

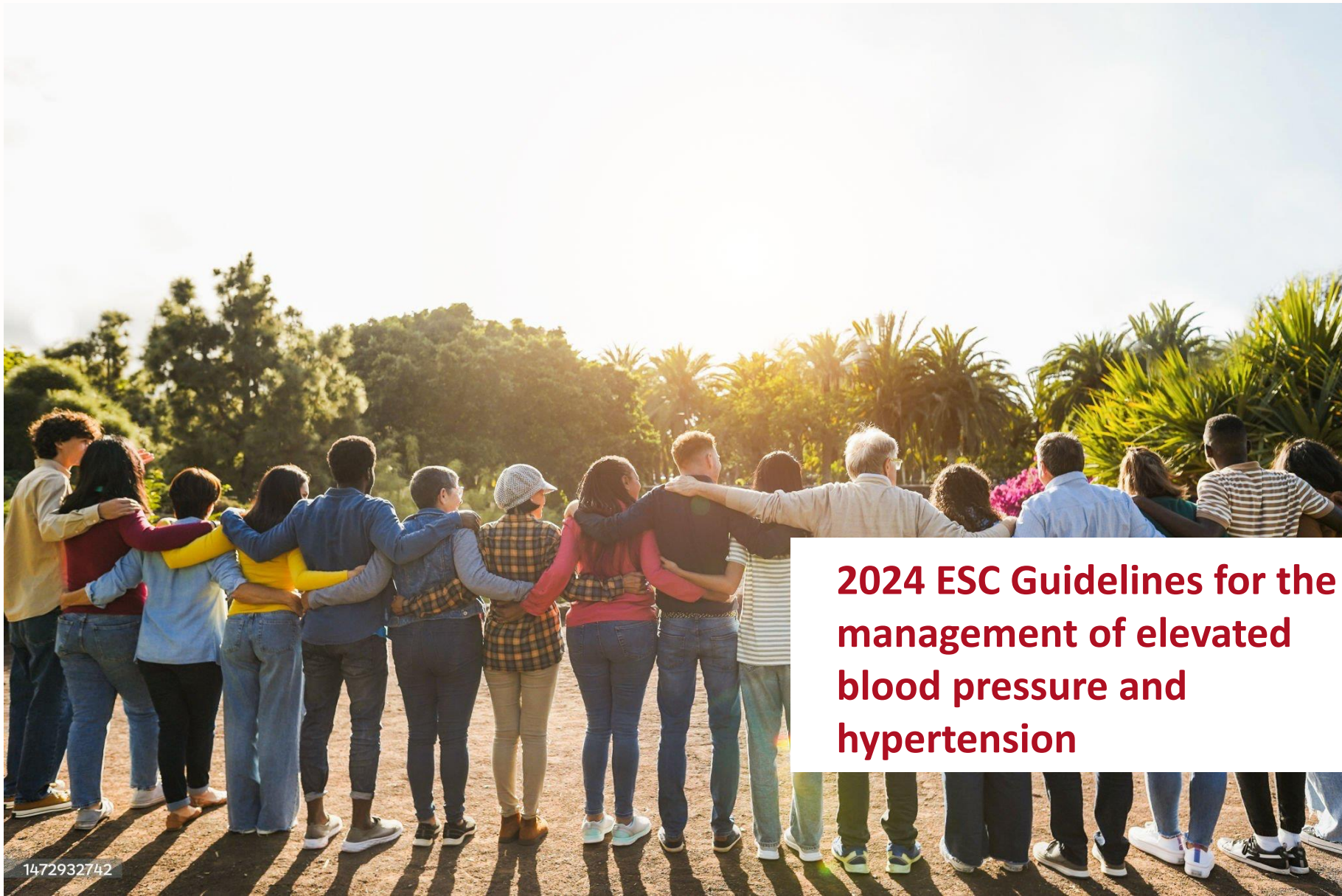


HART  
CENTRUM

# Management van hypertensie en verhoogde bloeddruk

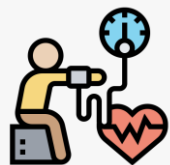
Ann-Sofie Vanstappen

ZIEKENHUIS *aan*  
*de* STROOM



**2024 ESC Guidelines for the management of elevated blood pressure and hypertension**

1472932742



Verhoogde bloeddruk  $> 120/70\text{mmHg}$   
Hypertensie  $> 140/90\text{mmHG}$



Levensstijl aanpassingen als eerste therapie



Doelstelling systolische BD 120-129mmHg  
ALARA in specifieke gevallen



Combinatie therapie van bij de start

Niet verhoogd

< 120/70 mmHg

Verhoogde bloeddruk

120-139/70-89 mmHg

Hypertensie

> 140/90 mmHg



## Blood pressure classification

Non-elevated blood pressure	Elevated blood pressure	Hypertension
<b>Office BP</b> SBP < 120 mmHg and DBP < 70 mmHg	<b>Office BP</b> SBP 120–139 mmHg or DBP 70–89 mmHg	<b>Office BP</b> SBP ≥ 140 mmHg or DBP ≥ 90 mmHg
