Hypertension in GP practice

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Prevention of heart failure

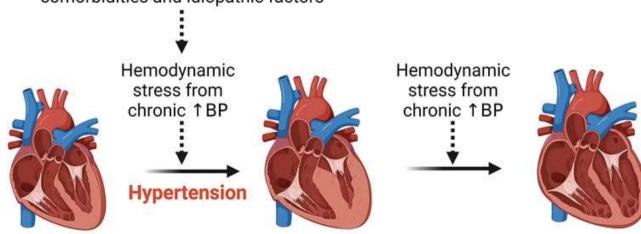
Overarching objective

Prevention and treatment of heart failure

- Early initiation of treatment of hypertension.
- Monitoring and modification of treatment in patients diagnosed with HF
- Early detection and prevention of diseases leading to heart failure
 - Hypertension
 - Renal failure
 - Dyslipidemia
 - Diabetes
 - Heart rhythm disorders
 - Viral infections
 - Thyroid diseases
 - depression*

Pathophysiology of heart failure

Genetic, neurohormonal, dietary, salt, stress, physiological, smoking, sex, socioeconomic, medication adherence, comorbidities and idiopathic factors

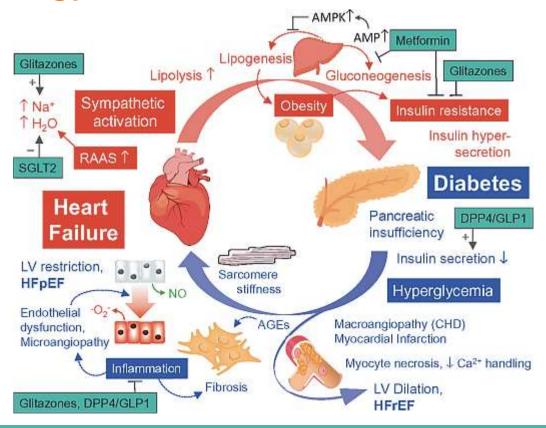


Normal heart

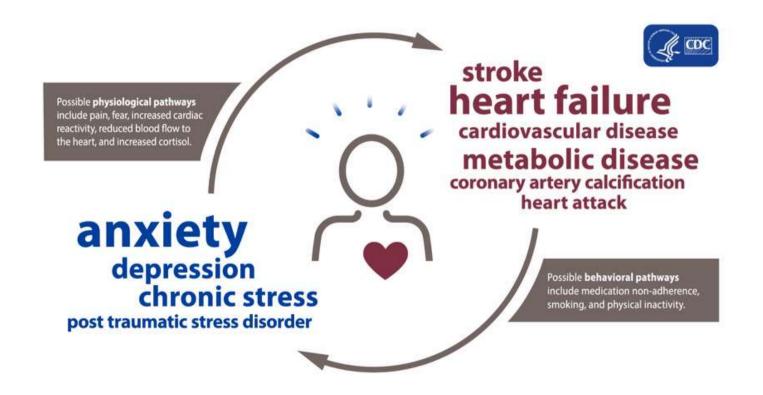
Compensated Left Ventricular hypertrophy

Decompensated Heart Failure

Pathophysiology of heart failure

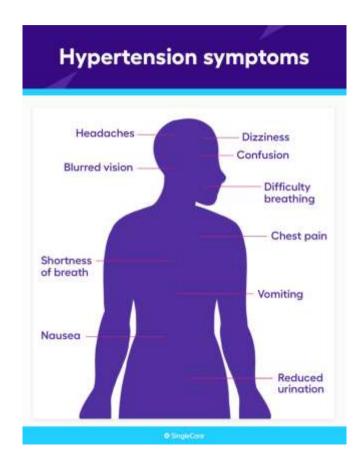


Pathophysiology of heart failure



Diagnosis of Hypertension in the PCP's Office:

Confirm diagnosis of hypertension in people with a: clinic blood pressure of 140/90 mmHg or higher and. ABPM daytime average or HBPM average of 135/85 mmHg or higher



Diagnosis of Hypertension in the PCP's Office:

