



# Drug & Poison Information Center Bulletin

## Faculty of Pharmacy - Tanta University

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- *Etripamil for At-Home PSVT Relief.*
- *From Food Pyramid to Real Food Model.*
- *Spironolactone in Women  $\geq 45$ : Hyperkalemia Risk.*



## Cardamyst®:

### A new era of rapid, at-home PSVT relief

Etripamil, sold under the brand name Cardamyst®, is an intranasal fast-acting, nondihydropyridine L-type calcium channel blocker that was approved on December 12, 2025 for acute symptomatic episodes of paroxysmal supraventricular tachycardia (PSVT). Similar to verapamil, etripamil functions by blocking the slow inward calcium influx through L-type calcium channels, thereby slowing atrio-ventricular (AV) nodal conduction and prolonging the AV nodal refractory period.



It inhibits voltage-dependent L-type calcium channels (Cav1.2 and Cav1.3), which are crucial for its antiarrhythmic effect. These channels are vital for the propagation of electrical signals that regulate the contraction and relaxation of heart muscle.

It selectively inhibits these L-type calcium channels in cardiac tissue. More recent trials also suggest its therapeutic potential in controlling the rate of atrial fibrillation (AF).

Studies indicate that etripamil may also exert class I and III antiarrhythmic effects on human atrial cardiomyocytes by directly inhibiting atrial  $K^+$  and  $Na^+$  channels, including TASK-1, which is upregulated in AF.



### ***Difference between Etripamil and other drugs used in PSVT***

Traditional therapeutic options for PSVT, such as oral antiarrhythmic drugs, have a delayed onset of action due to first-pass metabolism. Parenteral administration of agents for PSVT requires intravenous access and medical monitoring, leading to delays, inconvenience, and financial burden.

Etripamil offers an innovative approach by providing a self-administered, intranasal formulation that can rapidly alleviate symptoms and potentially avoid emergency room visits. Intranasal etripamil is designed to provide a rapid-onset and sustained antiarrhythmic effect with limited adverse hemodynamic and electrophysiological effects, eliminating the need for close medical supervision.

### ***Effectiveness***

Etripamil has shown promising results in clinical trials for its effectiveness in treating PSVT. In Phase 1 studies, intranasally administered etripamil was rapidly absorbed, reaching maximal plasma concentration within 5-8.5 minutes. This rapid absorption correlated with a greater than 10% increase in mean PR interval from baseline within 4-7 minutes at doses of 60 mg or higher. This PR was generally sustained for approximately 45 minutes at these doses.

In clinical trials, self-administered etripamil consistently demonstrated robust efficacy. A Kaplan-Meier estimate showed that 59.6% of etripamil-exposed patients converted to sinus rhythm within 30 minutes, with a median time to conversion of 18.5 minutes. Estimates for conversion to sinus rhythm with etripamil at 60 minutes in individual studies ranged from 63.2% to 73.5%. These findings suggest that etripamil provides a rapid and effective means for PSVT termination.

### ***Dosage and administration***

Etripamil is administered as a nasal spray, typically with one spray into each nostril at the onset of PSVT symptoms. If symptoms persist after 10 minutes, a new dose of the second device that comes with each prescription can be used.

Clinical trials have evaluated various doses, with 60 mg or greater generally produced instant slowing of AV nodal conduction with a limited duration of effect. Specifically, doses of 35, 70, 105, and 140 mg have been evaluated in Phase 2 studies to guide dose selection.

### **Side Effects**

In general, etripamil has been well tolerated in clinical studies. Adverse events were primarily mild to moderate and related to the administration site. Common adverse events included nasal discomfort, nasal congestion, rhinorrhea, increased lacrimation, throat irritation, upper airway cough syndrome, and sneezing.

A transient increase in heart rate was observed in healthy participants during sinus rhythm. An initial sharp decrease in systolic blood pressure (SBP) was seen, especially at higher doses, but it returned to near-baseline levels around 10 minutes after administration. After 10 minutes, there was an increase in SBP with increasing doses, with a maximum increase from baseline of less than 10 mm Hg in most dosing groups, and 12 mm Hg at 140 mg. Patients also may experience dizziness or lightheadedness after using etripamil, and it is advised to lie down if these symptoms occur.

