

LIVING WITH CHRONIC PELVIC PAIN

Presented by:

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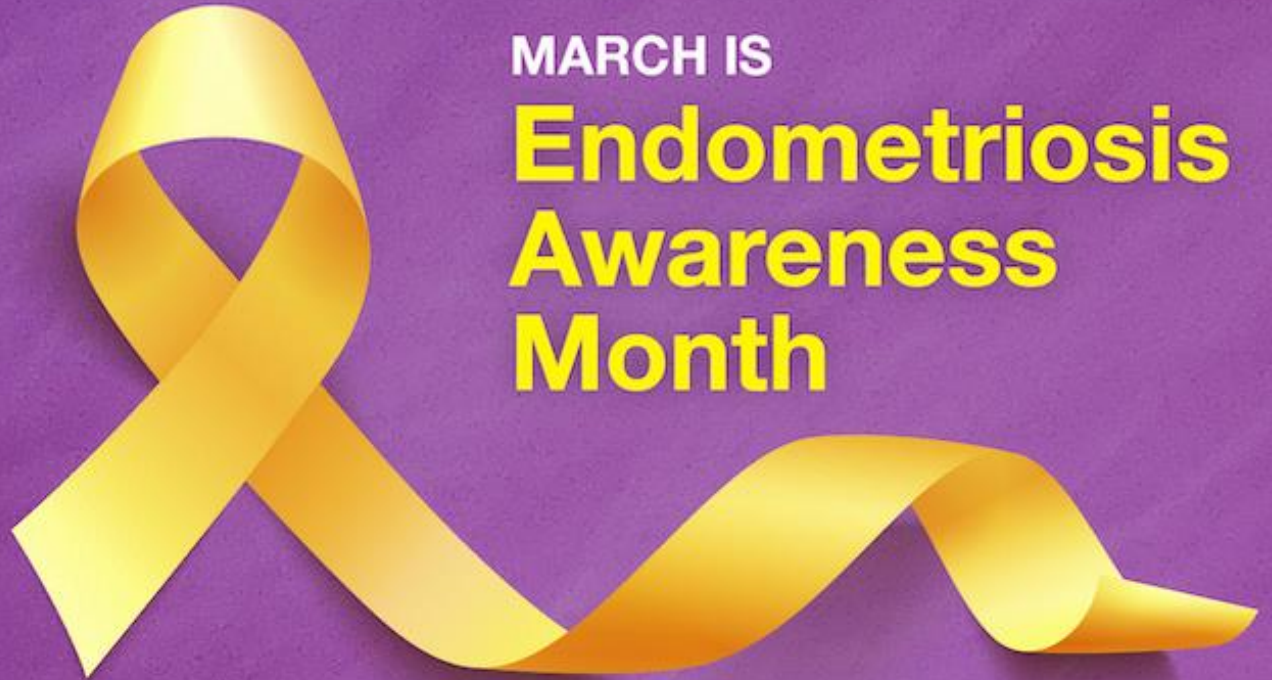
The Lifetime Effect of Chronic Pelvic Pain and Importance of Early Treatment

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Assistant Professor of OBGYN
Creighton University School of Medicine
March 24, 2022





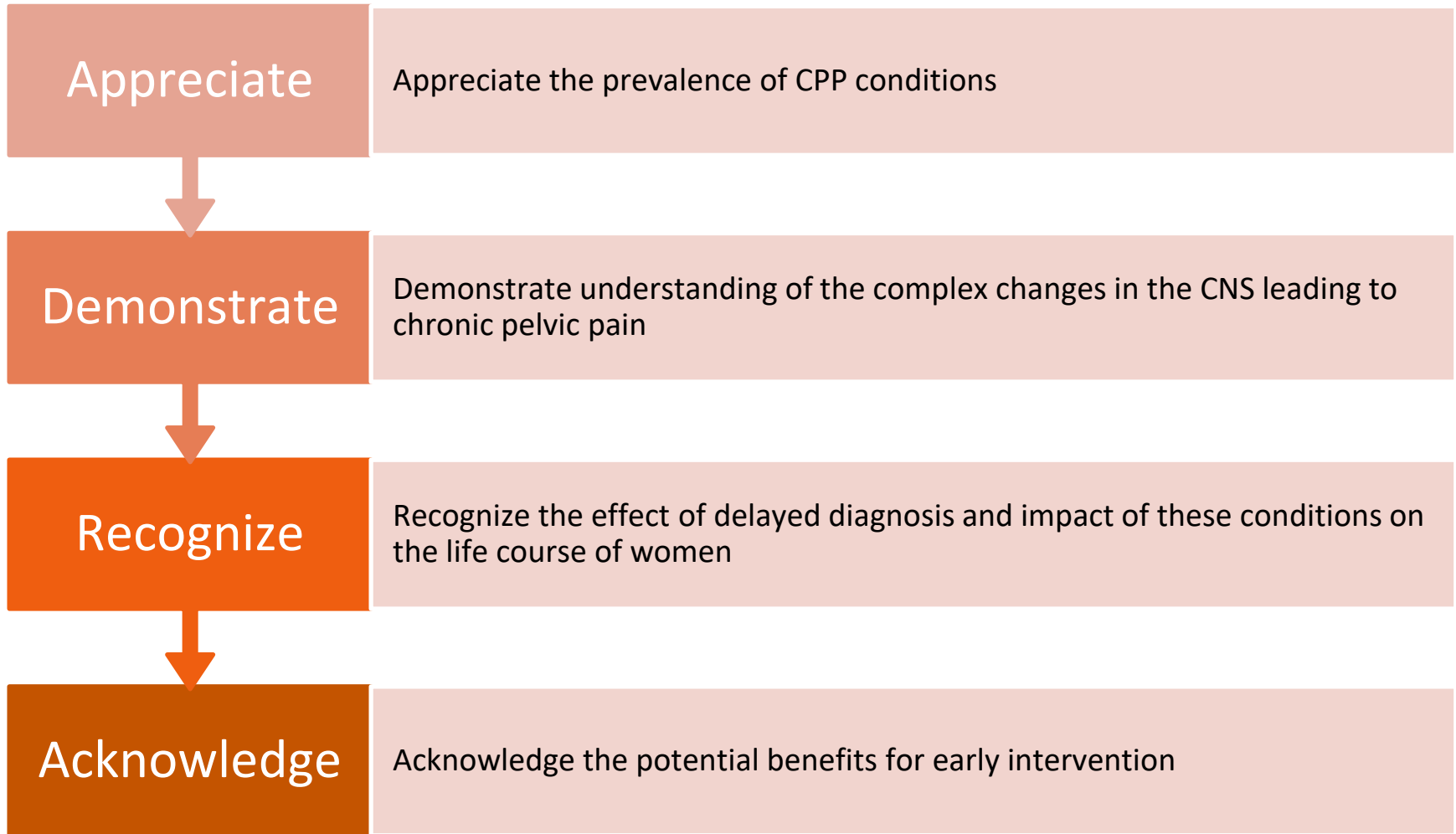
MARCH IS
**Endometriosis
Awareness
Month**



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Objectives



Chronic Pelvic Pain (CPP)

- Cyclical or non-cyclical lower abdominal pain
 - at least 6 months duration
 - Unrelated to pregnancy
 - Not exclusively due to painful periods or pain with sex
- Disproportionately affects females but can affect men and individuals across the gender continuum
- Affects 20-25% of population

UNDERSTANDING CHRONIC PELVIC PAIN

Understand and learn to treat your chronic pelvic pain to increase your quality of life.

DID YOU KNOW?

1 in 3
women
experience it

70%
don't seek
medical treatment

\$881M+
spent yearly
treating it

Epidemiology

- Considerable impact on well being of patients
- Associated with:
 - Physical dysfunction
 - Depression/anxiety
 - Personal economic losses
 - Poor quality of life
- Majority do not seek medical advice
 - 2001 UK study showed that only 32% sought medical advice
 - 58% reported use of analgesics and/or NSAIDs on a weekly or daily basis

Epidemiology

Condition	General Prevalence
Irritable Bowel Syndrome	12%
Vulvodynia	10-16%
Endometriosis	10%
Interstitial Cystitis/Painful Bladder Syndrome	3-7%
Myofascial pelvic pain	unknown

Irritable Bowel Syndrome

- Abdominal and pelvic pain associated with altered bowel habits
 - Subtypes: Constipation-predominant, diarrhea-predominant, mixed/alternating
- Often associated with significant abdominal bloating, increased gas
- Frequently exacerbated by stress or certain foods
- Primarily a diagnosis of exclusion currently, likely specific pathophysiology occurring which has not yet been uncovered
 - Organ hypersensitivity and abnormal bowel motility
 - Small intestinal bacterial overgrowth
- Treatments aimed at altering diet (avoidance of foods which contain certain types of sugars, low FODMAP diet) and managing stress related symptoms
 - Medications purely aimed at managing symptoms



Vulvodynia

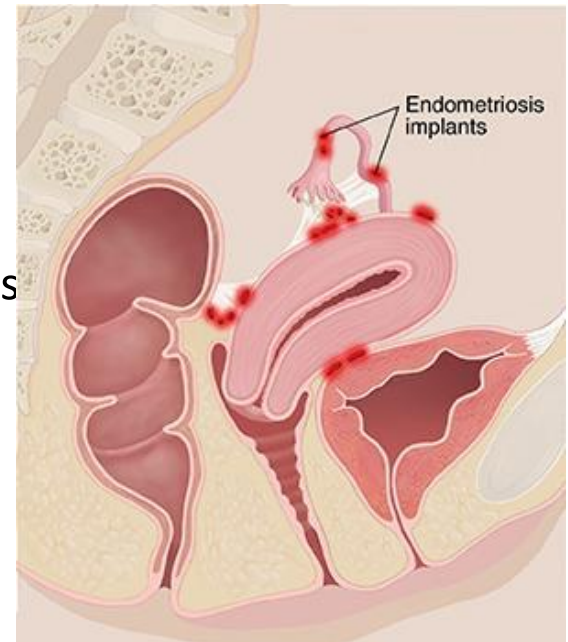
- Sensation of burning, stinging, itchiness, or rawness of the vulva without clear cause
 - Often experience pain with sex/penetration, tight clothing, tampon use
 - May be provoked or unprovoked pain
- Diagnosis of exclusion-rule out infection or other skin disorders
- Cause unknown
- Treatments
 - Topical and oral medications-anesthetics, antidepressants, nerve stabilizing medications
 - Nerve blocks
 - Physical therapy
 - Vestibulectomy-surgically removing the painful tissue



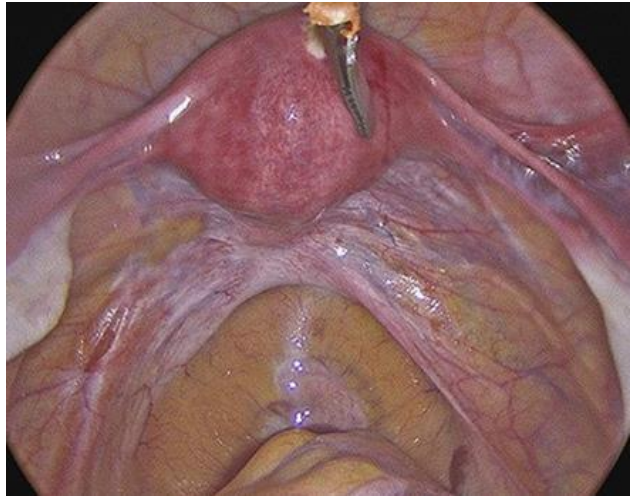
Endometriosis



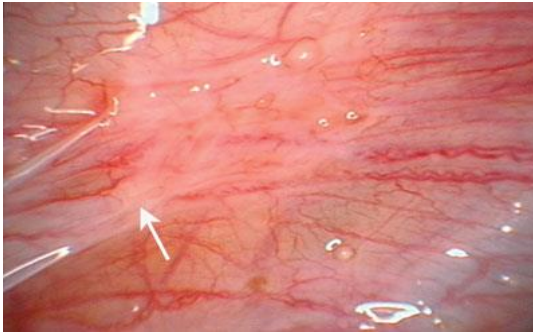
- Occurs in about 10% of women
- Disorder in which tissue similar to that lining the uterus is found in the abdominal cavity
- Responds to natural hormones ☐ acute/chronic inflammation, nerve growth, scarring, infertility
- Symptoms tend to present with or within the first few years after periods begin (cyclic pain with periods or even chronic daily pain)
- Long delay in diagnosis-average 9 years from symptoms
- Severity of pain does not correlate to the amount of disease present
- Treatments
 - Medical-anti inflammatory, hormonal suppression
 - Surgical-laparoscopic excision of lesions (can be extensive including removal of portions of bowel), Hysterectomy and/or removal of ovaries