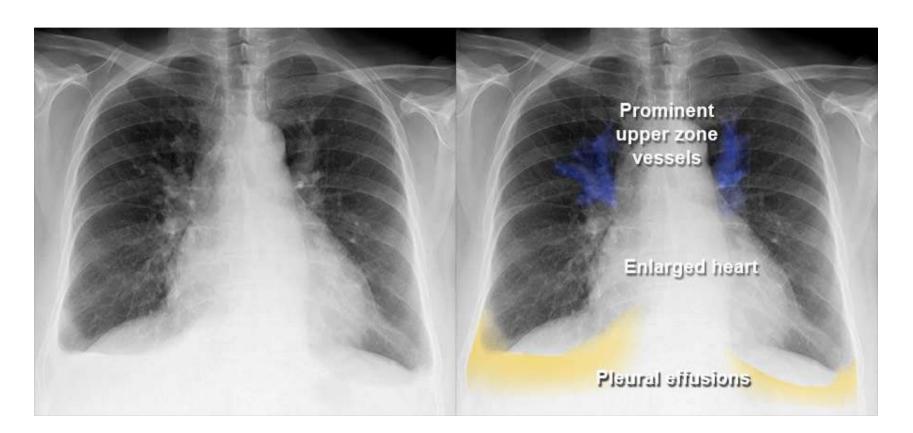
- Two consecutive BP measurements in ambulatory settings of 140/90 mmHg

BEST:

- 2 weeks of daily BP measurements twice a day. Daytime average of 135/85 mmHg
 - recommend certified manometer (best bought in pharmacy)
 - measurements set at the same time each day
 - sitting after 5 min rest
 - left arm

BLOOD PRESSURE LOG BOOK M6d Hypertension 90-100 Moderate Hypertension 160-200 100-120 Severe Hypertensian Notes Date Blood Pressure

RTG



Stages of hypertension

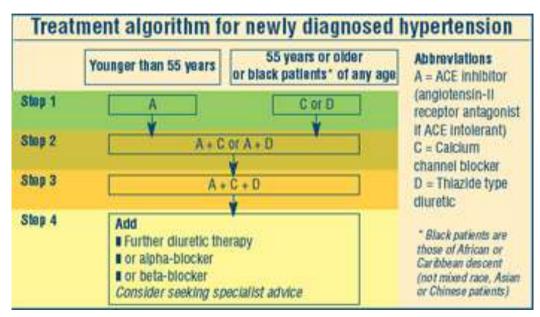
Blood Pressure Categories

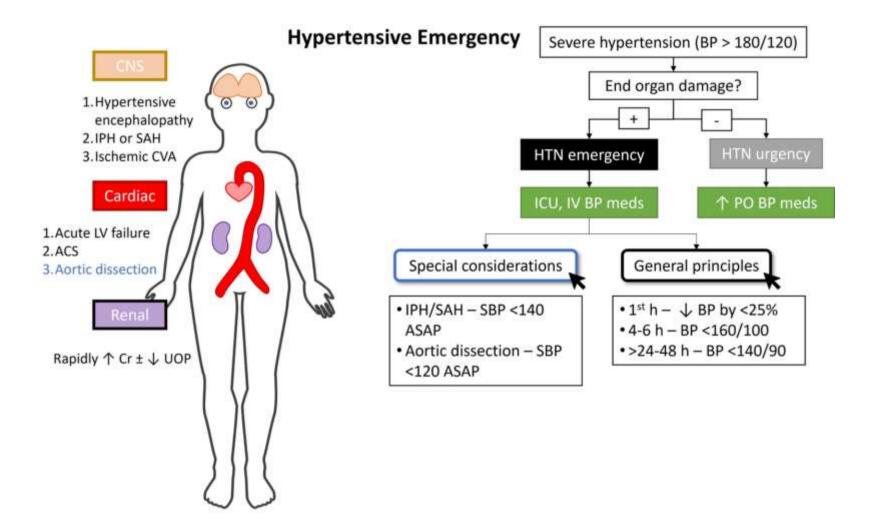


BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 - 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 - 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

Therapeutic algorithm

SBP > 160 mmHg ---





Chronic Hypertension: Complications

Chronic Hypertension

Long term Blood Pressure (BP) ≥ 135/85 (on ambulatory or home blood pressure measurement) in patients without diabetes, or BP ≥ 130/80 in patients with diabetes

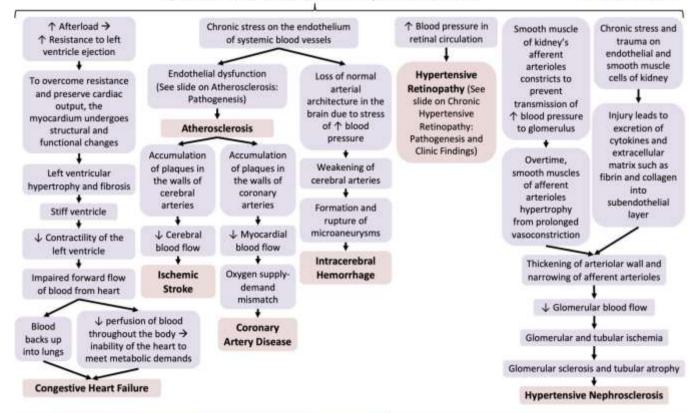
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Stages of Heart failure in context of hypertension treatmnent

