Pharmacology Test 1 Drug List

Alphabetical

Drug Name	Category	Mechanism, Indications, Adverse Effects, Unique Properties
Acebutolol	Adrenergic Antagonist beta-Antagonist, $beta_1$-Selective	Has partial beta- agonist activity. Local anesthetic membrane- stabilizing activity. Cardioselective: safer for use with asthmatics.
Acetohexamide	Diabetes Sulfonylurea	Relatively long-acting.
Acetylcholine	Cholinergic Agonist, Direct Muscarinic Choline ester	LOW DOSE: Stimulate NO, vasodilation, reflex tachycardia HIGH DOSE: Vasodilation, direct bradycardia. Extremely short-half life in-vitro due to abundant cholinesterase.
Albuterol	Adrenergic Agonist, Direct $beta_2$-selective	Bronchodilator
Ambenonium	Cholinergic Agonist, Indirect Cholinesterase Inhibitor Carbamate (Reversible)	Quaternary ammonium compound, does not enter CNS. Still has some adverse CNS effects. Can be used to treat Myasthenia Gravis.
Amitriptyline	Adrenergic Agonist, Indirect NE-Potentiating Agent Uptake-I Inhibitor, Tri-Cyclic Antidepressant	
Amphetamine	Adrenergic Agonist, Indirect NE-Releasing Agent Amphetamine	Promotes release of NE, Dopamine, and serotonin from CNS neurons. Not a catechol, and not a substrate for MAO or COMT, thus it is long-lasting. Does not require uptake I.
Arecholine	Cholinergic Agonist, Direct Muscarinic Choline ester	
Atenolol	Adrenergic Antagonist	Cardioselective: safer for use with asthmatics.

	beta-Antagonist, $beta_1$-Selective	
Atropine	Cholinergic Antagonist, Direct Muscarinic Antagonist 3 Amine	Antidote to organophosphate poisoning, if it has already been more than a half-hour. Crosses BBB
Atropine Methyl-nitrate	Cholinergic Antagonist, Direct Muscarinic Antagonist 4 Amine	Does not cross BBB
Benztropine	Cholinergic Antagonist, Direct Muscarinic Antagonist 3 Amine	Crosses BBB
Betamethasone	Glucocorticoid Long-acting	Very potent. *No salt-retaining activity.*
Betaxolol	Adrenergic Antagonist beta-Antagonist, $beta_1$-Selective	Decrease aqueous humour production, used to treat open-angle glaucoma. Cardioselective: safer for use with asthmatics.
Bethanechol	Cholinergic Agonist, Direct Muscarinic Choline ester	Resistant to cholinesterase, thus it has a longer half-life than ACh. Does not cross blood-brain barrier; used in GI and GU tracts.
Bitoterol	Adrenergic Agonist, Direct $beta_2$-selective	Bronchodilator. Prodrug is hydrolyzed in the lung by esterases to its active form,**colterol**.
Botulinum Toxin	Cholinergic Antagonist, Indirect	Prevents the release of ACh
Bovine Insulin	Diabetes Insulin Short-acting	Regular insulin, clear solution. Rapid onset and duration of a few hours. It is taken before meals for its immediate effects.
Bretylium	Adrenergic Antagonist, Indirect NE-depleting agent	Similar to Guanethidine. Also has direct anti-arrhythmic effects on heart.