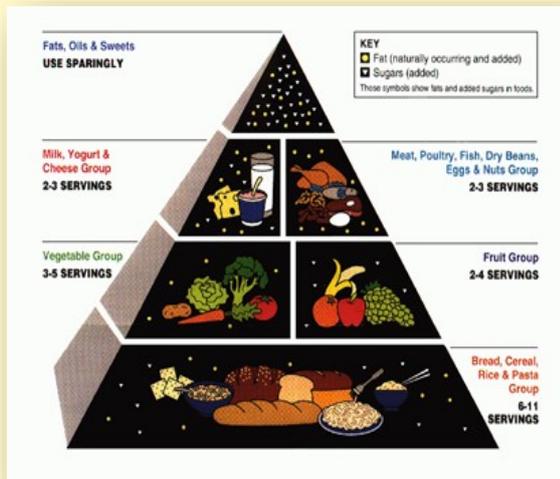
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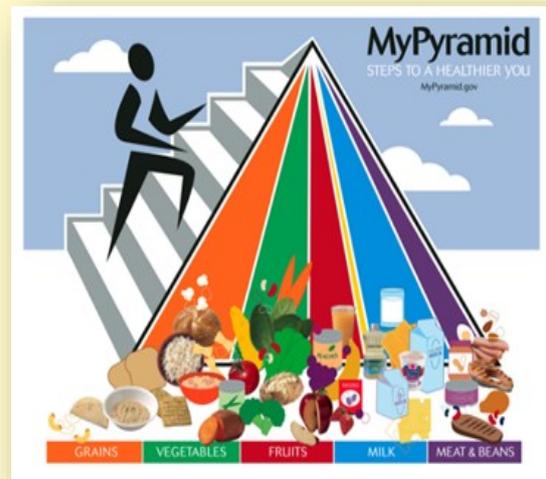
## The 2026 inverted food pyramid

### Food pyramid evolution over time

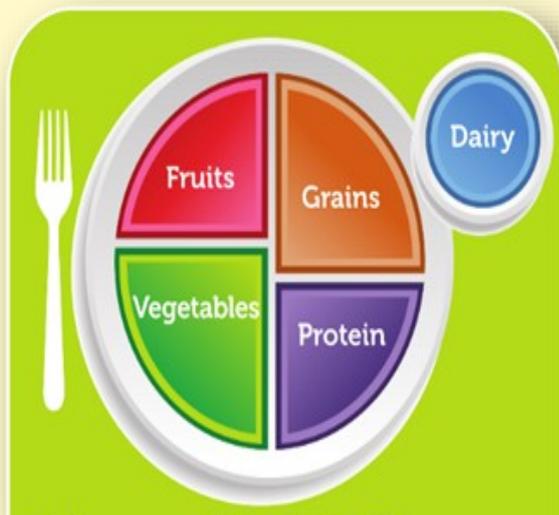
1992-2005



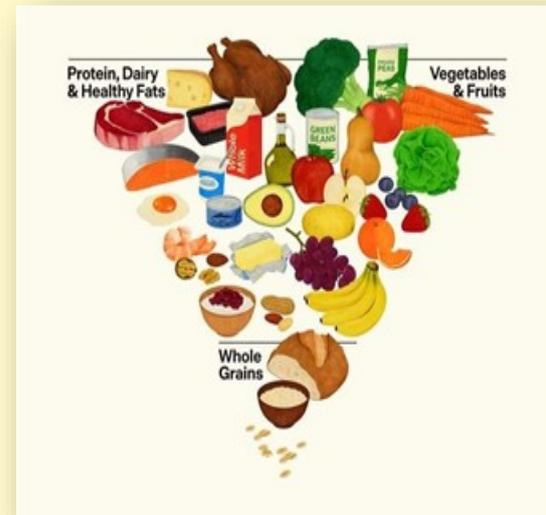
2005-2011



2011-2026



2026



The original United States Department of Agriculture (USDA) pyramid focused on a low-fat, grain-based diet, while the newer “Real Food” pyramid prioritizes high-quality protein (meat, eggs, seafood), healthy fats, and vegetables, while limiting processed foods and added sugars.

