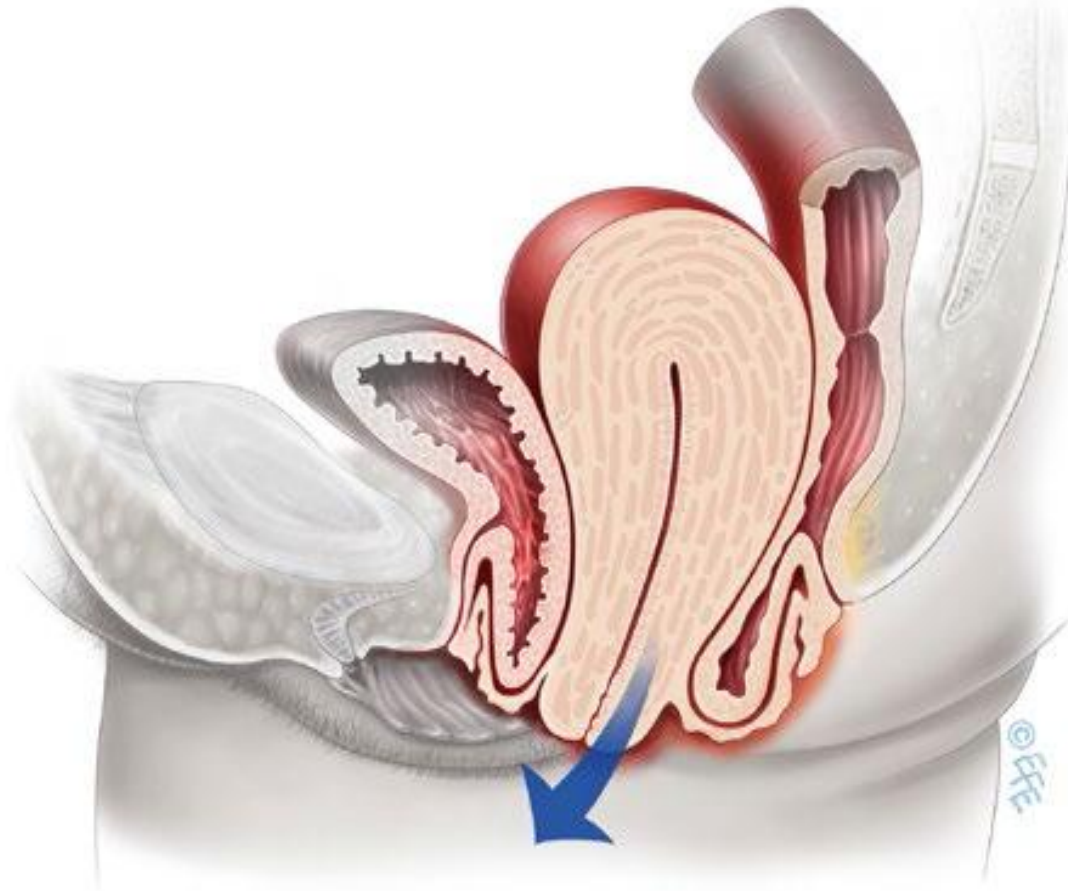
# Cystocele



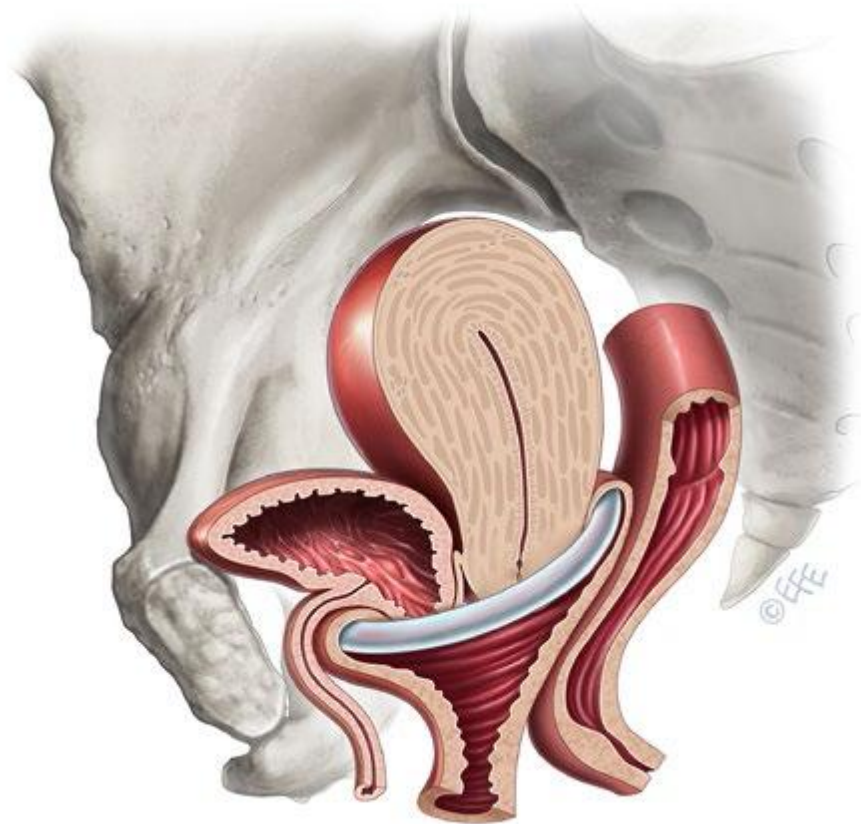
# Rectocele



# Enetrocele



# Ring Pessary





## How successful is Surgery?

- Approximately 75% of women having vaginal surgery and
- 90 to 95% having an abdominal approach, will have a long-term cure of their prolapse symptoms.

