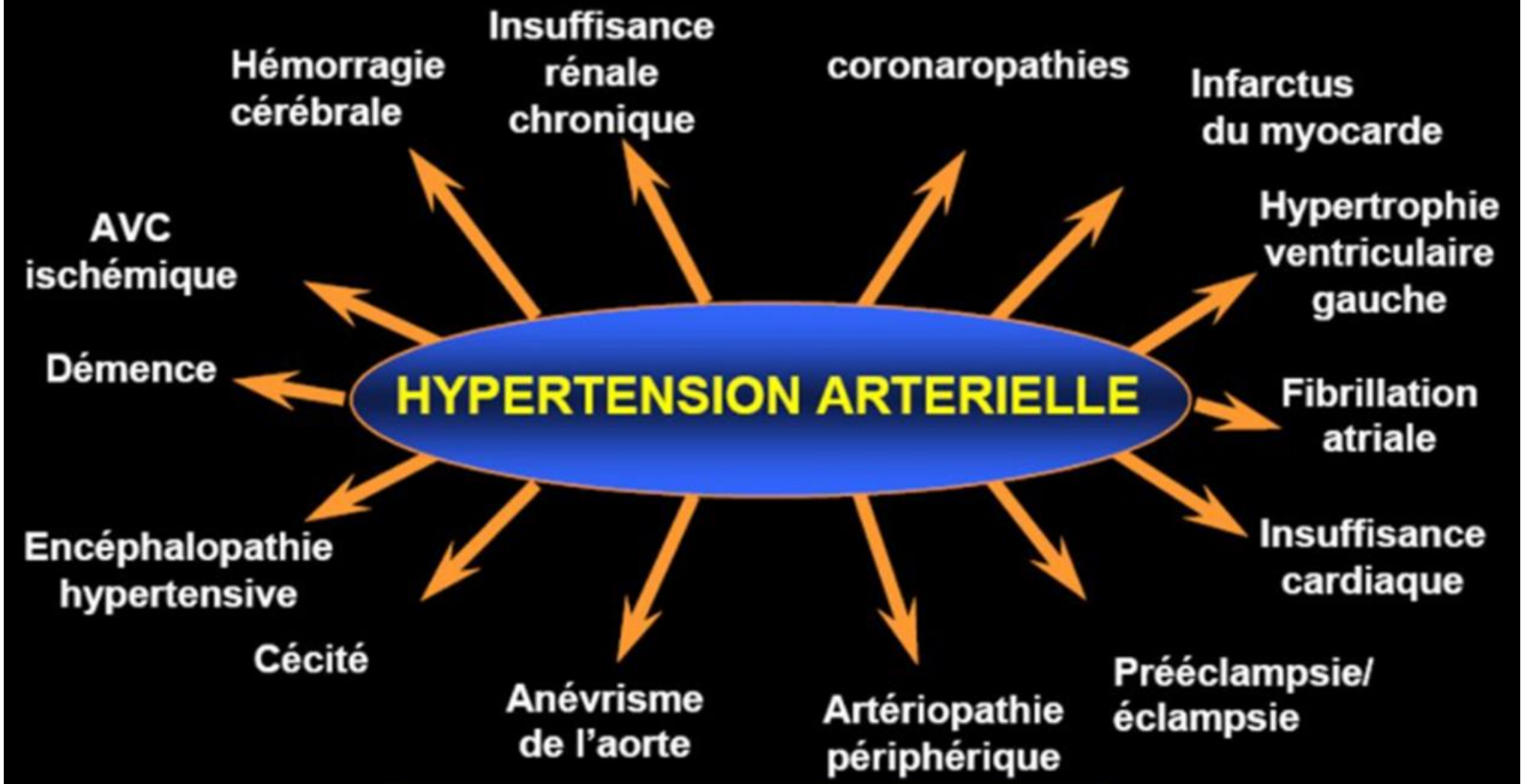
HTA sévère

Charles P. Vega. Severe Hypertension: Would You Refer This Patient? - Medscape - Feb 01, 2024.

Hypertension : silent killer

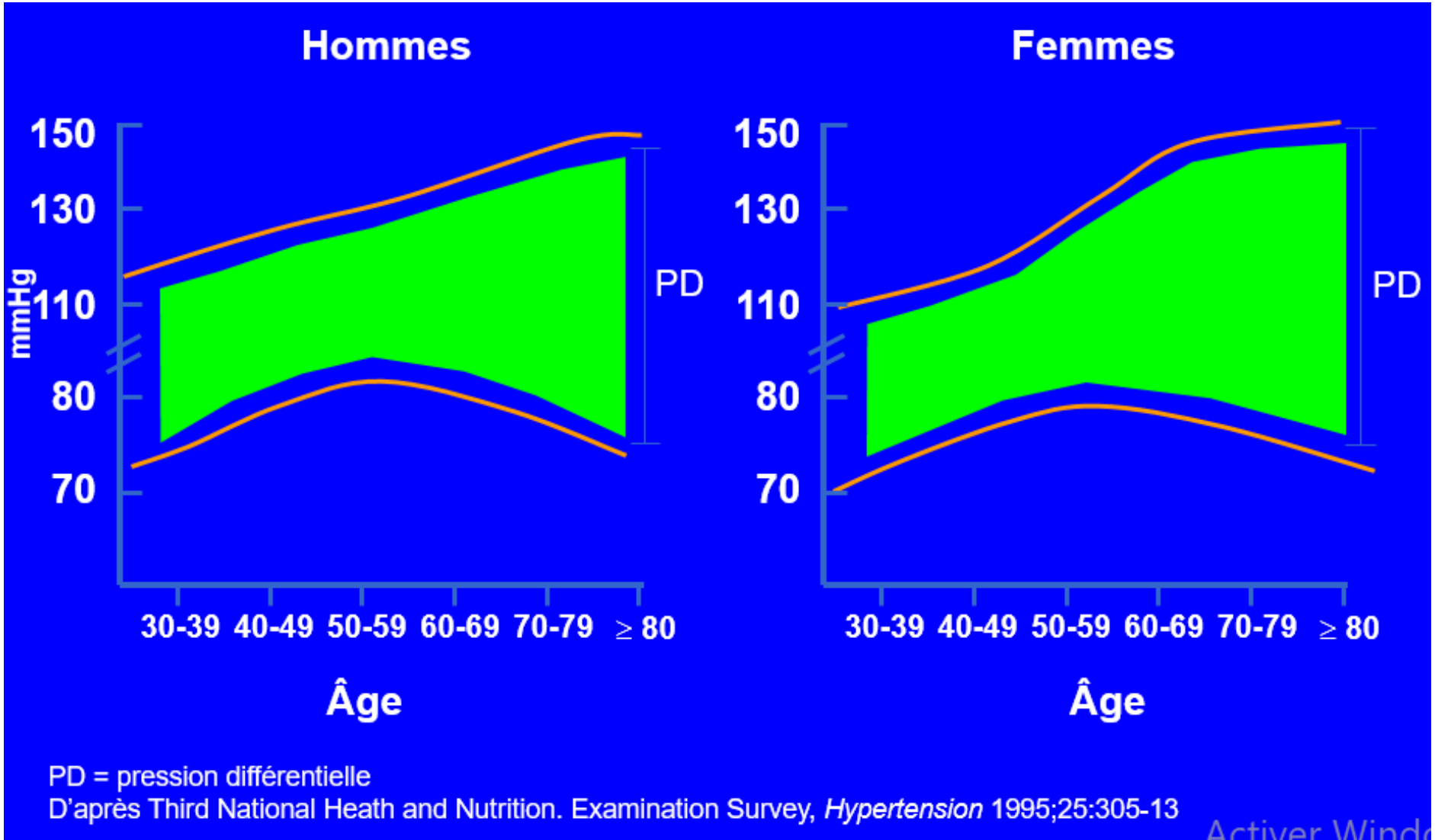


8 MILLIONS DE DECES / AN

Table 3 **Definitions and classification of office blood pressure levels (mmHg)[a]**

