



# MotilPro and MotilCalm

*Neural support for the "Gut Brain"\**



\*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

# The “Gut Brain” and Digestive Health\*

Proper gastrointestinal motility is essential for optimal rates of nutrient and fluid absorption, elimination of toxins and overall abdominal comfort. GI motility is regulated by over 100 million neurons embedded in the walls of the GI tract. Collectively known as the enteric nervous system, or the “gut brain,” these neurons communicate by way of numerous neurotransmitters and neurohormones to coordinate smooth muscle contraction. Serotonin and acetylcholine are the principal neurotransmitters within the GI tract that stimulate motility. Conversely, melatonin helps to modulate these signals to maintain slower neuromuscular rhythms.<sup>(1,2)\*</sup>



## MotilPro

*Promotes GI motility\**

MotilPro supports serotonergic and cholinergic neurotransmission in the GI tract. 5-HTP is absorbed by enterochromaffin cells in the epithelium, in which it is decarboxylated to serotonin using pyridoxal 5' phosphate as a cofactor. 5-HTP stimulates enteric neurons through activation of 5HT<sub>4</sub> receptors.<sup>(3,4)</sup> Ginger modulates serotonin signaling by additional 5HT<sub>4</sub> stimulation and by binding type 3 (5HT<sub>3</sub>) receptors in the enteric nervous system and brain stem, supporting gastric emptying, intestinal transit, healthy visceral sensation and upper GI comfort.<sup>(5,6)</sup> Acetyl-l-carnitine supports autonomic neuronal health and contributes acetyl groups for the synthesis of acetylcholine.<sup>(7)\*</sup>

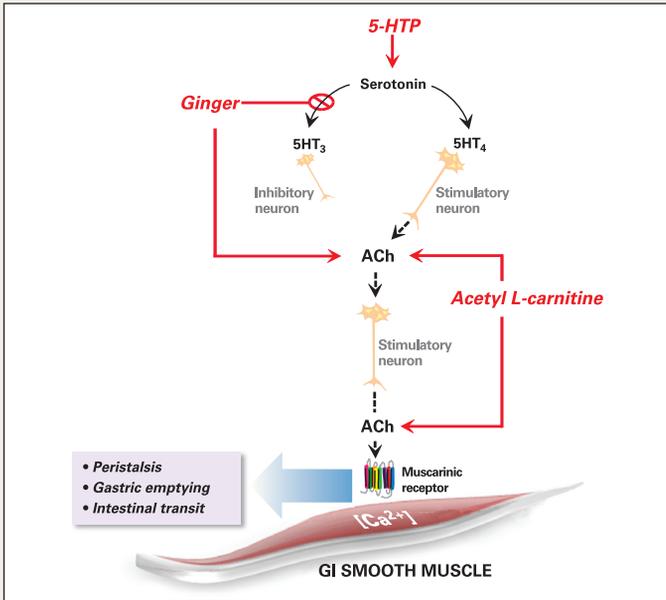
### MotilPro

three vegetable capsules contain  00

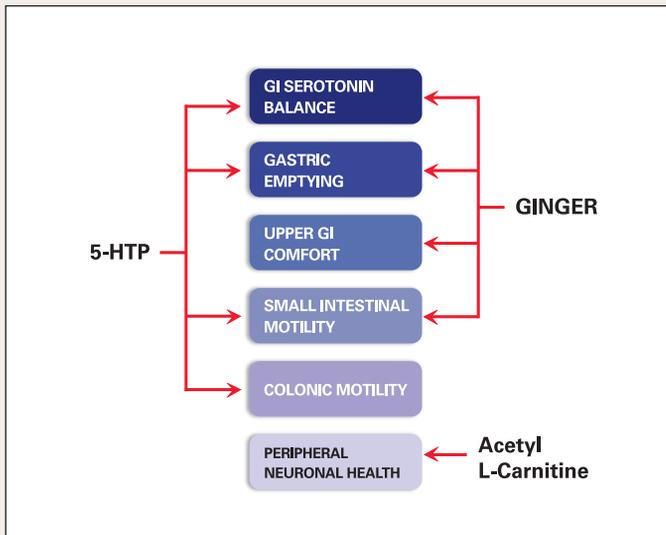
pyridoxal-5-phosphate (activated B <sub>6</sub> ) .....	10 mg
ginger (Zingiber officinale) extract (root) .....	1,000 mg
(standardized to contain 5% gingerols)	
acetyl-l-carnitine.....	500 mg
5-hydroxytryptophan (Griffonia simplicifolia) .....	50 mg
ascorbyl palmitate (fat-soluble vitamin C) .....	30 mg

**3-6 capsules per day, in divided doses, between meals.**

# MotilPro



**Figure 1.** MotilPro supports natural stimulatory neuromuscular function of the GI tract. 5-HTP supports activation of serotonin 5HT<sub>4</sub> receptors. Ginger complements 5-HTP by modulating inhibitory neurons and supporting acetylcholine release.\*



**Figure 2.** MotilPro promotes upper and lower GI motility.\*

## MotilCalm

*Provides calming support for the GI tract, protects GI mucosa and maintains normal inflammatory balance\**