Bromocriptine	Hormone Prolactin Antagonist Dopamine Agonist	Dopamine agonist ------> suppress Prolactin. Used to treat hyperprolactinemia.
Butoxamine	Adrenergic Antagonist beta-Antagonist, $beta_2$-Selective	The only $beta_2$-selective drug. No current therapeutic use.
Calcimar	Hormone Calcium-regulation	Calcitonin obtained from salmon.
Calcitriol (Vitamin-D)	Hormone Calcium-regulation	Used to treat Rickets, Hypoparath yroidism, Osteomalacia.
Carbachol	Cholinergic Agonist, Direct Muscarinic Choline ester	Resistant to cholinesterase, thus it has a longer half-life than ACh. Causes release of endogenous ACh as well as being an agonist. It does cross BBB. Direct application in eye: used to treat non-congestive wide-angle glaucoma.
Carbidopa	Dopamine Antagonist, Indirect Dopamine-Decarboxylase Inhibitor	Prevents the formation of Dopamine.
Carbimazole	Hormone Anti-Thyroid Thionamide	Inhibits organification (iodination) steps of Thyroid synthesis. Therapeutic effect is delayed.
Carteolol	Adrenergic Antagonist beta-Antagonist, non-selective	Has partial beta-agonist activity.
Chlorp ropamide	Diabetes Sulfonylurea	Very long-acting.
Cibacalcin (Calcitonin)	Hormone Calcium-regulation	Used to help treat hyperpara thyroidism, hypercalcemia, and Paget's Disease (characterized by increased skeletal remodeling).
Clomiphene	Hormone Anti-Estrogen	It is used to stimulate ovulation, but the mechanism is not completely understood. Proposed mech: blocks estrogen effects on hypothalamus ------> promote GnRH ------> **promotes ovulation**.

Clonidine	Adrenergic Agonist, Direct alpha$_2$-selective	Prototypical alpha$_2$-Agonist ------> inhibit sympathetics (and some parasym pathetics). It is an indirect adrenergic antagonist, as it decreases sympathetic outflow. Initially it produces a transient hypertension (via alpha$_2$ vascular receptors), followed by prolonged hypotension.
Clorgyline	Adrenergic Agonist, Indirect NE-Potentiating Agent MAO Inhibitor	**MAO-A**-selective inhibitor.
Cocaine	Adrenergic Agonist, Indirect NE-Potentiating Agent Uptake I Inhibitor	Blocks Uptake I (NE reuptake), thus potentiating the effects of NE.
Corticotropin Releasing Hormone (CRH)	Hormone CRH	
Cortisone	Glucocorticoid Short-acting	Some salt-retaining activity (i.e. Aldosterone cross-reactivity)
Cosyntropin (Adrenal-Corticotropin Hormone (ACTH))	Hormone ACTH	Used Diagnostically to evaluate**adrenal insufficiency**. If Cortisol does not respond to exogenous ACTH, then the problem is primary.
Curare (d-Tubocurarine)	Cholinergic Antagonist, Direct Nicotinic Blocker Blocks Neuromuscular Junction	Prototypical NMJ Antagonist. Causes flaccid paralysis of skeletal muscle.. It only blocks the NMJ -- not other nicotinic receptors, and not muscarinic!
Cyclopentolate	Cholinergic Antagonist, Direct Muscarinic Antagonist 3 Amine	Crosses BBB
Demecarium	Cholinergic Agonist, Indirect Cholinesterase Inhibitor Carbamate (Reversible)	Quaternary ammonium compound, does not enter CNS. Can be used in treatment of glaucoma. Longer duration of action.
Demulen	Contraceptive Combined Oral Contraceptive	Ethinyl estradiol + ethynodiol diacetate

Deprenyl	Adrenergic Agonist, Indirect NE-Potentiating Agent MAO Inhibitor	**MAO-B**-selective inhibitor.
Desmopressin	Hormone Vasopressin Analogue	Synthetic Vasopressin analogue. Longer-acting then Vasopressin.
Desoxycor ticosterone acetate	Mineralocorticoid	
Dexame thasone	Glucocorticoid Long-acting	Very potent. *No salt-retaining activity.*
Diethylstil bestrol	Contra ceptive Estrogen	Non-steroidal, but it has estrogen activity. No longer used in contraceptives because it can cause reproductive cancers in daughters born to mothers taking the pill. Today it is only used as a post-coital ("**morning after**") contraceptive.
Dihydrota chysterol	Hormone Calcium-regulation	Vitamin-D analogue. More effective than Vit-D because it bypasses renal mechanisms of metabolic control.
Dobutamine	Adrenergic Agonist, Direct "Cardioselective" (B_1)	Displays some $alpha_1$ effects. Used for cardiogenic shock and CHF. Increases the inotropic state, with little effect on heart-rate or TPR (because it is modulated by $alpha_1$ agonist).
Dopamine	Adrenergic Agonist, Direct	Important in maintenance of**renal blood flow**. Dopamine receptors are found in kidneys. Has Epi-like activity at high doses. Can be used in cardiogenic shock. Can cause nausea and vomiting
Doxazosin	Adrenergic Antagonist alpha-Antagonist, $alpha_1$-Selective	Similar to Prazosin but with longer half-life.
Echothiophate	Cholinergic Agonist, Indirect Cholinesterase Inhibitor Organophosphate (Irreversible)	Can be used in glaucoma treatment.
Edrophonium	Cholinergic Agonist, Indirect Cholinesterase Inhibitor	Very short-acting, used in diagnosis of**Myasthenia Gravis.**Edrophonium should decrease muscle strength. If it instead increases muscle strength, then MG is likely. If it makes matters worse, then suspect