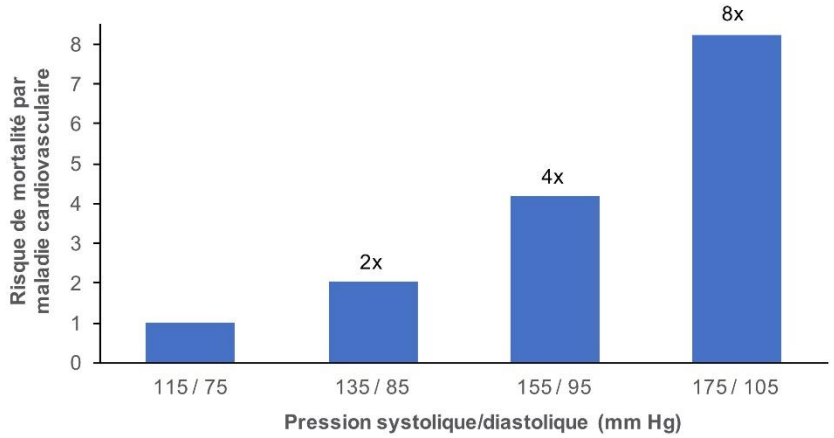
Category	Systolic		Diastolic
Optimal	<120	and	<80
Normal	120–129	and/or	80–84
High normal	130–139	and/or	85–89
Grade 1 hypertension	140–159	and/or	90–99
Grade 2 hypertension	160–179	and/or	100–109
Grade 3 hypertension	≥180	and/or	≥110
Isolated systolic hypertension	≥140	and	<90

Pression artérielle dans la population en fonction de l'âge



Définition de l'HTA

- La mortalité totale et cardiovasculaire augmente linéairement avec la tension artérielle : il double pour chaque augmentation de 20/10 mm Hg et ce dès 115/75 mm Hg.
- « L'hypertension doit être définie en termes de valeurs de PA au-delà de laquelle les interventions à visée diagnostique ou thérapeutique font plus de bien que de mal » *Rose*



