

Polish Forum for Prevention Guidelines on Hypertension: update 2017

Wytyczne Polskiego Forum Profilaktyki Chorób Układu Krążenia dotyczące nadciśnienia tętniczego: aktualizacja 2017

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NEW IN 2017, UPDATE OF POLISH FORUM FOR PREVENTION GUIDELINES ON HYPERTENSION

1. New data on epidemiology of hypertension in the Polish population
2. New system of cardiovascular risk assessment for the population of Poland
3. New treatment blood pressure (BP) goals
4. Modified recommendations on non-pharmacological treatment
5. Modified recommendations on combination treatment, including new recommended combinations

1. DEFINITION (DIAGNOSIS) OF HYPERTENSION

Hypertension is defined as high BP (systolic [SBP] ≥ 140 mm Hg and/or diastolic [DBP] ≥ 90 mm Hg) during two separate visits or during only one office visit if reliable information on high BP in the medical records, in the patient history, or from home measurements is available. It is also allowable to diagnose hypertension based on BP measurement during only one office visit if SBP ≥ 180 mm Hg and/or DBP ≥ 110 mm Hg after exclusion of factors that might increase BP acutely (such as pain or fear). BP should be measured at least twice during each office visit. The clas-

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Table 1. Classification of office blood pressure (BP) levels [3, 4]

Category	Systolic BP [mm Hg]		Diastolic BP [mm Hg]
Optimal BP	< 120	and	< 80
Normal BP	120–129	and/or	80–84
High normal BP	130–139	and/or	85–89
Grade 1 hypertension (mild)	140–159	and/or	90–99
Grade 2 hypertension (moderate)	160–179	and/or	100–109
Grade 3 hypertension (severe)	≥ 180	and/or	≥ 110
Isolated systolic hypertension*	≥ 140	and	< 90

*Isolated systolic hypertension should be graded 1, 2, or 3 according to systolic BP values in the ranges indicated.

Table 2. Definitions of hypertension by office and out-of-office blood pressure (BP) levels [3, 4].

Method of BP measurement	Systolic BP [mm Hg]		Diastolic BP [mm Hg]
Office BP	≥ 140	and/or	≥ 90
Ambulatory BP:			
Daytime (or awake)	≥ 135	and/or	≥ 85
Nighttime (or asleep)	≥ 120	and/or	≥ 70
24-hours	≥ 130	and/or	≥ 80
Home BP	≥ 135	and/or	≥ 85

sification of hypertension is presented in Table 1 whereas definitions of hypertension by office and out-of-office BP levels are presented in Table 2 [1–4].

2. BLOOD PRESSURE MEASUREMENT

The reliability of BP measurements depends on proper measurement using a certified device with its accuracy being checked periodically (e.g. every six months). Wrist devices are not recommended nowadays; however, their use can be justified in obese patients with very large arm circumference [2–4].

At the first visit BP should be measured on both arms; subsequently the arm with higher BP value should be always chosen [2–4]. The size of bladder should depend on the arm circumference. The cuff should be placed at heart level regardless of the position of the patient. The patient should sit for 3–5 min before beginning the BP measurements. BP should be measured at least twice with the patient in the sitting position, the measurements should be spaced 1–2 min apart, and additional measurement is required if the first two differ by more than 10 mm Hg [2–4].

3. PREVALENCE OF HYPERTENSION

Hypertension is a social problem in Poland because its prevalence is about 33% in the adult Polish population (over 10.5 million cases, including almost one million persons aged > 80 years). Almost 30% of hypertensives in Poland are not aware of their disease. The control rate of hypertension is only 26%.

4. ETIOPATHOGENESIS OF HYPERTENSION

The etiopathogenesis of hypertension is complex in most cases; therefore, the identification of the causal factor is often not possible. In all cases, particularly in young patients or those with severe hypertension, efforts should be made to identify secondary hypertension. This may lead to permanent recovery.

5. CARDIOVASCULAR RISK ASSESSMENT AND LABORATORY INVESTIGATIONS

The cardiovascular risk assessment should be based on the Pol-SCORE 2015 system, but risk factors not included in the Pol-SCORE 2015 charts (e.g. overweight, family history, diabetes) should also be taken into account [5]. The cardiovascular risk increases with increasing BP continuously, beginning from values considered as normal.

The routine laboratory investigation panel includes: electrocardiogram, blood cell count, fasting glucose, total cholesterol, low-density lipoprotein cholesterol, high-density lipoprotein cholesterol, triglycerides, potassium, sodium, uric acid, creatinine (with glomerular filtration rate calculation), and urine analysis including a test for albuminuria [3, 4]. In addition, the detailed history, physical examination, or results of the routine panel test may suggest other tests aimed at diagnosis of secondary hypertension, organ damage, or coexisting disease.

6. GOALS OF THERAPY

The primary goal is to reduce the risk of death and cardiovascular events as well as to reduce the risk of heart failure,

kidney disease, and dementia development. It is essential to reduce BP to recommended values as well as to control all other modifiable cardiovascular risk factors.