	Carbamate (Reversible)	a **cholinergic crisis** (depolarizing blockade)
Ephedrine	Adrenergic Agonist, Indirect Mixed-receptor agonist	Taken orally, long duration of action. Used in asthma, as nasal decongestant, and sometimes as a pressor. Has direct effects (alpha$_1$, beta$_1$, beta$_2$), and indirect effects (potentiate NE release). Uptake I is required for the indirect effects. Cocaine eliminates this response. Tachyphylaxis is observed peripherally but not centrally.
Epinephrine	Adrenergic Agonist, Direct Non-selective (alpha$_1$, alpha$_2$, beta$_1$, beta$_2$)	Increase b.p. (alpha$_1$) and *direct tachycardia*(beta$_1$).
Esmolol	Adrenergic Antagonist beta-Antagonist, beta$_1$-Selective	Unusually short half-life of 10 minutes. Used in surgery, where it blocks the reflex tachycardia and renin release that accompanies the use of vasodilators. Cardioselective: safer for use with asthmatics.
Estradiol, Estrone	Hormone Estrogen	Mixture of equine natural estrogens are used in post-menopausal hormone replacement therapy. The equine estrogen has one extra double-bond and is hence called a "conjugated estrogen."
Ethinyl Estradiol	Contraceptive Estrogen	Estradiol + Ethinyl at 17-position. Mainstay of oral contraceptives.
Ethynodiol Diacetate	Contraceptive Progestin	Used in combined oral contraceptives. Can have androgenic side-effects (acne, hirsutism)
Fludro cortisone	Mineralo corticoid	Used to replace Aldosterone activity in cases of adrenal insufficiency.

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Drug Name	**Category**	**Mechanism, Indications, Adverse Effects, Unique Properties**
Glipizide	Diabetes Sulfonylurea	"Second-generation" sulfonylurea.
Glyburide	Diabetes	"Second-generation" sulfonylurea. More

	Sulfonylurea	potent ad fewer side-effects. Short half-life, yet it has a long action of about 24 hrs. Contraindicated in hepatic or renal impairment.
Glycopyrrolate	Cholinergic Antagonist, Direct Muscarinic Antagonist 4 Amine	Does not cross BBB
Gonadorelin (Gonadotropin-Releasing Hormone, GnRH)	Hormone GnRH	Very short half-life of 4 minutes. Can be given intranasally, IV, or SQ. Pulsatile administrated every 3 or 4 hrs. Used to treat hypogonadism in men or women, delayed puberty, and cryptorchidism.
Guanabenz	Adrenergic Agonist, Direct alpha$_2$-selective	It is an indirect adrenergic antagonist, as it decreases sympathetic outflow.
Guanadrel	Adrenergic Antagonist, Indirect NE-depleting agent	Similar to Guanethidine but has a shorter duration of action.
Guanethidine	Adrenergic Antagonist, Indirect NE-depleting agent	Inhibits NE release and gradually depletes NE storage granules. Uptake I is required, so its effects are blocked by Cocaine. After 1-2 weeks of treatment, reduction of b.p., and often CO stays near normal.
Guanfacine	Adrenergic Agonist, Direct alpha$_2$-selective	It is an indirect adrenergic antagonist, as it decreases sympathetic outflow.
Hemicholinium	Cholinergic Antagonist, Indirect	Prevents the sequestration of ACh into vesicles
Hexame thonium	Cholinergic Antagonist, Direct Ganglionic Blocker Blocks $N_G$receptors	Prototypical ganglionic blocker. Blocks all autonomic reflex responses (generally, a reflex tachycardia or bradycardia)
Homatropine	Cholinergic Antagonist, Direct Muscarinic Antagonist 3 Amine	Crosses BBB
Human Chorionic	Hormone	Obtained from urine of pregnant women.