Endometriosis



normal

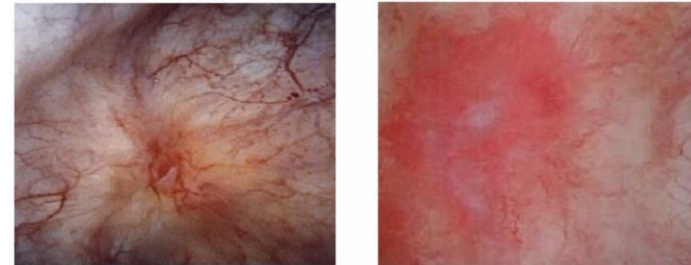


Stage 4

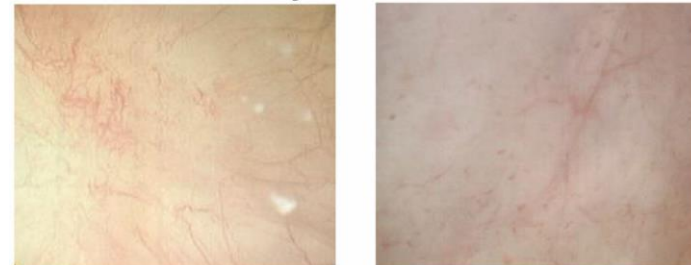
Interstitial Cystitis/Painful Bladder Syndrome

- Condition in which there are unpleasant sensations associated with the bladder or urethra
 - Increased discomfort as bladder fills, frequency including at night, urgency
 - Often evaluated frequently for UTI with negative urine cultures
- Cause unknown
- Another clinical syndrome but likely made up of different subtypes yet to be determined
- Diagnosis of exclusion
- Generally, bladder appears normal on cystoscopy, rarely may see Hunner's lesions (inflamed or ulcerated areas)

Hunner's Lesions

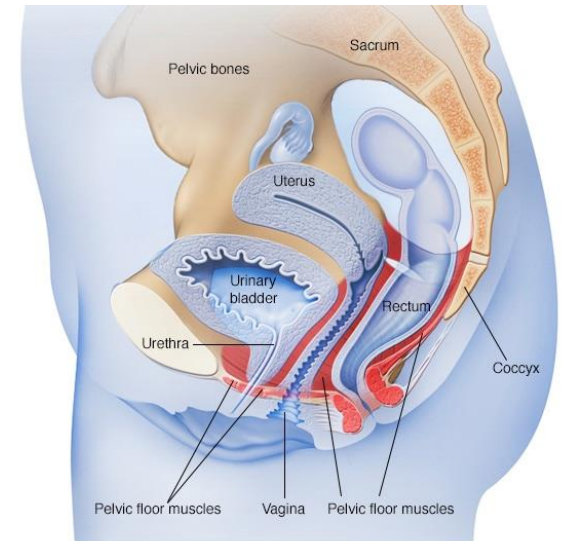


Healthy Bladder Tissue

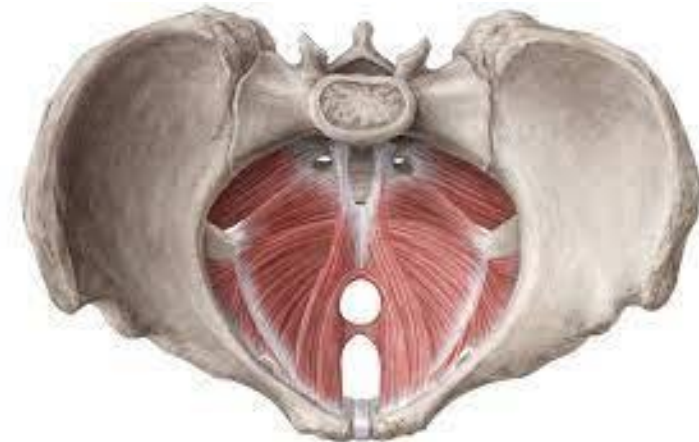


Myofascial Pelvic Pain

- Pain generated by the muscles of the pelvic floor, abdomen, and back
- Often secondary to the previously discussed conditions but may also occur as the initial cause
- Increased tension leads to decreased blood flow and retention of toxic/inflammatory chemicals within muscles
- Diagnosed via physical examination-palpation of muscles (generally should be non-tender)
- Treatment
 - Adequate management of underlying conditions
 - Physical therapy (internal/pelvic floor PT)-often requires long duration
 - Muscle relaxants
 - Botox injections



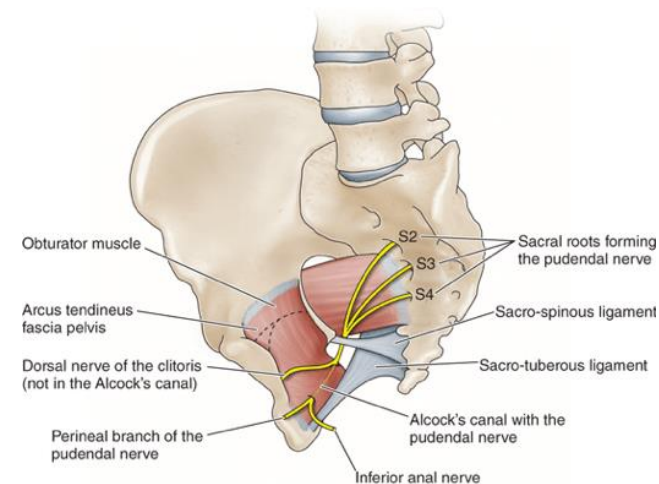
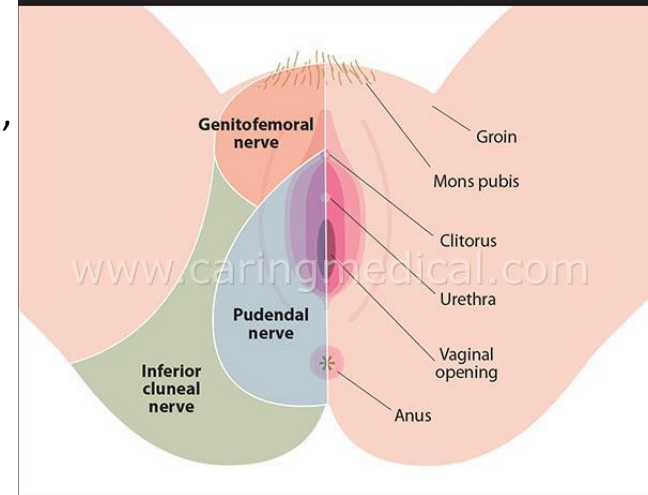
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Pudendal Neuralgia

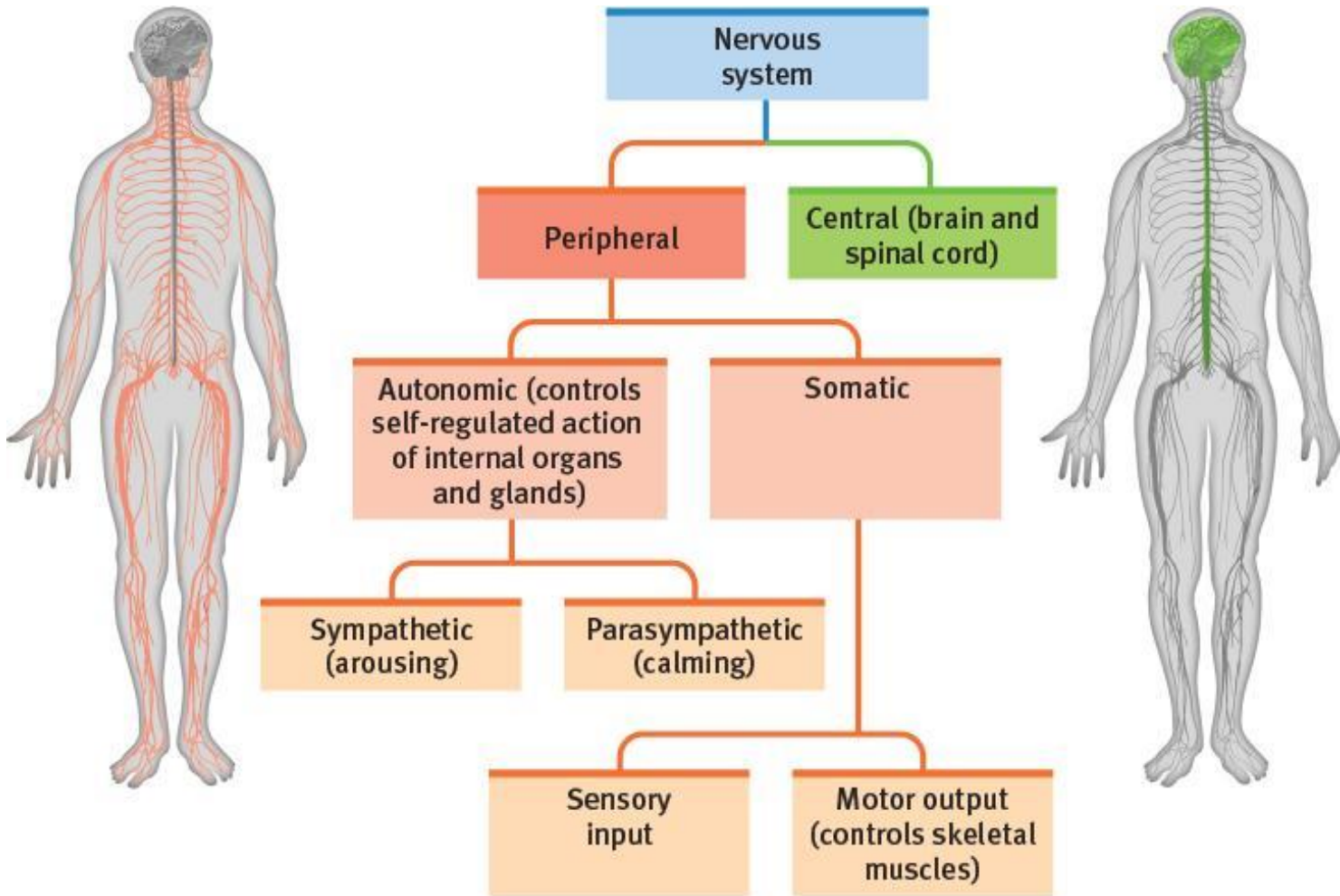
- Neuropathic pain condition affecting the pudendal nerve
 - Unrelenting burning/tingling sensation in the clitoris, vulva/labia, rectum in women; penis, scrotum, rectum in men
 - May have sensation of something stuck within vagina or rectum
 - Typically worse with sitting and progressive throughout the day, doesn't awaken them from sleep
- Causes include surgical entrapment of nerve, prolonged pressure (cycling, long car ride, *sitting during pandemic*), injury/stretching of nerve during childbirth/falls, muscle spasm/muscular entrapment of nerve
- Treatments
 - Avoidance of triggers-donut seats, sit/stand desks
 - Nerve blocks, nerve medications
 - Physical therapy
 - Surgical nerve decompression

Nerves of the female pelvic floor. For the most part, the pudendal nerve supplies the vagina. Compression of this nerve, the genitofemoral nerve, or the inferior cluneal nerves, can cause chronic vaginal pain.