<b>HBPM</b> SBP < 120 mmHg and DBP < 70 mmHg	<b>HBPM</b> SBP 120–134 mmHg or DBP 70–84 mmHg	<b>HBPM</b> SBP ≥ 135 mmHg or DBP ≥ 85 mmHg
<b>ABPM</b> Daytime SBP < 120 mmHg and Daytime DBP < 70 mmHg	<b>ABPM</b> Daytime SBP 120–134 mmHg or Daytime DBP 70–84 mmHg	<b>ABPM</b> Daytime SBP ≥ 135 mmHg or Daytime DBP ≥ 85 mmHg
Insufficient evidence confirming the efficacy and safety of BP pharmacological treatment	Risk stratify to identify individuals with high cardiovascular risk for BP pharmacological treatment	Cardiovascular risk is sufficiently high to merit BP pharmacological treatment initiation

The diagnosis of hypertension and elevated BP requires confirmation using out-of-office measurements (HBPM or ABPM) or at least one additional subsequent office measurement

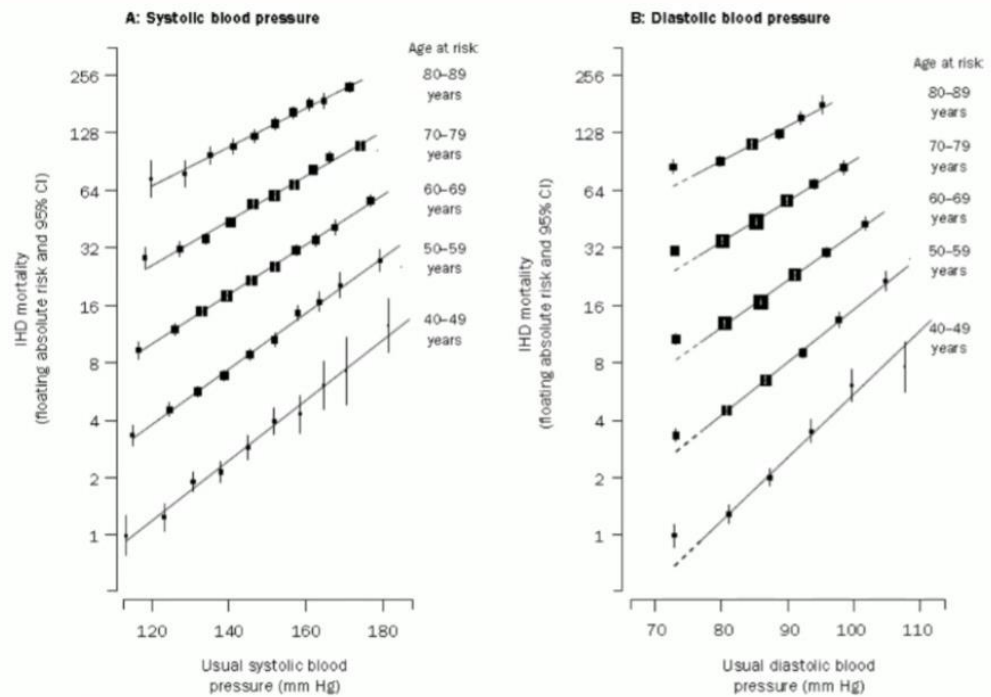
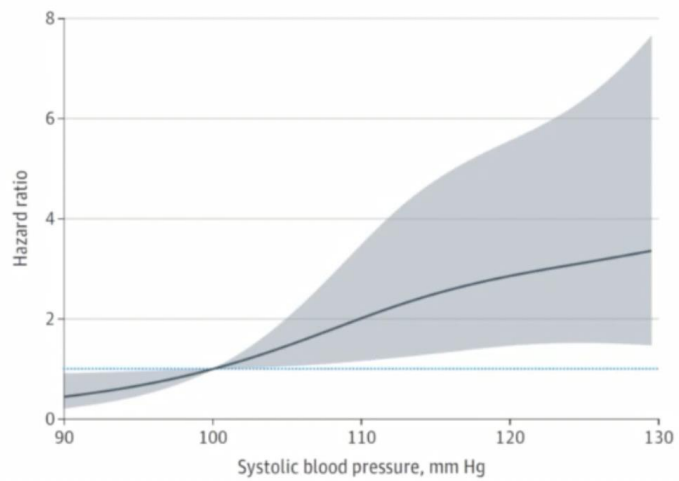
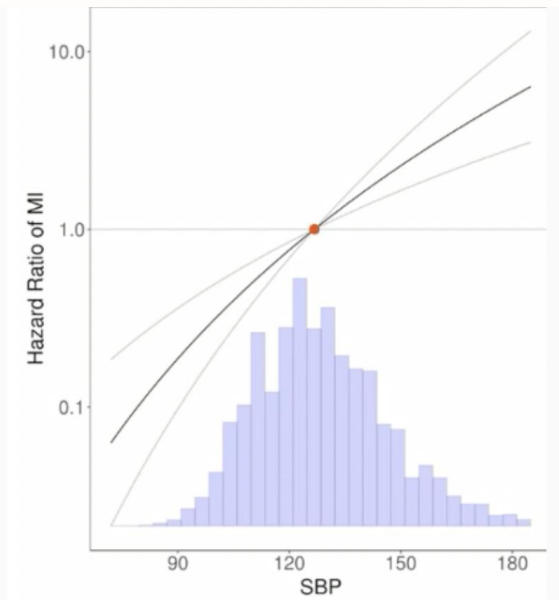