Gonadotropin (hCG)	Menotropin	Closely related to LH. Given IM at mid-cycle (or whenever follicle is adequate developed) to mimic the luteal surge, to try to induce ovulation and treat infertility.
Human Menopausal Gonadotropins (hMG)	Hormone Menotropin	Partially degraded mixture of both FSH + LH. They still retain some FSH + LH activity. Administered IM to promote follicular growth, treat infertility. Can be used to treat infertility in both men and women.
Humulin	Diabetes Insulin Short-acting	Regular insulin, clear solution. Rapid onset and duration of a few hours. It is taken before meals for its immediate effects.
Hydrocortisone (same as endogenous Cortisol)	Glucocorticoid Short-acting	
Imipramine	Adrenergic Agonist, Indirect NE-Potentiating Agent Uptake-I Inhibitor, Tri-Cyclic Antidepressant	
Iodide, I^-	Hormone Anti-Thyroid	Exogenous I^- temporarily (short-term) inhibits the proteolysis of thyroglobulin, preventing release of T_4. Used to treat acute **thyroid storm**. Also used before surgery, to make the Thyroid smaller and more firm.
Ipratropium	Cholinergic Antagonist, Direct Muscarinic Antagonist 4 Amine	Does not cross BBB
Isoethanine	Adrenergic Agonist, Direct $beta_2$-selective	Bronchodilator
Isoflurophate (DFP)	Cholinergic Agonist, Indirect Cholinesterase Inhibitor Organophosphate (Irreversible)	Can be used in glaucoma treatment.

Isophane (NPH) Insulin	Diabetes Insulin Intermediate-acting	Cloudy solution. Protease reacts with the protamine to release the insulin. Later onset and longer duration.
Isoproterenol	Adrenergic Agonist, Direct beta-selective ($beta_1$, $beta_2$)	Given sublingually or by inhalation. Produces hypotension ($beta_2$), tachycardia ($beta_1$), and higher CO. Rapidly metabolized by COMT in liver.
l-Norgestrel	Contraceptive Progestin	**Norplant** implanted contraceptive. Used in combined oral contraceptives. Can have androgenic side-effects (acne, hirsutism). *Has the most potent progestin properties.*
Labetalol	Adrenergic Antagonist alpha-Antagonist, $alpha_1$-Selective beta-Antagonist, non-selective	Causes hypotension, but is accompanied by less tachycardia than other alpha-antagonists, because it also has beta-antagonizing activity. Local anesthetic membrane-stabilizing activity.
Lente Insulin	Diabetes Insulin Intermediate-acting	Cloudy solution. Insulin precipitated with Zinc in acetate buffer.
Leuprolide	Hormone GnRH Analogue	Longer half-life of about 3 hrs. Can be given in pulsatile fashion, or continuously. Continuous administration: used to slow down precocious puberty, or used to supress endogenous GnRH release in in-vitro fertilization.
Levobunolol	Adrenergic Antagonist beta-Antagonist, non-selective	Decrease aqueous humour production, used to treat open-angle glaucoma.
Lo/ovral	Contraceptive Combined Oral Contraceptive	Ethinyl estradiol + dl-Norgestrel
Loestrin	Contraceptive Combined Oral Contraceptive	Ethinyl estradiol + norethindrone
Malathion	Cholinergic Agonist, Indirect	Common insecticide.