STAGE A: At-Risk for Heart Failure

Patients at risk for HF but without current or previous symptoms/signs of HF and without structural/ functional heart disease or abnormal biomarkers

Patients with hypertension, CVD, diabetes, obesity, exposure to cardiotoxic agents, genetic variant for cardiomyopathy, or family history of cardiomyopathy STAGE B: Pre-Heart Failure

Patients without current or previous symptoms/signs of HF but evidence of 1 of the following:

Structural heart disease

Evidence of increased filling pressures

Risk factors and

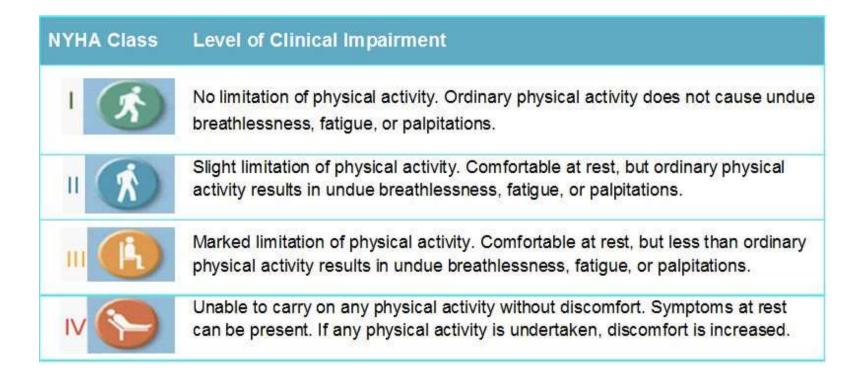
- Increased natriuretic peptide levels or
- persistently elevated cardiac troponin in the absence of competing diagnoses

STAGE C: Symptomatic Heart Failure

Patients with current or previous symptoms/signs of HF STAGE D: Advanced Heart Failure

Marked HF symptoms that interfere with daily life and with recurrent hospitalizations despite attempts to optimize GDMT

NYHA scale



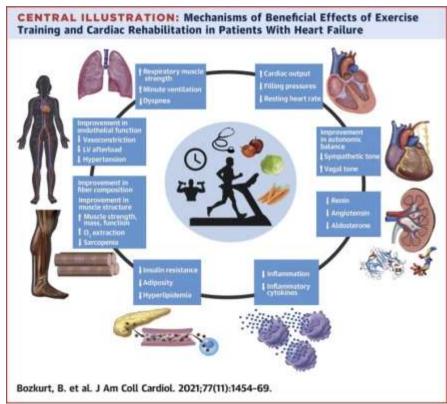
Treatment of HF in a PCP setting:

CHF Drug	Initial Dose(s)	Maximum Dose(s)	
Captopril	6.25 mg TID	50 mg TID	
Enalapril	2.5 mg BID	10-20 mg BID	
Fosinopril	5-10 mg QD	40 mg QD	
Lisinopril	2.5-5 mg QD	20-40 mg QD	
Perindopril	2 mg QD	8-16 mg QD	
Quinapril	5 mg BID	20 mg BID	
Ramipril	1.25-2.5 mg QD	10 mg QD	
Trandolapril	1 mg QD	4 mg QD	
Candesartan	4-8 mg QD	32 mg QD	
Losartan	25-50 mg QD	50-150 mg QD	
Valsartan	20-40 mg BID	160 mg BID	
Sacubitril/valsartan	24/26 mg BID	97/103 mg BID	
Ivabradine	5 mg BID	7.5 mg BID	
Spironolactone	12.5-25 mg QD	25 mg QD or BID	
Eplerenone	25 mg QD	50 mg QD	
Bisoprolol	1.25 mg QD	10 mg QD	
Carvedilol	3.125 mg BID	50 mg BID	
Carvedilol CR	10 mg QD	80 mg QD	
Metoprolol succinate	12.5-25 mg QD	200 mg QD	
Isosorbide dinitrate Hydralazine	20-30 mg ISDN/ 25-50 mg TID or QD	40 mg ISDN TID 100 mg hydralazine TID	

In the treatment of HF a combination of sacubitril and valsartan is used. Therapy is administered in a dose range of 49 mg/51 mg to 97 mg/103 mg. Dose modification to the target dose is carried out gradually over 2 to 4 weeks. The drug is administered twice daily.

The impact of cardiac rehabilitation on cardiovascular

outcomes



Q & A

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