

# EUROPEAN-LEVEL INTERVENTIONS TO REDUCE THE RISK FACTORS ASSOCIATED TO INCREASED BLOOD PRESSURE. REDUCING TOBACCO AND ALCOHOL CONSUMPTION. PROMOTING ACTIVE MOBILITY

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**Abstract:** Besides the consumption of salt, sugar and fats, which has been shown to directly contribute to increased blood pressure, tobacco, alcohol consumption and the lack of exercise are also considered risk factors for the occurrence of cardiovascular diseases. The impact these risk factors have on the health of people, as well as the costs of treating the diseases caused by them can be reversed by developing and implementing interventions to reduce tobacco and alcohol consumption among populations and to promote the active mobility. This paper presents the interventions made by some Member States, interventions that resulted in decreased consumption of the above-mentioned risk factors, improving thus, the public health.

**Cuvinte cheie:**  
consum, tutun, alcool,  
intervenție, mobilitate  
sănătate

**Rezumat:** Pe lângă consumul de sare, zahăr și grăsimi, care s-a dovedit a contribui direct la creșterea valorilor tensiunii arteriale, tutunul, alcoolul și lipsa activității fizice sunt, de asemenea, considerați factori de risc cunoscuți pentru apariția bolilor cardiovasculare. Impactul pe care acești factori de risc îl au asupra stării de sănătate a oamenilor, precum și costurile aferente tratării afecțiunilor cauzate de aceștia pot fi inversate prin elaborarea și implementarea de intervenții de reducere a consumului de tutun și alcool în rândul populațiilor și de promovare a mobilității active. Această lucrare prezintă intervențiile realizate de unele state membre, intervenții care au avut ca rezultat scăderea consumului factorilor de risc menționați anterior și, implicit îmbunătățirea sănătății publice.

In the European Region, tobacco is responsible for 16% of all deaths in adults (aged 30 years old or more). This contradicts the strong global and regional figures, according to which tobacco is responsible for 3% of adult deaths in the African region, 7% of adult deaths in the Eastern Mediterranean region and 12% of all adult deaths globally.(1) More specifically, 16% of all deaths from heart disease in the European Region are related to tobacco consumption.(2) In addition, in the European Region, there are 1600000 lives lost due to tobacco use every year.(3)

There is a strong association between smoking and cardiovascular disease. The acute consumption of tobacco is associated with only a temporary increase in blood pressure with every cigarette smoked, an increase that disappears 30 minutes later.(4) In fact, many smokers have lower blood pressure than non-smokers - a fact often linked to a lower average body weight among smokers, compared with non-smokers. However, tobacco consumption causes chronic arterial stiffness, which can persist for years after smoking cessation.(5) Moreover, there is an increased incidence of hypertension among the chronic, heavy smokers. Alarmingly, when the hypertensive patients combine smoking, they are more likely to suffer a reduction in left ventricular function (6) and thus, to suffer a heart condition.

Moreover, tobacco is often associated with alcohol consumption (a relation that grows stronger with increasing one of them), thereby exposing consumers to the many risk factors for developing hypertension.(7) Worldwide, 48 countries and the European Region of the World Health Organization (WHO) have ratified the Framework Convention on Tobacco Control

(FCTC), giving legitimacy to exercise pressures in order to establish severe measures on the control of tobacco consumption. This convention recognizes the importance of strategies to reduce both the demand and the supply of tobacco and offers the opportunity for tobacco control measures to be implemented at national, regional and international levels.

Turkey is among the countries that have successfully implemented the best practices recommended in the report of the United Nations (UN) on the prevention and control of noncommunicable diseases by promoting special places for smoking, warning labels, setting restrictions, excise taxes increase.(8)

Turkey is known for the unregulated consumption of tobacco, which was correlated with large increases in the number of hospitalizations due to coronary artery disease.(9) In the year 2000, the Ministry of Health has awarded 21 317 cardiovascular deaths, 274,770 years of life lost, and 321,237 disability-adjusted life years (DALY) to tobacco use in Turkey.(10) Tobacco control initiatives began in the 1980s and the real actions in 1990s, aiming at controlling, reducing and preventing the use of tobacco.(11)

In 1996, the Turkish government adopted the Law no. 4207 on the *Prevention of hazards caused by tobacco products*.(12) This law banned smoking in some public places, banned all tobacco advertising, the sale of tobacco to minors, required the introduction of mandatory health warnings on the cigarette packs and urged the national television stations to award 90 minutes of their airtime to describe the harmful impact of tobacco consumption.(12) In order to monitor and regulate

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the new law, the Tobacco Regulatory Authority was created in 2002.(13)

In addition to supporting the Law no. 4207, Tobacco Regulatory Authority banned tobacco products exposure to the public, and also tried to raise awareness of the dangers of smoking.(11) Most recently, in 2008, Turkey has implemented the Law on Preventing the risks of tobacco products (an amendment to the Law no. 4207, which aimed at the involvement of the health care sector, including services to help people quit smoking), and at the implementation of anti-smoking policies (stipulation by law of the clean air).(14) Regarding the results obtained after the implementation of these measures to control tobacco consumption, there was a small decrease from 33.6% of the population in 1993 to 31.2% in 2008.(15,16) Most impressively, it has been noticed a reduction from 57.8% in 1993 to 47.8% in 2008 among men. At the same time, the number of female smokers increased from 13.5% in 1993 to 15.2% in 2008 - highlighting the negative social trends of the acceptable habits. These changes, although recent, have already led to a decrease of 33.6% of acute cardiovascular disease hospitalized locally.(17)

