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Sunday, August 14, 2016

(Plenary)

7:15 - 8:15 Breakfast Session: Oxford Women's Health

‘The Pelvis in Pain’

A Physiotherapy Perspective

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What piece of the Pelvic Pain puzzle can a **Physiotherapy** approach assist with???

Traditional Role of Physiotherapist

- Expertise lies largely in assessing Striated Skeletal Muscle Function & Dysfunction

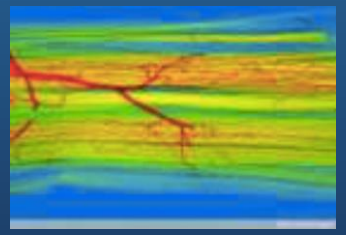
1. *Anatomy & Physiology* of striated muscle function
2. *Movement Disorders* relating to muscle dysfunction
3. *Pain* related to muscle / myofascial dysfunction

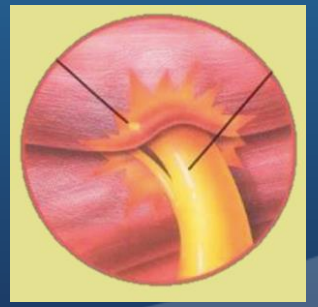
Principles of Myofascial-based Pain

1. All striated skeletal muscles have both motor and sensory innervation via somatic nerves
2. Normal muscle function / activation does not usually activate nociceptors or cause ‘pain’
3. Overactive / hypertonic striated skeletal muscle can activate pain signals in either…

- ***the muscle itself*** (ischaemia, myofascial trigger point)

- ***other structures*** (nerve compression from hypertonic muscles)





MYOFASCIAL Trigger Points (TrP's)

Defined as:

" a hyper-irritable nodule, usually found within muscle spindles and characterised by electrically active loci and a dysfunctional motor endplate"

Results in:

Local pain & specific referred pain pattern

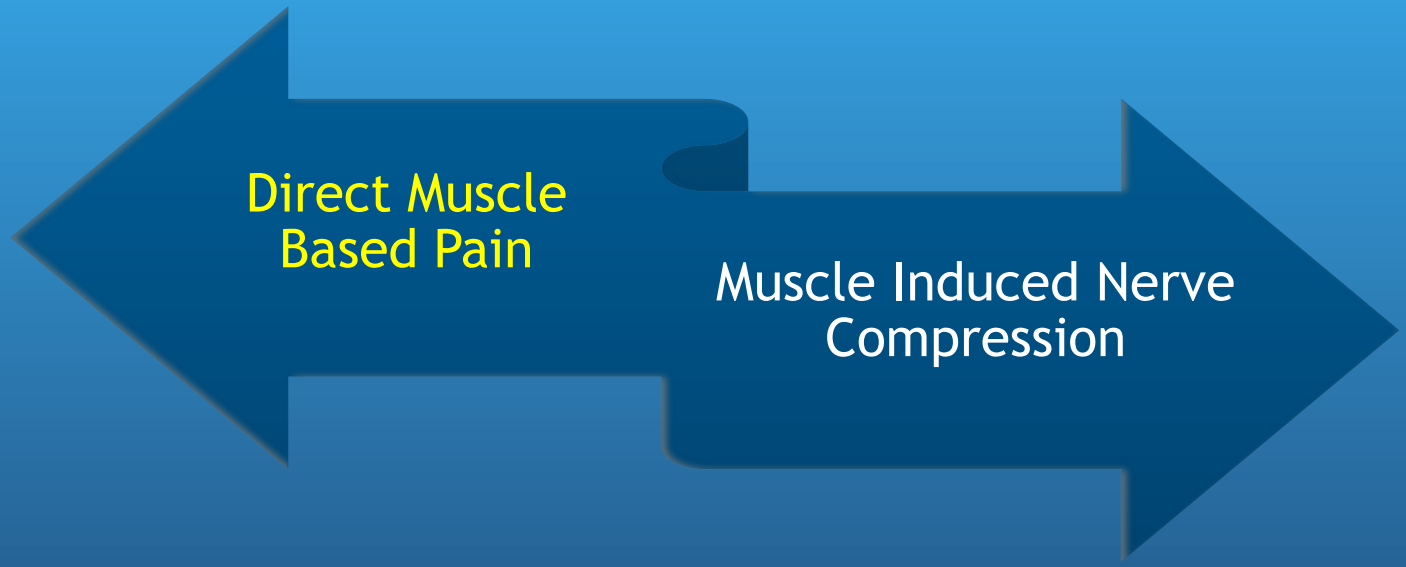
Pain either constant (active) or only on palpation (latent)

Motor dysfunction / reduced active range of movement

Associated autonomic dysfunction

How does this link to Pelvic Pain in a Gynaecological setting???

LINK between Muscle Overactivity & Pelvic Pain



- **Generalised hypertonia** of muscles in/around pelvic region
- **Myofascial trigger points** with referral pain patterns in/around the pelvic region

Skeletal Muscle Hypertonicity of the Pelvic Floor – **'Pelvic Floor Myalgia'**

Symptoms associated with Pelvic Floor Myalgia

- Generalised Pain through Pelvis
- Dyspareunia (entry & deep)
- Pain on Bladder Filling
- End of Void Pain
- Dyschezia

How do we assess for Pelvic Floor Hypertonicity???

- **Observation**

Normal Pelvic Floor Contraction

'tightening of the vaginal & anal openings, with an inward lift at the perineum'

Other Modalities

- Electromyography (EMG)
- Manometry

What happens with Hypertonic Pelvic Floor Muscles??

