Abdominal Pain and IBD

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FEEL MY PAIN

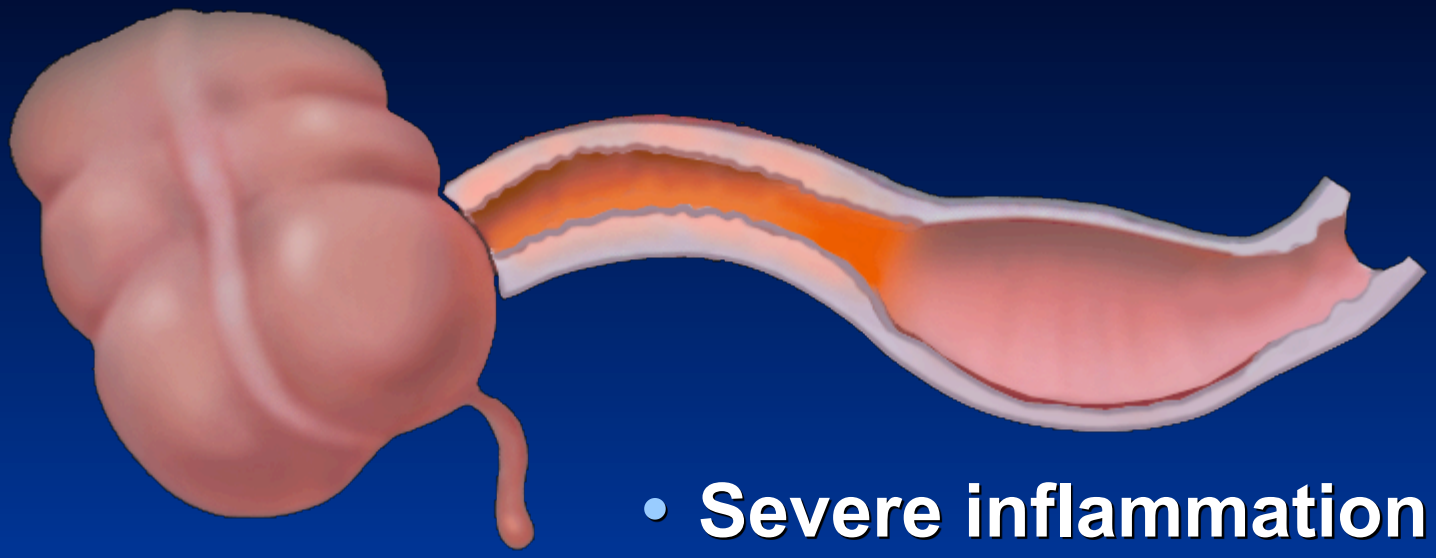
"To have pain is to have certainty . . . To hear about pain is to have doubt."

Elaine Scarry
The Body in Pain

Abdominal Pain and IBD

- What causes pain in IBD?

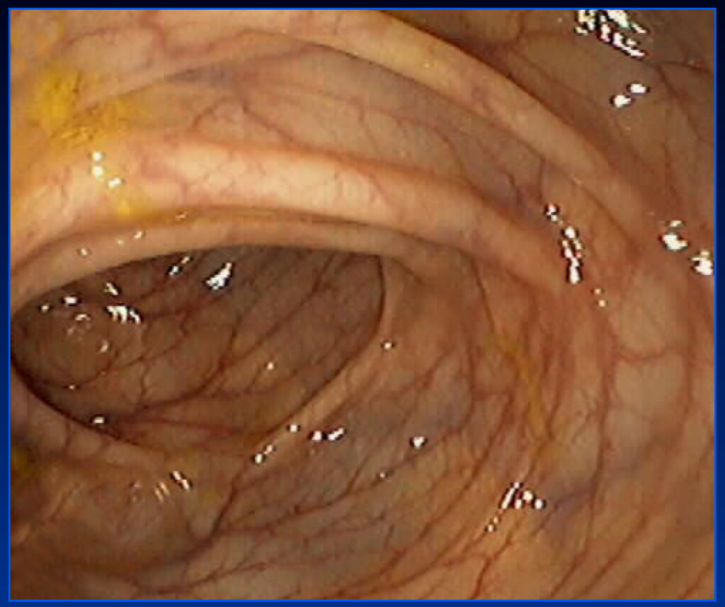
Causes of Pain from IBD Disease

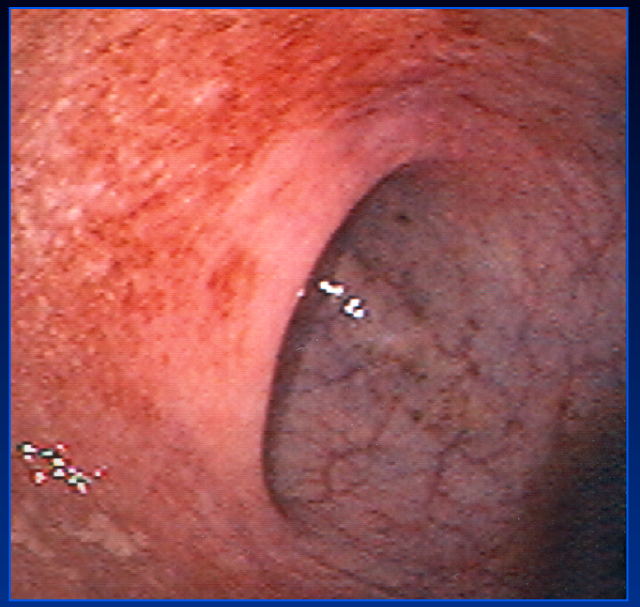


- Severe inflammation
- Deep ulcers
- Intestinal obstruction
- Fistulas
- Abscess

IBD - Spectrum of Disease

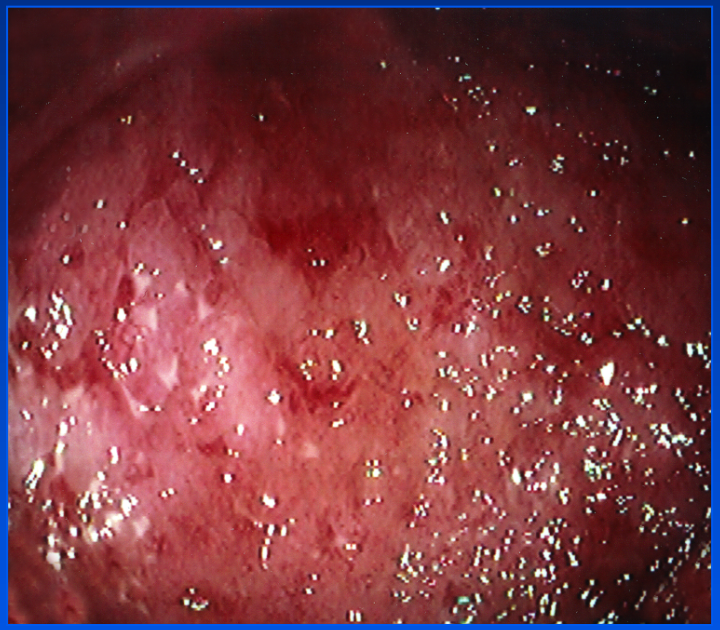
Normal

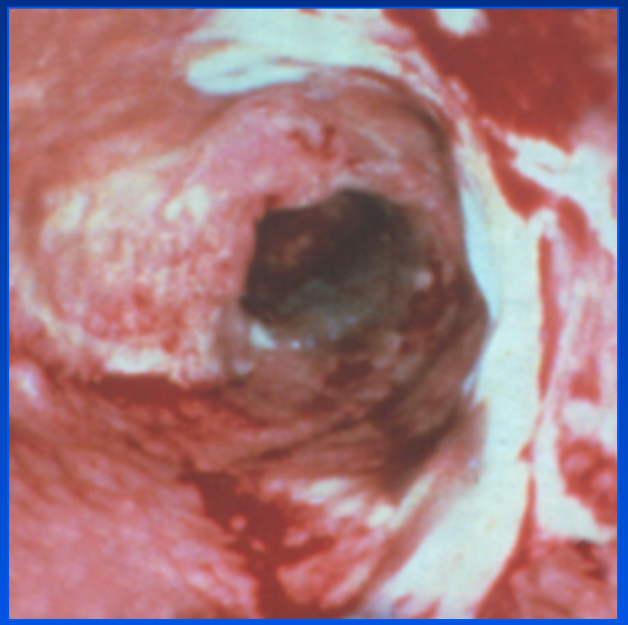




Mild

Moderate





Severe

The Relationship Between Pain and Disease Activity in IBD is Incomplete and Variable

