

Pharmacology Made Easy Prototype Drug List

Neurological System (38 Drugs)

Drug therapy for sleep disorders

- Benzodiazepine – **temazepam (Restoril)**
- Non-benzodiazepine – **zolpidem (Ambien)**

Drug therapy for muscle spasms

- Centrally acting muscle relaxants – **baclofen (Lioresal)**
- Peripherally acting muscle relaxants – **dantrolene (Dantrium)**

Drug therapy for seizure disorders

- Hydantoins – **phenytoin (Dilantin)**
- Iminostilbenes – **carbamazepine (Tegretol)**
- Valproic acid – **valproic acid (Depakote, Depacon, Depakene)**
- Other new drugs for seizure disorders

Drug therapy that supports anesthesia

- Local anesthesia – **lidocaine (Xylocaine)**
- General anesthesia/barbiturates – **sodium thiopental (Pentothal)**
- General anesthesia/benzodiazepine – **midazolam (Versed)**
- General anesthesia/opioid – **fentanyl (Sublimaze)**

Drug therapy for ADHD and narcolepsy

- Amphetamines – **amphetamine and dextroamphetamine sulfate (Adderall)**
- Methylphenidate – **methylphenidate (Ritalin, Concerta)**
- Non-amphetamine – **modafinil (Provigil)**

Drug therapy for Parkinson's disease

- Dopamine-replacement drugs – **levodopa (Dopar, Larodopa)**
- Direct-acting dopamine receptor agonists – **pramipexole (Mirapex)**
- Indirect-acting dopamine receptor agonists/MAOs – **selegiline (Eldepryl, Zelapar ODT)**

Drug therapy for Alzheimer's disease

- Cholinesterase inhibitors – **donepezil (Aricept, Aricept ODT)**
- NMDA receptor antagonist – **memantine (Namenda)**

Drug that treat multiple sclerosis

- Immunomodulators – **Interferon beta-1a (Avonex, Rebif), Interferon beta 1b (Betaseron)**

Drug that treat migraine headaches

- Serotonin agonists – **sumatriptan (Imitrex)**

Drug therapy for anxiety disorders

- Benzodiazepines – **diazepam (Valium), alprazolam (Xanax)**
- Non-benzodiazepines – **bupirone (BuSpar)**

Drug therapy for depression

- Tricyclic antidepressants – **amitriptyline (Elavil)**
- SSRIs – **fluoxetine (Prozac)**
- SNRIs – **venlafaxine (Effexor)**
- MAOIs – **phenelzine (Nardil)**
- Atypical antidepressants – **bupropion HCL (Wellbutrin)**

Drug therapy for bipolar disorder

- Lithium – **lithium carbonate (Eskalith, Lithobid)**
- Antiepileptic drugs (AED) – **valproic acid (Depakote)**

Drug therapy for schizophrenia

- Conventional antipsychotics – **chlorpromazine (Thorazine)**
- Atypical antipsychotics – **risperidone (Risperdal)**

Drug therapy for glaucoma

- Beta adrenergic blocker – **betaxolol (Betoptic), timolol (Timoptic)**
- Cholinergic agonists – **pilocarpine (Pilocar, Isopto Carpine)**
- Cholinesterase inhibitors – **echothiophate (Phospholine Iodide)**

Cardiovascular System (28 Drugs)

Drug Therapy for Hypertension

- RAAS Suppressants
 - ACE inhibitors – **captopril (Capoten)**
 - ARBs – **losartan (Cozaar)**
 - Aldosterone antagonists – **eplerenone (Inspra)**
 - Direct renin inhibitors – **aliskiren (Tekturna)**
- Calcium channel blockers – **nifedipine (Adalat, Procardia)**
- Sympatholytics
 - Alpha1 adrenergic blockers – **doxazosin (Cardura)**
 - Beta adrenergic blockers – **atenolol (Tenormin), metoprolol (Lopressor)**
 - Adrenergic neuron blockers – **reserpine (Serpalan, Reserpine)**
 - Centrally acting alpha2 agonists – **clonidine (Catapres)**
 - Alpha/beta blockers – **carvedilol (Coreg)**
- Direct acting vasodilators – **hydralazine (Apresoline)**

Drug therapy for heart failure

- Diuretics
 - Thiazide diuretics – **hydrochlorothiazide (HydroDIURIL)**
 - Loop diuretics – **furosemide (Lasix)**
 - Potassium-sparing diuretics – **spironolactone (Aldactone)**
- Cardiac glycosides – **digoxin (Lanoxin)**
- Sympathomimetics – **dobutamine (Dobutrex)**
- Phosphodiesterase inhibitors – **milrinone (Primacor)**

