HYPERTENSION

Symptoms	Questions
Headaches, dizziness, tinnitus, blurred vision, epistaxis, chest discomfort, palpitations, nervousness, fatigue	Does patient check blood pressure at home? What numbers are they getting? What are the highest and lowest numbers? How often are their numbers super high?
Complications	Any symptoms of HTN?
HF, CAD, MI, A Fib, aortic dissection, PAD, atherosclerosis, stroke, CKD, hypertensive nephrosclerosis, retinopathy	What medication(s) is the patient taking? Dose? How many times a day? How many days per week does the patient forget/does not have time to take their medication?
Risk Factors	
Obesity, diabetes, smoking, excessive alcohol/caffeine, high sodium diet, physical inactivity, stress	
Labs	
CBC, creatinine, eGFR, BMP	

HYPERTENSION: MEDICATIONS

ACEIs (lisinopril, enalapril)	Thiazide diuretics (HCTZ)
First-line for patients with DM, renal disease, ischaemic heart disease, and HF	Side effects: hypokalaemia, hyponatraemia, increased glucose and cholesterol

HYPERTENSION: MEDICATIONS (cont)

Side effects: dry cough, hyperkalaemia	___
Adverse effects: angioedema - STOP IMMEDIATELY	___
ARBs (losartan, valsartan)	**Dihydropyridine CCB (amlodipine, nifedipine)**
First-line for patients with DM, renal disease, ischaemic heart disease, and HF	Avoid in patients with HFrEF
Side effects: hyperkalaemia	Side effects: oedema, nausea, flushing, HA, GERD, gingival hyperplasia
Nondihydropyridine CCB (diltiazem, verapamil)	**Beta blockers (propranolol, metoprolol)**
Side effects: bradycardia, AV block, constipation, hyperprolactinaemia (verapamil)	Second-line therapy; used as primary drug in patients with HF, A Fib, ischaemic heart disease
	Side effects: bronchoconstriction with non-cardioselective beta blockers, increased TG
Many others, but these are the main ones that you are most likely to see in clinic.	

DIABETES TYPE II

Symptoms	Questions
Polyuria, polydipsia, polyphagia, vision changes, poor wound healing, numbness, tingling, constipation	Does pt check their blood sugars at home? When? What are their morning numbers (before eating)? Numbers during the day?
Labs	Highest and lowest blood sugars? How often? Any symptomatic low blood sugars?
A1c (every 3-6 months), BMP (renal function and electrolytes), LFTs, lipids, urine microalb/cr	If on insulin, how many units with which type of insulin? How often do they forget/are too busy to take their insulin?
Look For	Numbness, tingling, etc? Vision changes?
Statin therapy regardless, ASCVD assessment for high-intensity statin	Have they seen an eye doctor in the past year?
Last ophthalmology exam, podiatry	
Physical Exam	
Foot exam, acanthosis nigricans	

DIABETES TYPE II: TREATMENT

Metformin	Sulphonylureas
Enhances effect of insulin. Weight loss.	Glyburide, glimepiride, glipizide

DIABETES TYPE II: TREATMENT (cont)

Side effects: lactic acidosis, GI complaints (only when first starting, D/C), decreased B12 absorption	Increase insulin secretion
Contraindication: CKD w/ GFR <30	Side effects: risk of hypoglycaemia, weight gain, agranulocytosis, haemolysis
_____	Contraindications: CV comorbidity, obesity, severe renal/liver failure
SGLT-2 Inhibitors	**Meglitinides**
Canagliflozin, dapagliflozin, empagliflozin	Nateglinide, repaglinide
Increases glucose excretion with urine	Increases insulin secretion
Side effects: genital yeast infections and UTI, polyuria and dehydration, DKAContraindication: CKD, recurrent UTIs	Side effects: risk of hypoglycaemia, weight gain
Contraindication: CKD, recurrent UTIs	Contraindication: severe liver failure
DPP-4 Inhibitors	**GLP-1 Agonists**
Saxagliptin, sitagliptin	Exenatide, liraglutide
Inhibits GLP-1 degradation	Stimulates GLP-1 receptors

DIABETES TYPE II: TREATMENT (cont)

Side effects: GI sx, pancreatitis, URI, headache, dizziness, oedema	Side effects: pancreatitis, possible pancreatic cancer, nausea
Contraindication: liver failure, moderate to severe renal failure	Contraindications: pre-existing, sx GI motility disorders
_____	_____
_____	_____
Rapid Acting Insulin	**Long-Acting Insulin**
Lispro, aspart, glulisine	Glargine, detemir, degludec
Onset: 5-15 min, Peak: 1 hr, Duration: 3-4 hrs	Onset: 1-4 hrs, Duration: 24 hrs
Before meals	Once daily
Adverse Effects of Insulin	
Hypoglycaemia, weight gain, lipodystrophy, hypokalaemia, oedema, pain/erythema at injection site	

CORONARY ARTERY DISEASE

Symptoms	Questions

CORONARY ARTERY DISEASE (cont)

Angina: Retrosternal chest pain/pressure that may radiate to the L arm, neck, jaw, or back. Pain is not affected by body position or breathing. No chest wall tenderness. Dyspnea, dizziness, palpitations, diaphoresis, n/v, syncope	Has patient had chest pain since last visit? Is it occuring more often or stable? Does nitro help relieve pain?
Stable angina: chest pain/sx reproducible/predictable, subside with rest or nitroglycerin.	Any hospitalisations since last visit?
Things to Check For	Medication compliance?
ASCVD score, new ECGs, stress tests, ECHO, CT angio, coronary artery calcium (CAC) scoring, cardiac catheterisations	Any of the other symptoms besides chest pain?
Revascularisation - PCI or CABG	If they follow with cardiology, when was the last time they were seen?
Secondary Prevention	