- Severe disease is associated with pain (penetrating ulcers, abscess, obstruction)
- But disease can exist without pain (e.g., mucosal inflammation, shallow ulcers, even with bleeding)
- Pain can exist without evident disease (e.g., dysmotility, visceral sensitivity, CNS amplification)
- IBD-IBS is a paradigm for pain with little or no active disease

IBD-IBS

- Co-occurrence of IBS symptoms* in mild or inactive IBD
- Pain and diarrhea is out of proportion to IBD disease activity
- There is mucosal inflammation but with minimal or no endoscopic findings
- Increase use of potent biological agents that effectively reduce disease may increase awareness of IBD-IBS

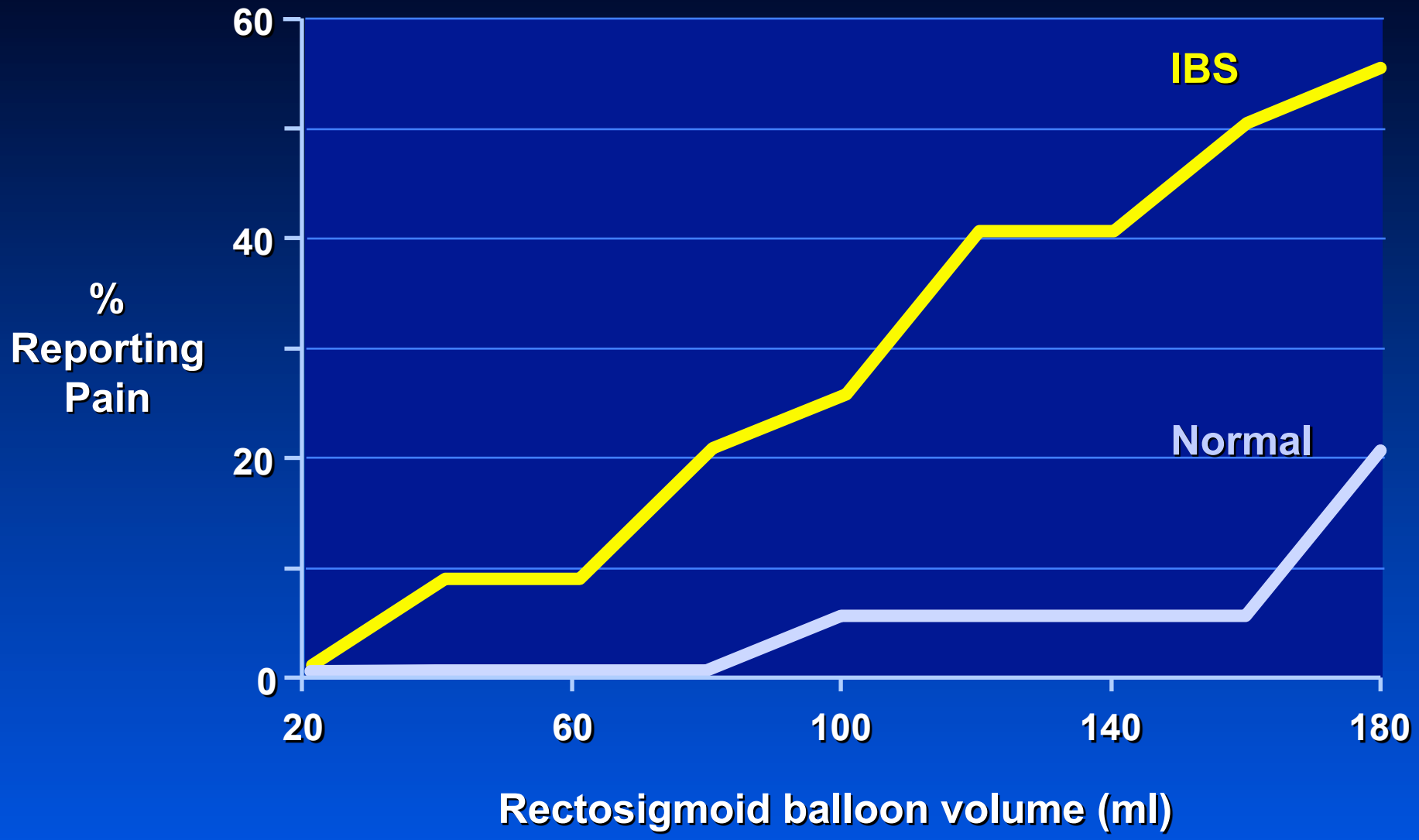
**abdominal pain and bowel difficulties (diarrhea or constipation)*

Abdominal Pain and IBD

- What causes Pain in IBD?
- How is pain regulated?