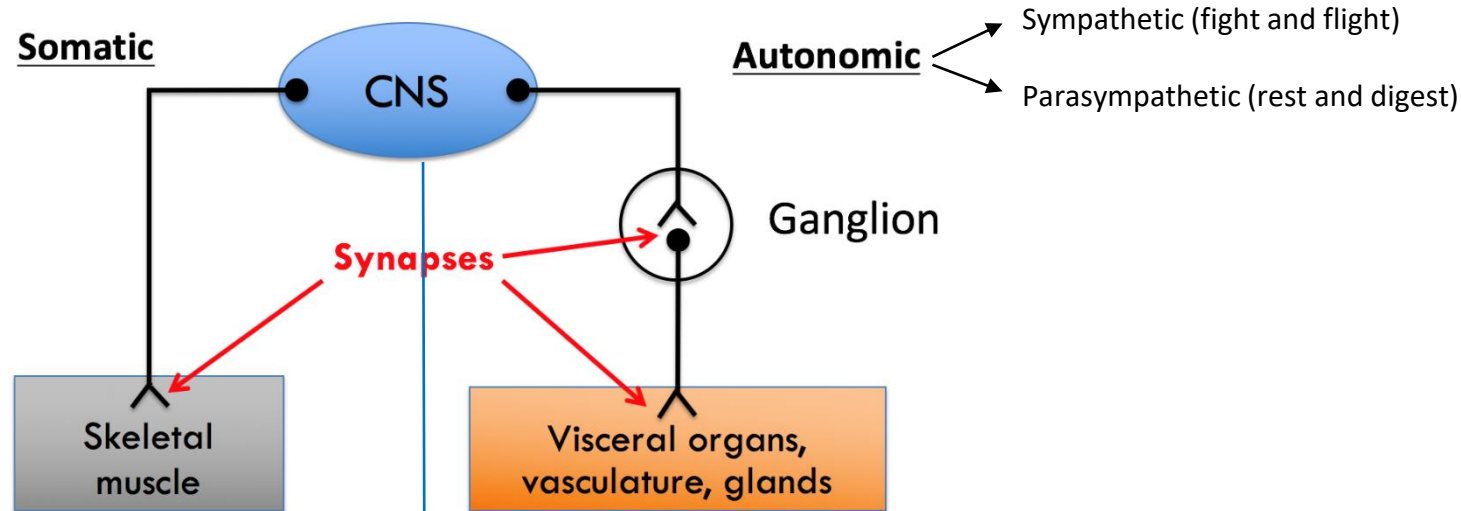


Physiology of pain

Nervous System



Physiology of Pain



- Somatic

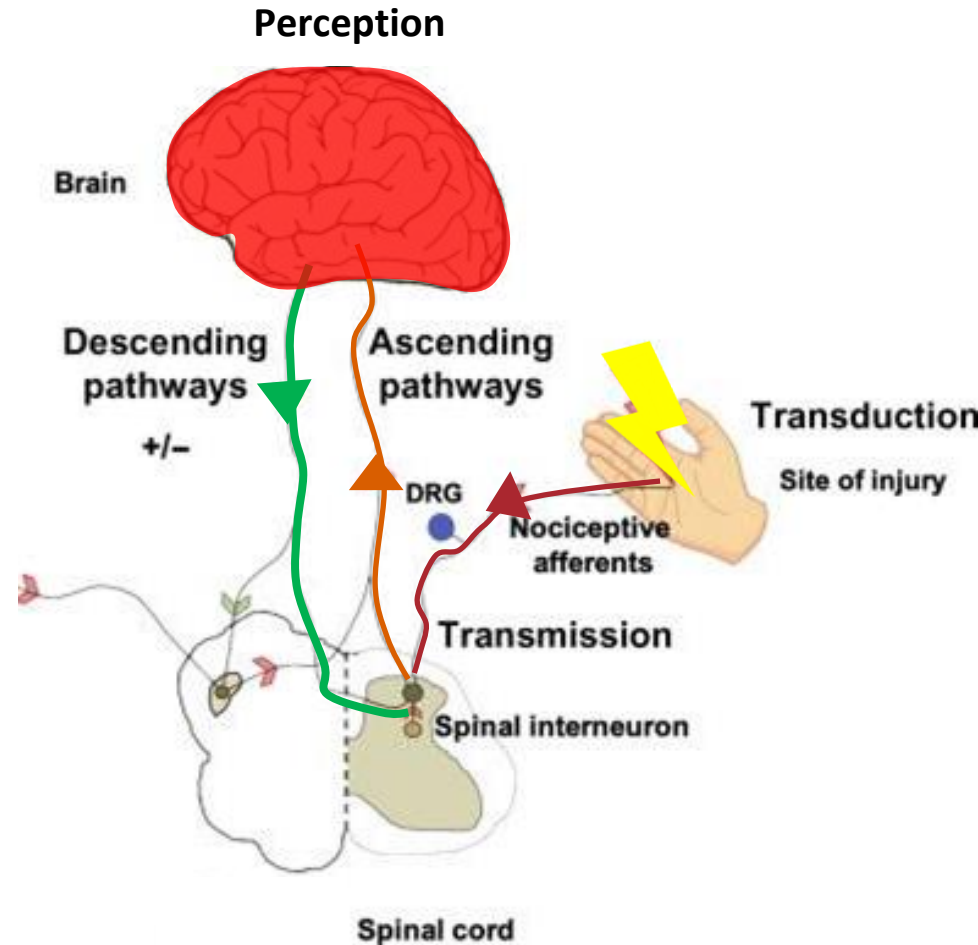
- Information from skin, skeletal muscle, joints
- Travels along a single nerve
- Results in specific localization to site of injury

- Visceral/Autonomic

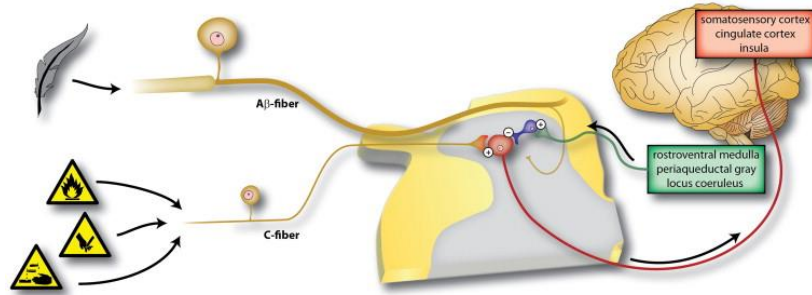
- Information from smooth muscle of hollow organs and peritoneum
- Mediated through sympathetic and parasympathetic divisions
- Extensive divergence results in poorly localized pain, non-specific/tough to describe
- May be associated with vegetative symptoms (sweating, nausea, heart rate changes)

Acute Pain

- Noxious (painful) stimuli induce the physiologic processes meant to signal a problem and protect us from further injury
- Multiple steps of pain processing:
 - Transduction
 - Transmission
 - Perception
 - Modulation



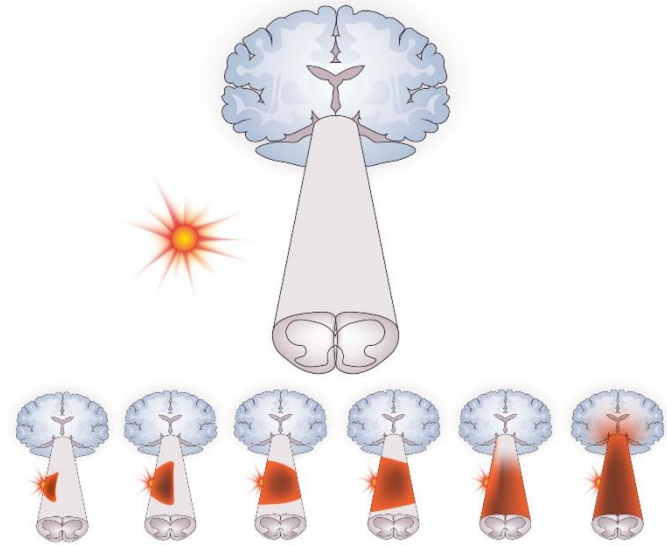
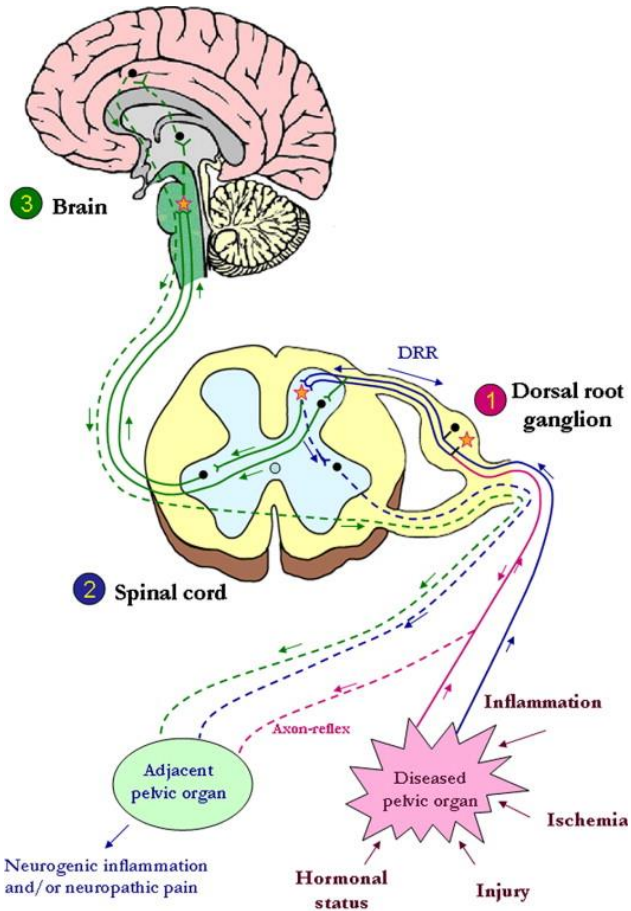
Acute pain



- Primary hyperalgesia
 - Tissue damage \square increased pain perception in injured area
- Peripheral sensitization
 - Uninjured area surrounding injury also becomes increasingly sensitive to both touch and pressure
- Processes are meant to serve as a protective mechanism to minimize use of the injured area and allow healing
- Once healing occurs, the system reverts to its pre-injured state

Central sensitization

MECHANISM OF CENTRAL SENSITIZATION



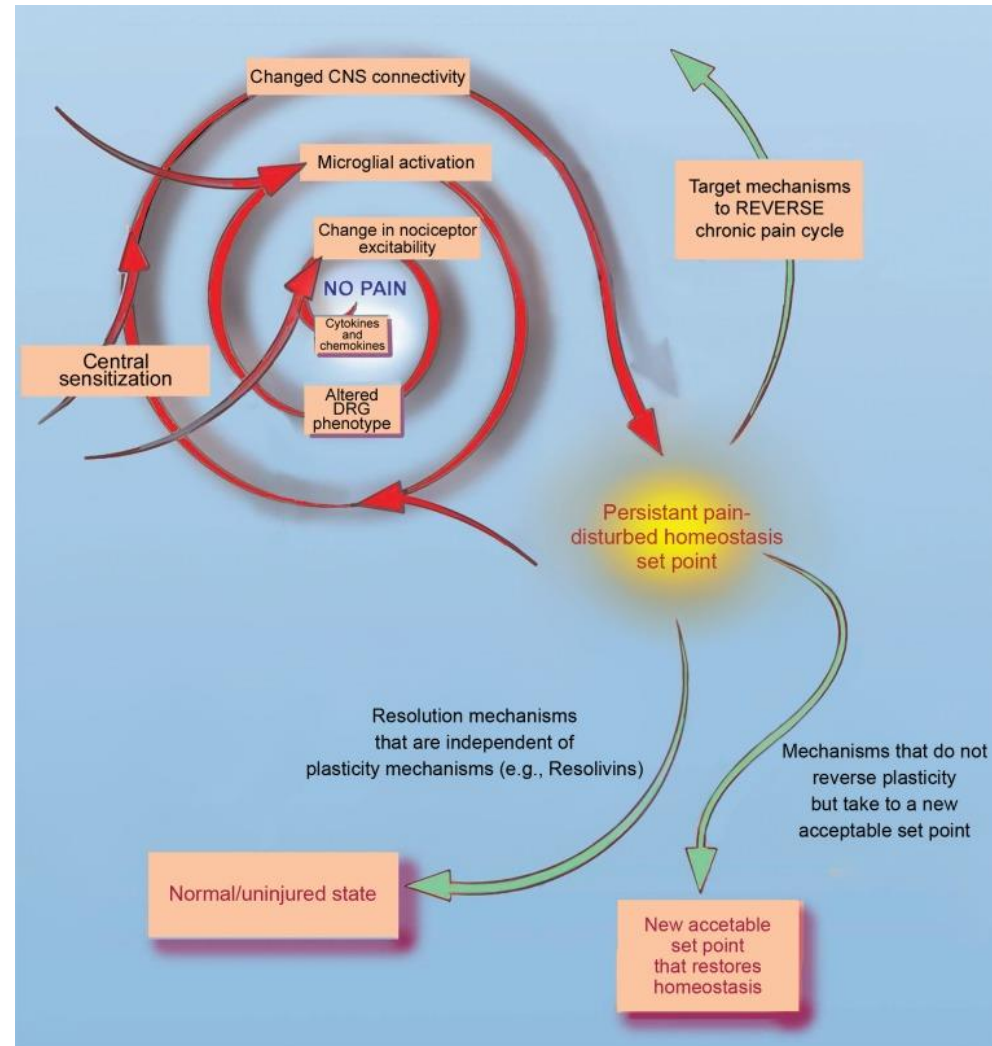
Shoulder pain
Lower limb tendinopathies

Chronic low back pain
Nontraumatic neck pain
Postcancer pain
Paediatric pain
Osteoarthritis
Rheumatoid arthritis
Persistent postsurgical pain
Ehlers-Danlos syndrome
Upper extremity tendinopathies
Visceral pain

Fibromyalgia
Traumatic neck pain
Chronic fatigue syndrome
Tension-type headache
Migraine
Temporomandibular disorders
Chronic pelvic pain

Chronic pain

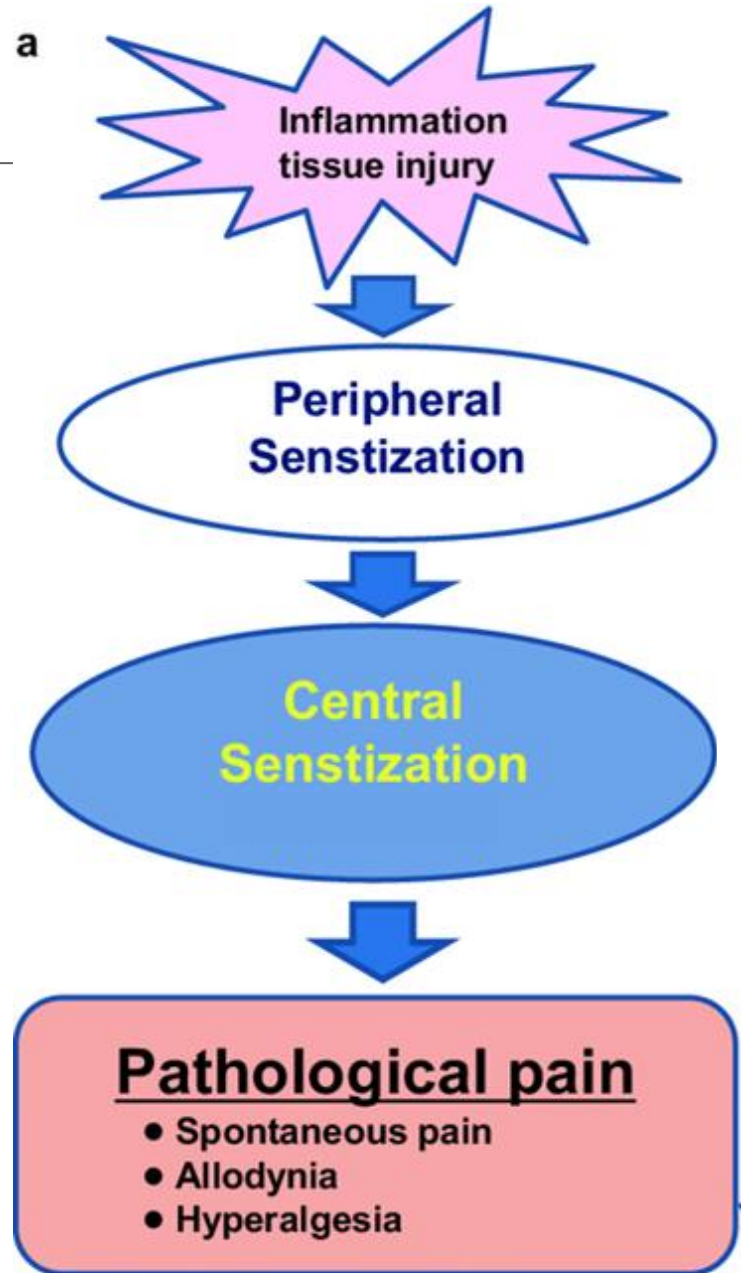
- Maladaptation of the acute pain system
- Pain itself changes how the peripheral and central nervous systems function
- Chronic pain is NOT long-lasting acute pain
- It is its own unique “disease”



