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Subject:	Conclusions on the improvement of cardiovascular health in the European Union

Delegations will find in the Annex the Council conclusions on the improvement of cardiovascular health in the European Union approved by the EPSCO Council (Health) at its meeting on 3 December 2024.

ANNEX

Council conclusions on the improvement of cardiovascular health in the European Union

Introduction

In the European Union, cardiovascular diseases (CVDs) have been recognised as the leading cause of mortality and a principal factor for morbidity and disability, challenging progress made in health care delivery and disease management. The EU's past and recent collective actions[1], highlighted by historical initiatives and health programmes, aim to address non-communicable diseases (NCDs), including the pervasive threat of CVDs. Despite these efforts, the enduring high mortality rates, the still worrying prevalence of cardiovascular diseases including common associated risk factors and their substantial economic toll emphasise the critical necessity of a Union level unified and strategic approach to cardiovascular health, taking into account that this will have positive effects on other NCDs as well. This will require, without prejudice to national competences, increased collaboration among Member States, the formulation of all-encompassing prevention, detection, diagnosis, management, treatment and rehabilitation strategies, and a pledge to harness healthcare innovations to lessen the impact and prevalence of CVDs. In line with the initiatives of the World Health Organization and the European Parliament, the 2030 Agenda for Sustainable Development[2] (particularly SDG 3.4 and 3.8) emphasises the importance of reducing premature mortality from non-communicable diseases (NCDs), such as cardiovascular diseases (CVDs).

[1] https://health.ec.europa.eu/non-communicable-diseases/healthier-together-eu-non-communicable-diseases-initiative_en
[2] https://sdgs.un.org/goals

THE COUNCIL OF THE EUROPEAN UNION

WELCOMES

1. The progress achieved through initiatives such as the joint actions funded by the European Union, the 'Healthier Together' initiative, and the recent Commission Communication on the European Health Union[3]. These efforts highlight a strong commitment to enhancing health resilience and cooperation across the Union, setting a commendable precedent for future health-related initiatives aimed at improving the well-being of all Europeans.

2. The work and actions carried out under the Expert Group on Public Health, and its predecessor the Steering Group on Promotion and Prevention, in identifying and transferring a series of initiatives to improve health promotion including healthy nutrition, physical activity and reducing risk factors such as the use of alcohol and of tobacco and other nicotine-containing or nicotine-free tobacco-related products, and setting up impactful actions on disease prevention, in all disease areas of the Healthier Together – EU NCDs initiative, including cardiovascular diseases.

[3] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: The European Health Union: acting together for people's health (COM/2024/206 final).

RECALLS THAT

3. Pursuant to Article 168 of the Treaty on the Functioning of the European Union (TFEU), a high level of human health protection is to be ensured in the definition and implementation of all Union policies and activities, and the Union is to encourage cooperation between the Member States in the field of public health and, if necessary, lend support to their action;

4. Article 168 TFEU provides that the Union is to complement and support national health policies, and promote the coordination between their programmes, in full respect of the responsibilities of Member States for the definition of their health policies and for the organisation, management and delivery of health services and medical care.

5. Since 2000, the Council of the European Union has continued to stress the importance of taking action on cardiovascular diseases, notably by adopting the following conclusions:

   - Council conclusions on Health in All Policies (2006)[4];
   - Council conclusions on Equity and Health in All Policies: Solidarity in Health (2010)[5];
   - Council conclusions on the Economy of Wellbeing (2019)[6];
   - Council conclusions on Healthy Nutrition for Children: The Healthy Future of Europe (2018)[7], which invite Member States to develop and implement targeted policies dealing with NCDs, as well as identifying unhealthy nutrition as a main risk factor for NCDs at the earliest age;

[4] https://webportal.consilium.eu.int/econsilium/documents/ST%2016167%202006%20INIT/general
[5] https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/lsa/114994.pdf
[6] OJ C 400, 26.11.2019, p. 9.
[7] See paragraph 35-36, OJ C 232, 3.7.2018, p. 1.