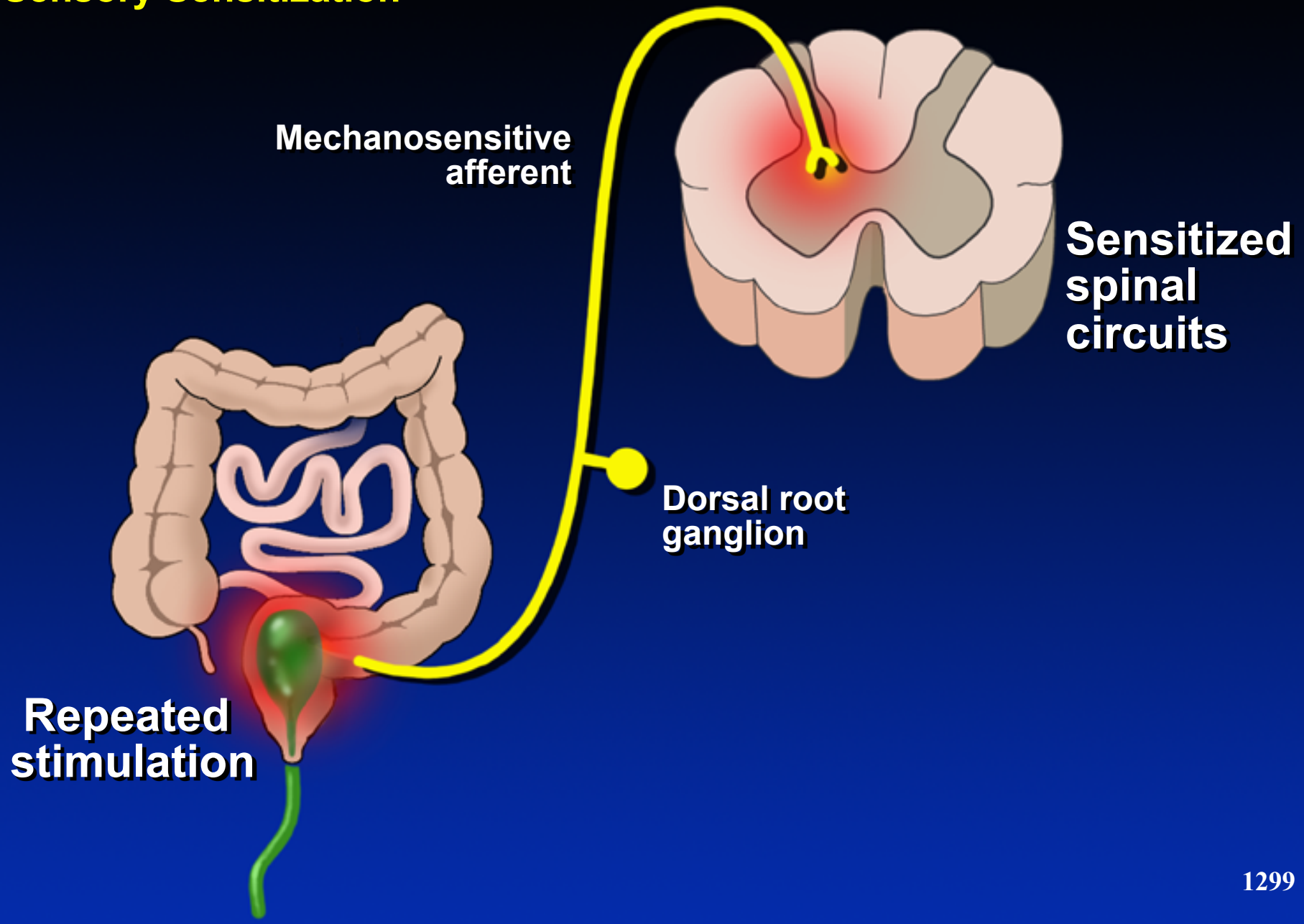
- Pain is influenced by gut and brain
- Pain can be acute or chronic
- *Acute GI pain* usually results from injury to the gut (e.g., active disease)
- *Chronic GI pain* can result from the gut (visceral hypersensitivity), brain (central hypersensitivity), or both

Visceral Hypersensitivity



Whitehead et al., Gastroenterology 1990;98:1187

IBS - Sensory Sensitization

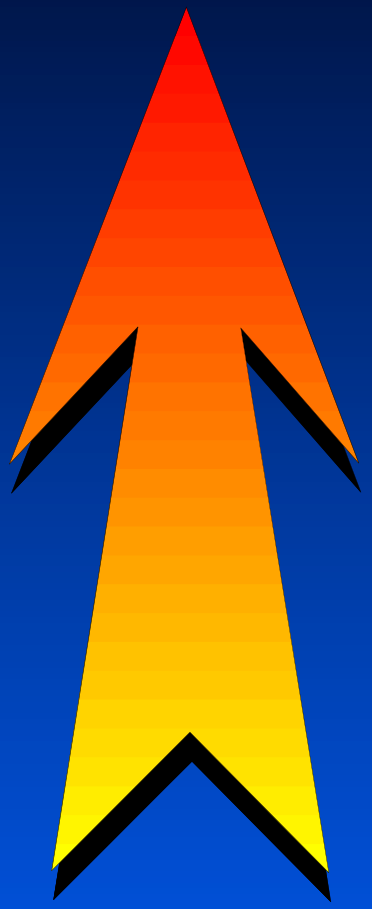


Influences on Visceral Sensitization

- Stress
- Abnormal inputs
  - Repetitive bowel stimulation
- Acute inflammation
  - Infection
  - IBD (mild or in remission)
- Neurological trauma
  - Operations
  - Invasive procedures

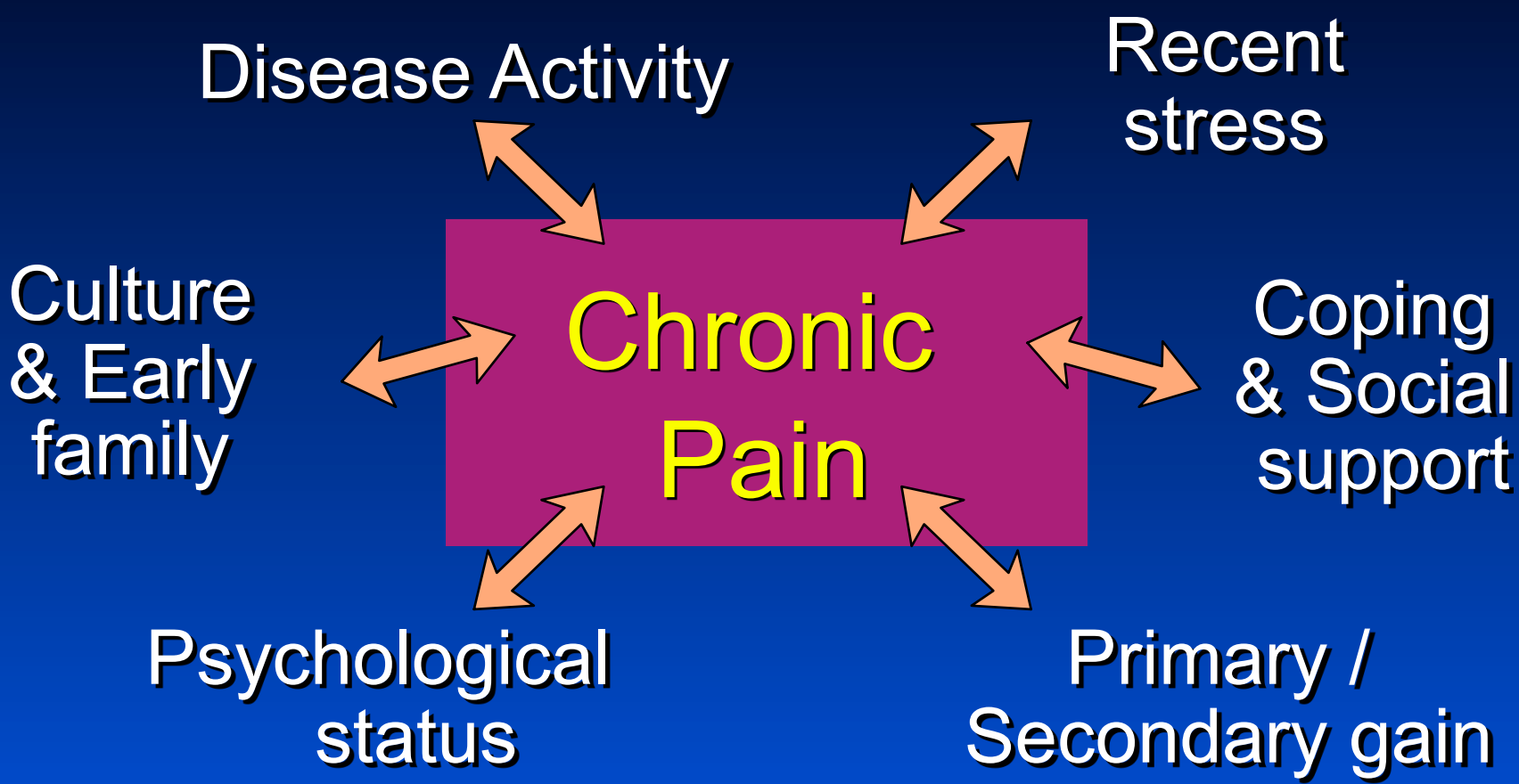
Zighelboim J, Dig Dis & Sci 1995; 40:819
Drossman DA et. al., Gastroenterology 2002

