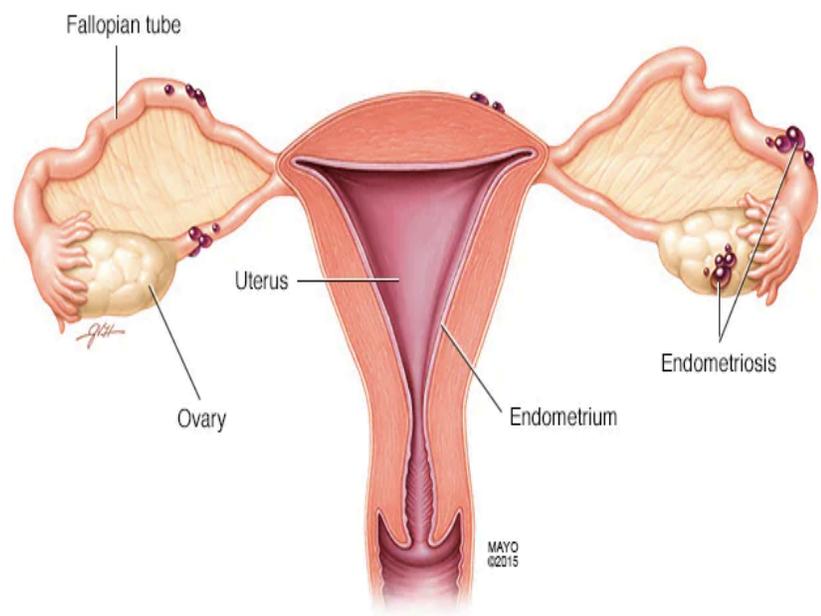


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## Endometriosis and Central Sensitization

- **Endometriosis** is a condition in which the cells of the lining of the uterus grow outside of the uterus (i.e. on the ovary, in the abdomen, on the bowel, on the bladder, etc.). This can cause scar tissue to form, resulting in many different symptoms including pelvic pain.
- **Chronic pelvic pain** is pain in the lower abdomen/pelvis that lasts for at least 6 months. This persistent pelvic pain can be caused by many different things and can result in a process called central sensitization.



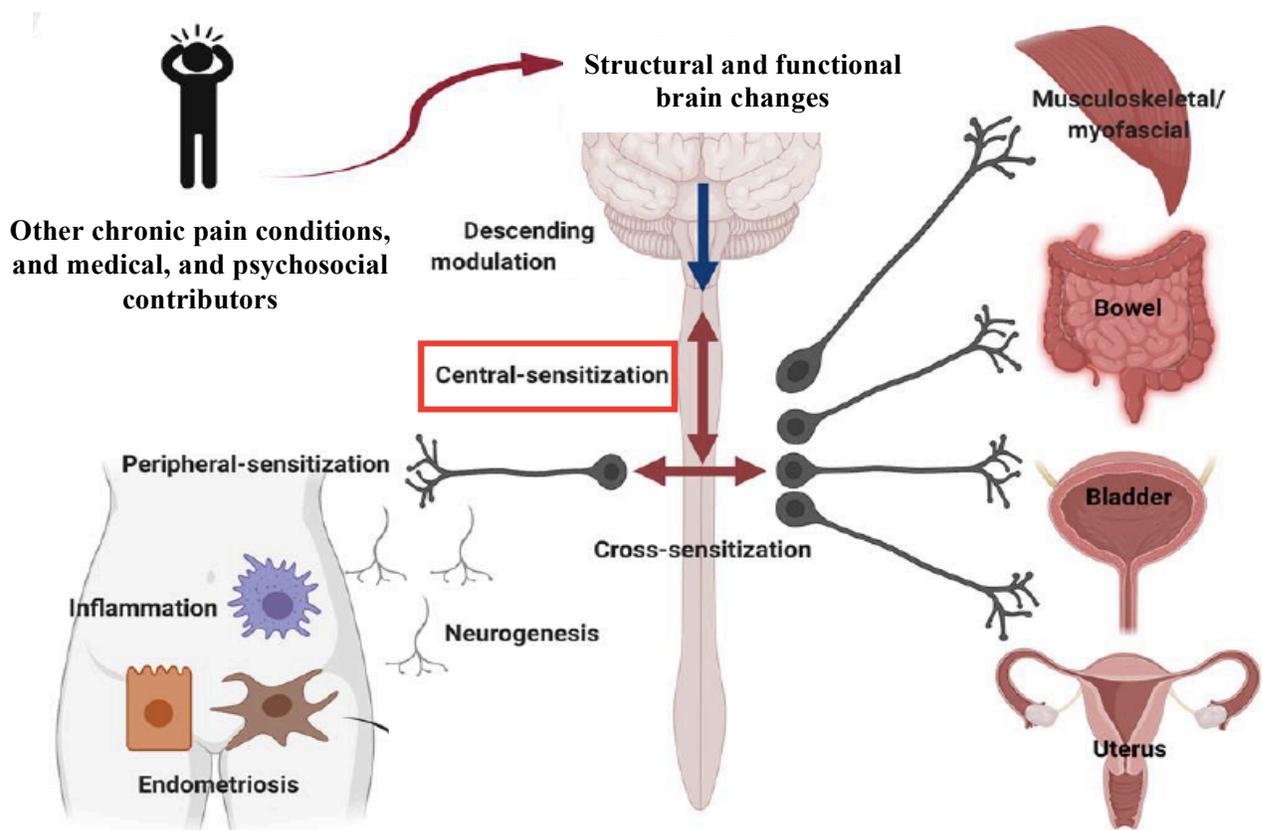
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- **Central sensitization of pain** is where the brain processes stimuli differently. There are changes in how pain signals are transmitted and perceived in the brain. There is increased excitability of the brain cells (neurons) so that normal input is amplified or enlarged, and pain input is not inhibited, decreased, or blocked. Central sensitization of pain can make it so that something that is not typically that painful is perceived and felt by one's body to be very painful.  
→ For example, if someone with central sensitization feels a toothpick lightly touch their skin, their brain may process that sensation to be much stronger or more painful than someone without this condition.

