

TABLE 1. Stratification of cardiovascular risk in the patient with hypertension (9)

Blood pressure (mmHg)					
Other RF, subclinical organ damage or cardiovascular disease	Normal TAs 120-129 Or TAd 80-84	Normally tall TAs 130-139 Or TAd 85-89	HTA grade 1 TAs 140-159 or TAd 90-99	HTA grade 2 TAs 160-179 or TAd100- 109	HTA grade 3 TAs≥180 or TAd≥110
No RF	Moderate Risk	Moderate Risk	Additional low risk	Additional moderate risk	Additional high risk
One or two RFs	Additional low risk	Additional low risk	Additional Moderate risk	Additional moderate risk	Additional extremely high risk
Three or more RFs, metabolic syndrome, diabetes mellitus or subclinical lesions	Additional moderate risk	Additional high risk	Additional high risk	Additional high risk	Additional extremely high risk
Stable cardiovascular disease	Additional extremely high risk	Additional extremely high risk	Additional extremely high risk	Additional extremely high risk	Additional extremely high risk

RF – risk factor

sure are overweight. High blood pressure is about six times more common in obese subjects than in thin men and women (16).

Obesity itself is associated with changes in hemodynamics. An increase in oxygen demand caused by excess adipose tissue (≈ 1.5 ml/kg per minute) requires an increase in cardiac capacity. There is also a parallel increase in blood volume. Thus, obese people have an increase in blood volume, cerebral vascular volume and cardiac output. However, obese people with a higher than optimal increase in blood pressure (e.g., hypertension) have peripheral vascular resistance that is “inadequate” or increased. Therefore, although an increase in blood pressure may contribute to an increase in blood pressure in obese people, an abnormal increase in blood pressure depends primarily on the increase in peripheral vascular resistance (17,18).

The assessment and recommendations for sedentary hypertensive patients are: physical activity can be beneficial for the prevention and treatment of hypertension and reducing cardiovascular risk and mortality. A meta-analysis of randomized controlled trials showed that aerobic endurance training reduces resting TAs and TAd by up to 3 / 2.4 mmHg in total and even 6.9 / 4.9 mm in hypertensive participants (19). Even irregular activity and shorter duration of physical activity are associated with a 20% decrease in mortality in cohort studies, and this also applies to a measured physical condition (20).

Assessment and recommendations for hypertensive smoking patients are: while the smoking rate is de-

clining in most European countries (where a smoking ban is effective), it is still common in many regions and groups. Studies using outpatient blood pressure monitored have shown that hypertensive, normotensive and untreated smokers have higher daily blood pressure values than non-smokers (21). In addition to the impact on blood pressure, smoking is a strong cardiovascular risk factor, and quitting smoking is probably the only way to prevent cardiovascular disease, including stroke, heart attack.

While moderate alcohol consumption may not be harmful, the shift from moderate to excessive consumption is associated with increased BP and an increased risk of stroke. The study on the prevention and treatment of hypertension (PATHS) investigated the effect of reducing BP. The intervention group had a higher reduction of 1.2 / 0.7 mmHg of blood pressure than the control group at the end of the 6-month period (22). A large amount of alcohol can also lead to supraventricular arrhythmias.

CONCLUSIONS

High blood pressure is a global problem. The family doctor plays a significant role in prevention, early detection but also in monitoring the treatment. Current studies highlight the importance and need for family doctor involvement.

Conflict of interest: none declared
Financial support: none declared

REFERENCES

1. Staessen JA, Fagard R, Thijs L, Celis H, Arabidze GG, Birkenhäger WH, Bulpitt CJ, de Leeuw PW, Dollowy CT, Fletcher AE, et al. Randomised double-blind comparison of placebo and active treatment for older patients with isolated systolic hypertension. *The Systolic Hypertension in Europe (Syst-Eur) Trial Investigators. Lancet.* 1997 Sep 13;350(9080):757-64.

