

## Characteristics of medications used in the treatment of pulmonary hypertension

Drug	Route of administration	Dose range (adult)	Half-life
<b>Prostacyclin pathway agonists</b>			
<b>Epoprostenol</b>	Continuous IV infusion via central venous catheter	1 to 12 nanograms/kg/minute initially Dose titrated up every one to two weeks until therapeutic response or dose limiting toxicity occurs	3 to 5 minutes (single dose) 15 minutes (continuous infusion)
<b>Treprostinil</b>	Continuous IV infusion via central venous catheter or continuous subcutaneous infusion	0.625 to 1.25 nanograms/kg/minute initially Dose titrated up every one to two weeks until therapeutic response or dose limiting toxicity occurs	4 hours
	Inhaled	One to three inhalations (ie, 6 to 18 micrograms), four times daily initially Maintenance dose may be gradually titrated up to nine inhalations (ie, 54 micrograms), four times daily	4 hours
<b>Iloprost</b>	Inhaled	2.5 to 5 micrograms, six to nine times daily	20 to 30 minutes (half-life of pulmonary vasodilating effect)
<b>Selexipag</b>	Oral	200 to 1600 micrograms twice daily Dose titrated up every one to two weeks until therapeutic response or dose limiting toxicity occurs	0.8 to 2.5 hours (selexipag) 6.2 to 13.5 hours (active metabolite)
<b>Endothelin receptor antagonists</b>			
<b>Bosentan</b>	Oral	62.5 to 125 mg, two times daily Dose is adjusted for low body weight or drug interactions*	5 hours
<b>Ambrisentan</b>	Oral	5 to 10 mg daily	9 hours

<b>Macitentan</b>	Oral	3 to 10 mg per day	14 to 18 hours (parent drug)
<b>Nitric oxide-cyclic guanosine monophosphate enhancers</b>			
<b>Soluble guanylate cyclase stimulant</b>			
<b>Riociguat</b>	Oral	Initial dose 0.5 to 1 mg three times daily, titrated up by 0.5 mg three times per day every two weeks until therapeutic response or dose limiting toxicity occurs (maximum dose 2.5 mg three times daily)	12 hours
<b>Phosphodiesterase type 5 inhibitors</b>			
<b>Sildenafil</b>	Oral	20 mg, three times daily	4 hours
	IV	10 mg, three times daily Dose is adjusted for drug interactions*	4 hours
<b>Tadalafil</b>	Oral	40 mg daily Dose is adjusted for drug interactions*	35 hours
<b>Calcium channel blockers</b>			
<b>Nifedipine</b>	Oral	Rapid titration every hour with short acting nifedipine in intensive care unit setting with right heart catheter in place. Effective dose converted to once daily equivalent (maximum dose 240 mg daily).	7 hours
<b>Diltiazem extended-release</b>	Oral	Rapid titration every hour with short acting agent nifedipine in intensive care unit setting with right heart catheter in place. Effective dose converted to once daily equivalent (maximum dose 900 mg daily).	6 to 9 hours
<b>Amlodipine</b>	Oral	Rapid titration every hour with short acting nifedipine in intensive care unit setting with right heart catheter in place. Effective dose converted to once daily equivalent (maximum dose 20 mg daily).	30 to 50 hours