Chronic Pain

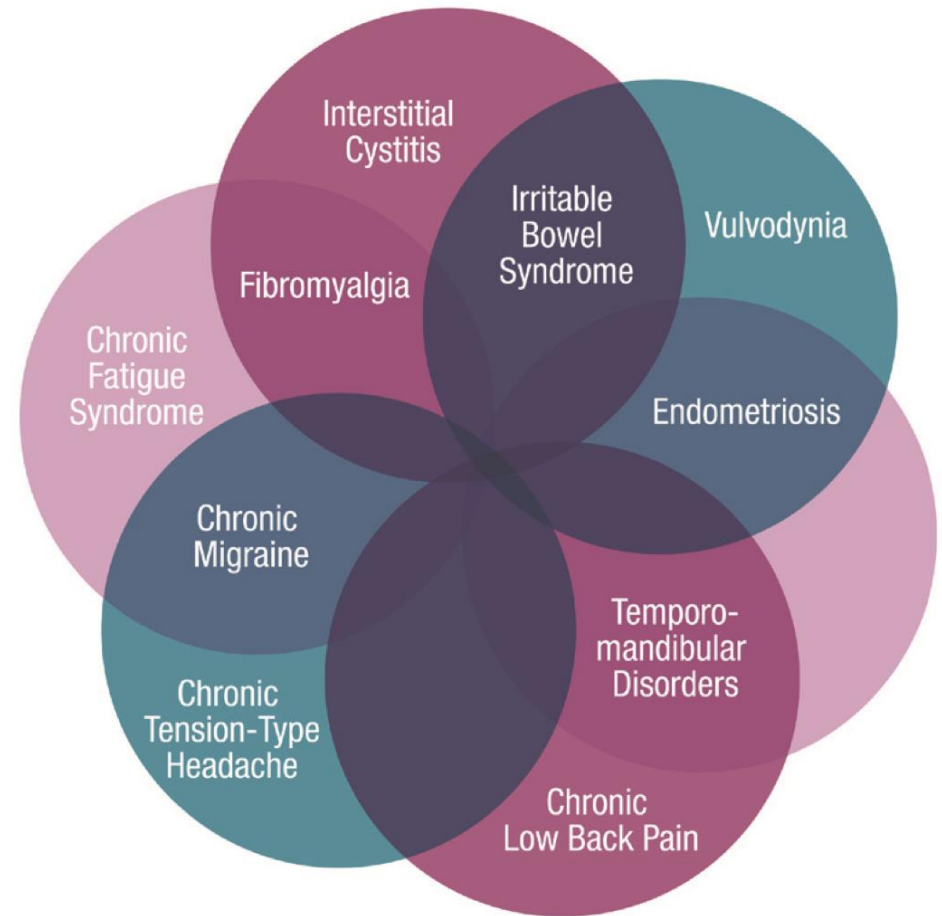


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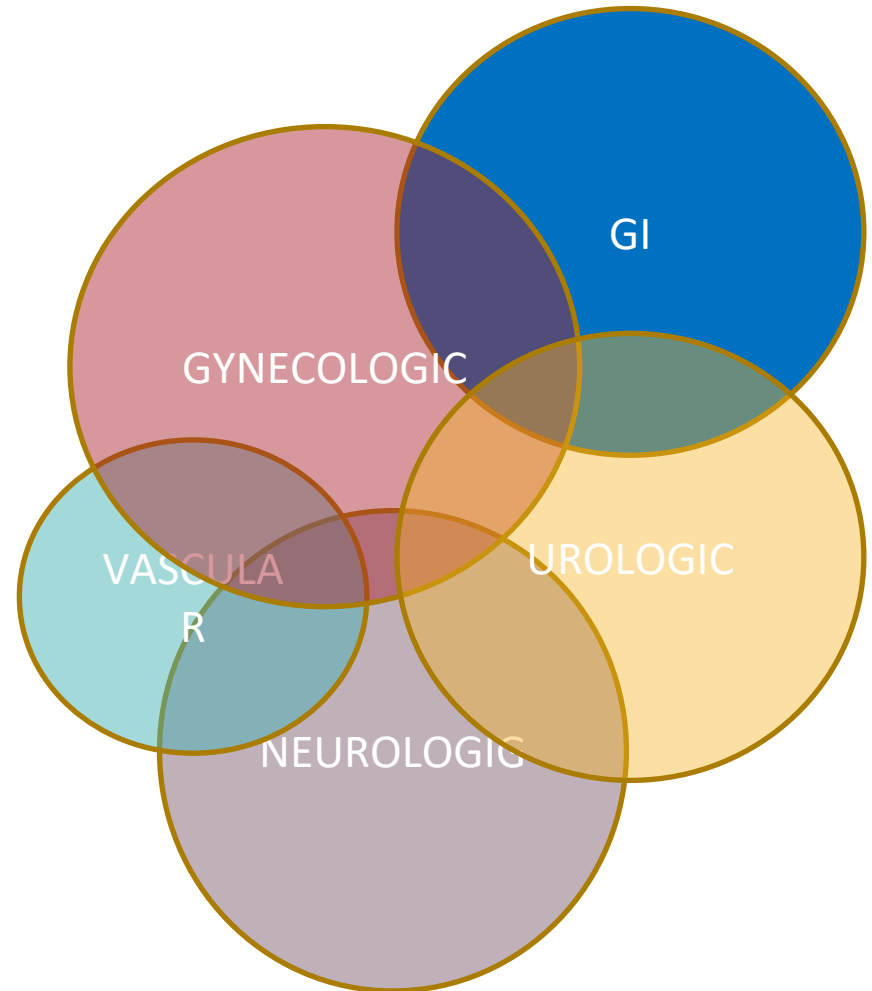
What is unique about pelvic pain?

- Increased frequency of chronic overlapping pain conditions
- Effect on visceral (organ) systems
 - Bowel
 - Bladder
 - Reproductive/Sexual organs
- Recurrent nature of pain
- Psychological impact may be greater due to the effect on intimate functions



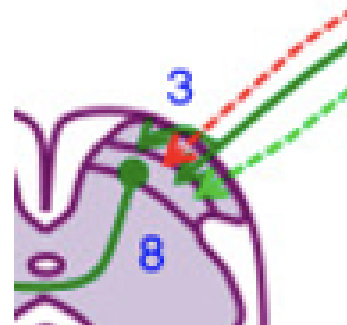
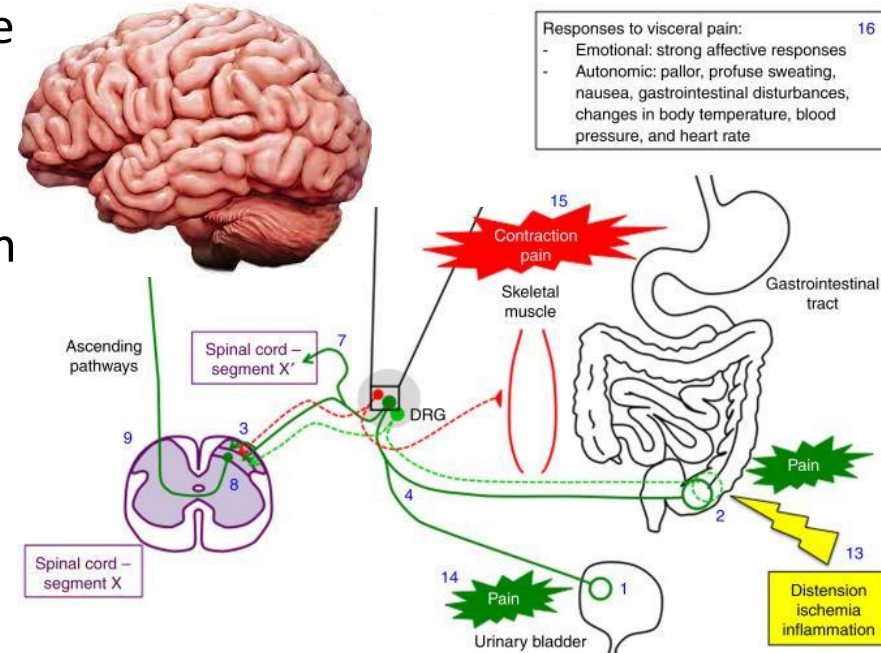
Etiologies of CPP

- CPP is an end symptom of various insults/disorders
- Typically the result of multiple overlapping pain conditions with each contributing to the state of pain
- Issues in one organ system affect the function of other organs



Visceral hypersensitivity

- Visceral organs are typically do not have sensation
- Increased stimulation of these structures leads to increased perception
- Organ cross talk
 - Viscerovisceral convergence
 - Organ to organ
 - Viscerosomatic convergence
 - Organ to muscle
 - Abdominal myofascial pain or pelvic floor myofascial tension/pain



Differential Diagnosis

Table 1. Some of the Diseases That May Be Associated With Chronic Pelvic Pain in Women

Gynecologic	Gastrointestinal
Extruterine	Carcinoma of the colon
Adhesions	Chronic intermittent bowel obstruction
Adnexal cysts	Colitis
Chronic ectopic pregnancy	Constipation
Chlamydial endometritis or salpingitis	Diverticular disease
Endometriosis	Hernias
Endosalpingiosis	Inflammatory bowel disease
Neoplasia of the genital tract	Irritable bowel syndrome
Ovarian retention syndrome (residual ovary syndrome)	Musculoskeletal
Ovarian remnant syndrome	Abdominal wall myofascial pain (trigger p
Ovarian dystrophy or ovulatory pain	Chronic coccygeal pain
Pelvic congestion syndrome	Compression of lumbar vertebrae
Postoperative peritoneal cysts	Degenerative joint disease
Residual accessory ovary	Disk herniation or rupture
Subacute salpingo-oophoritis (chronic PID)	Faulty or poor posture
Tuberculous salpingitis	Fibromyositis
Uterine	Hernias: ventral, inguinal, femoral, Spigel
Adenomyosis	Low back pain
Atypical dysmenorrhea or ovulatory pain	Muscular strains and sprains
Cervical stenosis	Neoplasia of spinal cord or sacral nerve
Chronic endometritis	Neuralgia of iliohypogastric, ilioinguinal, &
Endometrial or cervical polyps	genitofemoral nerves
Intrauterine contraceptive device	Pelvic floor myalgia (levator ani spasm)
Leiomyomata	Piriformis syndrome
Symptomatic pelvic relaxation (genital prolapse)	Rectus tendon strain
Urological	Spondylosis
Bladder neoplasm	Other
Chronic urinary tract infection	Abdominal cutaneous nerve entrapment i
Interstitial cystitis	Abdominal epilepsy
Radiation cystitis	Abdominal migraine
Recurrent, acute cystitis	Bipolar personality disorders
Recurrent, acute urethritis	Depression
Stone/urolithiasis	Familial Mediterranean fever
Uninhibited bladder contractions (detrusor dyssynergia)	Neurologic dysfunction
Urethral diverticulum	Porphyria
Urethral syndrome	Shingles
Urethral caruncle	Sleep disturbances
	Somatic referral

PID = pelvic inflammatory disease.