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### Central sensitization of pelvic pain is depicted here.

This image shows on the left that there is some etiology such as endometriosis, inflammation, and/or other medical and psychosocial contributing factors that is causing pain. The middle of the image shows that the pain causes nerves in the body to be activated sending signals to the brain to process the sensation of pain. When the pain becomes persistent and/or chronic, those pain signals may cross over to other parts of the body so that areas of the body that were previously not experiencing pain (such as the bowel or bladder) are now experiencing pain, as shown on the right.



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- The **Central Sensitization Inventory (CSI)** is a two-part patient-reported questionnaire to assess for chronic pelvic pain and symptoms of central sensitization. This questionnaire may be given to you by your pain specialist. It can also be accessed for free at:  
[https://www.pridedallas.com/wp-content/uploads/2016/04/csi\\_english.pdf](https://www.pridedallas.com/wp-content/uploads/2016/04/csi_english.pdf)
- The CSI can function as a screening tool for patients to assess for risk of central sensitization in those with chronic pelvic pain and concern for endometriosis or other chronic pain conditions.
- The higher the CSI score, the higher the risk of underlying central sensitization, contributing to worsening severity chronic pain conditions.
- A **CSI score  $\geq 40$**  in patients with endometriosis is associated with:
  - Higher pain scores
  - Pain present every day
  - Poorer responses to hormonal therapy
  - Higher chance of having 3 or more diagnosed or undiagnosed central sensitization syndromes, such as those listed below.
    - This means a patient who takes the CSI questionnaire and has a high score ( $\geq 40$ ) may have any of these conditions: Fibromyalgia, Chronic fatigue, Migraine, Irritable bowel syndrome, Painful bladder syndrome, Abdominal wall pain, Pelvic floor pain, Depression, Anxiety.
  - Less improvement in pain after surgery.
    - This means a patient who takes the CSI questionnaire and has a high score ( $\geq 40$ ) may have less benefits from surgery alone to improve central sensitization and chronic pain.
    - This is where interdisciplinary pain management comes in and provides the best outcomes: working with a team to address muscle (myofascial) pain, other pelvic pain conditions such as bladder pain, bowel pain, vulvodynia, and non-pelvic pain problems such as trauma, depression, and anxiety.

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## Central Sensitization Inventory: Patient Questionnaire A

### CENTRAL SENSITIZATION INVENTORY: PART A

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Please circle the best response to the right of each statement.**

1	I feel tired and unrefreshed when I wake from sleeping.	Never	Rarely	Sometimes	Often	Always
2	My muscles feel stiff and achy.	Never	Rarely	Sometimes	Often	Always
3	I have anxiety attacks.	Never	Rarely	Sometimes	Often	Always
4	I grind or clench my teeth.	Never	Rarely	Sometimes	Often	Always
5	I have problems with diarrhea and/or constipation.	Never	Rarely	Sometimes	Often	Always
6	I need help in performing my daily activities.	Never	Rarely	Sometimes	Often	Always
7	I am sensitive to bright lights.	Never	Rarely	Sometimes	Often	Always
8	I get tired very easily when I am physically active.	Never	Rarely	Sometimes	Often	Always
9	I feel pain all over my body.	Never	Rarely	Sometimes	Often	Always
10	I have headaches.	Never	Rarely	Sometimes	Often	Always
11	I feel discomfort in my bladder and/or burning when I urinate.	Never	Rarely	Sometimes	Often	Always
12	I do not sleep well.	Never	Rarely	Sometimes	Often	Always
13	I have difficulty concentrating.	Never	Rarely	Sometimes	Often	Always
14	I have skin problems such as dryness, itchiness, or rashes.	Never	Rarely	Sometimes	Often	Always
15	Stress makes my physical symptoms get worse.	Never	Rarely	Sometimes	Often	Always
16	I feel sad or depressed.	Never	Rarely	Sometimes	Often	Always
17	I have low energy.	Never	Rarely	Sometimes	Often	Always
18	I have muscle tension in my neck and shoulders.	Never	Rarely	Sometimes	Often	Always
19	I have pain in my jaw.	Never	Rarely	Sometimes	Often	Always
20	Certain smells, such as perfumes, make me feel dizzy and nauseated.	Never	Rarely	Sometimes	Often	Always
21	I have to urinate frequently.	Never	Rarely	Sometimes	Often	Always
22	My legs feel uncomfortable and restless when I am trying to go to sleep at night.	Never	Rarely	Sometimes	Often	Always
23	I have difficulty remembering things.	Never	Rarely	Sometimes	Often	Always
24	I suffered trauma as a child.	Never	Rarely	Sometimes	Often	Always
25	I have pain in my pelvic area.	Never	Rarely	Sometimes	Often	Always
						Total=

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## Central Sensitization Inventory: Patient Questionnaire B

### CENTRAL SENSITIZATION INVENTORY: PART B

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Have you been diagnosed by a doctor with any of the following disorders?**

**Please check the box to the right for each diagnosis and write the year of the diagnosis.**

		NO	YES	Year Diagnosed
1	Restless Leg Syndrome			
2	Chronic Fatigue Syndrome			
3	Fibromyalgia			
4	Temporomandibular Joint Disorder (TMJ)			
5	Migraine or tension headaches			
6	Irritable Bowel Syndrome			
7	Multiple Chemical Sensitivities			
8	Neck Injury (including whiplash)			
9	Anxiety or Panic Attacks			
10	Depression			