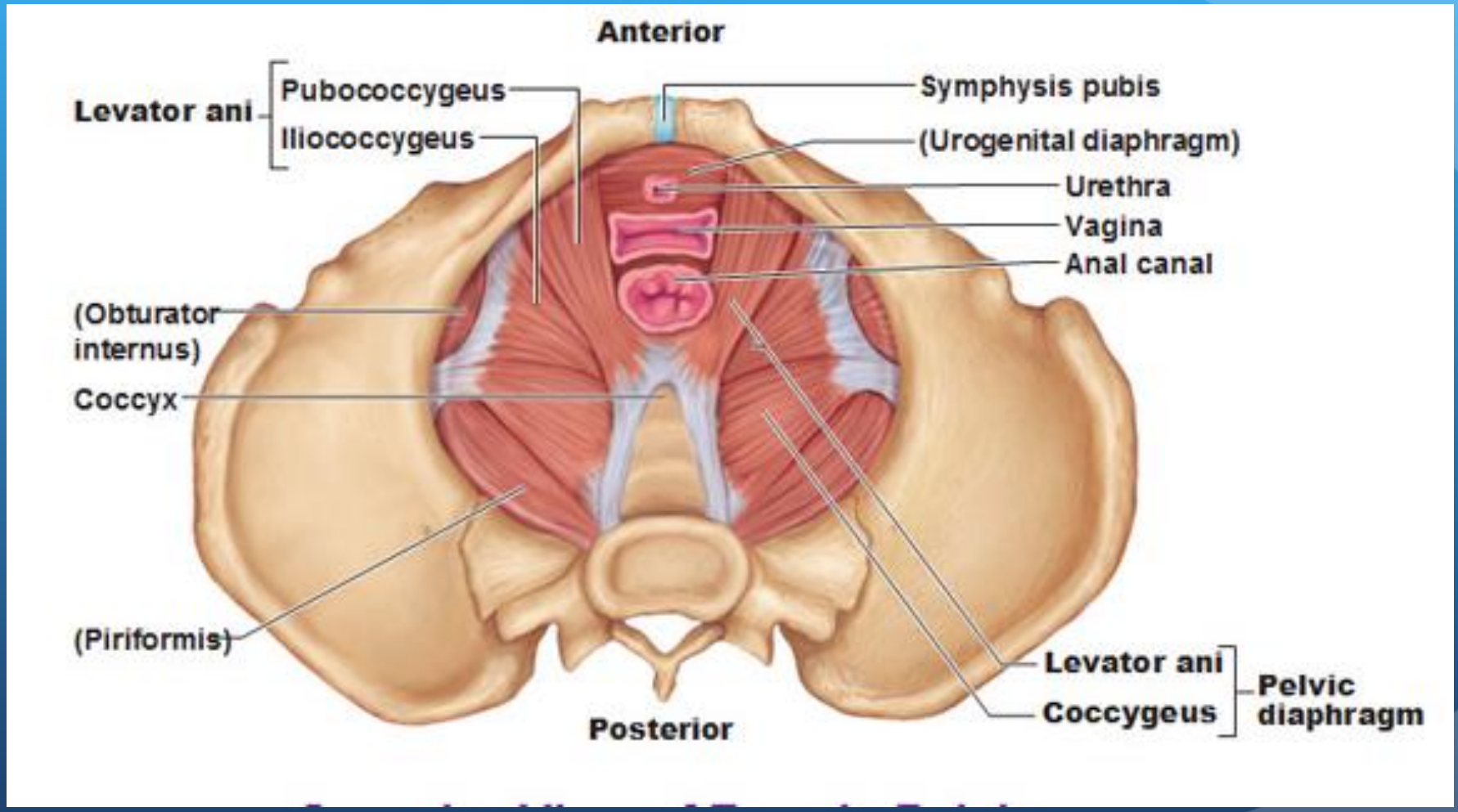
- *Decreased Range of Movement on the 'squeeze'*

- minimal 'tightening' of PFM & perineum

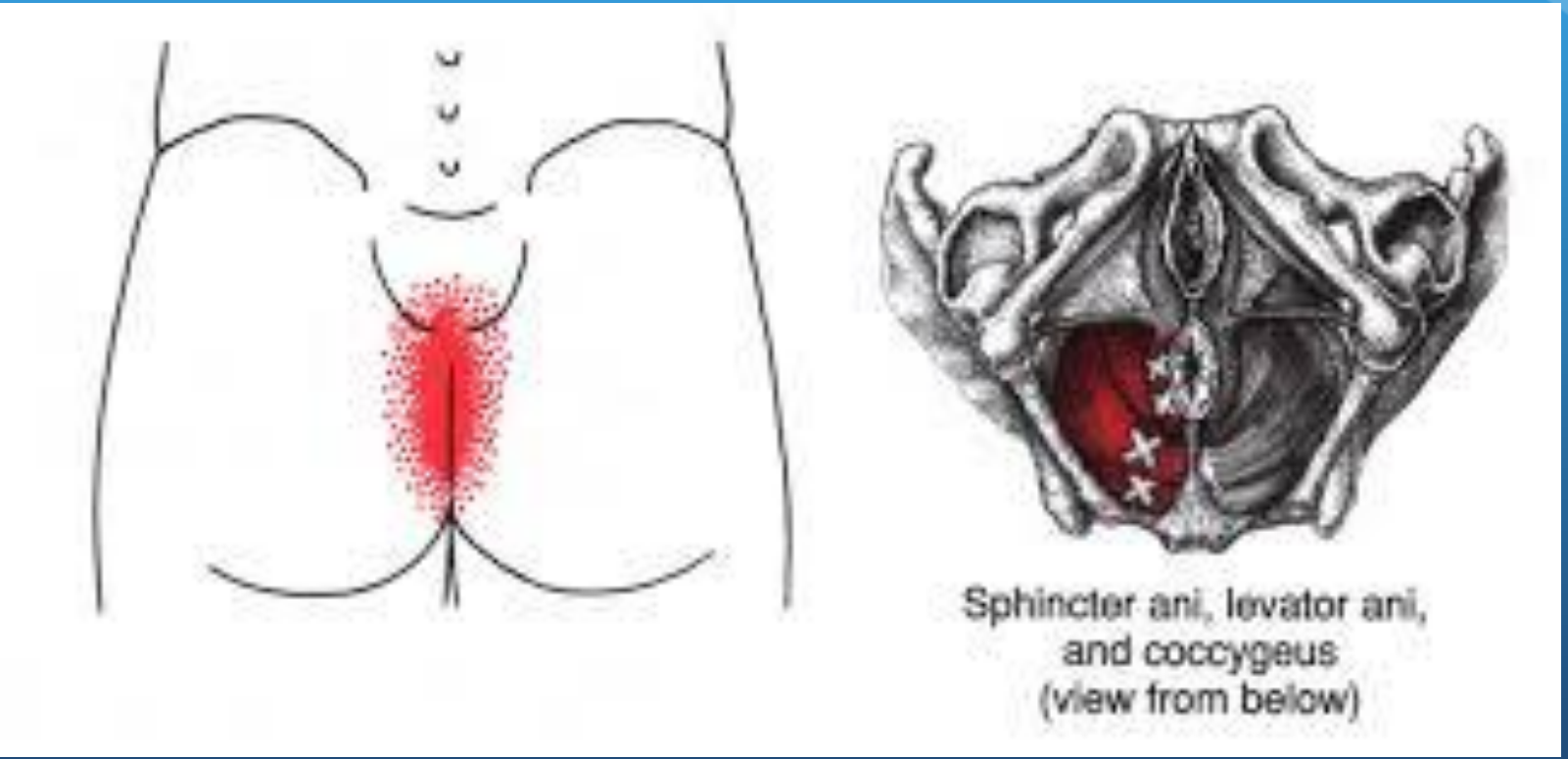
- *Partial reversal of Movement on 'relax'*

