New Drug Overview

Nereus (tradipitant)

PDL Category: Antiemetics

Introduction

Disease Background:

- Motion sickness is a condition that happens in reply to real or perceived motion, which may include symptoms of dysregulation in and between the gastrointestinal, central nervous system (CNS), and autonomic systems (*Jensen et al 2026*, *Priesol 2026*).
  - This can be triggered by travel (or simulated travel) by sea, air, or land (*Jensen et al 2026*).
  - As motion sickness occurs less frequent in adults and is very rare in adults >50 years of age, children 6 to 12 years of age are most susceptible to motion sickness.
  - In addition, females and migraine sufferers are more prone to motion sickness (*Priesol 2026*).
- Symptoms of motion sickness frequently are described by malaise, nausea, and sometimes vomiting (*Jensen et al 2026*). The main distinguishing symptom is nausea (*Priesol 2026*).
  - Other symptoms may include feeling of headache, non-vertiginous dizziness, belching, increased salivation, diaphoresis, and a general feeling of malaise (*Priesol 2026*).
    - Symptoms generally abate after 36 to 72 hours of continuous exposure, but can recur upon returning to the pre-exposure environment (eg, returning to land after a voyage at sea).
- As treatment is frequently not effective, prevention should be stressed (*Priesol 2026*).
  - If recurrent motion sickness occurs in patients even with use of environmental modifications and complementary/alternative treatments (eg acupressure bands), transdermal scopolamine or antihistamines are suggested rather than other treatment options.
- Nereus was FDA approved in 2025.

Pharmacology/Usage

- Nereus (tradipitant) is a substance P/neurokinin-1 (NK-1) receptor antagonist.
  - It is a selective, high-affinity antagonist of human substance P/NK1 receptors. It has been shown in animal models to inhibit drug induced emesis.
  - Human Positron Emission Tomography (PET) studies with tradipitant have shown that tradipitant 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.

Indications

Table 1. Food and Drug Administration Approved Indications

Indication	Nereus (tradipitant)
• For the prevention of vomiting induced by motion in adults.	✔

(Prescribing information: Nereus 2026)

- Information on indications, mechanism of action, pharmacokinetics, dosing, safety, and clinical efficacy summary has been obtained from the prescribing information for the individual products, except where noted otherwise.

Dosing and administration

Table 2. Dosing and Administration

Drug	Available Formulations	Route	Usual Recommended Frequency	Comments
Nereus (tradipitant)	Capsules: 85mg	PO	85mg or 170mg as a single oral dose, administered about 60 minutes before an event expected to cause vomiting induced by motion. -The maximum dosage in a 24-hr period is a single dose of 85mg or 170mg.	• Use the lowest effective dose. • The safety for the prevention of vomiting induced by motion in adults for more than 90 doses has not been established in clinical trials. • Administer on an empty stomach, at least 1 hour prior to or 2 hours after a full meal. • Avoid use in patients with mild, moderate, or severe hepatic impairment. • Avoid use in patients with severe renal impairment.

See the current prescribing information for full details.

Clinical Efficacy Summary

- The efficacy of Nereus was assessed in two randomized, double-blind, placebo-controlled studies (Study 1 and Study 2).
  - In both studies, subjects were randomized to receive a single dose of Nereus 85mg, 170mg, or placebo, about 60 minutes prior to a boat trip scheduled to last about 2 to 5 hours. Subjects were instructed to take study medication without food.
    - Subjects with conditions causing chronic nausea were not eligible for enrollment.
    - Use of anti-nausea or anti-emetic medications was not allowed during the studies.
    - The efficacy of Nereus for the treatment of established nausea and vomiting was not assessed in the studies.
  - There were 365 subjects in Study 1 and 316 subjects in Study 2 that had a mean age of 48 years (range from 18 to 75 years), while 62% were female and 81% identified as White.
  - The duration of the boat trip in these studies ranged from 2 to 4.4 hours. The peak wave height ranged from 0.3 to 2.5 meters.
  - The primary endpoint in both studies was the percentage of subjects with vomiting during the boat trip.
    - Vomiting was assessed every 30 minutes using a 1-item questionnaire completed by subjects indicating whether they had vomited in the last 30 minutes.
    - Results are presented in the table below, which was adapted from the prescribing information.

Table 3. Efficacy results

	Nereus 85mg	Nereus 170mg	Placebo
Study 1	N=123	N=120	N=122
Incidence of vomiting (%)	20%	18%	44%
Treatment difference	-25%	-26%	
NNT *calculated by Optum Rx*	4	4	
Study 2	N=104	N=106	N=106
Incidence of vomiting (%)	18%	10%	38%
Treatment difference	-19%	-27%	
NNT *calculated by Optum Rx*	6	4	

- Per the full text study of Study 1, the incidence of vomiting in both Nereus arms was statistically significantly lower as compared with placebo ($p<0.0001$ for both doses vs placebo) (*Polymeropoulos et al 2025*).
- In Study 1 and Study 2 during a boat trip, a secondary endpoint of worst nausea score, assessed over the preceding 30 minutes on a 5-point scale where 0 indicates no nausea and 4 indicates very severe nausea, was 2.4 for Nereus 85mg and 2.3 for Nereus 170mg compared to 2.4 for placebo in Study 1 and 2.5 for Nereus 85mg and 2.2 for Nereus 170mg compared to 2.4 for placebo in Study 2.
  - These differences did not reach statistical significance in either study.