Brain Contributes More with Chronic Pain

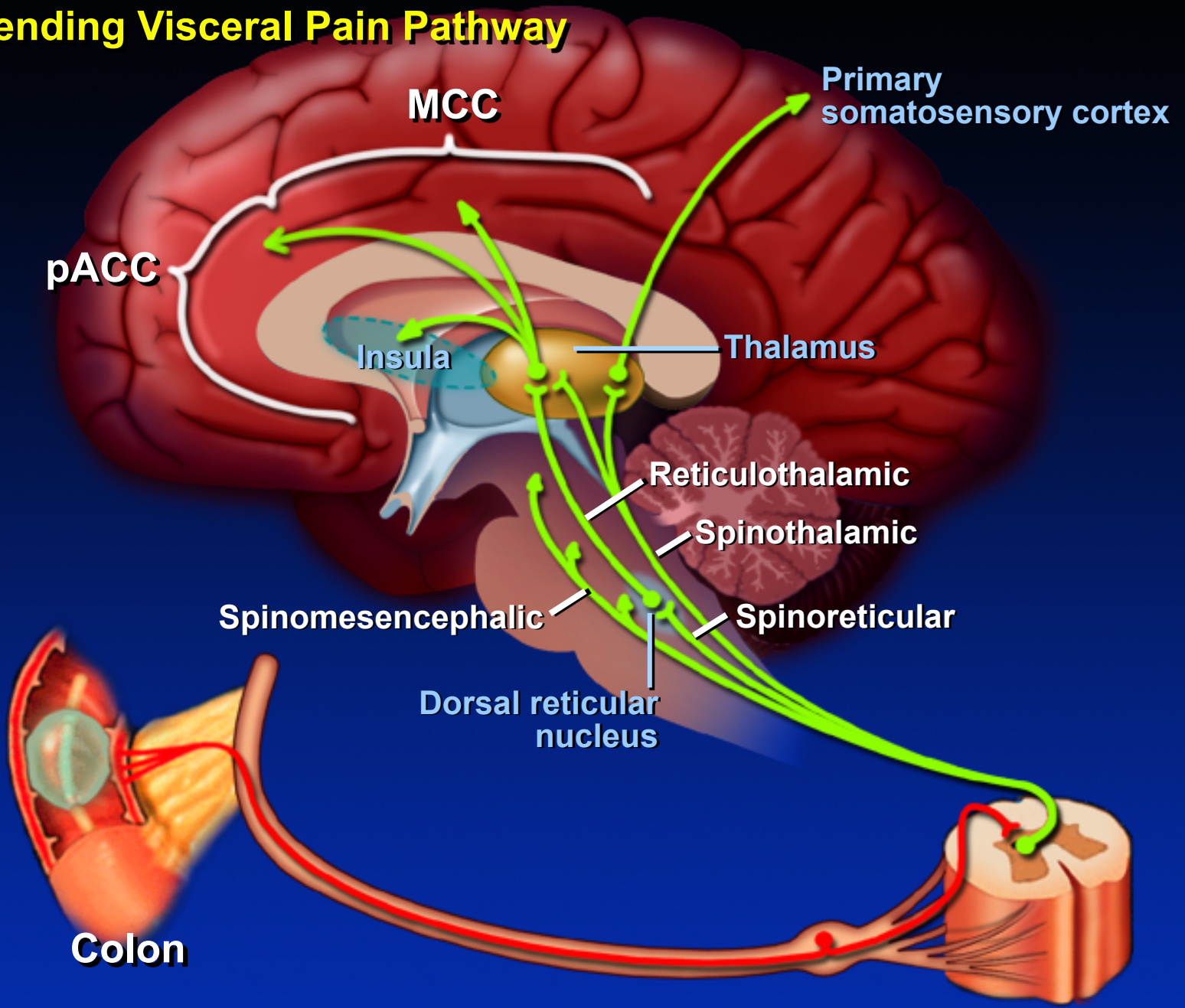


- Chronic abdominal pain
- Functional GI disorders
  - IBS
  - Functional dyspepsia
- Chronic GI disorders
  - GERD
  - IBD
- Acute GI episodes
  - Bowel obstruction
  - Cholecystitis