Drug therapy for coronary heart disease

- Antilipemic
 - HMG-CoA reductase inhibitors (statins) – **simvastatin (Zocor)**
 - Fibrates – **gemfibrozil (Lopid)**
- Antianginals
 - Nitrates – **nitroglycerin (Nitrostat, Nitro-Dur, Nitro-Bid), isosorbide (Isordil, Ismo)**
- Class I/sodium channel blockers
 - Class IA – **quinidine, procainamide (Pronestyl)**
 - Class IB – **lidocaine (Xylocaine)**
 - Class IC – **flecainide (Tambocor)**
- Class II/beta adrenergic blockers – **propranolol (Inderal)**
- Class III/potassium channel blockers – **amiodarone (Cordarone)**
- Class IV/calcium channel blockers – **verapamil (Calan)**

Respiratory System (15 Drugs)

Drug therapy for airflow disorders

- Beta2-adrenergic agonists – **albuterol (Proventil, Ventolin)**
- Inhaled anticholinergics – **ipratropium (Atrovent, Atrovent HFA)**
- Methylxanthines – **theophylline (Theo-24, Theolair, Theochron)**
- Glucocorticoids
 - Oral – **prednisone (Deltasone)**
 - Inhalation – **beclomethasone dipropionate (QVAR)**
 - Nasal – **beclomethasone (Beconase AQ)**
- Mast cell stabilizers – **cromolyn (Intal)**

Drug therapy for upper respiratory disorders

- H1-receptor antagonists
 - Sedating antihistamines – **diphenhydramine (Benadryl)**
 - Nonsedating antihistamines – **cetirizine (Zyrtec)**
- Sympathomimetic Decongestants – **phenylephrine (Neo-Synephrine)**
- Antitussives
 - Opioid – **codeine**
 - Nonopioid – **dextromethorphan (Benylin)**
- Expectorants – **guaifenesin (Mucinex, Humibid)**
- Mucolytics – **acetylcysteine (Mucomyst)**

Hematologic System (15 Drugs)

Drug therapy for anemia

- Iron deficiency anemia - **ferrous sulfate (Feosol)**, **iron dextran (INFeD)**
- Pernicious anemia – **vitamin B12, cyanocobalamin (Nascobal, Cyanoject)**
- Megaloblastic (macrocytic) anemia – **folic acid (Folacin)**

Drug therapy for Hemophilia

- Factor VIII – **plasma-derived (Hemofil-M)** or **recombinant factor VIII (Advate)**
- Factor IX – **plasma-derived (AlphaNine SD)** or **recombinant factor IX (BeneFix)**
- Desmopressin – **desmopressin (DDAVP, Stimate)**

Drug therapy to prevent and dissolve thrombi

- Anticoagulants
 - Factor Xa and thrombin inhibitor – **heparin**
 - Factor Xa inhibitor – **enoxaparin (Lovenox)**
 - Vitamin K inhibitor – **warfarin (Coumadin)**
- Antiplatelets
 - Salicylics – **aspirin (Ecotrin)**
 - ADP Inhibitors – **clopidogrel (Plavix)**
- Thrombolytics – **alteplase (Activase)**

Drug therapy the supports hematopoiesis

- Erythropoietic growth factor – **epoetin alpha (Epoen, Procrit)**
- Leukopoietic growth factor – **filgrastim (Neupogen)**
- Thrombopoietic growth factors – **oprelvekin (Neumega)**

Endocrine System (20 Drugs)

Oral hypoglycemics

- Sulfonylureas – **glipizine (Glucotrol)**
- Meglitinides – **repaglinide (Prandin)**
- Biguanides – **metformin (GlucoPhage)**
- Thiazolidinediones – **rosiglitazone (Avandia)**
- Alpha-glucosidase inhibitors – **acarbose (Precose)**
- Gliptins – **sitagliptin (Januvia)**

Injectable hypoglycemics

- Insulin – **lispro (Humalog)**, **Regular (Humulin R)**, **NPH (Humulin N)**, **insulin glargine (Lantus)**
- Amylin mimetics – **pramlintide (Symlin)**
- Incretin mimetics – **exenatide (Byetta)**

Hyperglycemics – **glucagon (GlucaGen)**

Thyroid replacements – **levothyroxine (Synthroid)**

Antithyroid drugs

- Propylthiouracil – **propylthiouracil (PTU)**
- Radioactive iodine – **iodine-131 (131I, Iodotope)**

Drug therapy for hypothalamic disorders

- Growth hormone – **somatropin (Genotropin, Nutropin, Humatrope, Serostim)**
- Antidiuretic hormone – **desmopressin (DDAVP, Stimate, Minirin)**