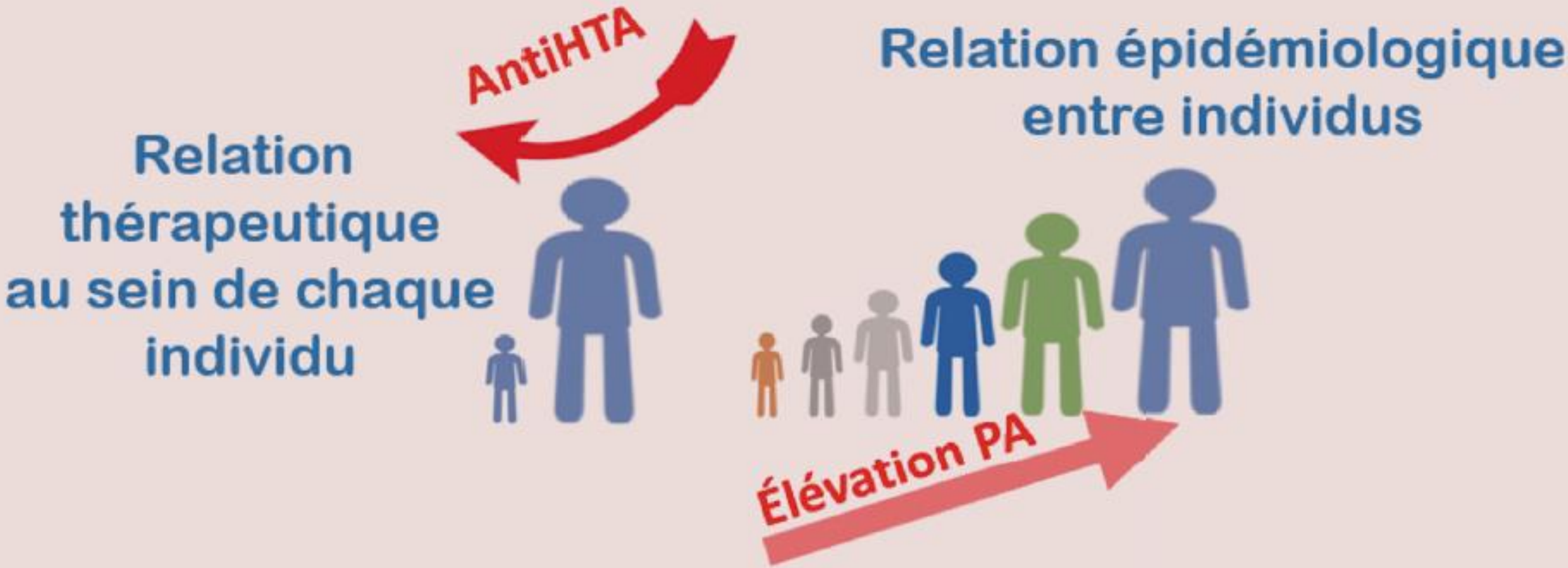
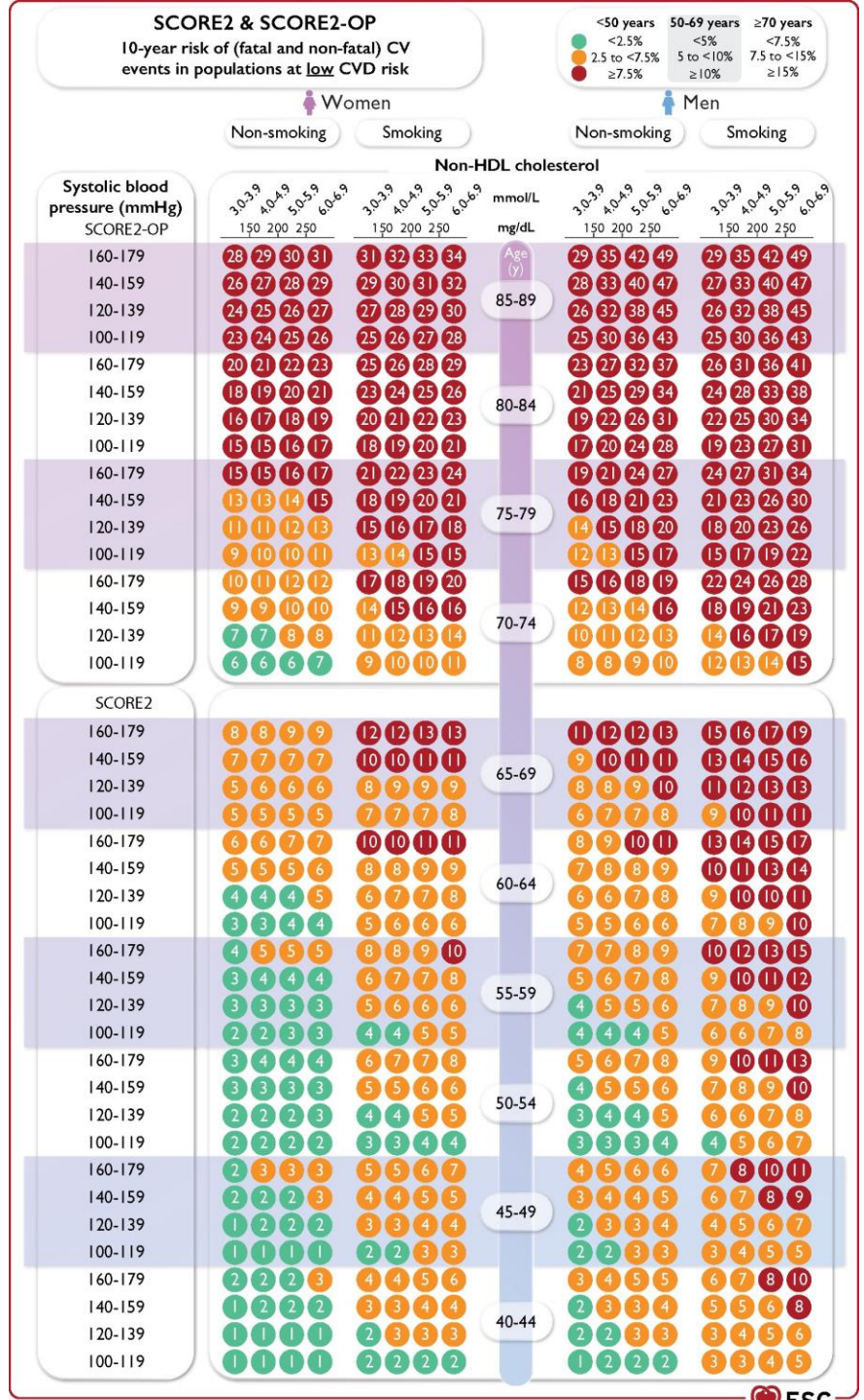
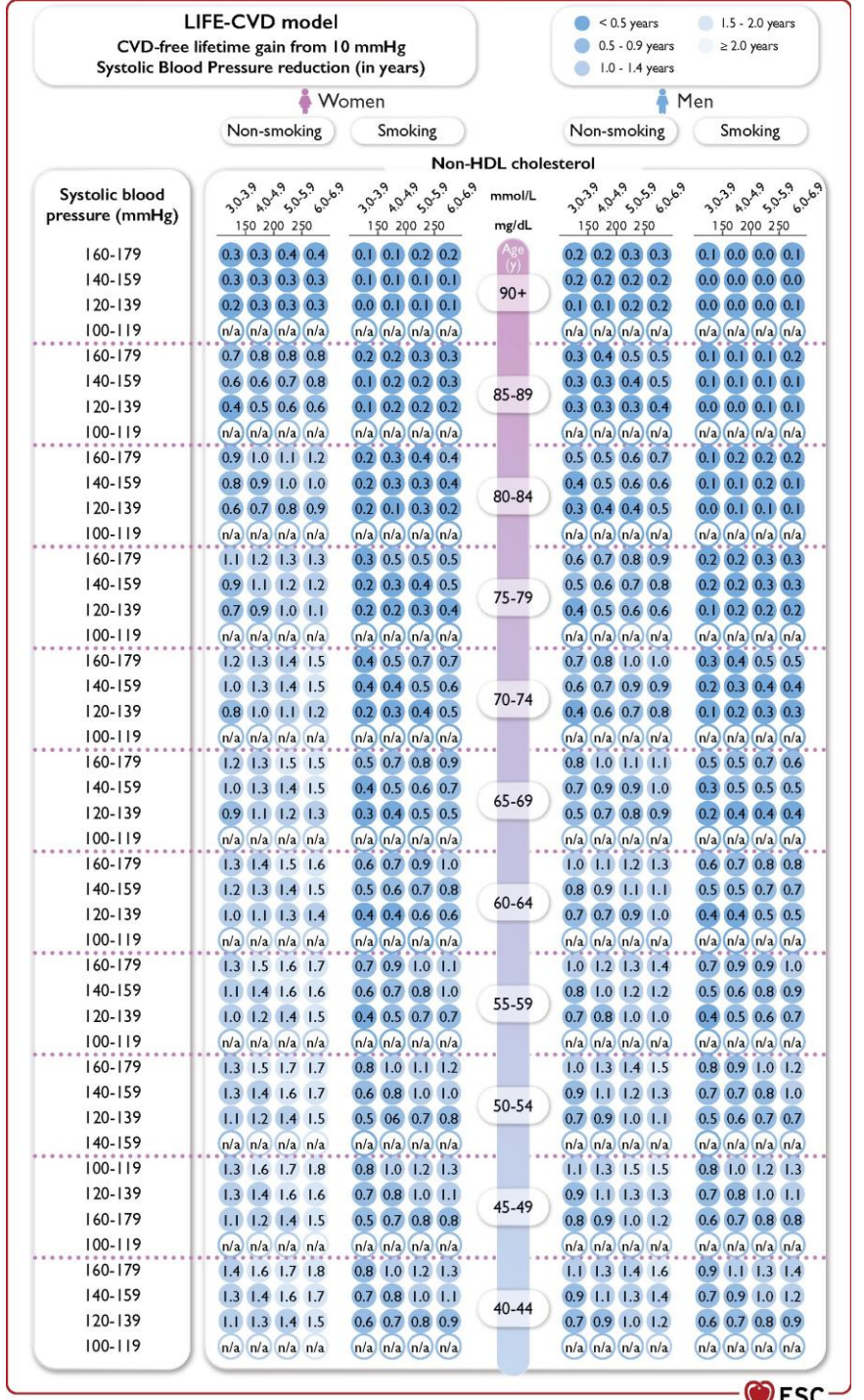


Figure 1. Les 2 types de relation entre pression artérielle et risque cardiovasculaire : la relation épidémiologique s'observe entre groupes d'individus, elle est constamment croissante ; la relation thérapeutique n'est pas directement observable, elle aurait une forme en J.