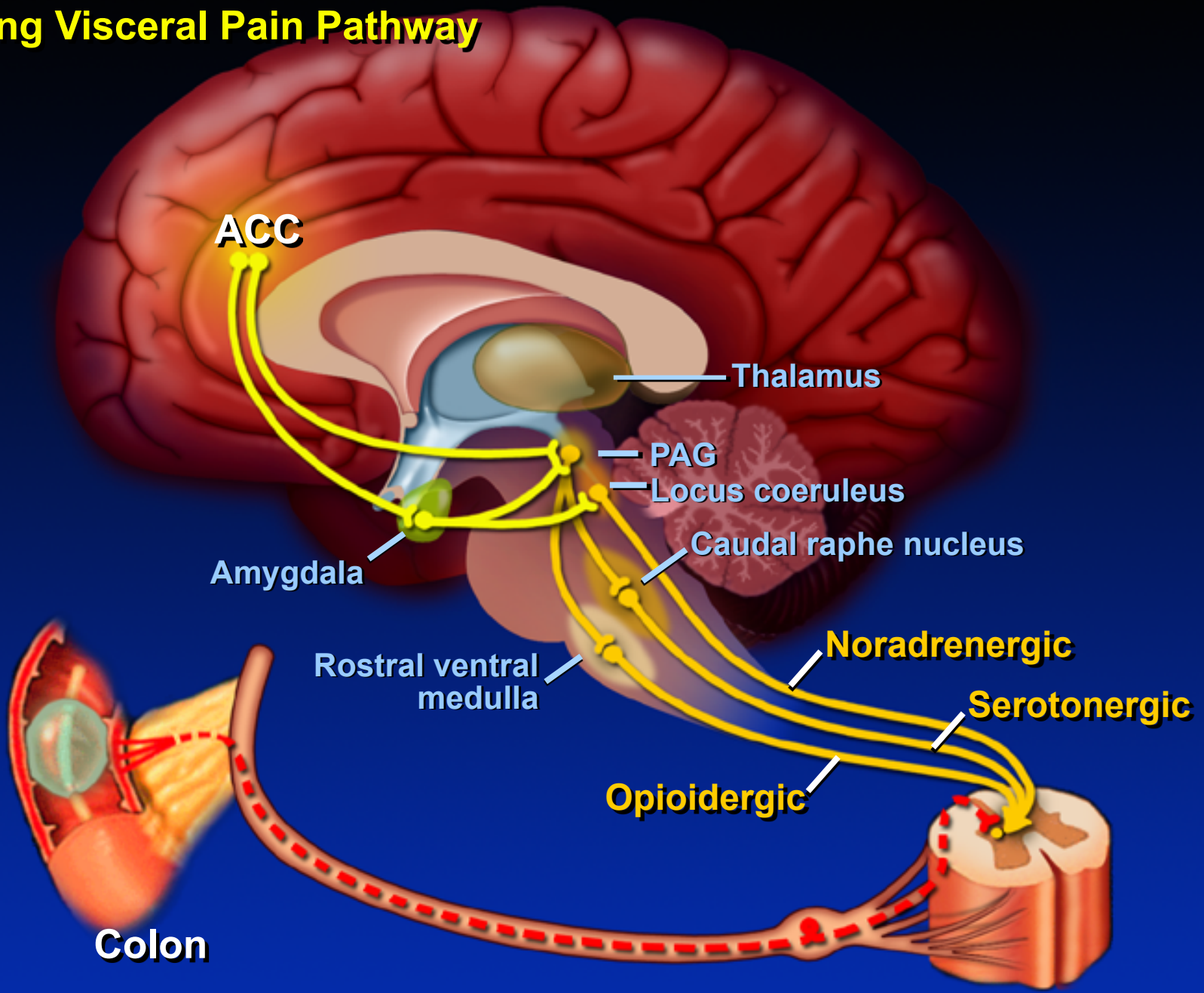
Chronic Pain has Multiple Contributions



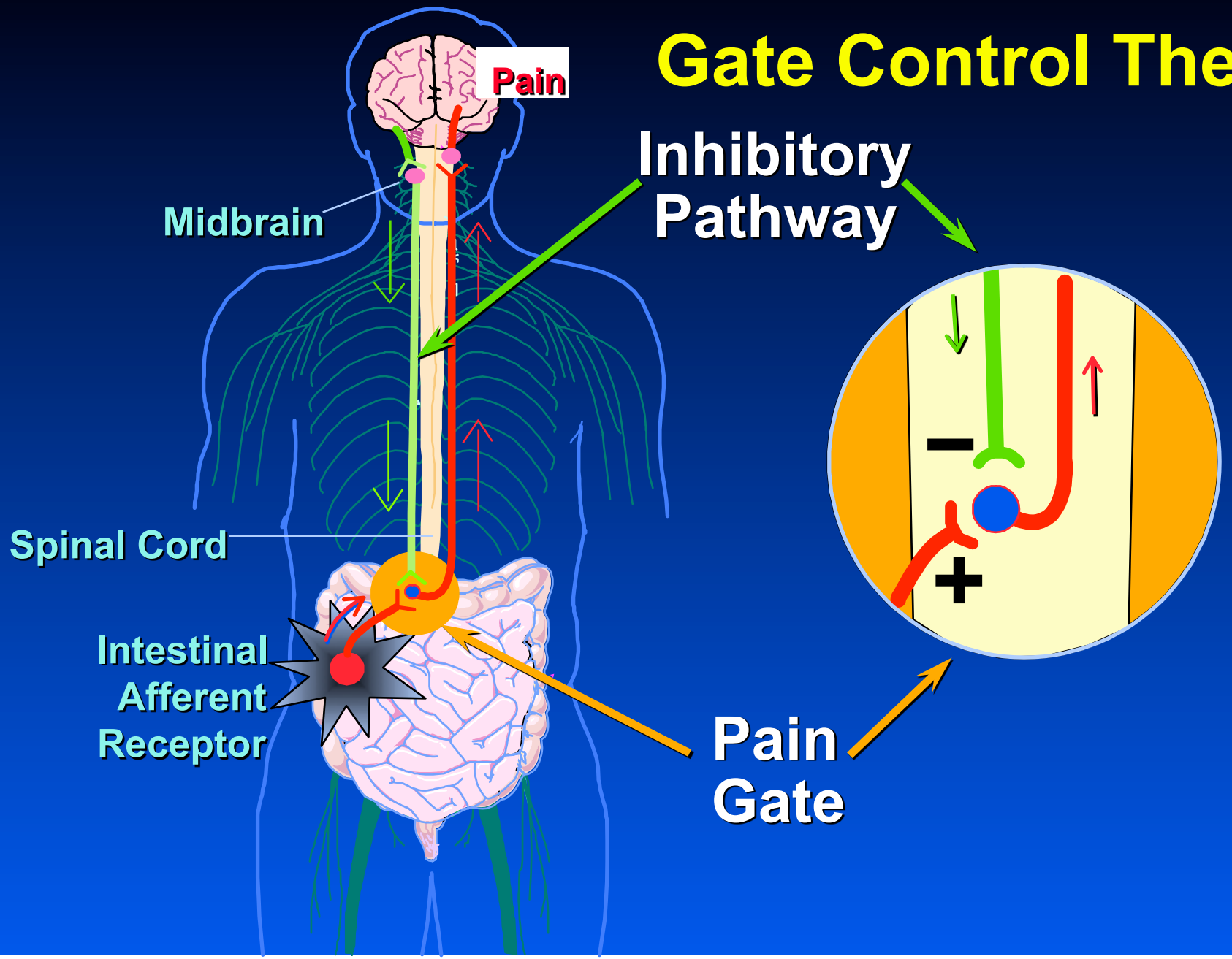
IBS - Ascending Visceral Pain Pathway



Descending Visceral Pain Pathway



Gate Control Theory



Narcotic Bowel Syndrome

CLINICAL GASTROENTEROLOGY AND HEPATOLOGY 2007;5:1126–1139

REVIEW

The Narcotic Bowel Syndrome: Clinical Features, Pathophysiology, and Management

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See CME exam on page 1122.

Narcotic bowel syndrome (NBS) is a subset of opioid bowel dysfunction that is characterized by chronic or frequently recurring abdominal pain that worsens with continued or escalating dosages of narcotics. This syndrome is underrecognized and may be becoming more prevalent. In the United States this may be the result of increases in using narcotics for chronic nonmalignant painful disorders, and the development of maladaptive therapeutic interactions around its use. NBS can occur in patients with no prior gastrointestinal disorder who receive high dosages of narcotics after surgery or acute painful problems, and among patients with functional gastrointestinal disorders or other chronic gastrointestinal diseases who are managed by physicians who are unaware of the hyperalgesic effects of chronic opioids. The evidence for the enhanced pain perception is based on the following: (1) activation of excitatory antianalgesic pathways within a bimodal opioid regulation system, (2) descending facilitation via dynorphin rostral ventral medulla and pain facilitation via glial cell activation and cholecystokinin activation, and (3) glial cell activation that produces morphine tolerance and enhances opioid-induced pain. Treatment involves early recognition of the syndrome, an effective physician–patient relationship, graded withdrawal of the narcotic according to a specified withdrawal program, and the institution of medications to reduce withdrawal effects.

It has long been recognized that opiates can adversely affect bowel (or gastrointestinal) motility. These effects, known as opioid gastrointestinal (GI) dysfunction, are manifest as constipation, nausea, bloating, ileus, and sometimes pain.[1–3] When pain is the predominant symptom, the condition has been termed *narcotic bowel syndrome* (NBS). NBS is characterized by the progressive and paradoxic increase in abdominal pain despite continued or escalating dosages of narcotics prescribed in an effort to relieve the pain. This entity[4–6] first was reported 2 decades ago in the United States and 10 years ago in China.[7] At the University of North Carolina (UNC) Center for Functional Gastrointestinal (GI) and Motility Disorders (www.med.unc.edu/ibs), patients frequently are seen with chronic and refractory gastrointestinal disorders. Many of these patients are experiencing NBS and benefit from narcotic detoxification.

In this narrative review we discuss our experience with the clinical features of this syndrome; discuss the changing practice of narcotic usage for functional GI pain, which may make NBS more common; review new information on the possible neurophysiologic determinants of the syndrome; offer diagnostic criteria; and recommend an approach to management of patients with NBS. We performed a Medline search and could identify only 4 case reports on this topic, spanning more than 20 years. Accordingly, there is a limited and fragmented evidence base and the references provide supportive evidence for the statements made based on clinical experience. Nevertheless, we consider this to be a rapidly emerging clinical issue that requires attention. We propose that if the physician recognizes the many facets of NBS with proper diagnosis and management, the clinical outcome can improve greatly and health care costs may be reduced.

Diagnosis

The syndrome is characterized by chronic or intermittent colicky abdominal pain that worsens when the narcotic effect wears down. Although narcotics may seem helpful at first, over time the pain-free periods become shorter and tachyphylaxis occurs, leading to increasing narcotic doses. Ultimately, increasing dosages enhance the adverse effects on pain sensation and delayed motility, thereby initiating the development of NBS.

