BP Goals[1]

Population	Conventional	AOBP Avg[2]
18 - 59 yrs and/or DM, 18+, and /or CKD[3], 18+	**≤ 139 / 89 mm Hg**	**≤ 134 / 84 mm Hg**
≥ 60 yrs w/out DM or CKD	**≤ 149 / 89 mm Hg**	**≤ 144 / 84 mm Hg**

If BP above goal

Start ACEI+Diuretic

Lisinopril - HCTZ
20 - 25mg
½ → 1 → 2 tabs daily

See CAUTION/INFO: **verify contraception** & eGFR.
Titrate to BP goal.

Optional: Replace ACEI w/ ARB if ACEI intolerant

Losartan
25mg daily → 25mg twice daily → 50mg twice daily
Titrate to BP goal.

Add Calcium Channel Blocker

Amlodipine
2.5 → 5 → 10mg daily
Titrate to BP goal.

Replace HCTZ w/ Chlorthalidone

Chlorthalidone
25mg daily
Titrate to BP goal.

Add Spironolactone*

Spironolactone
12.5 → 25mg daily
*If on thiazide AND eGFR≥60 AND K<4.5

If Spironolactone eligibility criteria not met:

Atenolol[3]
25 → 50mg daily
Titrate to BP goal. **Maintain pulse of 55 or greater**

[1]BP algorithm applies if eGFR ≥ 30 and if LVEF ≥ 40%.
[2]Automated Office BP (AOBP) average is the average of three readings measured with the patient unobserved using an AOBP device.
[3] CKD: Microalbuminuria or [(age/2) + eGFR] < 85

Statin Goals

Atorvastatin 40-80 mg:
- Clinical ASCVD[5] Age < 75 + any LDL

Atorvastatin 10-20 mg:
- Clinical ASCVD Age ≥ 75 + any LDL
- DM: Age ≥ 40 + LDL 70-189

Clinical ASCVD[4]
- Age <75, Any LDL → **Start Statin: Atorvastatin** 80mg daily. See CAUTION/INFO. **Verify contraception**
- Age ≥75, Any LDL → **Start Statin: Atorvastatin** 20 mg daily. See CAUTION/INFO. **Verify contraception**

DM
- Age ≥ 40, LDL 70-189 → **Start Statin: Atorvastatin** 20 mg daily. See CAUTION/INFO. **Verify contraception**

Optional: 10 yr CV risk ≥ 7.5%

If recommended dose of statin not tolerated, reduce to highest tolerated dose or switch to other statin (such as simvastatin or rosuvastatin)

Optional: LDL monitoring to assist with adherence assessment; consider lower statin dose if LDL < 40 x 2

[4] Beta Blockers, independent of their mild anti-hypertensive effect, are sometimes indicated for secondary cardio-protection

Adapted from KPNC CPG for: CAD, DM, Cholesterol, HTN, HF and Stroke
Complete guidelines can be found in the Clinical Library at http://cl.kp.org

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A1c Goals

≤ 7.9%: ≥ 65 yrs or clinical factors[6]
≤ 6.9%: < 65 yrs w/o clinical factors

Type 2 DM A1C ≥ 2% above goal
- Yes → **Add Metformin + NPH insulin**
- No → **Add Metformin[7]**

Start Metformin
500mg: ½ tablet bid → 1 tablet bid → 2 tablets bid

Contraindicated: eGFR <30 or HF NY class 3–4 or LFTs >3 x ULN
Start not recommended: If baseline eGFR < 45
Assess risk/ benefits: If eGFR falls < 45

If GFR 30–45, 1000mg = max.
Titrate every 1-2 weeks aiming for AM SMBG target
(≤ 6.9: 70–130; ≤ 7.9: 100–160)

At goal
- Yes → **Monitor**
- No → **Risk of Severe Hypoglycemia[8]**

Start / Add NPH Insulin
10 units SQ at hs
↑ 2 units every 2 days until at target.

Risk of Severe Hypoglycemia[8]
- Yes → **Add Alternate agent[9]**
- No → **Add Glipizide**

Add Glipizide
5mg: ½ tablet bid → 1 tablet bid → 2 tablets bid

Contraindicated: severe sulfa allergy

Titrate every two weeks until at target.

A1C ≥ 1% of goal?
- Yes → **Add NPH Insulin**
- No → **Add NPH Insulin or Alternate agent[9]**

Thiazoladinedione
- Oral
- Wt: Avg 1-3 kg gain
- Risk: CHF , Fx
- Formulary,
- generic co-pay

DPP-4 Inhibitor
- Oral
- Wt: Neutral
- Non-formulary; brand co-pay

GLP-1 R Agonist
- SQ Injection (Needs Endocrine approval)
- Wt: Avg 1-3 kg loss
- Risk: Nausea / vomiting
- Non-formulary; brand co-pay

SGLT2 Inhibitor
- Oral
- Wt: Avg 1-3 kg loss
- Risk: Genital yeast infections, DKA
- Non-formulary; brand co-pay

[5] Clinical Atherosclerotic Cardiovascular Disease (ASCVD), defined as: CAD, TIA/CVA, Symptomatic PAD.
[6]Individualize A1c goal based on risk of hypoglycemia, duration of DM, life expectancy, co-morbidities, vascular complications, member resources and support system.
[7]If intolerant to immediate release metformin, ***strongly*** consider sustained release metformin.
[8]**Severe Hypoglycemia** = Hypoglycemia resulting or likely to result in seizures, loss of consciousness, or needing help from others. **Mild to moderate hypoglycemia** = recognized signs and symptoms of neuro-glycopenia such as hunger or sweating that the patient can effectively self-treat.
[9]A1C above goal after 3 months despite non-insulin agents, ***strongly*** consider discontinuing ineffective medications and initiating insulin + metformin.

