

# Endometriosis: Beyond the Basics

## Pain Management in Endometriosis

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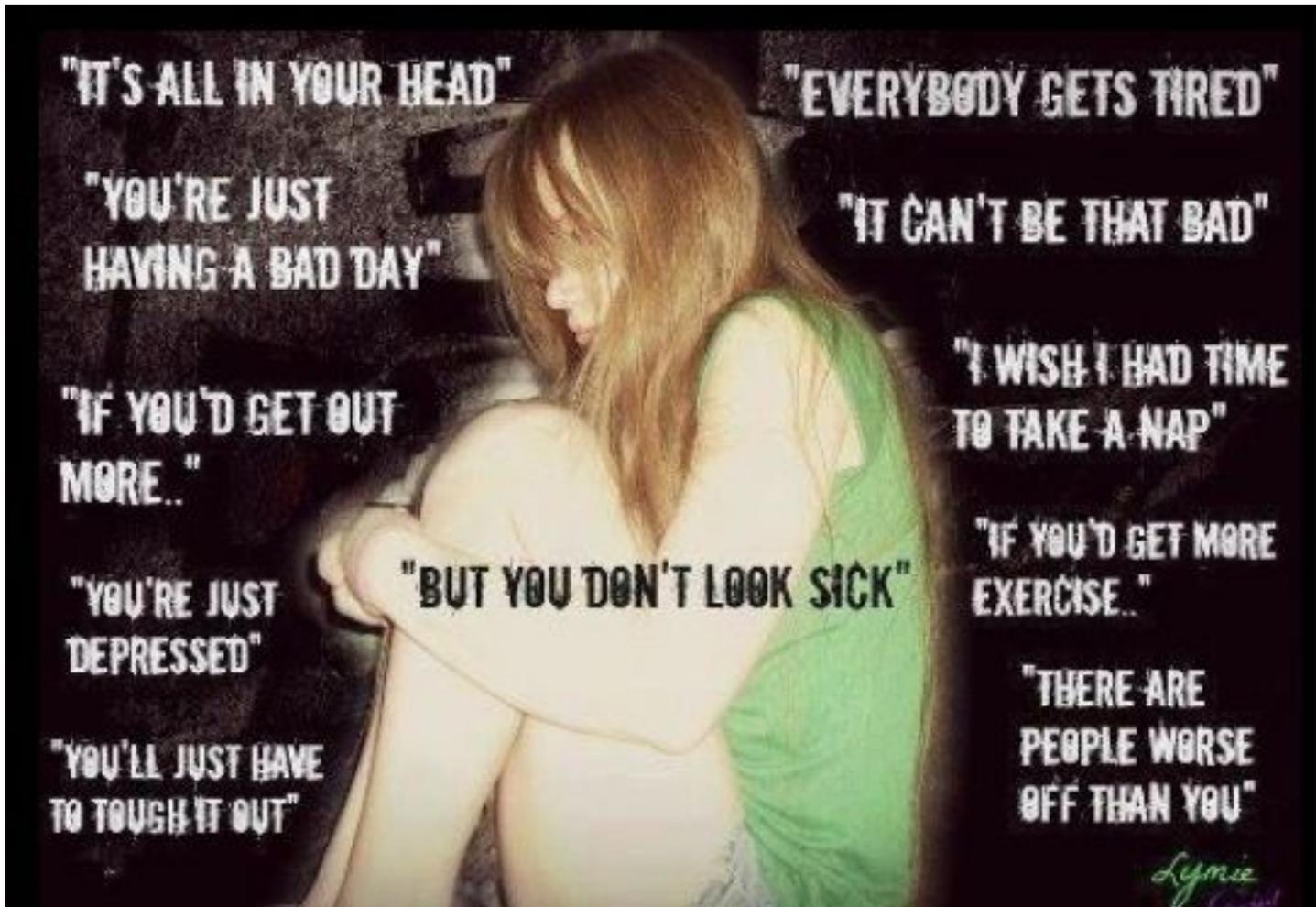
Minimally Invasive GYN Surgery

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PennState Health

inspired together



"IT'S ALL IN YOUR HEAD"

"EVERYBODY GETS TIRED"

"YOU'RE JUST  
HAVING A BAD DAY"

"IT CAN'T BE THAT BAD"

"IF YOU'D GET OUT  
MORE.."

