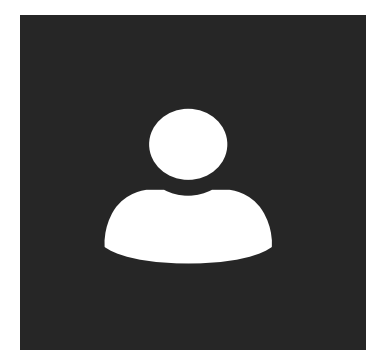


# GI Dysmotility Symptoms Are Not Associated with Increased L-Dopa Requirements in Parkinson's Disease Patients



PRESENTER:  
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## INTRODUCTION

Gastrointestinal (GI) motility disorders like gastroparesis or small bowel bacterial overgrowth are **thought to impair efficacy of L-dopa**, absorbed in the proximal small intestine leading to—> motor fluctuations among Parkinson's Disease (PD) patients that prompt dosage increases. Symptoms of dysmotility are frequently reported but results are mixed concerning their effect on L-dopa pharmacokinetics.

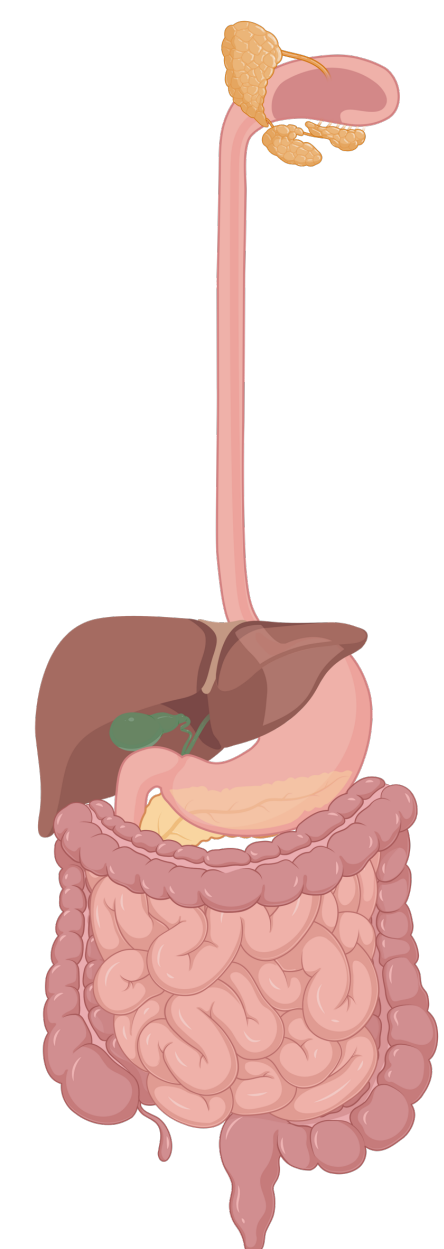
We compare L-dopa equivalent daily dose (LEDD) and motor function among patient with 5 upper GI symptoms to study the possible relationship.

## METHODS

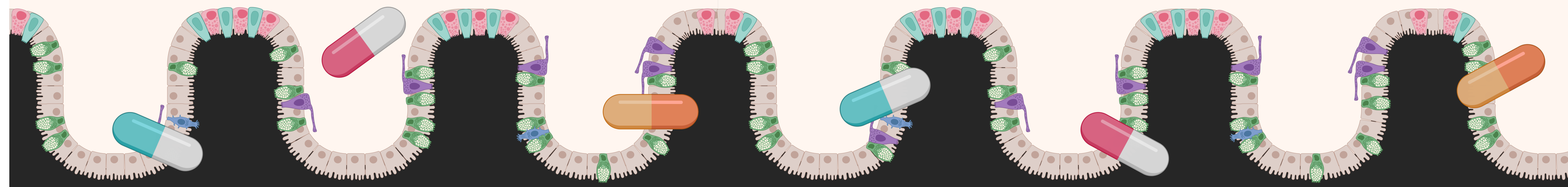
We collected data from 200 PD patients evaluated by outpatient neurology at Mass General Brigham Healthcare between 2018-2019.

History of five upper GI symptoms, Unified PD Rating Scale (UDPRS) part III motor exam scores off medication, & LEDD were extracted from medical records:

1. Dysphagia
2. Nausea
3. Vomiting
4. Epigastric pain
5. Bloating



Differences between LEDD and UDPRS motor scores among patients with and without a history of each of the 5 GI symptoms were calculated via Student t-tests.



In Parkinson's, **GI Dysmotility** may **NOT** be directly related to **poor L-Dopa absorption** despite being a common reason PD patients are referred to GI.

## RESULTS

GI Symptom	LEDD, mg (SD)	P value	UDPRS III (SD)	P value
Nausea	<b>-187 (86)</b>	<b>0.03</b>	1 (2)	0.633
Vomiting	11 (95)	0.91	-2 (2)	0.343
Dysphagia	<b>230 (84)</b>	<b>0.007</b>	<b>5 (2)</b>	<b>0.036</b>
Epigastric pain	101 (104)	0.33	0 (3)	0.881
Bloating	62 (99)	0.533	1 (2)	0.764

## DISCUSSION

Except dysphagia, GI dysmotility symptoms are **NOT** associated with increased LEDD or motor severity. **GI dysmotility may not be directly related to poor L-dopa absorption.**

While dysphagia was linked with higher LEDD, this may have stemmed from higher UDPRS scores in this population.

Interestingly, those with nausea required lower LEDD despite comparable motor severity. Nausea, a frequent symptom of delayed intestinal transit, may extend absorption time leading to better motor outcomes on less L-dopa. However, further studies are needed to discern any underlying mechanism.

**Clinical management of dysmotility may not reduce motor fluctuations and the need for increased L-dopa as previously presumed.**

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