	Cholinesterase Inhibitor Organophosphate (Irreversible)	
Mecamylamine	Cholinergic Antagonist, Direct Nicotinic Blocker	
Medroxypro gesterone	Contraceptive Progestin	When given IM, it is the **Depo Provera**contraceptive shot. Very resistant to metabolism when given IM (long lasting). It is close in structure to Progesterone and has no androgenic side-effects. It is the only progestin used in combined post-menopausal hormone replacement therapy.
Meprednisone	Glucocorticoid Short-acting	Some salt-retaining activity (i.e. Aldosterone cross-reactivity)
Mestranol	Contraceptive Estrogen	Metabolic precursor to Ethinyl Estradiol.
Metaproterenol	Adrenergic Agonist, Direct $beta_2$-selective	Bronchodilator
Metaraminol	Adrenergic Agonist, Indirect Mixed-receptor agonist	Used for the treatment of hypotension. Overall effects similar to NE, but it is less potent and longer acting. Because of reflex bradycardia, it actually slightly decreases cardiac output, but increases force of contraction. Has direct effects ($alpha_1$, $beta_1$, $beta_2$), and indirect effects (potentiate NE release). Uptake I is required for the indirect effects. Cocaine eliminates this response.
Metformin	Diabetes Biguanide	Mechanism of action unknown. Their hypoglycemic activity does not depend on the presence of functional beta-cells.
Methacholine	Cholinergic Agonist, Direct Muscarinic Choline ester	Resistant to Acetylcholinesterase, but susceptible to other cholinesterases, thus it has an intermediate half-life. Primarily used as a diagnostic agent.. If muscarine is present, then SQ Methacholine

		will not produce expected cholinergic effects.
Metham phetamine	Adrenergic Agonist, Indirect NE-Releasing Agent Amphetamine	Promotes release of NE from pre-synaptic neuron. More pronounced CNS effects than amphetamine.
Methimazole	Hormone Anti-Thyroid Thionamide	Inhibits organification (iodination) steps of Thyroid synthesis. Therapeutic effect is delayed. This is the metabolic by-product of Carbimazole.
Methoxamine	Adrenergic Agonist, Direct alpha$_1$-selective	Used to maintain blood pressure during anesthesia. Produces fewer arrhythmias than other drugs.
Methscopolamine	Cholinergic Antagonist, Direct Muscarinic Antagonist 4 Amine	Does not cross BBB
Methyldopa	Adrenergic Agonist, Direct alpha$_2$-selective	**alpha-methyl-NE**is the active form, converted by DOPA-decarboxylase and Dopamine-beta-Hydroxylase into the active form. alpha-methyl-NE slowly replaces endogenous NE in pre-synaptic neurons, to induce the inhibitory physiologic effect of decreasing sympathetic outflow.
Methylph enidate	Adrenergic Agonist, Indirect NE-Releasing Agent Amphetamine	Similar to Methamphetamine, with abuse potential.
Methylpre dnisolone	Glucoco rticoid Short-acting	Some salt-retaining activity (aldosterone cross-reactivity)
Metoprolol	Adrenergic Antagonist beta-Antagonist, beta$_1$-Selective	Local anesthetic membrane-stabilizing activity. Cardioselective: safer for use with asthmatics.
Metyrapone	Hormone Anti-Cortisol	Inhibits **11beta-Dehydroxylase**, the final step in the formation of Cortisol, thus preventing formation of Cortisol. Used diagnostically to confirm secondary**adrenal insufficiency**. Give Metyrapone, and look for increase in ACTH

		levels. No increase in ACTH indicates secondary adrenal insufficiency.
Mifepristone	Contraceptive Anti-Progestin	**RU-486** morning-after pill. It is a weak partial agonist of progestin receptors. It induces abortion in first trimester (or morning after) by causing luteolysis, embryo detachment, and inducing menstruation.
Muscarine	Cholinergic Agonist, Direct Muscarinic Alkaloid	Prototype muscarinic agonist. Poison found in mushrooms, causing cholinergic hyper-activation.
Nadolol	Adrenergic Antagonist beta-Antagonist, non-selective	Has particularly long half-life and duration of action.
Nafarelin	Hormone GnRH Analogue	Longer half-life of about 3-hrs.
Naphazoline	Adrenergic Agonist, Direct $alpha_1$-selective	Used to induce mydriasis before ophthalmic exam.
Neostigmine	Cholinergic Agonist, Indirect Cholinesterase Inhibitor Carbamate (Reversible)	Has a quaternary nitrogen and does enter CNS. Can be used to treat Myasthenia Gravis.
Nicotine	Cholinergic Agonist, Direct Nicotinic	Increases all autonomic outflow (nicotinic ganglionic stimulation). Also stimulates adrenal medulla to release NE and Epi, further increasing sympathetics. Found in insecticides as well as cigarette smoke. At high (toxic) doses, it can cause depolarizing blockade of smooth and skeletal muscle.
Norepinephrine	Adrenergic Agonist, Direct $alpha_1$, $alpha_2$, $beta_1$	Increase b.p. ------>*reflex bradycardia*.. If reflexes are blocked by Hexamethonium, then you see a direct tachycardia.
Norethindrone	Contraceptive Progestin	Used in combined oral contraceptives. Can have androgenic side-effects (acne, hirsutism)
Norethynodrel	Contraceptive	Used in combined oral contraceptives. Can