Clinical guidelines

- There are currently no published guidelines addressing the use of Nereus, as it was most FDA approved.
- **Review, Motion Sickness: An overview** (*Leung and Hon 2019*).
  - As it is easier to prevent than cure, it is important to stress prevention.
    - Behavioral and environmental modifications may be effective for motion sickness prevention.
      - Avoiding heavy meals and ingestion of caffeine or alcohol is suggested. Smoking should also be avoided.
      - Eliminating visual input, having controlled regular breathing, and reduction of head and body movement may help.
  - Pharmacotherapy may be helpful when taken prophylactically.
    - Treatment may be considered for those who are likely to have significant motion sickness and for patients who do not respond to conservative efforts.
    - Medications are generally most effective when combined with behavioral and environmental modifications.
    - Medications that are effective and most frequently used in the prophylaxis or treatment of motion sickness include anticholinergic agents and antihistamines.
      - Scopolamine has been shown to be effective for the prevention and treatment of motion sickness and is the drug of choice for patients who want to stay awake during travel.

- Several first-generation antihistamines have been demonstrated to be effective for treatment and prevention of motion sickness, including cinnarizine, promethazine, dimenhydrinate, diphenhydramine, cyclizine, and meclizine.
- There is no data to support that sympathomimetics are superior to scopolamine and antihistamines. However, they are frequently used in combination with scopolamine and antihistamines

▪ Complementary and alternative therapy are discussed.
- Some data suggests that acupressure, acupuncture, and electroacupuncture are effective treatment for motion sickness.
- Some authors also suggest the use of ginger.
- One study suggested that vitamin C 2g may be effective for suppressing motion sickness symptoms.

Safety summary

- **Contraindications:** None.

- **Box Warning:** None.

- **Warnings and precautions:**
  - In placebo-controlled clinical trials, somnolence (6%, 12%) and fatigue (6%, 8%) were adverse reactions reported in subjects who took a single dose of 85mg or 170mg Nereus, respectively.
    - Nereus may impair the mental and/or physical abilities required for driving a motor vehicle or operating heavy machinery.
    - Concomitant use of other drugs that cause central nervous system depression and strong CYP3A4 inhibitors may increase this effect.
      - If concomitant use is unavoidable, warn patients against driving and other activities requiring complete mental alertness.

- **Common adverse drug reactions**:
  - Listed % incidence for adverse drug reactions= reported % incidence for drug (Nereus 85mg) minus reported % incidence for placebo in studies 1 and 2. Please note that an incidence of 0% means the incidence was the same as or less than placebo.
    - The most frequently reported adverse events included somnolence (2%), headache (2%), and fatigue (3%).
  - Listed % incidence for adverse drug reactions= reported % incidence for drug (Nereus 170mg) minus reported % incidence for placebo in studies 1, 2, and 3. Please note that an incidence of 0% means the incidence was the same as or less than placebo.
    - The most frequently reported adverse events included somnolence (6%), headache (4%), and fatigue (6%).

- **Drug interactions:**
  - Tradipitant is a CYP3A4 substrate. Strong CYP3A4 inhibitors may increase tradipitant exposure, which may increase the risk of adverse reactions to Nereus.

- **Special populations:**
  - There is no pregnancy category for this medication; however, the risk summary indicates that available data from clinical trials with use in pregnant women are not sufficient to inform a drug-associated risk of major birth defects, miscarriage, or other adverse maternal or fetal outcomes.
  - The safety and efficacy of use in the pediatric population have not been established.

Conclusion

- Motion sickness is a condition that happens in reply to real or perceived motion, which may include symptoms of dysregulation in and between the gastrointestinal, central nervous system (CNS), and autonomic systems (*Jensen et al 2026*, *Priesol 2026*).
  - This can be triggered by travel (or simulated travel) by sea, air, or land (*Jensen et al 2026*).
- Symptoms of motion sickness frequently are described by malaise, nausea, and sometimes vomiting (*Jensen et al 2026*).
- Nereus is a substance P/neurokinin 1 (NK1) receptor antagonist indicated for the prevention of vomiting induced by motion in adults.
  - Administer orally about 60 minutes before an event expected to cause vomiting induced by motion, on an empty stomach. Use the lowest effective dose.
- Nereus may impair the mental and/or physical abilities required for driving a motor vehicle or operating heavy machinery.
  - Concomitant use of other drugs that cause central nervous system depression and strong CYP3A4 inhibitors may increase this effect.
- The efficacy of Nereus for preventing vomiting induced by motion was assessed in two randomized, double-blind, placebo-controlled studies.
  - Treatment was taken about 60 minutes prior to a boat trip scheduled to last about 2 to 5 hours.
  - The primary endpoint in both studies was the percentage of subjects with vomiting during the boat trip.
    - The incidence of vomiting (%) was less with Nereus 85mg and 170mg as compared with placebo.
- There are no guidelines that discuss Nereus as it was just FDA approved. However, scopolamine and antihistamines are often used as pharmacotherapy for prevention and treatment of motion sickness (*Leung and Hon 2019*).

- There is no evidence to suggest that Nereus is safer or more effective than other currently preferred, more cost-effective medications. It is therefore recommended that Nereus remain non-preferred and require prior authorization and be available to those who are unable to tolerate or who have failed on preferred medications.

- **PDL Placement:**
  - ☐ Preferred
  - ☒ Non-Preferred with Conditions

References

- Jensen N, Randall D, Lang E. Motion Sickness. Dynamed Website. Updated January 21, 2026. Accessed June 12, 2026. https://www.dynamed.com.
- Leung AKc, Hon KL. Motion sickness: an overview. *Drugs Context.* 2019; 8:2019-9-4.
- Nereus. Package insert. Vanda Pharmaceuticals Inc.; March 2026.
- 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.
- Priesol AJ. Motion Sickness. UpToDate website. Last updated February 23, 2026. Accessed June 12, 2026. https://www.uptodate.com.

Publication Date: June 2026.