Top 50 Commonly Prescribed Drugs: Knowledge for Better Eye Care
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Cholesterol lowering drugs

High Cholesterol in the United States
- 73.5 million adults (31.7%) in the United States have high LDL cholesterol.
- Less than half of adults with high LDL cholesterol are getting treatment.
- Nearly 31 million adult Americans have a total cholesterol level greater than 240 mg/dL.

1. **Atorvastatin (Lipitor)**
   - Indications: Hyperlipidemia | Prevention of cardiovascular disease
   - Dosage: 10 - 80 mg/d
   - MOA: HMG-CoA reductase inhibitor
   - Contraindications: Pregnancy: fetal harm | Active liver disease
   - Adverse reactions: Rhabdomyolysis and myopathy | Liver enzyme abnormalities
   - Drug Interactions: Myopathy: Cyclosporin, tipranavir clarithromycin, itraconazole

7. **Simvastatin (Zocor)**
   - Indications: Hyperlipidemia | Prevention of cardiovascular disease
   - Dosage: 5 - 80 mg/d, starting 20 – 40 mg/d; Lipid determinations after 4 weeks
   - MOA: Prodrug | HMG-CoA reductase inhibitor
   - Contraindications | Pregnancy: fetal harm | Active liver disease

23. **Pravastatin (Pravachol)**
43. **Crestor (rosuvastatin)**

42. **Fenofibrate (Tricor)**
Indications: Primary hypercholesterolemia | Hypertriglyceridemia
Dosage: 50 - 150 mg/d; Lipid determination at 4-8 weeks
MOA: Stimulates peroxisome proliferator activated receptor α (PPARα)
Contraindications: Severe renal impairment | Active liver disease

Ocular manifestation of cholesterol deposits
- Xanthelasma, Arcus, Hollenhorst plaque

Thyroid Drugs
Facts about thyroid
- 27 million Americans have some sort of thyroid disease.
- ~ 13 million have no idea they suffer from a thyroid problem.
- Typically, women are more prone to thyroid issues than men.
- Thyroid disease becomes more common as we age.
- In the U.S., one in 1,000 women have hyperthyroidism.
- Many thyroid abnormalities are seen during times of fluctuating reproductive hormones.
- Thyroid panel (T4, T3, TSH, TPO) test is recommended

2. **Levothyroxine (Synthroid)**
   - Indications: Replacement or supplemental therapy in hypothyroidism | Pituitary TSH suppression
   - Dosage: 25 – 50 mcg/d, then slow increase to 100 - 125 mcg/d (adult); TSH monitoring at 6-8 weeks
   - MOA: Thyroid nuclear receptor proteins

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Contraindications: Thyrotoxicosis| Uncorrected adrenal insufficiency
- NO SPECS
- Normative Exophthalmometry Demographic Data – Globe Protrusion (An Average of Averages)

**Hypertension**
- ~70 million American adults (29%) have high blood pressure.
- Only ~ half (52%) of patients have their condition under control.
- Nearly 1 of 3 American adults has prehypertension.
- High blood pressure costs the nation $46 billion each year.

**Why Blood Pressure Matters**
- 360,000 American deaths in 2013 included high blood pressure as a primary or contributing cause.
- First heart attack: About 7 of every 10 people having their first heart attack have high blood pressure.
- First stroke: About 8 of every 10 people having their first stroke have high blood pressure.
- Chronic heart failure: About 7 of every 10 people with chronic heart failure have high blood pressure.

3. **Lisinopril (Prinivil)**
   - Indications: Hypertension; Heart failure; Acute myocardial infarction
   - Dosage: 20 – 40 mg
   - MOA: inhibits angiotensin converting enzyme (ACE)
   - Ocular Side Effects (mild & transient): Blur, photophobia, and diplopia

6. **Amlodipine (Norvasc)**
   - Indications: Hypertension, Coronary artery disease (angina)
   - Dosage: 5 – 10 mg/d
   - MOA: A dihydropyridine calcium antagonist; More effect on vascular SM

9. **Metoprolol ER (Toprol XL)**
15. **Metoprolol (Lopressor)**
   - Indications: Hypertension, Angina pectoris, Heart failure
   - Dosage: 25 – 100 mg/d
   - MOA: beta1-selective (cardioselective) adrenergic receptor blocker
   - Adverse reactions: Tiredness, dizziness, depression, mental confusion, diarrhea, rash

38. **Atenolol (Tenormin)**
   MOA: a beta1-selective (cardioselective) beta-adrenergic receptor blocker

27. **Carvedilol (Coreg)**
   - Indications: Left ventricular dysfunction s/p MI; Hypertension
   - Dosage: 12.5 – 50 mg/d
   - MOA: An α/β-adrenergic blocker
   - Adverse reactions: Dizziness, fatigue, hypotension, diarrhea, hyperglycemia, wt gain