Drug therapy for adrenal disorders

- Glucocorticoids – **hydrocortisone (Hydrocortone, Solu-Cortef)**
- Mineralocorticoids – **fludrocortisone (Florinef)**

Immune System (23 Drugs)

Vaccines

Drug Therapy for CA

Cytotoxics

- Antimetabolites
 - Folic acid analog – **methotrexate (Rheumatrex)**
 - Pyrimidine analog – **cytarabine (Cytosar-U, DepoCyt)**
 - Purine analogs – **mercaptopurine (Purinethol)**
- Alkylating agents
 - Nitrogen mustards – **cyclophosphamide (Cytoxan)**
 - Nitrosoureas – **carmustine (BiCNU)**
- Platinum compounds – **cisplatin (Platinol-AQ)**
- Antitumor antibiotics
 - Anthracyclines – **doxorubicin (Adriamycin, Doxil)**
- Antimitotics
 - Vinca alkaloid – **vincristine (Oncovin)**
 - Taxanes – **paclitaxel (Taxol)**
- Topoisomerase inhibitors – **topotecan (Hycamtin)**

Hormonal agents

- Gonadotropin-releasing hormone agonists – **leuprolide (Lupron, Lupron Depot)**
- Androgen receptor blockers – **flutamide (Eulexin)**
- Estrogen receptor blockers – **tamoxifen (Nolvadex)**
- Aromatase inhibitors – **anastrozole (Arimidex)**
- Monoclonal antibody – **trastuzumab (Herceptin)**

Biologic response modifiers

- Interferon – **interferon alfa-2a (Roferon-A), interferon alfa-2b (Intron A)**

Targeted antineoplastic drugs

- BCR-ABL tyrosine kinase inhibitor – **imatinib (Gleevec)**

Drug Therapy for HIV

- Viral entry blockers
 - Entry and fusion inhibitors – **enfuvirtide (Fuzeon)**
 - CCR5 antagonist – **maraviroc (Selzentry)**
- Enzyme inhibitors
 - Nucleoside reverse transcriptase inhibitors (NRTIs) – **zidovudine (Retrovir)**
 - Non-nucleoside reverse transcriptase inhibitors (NNRTIs) – **delavirdine (Rescriptor)**
 - Integrase inhibitor – **raltegravir (Isentress)**
 - Protease inhibitors (PIs) – **ritonavir (Norvir)**

Pain & Inflammation (11 Drugs)

Nonopioid analgesics

- NSAIDs (COX-1 and COX-2 inhibitors) – **aspirin, ibuprofen (Advil, Motrin)**
- NSAIDs (COX-2 inhibitor) – **celecoxib (Celebrex)**
- Acetaminophen – **acetaminophen (Tylenol)**
- Centrally acting nonopioids – **tramadol (Ultram)**

Opioid analgesics

- Opioid agonists – **morphine**
- Opioid agonist-antagonists – **butorphanol (Stadol), pentazocine (Talwin)**

Opioid antagonists – **naloxone (Narcan)**

Uricosurics (fou) – **allopurinol (Zyloprim)**

Glucocorticoids – **prednisone (Deltasone)**

Infection (19 Drgus)

Drugs that interfere with cell wall synthesis

- Penicillins – **amoxicillin (Amoxil), amoxicillin and clavulanic acid (Augmentin)**
- Cephalosporins – **cephalexin (Keflex)**
- Monobactams – **aztreonam (Azactam)**
- Carbapenem – **imipenem and cilastatin (Primaxin)**
- Vancomycin – **vancomycin (Vancocin)**

Antibiotics that inhibit protein synthesis

- Tetracyclines – **tetracycline (Sumycin)**
- Macrolides – **erythromycin (E-Mycin)**
- Aminoglycosides – **gentamicin (Garamycin)**

Drugs that inhibit DNA replication or cell division

- Fluoroquinolones – **ciprofloxacin (Cipro)**

Drugs that inhibit folic acid synthesis

- Sulfonamides – **trimethoprim and sulfamethoxazole (Bactrim, Septra)**
- Urinary tract antiseptics – **nitrofurantoin (Macrochantin)**

Drug therapy for tuberculosis

- Antimicrobacterials – **isoniazid (INH, Nydrasid-IM form), rifampin (Rifadin)**

Drug therapy for parasitic infections

- Antiparasitics – **metronidazole (Flagyl), chloroquine (Aralen)**

Drug therapy for fungal infections

- Polyene antibiotics – **amphotericin B (Fungizone)**
- Azoles – **ketoconazole (Nizoral)**

Drug therapy for viral infections

- Antivirals – **acyclovir (Zovirax)**

Gastrointestinal System (21 Drugs)