- minimal 'opening' of PFM & 'drop' of perineum

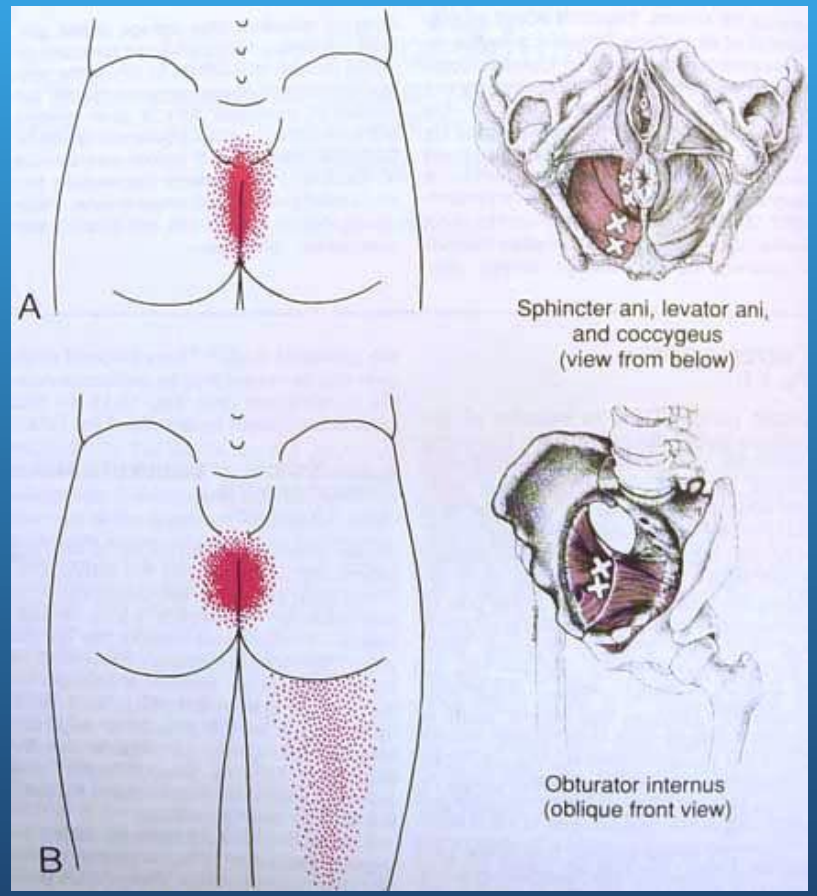
PELVIC FLOOR Muscles



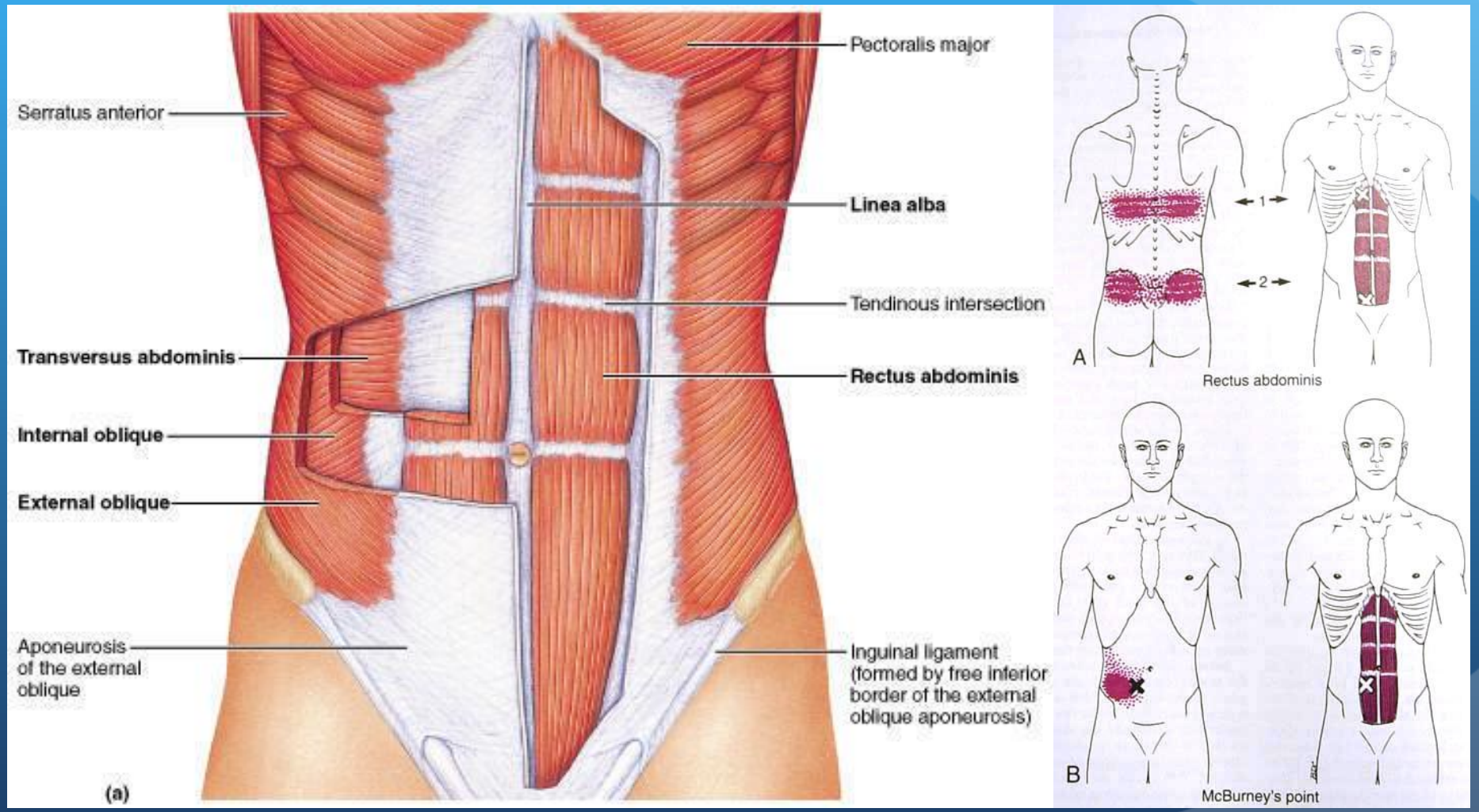
PAIN REFERRAL - Myofascial TrP's PELVIC FLOOR MUSCLES



