

This table contains B adrenergic drugs and notes about them collected from all the slides.

Color code: light blue :propranolol is the most important drug of all.

Dark blue:Partial beta agonist activity

Light green:Has other functions other than dealing with beta receptors. Example: sotatlol blocks potassium channels in heart

Name of B antagonist	B1-Selective ⁺	Partial agonist?	Notes
Propranolol (the prototypical B-blocking drug)	No	No	<ul style="list-style-type: none"> • Lipophilic* → can cross BBB • Low and dose dependent bioavailability (extensive hepatic first pass**), liver disease may prolong half-life. • Blocks serotonin receptors in brain. (no clinical significance) Used for: • Hyperthyroidism (prevents conversion of thyroxine to triiodothyronine) • Migraine • Reduce tremors • Reduce “stage fright” • Treatment of alcohol
Nadolol	No	No	<ul style="list-style-type: none"> • Is not metabolized at all; excreted unchanged in urine. Longest half-life (24 hours). Renal failure prolongs half-life.
Nebivolol	Yes	No	<ul style="list-style-type: none"> • Can elicit Vasodilation (Nitric oxide pathway) thus it is preferred for patients with asthma.
Atenolol	Yes	No	B1 selective antagonists which makes them safer for use with: (however caution must still be taken)
Metoprolol	Yes	No	
Timolol			Topical use for wide angle glaucoma (because it has no local anesthetic activity and excellent hypotensive activity)
Esmolol			<ul style="list-style-type: none"> • The shortest half life
Acebutalol	Yes	YES	These drugs have partial B-agonist activity. So they are effective in hypertension and angina. They are less likely to cause: <ul style="list-style-type: none"> • Bradycardia • Abnormalities in plasma lipids • Bronchoconstriction (in fact they might promote bronchodilation!)
Pindolol	No	YES	
Celiprolol	Yes	YES	
Labetalol	No	YES (but relevant to our	<ul style="list-style-type: none"> • A mixture drug of: an alpha 1 antagonist and a nonselective B-antagonist. • Used for hypertensive emergencies (It can

		discussion)	block alpha 1 receptors in addition to B receptors) <ul style="list-style-type: none"> • Hypotension not associated with tachycardia like other Alpha 1 antagonists.
Carvedilol	No	No	<ul style="list-style-type: none"> • Ratio of B receptor to alpha 1 potency is 1:10 • Used for hypertension and systemetic heart failure.
Stolalol	No	No	Has class 3 antiarrhythmic effects: Blocks potassium channel in heart. Used for: Ventricular and supra ventricular arrhythmias.

*Penbutolol is lipophilic aswell.

** metoprolol is highly metabolized aswell, while atenolol and pindolol are less metabolized. **Nadolol** is not metabolized at all! With the longest half-life (24 hours).Esmolol has the lowest half-life (10 minutes).