10. **Losartan (Cozaar)**
37. **Losartan Potassium (Cozaar)**
   - Indications: Hypertension; Diabetic nephropathy
   - Dosage: 50mg/d
   - MOA: an angiotensin II receptor blocker (ARB)

13. **Hydrochlorothiazide (Microzide)**
   - Indications: Hypertension
   - Dosage: 12.5mg/d
   - MOA: Blocks reabsorption of sodium and chloride ions; ↓ K, H, Cl, I; ↑ Ca, uric acid

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• Ocular SE: Transient blurred vision, xanthopsia

35. Lisinopril/HCTZ (Zestoretic)
14. Furosemide (Lasix)
  • Indications: Edema (CHF, cirrhosis, renal); Hypertension
  • Dosage: 20 – 80 mg/d
  • MOA: Inhibits absorption of Na & Cl in the proximal & distal tubules, & loop of Henle

Hypertensive Retinopathy Scheie Classification
The Role of Ocular Perfusion Pressure in Glaucoma

4. Omeprazole (Prilosec)
  • Indications: Gastroesophageal reflux disease; NSAID-associated gastric ulcer; H. pylori eradication
  • Dosage: 20 – 40 mg/d
  • MOA: A proton pump inhibitor
  • Ocular SE (<1%): conjunctivitis, vision abnormal

16. Pantoprazole (Protonix)
  • Indications: Erosive Esophagitis a/w GERD; Zollinger-Ellison Syndrome
  • MOA: PPI

Facts about diabetes
  • More than 29 million Americans are living with diabetes, and 86 million are living with prediabetes
  • High blood sugar levels can lead to heart disease, stroke, blindness, kidney failure, and amputation of toes, feet, or legs.
  • Diabetes is the leading cause of kidney failure, lower-limb amputations, and adult-onset blindness.
  • More than 20% of health care spending is for people with diagnosed diabetes.

5. Metformin (Glucophage)
  • Indications: Type 2 diabetes mellitus
  • Dosage: 500mg bid
  • Max < 2550 mg/d
  • Contraindications: Renal disease; Metabolic acidosis
  • Adverse reactions: Diarrhea, nausea, and upset stomach

Classification of diabetic retinopathy | Definition of CSME
Incidence of Pain, as Compared to Major Conditions

8. Hydrocodone/Acetaminophen (Lortab)
  • Indications: Moderate to moderately severe pain
  • Sched III Narcotic
  • Dosage: 2.5/500, max 8 tablets
  • MOA: Inhibits µ opioid receptor

17. Gabapentin (Neurontin)
  • Indications: Postherpetic neuralgia; Epilepsy
  • Dosage: 600 mg tid
  • MOA: Unknown, structurally related to GABA
  • Ocular SE (< 3%): Blurred vision, conjunctivitis, diplopia

24. Tramadol (Ultram)
  • Indications: Moderate to moderately severe pain
  • Schedule IV
• Dosage: 50 mg qid, max. 400 mg/d
• MOA: A centrally-acting synthetic opioid analgesic

Antibiotic prescribing rates by country

11. Azithromycin (Zithromax)
• Indications: Mild to moderate infections
• Dosage: 250-500 mg/d
• MOA: A macrolide antibacterial drug

18. Amoxicillin (Amoxil)
32. Amoxicillin/Potassium Clavulanate ER (Augmentin XR)
• Indications: Infections due to susceptible strains (β-lactamase-negative)
• Dosage: 500 – 875 mg bid
• MOA: inhibition of biosynthesis of cell wall mucopeptide

20. Sertraline (Zoloft)
• Black box warning for Sertraline (Zoloft) and other antidepressants: Suicidal risk
• MOA: inhibition of CNS neuronal uptake of serotonin (5HT)

36. Citalopram (Celexa)
26. Escitalopram (Lexapro)
• Indications: Depression
• MOA: inhibition of CNS neuronal reuptake of serotonin
• Ocular SE (<1%): accommodation abnormal, conjunctivitis, eye pain

41. Fluoxetine (Prozac)
• Indications: Major Depressive Disorder; Obsessive Compulsive Disorder; Bulimia Nervosa (60 mg/d); Panic Disorder
• Dosage 10 – 20 mg/d
• MOA: Linked to SSRI

48. Trazodone (Oleptro)
• Indications: Depression
• Dosage: 150 mg – 400 mg/d
• MOA: selectively inhibits serotonin uptake

40. Duloxetine (Cymbalta)
• Indications: Major Depressive Disorder; Generalized Anxiety Disorder; Diabetic Peripheral Neuropathic Pain
• Dosage: 40 – 60 mg/d
• MOA: Unknown, potentiation of serotonergic and noradrenergic activity

44. Venlafaxine (Effexor)
• Indications: Major depressive disorder
• Dosage: 75 – 150 mg/d
• MOA: potent inhibitors of neuronal serotonin and norepinephrine reuptake
• Ocular SE (<1%): Blurred vision, conjunctivitis, eye pain

34. Bupropion (Wellbutrin)
• Indications: Major depressive disorder | Zyban: smoking cessation
• Dosage: 200 – 300 mg/d
• MOA: Unknown, weak inhibitor of NE and DA neuronal uptake.