SCORE2 & SCORE2-OP
10-year risk of (fatal and non-fatal) CV events in populations at low CVD risk
<50 years
<2.5%
2.5 to <7.5%
≥7.5%
50-69 years
<5%
5 to <10%
≥10%
≥70 years
<7.5%
7.5 to <15%
≥15%
Women
Non-smoking
Smoking
Men
Non-smoking
Smoking
Non-HDL cholesterol
Systolic blood pressure (mmHg)
SCORE2-OP
SCORE2
3.0-3.9
4.0-4.9
5.0-5.9
6.0-6.9
mmol/L
mg/dL
150 200 250
Age (y)
160-179 28 29 30 31 31 32 33 34 29 35 42 49 29 35 42 49
140-159 26 27 28 29 29 30 31 32 28 33 40 47 27 33 40 47
120-139 24 25 26 27 27 28 29 30 26 32 38 45 26 32 38 45
100-119 23 24 25 26 25 26 27 28 25 30 36 43 25 30 36 43
85-89
160-179 20 21 22 23 25 26 28 29 23 27 32 37 26 31 36 41
140-159 18 19 20 21 23 24 25 26 21 25 29 34 24 28 33 38
120-139 16 17 18 19 20 21 22 23 19 22 26 31 22 25 30 34
100-119 15 15 16 17 18 19 20 21 17 20 24 28 19 23 27 31
80-84
160-179 15 15 16 17 21 22 23 24 19 21 24 27 24 27 31 34
140-159 13 13 14 15 18 19 20 21 16 18 21 23 21 23 26 30
120-139 11 11 12 13 15 16 17 18 14 15 18 20 18 20 23 26
100-119 9 10 10 11 13 14 15 15 12 13 15 17 15 17 19 22
75-79
160-179 10 11 12 12 17 18 19 20 15 16 18 19 22 24 26 28
140-159 9 9 10 10 14 15 16 16 12 13 14 16 18 19 21 23
120-139 7 7 8 8 11 12 13 14 10 11 12 13 14 16 17 19
100-119 6 6 6 7 9 10 10 11 8 8 9 10 12 13 14 15
70-74
160-179 8 8 9 9 12 12 13 13 11 12 12 13 15 16 17 19
140-159 7 7 7 7 10 10 11 11 9 10 11 11 13 14 15 16
120-139 5 6 6 6 8 9 9 9 8 8 9 10 11 12 13 13
100-119 5 5 5 5 7 7 7 8 6 7 7 8 9 10 11 11
65-69
160-179 6 6 7 7 10 10 11 11 8 9 10 11 13 14 15 17
140-159 5 5 5 6 8 8 9 9 7 8 8 9 10 11 13 14
120-139 4 4 4 5 6 7 7 8 6 6 7 8 9 10 10 11
100-119 3 3 4 4 5 6 6 6 5 5 6 6 7 8 9 10
60-64
160-179 4 5 5 5 8 8 9 10 7 7 8 9 10 12 13 15
140-159 3 4 4 4 6 7 7 8 5 6 7 8 9 10 11 12
120-139 3 3 3 3 5 6 6 6 4 5 5 6 7 8 9 10
100-119 2 2 3 3 4 4 5 5 4 4 4 5 6 6 7 8
55-59
160-179 3 4 4 4 6 7 7 8 5 6 7 8 9 10 11 13
140-159 3 3 3 3 5 5 6 6 4 5 5 6 7 8 9 10
120-139 2 2 2 3 4 4 5 5 3 4 4 5 6 6 7 8
100-119 2 2 2 2 3 3 4 4 3 3 3 4 4 5 6 7
50-54
160-179 2 3 3 3 5 5 6 7 4 5 6 6 7 8 10 11
140-159 2 2 2 3 4 4 5 5 3 4 4 5 6 7 8 9
120-139 1 2 2 2 3 3 4 4 2 3 3 4 4 5 6 7
100-119 1 1 1 1 2 2 3 3 2 2 3 3 3 4 5 5
45-49
160-179 2 2 2 3 4 4 5 6 3 4 5 5 6 7 8 10
140-159 1 2 2 2 3 3 4 4 2 3 3 4 5 5 6 8
120-139 1 1 1 1 2 3 3 3 2 2 3 3 3 4 5 6
100-119 1 1 1 1 2 2 2 2 1 2 2 2 3 3 4 5
40-44

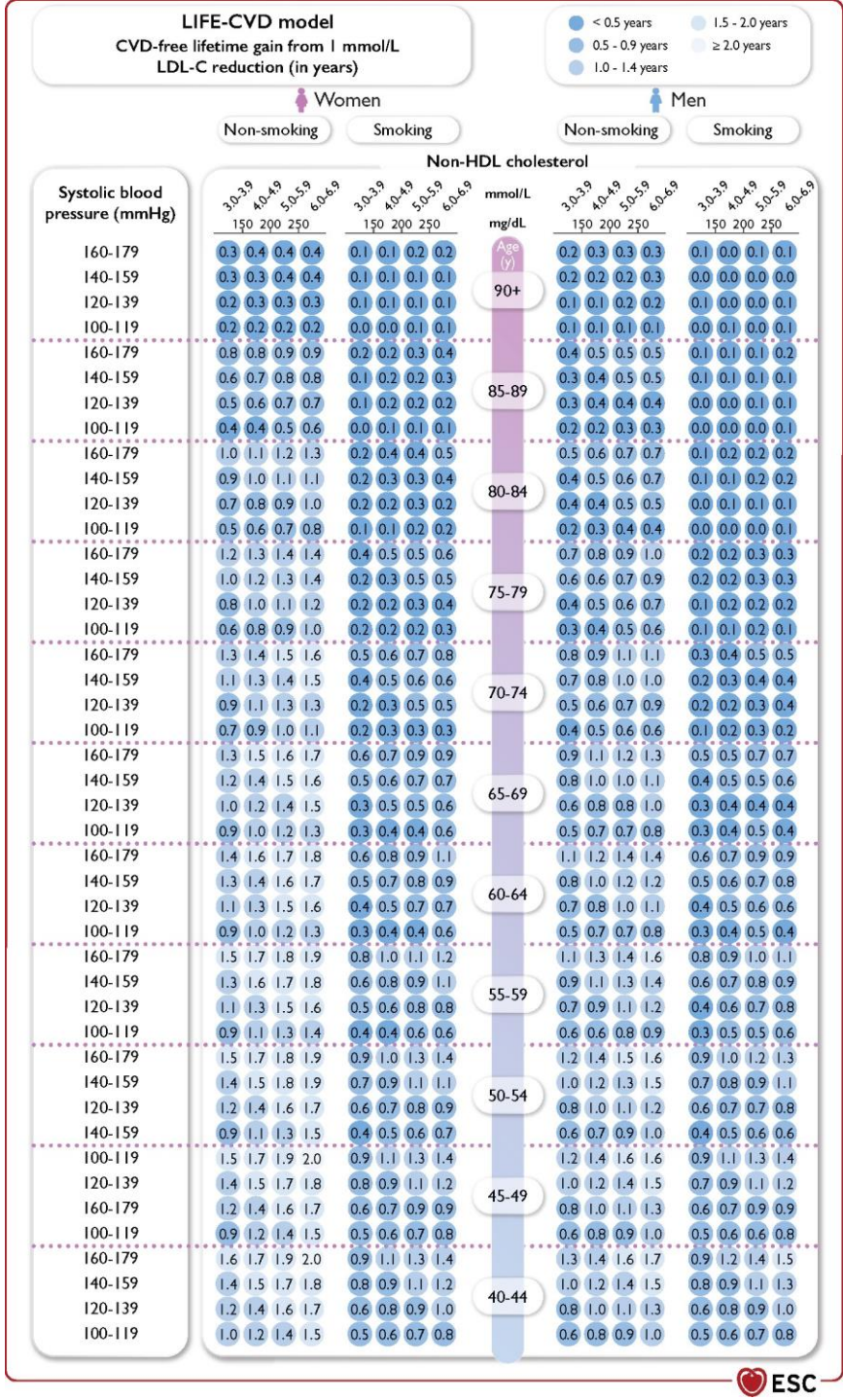
The absolute lifetime benefit per 10-mmHg reduction in SBP

- The lifetime benefit is expressed as ‘years of median life expectancy free from myocardial infarction or stroke’ gained from 10 mmHg SBP lowering. The lifetime benefit is calculated by estimating lifetime CVD risk with the LIFE-CVD model multiplied by the HR (0.80) from a meta-analysis of the effect of BP lowering. For 20 mmHg SBP lowering, the average effect is almost twice as large, etc.