2. MRC trial of treatment of mild hypertension: principal results. Medical Research Council Working Party. *Br Med J (Clin Res Ed)*. 1985 Jul 13;291(6488):97-104.
3. 1999 World Health Organization-International Society of Hypertension Guidelines for the Management of Hypertension. Guidelines Subcommittee. *J Hypertens*. 1999 Feb;17(2):151-83.
4. Chobanian AV, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL Jr, Jones DW, Materson BJ, Oparil S, Wright JT Jr, Roccella EJ; National Heart, Lung, and Blood Institute Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure; National High Blood Pressure Education Program Coordinating Committee. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: the JNC 7 report. *JAMA*. 2003 May 21; 289(19):2560-72.
5. Dorobanțu M, Bădilă E, Ghiorghe RO, Olteanu M, Flondor P. Total cardiovascular risk estimation in Romania. Data from the SEPHAR study. *Rom J Intern Med*. 2008; 46(1):29-37.
6. Viera AJ. Screening for Hypertension and Lowering Blood Pressure for Prevention of Cardiovascular Disease Events. *Med Clin North Am*. 2017 Jul;101(4):701-712.
7. Vischer AS, Burkard T. Principles of Blood Pressure Measurement - Current Techniques, Office vs Ambulatory Blood Pressure Measurement. *Adv Exp Med Biol*. 2017;956:85-96.
8. Bejan GC, Stănescu AMA, Ghilencea NL, Matei D. Analiza actuală a aspectelor terapeutice moderne în tratamentul HTA și al comorbidităților asociate. *Ro Med J*. 2018;65(2):102-107.
9. Mancia G, De Backer G, Dominiczak A, Cifkova R, Fagard R, Germano G, Grassi G, Heagerty AM, Kjeldsen SE, Laurent S, Narkiewicz K, Ruilope L, et al; Management of Arterial Hypertension of the European Society of Hypertension; European Society of Cardiology. 2007 Guidelines for the Management of Arterial Hypertension: The Task Force for the Management of Arterial Hypertension of the European Society of Hypertension (ESH) and of the European Society of Cardiology (ESC). *J Hypertens*. 2007 Jun;25(6):1105-87.
10. Chobanian AV, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL Jr, Jones DW, Materson BJ, Oparil S, Wright JT Jr, Roccella EJ; Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. National High Blood Pressure Education Program Coordinating Committee. Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *Hypertension*. 2003 Dec;42(6):1206-52.
11. Conroy RM, Pyörälä K, Fitzgerald AP, Sans S, Menotti A, De Backer G, De Bacquer D, Ducimetière P, Jousilahti P, Keil U, et al.; SCORE project group. Estimation of ten-year risk of fatal cardiovascular disease in Europe: the SCORE project. *Eur Heart J*. 2003 Jun;24(11):987-1003.
12. Moriguchi E. New risk factors in clinical practice. *Hypertension* 2002; 5 (2): 63-66.
13. Bejan GC, Stănescu AMA, Ghilencea LN, Iancu MA, Stefani C, Leica A Matei D. Este riscul cardiovascular global al pacienților hipertensivi superior sumei riscurilor individuale ale factorilor de risc implicați? *Ro J Med Pract*. 2019;14(1):57-61.
14. Anand SS, Islam S, Rosengren A, Franzosi MG, Steyn K, Yusufali AH, Keltai M, Diaz R, Rangarajan S, Yusuf S; INTERHEART Investigators. Risk factors for myocardial infarction in women and men: insights from the INTERHEART study. *Eur Heart J*. 2008 Apr;29(7):932-40.
15. Simionescu AA, Sabrina Stoica S, Hetea H. Coagularea intravasculara diseminata produsa la domiciliu in al treilea trimestru al sarcinii – doua cazuri clinice. *Ginecologia.ro* 2017;15(1):24-7.
16. Stamler R, Stamler J, Riedlinger WF, Algera G, Roberts RH. Weight and blood pressure. Findings in hypertension screening of 1 million Americans. *JAMA*. 1978 Oct 6; 240(15):1607-10.
17. Reisin E. Weight reduction in the management of hypertension: epidemiologic and mechanistic evidence. *Can J Physiol Pharmacol*. 1986 Jun;64(6):818-24.
18. Stefani C, Miricescu D, Totan A, Greabu M, Stănescu AMA. Adipose tissue biomarkers and systemic health. *Ro J Med Pract*. 2019;14,4(69):366-370.
19. Cornelissen VA, Fagard RH. Effects of endurance training on blood pressure, blood pressure-regulating mechanisms, and cardiovascular risk factors. *Hypertension*. 2005 Oct;46(4):667-75.
20. Rossi A, Dikareva A, Bacon SL, Daskalopoulou SS. The impact of physical activity on mortality in patients with high blood pressure: a systematic review. *J Hypertens*. 2012 Jul;30(7):1277-88.
21. Bang LE, Buttenschøn L, Kristensen KS, Svendsen TL. Do we undertreat hypertensive smokers? A comparison between smoking and non-smoking hypertensives. *Blood Press Monit*. 2000 Oct-Dec;5(5-6):271-4.
22. Cushman WC, Cutler JA, Hanna E, Bingham SF, Follmann D, Harford T, Dubbert P, Allender PS, Dufour M, Collins JF, et al. Prevention and Treatment of Hypertension Study (PATHS): effects of an alcohol treatment program on blood pressure. *Arch Intern Med*. 1998 Jun 8;158(11):1197-207.