**Key differences**

Aspect	USDA Food Pyramid	“Real Food” Pyramid
<b>Base of Pyramid</b>	Grains are the foundation.	Vegetables, whole foods, and quality proteins are the foundation.
<b>Fat Intake</b>	Emphasizes low-fat diets.	Encourages healthy fats (olive oil, nuts, seeds).
<b>Food Processing</b>	Limited distinction between processed and unprocessed foods.	Focuses on minimally processed foods.
<b>Sugar</b>	Sugary foods placed at the top.	Reduces added sugars across the whole diet.

**Overall goal:**

The USDA model focused on low-fat, high-carbohydrate intake, while the “Real Food” pyramid emphasizes nutrient density and food quality over macronutrient distribution.

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**By: Ph. Nahla Eldeeb, B.Sc.**

## Spironolactone in women $\geq 45$ : Safety check

Spironolactone remains a cornerstone therapy in dermatology for the treatment of acne, female-pattern hair loss, hirsutism, and hidradenitis suppurativa. While routine potassium monitoring is no longer recommended for healthy women under 45 years due to minimal risk, uncertainty persisted regarding its safety in women aged 45 and older. A recent retrospective cohort study published in the *Journal of the American Academy of Dermatology* addressed this clinical concern.

### Study Overview

The study analyzed 398 women aged  $\geq 45$  years treated with spironolactone between 2015 and 2025, primarily for acne. Investigators assessed hyperkalemia incidence (defined as serum potassium  $>5.0$  mEq/L), associated risk factors, clinical severity, and the impact of potassium monitoring on clinical management decisions.

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### Key Findings

#### ⇒ **Overall Incidence:**

Hyperkalemia occurred in 10.1% of patients higher than the  $<1\%$  reported in younger women.

#### ⇒ **Risk Stratification by Age:**

- 45–64 years: 7.9%
- $\geq 65$  years: 22.4%

Age  $\geq 65$  independently increased risk nearly threefold.

#### ⇒ **Impact of Comorbidities**

The risk of hyperkalemia was higher among patients with hypertension, diabetes, or chronic kidney disease. The highest incidence (28.1%) was observed in women  $\geq 65$  with at least one comorbidity, while healthy women aged 45–64 had the lowest rate (6.3%).

## Clinical Severity and Outcomes

Most cases were classified as mild (97.5%), with being 85% asymptomatic and were managed in outpatient settings. Only 3.8% required treatment modification. Serious complications were rare, and no clear dose-response relationship was identified.

## Timing of Hyperkalemia

Hyperkalemia typically developed late during treatment with a mean onset of 20 months, suggesting evolving patient factors rather than early drug toxicity.

## Conclusion

- ⇒ This study provides real-world evidence that hyperkalemia in women aged  $\geq 45$  taking spironolactone for dermatologic conditions occurs more frequently than in younger patients, but is usually mild and rarely requires changes in management.
- ⇒ Women aged  $\geq 65$  and those with comorbidities represent the highest-risk groups. The findings support a risk-based, individualized approach to potassium monitoring rather than universal testing.
- ⇒ Optimizing monitoring strategies is essential to maintain safety while avoiding unnecessary laboratory evaluations.



## References:

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### We are on the web

<https://pha.tanta.edu.eg/units/Drug%20Information/Default.aspx>

## Vision

The vision of Tanta University DPIC is to improve national healthcare service through provision of evidence-based, unbiased, patient oriented drug information services & adverse drug reporting system.

## Mission

- \* Responding to drug inquiries related to the use of the drug and providing the health care professionals and patients with drug information related to the patient's care to achieve the optimal use of the drug in addition to the provision of other toxicological managing information.
- \* Educational activities to support the rational optimal use of drugs as well, supporting research activities.
- \* Continuous medical education and training courses in various fields of pharmacy for students, undergraduates, postgraduate students, and researchers.
- \* Issuing a Drug Information Bulletin periodically to take a look at medical & pharmaceutical news.
- \* Supporting the National Pharmaceutical Vigilance Program by following up and monitoring side effects and problems related to use of pharmaceutical preparations within regional hospitals.
- \* Contributing to the establishment of various treatment protocols and prescription booklet services in regional hospitals.

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