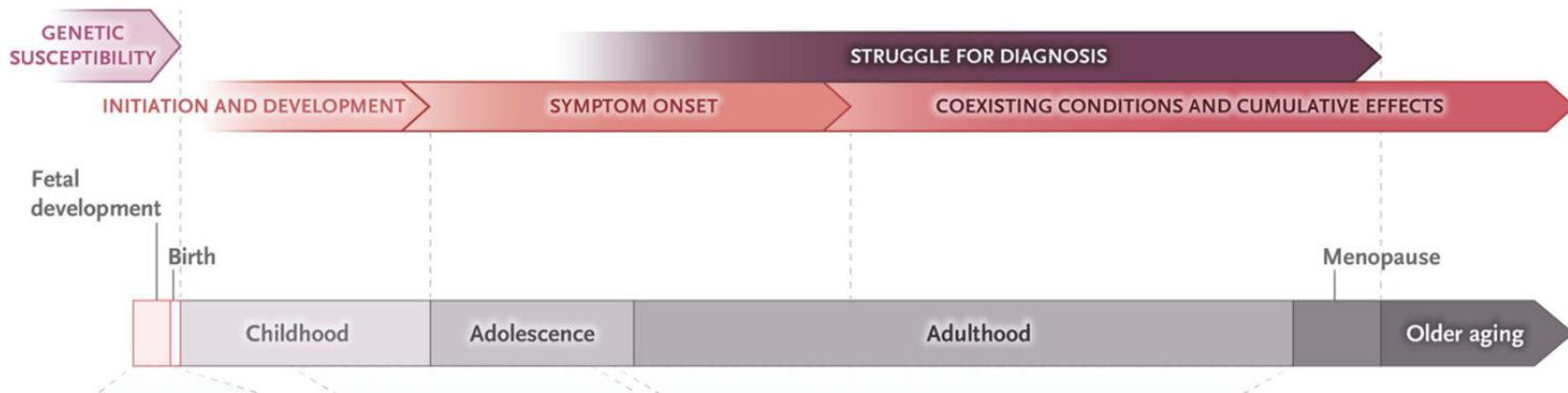
Many conditions
can cause or
contribute to
chronic pelvic pain



Factors contributing to the development of chronic pain and disability

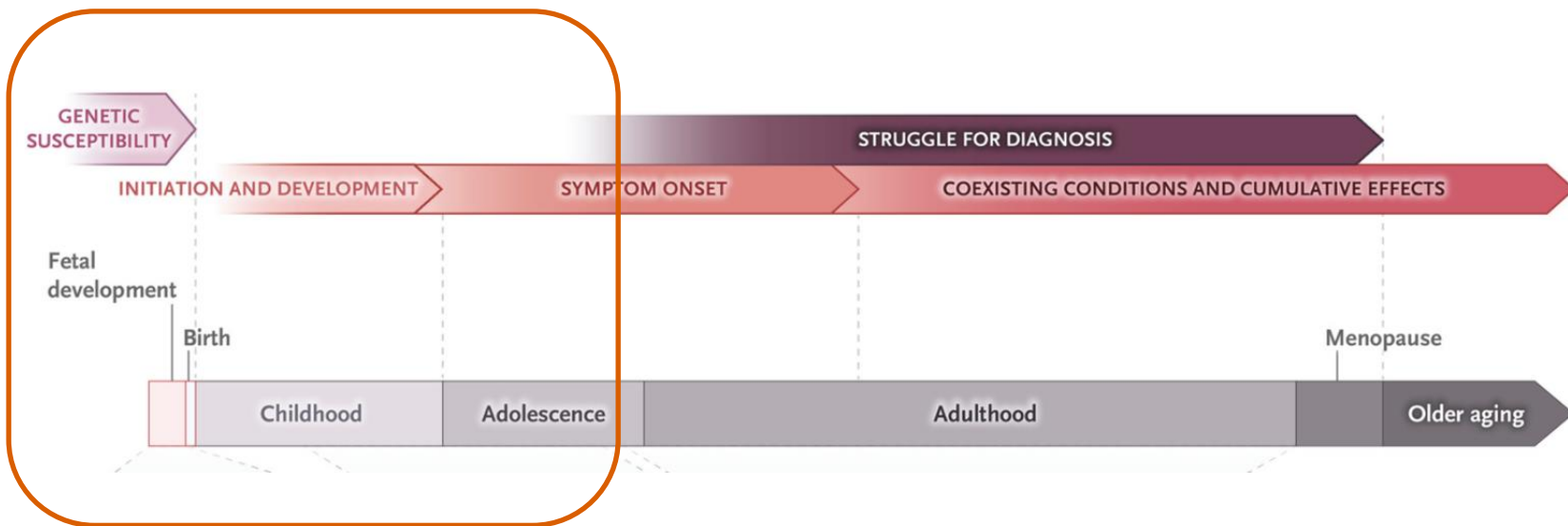
Development of pain and disability

- Genetic and epigenetic factors
- Adverse childhood events
- Dismissal of symptoms
- Delay in diagnosis



Development of pain and disability

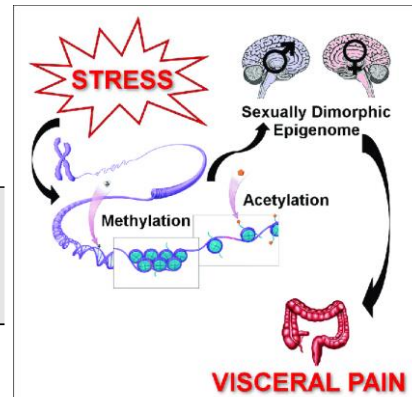
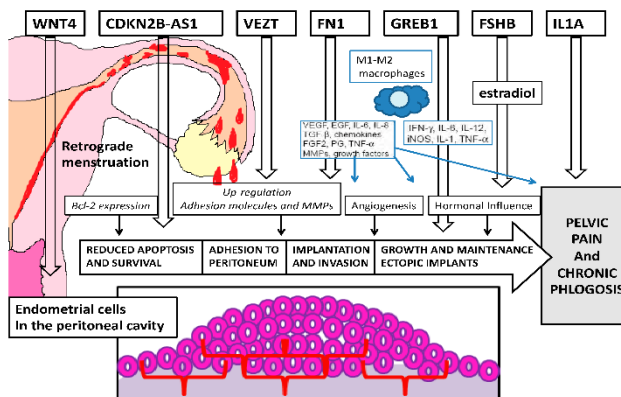
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Genetic and Epigenetic Factors

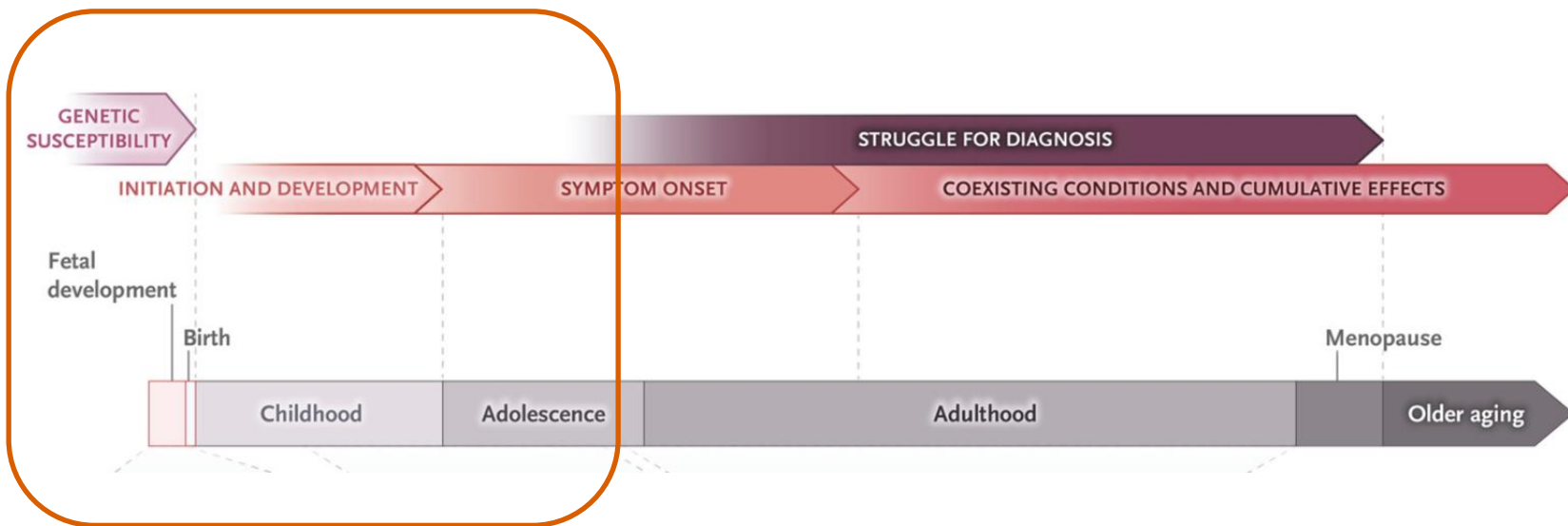
Our genes

How our environment/exposure affects our genes



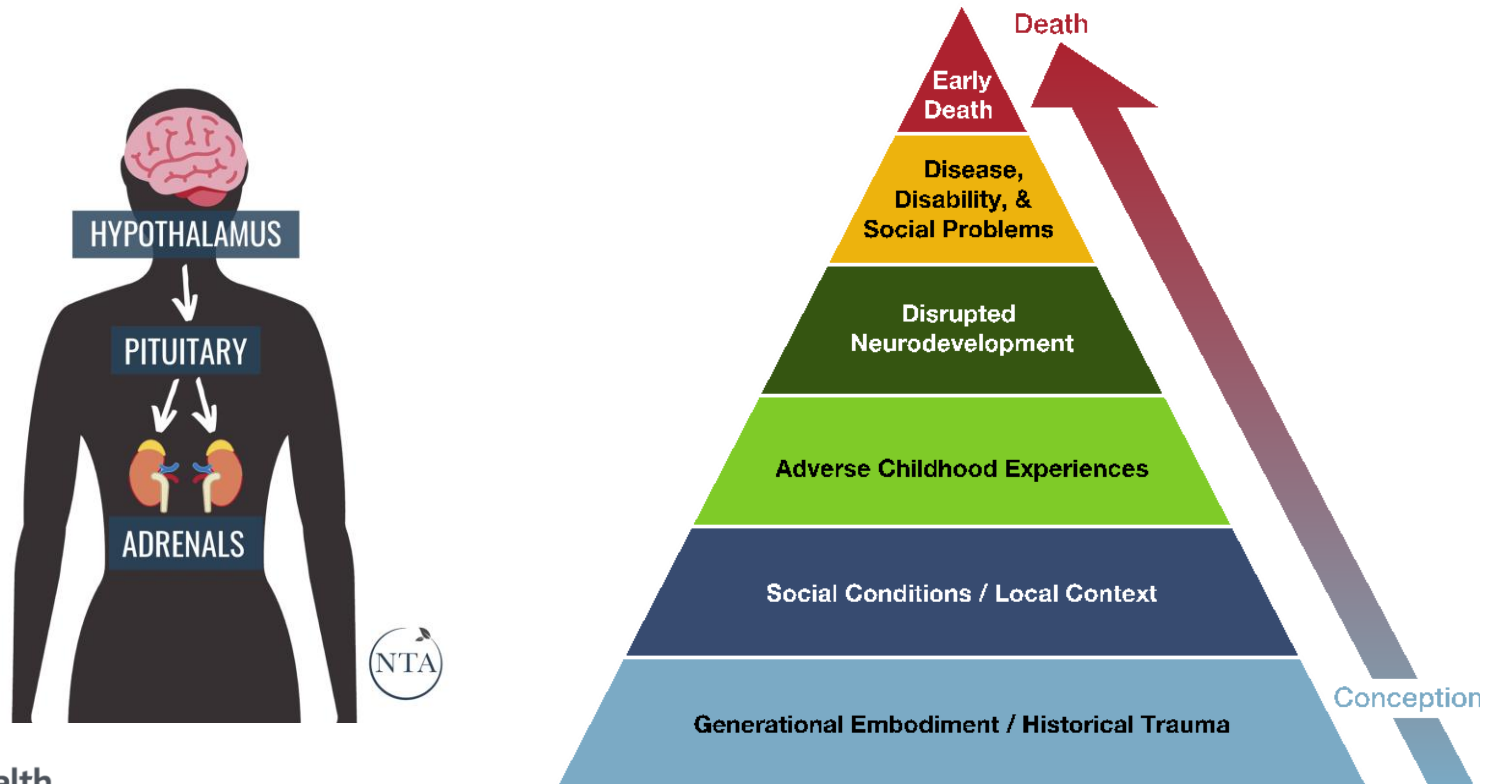
Development of pain and disability

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Adverse childhood events and CPP

- Stressful events experienced in early life can dramatically alter the functioning of the HPA axis which regulates the stress response and influences the perception of pain



Adverse childhood events and CPP

Table 3. Adverse Childhood Experiences by Category

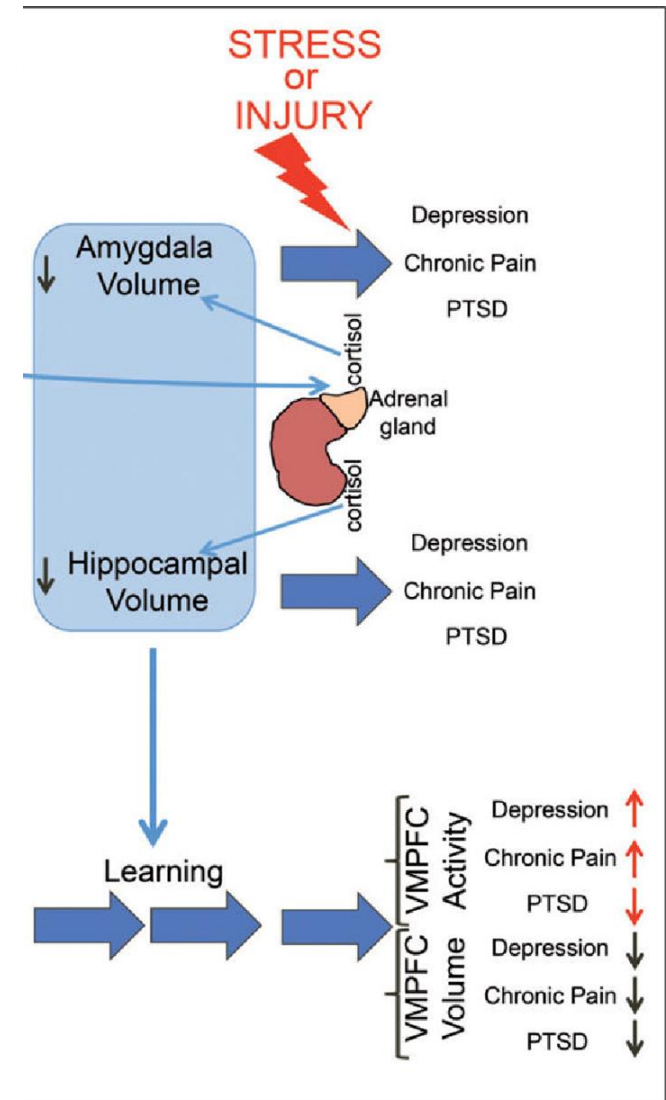
Characteristic	Chronic Pelvic Pain Group	Control Group	OR (95% CI)	P
ACEs by category				
Abuse				
Physical	26 (43)	9 (15)	4.3 (1.8–10.4)	.001
Emotional	37 (62)	20 (33)	3.2 (1.5–6.8)	.003
Sexual	33 (55)	14 (23)	4.0 (1.8–8.8)	<.001
Household Challenges by Category				
Substance use disorder	27 (45)	15 (25)	2.5 (1.1–5.3)	.035
Mental illness	21 (35)	18 (30)	1.3 (0.6–2.7)	.70
Witnessed domestic violence	21 (35)	5 (8)	5.9 (2.1–17.1)	<.001
Incarcerated household member	6 (10)	6 (10)	1 (0.3–3.3)	1.00
Parental separation or divorce	29 (48)	18 (30)	2.2 (1.0–4.6)	.06

OR, odds ratio; ACEs, adverse childhood experiences.