Figure 4: Ischaemic heart disease (IHD) mortality rate in each decade of age versus usual blood pressure at the start of that decade

Figure 2. Adjusted Cubic Spline for the Hazard of Incident Cardiovascular Disease by Systolic Blood Pressure



Seamus Whelton, et al. (N=1457)  
*JAMA Cardiol* 2020; 5: 1011-1018

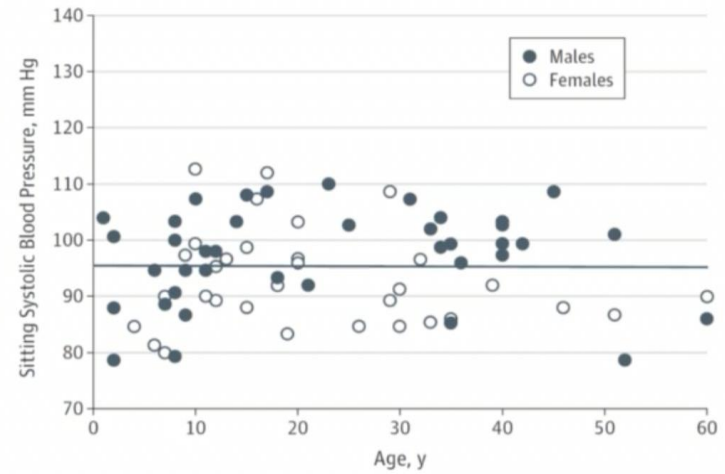


Marios Arvanitis, et al. (N=47407)  
*Circulation* 2021; 143: 895-906

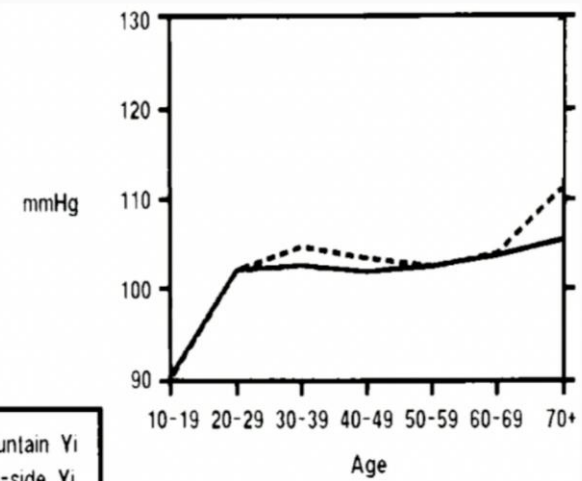




**B** Age-systolic blood pressure slope for Yanomami individuals



**Noel Muller, et al. (N=72)**  
*JAMA Cardiol* 2018; 3: 1247-1249



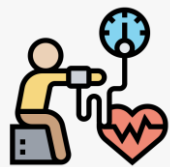
**Jiang He, et al. (N=4958)**  
*Epidemiology* 1991; 2: 88-97