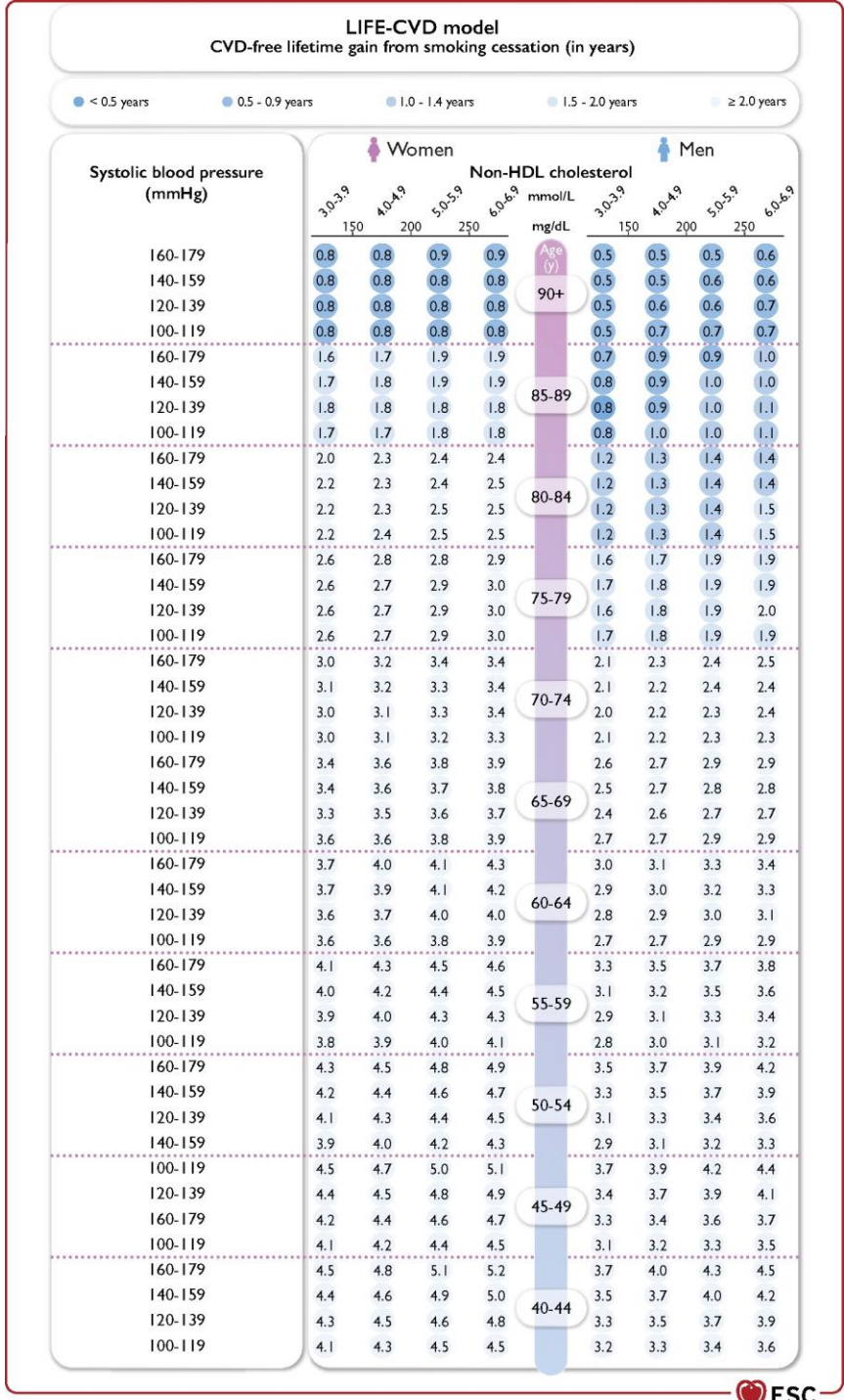


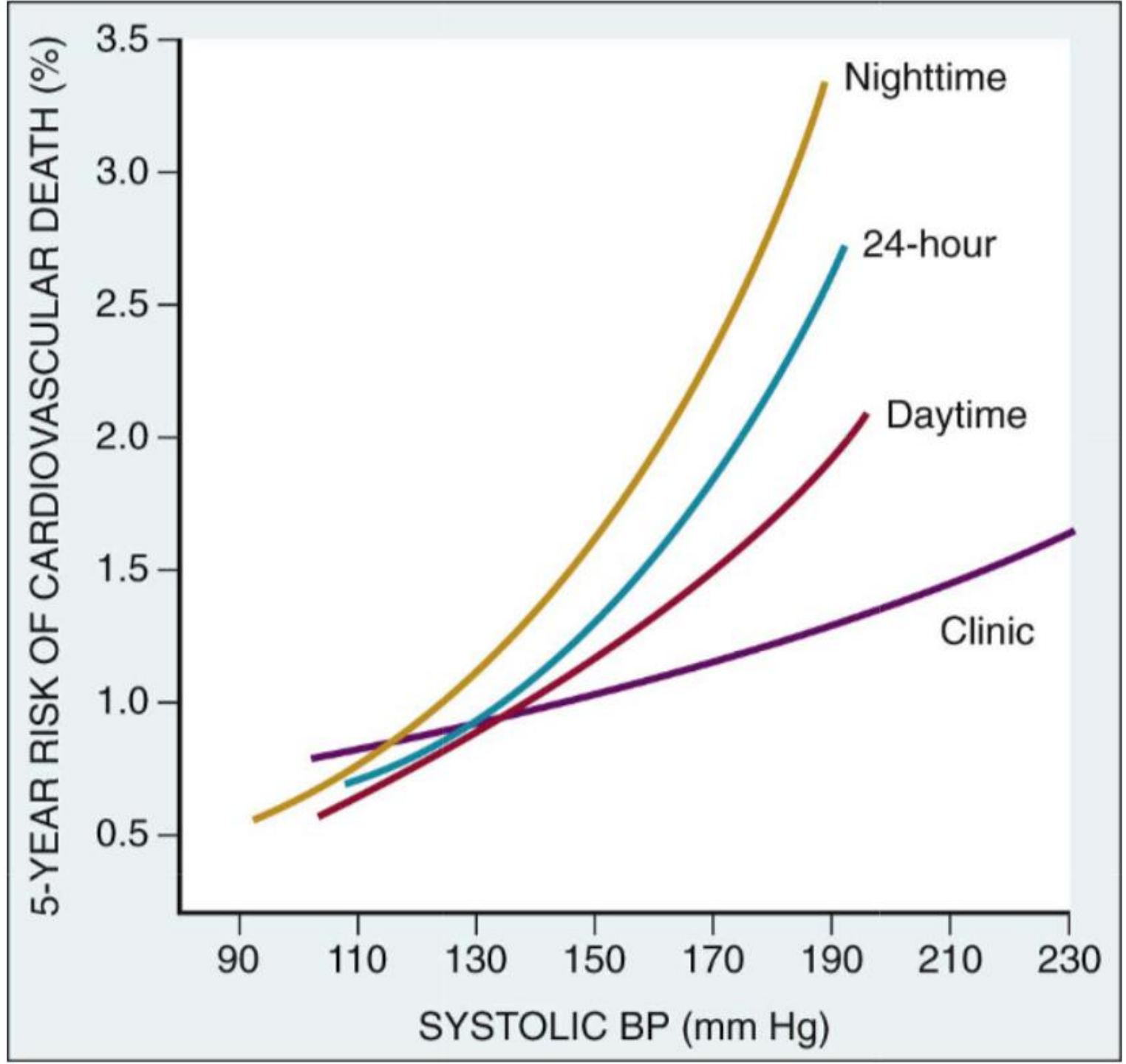
Average years-free-of-cardiovascular disease gained per 40 mg/dL LDL-C reduction in apparently healthy persons

