

# Classification and Indications of Ambulatory Blood Pressure Monitoring in Children and Adolescents 2022 Update A Scientific Statement from the American Heart Association



## **CLASSIFICATION**

### **INDICATIONS**

| Category -                 | Clinic Blood<br>Pressure             | Mean Ambulatory Blood Pressure  | <b>€</b> .5                              |                           |  |
|----------------------------|--------------------------------------|---|--|---------------------------|--|
|                            | <13 Years 13Years & up               | <13 Years 13Years & up  | Confirm<br>Hypertension                  | Secondary<br>Hypertension |  |
| Normal Blood               | <95 <sup>th</sup> percentile <130/80 |   | Assess BP Patterns In High Risk Patients |                           |  |
| Pressure                   | visor percentile visor ou            | <95 <sup>th</sup> percentile < 125/75 24hr<br>or adolescent <130/80 awake<br>cut points & <110/65 sleep | Diabetes                                 | Kr. CKD                   |  |
| White Coat<br>Hypertension | ≥95 <sup>th</sup> percentile ≥130/80 |   |  | <b>W</b> 1                |  |
|                            |                                      |   | Solid-Organ<br>transplant                | Obesity                   |  |
| Masked                     |                                      |   | transplant                               | <b>(</b> ¶ <b>0</b> )     |  |
| Hypertension               | <95 <sup>th</sup> percentile <130/80 | ≥95 <sup>th</sup> percentile ≥125/75 24hr   | Obstructive 🕌                            | Optimize                  |  |
|                            |                                      | or adolescent ≥130/80 awake   | sleep apnea                              | Optimize anti- HTN Rx     |  |
| Ambulatory  Hypertension   | ≥95 <sup>th</sup> percentile ≥130/80 | cut points & ≥110/65 sleep  | Genetic                                  | <b>©</b> ≣ Research       |  |
| Tryper terision            |                                      | BP Load is removed  | Syndromes                                | Research                  |  |



# Ambulatory Blood Pressure Monitoring (ABPM) in Children and Adolescents: 2022 Update:



# A Scientific Statement From the American Heart Association

### Method



Validated oscillometric/ auscultatory device with appropriate cuff



Reading interval:

Awake: 15-20min Sleep: 20-30min



Keep arm limp & relaxed during recording

#### 24-hours period

reads

Sleep/ wake timings





Duration of activities

**Dizziness** 



Timing of medication

# Interpretation



**Blood pressure load** 



No clear benefit in predicting CKD progression ‡



**Nocturnal hypertension** 



**Left Ventricular Hypertrophy** 



↑Carotid IMT Impaired Endothelial Function



**Diastolic hypertension** 



Discriminates between Primary and Secondary Hypertension





<sup>‡</sup> CKiD: Chronic Kidney Disease in Children Study \*Intima Media Thickness

<sup>&</sup>lt;sup>‡</sup> SHIP-AHOY: Study of High Blood Pressure in Pediatrics: Adult Hypertension Onset in Youth