- **Bloeddruk 120-139mmHg**  
op lange termijn verhoogde kans op hypertensie gemedieerde orgaanschade
- **Thuismetingen**  
witte jas en gemaskeerde hypertensie uitsluiten



Verhoogde bloeddruk > 120/70mmHg  
Hypertensie > 140/90mmHG



Verhoogde bloeddruk  $> 120/70\text{mmHg}$   
Hypertensie  $> 140/90\text{mmHG}$



Levensstijl aanpassingen als eerste therapie



Doelstelling systolische BD 120-129mmHg  
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Combinatie therapie van bij de start





Levensstijl aanpassingen als eerste therapie





**Aerobic exercise training**  
At least 150 min/week moderate-intensity or 75 min/week vigorous intensity: brisk walking, jogging, cycling, swimming (Class I)



**Increase daily physical activity**  
(steps/day, take stairs, walk/cycle)



**Avoid sedentary lifestyle**



**Isometric resistance exercise training:**  
Low-to-moderate-intensity  
(3 sets of 1–2 min contraction: hand-grip, plank, wall sit)



**Dynamic or isometric resistance training to complement aerobic exercise training**  
2–3 times/week  
(Class I)



**Dynamic resistance exercise training:**  
Large muscle groups, low-to-moderate-intensity (2–3 sets with 10–15 reps.: squat, push-ups, sit-up)



**Increase potassium intake**



**Increase physical activity**



**Optimize weight management and diet**



**Reduce table salt (sodium chloride) intake**

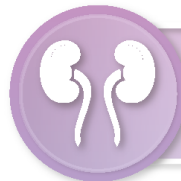


**Reduce alcohol intake**



Established clinical cardiovascular disease

Atherosclerotic cardiovascular disease<sup>a</sup>  
Heart failure



Moderate or severe CKD

eGFR <60 mL/min/1.73 m<sup>2</sup> or  
albuminuria ≥30 mg/g (≥3 mg/mmol)



Other forms of hypertension-mediated organ damage

Cardiac<sup>b</sup>  
Vascular<sup>b</sup>



Diabetes mellitus

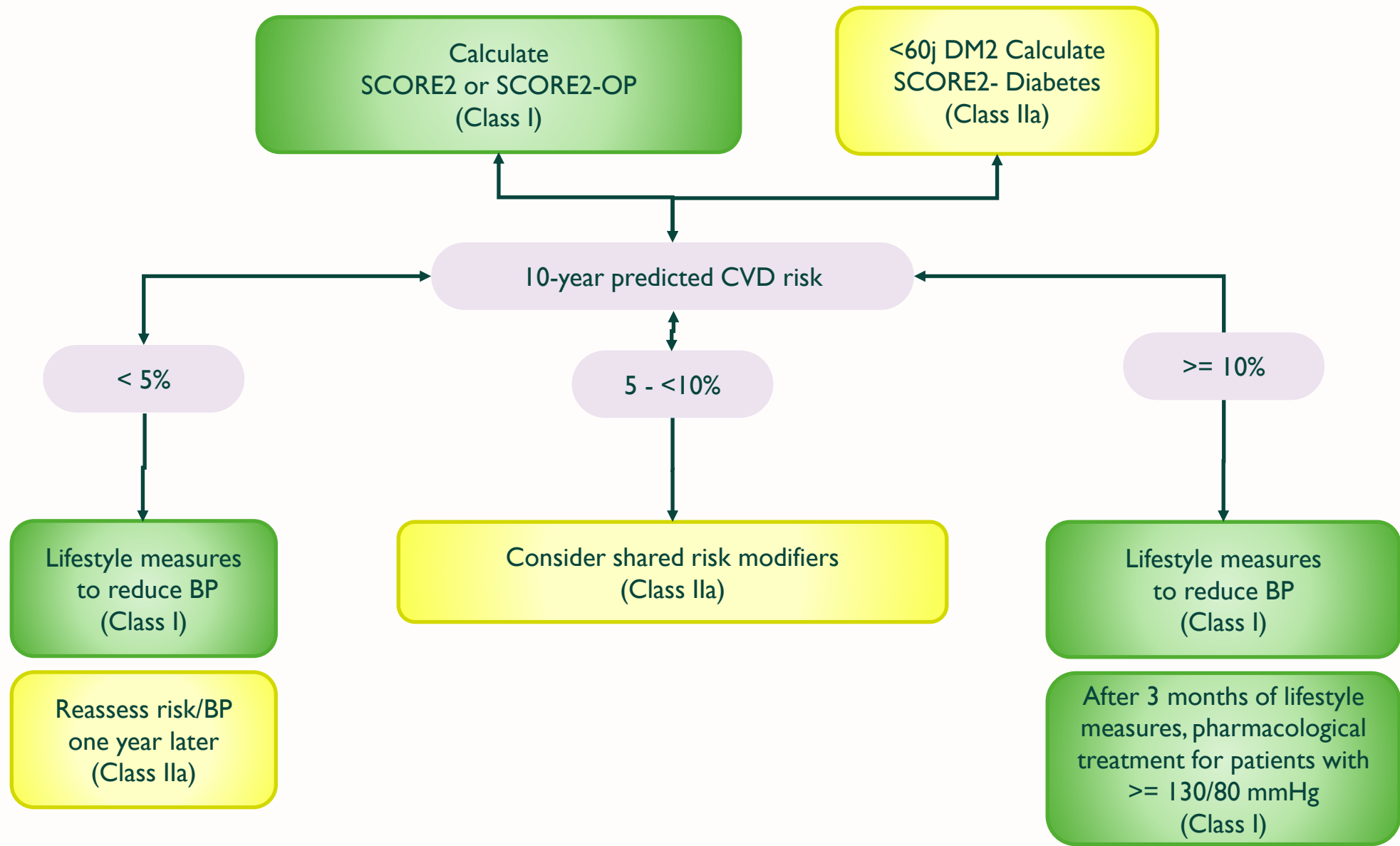
Type 1 and type 2 diabetes mellitus<sup>c</sup>