Although pain is the dominant feature, nausea, bloating, intermittent vomiting, abdominal distension, and constipation are common. Eating can aggravate the symptoms, so when the condition lasts for weeks, mild weight loss may occur because of anorexia, or a willful restriction of eating out of fear of aggravating the pain (sitophobia). The symptoms may correlate with delayed gastric emptying and intestinal transit.

A common and misleading consequence of NBS is that abdominal radiographs may show signs suggestive of a partial intestinal obstruction, which in fact is caused by an adynamic ileus or pseudo-obstruction. There also may be large amounts

Abbreviations used in this paper: FGID, functional gastrointestinal disorders; GI, gastrointestinal; IBS, irritable bowel syndrome; IV, intravenous; NBS, narcotic bowel syndrome; RVM, rostral ventral medulla; UNC, University of North Carolina.

1542-3565/07/$32.00
doi:10.1016/j.cgh.2007.06.013

The Narcotic Bowel Syndrome: Clinical Features, Pathophysiology, and Management

David M. S. Grunkemeier, Joseph E. Cassara, Christine B. Dalton, and Douglas A. Drossman

Grunkemeier, DMS et al., Clin Gastroenterology and Hepatology 2007; 5:1126

Typical Clinical Presentation for NBS

- Patient presents with chronic or recurrent abdominal pain which is treated with narcotics
- Narcotics may have relieved pain initially but then tachyphylaxis occurs
- Pain worsens when the narcotic effect wears off
- Shorter pain-free periods result in increasing narcotic doses
- Increasing doses further alter motility and aggravate pain
- Can occur in patients with FGID, IBD or other organic disease and otherwise healthy subjects (e.g., post operative)

Grunkenmeier et al. Clin Gastro Hep 2007; 5:1126

Abdominal Pain and IBD

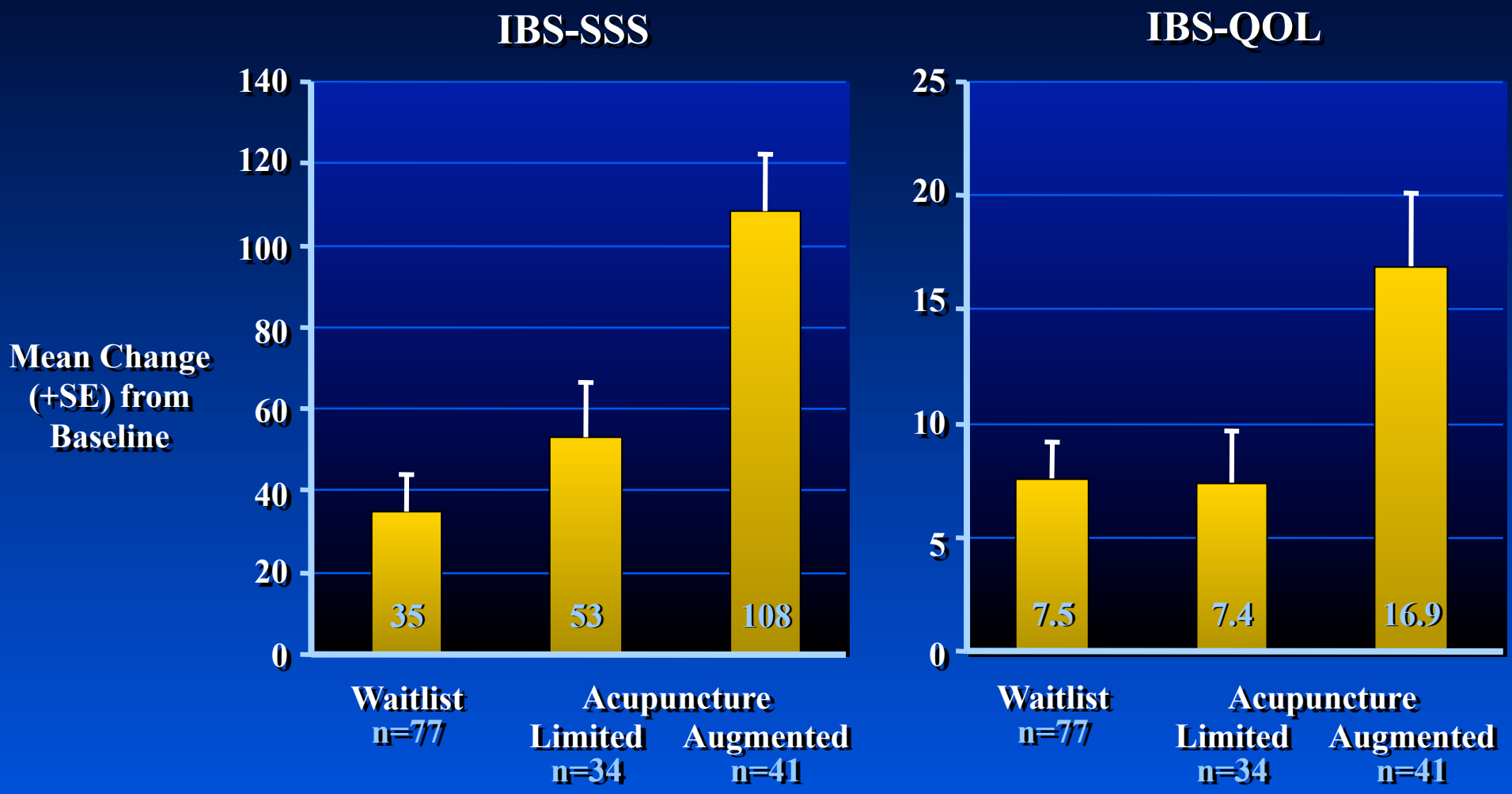
- What causes Pain in IBD?
- How is pain regulated?
- How can IBD pain be treated?

An effective patient-physician relationship is the cornerstone of optimal clinical care

Evidence on Physician-Patient Relationship

- Positive verbal and non-verbal behaviors increases patient satisfaction
- Effective communication improves clinical outcome (better response to treatment)
- Ineffective communication increases malpractice claims
- Physicians with good communications skills like their patients and enjoy work more and patients are more satisfied
- An effective physician – patient relationship improves patient symptoms

Acupuncture for IBS: 6 Weeks Follow-up After Treatment



Kaptchuk TJ, et al., Br Med J 2008;336:999

If you are distressed by anything external, the pain is not due to the thing itself, but to your estimate of it; and this you have the power to revoke at any moment.