- Council conclusions on closing health gaps within the EU through concerted action to promote healthy lifestyle behaviours (2011), which express a commitment to accelerate progress on combating unhealthy lifestyles relevant for CVD[8];
- Council conclusions on nutrition and physical activity (2014), which recognises the link between nutrition and activity with NCDs, including CVD[9];
- Council conclusions on a Community strategy to reduce alcohol-related harm (2001)[10], which draw attention to the link between the consumption of alcohol and alcoholic cardiomyopathy;
- Council conclusions on promoting heart health (2004)[11], which referred to several earlier Council resolutions and conclusions on the topic and propose national PH strategies to address the promotion of cardiovascular health and related support by the Commission;
- Council conclusions on Obesity, Nutrition and Physical Activity (2005)[12], which highlighted the link between obesity and cardiovascular health;
- Council conclusions on Women's Health (2006)[13], which stated that CVDs affect women differently, account for a major cause of death and are linked to smoking;
- Council conclusions on promotion of healthy lifestyles and prevention of Type 2 diabetes (2006)[14], which recognised that CVDs can be due to complications following Type 2 diabetes (see para 8), and that 'preventing diabetes has a direct positive benefit on other non-communicable diseases, e.g. cardiovascular diseases';
- Council conclusions on the EU role in Global Health (2010)[15], which referred to NCDs and mental health;

[8] See paragraph 9, OJ C 359, 9.12.2011, p. 5.
[9] See paragraph 15, OJ C 213, 8.7.2014, p. 1.
[10] See paragraph 10, OJ C 175, 20.6.2001, p. 1.
[11] See paragraph 26-28, https://data.consilium.europa.eu/doc/document/ST-9627-2004-INIT/en/pdf
[12] See paragraph 8, https://data.consilium.europa.eu/doc/document/ST-9803-2005-INIT/en/pdf
[13] See paragraphs 12, 13 and 14, OJ C 146, 22.6.2006, p. 4.
[14] See paragraph 13, OJ C 147, 23.6.2006, p. 1.
[15] See paragraph 4, https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/foraff/114352.pdf

- Council conclusions to contribute towards halting the rise in Childhood Overweight and Obesity (2017)[16], which highlighted the link between obesity and cardiovascular health and the correlation between nutrition and CVDs;
- Council conclusions on cross-border aspects in alcohol policy – tackling the harmful use of alcohol (2017)[17], which encouraged Member States to strengthen NCD prevention;
- Council Recommendations of 8 June 2009 on an action in the field of rare diseases[18];
- Council conclusions on Healthy nutrition for children: The healthy future of Europe (2018)[19], which referred to the link between nutrition and NCD/CVD in several places and invites MS and the Commission to take action in several areas;
- Council conclusions on strengthening the European Health Union (2021)[20], which stated in the introduction that 'non-communicable diseases account for 87% of the disease burden in the EU';
- Council Conclusions on Food Product Improvement (2016)[21], which noted with concern that the prevalence of overweight, obesity and other diet-related non-communicable diseases in the European population is too high and is still rising and that this has a negative impact on life expectancy, reducing Union citizens' quality of life and affecting society, inducing high healthcare costs which may affect the sustainability of the healthcare systems.

[16] See paragraphs 3 and 6, OJ C 205, 29.6.2017, p. 46.
[17] See paragraph 24, OJ C 441, 22.12.2017, p. 3.
[18] OJ C 151, 3.7.2009, p. 7.
[19] OJ C 232, 3.7.2018, p. 1.
[20] OJ C 512I, 20.12.2021, p. 2.
[21] OJ C 269, 23.7.2016, p. 21.

- Council conclusions on the Future of the European Health Union[22], adopted on 21 June 2024, which stressed the critical importance of tackling diseases that lead to high mortality rates. These Conclusions emphasised an integrated approach that encompasses prevention, management, treatment, diagnosis and rehabilitation, aiming to enhance health outcomes across the Union. Additionally, the Conclusions invited the Member States and the European Commission to 'CONTINUE and STRENGTHEN the work of the Healthier Together - EU Non-Communicable Diseases Initiative by implementing and completing in a stepwise manner an overarching, integrative, comprehensive and multi-sectoral EU-level approach, to support the implementation of effective policies in the area of NCDs, including as strands, action plans on health determinants, cancer, cardiovascular diseases, chronic respiratory diseases, diabetes, mental health and neurological disorders, and rare diseases.'

