

Hydralazine (Apresoline)

Hydralazine, also known by its trade name Apresoline, is a vasodilator that helps to relax smooth muscle and decrease peripheral resistance helping to lower blood pressure. Hydralazine directly relaxes arteriolar muscle decreasing afterload to treat severe hypertension and heart failure. Possible side effects include drug-induced lupus (SLE), reflex tachycardia, and hypotension. To prevent hydralazine-induced reflex tachycardia and hypotension, this medication can be coadministered with a diuretic and beta blocker.



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Indications

Severe Hypertension

Severed Hiker-BP

Hydralazine is used clinically to treat severe hypertension; however, it is not indicated first-line for essential hypertension. It is also a first-line treatment for hypertension during pregnancy (combined with methyldopa).

CHF

CHF Heart-balloon

Along with severe hypertension, hydralazine can be used to treat CHF. Reducing afterload decreases the amount of pumping against resistance the heart has to do.

Reduced Afterload

Down-arrow After-load Heart-pump

Hydralazine relaxes smooth muscle and preferentially vasodilates arterioles, leading to afterload reduction. It is indicated in diseases where there is cardiac failure or excess systemic resistance, like hypertension.

Pregnancy

Pregnant-woman

Hydralazine is one of the first-line medications used for intrapartum hypertension, as it provides dependable and effective reduction of severely high blood pressure in pregnant women.

Mechanism of Action

Vasodilates Arterioles

Vase-dyed with Artery-O's

Increases in cyclic GMP levels and inhibition of smooth muscle contraction leads to greater vasodilation of arterioles than veins.

Side Effects

Drug-induced Lupus

[Loopy Pill-butterfly](#)

Drug-induced lupus, an autoimmune response caused by chronic use of some drugs, may be seen as a side effect. Patients will likely display anti-histone antibodies.

Reflex Tachycardia

[Reflex-hammer Tac-heart-card](#)

Reflex tachycardia is a possible side effect of this drug, and this occurs as a compensatory response to suddenly decreased blood pressure to maintain cardiac output. Hydralazine is often coadministered with a beta-blocker to prevent this. Hydralazine is contraindicated in angina and CAD, and can cause angina.

Hypotension

[Hippo-BP](#)

The main mechanism of Hydralazine can lead to hypotension. This hypotension may cause sodium and water retention and a corresponding increase in blood volume. To help prevent volume expansion, a diuretic may be coadministered. Symptoms associated with hypotension may include dizziness, headache, and fatigue.

Considerations

Combined with Diuretic and Beta Blocker

[Die-rocket and Beta-fish with Blocks](#)

Hydralazine is often administered in combination with a diuretic and beta blocker to prevent the side effects of increased blood volume and reflex tachycardia.