"I WISH I HAD TIME  
TO TAKE A NAP"

"YOU'RE JUST  
DEPRESSED"

"BUT YOU DON'T LOOK SICK"

"IF YOU'D GET MORE  
EXERCISE.."

"YOU'LL JUST HAVE  
TO TOUGH IT OUT"

"THERE ARE  
PEOPLE WORSE  
OFF THAN YOU"

*Lynnie*



# What can affect the management of pain in endometriosis?

- Pain associated with endometriosis can involve many different mechanisms and evaluation can be made difficult by:
  - Differing ways in which we measure pain
  - Incomplete understanding of what exactly causes endometriosis pain.
  - Difficulty in determining true success or failures in treating pain
  - Chronic pain from endometriosis can eventually involve surrounding organs and systems beyond the reproductive tract
  - Coexisting conditions may be the true cause of pain.
- The treatment of pain needs to be individualized from person to person. That means what works for you, may not work for someone else.

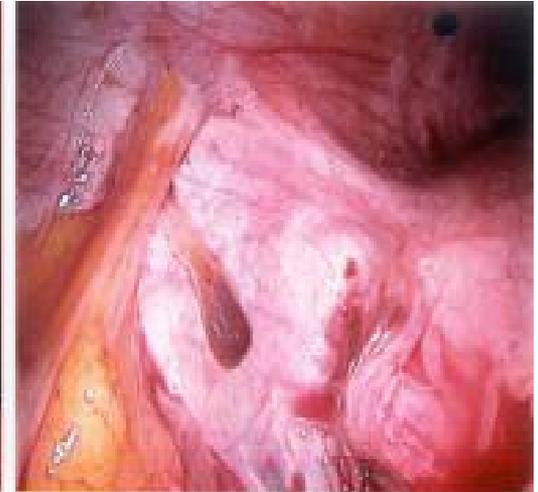


# How Does Endometriosis Cause Pain?

Endometriosis can appear in different forms in the pelvis, including clear vesicles, erythematous (red) lesions, dark pigmented lesions, erosions, and white scarring.

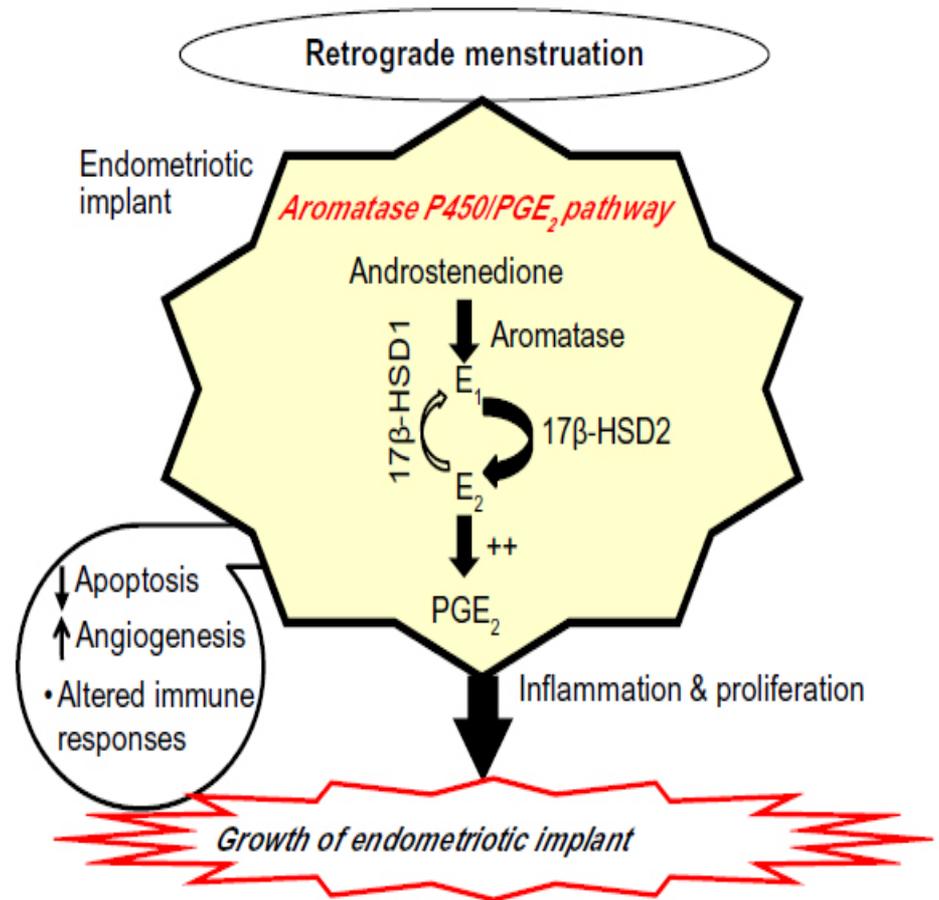
Each of these lesions can cause pain in a different way.