The BP goal is < 140/90 mm Hg in non-diabetic, non-elderly patients. The goal in diabetics is < 140/85 mm Hg [6]. In patients > 60 years old with initial SBP \geq 160 mm Hg, it is recommended to reduce SBP to between 150 and 140 mm Hg, however, in fit patients < 80 years old, a target < 140 mm Hg may be considered if treatment is well tolerated. In some of these patients a target < 120 mm Hg may be considered if at (very) high risk [6]. In individuals > 80 years old and with initial SBP \geq 160 mm Hg, it is recommended that SBP is reduced to between 150 and 140 mm Hg, provided they are in good physical and mental condition [6].

7. NON-PHARMACOLOGICAL TREATMENT

Lifestyle changes are important for both prevention and treatment of hypertension. Non-pharmacological treatment should be implemented immediately in all patients with hypertension. It is recommended to [6]:

- stop smoking;
- normalise body weight (body mass index 20–25 kg/m², waist < 102 cm in men and < 88 cm in women);
- perform at least 150 min a week of moderate intensity or 75 min a week of vigorous intensity aerobic physical activity or an equivalent combination thereof. Sessions of physical activity should last at least 10 min each, and be spread throughout the week, i.e. on 4–5 days a week and preferably every day of the week;
- reduce salt intake to < 5 g/day;
- increase fruit intake to at least 200 g/day;
- increase vegetables intake to at least 200 g/day;
- limit alcohol intake to below 10 g of ethanol in women and below 20 g of ethanol in men.

In addition, sugar-sweetened soft drinks should be discouraged. Lifestyle changes in addition to BP lowering favourably influence other cardiovascular risk factors.

8. PHARMACOLOGICAL TREATMENT

Drug treatment should always be combined with healthy lifestyle changes. Antihypertensive drugs should be prescribed immediately to patients:

- with moderate or severe hypertension (grade 2 or 3);
- with mild hypertension (grade 1) at high or very high cardiovascular risk.

In patients with mild hypertension (grade 1) and low or moderate cardiovascular risk, lifestyle changes should be implemented, and the decision about drug therapy initiation should be made after assessment of non-pharmacological treatment effect and full cardiovascular risk stratification. Excessive delay in initiation of pharmacotherapy is not beneficial.

9. INDIVIDUALISATION OF THERAPY

Beneficial and adverse effects of drugs, metabolic disorders, organ damage, and co-morbidities should be taken into account when choosing antihypertensive drugs [3, 4, 6].

General recommendations

- In uncomplicated hypertension it is recommended to start therapy with a drug belonging to one of the following classes: angiotensin converting enzyme inhibitors (ACEI), beta-blockers, calcium antagonists, diuretics, and sartans. Long-acting drugs are generally preferred.
- Monotherapy may be effective in patients with mild hypertension.
- A two-drug regimen should be a preferred option when starting pharmacotherapy in patients with moderate or severe hypertension as well as in patients at high or very high cardiovascular risk. Fixed-dose, single-pill combinations should be preferred.
- The lack of combination treatment is often a cause of uncontrolled hypertension.

Preferred drug combinations

- ACEI or sartan + thiazide or thiazide-like diuretic
- ACEI or sartan + calcium antagonist
- Calcium antagonist + thiazide or thiazide-like diuretic
- Calcium antagonist + beta-blocker
- ACEI + beta-blocker

The combination of a beta-blocker with a diuretic should be considered as possible; however, the influence of these drugs on lipids and glucose metabolism should be taken into account.

Co-morbidities

The co-morbidities should be taken into account when choosing antihypertensive drugs. For example, the combination of an ACEI with a beta-blocker is preferred in patients after myocardial infarction, whereas a thiazide-like diuretic in combination with an ACEI or a sartan should be preferred in patients after stroke. The choice of drugs should be influenced by their preventive effects and clinical trial results [7].

10. MONITORING OF BLOOD PRESSURE

Blood pressure should be measured during every follow-up visit (office BP). Patients should be informed about the need of BP measurements at home.

Home BP monitoring (HBPM): BP should be measured daily on seven consecutive days (preferentially in the week preceding the visit). These readings often influence the decision on antihypertensive therapy modification.

Ambulatory BP monitoring (ABPM) is more closely related to cardiovascular events risk and better correlated with organ damage compared to office measurements. Both HBPM and ABPM allow for diagnosis of white-coat hypertension and

white-coat effect as well as masked hypertension. In addition, ABPM allows for detection of morning BP surge and lack of nocturnal BP fall (*non-dipper*) or extreme nocturnal BP fall (*extreme dipper*). It also allows for short-term BP variability assessment.

Conflict of interest: none declared

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XIX Ogólnopolska Konferencja

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Serdecznie zapraszamy na doroczne spotkanie największej sekcji Polskiego Towarzystwa Kardiologicznego. Tradycyjnie będzie ono poświęcone najnowszym osiągnięciom technologicznym oraz naukowym w dziedzinie echokardiografii, a także zastosowaniom praktycznym w konkretnych sytuacjach klinicznych. Konferencja będzie niewątpliwie okazją do pogłębienia wiedzy zarówno dla doświadczonych echokardiografistów, jak i tych, którzy dopiero rozpoczynają naukę tej fascynującej techniki diagnostycznej. Wśród wykładowców będą autorytety, najbardziej znani polscy specjaliści w tej dziedzinie. Podczas wystawy towarzyszącej Konferencji zostanie zaprezentowana najnowsza aparatura echokardiograficzna.

Szczegółowe informacje znajdują się na stronie: www.echo2017.skolamed.pl