CORONARY ARTERY DISEASE (cont)

Smoking cessation, increased physical activity, lifelonf antiplatelet therapy with aspiring or clopidogrel, treat comorbidities, lipid-lowering therapy

CORONARY ARTERY DISEASE: TREATMENT

Anti-anginal Drugs	**Antiplatelet Agents**
First-line: beta-blockers	*Recommended for all patients*
Second-line: CCBs, nitrates, ranolazine	Aspirin, clopidogrel
ACEIs or ARBs	**Revascularisation**
In patients who also have HTN, DM, LVEF 40% or <, CKD	CABG
Lisinopril, ramipril. Losartan, valsartan.	PCI

COPD & TREATMENT

Symptoms	**Complications**
Cough, dyspnea, fatigue, hyperventilation	Chronic respiratory failure, R HF (cor pulmonale), secondary spontaneous pneumothorax
Physical Exam	**Treatment**

COPD & TREATMENT (cont)

Accessory muscle use, barrel chest, decreased breath sounds, end-expiratory wheezing and/or prolonged expiration, rhonchi/crackles, cyanosis, tachycardia, JVD, oedema, nail clubbing	Short--acting beta agonists: salbutamol
Labs	Long-acting beta agonists: salmeterol
CBC	Short--acting muscarinic antagonists: ipratropium bromide
Things To Look For	Long-acting muscarinic antagonists: tiotropium bromide
PFT: FEV1 and FEV1/FVC	Inhaled corticosteroids: budesonide, fluticasone
CXR, chest CT	
Pulmonology clinic notes	

Questions: How often they use albuterol inhaler? Any hospitalisations due to COPD exacerbation since last visit? If on O2, when do they use it? How has their COPD been - stable, worse? Have they used their steroids (pills) since the last visit (if they have them, some have to prevent exacerbations)?

CKD

Risk Factors	**Treatment**
DMII, HTN, obesity, advanced age, substance use, AKI	Diet
Aetiology	Avoidance of nephrotoxic substances: NSAIDs, antifungal, antibiotics, antivirals
Diabetic nephropathy, hypertensive nephropathy, glomerulonephritis, PKD, analgesic misuse, amyloidosis	Control underlying condition and comorbidities
Labs	Haemodialysis
CBC, BMP (Cr, BUN), PT, PTT, bleeding time, lipid panel, blood pH, eGFR, urinalysis, urine microalb/cr	**Complications**
	CKD-mineral and bone disorder, secondary hyperparathyroidism, anaemia, ESRD

CONGESTIVE HEART FAILURE

Symptoms	**Lifestyle Modifications**
Nocturia, fatigue, tachycardia, dyspnea, orthopnea, PND, peripheral oedema	Exercise, cessation of smoking/EtOH/recreational drugs, weight loss, immunisations

CONGESTIVE HEART FAILURE (cont)

Physical Exam	Diet and fluid restriction
S3/S4 gallop, pulsus alternans, bilateral basilar crackles, displaced apical heart beat, peripheral pitting oedema, JVD, hepato-jugular reflux	Self-monitoring and symptom recognition (if pt gains > 4-5 lbs within 3 days -> fluid overloaded)
Labs	**Drugs to Avoid**
CBC, BMP, LFTs, lipid panel	Most antiarrhythmic drugs, CCB (except amlodipine), NSAIDs, thiazolidinediones

Know baseline BNP

Look For

Echo - ejection fraction, valvular dysfunction

CXR - cardiac silhouette, pulmonary congestion

ECG - LVH

Cardiac MRI, L heart cath/angio, R heart cath

CONGESTIVE HEART FAILURE: TREATMENT

ACEIs	Aldosterone Antagonists
Enalapril, lisinopril	Spironolactone, eplerenone
Every patient with HFrEF	Class II-IV and LVEF <35%
ARBs	Monitor for hyperkalaemia
Losartan, valsartan	**Loop Diuretics and Thiazide Diuretics**

CONGESTIVE HEART FAILURE: TREATMENT (cont)

Beta Blockers	Loop: furosemide, torsemide
Carvedilol, metoprolol	Thiazide: HCTZ, metolazone, chlorthalidone
Add once patient is stable on ACEI/ARB and no decompensated	To treat volume overload

CIRRHOSIS

Symptoms	Things to Look Out For
Often asymptomatic	Child-Pugh score and MELD score every 6 months along with labs
Fatigue, pruritus, yellowing of skin or eyes, n/v, increased abdomen size, gynecomastia, hypogonadism	HCC screening (q6 months)
Physical Exam	**Complications**
Jaundice, telangiectasia, caput medusae, palmar erythema, hepatomegaly, splenomegaly, ascites, asterixis	Portal HTN, ascites, spontaneous bacterial peritonitis, oesophageal variceal haemorrhage, coagulopathy, hepatic encephalopathy, hepatorenal syndrome, hepatopulmonary syndrome, HCC, portal vein thrombosis

CIRRHOSIS (cont)

Labs	Treatment
CBC, LFTs, alk phos, ammonia, PT/INR, albumin	Treat underlying condition, avoid hepatotoxic substances (EtOH, NSAIDs), routine vaccines
Imaging	Non-selective beta blockers (propranolol) to lower portal HTN and prevent variceal bleeding
US, CT scan	Spironolactone and furosemide for ascites and oedema

Aetiology is extensive: alcohol use, medications, aflatoxin, hepatitis, primary biliary cirrhosis, primary sclerosing cholangitis, parasitic infections, non-alcoholic steatohepatitis, haemochromatosis, Wilson disease, alpha-1 antitrypsin deficiency, glycogen storage disease, CF, Budd-Chiari syndrome