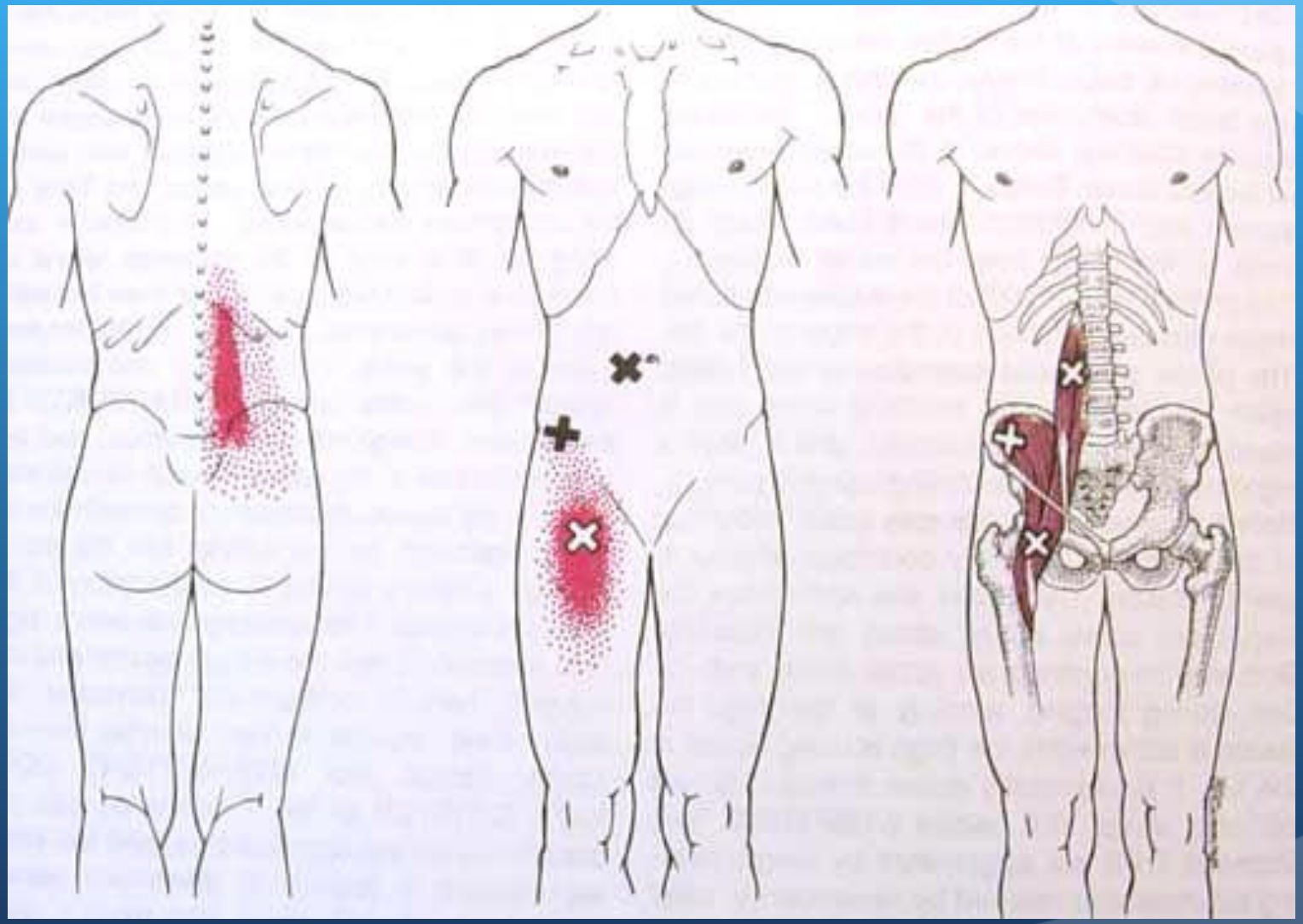
OBTURATOR INTERNUS



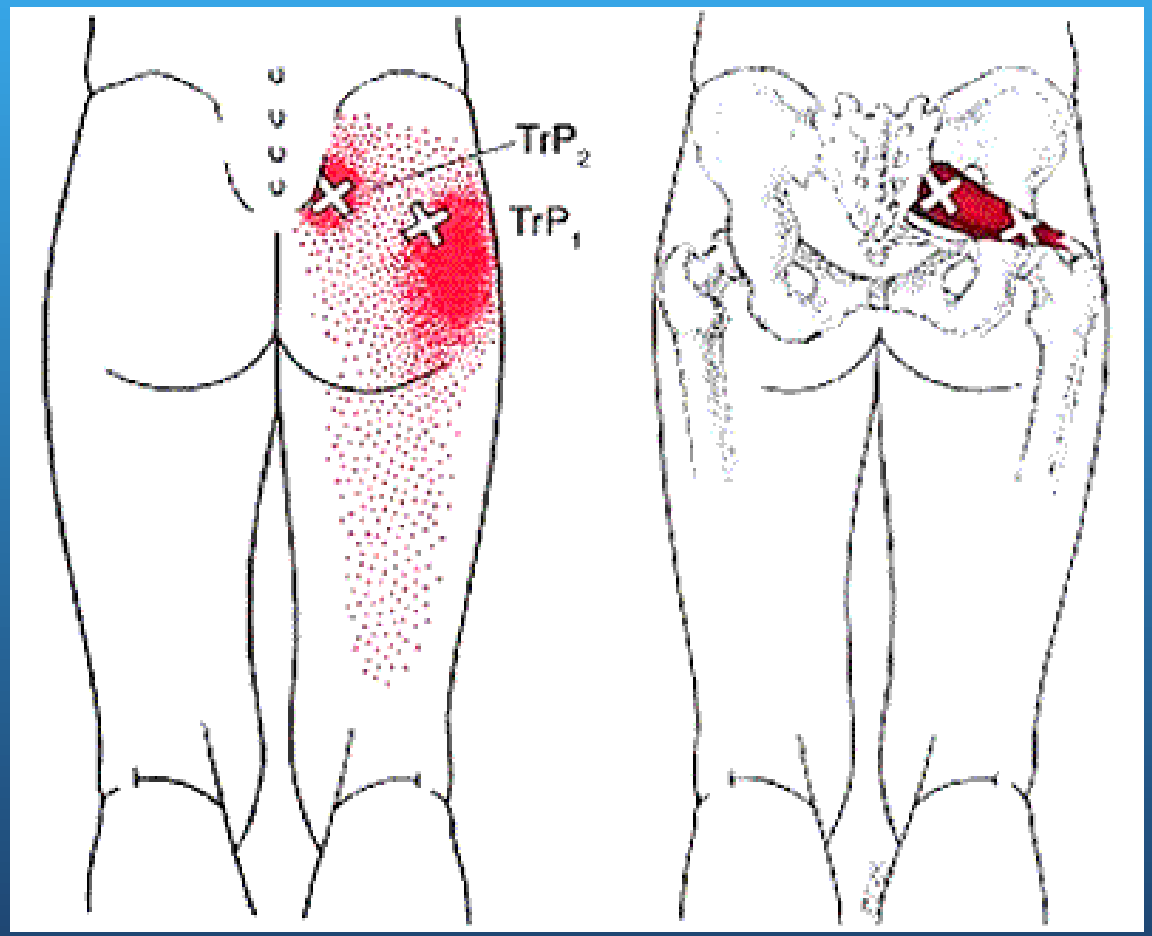
RECTUS ABDOMINUS



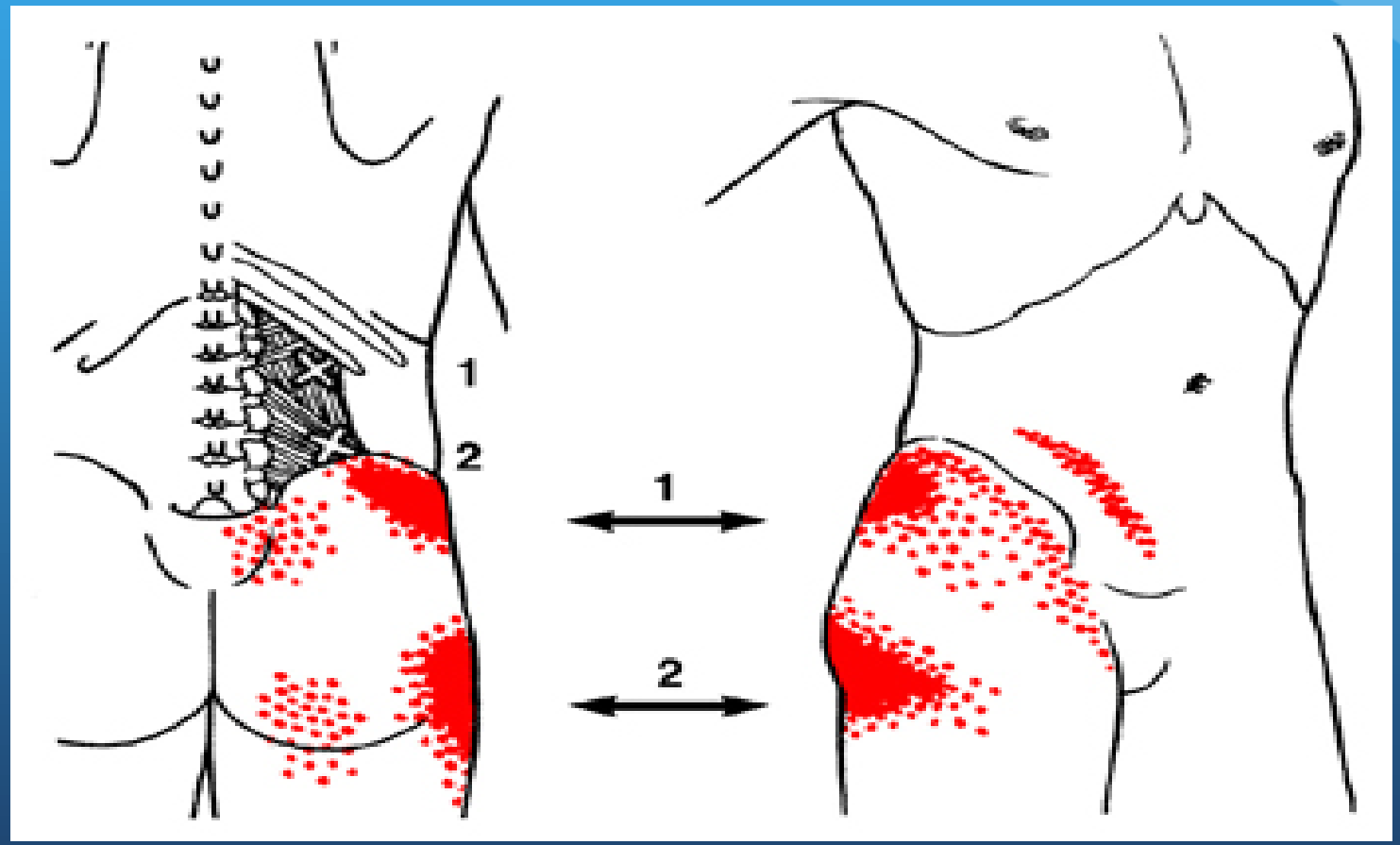
ILIO-PSOAS



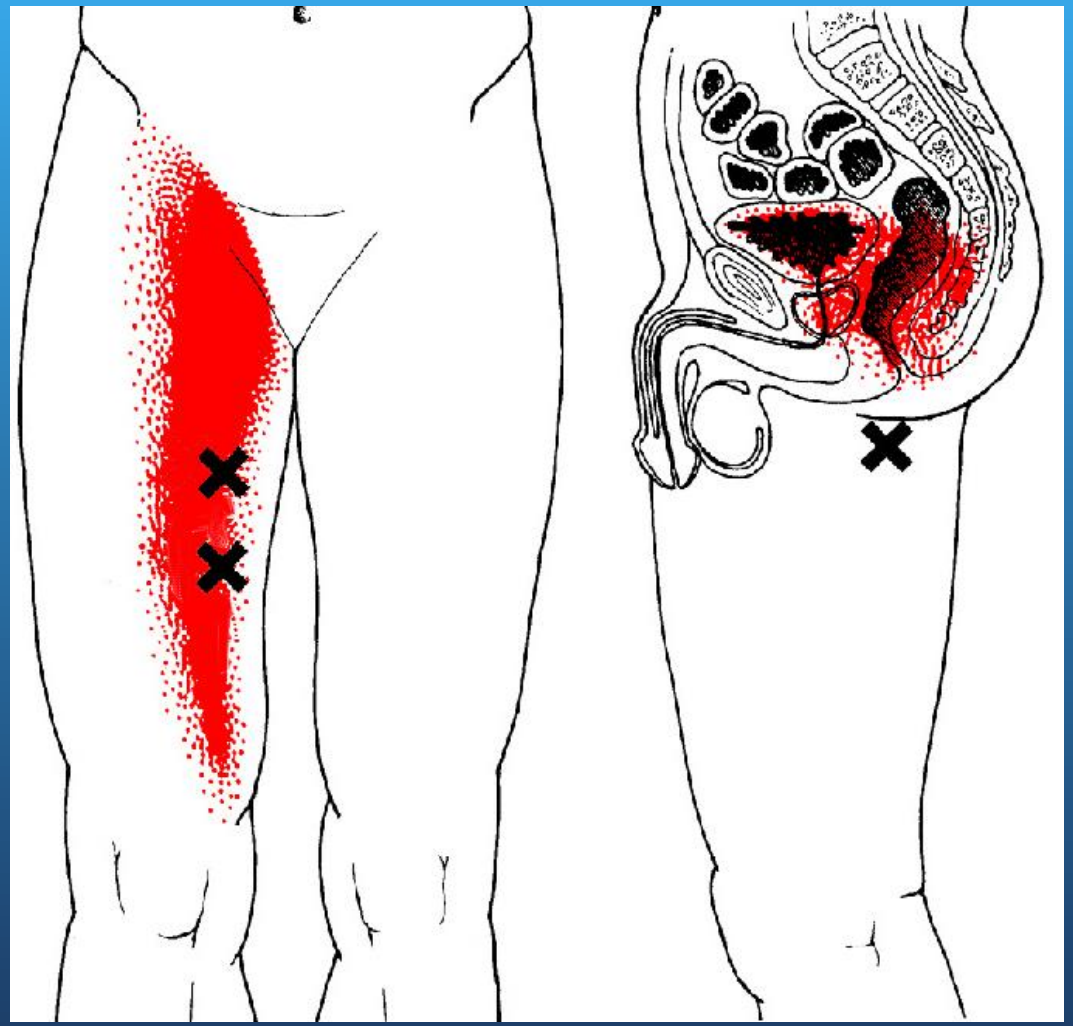
PIRIFORMIS



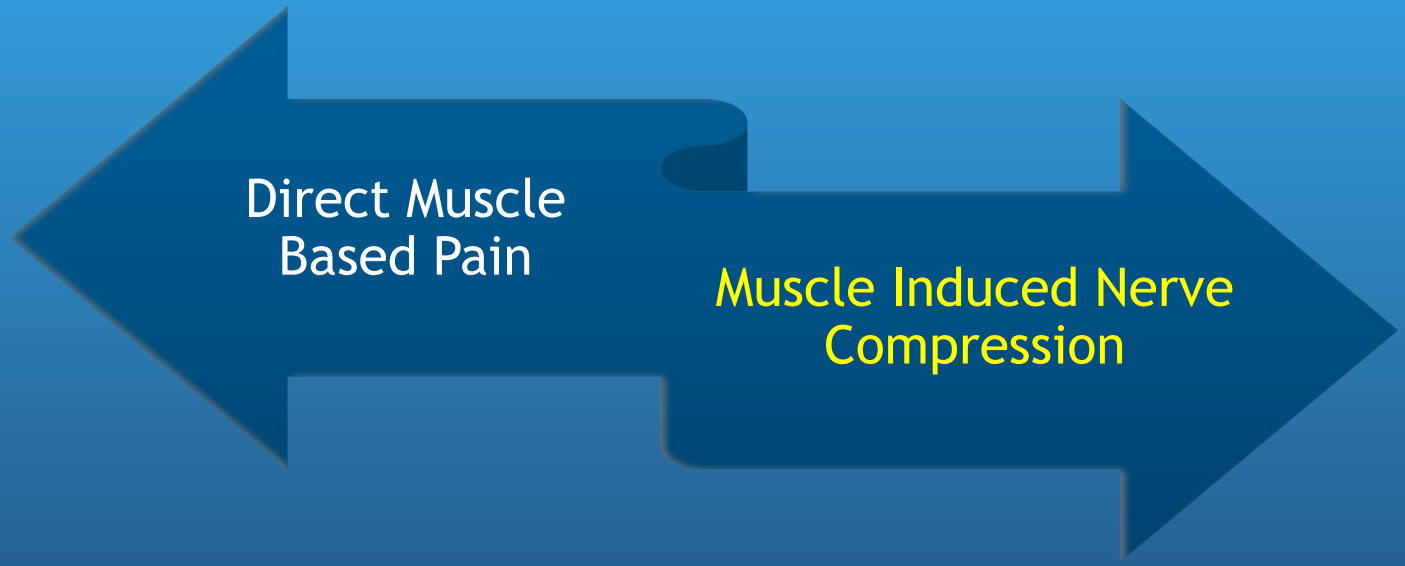
QUADRATUS LUMBORUM



ADDUCTOR MAGNUS



LINK between Muscle Overactivity & Pelvic Pain



Muscle Induced Nerve Compression – 'Pudendal Neuralgia'