- Lifetime benefit of 1 mmol/L LDL-C lowering for apparently healthy persons, based on the following risk factors: age, sex, current smoking, SBP, and non-HDL-C. The lifetime benefit is expressed as ‘years of median life expectancy free from myocardial infarction or stroke’ gained from 1 mmol/L LDL-C lowering. For 2 mmol/L LDL-C lowering, the average effect is almost twice as large, and so on.



Lifetime atherosclerotic cardiovascular disease benefit from smoking cessation for apparently healthy persons, based on the following risk factors: age, sex, systolic blood pressure, and non-HDL-C.




5-YEAR RISK OF CARDIOVASCULAR DEATH (%)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
Nighttime
24-hour
Daytime
Clinic
90
110
130
150
170
190
210
230
SYSTOLIC BP (mm Hg)

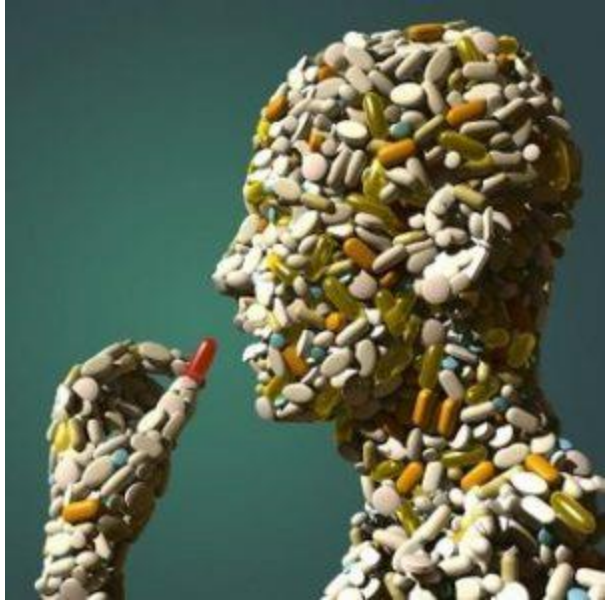
HTA: rechercher iatrogénie, dopage, éléments et alcool

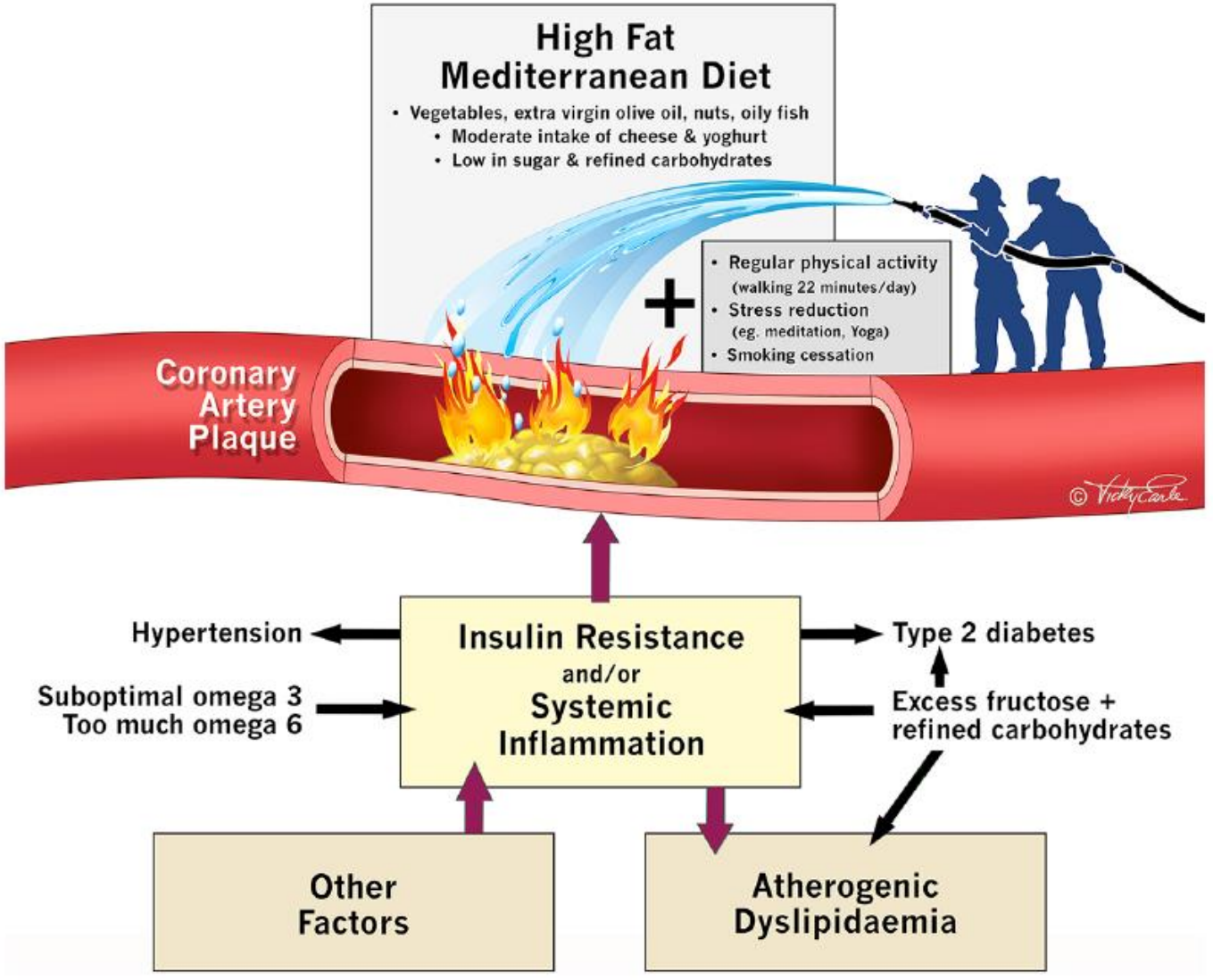
- Œstro-progestatifs, corticoïdes, AINS, gouttes nasales, EPO, amphétamines, réglisse , phytothérapies, métaux lourds.