Marcus Aurelius Antoninus
Roman Emperor, A.D. 161-180

Psychologic Treatments to Help Pain

- **Cognitive - behavioral**
  Uses diaries and exercises to reframe maladaptive thoughts and increase control over symptoms
- **Psychotherapy - Interpersonal**
  Identify and address difficulties in relationships and emotional conflicts via bowel symptoms
- **Hypnosis**
  Suggestion used to produce overall relaxation and reduce gut sensations
- **Relaxation training**
  Uses imagery and relaxation techniques to reduce autonomic arousal and stimulate muscular relaxation

Benefits of Psychological Treatment

- High response rate (about 70%)
- Can benefit patients not responding to medical treatments
- Is additive to and possibly synergistic with medical treatments
- No side effects
- Benefits continue years after treatment ends
- Reduces health care costs

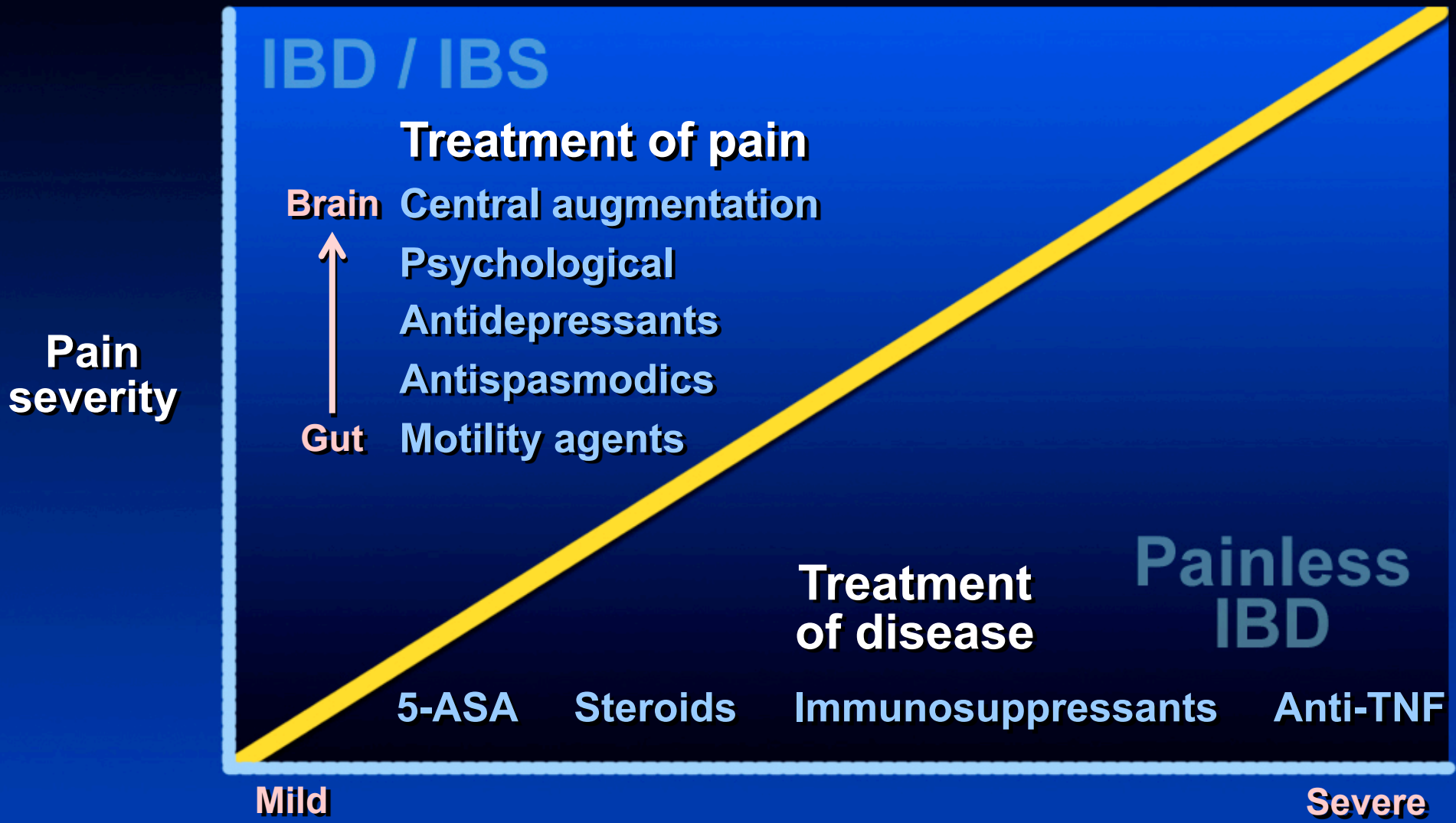
When to Refer for Psychological Treatment

- **Consider referral for:**
  - moderate-severe symptoms (better if not constant pain)
  - when patient sees relation of stress to symptoms
  - maladaptive coping (e.g. "catastrophizing")
  - is motivated toward treatment
- **No one treatment is superior**
- **Predictors of treatment response to CBT*:**
  - Personal controllability (IMIQ)
  - Perceived sense of control over symptoms (CSQ)
  - Confidence in the treatment (Credibility Scale)
  - Positive relationship with the therapist (WAIS)

*Weinland et al. Am J Gastro 2010;105:1397

". . . Is it my imagination or does it seem like everyone is taking Prozac? . . ."

Treatment Options in IBD



Drossman, 2010

Rationale for Antidepressants

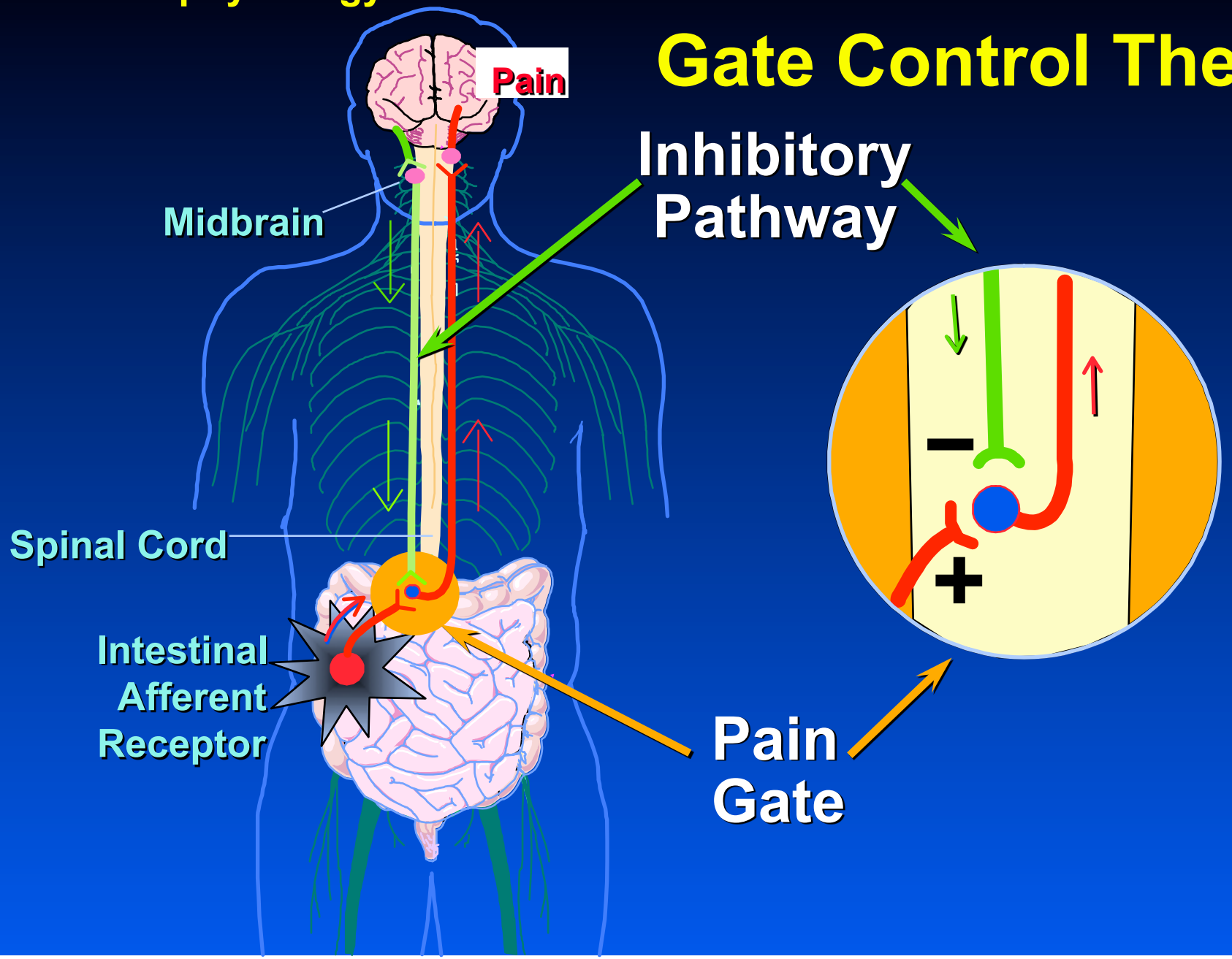
- Treatment of psychiatric co-morbidity
- Peripheral effects
  - Motility / secretion
  - Reduces nerve impulses from gut
- Central pain modulatory effects