6. The European Commission adopted the Communication on the European Health Union in May 2024, confirming that NCDs including CVD remain a top priority (e.g. by strengthening the 'Healthier Together Initiative'), and took the following actions in the field of cardiovascular health, establishing the:

- Joint Action on Cardiovascular Diseases and Diabetes (JACARDI)[23] and nine action grants financing projects in the field of CVD;
- Repository of best and promising practices on the prevention of non-communicable diseases, including cardiovascular diseases[24];
- Expert group on public health and, in particular, the subgroup on the prevention of non-communicable diseases[25];

[22] https://data.consilium.europa.eu/doc/document/ST-11597-2024-INIT/en/pdf
[23] https://ec.europa.eu/newsroom/sante/newsletter-archives/49312
[24] EU Best Practice Portal.
[25] https://health.ec.europa.eu/document/download/e4d7a33c-ea35-4a08-8e0d-c1cb8ac04172_en?filename=c_2022_8816_en.pdf

- Healthier Together – the EU non-communicable diseases (NCD) initiative which provides a strategic framework for preventative action on cardiovascular diseases, diabetes, chronic respiratory diseases, mental health and neurological disorders, and also on health determinants[26].

7. In the framework of the World Health Organisation (WHO), the following documents were adopted in the field of cardiovascular health:
   - Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases (2011)[27];
   - The WHO Global Action Plan for the Prevention and Control of Non-communicable diseases 2013–2020 (2013)[28];
   - The Vienna Declaration of 5 July 2013 on Nutrition and Non-Communicable Diseases in the Context of 'Health 2020'[29];
   - The WHO Global Oral Health Action Plan (2023–2030): Turning Strategy into Action[30];
   - Political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable diseases, and mental health (2023)[31];
   - The "Budapest Declaration" of the Seventh Ministerial Conference on Environment and Health: Budapest, Hungary 5–7 July 2023[32].

8. Regulation (EU) 2021/522 of the European Parliament and of the Council of 24 March 2021 establishing a Programme for the Union's action in the field of health ('EU4Health Programme') for the period 2021-2027 aims to improve and promote health in the Union and reduce the burden of communicable and non-communicable diseases by supporting health promotion and disease prevention, reducing health inequalities, promoting healthy lifestyles and access to healthcare.

[26] https://health.ec.europa.eu/non-communicable-diseases/healthier-together-eu-non-communicable-diseases-initiative_en
[27] https://apps.who.int/gb/ebwha/pdf_files/EB152/B152_6-en.pdf
[28] https://www.who.int/publications/i/item/9789241506236
[29] https://iris.who.int/handle/10665/350439
[30] https://www.who.int/publications/i/item/9789240090538
[31] https://apps.who.int/gb/ebwha/pdf_files/EB152/B152_6-en.pdf
[32] https://www.who.int/europe/publications/i/item/EURO-Budapest2023-6

9. The European Commission adopted the Communication on The European Green Deal in December 2019 that aims, inter alia, to protect the health and well-being of citizens from environment-related risks and impacts. In its Communication of 12 May 2021 entitled 'Pathway to a Healthy Planet for All - EU Action Plan: Towards Zero Pollution for Air, Water and Soil', the Commission established a 'Zero Pollution Action Plan' that, amongst other things, addresses pollution aspects of the European Green Deal which can also cause cardiovascular diseases (CVD) and further commits to reducing, by 2030, the health impact of air pollution by more than 55 % (compared to the situation in 2005) by aligning concentrations with the latest scientific evidence-based WHO guidelines. It includes a vision for 2050 in which air pollution is reduced to levels no longer considered harmful to health and natural ecosystems.

10. The European Parliament resolution on prevention, management and better care of diabetes in the EU, which recognises that one third of people living with diabetes develop cardiovascular diseases (CVD)[33].

11. The European Parliament resolution on non-communicable diseases (NCDs), which recognises the interconnections between NCDs, including between diabetes, obesity and cardiovascular diseases (CVD)[34].

[33] https://www.europarl.europa.eu/doceo/document/TA-9-2022-0409_EN.html
[34] https://www.europarl.europa.eu/doceo/document/TA-9-2023-0467_EN.html

CONSIDERS THAT

12. Cardiovascular diseases (CVDs) are disorders related to the heart and circulatory (vascular) system, which include, among others, heart failure, ischaemic heart disease, structural heart disease, stroke, heart rhythm disturbances (e.g. atrial fibrillation), hypertension, cardiomyopathy, congenital heart diseases, inherited cardiac conditions, and diseases of the aorta, heart valves and peripheral arteries.

13. An estimated 60 million people live with cardiovascular diseases in the EU, accounting for approximately 1 in every 3 deaths[35]. Despite a decline in premature mortality from cardiovascular disease in many countries in the European Union, CVDs remain the most common cause of death, accounting for about 1.7 million deaths annually across the EU's 27 Member States, which equates to 37% of all deaths[36]. In addition, many patients suffer from the long-term effects of CVDs[37], living for years with considerable disability. An estimated 53 million people were suffering from CVDs in the Union in 2019, making CVD the biggest cause of death today[38].