Medications and other substances that may increase blood presssure[397]

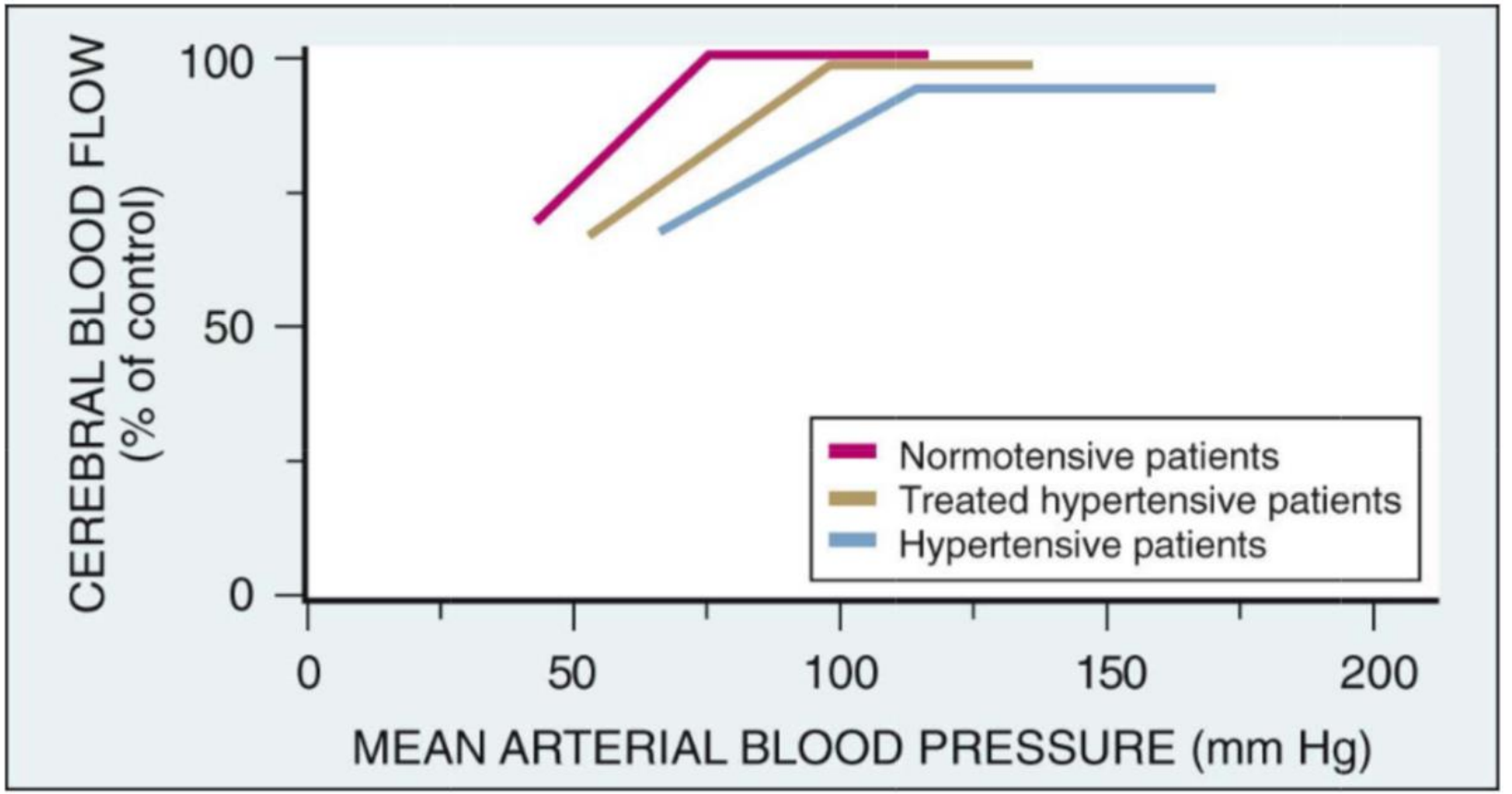
Medication/substance	
Oral contraceptive pill	Especially oestrogen containing; cause hypertension in ~5% of women, usually mild but can be severe
Diet pills	For example, phenylpropanolamine and sibutramine
Nasal decongestants	For example, phenylephrine hydrochloride and naphazoline hydrochloride
Stimulant drugs	Amphetamine, cocaine, and ecstasy; these substances usually cause acute rather than chronic hypertension
Liquorice	Chronic excessive liquorice use mimics hyperaldosteronism by stimulating the mineralocorticoid receptor and inhibiting cortisol metabolism
Immunosuppressive medications	For example, cyclosporin A (tacrolimus has less effect on BP and rapamycin has almost no effect on BP) and steroids (e.g. corticosteroids and hydrocortisone)
Antiangiogenic cancer therapies	Antiangiogenic drugs such as VEGF inhibitors (e.g. bevacizumab), tyrosine kinase inhibitors (e.g. sunitinib), and sorafenib have been reported to increase BP
Other drugs and substances that may raise BP	Anabolic steroids, erythropoietin, non-steroidal anti-inflammatory drugs, and herbal remedies (e.g. ephedra and ma huang)

Comment faut il traiter l'HTA?





« Start low, go slow »



1 pill

Initial therapy
Dual combination

ACEi or ARB + CCB or diuretic

Consider monotherapy in low-risk grade 1 hypertension (systolic BP <150mmHg), or in very old (≥80 years) or frailer patients