P values for binary data (ACEs) are based on two-tailed Fisher exact test.

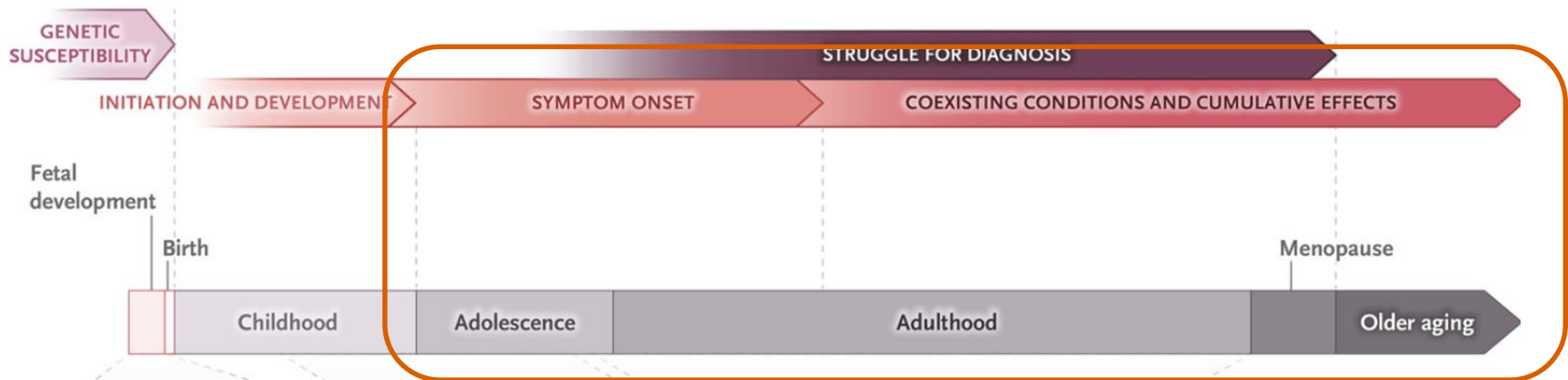
CPP patients commonly report

- Stress-related symptom onset or increase in intensity
- Difficulty coping with stressful situations
- Depression, anxiety, and panic disorders



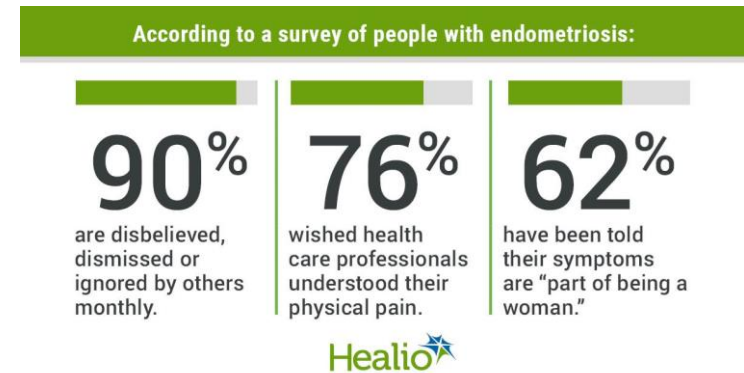
Development of pain and disability

- Genetic and epigenetic factors
- Adverse childhood events
- Dismissal of symptoms
- Delay in diagnosis



Dismissal of symptoms

- Patients/Family/Friends
 - Assuming symptoms are normal
 - Female family members had similar pain symptoms
 - Considering symptoms to be tolerable
 - Feeling embarrassed or afraid/Thinking providers would not offer help
 - Having limited resources/avoid seeking care in general
 - Lack of medical knowledge
 - Discomfort discussing GU/reproductive health



- Providers
 - Lack of medical knowledge regarding these conditions
 - Discomfort discussing GU/reproductive health