14. The United Nations Convention on the Rights of Persons with Disabilities[39], to which all the Member States and the EU are Parties, recognises that persons with disabilities have the right to the enjoyment of the highest attainable standard of health without discrimination on the basis of disability and that States Parties shall take all appropriate measures to ensure their access to health services that are gender-sensitive, including health-related rehabilitation (Article 25). However, persons with disabilities still report significantly higher unmet needs for medical examination than persons without disabilities (5% versus 1.4% in 2023)[40].

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[35] European Society of Cardiology, Atlas of Cardiology, https://eatlas.escardio.org/Atlas/ESC-Atlas-of-Cardiology European Society of Cardiology, Cardiovascular Realities 2024, https://eatlas.escardio.org/Atlas/ESC-Atlas-of-Cardiology

[36] European Society of Cardiology, Atlas of Cardiology, https://eatlas.escardio.org/Atlas/ESC-Atlas-of-Cardiology European Society of Cardiology, Cardiovascular Realities 2022, https://eatlas.escardio.org/Atlas/ESC-Atlas-of-Cardiology

[37] GBD 2021 Diseases and Injuries Collaborators (2024). Global incidence, prevalence, years lived with disability (YLDs), disability-adjusted life-years (DALYs), and healthy life expectancy (HALE) for 371 diseases and injuries in 204 countries and territories and 811 subnational locations, 1990-2021: a systematic analysis for the Global Burden of Disease Study 2021. *Lancet (London, England)*, *403*(10440), 2133–2161. https://doi.org/10.1016/S0140-6736(24)00757-8

[38] Timmis, A., Vardas, P., Townsend, N., Torbica, A., Katus, H., De Smedt, D., Gale, C. P., Maggioni, A. P., Petersen, S. E., Huculeci, R., Kazakiewicz, D., de Benito Rubio, V., Ignatiuk, B., Raisi-Estabragh, Z., Pawlak, A., Karagiannidis, E., Treskes, R., Gaita, D., Beltrame, J. F., McConnachie, A., … Atlas Writing Group, European Society of Cardiology (2022). European Society of Cardiology: cardiovascular disease statistics 2021. *European heart journal*, *43*(8), 716–799. https://doi.org/10.1093/eurheartj/ehab892

[39] https://www.un.org/disabilities/documents/convention/convoptprot-e.pdf

[40] https://ec.europa.eu/eurostat/databrowser/product/page/HLTH_DH030

15. The economic burden of CVD is substantial for patients, healthcare systems, society, and patients' families. The total cost of CVD in the Union was estimated at €282 billion in 2021, representing 2% of the GDP of the Union. Productivity losses associated with incapacity to work and premature mortality were estimated at €15 billion and €32 billion respectively, and the cost of unpaid care by friends/relatives was estimated at €79 billion[41]. Investing in health promotion and the prevention of cardiovascular diseases and in healthcare systems is critical in order to reduce individual health cost, ensure a resilient labour market and strengthen the EU's competitiveness[42].

16. The burden of cardiovascular diseases affects people and countries unevenly and increases inequalities in the Union between socio-economic and population groups, countries and regions. Wider determinants of cardiovascular health including socio-economic determinants of health, such as education, income, and living conditions, as well as commercial determinants, play a crucial role in these disparities, influencing both the prevalence and impact of cardiovascular diseases across different communities with some populations and communities being affected disproportionately. Health promotion and prevention strategies should target these high-risk populations with an emphasis on health promotion and prevention over the life course in recognition of the generational inequalities in cardiovascular health.

[41] Luengo-Fernandez, R., Walli-Attaei, M., Gray, A., Torbica, A., Maggioni, A. P., Huculeci, R., Bairami, F., Aboyans, V., Timmis, A. D., Vardas, P., & Leal, J. (2023). Economic burden of cardiovascular diseases in the European Union: a population-based cost study. *European heart journal*, *44*(45), 4752–4767. https://doi.org/10.1093/eurheartj/ehad583.