	Progestin	have androgenic side-effects (acne, hirsutism). Has *no androgenic effects*. Most extensive estrogenic activity, with the least progestin activity.
Ortho-Novum	Contraceptive Combined Oral Contraceptive	Ethinyl Estradiol + Norethindrone
Ovulen	Contraceptive Combined Oral Contraceptive	Mestranol + ethynodiol diacetate
Oxymetolazine	Adrenergic Agonist, Direct alpha$_1$, alpha$_2$	Topical nasal decongestant (via action on alpha$_1$receptors). In high doses, can paradoxically produce hypotension, probably via alpha$_2$receptors.
Oxytocin	Hormone Oxytocin	Given IV to induce labor in mild eclampsia or incomplete abortion. Given IM to control post-partum bleeding. Given intranasally as needed to induce lactation.

Drug Name	**Category**	**Mechanism, Indications, Adverse Effects, Unique Properties**
Paramethasone	Glucocorticoid Intermediate-acting	*No salt-retaining activity.*
Parathion	Cholinergic Agonist, Indirect Cholinesterase Inhibitor Organophosphate (Irreversible)	Common insecticide.
Parathyroid Hormone (PTH)	Hormone Calcium-regulation	Used diagnostically to diagnose pseudo hypothyroidism, a disorder characterized by insensitivity to PTH.
Pargyline	Adrenergic Agonist, Indirect NE-Potentiating Agent MAO Inhibitor	Non-selective MAO inhibitor.
Pemoline	Adrenergic Agonist, Indirect	Similar to Methamphetamine, with abuse potential.

	NE-Releasing Agent Amphetamine	
Penbutolol	Adrenergic Antagonist beta-Antagonist, non-selective	Has partial beta-agonist activity.
Perchlorate (ClO_4^-)	Hormone Anti-Thyroid Ionic Inhibitor	Inhibits uptake of iodide into the Thyroid. In large doses, this drug causes aplastic anemia. Only use in small doses.
Phenmetrazine	Adrenergic Agonist, Indirect NE-Releasing Agent Amphetamine	Similar to Metham phetamine, with abuse potential.
Phenoxy benzamine	Adrenergic Antagonist alpha-Antagonist, non-selective	Used in management of pheochromocytoma, and surgery that follows. **Irreversible**binding to alpha-receptors. 14 to 48 hour duration after a single dose. Causes marked orthostatic hypotension. Causes hypotension (primary effect), reflex tachycardia, and reflex release of renin.
Phentolamine	Adrenergic Antagonist alpha-Antagonist, non-selective	Used in management of pheochromocytoma. Blocks alpha-receptors and serotonin receptors. It is an agonist at muscarinic and histaminic receptors. Poor oral bioavailability, and short duration of action. Causes hypotension (primary effect), marked tachycardia (both due to reflex, and because NE release is increased because of $alpha_2$blockade), and reflex release of renin.
Phenylephrine	Adrenergic Agonist, Direct $alpha_1$-selective	Used topically as a nasal decongestant (restrict blood flow to nose), and to induce mydriasis for ophthalmic exam. Not a catechol, and not broken down by COMT, thus it has longer half-life (20