Recurrent prolapse may be due to continued factors which have caused the initial prolapse eg weak tissues & constipation.

# Chronic Pelvic Pain

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## Definition

**Chronic Pelvic Pain (CPP)** is pain of apparent pelvic origin that has been present most of the time for the past six months



# Etiology

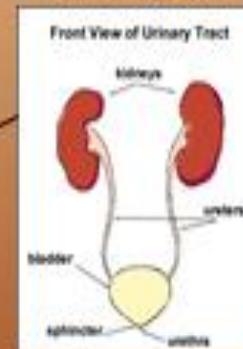
Psychological



Gastrointestinal



Urological



Gynecological



Musculoskeletal



# Chronic Pelvic Pain

## Differential Diagnosis: *Gynecological* Conditions

### *Cyclical*

- Endometriosis
- Adenomyosis
- Primary Dysmenorrhea
- Ovulation Pain/ Mittelschmerz
- Cervical Stenosis
- Ovarian Remnant Syndrome

### *Non-cyclical*

- Pelvic Masses
- Adhesive Disease
- Pelvic Inflammatory Disease
- Tuberculosis Salpingitis
- Pelvic Congestion Syndrome
- Symptomatic Pelvic Organ Prolapse
- Vaginismus
- Pelvic Floor Pain Syndrome

# Chronic Pelvic Pain

## Differential Diagnosis: *Gastrointestinal* Conditions that may Cause or Exacerbate Chronic Pelvic Pain

### *Level A*

- Colon Cancer
- Constipation
- Inflammatory Bowel Disease
- Irritable Bowel Syndrome

### *Level B*

None

### *Level C*

- Colitis
- Chronic Intermittent Bowel Obstruction
- Diverticular Disease

# Chronic Pelvic Pain

## Differential Diagnosis:

### *Urological* Conditions that may Cause or Exacerbate Chronic Pelvic Pain

#### *Level A*

- Bladder Carcinoma
- Interstitial Cystitis
- Radiation Cystitis
- Urethral Syndrome

#### *Level B*

- Detrusor Dyssynergia
- Urethral Diverticulum

#### *Level C*

- Chronic Urinary Tract Infection
- Recurrent Acute Cystitis
- Recurrent Acute Urethritis
- Stone/urolithiasis
- Urethral Caruncle

# Chronic Pelvic Pain

## Differential Diagnosis:

### *Psychological/Other* Conditions that may Cause or Exacerbate Chronic Pelvic Pain

#### *Level A*

- Abdominal cutaneous nerve entrapment in surgical scar
- Depression
- Somatization Disorder

#### *Level B*

- Celiac Disease
- Neurologic Dysfunction
- Porphyria
- Shingles
- Sleep Disturbances

#### *Level C*

- Abdominal Epilepsy
- Abdominal Migraines
- Bipolar Personality Disorder
- Familial Mediterranean Fever



# Chronic Pelvic Pain

## Differential Diagnosis:

### *Musculoskeletal* Conditions that may Cause or Exacerbate Chronic Pelvic Pain

#### *Level A*

- Abdominal Wall Myofascial Pain (Trigger Points)
- Chronic Back Pain
- Poor Posture
- Fibromyalgia
- Neuralgia of pelvic nerves
- Pelvic Floor Myalgia
- Peripartum Pelvic Pain Syndrome

#### *Level B*

- Herniated Disk
- Low Back Pain
- Neoplasia of spinal cord or sacral nerve

#### *Level C*

- Lumbar Spine Compression
- Degenerative Joint Disease
- Hernia
- Muscular Strains and Sprains
- Rectus Tendon Strains
- Spondylosis

# Chronic Pelvic Pain

## Pelvic Floor Pain Syndrome

- **Description:** Spasm and strain of pelvic floor muscles
  - Levator Ani Muscles
  - Coccygeus Muscle
  - Piriformis Muscle
- **Symptoms:** Chronic pelvic pain symptoms; pain in buttocks and down back of leg, dyspareunia
- **Treatment:** Biofeedback, Pelvic Floor Physical Therapy, TENS (Transcutaneous Electrical Nerve Stimulation) units, anxiolytic therapy, cooperation from sexual partner

# Chronic Pelvic Pain

## Differential Diagnosis: *Psychological/Other* Conditions that may Cause or Exacerbate Chronic Pelvic Pain

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# Chronic Pelvic Pain

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## Conclusions

- Chronic Pelvic Pain requires patience, understanding and collaboration from both patient and physician
- Obtaining a thorough history is key to accurate diagnosis and effective treatment
- Diagnosis is often multifactorial – may affect more than one pelvic organ
- Treatment options often multifactorial – medical, surgical, physical therapy, cognitive

# KEY MESSAGES

- Timing and Synergy of core muscle contractions is affected by Pelvic / or back pain / fear of back pain.
- Visceral pain also inhibits core ; Motor planning gets affected.
- Inhibitions / Delay of timing of co-contraction DOES NOT improve once pain is resolved. This gives rise to discordant / non – Synergistic muscle patterns.
- Core fitness exercises are NO DOING EXERCISES

## Cont...

- Correct Pattern = Efficiency  
Wrong sequence = Effort.
- Non optimal strengthening on a weak core leads to tissue break down , pain , loss of optimal functional efficiency.
  - indications – Low Back pain , Knee / Shoulder pain / Plantar fascitis .
- Multifidi gives segmental stability - co-contracts with Trv Abd.
- Patience and Technique is the KEY.

**PRESENTATION FINISHED**

**...ANY QUESTIONS?**