[42] Letta, E. (2024). Much more than a market. https://www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf

17. The share of deaths from CVD is higher among women than men, accounting for 35% of all deaths in women in the EU[43]. CVDs impact women more severely than men as, for instance, women have a higher risk of death after a heart attack. The cultural mislabelling of CVD as a 'men's disease' and the lack of knowledge of symptoms in women may be partly responsible for the risk of mortality following a heart attack being 20% higher among women than men. Women-specific cardiovascular risk factors[44], including early or late menarche, menopause, pregnancy[45,46], and other health-related issues, are often overlooked in epidemiology, diagnosis and care. Women are also less likely to receive evidence-based treatments for cardiovascular conditions and are more prone to experiencing delays in care. These gender disparities highlight the need for tailored cardiovascular strategies that address the specific risks and healthcare challenges faced by women.

18. Metabolic risk factors including high blood pressure, high cholesterol levels, which include inherited lipid disorders, overweight/obesity and high blood sugar levels, along with behavioural risk factors, such as tobacco use, use of other nicotine-containing products, alcohol consumption, sedentary lifestyle, poor nutrition, and the high intake of salt, sugar and saturated fat are highly prevalent in the EU, underlining the need for an increased roll out of evidence-based primary prevention and health promotion programmes and stronger Union legislation tackling commercial determinants for the benefit of current and future generations.

[43] https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Cardiovascular_diseases_statistics&oldid=629164#Deaths_from_cardiovascular_diseases

[44] European Society of Cardiology, Atlas of Cardiology, https://eatlas.escardio.org/Atlas/ESC-Atlas-of-Cardiology European Society of Cardiology, Cardiovascular Realities 2024, https://eatlas.escardio.org/Atlas/ESC-Atlas-of-Cardiology

[45] O'Kelly, A. C., Michos, E. D., Shufelt, C. L., Vermunt, J. V., Minissian, M. B., Quesada, O., Smith, G. N., Rich-Edwards, J. W., Garovic, V. D., El Khoudary, S. R., & Honigberg, M. C. (2022). Pregnancy and Reproductive Risk Factors for Cardiovascular Disease in Women. *Circulation research*, *130*(4), 652–672. https://doi.org/10.1161/CIRCRESAHA.121.319895

[46] Roos-Hesselink, J. W., van der Zande, J. A., & Johnson, M. R. (2023). Pregnancy outcomes in women with heart disease: how to improve?. *European heart journal*, *44*(17), 1541–1543. https://doi.org/10.1093/eurheartj/ehad035

19. Around 10% of CVD deaths are directly linked to smoking. Smokers have a 30% higher risk of developing coronary heart disease than non-smokers. Second-hand smoking is estimated to increase the risk of stroke by the same amount[47].

20. With regard to cardiovascular diseases, harmful alcohol consumption, regardless of levels and patterns of drinking, has a detrimental effect, namely in the case of hypertensive heart disease, haemorrhagic stroke, alcohol-induced cardiomyopathy, and atrial fibrillation/flutter[48].

21. One of the most important lifestyle risk factors for cardiovascular disease is unhealthy nutrition, and there is evidence for the impact of, for example, overweight/obesity[49] and the high intake of saturated fats, trans-fats, sodium and sugar[50]. The reduction of nutritional risk factors such as excessive salt, sugar, saturated fat and trans fatty acid intake, which can already be present in childhood, is key to prevention.

22. Commercial determinants, such as harmful[51] marketing practices that promote unhealthy products and make healthy choices more difficult, also play a crucial role and should be addressed to effectively reduce these risks. Efforts to improve population, organisational and systems health literacy are needed to support people in accessing, understanding, appraising and using information and services in ways that promote and maintain good health and well-being.

[47] Gernun, S., Franzen, K. F., Mallock, N., Benthien, J., Luch, A., Mortensen, K., Drömann, D., Pogarell, O., Rüther, T., & Rabenstein, A. (2022). Cardiovascular functions and arterial stiffness after JUUL use. *Tobacco induced diseases*, *20*, 34. https://doi.org/10.18332/tid/144317

[48] https://www.who.int/publications/i/item/9789240096745

[49] Roberto, C. A., Swinburn, B., Hawkes, C., Huang, T. T., Costa, S. A., Ashe, M., Zwicker, L., Cawley, J. H., & Brownell, K. D. (2015). Patchy progress on obesity prevention: emerging examples, entrenched barriers, and new thinking. *Lancet (London, England)*, *385*(9985), 2400–2409. https://doi.org/10.1016/S0140-6736(14)61744-X