PHASE
PREVENT HEART ATTACKS AND STROKES EVERYDAY

Cardiovascular Risk Management Medications and Lab Chart Rev. 25 (08/17)

PHASE POPULATIONS

CAD **Symptomatic PAD**

CVA/TIA Ischemic

DM ASA: If 10 y CV risk > 10% ages 50-59 ASA recommended; if 10 y CV risk > 10% ages 60-69 consider ASA

PHASE MEDICATIONS & CAUTIONS

ASA

ASA	81mg daily

CAUTION/INFO If ASA intolerant: Clopidogrel : CAD, Sx PAD

ACEI

Lisinopril	10mg daily

CAUTION/INFO Verify effective contraception in women of childbearing potential: Use Chlorthalidone or HCTZ.
Use ACEI with caution: eGFR <30, K >5.5
ARB may be inappropriate : Hx of Angioedema, renal failure or hyperkalemia on ACEI.

STATIN

- Clinical ASCVD[3] Age < 75 + any LDL

Atorvastatin	40–80mg daily

- Clinical ASCVD Age ≥ 75 + any LDL
- DM: Age ≥ 40 + LDL 70-189

Atorvastatin *OR*	10-20mg daily
Simvastatin	20-40mg daily

CAUTION/INFO Verify effective contraception in women of childbearing potential.

BETA BLOCKER – FOR CAD/Sx PAD

Atenolol	25mg daily

CAUTION / INFO Use with caution: HR <55, asthma, hypotension.

BP	Preferred Dosage Forms	Max. Rec. Dose	Optimal Titration Interval	Baseline Labs	Titration
ACE Inhibitor - Diuretic Lisinopril - HCTZ (Prinzide®) F	Tab 20 / 25mg	40 / 50mg daily	2 weeks	K+ and SCr. < 6 months (Na+ optional)	K+ and SCr. 1 week after initiation or dosage change (Na+ optional)
Thiazide Diuretics HCTZ (Hydrodiuril®, Esidrix®) F	Tab 25mg	HCTZ 50mg daily	2 weeks	K+ and SCr. < 6 months (Na+ optional)	K+ and SCr 1 week after initiation or dosage change (Na+ optional)
Chlorthalidone (Hygroton®) F	Tab 25mg	25mg daily	2 weeks	K+ and SCr. < 6 months (Na+ optional)	K+, SCr 1 week after initiation or dosage change (Na+ optional)
ACE Inhibitor Lisinopril (Prinivil®) F	Tab 5, 10, 20mg	40mg daily	1 week	K+ and SCr. < 6 months	K+ and SCr 1 week after initiation. K+ 2 weeks after dosage change
ARB Losartan (Cozaar®) F	Tab 25, 50mg	100mg daily or 50mg BID	1 week	K+ and SCr. < 6 months	K+ and SCr 1 week after initiation. K+ 2 weeks after dosage change
Calcium Channel Blocker Amlodipine (Norvasc®) F	Tab 2.5, 5, 10mg	10mg daily	1 week	None	None
Potassium Sparing Diuretic Spironolactone (Aldactone®) F	Tab 25mg	25mg daily	1 week	K+, SCr. < 1 month	K+ and SCr 1 week after initiation & 2 weeks after dosage change
Beta 1 blocker Atenolol (Tenormin®) F	Tab 25, 50, 100mg	100mg daily	1 week	None	Maintain pulse ≥ 55

DM 2 (non-insulin agents)	Preferred Dosage Forms	Max. Rec. Dose	Optimal Titration Interval	Baseline Labs	Cautions / Contraindications
Biguanide Metformin (Glucophage®) F	Tab 500, 1000mg	1000mg BID	2 weeks	SCr. (CBC optional)	Contraindicated: eGFR <30 or HF NY class 3–4 or LFTs >3 x ULN; Not recommended: baseline eGFR < 45; Assess R/B: If eGFR falls < 45
Sulfonylurea Glipizide (Glucotrol®) F	Tab 2.5, 5, 10mg	20mg BID ac	2 weeks	None	Contraindicated: severe sulfa allergy
Thiazoladinedione Pioglitazone (Actos®) F	Tab 15,30,45 mg	45 mg daily	2 months	ALT,(AlkP ,T bili optional)	Contraindicated: CHF stage III or IV
DPP-4 inhibitor Linagliptin (Tradjenta®) NF	Tab 5 mg	5 mg daily	N/A	None	N/A
SGLT2 inhibitor Empagliflozin (Jardiance®) NF	Tab 10, 25 mg	25 mg daily	2 weeks	SCr.	Contraindicated: eGFR <45
GLP-1 receptor agonist Exenatide ER inj (Bydureon®) NF	SQ Inj 2 mg	2 mg weekly	N/A	SCr.	Contraindicated: personal or FH Medullary thyroid CA or MEN2

Statins	Preferred Dosage Forms	Max. Rec. Dose	Optimal Titration Interval	Baseline Labs*	Titration
Antilipemics Atorvastatin (Lipitor®) F	Tab 40, 80mg	80mg daily hs	N/A	ALT, SCr	N/A
Simvastatin (Zocor®) F	Tab 20, 40mg	40mg daily hs	N/A	ALT, SCr	N/A

F: Formulary
NF: Non-formulary

*Do not routinely measure CK. Consider baseline CK if increased risk for adverse muscle events (such as personal or family history of statin intolerance or muscle disease, clinical presentation, or concomitant drug therapy that might increase the risk for myopathy).

Drug info site: http://pharmacy.kp.org

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