



Therapy that works on gut instinct

pain

constipation

diarrhea

bloating

Modulating the underlying mechanism of Irritable Bowel Syndrome

PMODULOR®

Trimebutine Maleate

More than just pain relief



Irritable Bowel Syndrome: Taking a closer look

IBS is defined as lower abdominal pain, disturbed defecation (diarrhea and/or constipation), and bloating in the absence of structural (e.g., inflammatory bowel disease) or biochemical (e.g., lactase deficiency) abnormalities that might explain these symptoms.¹

The importance of the GI Brain-Gut interaction

IBS is a disorder in which altered motility or sensation in the small bowel or colon is modulated by input from the CNS, including higher centres.²

Interactive mechanism of IBS² **Psychosocial** factors: (trauma, stress, etc.) Vagal nuclei **Sympathetic S2, 3, 4** Altered **Altered** motility sensation Adapted from Camilleri, 1999

Conceptual framework for mechanisms interacting in the development of IBS, a disorder involving the brain-gut axis. Modulon has not been shown to directly affect the central mechanisms involved in IBS.

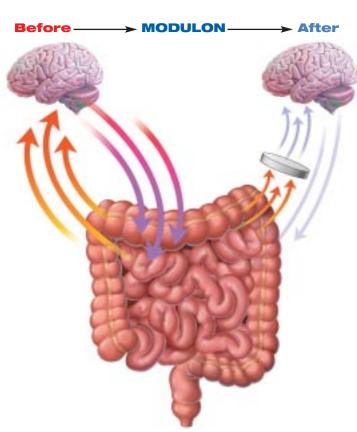
Modulon: Restoring balance in IBS

As a result of targeting the underlying mechanism of action in the enteric nervous system, Modulon:³

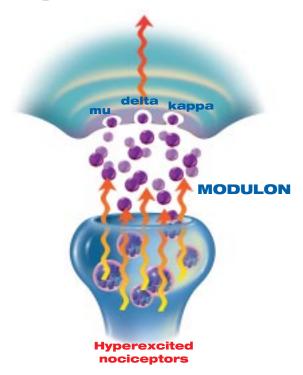
- Promotes normal motility by regulating abnormal intestinal and colonic activity
- Inhibits the effects of stress on post-prandial contractile activity in the jejunum
- Reduces visceral sensitivity produced by colorectal distension[†]

† Based on animal studies. Clinical significance has not been established.

Modulon: A proposed mechanism of action for more than just pain relief^{4‡}



Modulon may act to reduce efferent and afferent signals, to normalize the gut and relieve abdominal pain, bloating and altered bowel habits.⁴



Adapted from Diamant, 1987

By flooding peripheral opiate receptors of the afferent gut neural network, Modulon may have an effect in modulating afferent misinformation, consequently reducing efferent signaling and promoting a return to normal gut function.⁴

More than just pain relief



[‡] The above mode of action has not been established in human subjects. Please refer to the Clinical Pharmacology section of the Modulon Product Monograph. Modulon is a lower GI tract motility regulator.

IBS

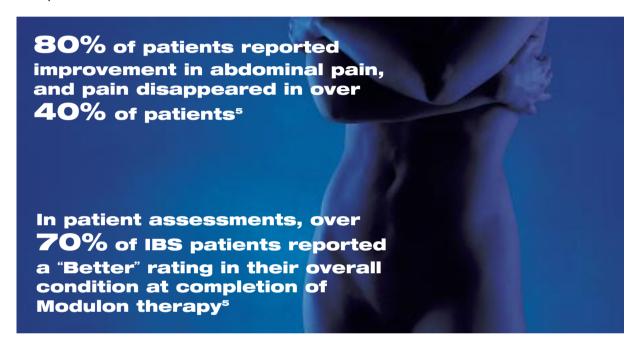


Modulon and the GI "Gut Brain"

Modulon targets the underlying mechanism of action in the enteric nervous system, returning abnormal bowel transit time to physiological levels.⁴

Proven symptom relief

In a large open-labelled multicentre Canadian study including 131 patients treated for 4 weeks:5



Symptomatic improvement occurred within 2 weeks and was sustained over the 4 weeks of therapy⁵

Recommended dosage: 200 mg three times a day





Most commonly reported side effects are CNS (3.3%) and GI related (3.1%). Please consult Product Monograph before prescribing.

REFERENCES

^{1.} Drossman DA. Review article: An integrated approach to the irritable bowel syndrome. Aliment Pharmacol Ther 1999;13 (Suppl 2):3-14. 2. Camilleri M. Motor function in irritable bowel syndrome. Can J Gastroenterol 1999;13 (Suppl A):8A-11A. 3. Delvaux M, Wingate D. Trimebutine: Mechanism of action, effects on gastrointestinal function and clinical results. J Int Med Res 1997;25:225-46. 4. Diamant N. Enkephalinergic control of gastrointestinal motility: From "gut brain" to trimebutine. Can J Gastroenterol 1987;1:41-3. 5. Anderson JGD, Kempton JD, Beaudoin M et al. Trimebutine maleate in the treatment of irritable bowel syndrome: Canadian clinical experience. Can J Gastroenterol 1987;1(1):23-7.