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| --- | --- | --- | --- | --- |
| **Category** | **Examples** | **Mechanism** | **Uses** | **Side effects** |
| **Mannitol** |  | **Osmotic diuretic**  Inc. urine flow | **Inc. intracran. pressure**  **Inc. intraoc. Pressure**  Drug overdose | **Pulmonary edema**  Dehydration  **Do not use w/ anuria, HF** |
| **Acetazolamide** |  | **Carbonic anhydrase inhibitor**  Inc. bicarb excretion  Alkalinizes urine | **Glaucoma**  **Metabolic alkalosis**  **Altitude sickness**  **Pseudotumor cerebri** | **Type 2 RTA**  Paresthesias  **Sulfa allergy**  Ammonium toxicity |
| **Loop diuretics** | Furosemide  Bumetanide  Torsemide | **Inhibit Na/K/2Cl transporter**  (TAL of Henle)  Prevents urine concentration  **Vasodilates afferent arteriole**  (stimulates PGE release) | HF  Cirrhosis  Nephrotic syndrome  Pulmonary edema  **HTN**  **Hypercalcemia** | **Ototoxicity**  Dehydration  **Sulfa alltergy**  **Interstitial nephritis**  **Gout**  Hypokalemia  Metabolic alkalosis |
| Ethacrynic acid | **Inhibit Na/K/2Cl transporter**  Nonsulfonamide | **Patients w/ sulfa allergies**  (can’t use furosemide) | Similar to above  **More ototoxic** |
| **Thiazide diuretics** | Hydrochlorothiazide  Chlorthalidone  Metolazone | **Inhibit NaCl transporter**  (DCT)  Dec. nephron diluting ability  Dec. calcium excretion | HTN  HF  **Hypercalciuria**  **Osteoporosis**  **Nephrogenic DI**  **(Inc. PCT Na/H2O reuptake)** | Hypokalemia  **Hyperglycemia**  **Hyperlipidemia**  **Hyperuricemia**  **Hypercalcemia**  **Sulfa allergy** |
| **K+ sparring diuretics** | Spironolactone  Eplerenone | **Aldosterone antagonists**  Inc. Na/H2O excretion  Dec. K, H excretion | Hyperaldosteronism  **K depletion**  **HF**  Ascites (spironolactone)  Nephrogenic DI  (amiloride) | Hyperkalemia  (**arrhythmias**)  **Anti-androgenic**  (spironolactone) |
| Amiloride  Triamterene | **Inhibit ENaC channel**  (collecting duct) |
| **Angiotensin**  **Converting**  **Enzyme**  **Inhibitors** | Captopril  Enalpril  Lisinopril  Ramipril | **Inhibit ACE -> dec. AT-II levels**  Inhibit efferent arteriole constrict.  (Dec. GFR)  **Inc. bradykinin** (vasodilator) | **HTN (prevents heart remodel)**  **HF (dec. mortality)**  Proteinuria  **Diabetic nephropathy**  Cause renal failure w/  bilateral renal artery stenosis | **Dry cough**  **Angioedema (bradykinin)**  **Teratogen (renal)**  Inc. creatinine  Hyperkalemia  Hypotension |
| **Angiotensin II**  **Receptor**  **Blockers** | Losartan  Candesartan  Valsartan | **Prevents AT-II receptor binding**  **Do not increase bradykinin** | **HTN**  **HF**  Proteinuria  **Diabetic nephropathy** | Hyperkalemia  Dec. GFR  Hypotension  **Teratogen** |
| **Aliskiren** |  | **Renin inhibitor**  Blocks production of AT-I | Hypertension | Hyperkalemia  Dec. GFR  Hypotension  **Do not give if taking**  **ACE-I or ARBs** |