Drug therapy for peptic ulcers

- Histamine₂-receptor antagonists – **ranitidine hydrochloride (Zantac)**
- Proton pump inhibitors – **omeprazole (Prilosec)**
- Mucosal protectant – **sucralfate (Carafate)**
- Antacids – **aluminum hydroxide (Amphojel)**
- Prostaglandin E analog – **misoprostol (Cytotec)**
- Antibiotics – **amoxicillin (Amoxil), metronidazole (Flagyl), tetracycline (Sumycin)**

Drug therapy for nausea

- Serotonin antagonists – **ondansetron (Zofran)**
- Dopamine antagonists – **prochlorperazine (Compazine)**
- Antihistamines – **dimenhydrinate (Dramamine)**
- Prokinetic – **metoclopramide (Reglan)**

Drug therapy for constipation

- Fiber supplements – **psyllium (Metamucil)**
- Stool softeners – **docusate sodium (Colace), docusate sodium and senna (Peri-Colace)**
- Stimulant laxatives – **bisacodyl (Dulcolax)**

Drug therapy for diarrhea

- Opioids – **diphenoxylate and atropine (Lomotil), loperamide (Imodium)**

Drug therapy for irritable bowel syndrome (IBS)

- 5-HT₃ serotonin receptor blocker – **alosetron (Lotronex)**
- Selective chloride channel activator – **lubiprostone (Amitiza)**

Drug therapy for inflammatory bowel disease

- 5-aminosalicylates – **sulfasalazine (Azulfidine)**
- Immunosuppressants – **azathioprine (Imuran)**

Reproductive and Genitourinary Systems (21 Drugs)

Oral contraceptives – **ethinyl estradiol and drospirenone (Yasmin)**

Estrogen HRT

- Oral – **conjugated equine estrogen (Premarin)**
- Transdermal – **estradiol (Estraderm)**
- Intravaginal – **estradiol (Vagifem, Estrace Vaginal Cream)**

Estrogen and progesterone HRT

- Oral – **conjugated estrogen and medroxyprogesterone acetate (Prempro)**
- Transdermal – **estradiol and norethindrone acetate transdermal system (CombiPatch)**

Drug therapy for endometrial hyperplasia and endometriosis

- GnRH agonist – **leuprolide (Lupron, Lupron Depot)**
- Progesterone – **medroxyprogesterone acetate (Provera)**

Drug therapy for infertility

- LH and FSH stimulant – **clomiphene (Clomid)**
- Ovulation stimulant – **hCG (Choron 10)**
- Hyperprolactinemia inhibitor – **cabergoline (Dostinex)**

Drug therapy that induces uterine contractions

- Oxytocin – **oxytocin (Pitocin)**
- Ergot alkaloids – **methylergonovine (Methergine)**
- Synthetic prostaglandin – **dinoprostone (Cervidil)**

Drug therapy that stops uterine contractions

- Beta2-adrenergic agonists – **terbutaline (Brethine)**

Drug therapy for replacement of androgens

- Testosterone – **testosterone (Androderm, Delatestryl)**

Drug therapy for benign prostatic hypertrophy and outflow disorders

- 5-alpha reductase inhibitor – **finasteride (Propecia, Proscar)**
- Alpha-adrenergic receptor antagonists – **tamsulosin (Flomax)**

Drug therapy for erectile dysfunction

- PDE5 inhibitor – **sildenafil (Viagra)**

Drug therapy for urinary incontinence/over-active bladder

- Anticholinergics – **oxybutynin chloride (Ditropan)**

Drug therapy for urinary retention

- Cholinergics – **bethanechol (Urecholine)**

Musculoskeletal System (10 Drugs)

Drug therapy for rheumatoid arthritis

- DMARD I – **methotrexate (Rheumatrex)**
- DMARD II – **etanercept (Enbrel)**

Drug therapy for osteoporosis

- SERMs – **raloxifene (Evista)**
- Bisphosphonates – **alendronate (Fosamax)**
- Calcitonin – **calcitonin-salmon (Calcimar, Miacalcin)**
- Calcium supplements – **calcium citrate (Citracal), calcium carbonate (Tums)**

Drug therapy for myasthenia gravis

- Cholinesterase inhibitors – **neostigmine (Prostigmin), pyridostigmine (Mestinon)**

Drugs with neuromuscular blocking effects

- Neuromuscular blocking agents – **succinylcholine (Anectine)**

Legend

N100 (25 drugs)

N120/N280 (121 drugs)

N201 (55 drugs)

N203 (2 drugs + review others)

N204 (14 drugs)

N206 (24 drugs)