Antidepressants for Pain*

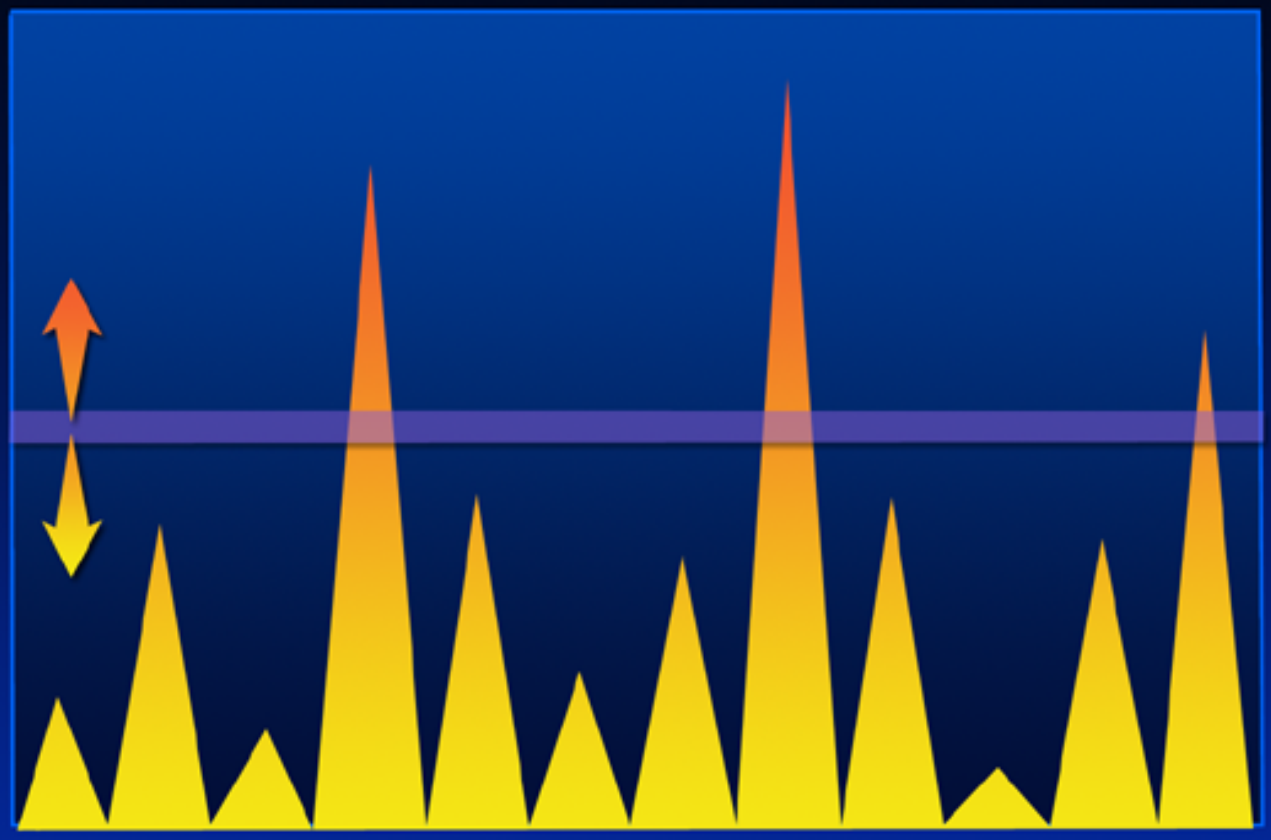
- Tricyclics (e.g., Desipramine, Nortriptyline, Amitriptyline)
  - Pain benefit
  - Side effects of sedation, dry mouth, dizzyness, constipation
  - 2^0 amines (desipramine/nortriptyline) have fewer side effects
  - Inexpensive
- SNRIs (e.g., Duloxetine, Venlafaxine, Desvenlafaxine Milnacipran)
  - Pain benefit
  - Nausea side effects
  - Fewer side effects than tricyclics
  - Expensive
- SSRIs (e.g., Paroxetine, Citalopram, Escitalopram)
  - Not as helpful for pain
  - Helps anxiety
  - Side effects (anxiety, diarrhea)

*All classes help depression

Gate Control Theory



Effect on Perception



- **Augmentation Treatment for Refractory FGIDs**
  - Use more than one treatment to enhance benefit
  - Can use lower dosages and minimize side effects
  - Helpful when one treatment not successful or produces side effects
  - Beginning to use with refractory GI disorders
  - Examples
    - Add Buspirone or Bupropion to antidepressant
    - SSRI and TCA
    - Add atypical antipsychotic (e.g. quetiapine) to TCA or SNRI
    - Mood stabilizer (e.g., lamotrigine) to antidepressant
    - Combine antidepressant and psychological treatment

Drossman DA, Beyond Tricyclics: New ideas for treating patients with painful and refractory FGIDs Am J Gastro 2009 in press

Abdominal Pain and IBD

- What causes Pain in IBD?
- How is pain regulated?
- How can IBD pain be treated?
- What can I do to help manage my pain and other IBD symptoms IBD?

Step 1 - Acceptance

- *Accept that the pain is there*
- *Learn all you can about your condition and it's management*
- *Knowledge is power*

Step 2 – Get Involved

- *Take an active role in your care*
- *Develop with your doctor a partnership in the care*
- *Understand your doctor's recommendations and maintain an open dialogue*

Step 3 – Set Priorities

- *Look beyond the pain to the things important in your life*
- *Do what is important*
- *Eliminate or reduce what is not important*

Step 4 – Set Realistic Goals

- *Set goals within your power to accomplish*
- *Break a larger goal into small manageable steps*
- *Take the time to enjoy the success of reaching your goals*

Step 5 – Know Your Rights

- *…to be treated with respect*
- *…to ask questions and voice your opinions*
- *…to disagree as well as agree*
- *…to say no without guilt*

Step 6 – Recognize and Accept Emotions

- *Mind and body are connected*
- *Strong emotion affects pain, for better or worse*
- *By acknowledging and dealing with your emotions you can reduce stress and decrease the pain*

Step 7 – Learn to Relax

- *Stress increases pain and other symptoms increase*
- *Relaxation help reclaim control over your body and reduces pain*
- *Relaxation options to consider:*
  - Deep breathing
  - Relaxation response
  - Hypnosis
  - Yoga and meditation

Step 8 – Exercise

- *Exercise may reduce your pain*
- *Exercise increases one's sense of control in life*
- *Exercise helps you feel better about yourself*

Step 9 – Refocus

- *With these steps pain does not need to be the center of your life*
- *Focus on abilities not disabilities*
- *You will begin to see you can live a normal life with IBD*

Step 10 – Reach Out

- *Share your thoughts and feelings with your health care provider*
- *Talk and interact with family and friends in healthy ways*
- *Support others with IBD and seek support from them as well*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ANAL EXAMS
MAY 27 28 29
LAST DAY OF SCHOOL
MAY 29