1 pill

Step 2
Triple combination

ACEi or ARB + CCB + diuretic

2 pills

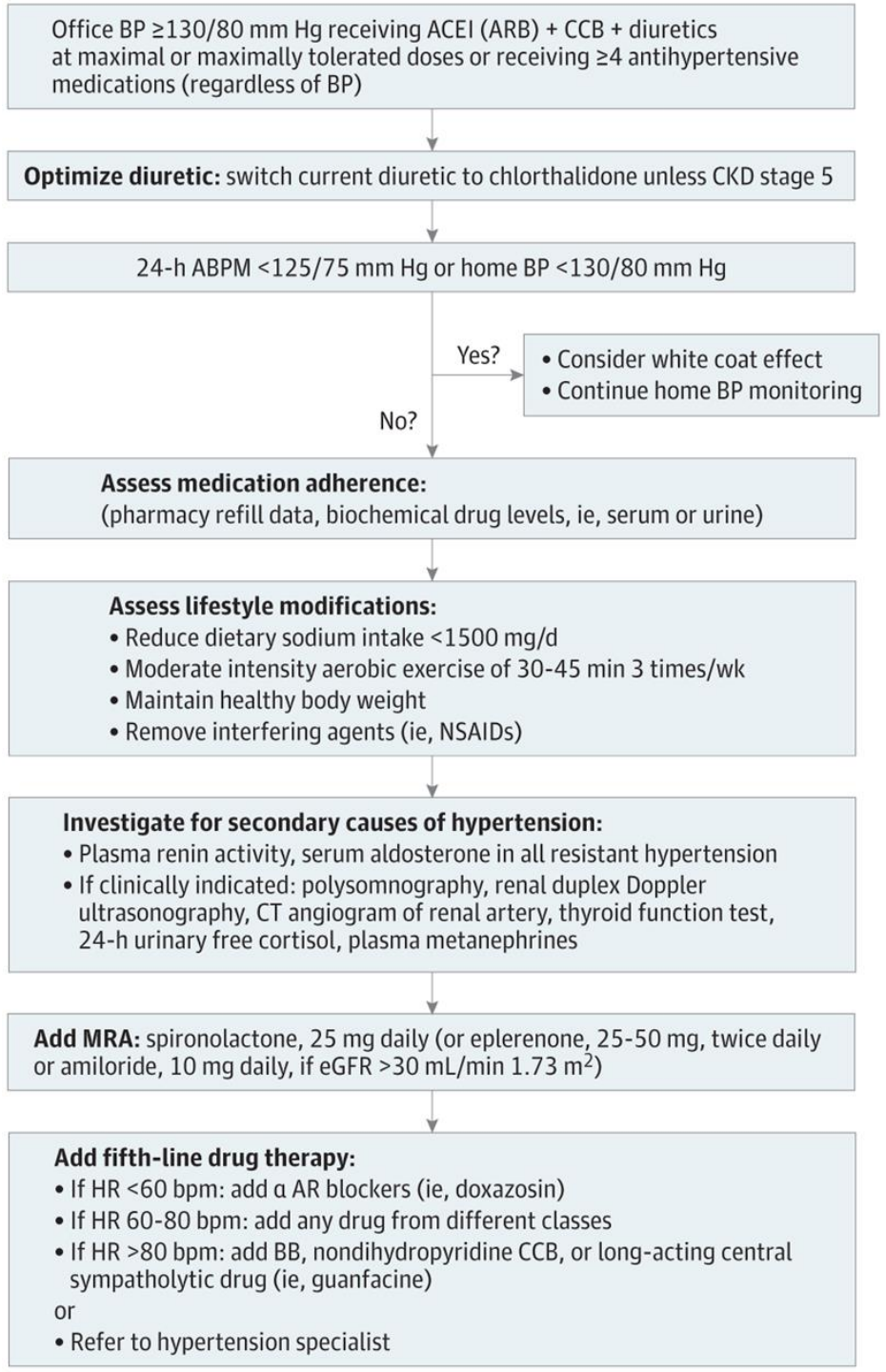
Step 3
Triple combination
+ spironolactone
or other drug

Resistant hypertension
Add spironolactone (25-50 mg o.d.) or other diuretic, alpha-blocker or beta-blocker

Consider referral to a specialist centre for further investigation

Management of Resistant Hypertension (RH)

- The risk factors for RH include Black race, older age, male sex, obesity, diabetes, and the presence of chronic kidney disease.
- Primary aldosteronism has been identified in up to 20% of patients with RH, but only 20% to 50% of patients with primary aldosteronism present with hypokalemia
- Screening can be performed during treatment with mineralocorticoid receptor antagonists, ACE inhibitors, or ARB. These drugs typically raise plasma renin activity, thus the presence of suppressed PRA while taking them should increase suspicion for primary aldosteronism.
- patients with RH undergoing treatment with continuous positive airway pressure experience a 2– to 5–mm Hg reduction in SBP



- In one study only 20-30% of patients with arterial hypertension had their condition controlled. [4] [5]
- This deficit in treatment response was partially explained by the observation that only **2/3** of patients were taking their drugs correctly and as prescribed. [4] [5]
- In another study only 15% of hypertensive patients strictly followed their drug regimen a year after diagnosis.
- **After 6 months, more than one-third, and after 1 year, about one-half of patients may stop their initial treatment.**
- Non-compliance is especially common when a complex antihypertensive drug regimen is prescribed or when a patient has poor knowledge, understanding, and perception of hypertension.[7–10] It is usual to consider patients to be sufficiently compliant with their treatment when they take ≥80% of their prescribed antihypertensive drugs.

- Une enquête intéressante effectuée auprès de pharmacies à domicile a montré qu'environ 15% des emballages ne sont pas ouverts et que 25% des boîtes entamées le sont à moins de 20%.

Severe Hypertension: Would You Refer This Patient?

- A 58-year-old woman is seen for routine care. She has a history of hypertension, obesity, hyperlipidemia, chronic kidney disease (CKD), prediabetes, and tobacco use disorder. She feels well today except for some mild fatigue for several months.
- She checks her blood pressure (BP) at home about every 10 days, when she remembers to do so. She did not bring you her device or a list of her BP readings but says it is "around 150" and cannot recall any diastolic values.
- Current medications include losartan 100 mg daily, amlodipine 10 mg daily, hydralazine 50 mg three times daily, lovastatin 40 mg nightly, and aspirin 81 mg daily.

- Her vital signs today include temperature of 36.9 °C, heart rate 84 beats/min, BP 162/92 mm Hg, respirations 12, and oxygen saturation 98% on room air. Her body mass index is 34. The rest of her physical examination is normal.
- The patient completed lab work a week prior to this visit. Notable values included an eGFR of 46 mL/min/1.73 m^2 and a urine microalbumin–to-creatinine ratio of 60 mg/g. Her serum potassium is 5.0 mEq/L, and her A1c is 6.2%.

What is the most important issue to address regarding her BP control?

- Reducing losartan dose due to hyperkalemia
- Increasing hydralazine to 50 mg four times daily
- Adding a thiazide diuretic
- Assessing adherence to the current regimen

- Medication adherence is a major issue for all chronic health conditions, including hypertension. Poor adherence to antihypertension therapy is ubiquitous. In a meta-analysis of 161 observational studies, the global rate of nonadherence to antihypertension drugs varied between 27% and 40%. The prevalence of nonadherence was higher in poor and non-Western countries, but nonadherence rates were still generally more than 25% in higher-income countries. Finally, rates of nonadherence were static worldwide between 2010 and 2020, with no improvement over time. Therefore, assessing adherence to treatment is essential to good care for hypertension.

- A survey of nephrologists indicated a strong consensus to see patients before their eGFR levels declined to < 30 mL/min/m^2.

- a healthy lifestyle should always be part of the treatment plan
- Treatment-resistant hypertension is found in 12%-18% of patients treated for hypertension. When it develops, clinicians should strongly consider secondary causes of hypertension and an appropriate history and workup. For this patient, renal artery stenosis and/or obstructive sleep apnea are the diagnoses most likely to be contributing to her hypertension.

- Assuming that no secondary cause of hypertension is found, the AHA recommends these interventions for treatment-resistant hypertension:
- Maximize lifestyle interventions
- Add a long-acting thiazide diuretic such as chlorthalidone or indapamide
- Add a mineralocorticoid antagonist such as spironolactone or eplerenone