

# Clinical trial finds nasal spray safely treats recurrent abnormal heart rhythms

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A clinical trial led by Weill Cornell Medicine investigators showed that a nasal spray that patients administer at home, without a physician, successfully and safely treated recurrent episodes of a condition that

causes rapid abnormal heart rhythms.

The [study](#), published in the *Journal of the American College of Cardiology*, provides real-world evidence that a wide range of patients can safely and effectively use the experimental drug, called etripamil, to treat recurrent paroxysmal supraventricular tachycardia (PSVT) episodes at home, potentially sparing them the need for repeated hospital trips for more invasive treatments.

The study is the latest in a series of studies by lead author Dr. James Ip, professor of clinical medicine at Weill Cornell Medicine and a cardiologist at NewYork-Presbyterian/Weill Cornell Medical Center, and colleagues to demonstrate the potential of [nasal spray](#) calcium-channel blocker etripamil as an at-home treatment PSVT. Dr. Ip received compensation as a steering committee member for Milestone Pharmaceuticals, the maker of etripamil and sponsor of the trial.

Patients with PSVT experience sudden and recurrent rapid heart rhythms triggered by abnormal electrical activity in the upper chambers of the heart. Though the episodes are not commonly life-threatening, they can be frightening and cause shortness of breath, [chest pain](#), dizziness, or fainting and lead to frequent emergency department visits.

Treatment for PSVT often requires hospitalization to receive intravenous medication. Some patients undergo a procedure called cardiac ablation, where the physician threads thin wires through their blood vessels to the heart and uses them to treat the short circuits that cause the abnormal normal heart rhythm.

Dr. Ip and colleagues previously [showed](#) that almost two-thirds of patients with PSVT who took one or more doses of the calcium channel blocker etripamil without a physician present experienced symptom relief on average in 17 minutes. The latest study builds on those findings,

showing that verapamil is safe and effective under more real-world circumstances in a larger patient population and could be safely used to treat multiple episodes of PSVT.

The new study enrolled 1116 patients at 148 sites in the United States, Canada, and South America. It did not require a pretest dose supervised by a physician as the previous studies did. It also included patients with a history of atrial fibrillation or [atrial flutter](#), who were excluded from the previous studies.

Patients monitored their heart for one hour with a home electrocardiogram monitor after self-administering the first dose, took an additional dose if necessary, and were allowed to self-treat up to four PSVT episodes with etripamil.

Two-thirds of the patients experienced relief within an hour, and the average time needed for symptom relief was 17 minutes. Mild, temporary nasal symptoms such as [runny nose](#), [nasal congestion](#) or discomfort, and bloody nose were common after the first use of etripamil but became less common with subsequent use.

**More information:** James E. Ip et al, Etripamil Nasal Spray for Recurrent Paroxysmal Supraventricular Tachycardia Conversion: Results from the NODE-303 Open-label Study, *Journal of the American College of Cardiology* (2024). [DOI: 10.1016/j.jacc.2024.03.384](https://doi.org/10.1016/j.jacc.2024.03.384)

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