Another country that has ratified the Framework Convention on Tobacco Control is the Russian Federation. In 1999, the Russian Federation has implemented the programme / *Hypertension in elderly hypertensive patients*, which aimed at reducing smoking among the elderly hypertensive patients. The programme successfully reduced smoking prevalence by increasing the therapy on tobacco and improving the overall treatment of the elderly patients with high blood pressure by specific treatment methods.(18)

With regard to alcohol consumption, the European Region registers the highest amount of alcohol consumed in the world, about double the world average.(19) In 2009, on average, an adult of 15 years or older, consumed 12.5 litres of pure alcohol - the equivalent of 27 g of pure alcohol, or about three standard drinks per day per person.

*The European action plan to reduce the harmful use of alcohol 2012-2020* cites alcohol as one of the world's top priorities in the fight to improve health. Alcohol is the biggest contributor to a poor health and premature death in the European Region, and the third largest contributor globally.(20) Along with smoking and traffic accidents (which are frequently associated with alcohol), alcohol causes 40% of diseases and premature deaths in the European Region.

The most important actions to reduce alcohol consumption have been implemented in the Russian Federation and Moldova, countries with a known high consumption of alcohol. Anti-alcohol interventions conducted within these countries include television series, awareness workshops for teenagers, creating counselling services as part of health care facilities at national level.(21) These campaigns aimed at decreasing alcohol consumption to half by 2020. The Russian Federation has seen a 17% reduction in alcohol consumption, down from 18 litres to 15 litres per capita between 2010-2012.(22)

In 2010, Moldova has implemented numerous interventions to restrict alcohol consumption, the country with the highest consumption of alcohol in the world with 18.22 litres per capita each year. An evaluation of the effectiveness and cost-effectiveness of interventions showed that Moldova was highly successful in its interventions, increasing excise taxes on alcohol by 25%. The fiscal measures were supported by banning alcohol sales to those under 16 years of age, testing the drivers for blood alcohol volume, informing the people about the dangers of excessive alcohol consumption, and by the efforts to prevent the illegal manufacture of alcohol. Overall, the

interventions were able to save 6114 years of healthy life in 2010 with the opportunity to increase this figure to 17,736 lives per year, by still implementing the current interventions, at a larger scale.(23)

It was found that the significant reductions in alcohol consumption are directly related to decreases in blood pressure - through a dose-response relation (i.e., a greater reduction in alcohol consumption leads to a greater improvement in blood pressure). Reducing alcohol consumption is vital for the prevention and treatment of hypertension in chronic consumers.(24) In particular, studies have shown that there is a linear relation between alcohol consumption and blood pressure. A study found that people who consume large amounts of alcohol have by 17.6mmHg a higher systolic blood pressure and a diastolic blood pressure greater than 10.9mmHg, than the occasional drinkers.(25) While the direct relation between alcohol and hypertension is not known, studies on hypertensive patients found that up to 40% of these were considered chronic/heavy users (those who consume more than 40g of alcohol / day).(25)

Policy makers should seek to implement best practices by addressing three areas shown to have a positive impact on alcohol consumption: marketing (advertising), availability (retail), and the best prices (taxation). In addition, the interventions should target the young people, in order to have an impact on their future lifestyle.

The lack of physical activity is recognized as a major independent risk factor for arterial hypertension (and generally for the non-communicable diseases), causing 3.5% of the disease burden and up to 10% of all deaths in the European Region. Regular moderate physical activity is a very effective way to improve and maintain the health of the population (26)

The European Charter on Counteracting Obesity aims at reducing the obesity epidemic and reversing the current trend in the European Region. It details the key actions necessary to encourage the healthy eating and the physical activity.(27) The importance of physical activity to tackle the obesity epidemic is outlined in this document and is reflected in the document-guide "Steps to Health: A Framework for Action in the WHO European Region".(26) In addition, the Parma Declaration on Environment and Health, adopted by WHO Member States at the fifth Ministerial Conference on Environment and Health, held in Parma, Italy, between 10 and March 12, 2010, highlights the importance of ensuring a safe environment to allow the development of physical activity, as well as the country's commitment to make efforts in achieving this.(28)

Policy makers should understand the value of the type of the "outside the box" thinking to achieve creative ways to promote mobility within the society, to make the change a possibility, and to educate the public towards the benefits associated with the physical activity.

One of the interventions to promote the active mobility was implemented in Slovenia, which in 2000, created the *MURA programme*, aiming at improving the lifestyle of people, health being the key to the development of new programmes and policies. As part of the programme, the "*Let's live healthy*" campaign was created. The campaign aimed at creating a sense of ownership regarding the own health, and at the awareness of health improvement. So far, the programme succeeded in including 30,000 people and 80% of participants reported a permanent change in their lifestyle. Specifically, Slovenia works more strongly in terms of physical activity, for example, by including the Nordic walking centres in the programme.(29)

The interventions to reduce tobacco and alcohol consumption, as well as the strategies to increase physical

