

# ERECTILE DYSFUNCTION AND PHARMACOLOGIC TREATMENT



**Erectile dysfunction** is the inability to achieve or maintain an erection sufficient for sexual intercourse.

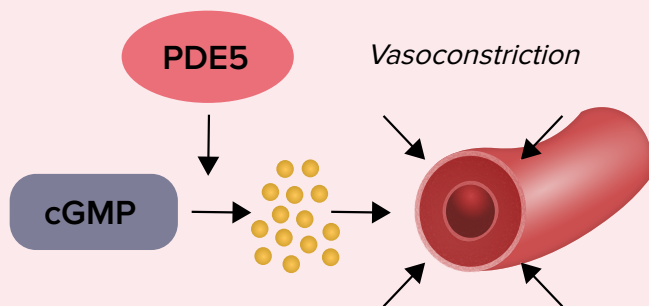
Risk factors	Treatment	Administration	Dosing	Common side effects
<ul style="list-style-type: none"> <li>• Age (&gt; 40 years)</li> <li>• Chronic disease</li> <li>• Certain medications</li> <li>• Psychological distress</li> </ul>	Erectile dysfunction is treatable with phosphodiesterase inhibitors: <ul style="list-style-type: none"> <li>• Sildenafil (Viagra)</li> <li>• Vardenafil (Levitra)</li> <li>• Tadalafil (Cialis)</li> <li>• Avanafil (Stendra)</li> </ul>	Oral	<ul style="list-style-type: none"> <li>• Typically taken 15–60 minutes before sexual activity</li> <li>• Tadalafil can be taken daily.</li> </ul>	<ul style="list-style-type: none"> <li>• Headache</li> <li>• Flushing</li> <li>• Upset stomach</li> <li>• Worsening sleep apnea</li> <li>• Hypotension</li> </ul>

## CLINICAL TIP:

Erectile dysfunction can be an early warning sign of a wide range of serious conditions, including cardiovascular disease and diabetes. Clients who report erectile dysfunction should be screened for underlying pathology.

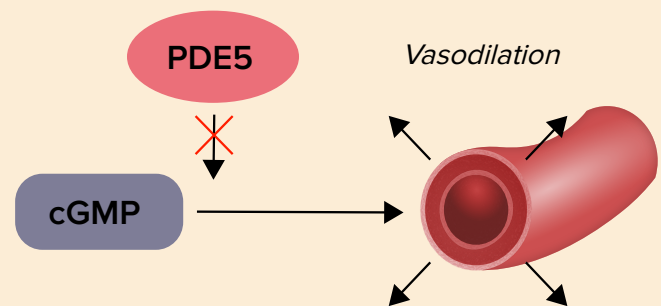
## PDE5 inhibitor function

Cyclic GMP (cGMP) is an enzyme that regulates ion channel conduction in smooth muscle, causing vasodilation.



Phosphodiesterase 5 (PDE5) is an enzyme that breaks down cGMP, leading to vasoconstriction.

PDE5 inhibitors block PDE5 function, which prevents the breakdown of cGMP. Higher cGMP levels increase vasodilation.



Increased vasodilation facilitates penile engorgement and sustained erectile function.

## Precautions

- Coronary heart disease
- CV event in previous 6 months (MI, stroke, serious dysrhythmia)
- Preexisting low or high BP
- CHF
- Unstable angina

## Client education

- Caution must be taken when combining PDE5 inhibitors and other vasodilators due to hypotension risk.
- Never combine PDE5 inhibitors and nitroglycerine: can be fatal!
- Priapism is a painful erection; seek medical intervention if priapism lasts > 4 hours. Can cause permanent damage.
- Avoid grapefruit and large, fatty meals, which can delay onset of medication.

## NOTES