		minutes) then catecholamines. alpha-Agonist ------> increase b.p. ------ > *reflex bradycardia*.
Physostigmine	Cholinergic Agonist, Indirect Cholinesterase Inhibitor Carbamate (Reversible)	Is a tertiary nitrogen and does enter CNS. It is therefore used in treatment of Atropine poisoning.
Pilocarpine	Cholinergic Agonist, Direct Muscarinic Alkaloid	
Pindolol	Adrenergic Antagonist beta-Antagonist, non-selective	Has good oral bioavailability. Has partial beta-agonist activity. Local anesthetic membrane-stabilizing activity.
Pirbuterol	Adrenergic Agonist, Direct $beta_2$-selective	Bronchodilator
Pirenzepine	Cholinergic Antagonist, Direct Muscarinic Antagonist 3 Amine	Crosses BBB
Porcine Insulin	Diabetes Insulin Short-acting	Regular insulin, clear solution. Rapid onset and duration of a few hours. It is taken before meals for its immediate effects.
Pralidoxime **(2-PAM)**	Cholinesterase Activator	Antidote to organophosphate poisoning, as long as it is administered within first half-hour, before **aging**occurs.
Prazosin	Adrenergic Antagonist alpha-Antagonist, $alpha_1$-Selective	Has less of an effect on reflex tachycardia and renin release, because it does not block the inhibitory $alpha_2$ receptors. It can be used to treat hypertension.
Prednisolone	Glucocorticoid Short-acting	Some salt-retaining activity (aldosterone cross-reactivity)
Prednisone	Glucocorticoid	Some salt-retaining activity (aldosterone cross-reactivity)

	Short-acting	
Prolactin	Hormone Prolactin	No therapeutic use.
Propanolol	Adrenergic Antagonist beta-Antagonist, non-selective	Undergoes extensive first-pass metabolism. Lipophilic, readily crosses BBB, used to treat migraines and other CNS disorders. Local anesthetic membrane-stabilizing activity.
Propantheline	Cholinergic Antagonist, Direct Muscarinic Antagonist 4 Amine	Does not cross BBB
Propylthiouracil	Hormone Anti-Thyroid Thionamide	Inhibits organification (iodination) steps of Thyroid synthesis. Therapeutic effect is delayed. Also inhibits peripheral conversion of T_4 to T_3.
Protirelin (Thyrotropin-Releasing Hormone, TRH)	Hormone TRH	Used diagnostically to distinguish between primary and secondary hypothyroidism.
Pseudoephedrine	Adrenergic Agonist, Indirect Mixed-receptor agonist	Taken orally, long duration of action. Used in asthma, as nasal decongestant, and sometimes as a pressor. Has direct effects (alpha$_1$, beta$_1$, beta$_2$), and indirect effects (potentiate NE release). Uptake I is required for the indirect effects. Cocaine eliminates this response. Tachyphylaxis is observed peripherally but not centrally.
Pyridostigmine	Cholinergic Agonist, Indirect Cholinesterase Inhibitor Carbamate (Reversible)	Quaternary ammonium compound, does not enter CNS. Can be used to treat Myasthenia Gravis.
Radio-Iodine, ^{131}I	Hormone Anti-Thyroid	Used to treat hyperthyroidism. The ^{131}I gets concentrated in the Thyroid, where it diffusely kills thyroid cells.

		Ultimately it will lead to hypothyroidism, which can then be treated with T_4.
Reserpine	Adrenergic Antagonist, Indirect NE-depleting agent	Blocks the transport of NE and Dopamine into vesicles, thus depleting their stores. Effect is irreversible: a single dose depletes all amines until more can be synthesized. Side effects: Sedation, Parkinsonian symptoms, increased gastrin secretion, psychic depression.
Ritodrine	Adrenergic Agonist, Direct beta$_2$-selective	Used to relax the uterus during labor.
Sarin	Cholinergic Agonist, Indirect Cholinesterase Inhibitor Organophosphate (Irreversible)	Nerve gas.
Scopolamine	Cholinergic Antagonist, Direct Muscarinic Antagonist 3 Amine	Can be given as a patch to treat motion sickness. Crosses BBB
Sermatorelin (Growth-Hormone Releasing Hormone, GHRH)	Hormone GHRH	Given diagnostically, to diagnose primary (pituitary) or secondary (hypothalamic) GH deficiency (Dwarfism)
Soman	Cholinergic Agonist, Indirect Cholinesterase Inhibitor Organophosphate (Irreversible)	Nerve gas.
Somatrem (Growth Hormone, GH, Somatomedin)	Hormone GH	Given as replacement therapy, only to children with open epiphyses. Contraindicated in people with closed epiphyses. Biosynthetic, identical to endogenous GH
Succinylcholine	Cholinergic Agonist, Direct Muscarinic Choline ester	Binds to nicotinic receptors with higher affinity than ACh. Early on: muscle fasciculations. Later: paralysis due to depolarization blockade.