There is no established relationship between the extent of disease and symptoms, but the location and type of disease can impact the pain you feel in your pelvis.



# Mechanisms that cause pain in endometriosis

- Production of substances such as growth factors and cytokines by activated macrophages and other cells associated with functioning endometriosis implants.
- Direct and indirect effects of active bleeding from endometriosis implants.
- Irritation of pelvic floor muscles or direct invasion of pelvic nerves by endometriosis implants, especially in the lower pelvis and cul-de-sac. This premise has gathered the most support in recent decades.



# Non Steroidal Anti Inflammatory Medications-NSAIDS

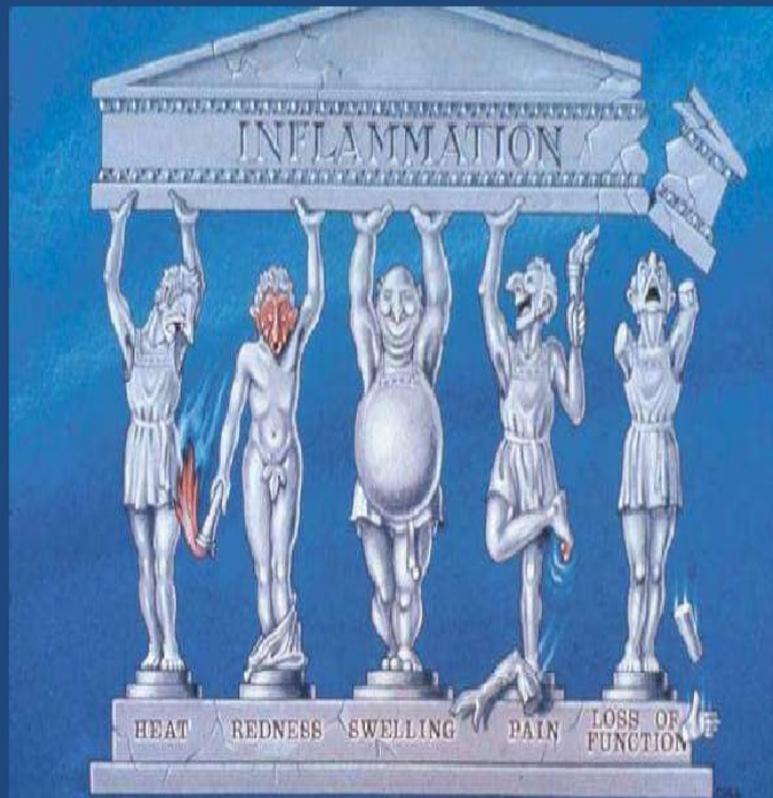
- **First line therapy** in the treatment of endometriosis related pain.
- You may need to try up to 3 different types of NSAID before you find the one that works the best
- NSAIDS block the production of prostaglandins in the body.
- Prostaglandins occur naturally, in response to injury or disease and cause pain and inflammation.



# Non Steroidal Anti Inflammatory Medications-NSAIDS

- It is thought that perhaps women with Endometriosis produce more “bad” prostaglandins than women without the condition causing more inflammation, pain and uterine contractions.
- NSAIDS work effectively if they are taken before the body produces the prostaglandins. If possible, it is best to start taking NSAIDs the day before, up to several days before pain is expected, or prophylactically to control pain before it starts.
- The “bad” prostaglandins can also be moderated by reducing animal fats, caffeine, alcohol and other dietary modifications.

