

Phenylephrine

In 2006, the federal government imposed restrictions on the over-the-counter sale of pseudoephedrine products in an attempt to curb the clandestine chemical synthesis of methamphetamine. Manufacturers have responded by changing many of their decongestant product formulations to include phenylephrine instead of pseudoephedrine. Products such as Sudafed® PE and Contac® contain phenylephrine 5 or 10 mg per dosage unit. As a result, pseudoephedrine overdoses are decreasing and phenylephrine overdoses are increasing in Maryland.

Phenylephrine stimulates alpha receptors in vascular smooth muscle and causes local vasoconstriction of the nasal arteries. The alpha stimulatory effect of phenylephrine is superior to that of pseudoephedrine.

Phenylephrine overdoses may present with CNS excitation, hypertension, tachycardia (or normal chronotropy), mydriasis, and possibly hyperthermia. Severe phenylephrine overdoses will present with hypertensive crisis, bradycardia (reflexive), seizures, myocardial infarction, dysrhythmias, and cerebral hemorrhage.

Management of phenylephrine overdoses includes administration of activated charcoal in addition to oxygen and ECG monitoring. Benzodiazepines should be used first line to treat tachycardia, mild hypertension, agitation, and seizures. Hypertensive crisis should be treated with nitroprusside or nitroglycerin. These medications vasodilate both arteriolar and venous beds. Phentolamine, an alpha blocker, is a second-line agent. Beta-blockers (or mixed alpha/beta blockers such as labetalol) should not be used in this situation because they can lead to unopposed alpha effects and exacerbate the hypertension and cause intracranial bleeding/ischemia.

The Maryland Poison Center is available 24-7 to answer all questions and assist in the management of all poisoned patients. Please call 1-800-222-1222 to reach one of our certified specialists in poison information.

We wish you a safe and happy holiday season!

Bryan D. Hayes, PharmD, Clinical Toxicology Fellow

DID YOU KNOW THAT... Acetadote® administration has been simplified for the obese patient?

Acetadote® is the intravenous form of acetylcysteine used for the management of acute acetaminophen overdoses. The usual recommended dosage is 150 mg/kg over 1 hour, followed by 50 mg/kg over 4 hours, followed by 100 mg/kg over 16 hours. The new recommended dose in obese patients (>100kg) is 15 grams total over 1 hour, 5 grams total over 4 hours and 10 grams total over 16 hours.



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If you do not wish to receive faxes or emails from the Maryland Poison Center, call 410.706.7604 or circle your fax number and fax this back to 410.706.7184. Supported by Maryland Department of Health and Mental Hygiene

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