Dismissal of symptoms

- Depression
- Anxiety
- Shame
- Loss of trust in providers

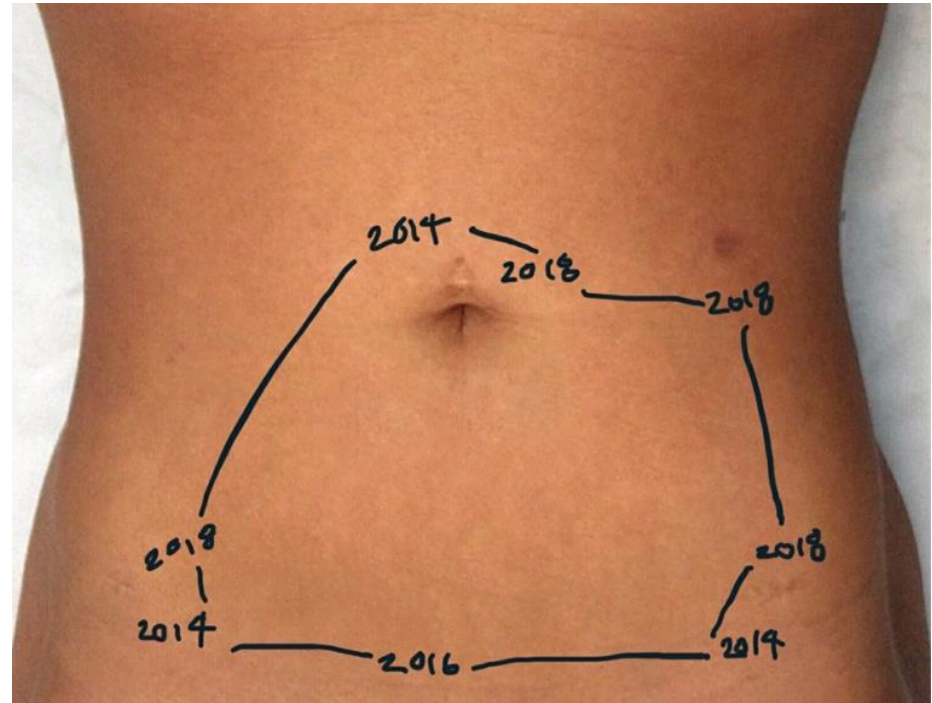


Development of pain and disability

- Ineffective treatments

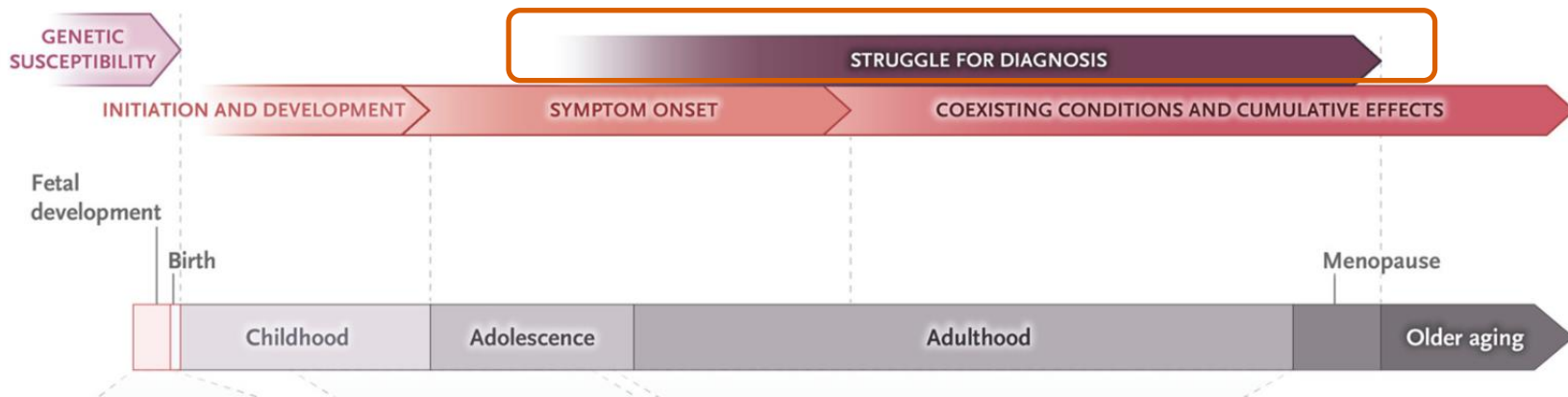


- Repetitive surgeries, procedures

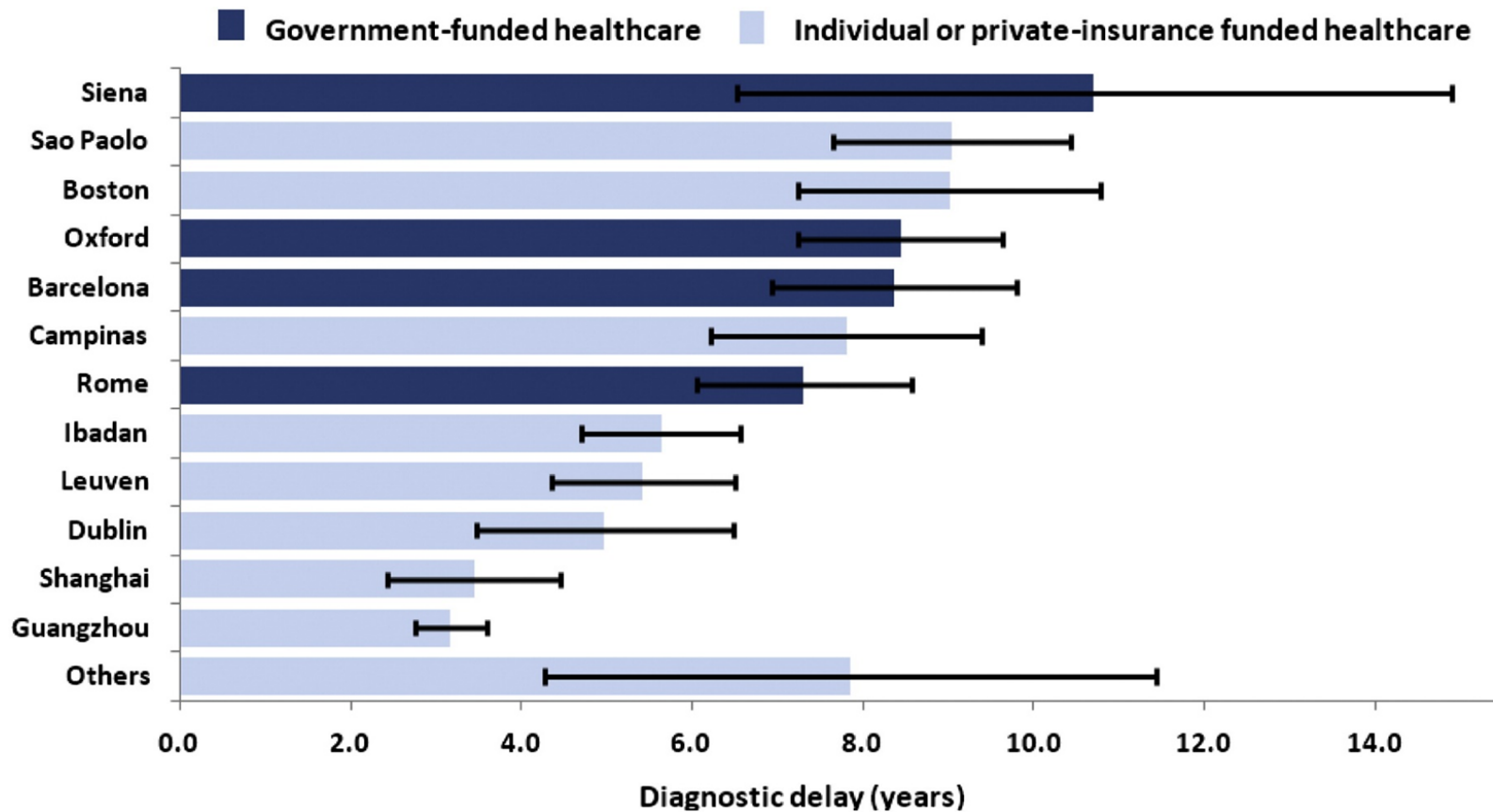


Development of pain and disability

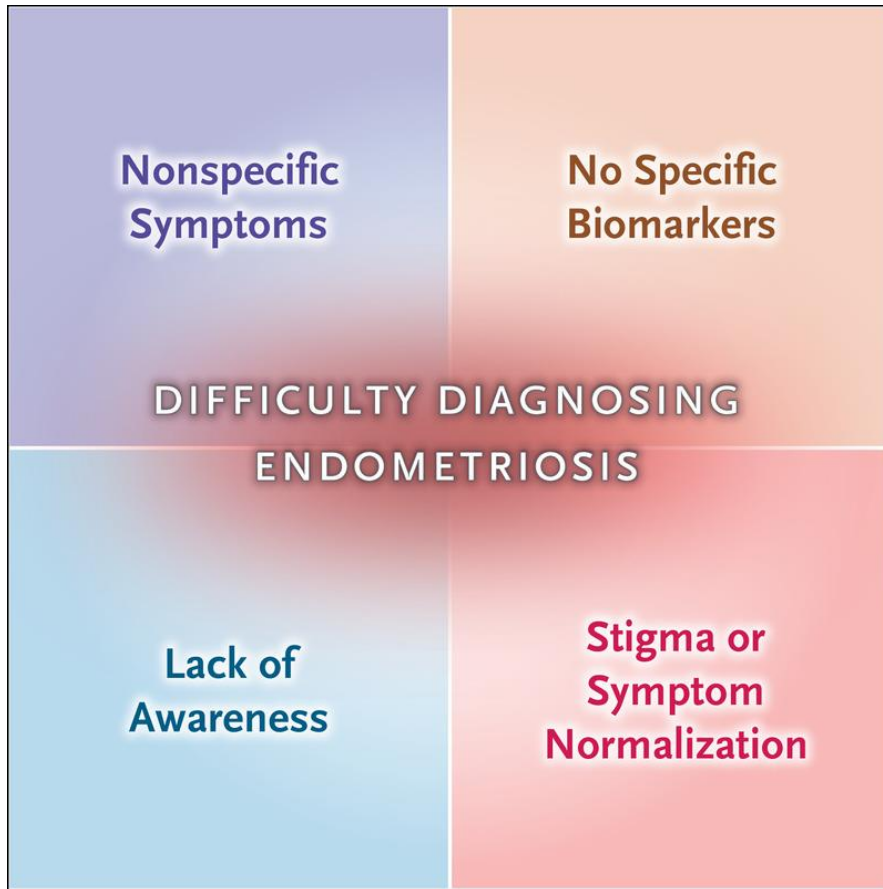
- Genetic and epigenetic factors
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Delay in diagnosis

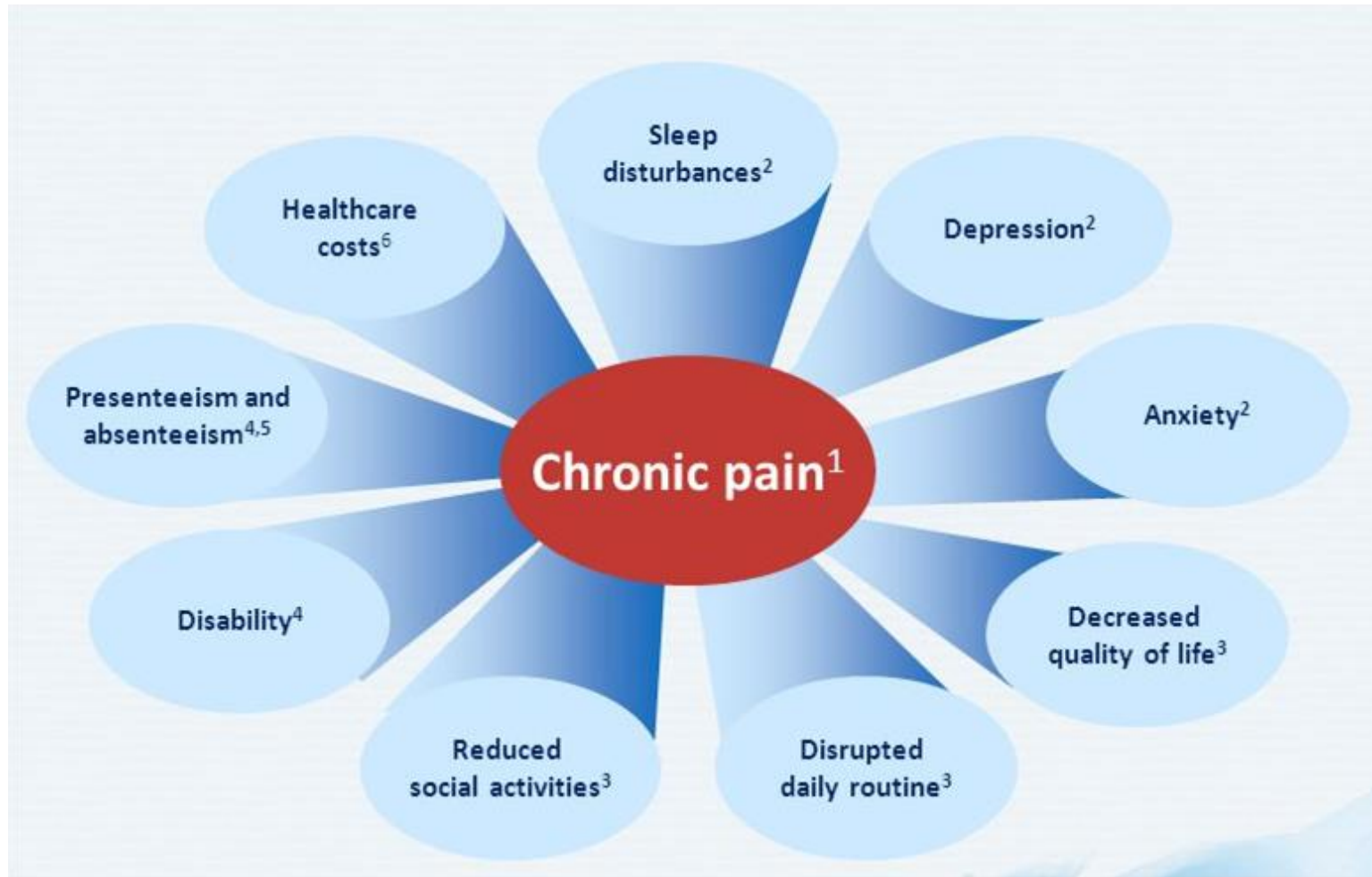


Delay in diagnosis



Lifetime effects of chronic pelvic pain

The web of chronic pain



Quality of life

- Physical
- Reproductive ability and Sexual Intimacy
- Psychological
- Social
- Financial/ Employment

“It has an impact in every aspect of your life”.

“Living with it, it does affect me. Nearly every day I feel it”.

“Overall endometriosis has made me live a very solitary life”.

Table 3

Most highlighted impact of endometriosis for the different age groups

Age group	Group1 (16–24 years)	Group2 (25–34 years)	Group3 (35 and above years)
Similarities	1- Social life	1- Marital/Sexual relationship	1- Physical impact
	2- Marital/Sexual relationship	2- Psychological impact	2- Marital/Sexual relationship
	3- Physical impact	3- Physical impact	3- Psychological impact
	4- Psychological impact	4- Social life	4- Social life
Differences	• Education	• Life opportunities • Employment	• Financial impact

Physical

- *“I think I was about 14 years old when I (first) had the symptoms... Lots of pain and I couldn’t move. There was always constant pain. I didn’t have a day without pain. I used to have days off because of it. I just sat there and could not move, and I cried”.*

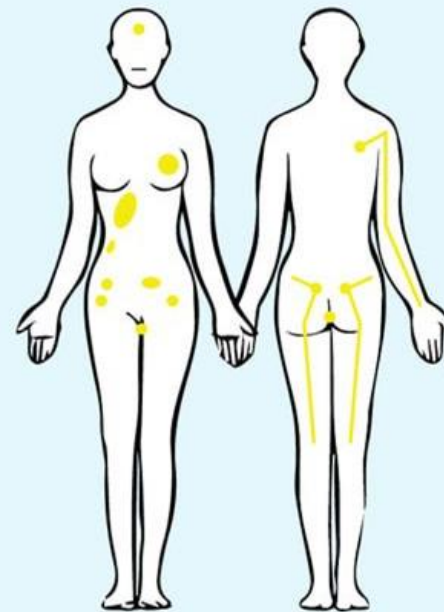
Cycle Signs and Symptoms that could be associated with Endometriosis

% Overall
76 : PMS
70 : Breast Pain
61 : Migraines
76 : Brain Fog
82 : Mood Swings
80 : Anxiety
95 : Fatigue
63 : Insomnia
60 : Night Sweats
57 : Feeling Cold

% Reproductive
93 : Cycle Pain
84 : Ovulation Pain
52 : Irregular Cycles
56 : Irregular Bleeding
63 : Blood Clots
79 : Painful Sex
39 : Infertility

% Digestive
84 : Pain with Bowel
83 : Diarrhea / Constipation
67 : Nausea / Vomiting

Urinary
60 : Frequent Urgency
48 : Urinary Pain



EndoStats.com

% Thoracic
35 : Chest Pain
36 : Shortness of Breath
29 : Rapid Heartbeat
38 : Shoulder Pain
50 : Up Abdominal Pain
34 : Pain Lying Down
46 : Dizziness
05 : Pneumothorax
(collapse lung)
02 : Pleural Effusion
03 : Coughing Up Blood

% Sciatic
81 : Low Back Pain
65 : Pain Down Leg/Knees

% Immune System
50 : Seasonal Allergies
52 : Food Intolerance

% Nutrient Deficiency
18 : Low Blood Sugar
19 : Low Magnesium
47 : Low Iron

651

Patient driven online survey
2/15/17 : 5/15/17

It feels like...

Stabbing hot knives in my rectum - Laura

a hot poker blade stabbing and slicing me - Monyca

a knife inside my butt trying to stab its way out my butt cheek - Elizabeth

Some days, a hard catwalk across my abdomen in kitten heels...other days, the crazy wench goes sadistic and breaks out 6" spiked platforms -Kristin

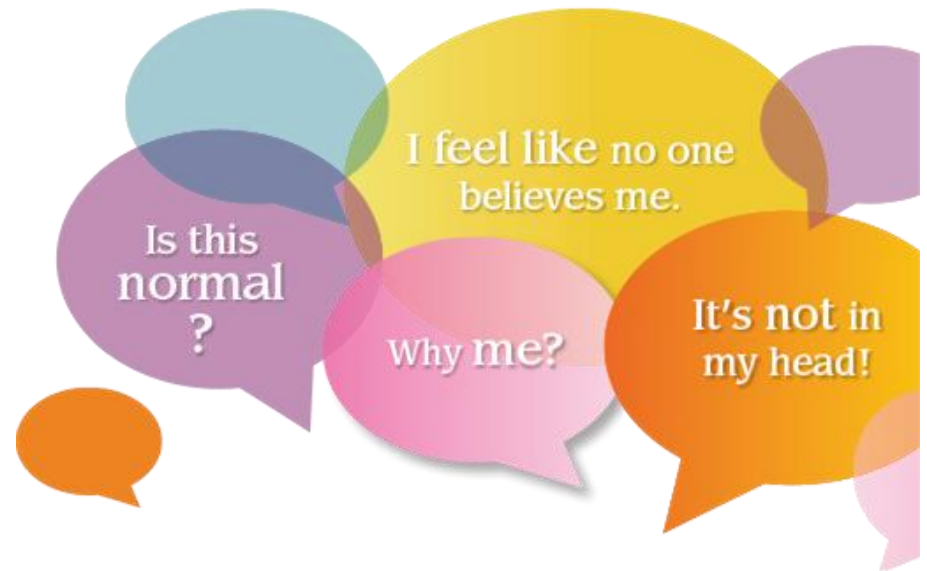
Reproductive ability and sexual intimacy



- *“I started to worry when my ex-partner and I got together and the pain during and after sex just got [so] bad that I would just lay in a fetal position for hours afterwards. It got progressively worse to the point where I would actually be crying during and after sex”.*

Psychological effects

- *“I don't have a life because of my pain.”*
- *“I worry that I'm always letting my partner down.”*
- *“I'm missing out on time with my children. I feel like an absent parent.”*
- *“I've been to so many doctors over the years. No one could figure out what was going on. They basically told me it was all in my head.”*



Social

- Isolation
- Loss of identity
- Shift in family roles



- *“I don’t tend to socialize and keep to myself because of pain and bleeding. As a result, I have missed out on travel, concerts, weekends away and school/university events etc”.*
- *“...it’s stressful and you’re angry and I guess that’s the point where it can affect your relationships with people more seriously”*