## The Cardinal Signs of Inflammation



# Non Steroidal Anti Inflammatory Medications- NSAIDS

- Ibuprofen, Motrin – 600-800mg three to four times a day. Over the counter strength is 200mg.
- Aleve – 220mg 1-2 tablets twice a day.
- Naprosyn – 500mg 1 tablet twice a day
- Naproxen – 550mg 1 tablet twice a day (prescription strength of Aleve)
- Meloxicam – (Mobic) 7.5mg once or twice a day or 15mg once a day
- Indomethacin – regular strength 25-75mg up to three times daily or Extended release 75mg once or twice a day
- Ketorolac (Toradol) – 10mg up to four times a day, but not for longer than 5 days in a row. Celebrex – 200mg 1 tablet twice daily
- Relafen – 500mg 1 tablet twice daily (not to exceed 200mg in a day in divided doses)



# Non Steroidal Anti Inflammatory Medications-NSAIDS

Common side effects include:

- Nausea
  - Vomiting
  - Diarrhea
  - Stomach upset
  - Stomach ulcer
- It is very important to take these medications with food to prevent stomach upset and gi distress.
  - Many Rx plans, mostly Medical Assistance, will control which one of these medications they will cover, often causing needs for prior authorizations and delays in treatment
  - It may help your provider for you to be educated on what types of medications that are covered under your plan so we can effectively prescribe the correct medication for you to begin treatment in a timely fashion.



# Tramadol

- Also known by name of Ultram, ConZip
- Mechanism of action- binds to the mu opioid receptor
- In August of 2014, the DEA changed Tramadol's schedule in prescribing to a Schedule 4, meaning its use now required providers to provide written prescriptions for the drug. This impacted availability of the drug.
- Nucynta is the newer generation form of Tramadol, and its effect on opioid receptors is several times stronger than Tramadol. Also comes in an extended release option.



# Tramadol

- 50mg 1-2 tablets at a time, but cannot exceed more than 8 tablets in a day or 4000mg in a 24 hour period.
- Must be taken cautiously with other SSRI medications (antidepressants) due to risk of serotonin syndrome which can cause agitation, hallucinations, fever, fast heart rate, overactive reflexes, nausea, vomiting, diarrhea, loss of coordination.

## Common side effects:

- headache, dizziness, drowsiness, tired feeling
- constipation, diarrhea, nausea, vomiting, stomach pain
- feeling nervous or anxious.
- itching, sweating, flushing (warmth, redness, or tingly feeling).
- Must be weaned to avoid withdrawal symptoms



# Nerve pain and medications

- Pelvic nerve pain can be caused by damage to your nerves or nerve endings.
- This causes your nerves to send pain signals to your spinal cord without needing a specific stimulus, or in response to something that wouldn't normally hurt, such as gentle stroking of your skin.
- In cases of endometriosis, normal urination, having bowel movements, sexual activity and everyday activities of daily living can cause pain.



# Nerve pain and medications

- Amitriptyline
  - is an antidepressant drug but at lower doses it's widely used for long-term pain caused by arthritis, nerve pain or fibromyalgia.
  - Dosage can start as low as 10mg at bedtime, and is increased based on effectiveness, sometimes up to 75mg
  - An added benefit of this medication in addition to its anti-depressant and nerve pain benefits, is that it can be used to help with insomnia and sleep issues from pain.
- Side effects
  - Dry mouth
  - Drowsiness
  - Heart arrhythmias
  - Seizures
  - Constipation
  - confusion