Quick depression screening tool

12. Zolpidem (Ambien)
• Indications: short-term treatment of insomnia
• Dosage: 5 – 10 mg/d

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• MOA: interacts with a GABA-BZ receptor complex
• Ocular SE (<1%): diplopia, vision abnormal, eye irritation

28. Alprazolam (Xanax)
• Indications: Anxiety disorders; Panic disorder
• Dosage: 0.25 – 0.5 mg tid, max 4mg/d
• MOA: Unknown, CNS agents of the 1,4 benzodiazepine class

19. Prednisone (Deltasone)
• MOA: cause profound and varied metabolic effects; modify the body's immune responses to diverse stimuli.

49. Methylprednisolone (Medrol)
• Giant Cell Arteritis: intravenous (IV) methylprednisolone at doses of 250-1,000 mg daily for 3 days

30. Meloxicam (Mobic)
• Indications: relief of the signs and symptoms of osteoarthritis and rheumatoid arthritis.
• Black box warning about NSAIDs

21. Tamsulosin (Flomax)
• Indications: Benign prostatic hyperplasia
• MOA: an alpha1 adrenoceptor antagonist
• Ocular SE: Intraoperative floppy iris syndrome

22. Fluticasone (Flonase)
• Indications: perennial rhinitis
• Dosage: 2 sprays bid (200 mcg/d)
• MOA: anti-inflammatory activity

45. Ventolin (albuterol sulfate)
• Indications: Treatment or prevention of bronchospasm
• Dosage: 2 inhalations every 4 to 6 hours.
• MOA: a beta2-adrenergic agonist

25. Montelukast (Singulair)
• Indications: Prophylaxis and chronic treatment of asthma; Relief of symptoms of allergic rhinitis
• Dosage: 10 mg /d
• MOA: inhibits physiologic actions of LTD4 at the CysLT1 receptor

29. Warfarin (Coumadin)
• Indications: venous thrombosis & pulmonary embolism
• MOA: inhibiting the synthesis of vitamin K-dependent clotting factors (2, 7, 9, 10)
• Adverse reactions: fatal and nonfatal hemorrhage

31. Clopidogrel (Plavix)
• Indications: Acute coronary syndrome; Myocardial infarction
• MOA: an inhibitor of platelet activation and aggregation through the irreversible binding to ADP receptors on platelets.

33. Allopurinol (Zyloprim)
• Indications: Acute gout attacks
• Dosage: 200 – 600 mg/d, max 800 mg | Chocicine is given prophylactically.
• MOA: a xanthine oxidase inhibitor

Facts about erectile dysfunction
• ~10% of men aged 40-70 have severe or complete erectile dysfunction
• An additional 25% of men in this age category have intermittent erectile difficulties.
• Erectile dysfunction still affects 5%-10% of men below the age of 40.
39. **Cialis (tadalafil)**
   - **Indications:** erectile dysfunction; benign prostatic hyperplasia
   - **Dosage:** 5 – 20 mg/d
   - **MOA:** a phosphodiesterase 5 (PDE5) inhibitor
   - **Ocular SE (<2%):** blurred vision, changes in color vision, conjunctivitis, swelling of eyelids, NAION

46. **Amphetamine/Dextroamphetamine (Adderall)**
   - **Indications:** Attention Deficit Hyperactivity Disorder (ADHD) and Narcolepsy
   - **Dosage:** 5 – 40 mg/d
   - **MOA:** block the reuptake of norepinephrine and dopamine
   - **Ocular SE:** Difficulties with accommodation and blurring of vision, mydriasis

47. **Cyclobenzaprine (Flexeril)**
   - **Indications:** for relief of muscle spasm associated with acute, painful musculoskeletal conditions
   - **Dosage:** 5mg tid
   - **MOA:** primarily within the central nervous system at brain stem; a reduction of tonic somatic motor activity
   - **Contraindications:** MAOIs, SSRIs

Hypokalemia

50. **Potassium Chloride (Klor-Con)**
   - **Indications:** Hypokalemia
   - **Dosage:** 20 – 100 mEq/d
   - **MOA:** The intracellular concentration of potassium is approximately 150 to 160 mEq per liter

**References**

- [https://www.lowestmed.com/](https://www.lowestmed.com/)
- [http://www.goodrx.com/](http://www.goodrx.com/)