Clinical studies indicate that supplemental melatonin calms the intestinal tract, provides mucosal protection, maintains normal inflammatory balance and promotes immune function in the GI tract.<sup>(1,2,8)</sup> Melatonin also supports the normal regenerative capacity of the epithelia.<sup>(9)</sup> Ginger promotes gastric emptying and upper GI comfort and may relieve occasional nausea.<sup>(5,6)</sup> Ginger also supports mucosal glutathione levels and maintains healthy mucosal cytokine and eicosanoid production.<sup>(10)</sup> Clinical evidence has indicated the value of *Boswellia serrata* in maintaining slower contractile patterns of intestinal smooth muscle.<sup>(11,12)</sup> AKBA, a major triterpenoid in *Boswellia*, promotes mucosal integrity and healthy leukotriene balance in the ileum and colon.<sup>(13)</sup> Curcumin supports healthy TNF $\alpha$  production and gene expression through nuclear factor kappa B activity.<sup>(14)</sup> Quercetin supports intestinal barrier function and complements melatonin in maintaining normal neuromuscular activity in the ileum and colon by maintaining presynaptic acetylcholine retention at neuromuscular junctions of the GI tract.<sup>(15)\*</sup>

MotilCalm

three vegetable capsules contain  v 00

Curcumin C3 Complex® turmeric ( <i>Curcuma longa</i> ) .....	1,000 mg extract (root)
(standardized to contain 95% curcuminoids)	
ginger ( <i>Zingiber officinale</i> ) extract (root) .....	500 mg
(standardized to contain 5% gingerols)	
5-LOXIN® AKBA <i>boswellia serrata</i> extract (gum resin) .....	100 mg
(standardized to contain 30% 3-acetyl-11-keto-beta-boswellic acid (AKBA))	
quercetin .....	100 mg
melatonin .....	6 mg
ascorbyl palmitate (fat-soluble vitamin C) .....	15 mg

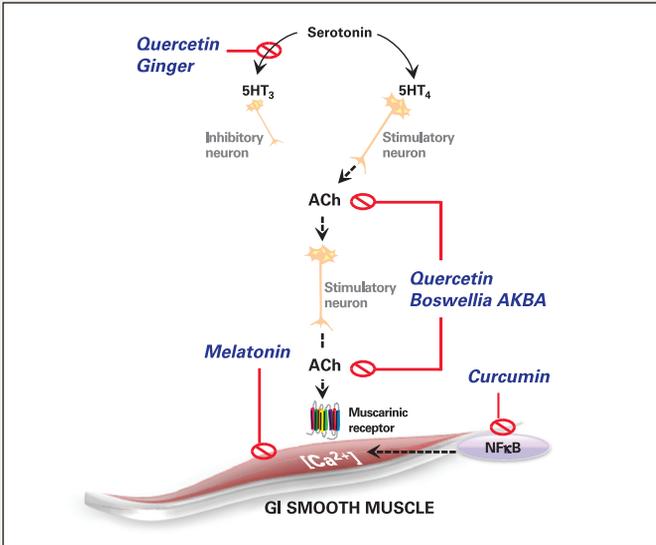
**3 capsules per day, in the evening, 1/2 to 1 hour before bedtime.**

***WARNING: Not to be taken by pregnant or lactating women. May have sedating effects and is for bedtime use only. This product may be contraindicated in depression, seasonal affective disorder, schizophrenia, autoimmune disease, asthma and for individuals taking MAO inhibitors or corticosteroids.***

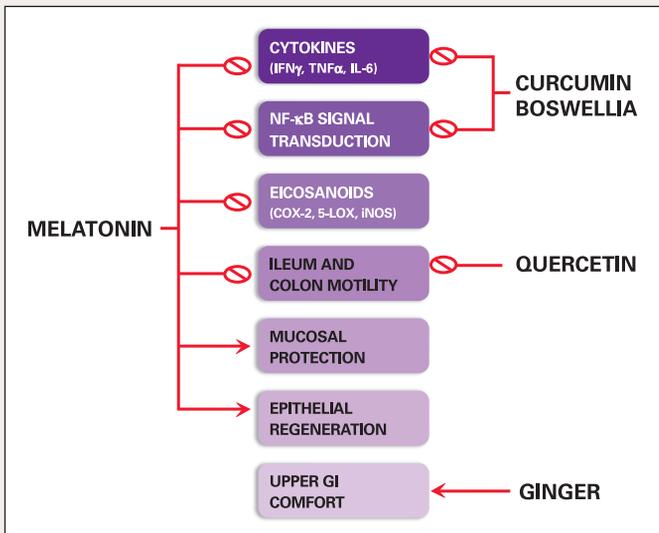
Curcumin C3 Complex® is a registered trademark and patented product of Sabinsa Corporation.

**5-LOXIN®** AKBA *boswellia serrata* extract. 5-LOXIN® is a registered trademark of PL Thomas & Co., Inc. International patents pending.

# MotilCalm



**Figure 3.** MotilCalm helps maintain healthy neuromuscular activity of the GI tract. Quercetin and ginger modulate serotonin activation of 5HT<sub>3</sub> receptors to support upper GI comfort. Quercetin and boswellia maintain healthy acetylcholine activity in the ENS and at neuromuscular junctions. Melatonin and curcumin modulate the effects of acetylcholine and cytokines on muscle contraction.\*



**Figure 4.** MotilCalm maintains reduced motility, promotes inflammatory balance and mucosal protection.\*

## MotilPro versus MotilCalm

While MotilPro promotes peristalsis and overall motility of the stomach and intestines, MotilCalm helps to maintain calming GI rhythms, supporting a gradual migration of food and nutrients through the ileum and colon.\*

	Quantity	Order Code
MotilPro	180	MOP1
MotilCalm	180	MOC1



## References

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