Tradipitant (NEREUS) for Prevention of Vomiting Induced by Motion Sickness
National Drug Monograph
July 2026
VA Pharmacy Benefits Management Services and National Formulary Committee

The purpose of VA National Formulary Committee drug monographs is to provide a focused drug review for making formulary decisions. The Product Information or other resources should be consulted for detailed and most current drug information.

FDA PRESCRIBING INFORMATION[1]

Description / MOA	Tradipitant is a selective, high-affinity antagonist of human substance P/neurokinin-1 (NK-1) receptors. Tradipitant has been shown in animal models to inhibit drug-induced emesis, and human positron emission tomography (PET) studies demonstrate that it crosses the blood-brain barrier and occupies brain NK-1 receptors. The exact mechanism by which tradipitant exerts its therapeutic effect is not fully established.
Indication Under Review	Prevention of vomiting induced by motion in adults
Dosage Regimen	The recommended dosage is 85 mg or 170 mg administered as a single oral dose approximately 60 minutes before an event expected to cause vomiting induced by motion. Use the lowest effective dose. The maximum dosage in a 24-hour period is a single dose of 85 mg or 170 mg. The drug should be administered on an empty stomach, at least 1 hour prior to or 2 hours after a full meal.
Dosage Forms Under Review	85mg Oral Capsule

EFFICACY CONSIDERATIONS

Trial — **Polymeropoulos, et al. MOTION SIFNOS trial[2]**

Design — Randomized, double-blind, placebo-controlled study conducted in natural sea conditions on the Pacific Ocean.

Population — N = 126 (intent-to-treat). Adults aged 18 to 75 years with a history of motion sickness. The study population was 77% female, with a mean age of 39.1 years.

Intervention — Patients were randomized 1:1 to receive a single dose of tradipitant 170 mg (n = 63) or matching placebo (n = 63) approximately 60 minutes prior to a boat trip lasting approximately 4 hours.

Results — Tradipitant demonstrated a significant reduction in the incidence of vomiting compared to placebo. While symptoms were lower in the tradipitant group, the difference in worst motion sickness severity was not statistically significant.

Primary Outcome	Tradipitant 170mg (n=63)	Placebo (n=63)	Difference (95% CI)	P value
Incidence of vomiting	17.5%	39.7%	-0.22	0.0039
LS mean MSSS Worst Score	3.40	3.75	-0.35	0.2936

MSSS: Motion Sickness Severity Scale

Secondary Endpoints: All other assessments favored tradipitant but did not reach statistical significance

Assessment	Tradipitant 170mg (n=63)	Placebo (n=63)	Difference (95% CI)	P value
LS mean MSAQ	47.92	50.03	-2.11	0.6333
LS mean PGI-S	2.20	2.46	-0.26	0.2678

MSAQ: Motion Sickness Assessment Questionnaire
PGI-S: Patient Global Impression Scale-Subjective

In "rough" sea conditions (wave height ≥ 1m), vomiting incidence was 15.8% (n = 19) for tradipitant vs. 72.2% (n = 18) for placebo (p = 0.0009); compared to "calm" sea (< 1m wave height) where vomiting incidence was 18.2%(n=44) for tradipitant vs. 26.7% (n=45) for placebo (p=0.3123).

Mild side effects seen more with tradipitant vs. placebo: somnolence: 27% vs. 12.7%; headache: 12.7% vs. 7.9%.

Trial — **Polymeropoulos, et al. MOTION SYROS trial[3]**

Design — A multicenter, randomized, double-blind, placebo-controlled study conducted across 34 boat trips in variable sea conditions (Atlantic, Pacific, and Gulf of Mexico).

Population — N = 365 (intent-to-treat). Adults aged 18 to 75 years with a history of motion sickness. The population was 66.7% female, with a mean age of 48.6 years.

Intervention — Patients were randomized 1:1:1 to receive a single dose of tradipitant 170 mg (n = 120), tradipitant 85 mg (n = 123), or matching placebo (n = 122) approximately 60 minutes before boat travel.

Results

Both dosing arms of tradipitant significantly reduced the incidence of vomiting compared to placebo. Secondary endpoints regarding nausea and total symptom questionnaires favored tradipitant but did not reach statistical significance.