Tabun	Cholinergic Agonist, Indirect Cholinesterase Inhibitor Organophosphate (Irreversible)	
Tamoxifen	Hormone Anti-Estrogen	Used to treat breast cancer. Antagonizes the action of estrogen on breast tissue.
Terazosin	Adrenergic Antagonist alpha-Antagonist, $alpha_1$-Selective	Similar to Prazosin but with longer half-life.
Terbutaline	Adrenergic Agonist, Direct $beta_2$-selective	Bronchodilator
Thiocyanate (SCN^-)	Hormone Anti-Thyroid Ionic Inhibitor	Inhibits uptake of iodide into the Thyroid.
Thyroid- Stimulating Hormone (TSH)	Hormone TSH	Used to promote uptake of radioactive ^{131}I, to treat Thyroid carcinoma. Derived from bovine pituitaries.
Thyroxine (T_4)	Hormone Thyroxine	Given orally to treat hypothyroidism. $T_4$is given -- not T_3, which is too potent and has cardiotoxic side-effects.
Timolol	Adrenergic Antagonist beta-Antagonist, non-selective	Decrease aqueous humour production, used to treat open-angle glaucoma. Local anesthetic membrane-stabilizing activity.
Tolazamide	Diabetes Sulfonylurea	Relatively long-acting.
Tolazoline	Adrenergic Antagonist alpha-Antagonist, non-selective	Similar to Phentolamine, but less potent and more readily absorbed orally. Causes hypotension (primary effect), reflex tachycardia, and reflex release of renin.
Tolbutamide	Diabetes Sulfonylurea	Relatively long-acting.
Tranylcypromine	Adrenergic Agonist, Indirect	Non-selective MAO inhibitor.

	NE-Potentiating Agent MAO Inhibitor	
Triamcinolone	Glucocorticoid Intermediate-acting	*No salt-retaining activity.*
Trihexyphenidyl	Cholinergic Antagonist, Direct Muscarinic Antagonist 3 Amine	Crosses BBB
Trimethaphan	Cholinergic Antagonist, Direct Ganglionic Blocker Blocks $N_G$receptors	Blocks all autonomic responses.
Tropicamide	Cholinergic Antagonist, Direct Muscarinic Antagonist 3 Amine	Crosses BBB
Tyramine	Adrenergic Agonist, Indirect NE-Releasing Agent	Potentiates NE release in pre-synaptic neuron. Serves as a false substrate for MAO. Uptake I of tyramine is required in order for it to work, thus it is neutralized by Cocaine. It is dangerous to eat tyramine (wine + cheese) in patients taking**MAO-inhibitors**, as it can lead to hypertensive crisis.
Ultralente Insulin	Diabetes Insulin Long-acting	Cloudy solution. Poorly soluble complex of zinc and insulin. Due to poor manageability, used only with Type I Diabetics.
Urapidil	Adrenergic Antagonist alpha-Antagonist, $alpha_1$-Selective	Has less of an effect on reflex tachycardia and renin release, because it does not block the inhibitory $alpha_2$ receptors. It can be used to treat hypertension.
Urofollitropin	Hormone FSH	Natural FSH extracted from urine. Used to treat infertility.

Vasopressin (ADH)	Hormone Vasopressin	Used to treat Diabetes Insipidus. Administered IV, IM, intranasally. V_1 Receptors: Vascular vasoconstriction. V_2Receptors: Tubular reabsorption of water.
Xylometolazine	Adrenergic Agonist, Direct $alpha_1$, $alpha_2$	Topical nasal decongestant.
Yohimbine	Adrenergic Antagonist alpha-Antagonist, $alpha_2$-selective	The only $alpha_2$-selective antagonist there is. May be useful in autonomic insufficiency.