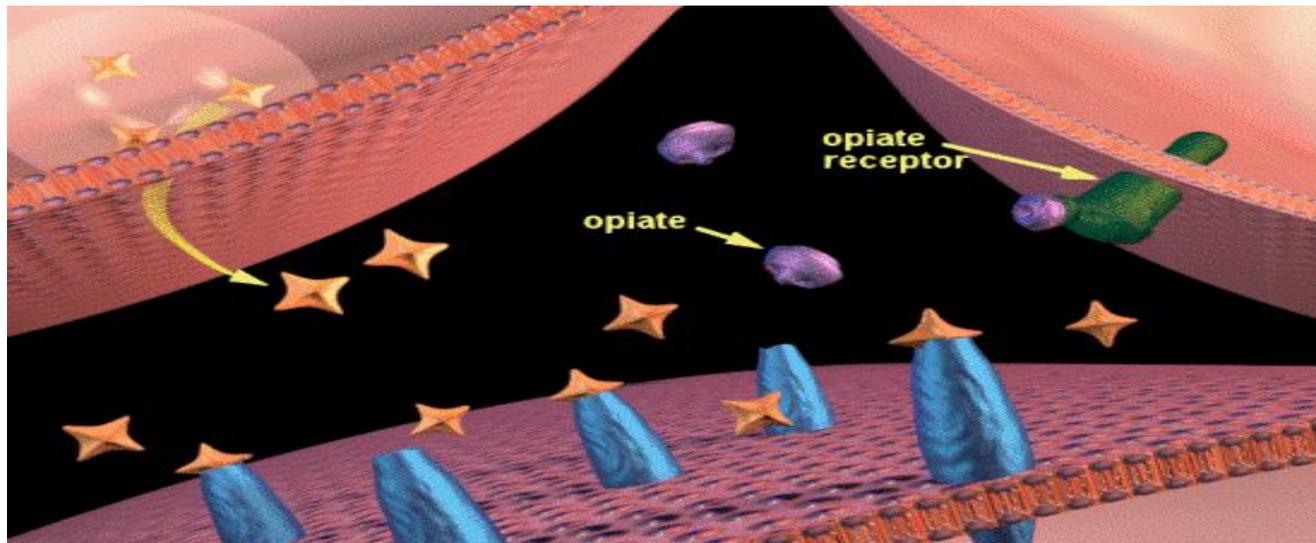
# Nerve pain and medications

- Gabapentin (Neurontin) / Pregabalin (Lyrica)
  - Works by dampening down the activity in the nerves that are irritated or damaged in the pelvis.
  - They do not work immediately and must be taken for 3-4 weeks before effects can be seen. Dosages can be titrated slowly or quickly based on side effects.
  - Lyrica often needs prior authorization before it can be used. Failure of other medications already listed can be a determining factor for approval. I have seen promising results in the use of this medication in our practice here at HMC.
- Common side effects
  - Dizziness
  - Drowsiness
  - Increased appetite
  - Weight gain
  - Mood changes
  - constipation



# Narcotics in Endometriosis Treatment

- Addiction and opioid tolerance are conditions that can negatively impact effective pain management with narcotics.
- Prolonged administration of narcotics or opiates can result in a paradoxical increase in atypical pain that appears to be unrelated to the original reason for medications in the first place.
- To better understand this, a small review of how pain receptors work may help



# Narcotics in Endometriosis Treatment

- Hydrocodone with acetaminophen  
(Norco), ( Vicodin), (Lortab)  
5mg/325mg, 7.5mg/325mg , 10mg/325mg
- Oxycodone with acetaminophen  
(Percocet)  
5mg/325mg, 7.5mg/325mg, 10mg/325mg,  
10mg/500mg
- Oxycodone – 5mg, 10mg, or higher ( not  
recommended for long term maintenance therapy)
- Tylenol with codeine (T#3, T#4)



# Side effects of narcotics

- Fatigue
- Itchiness
- Shortness of breath
- Dizziness
- Irritability
- Anxiety
- Changes in appetite-  
hunger or insatiety
- Headache
- Hallucinations
- Dependency



# Narcotics in Endometriosis Treatment

- The use of narcotics in treating the pain of endometriosis should be done as a last resort due to the possibility of creating addiction and the side effects of these medications.
- Studies have shown that chronic pain sufferers such as those patients with Endometriosis can become socially isolated, in part because they are misunderstood, demeaned, or stigmatized by others because of their narcotic use.
- Appropriate pain management strategies with narcotics are often impeded by payor policies, preferred drug lists, or lack of reimbursement for alternative therapies, funding and lack of guidelines.
- Goal of narcotic use is to maximize positive outcomes while minimizing risks for misuse and abuse potentials.



# Alternative treatments for Pain

- Warm bath, hot tub
- Heating pad
- Massage
- Ice pack
- Herbs, supplements, oils- Turmeric, chamomile, ginger, valerian root
- Omega 3's- capsules , tablets, food
- Exercise



# Alternative treatments for Pain

- Dietary changes – Paleo diet
- Mental health counseling – controlling anxiety and depression
- Support systems
- Accupuncture
- Pelvic floor Physical Therapy
- Medical marijuana –Pa House amended and then overwhelmingly approved medical cannabis legislation on March 14-16, 2016





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