Familial hypercholesterolaemia

Probable or definite familial hypercholesterolaemia





Score2:  
5-10%

## Risk modifiers

### Sex-specific modifiers (Class IIa)



Gestational diabetes



Gestational hypertension



Pre-eclampsia



Pre-term delivery



One or more stillbirth



Recurrent miscarriage

### Shared modifiers (Class IIa)



High-risk ethnicity



Family history of  
premature onset ASCVD



Socio-economic deprivation



Auto-immune inflammatory  
diseases



Severe mental illness



HIV



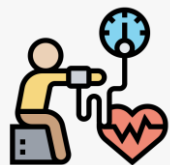
## Levensstijl aanpassingen als eerste therapie



Hypertensie altijd behandelen  
Verhoogde bloeddruk als:

- secundaire preventie (na coronair, cerebraal of perifeer event)
- eGFR < 60 of proteïnurie
- DM (tenzij <60j en laag risico)
- AHT met orgaanschade
- familiale hypercholesterolemie
- SCORE2 risico >10%
- SCORE2 risico 5-10% na upgrade





Verhoogde bloeddruk  $> 120/70\text{mmHg}$   
Hypertensie  $> 140/90\text{mmHG}$



Levensstijl aanpassingen als eerste therapie



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ALARA in specifieke gevallen

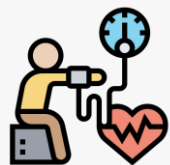


Combinatie therapie van bij de start

- Systolisch 120-129 mmHg
- (Diastolisch 70-79 mmHg)
- Minder streng (“ALARA”) bij:
  - orthostatische hypotensie
  - >85j
  - hoge frailty
  - levensverwachting <3j



Doelstelling systolische BD 120-129mmHg  
ALARA in specifieke gevallen



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Levensstijl aanpassingen als eerste therapie



Doelstelling systolische BD 120-129mmHg  
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Combinatie therapie van bij de start







## Combinatie therapie van bij de start

Low-dose double  
Combination therapy  
ACEi or ARBs / CCBs / Diuretics  
(Class I)

Low-dose triple  
Combination therapy  
ACEi or ARBs / CCBs / Diuretics  
(Class I)

Maximally tolerated triple  
Combination therapy  
ACEi or ARBs / CCBs / Diuretics  
(Class I)

Refer to hypertension clinic  
Test for adherence  
Add spironolactone  
(Class IIa)

At any step:  
Add beta-blockers  
If compelling indications  
(angina, post-myocardial infarction,  
systolic heart failure or heart rate  
control  
(Class I)

Medication at the most convenient time  
of day

Moxonidine, Alpha-blocker  
Hydralazine

Adapted from ESC Guidelines 2024



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Hypertensie > 140/90mmHG



Levensstijl aanpassingen als eerste therapie



Doelstelling systolische BD 120-129mmHg  
ALARA in specifieke gevallen



Combinatie therapie van bij de start



Ziekenhuis aan de Stroom  
[ZAS] is het netwerk van  
ZNA en GZA Ziekenhuizen