Primary Outcome	Tradipitant 170mg (n=120)	Tradipitant 85mg (n=123)	Placebo (n=122)	P value
Incidence of vomiting	18.3%	19.5%	44.3%	< 0.0001 (both)
Vomiting in rough seas	20.4%	22%	49.5%	<0.0001

Other Endpoints: Both doses were superior to placebo in preventing more than one instance of vomiting: tradipitant 170 mg = 10.8% (n = 120, p = 0.0001); tradipitant 85 mg = 13.8% (n = 123, p = 0.0011); placebo = 31.1% (n = 122). Worst nausea severity (LS mean): 170 mg = 2.4, 85 mg = 2.6, placebo = 2.5 (NS). Overall MSAQ Score (LS mean): 170 mg = 46.0, 85 mg = 49.2, placebo = 45.1 (NS). PGI-S Score (LS mean): 170 mg = 2.1, 85 mg = 2.0, placebo = 2.2 (NS).

Mild TEAE seen more with tradipitant vs. placebo (170mg =28.3%, 85mg = 26.8% and placebo 9%). The most common were fatigue, headache and somnolence.

SAFETY CONSIDERATIONS[1-3]

Boxed Warnings	None
Contraindications	None
Other Warnings	May cause somnolence and fatigue which can impair abilities required for driving a motor vehicle or operate heavy machinery.
AEs in ≥ 10% of patients	Somnolence, headache, fatigue
Drug Interactions	Strong CYP3A4 inhibitors may increase tradipitant exposure and the risk of adverse reactions. Concomitant use with other CNS depressants may increase impairment of mental alertness.
Pregnancy	No human data available. Animal reproduction studies at oral doses up to 3.3 times the maximum recommended human dose (MRHD) showed no adverse developmental effects in rats or rabbits.
Lactation	No human data available; it is present in rat milk. Advise breastfeeding women to monitor infants for somnolence.
Administration	Administer a single oral dose approximately 60 minutes before an event expected to cause motion-induced vomiting. Must be taken on an empty stomach, at least 1 hour prior to or 2 hours after a full meal. The safety of taking more than 90 doses has not been established in clinical trials.
Renal Impairment	Avoid use in severe renal impairment
Hepatic Impairment	Avoid use in patients with mild, moderate or severe hepatic impairment

THERAPEUTIC ALTERNATIVES

Drug	VANF	CFU	FDA Indication
Tradipitant (NEREUS)	Pending Review		Prevention of vomiting induced by motion in adults
Scopolamine Transdermal (TRANSDERM SCOP)	Formulary	No	Prevention of nausea and vomiting associated with motion sickness
Dimenhydrinate (DRAMAMINE) OTC	Non-Formulary	No	Treatment and prevention of nausea, vomiting, or dizziness associated with motion sickness
Meclizine (BONINE) OTC	Formulary	No	Prevention and treatment of nausea, vomiting, or dizziness associated with motion sickness
Diphenhydramine (BENADRYL) OTC	Formulary	No	Prevention or treatment of motion sickness
Promethazine	Formulary	No	Prophylaxis and treatment of motion sickness

POTENTIAL PLACE IN THERAPY

1. Motion sickness is a syndrome that occurs in response to real or perceived motion, which can include gastrointestinal, central nervous system, and autonomic symptoms. There are several environmental modifications to help prevent motion sickness (e.g. looking at a stable visual reference point, avoidance of reading while in motion, driving rather than being a passenger and avoiding seating locations with more motion).
2. The use of ginger and acupressure bands with patients prone to motion sickness are well tolerated and may be beneficial. Patients can be advised to suck on hard ginger candies if they experience or anticipate experiencing symptoms of motion sickness. Acupressure bands are typically applied to both wrists prophylactically but can also be worn after symptoms have begun.
3. For patients with recurrent motion sickness despite environmental modification and complementary and alternative treatments, consider transdermal scopolamine or antihistamines, as these are the best studied and most commonly used options.
4. Tradipitant can be considered for patients who have motion induced vomiting that have not responded to adequate doses of scopolamine and antihistamines.

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References

1. Nereus (tradipitant) capsules [prescribing information online]. Washington DC: Vanda Pharmaceuticals.; 2025.
2. Polymeropoulos, VM, Czeisler, MÉ, Gibson, MM, et al. Tradipitant in the Treatment of Motion Sickness: A Randomized, Double-Blind, Placebo-Controlled Study. Front Neurol. 2020; 11:563373.
3. Polymeropoulos VM, Kiely L, Bushman ML, et al. Motion Syros: Tradipitant Effective in the Treatment of Motion Sickness; a Multicenter, Randomized, Double-Blind, Placebo-Controlled Study. Front Neurol. 2025;16:1550670.