Economic Impact

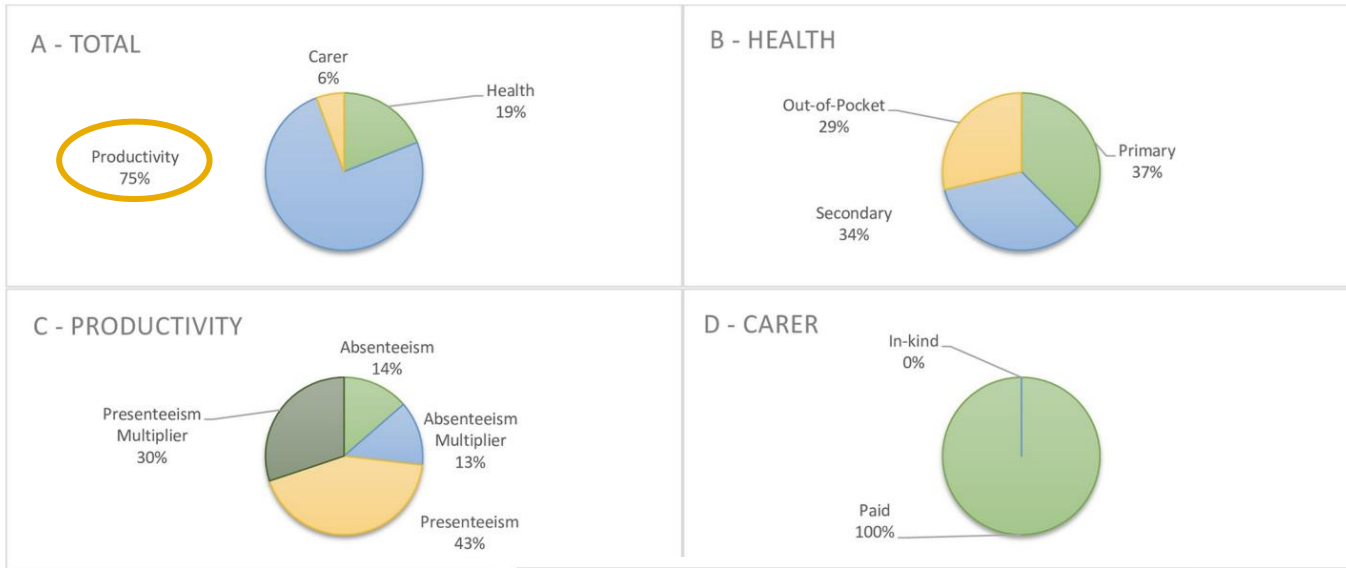


Fig 2. Cost breakdown for women with CPP.

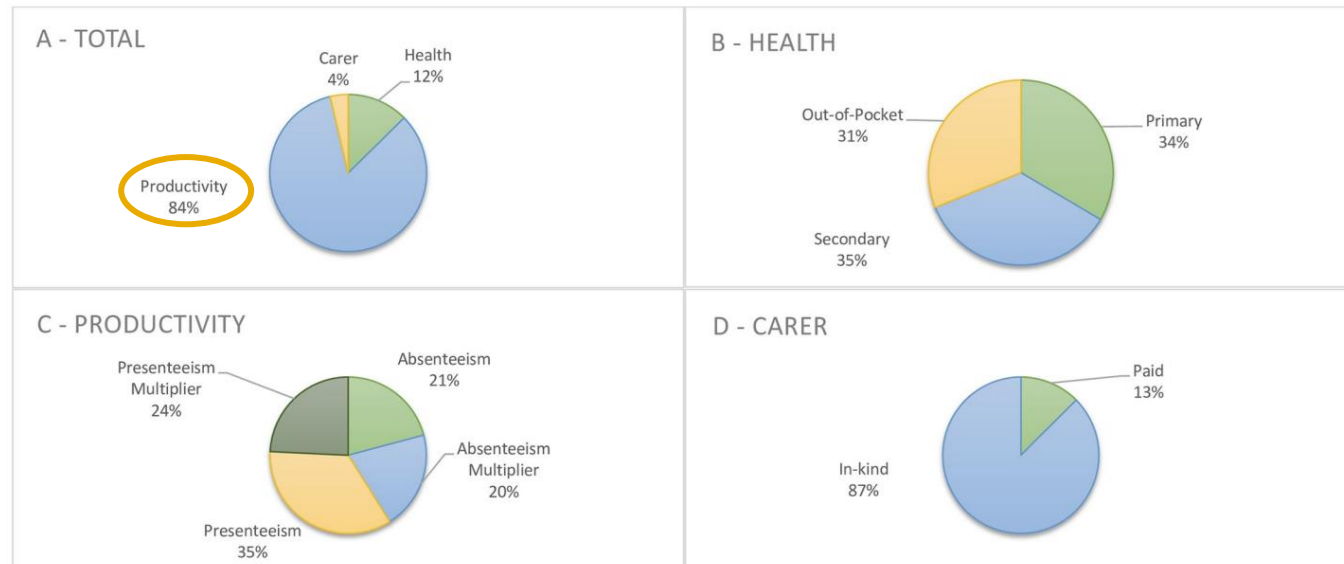


Fig 1. Cost breakdown for women with a diagnosis of endometriosis.

Economic impact

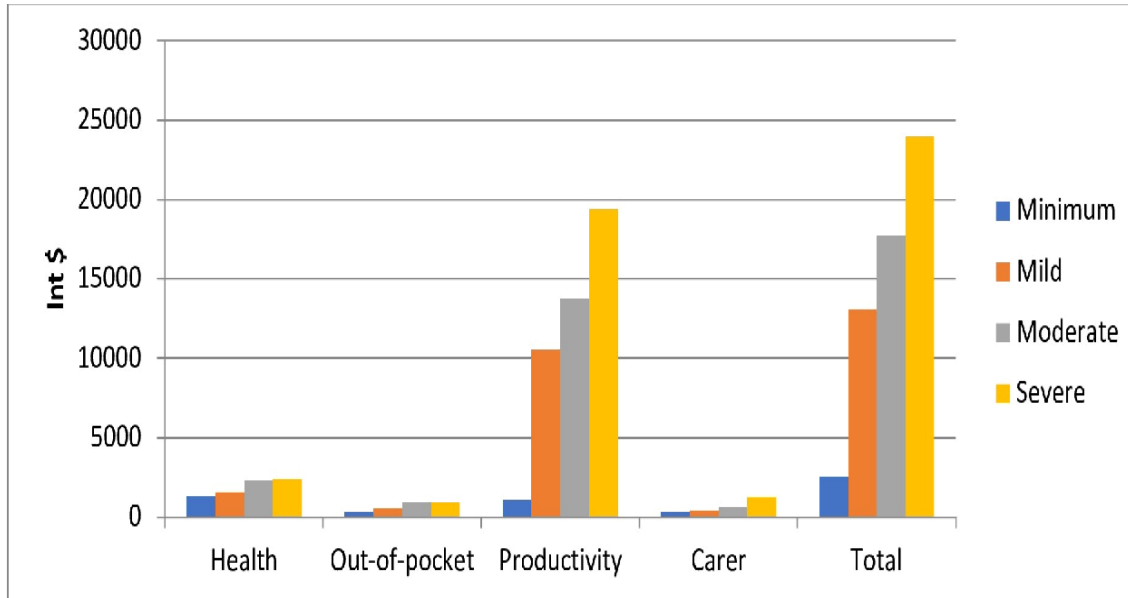


FIG 3 Costs broken down by main severity (Int \$)

ENDOMETRIOSIS COSTS...

\$12,1187
In doctor visits, hospital stays, surgery, medicine and other healthcare service expenses per person each year.

\$15,737
in lost productivity person each year.

10.8
Hours of work is lost each week.

\$4,289
for diagnostic laparoscopy in the U.S.

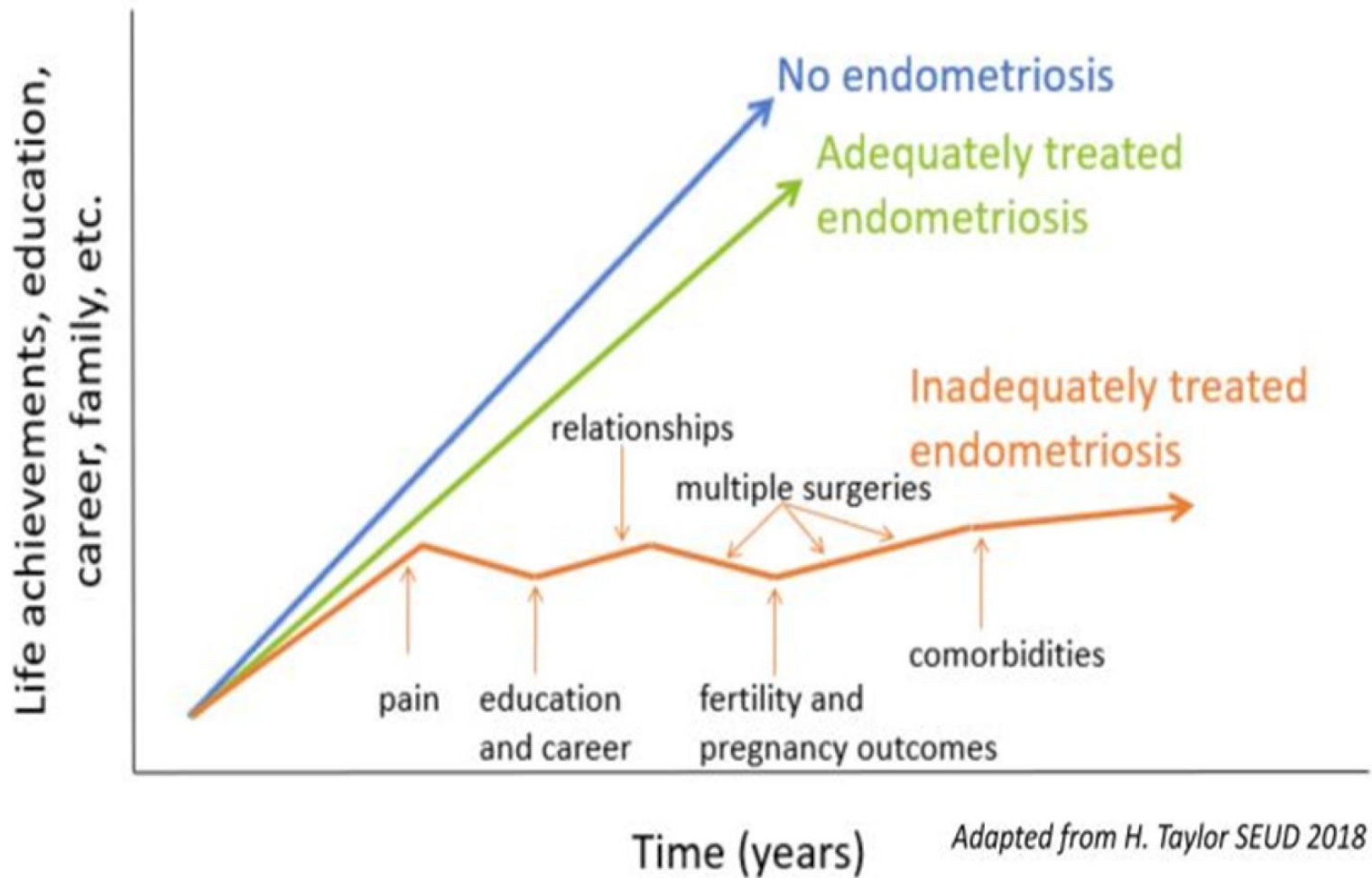
\$11,397
for abdominal hysterectomy in the U.S.

INDIRECT COSTS

WHERE THE MONEY GOES FOR 22 WOMEN

- GLUTEN-FREE FOOD
- PANTY LINERS
- SOY-FREE FOOD
- DAIRY-FREE FOOD
- TENS MACHINE
- PHYSIOTHERAPY
- TRAVEL COSTS FOR SURGERY
- SUPPLEMENTS
- CHIROPRACTOR
- REFLEXOLOGY
- MASSAGE THERAPY
- ACUPUNCTURE

Lifetime impact

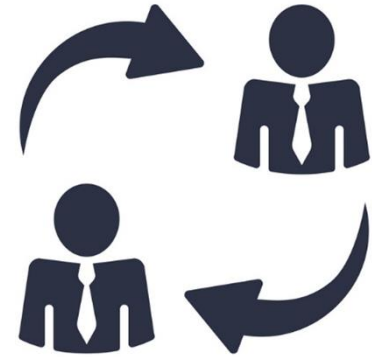


Employers' role

Should we sit or stand?



Source: UpliftDesk



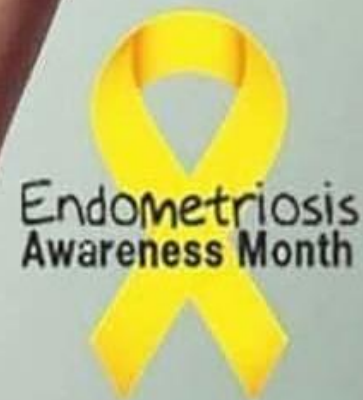
JOB TRANSITION



**WORK
FROM
HOME**



**Just because you can't see it
Doesn't mean it doesn't exist!**



if ENDOMETRIOSIS were visible this is how it might look!

Thank You



CONNECT WITH US



@Got_HAWP



Healthy Arizona Worksites Program



healthyazworksites.org



info@healthyazworksites.org



**THANK YOU
FOR WATCHING!**

HEALTHYAZWORKSITES.ORG