- Irritation of the pudendal nerve may result in sensory symptoms in any or all areas it supplies & spasm of the muscles it supplies
- Common site for PN irritation may be Alcock's canal &/or at the obturator internus muscle
- Sensory symptoms can manifest as itching, burning, tingling, cold sensations and pain – symptoms may extend to in to the groin, abdomen, legs and buttocks
- Pudendal neuralgia can occur in women & men
- 'Cyclist's Syndrome' – 7-8% of cyclists on long distance, multi-day rides experience pudendal neuralgia

Causes of PN Entrapment

- Pudendal nerve running through structures e.g sacrospinous ligament
- Altered biomechanical positioning at SIJ – increased compression through sacrospinous & sacrotuberous clamp
- Dilation of obturator vessels in Alcock's Canal – 'reduced space'
- Descending perineal syndrome – stretch on course of pudendal nerve

Pudendal Neuralgia symptoms

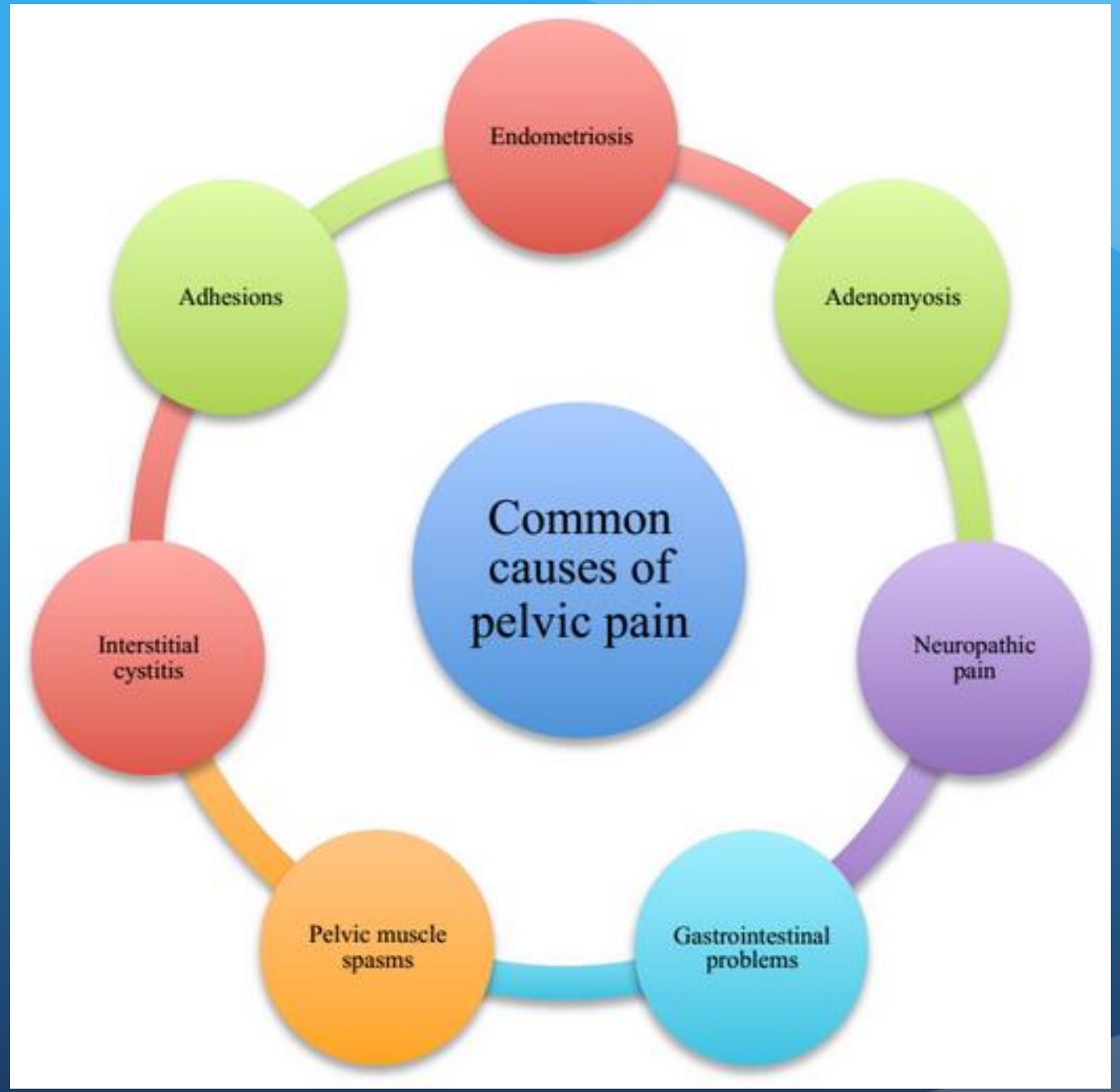
- **Signs & Symptoms** may include

- Pain with sitting (improvement with standing or sitting on a toilet seat)
- Discomfort with tight clothing
- Bladder and/or bowel symptoms (hesitancy, frequency, retention, constipation)
- Pain may be triggered by defaecation – traction of pudendal nerve by dropping of perineum during bowel motion
- Sensation of foreign body in the rectal/vaginal region
- Dyspareunia

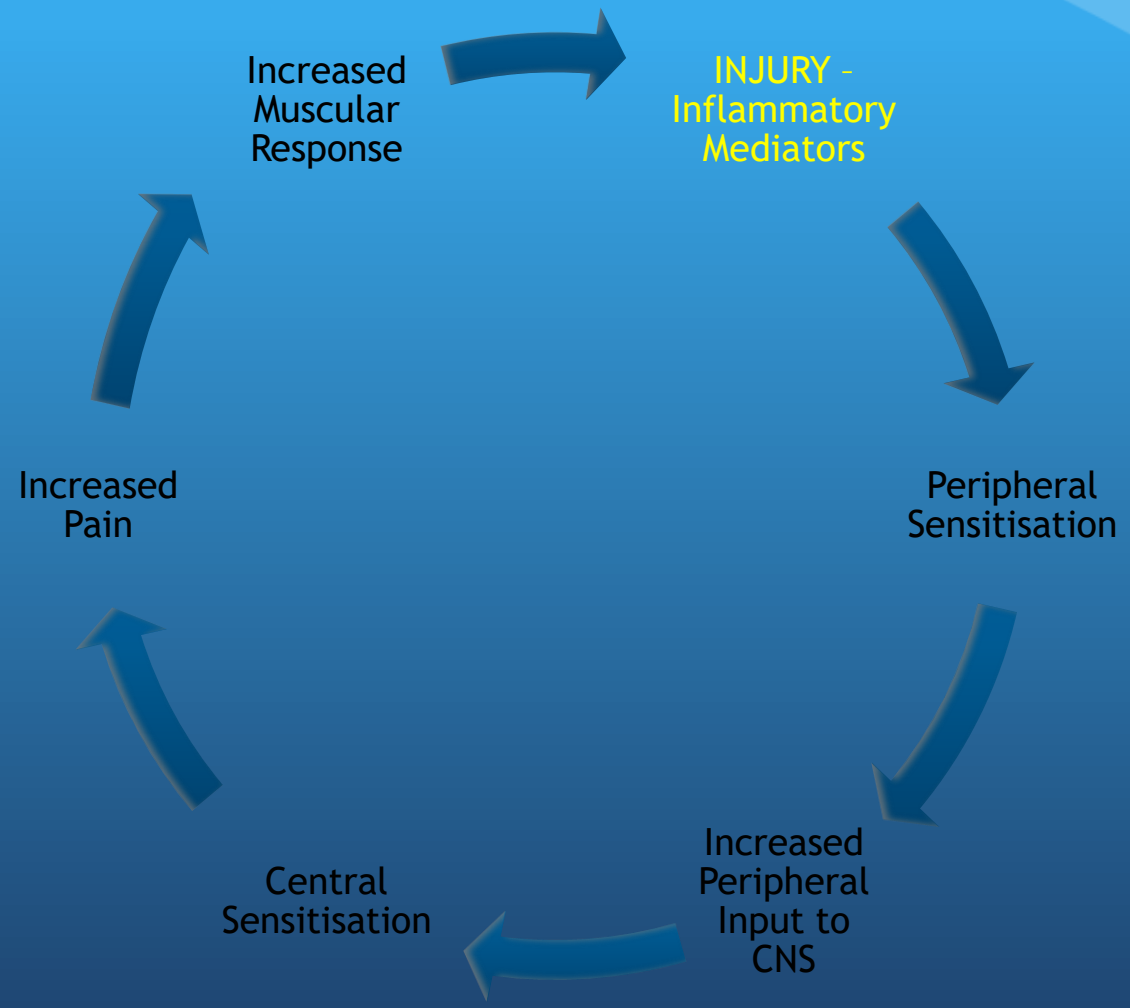
PHYSIOTHERAPY

- **TREATMENT**

- Myofascial release of piriformis, coccygeus & obturator internus
- Correction of sacro-iliac joint malalignment to release compression between sacrotuberous and sacrospinous ligaments
- Minimisation of traction injury to pudendal nerve from descent of pelvic floor – bowel management to minimise straining and PF strengthening to reduce descent of levators
- Sitting on support ring to offload pelvic floor
- Standing desk at work


Endometriosis
Adenomyosis
Neuropathic pain
Gastrointestinal problems
Pelvic muscle spasms
Interstitial cystitis
Adhesions
Common causes of pelvic pain

Impact of Neural Sensitisation



MUSCULOSKELETAL Disorders

- *Postural Dysfunction* – particularly for women who have a sedentary lifestyle
- *Deconditioned Muscles* – due to chronic constipation, childbirth (diastasis recti), overstretching with weight gain and lack of exercise
- *Lumbar Spine Pain, Sacro-iliac Dysfunction, Coccydynia*
- *Myofascial Dysfunction* – trigger points in abdominal wall and/or pelvic floor muscles

PHYSIOTHERAPY

- Rehabilitation of the pelvic floor, abdominal, gluteal, lumbosacral and hip rotator muscles
- Pudendal nerve mobilisation, connective tissue mobilisation and myofascial trigger point release of the surrounding muscles and tissues
- Correction of Sacro-iliac joint dysfunction and misalignment
- Range of motion and strengthening of certain muscles to improve core & lower extremity balance and stability

DIFFERENTIAL DIAGNOSIS

- Differential Diagnosis for Pelvic Pain is extensive – challenging to diagnose, challenging to treat, & challenging to cure
- Diagnosis, evaluation and treatment plan should align with the findings from the subjective and objective investigation – a complete & detailed history is the key to formulating a diagnosis
- PAIN - Nature of the Pain, Location of Pain, Duration of Pain, Timing of Pain and Modifying Factors

CONCLUSION

- Pelvic Pain requires patience and understanding
- Obtaining a thorough History is key to accurate diagnosis and effective treatment
- Diagnosis often Multi-factorial – may affect more than one pelvic structure
- *Successful treatment involves a Multi-disciplinary Approach*