[50] Kotseva, K., De Backer, G., De Bacquer, D., Rydén, L., Hoes, A., Grobbee, D., Maggioni, A., Marques-Vidal, P., Jennings, C., Abreu, A., Aguiar, C., Badariene, J., Bruthans, J., Castro Conde, A., Cifkova, R., Crowley, J., Davletov, K., Deckers, J., De Smedt, D., De Sutter, J., … EUROASPIRE Investigators* (2019). Lifestyle and impact on cardiovascular risk factor control in coronary patients across 27 countries: Results from the European Society of Cardiology ESC-EORP EUROASPIRE V registry. *European journal of preventive cardiology*, *26*(8), 824–835. https://doi.org/10.1177/2047487318825350

[51] https://www.who.int/europe/publications/i/item/9789289061162

23. Another important lifestyle risk factor for cardiovascular disease is physical inactivity. There is strong evidence for the impact of physical activity on improving cardiovascular health with the potential for a 27% reduction in relative risk of cardiovascular disease mortality in those who engage in recommended levels of physical activity[52]. Despite this, many children and adults still fall far short of meeting the guidelines for physical activity. Promotion of and evidence-based physical activity programmes for people of all levels of ability should be a core component of cardiovascular disease prevention, treatment and rehabilitation.

24. Diabetes increases the risk of various cardiovascular diseases, including coronary artery disease, heart failure, and stroke[53]. The high blood sugar levels associated with diabetes can damage blood vessels and the nerves that control the heart, which together with impaired renal function further increases CVD risk. Similarly, patients with chronic kidney disease (CKD) also exhibit an elevated cardiovascular risk, manifesting as coronary artery disease, heart failure, arrhythmias, and sudden cardiac death. Therefore, the effective management of both diabetes and CKD – including controlling blood sugar, blood pressure, and cholesterol levels, following a heart-healthy diet, engaging in physical activity, promoting optimal periodontal health and avoiding smoking/tobacco and nicotine and harmful alcohol consumption, regardless of levels and patterns of drinking – is vital in minimising the risk of cardiovascular disease and other complications from diabetes.

25. Obesity, which might have behavioural and genetic roots, is highly prevalent among patients with CVD and impacts significantly the course and prognosis of the condition. This challenge requires comprehensive programmes, early detection, and effective management.

[52] https://www.escardio.org/Councils/Council-for-Cardiology-Practice-(CCP)/Cardiopractice/physical-activity-for-cardiovascular-prevention

[53] Shah, A. D., Langenberg, C., Rapsomaniki, E., Denaxas, S., Pujades-Rodriguez, M., Gale, C. P., Deanfield, J., Smeeth, L., Timmis, A., & Hemingway, H. (2015). Type 2 diabetes and incidence of cardiovascular diseases: a cohort study in 1·9 million people. *The lancet. Diabetes & endocrinology*, *3*(2), 105–113. https://doi.org/10.1016/S2213-8587(14)70219-0

26. Cardiovascular health and mental well-being are strongly interconnected. Chronic stress, anxiety disorders, depression[54] and other mental health conditions have been associated with early-onset CVD and suboptimal cardiovascular health in young adults[55]. At the same time, CVDs themselves can lead to mental health difficulties, including increased levels of stress, anxiety, and depression.

27. Environmental stressors also contribute to CVD risk. There is increasing understanding of the links between different CVDs and air pollution, noise exposure and increase in temperature due to climate change[56], representing another critical area for action. Climate change, in particular, exacerbates existing health inequalities and particularly impacts vulnerable populations, requiring prevention across sectors. Air pollution is the leading environmental cause of early death in the EU, resulting in 300,000 premature deaths annually, mainly due to noncommunicable diseases such as CVD. Vulnerable groups - including children, elderly people, those with pre-existing conditions, and socioeconomically disadvantaged populations - are disproportionately affected. Increases in levels of particle pollution are directly linked to higher risk of cardiovascular death. Adults who are exposed to second-hand smoke, face a 25-30% higher risk of developing coronary artery disease and a 20-30% higher risk of stroke[57]. Additionally, environmental noise contributes to an increased incidence of arterial hypertension, myocardial infarction, and stroke[58,59]. These findings highlight the critical need to address environmental stressors as part of comprehensive cardiovascular disease prevention strategies.

[54] Borkowski, P., & Borkowska, N. (2024). Understanding Mental Health Challenges in Cardiovascular Care. *Cureus*, *16*(2), e54402. https://doi.org/10.7759/cureus.

[55] Kwapong, Y. A., Boakye, E., Khan, S. S., Honigberg, M. C., Martin, S. S., Oyeka, C. P., Hays, A. G., Natarajan, P., Mamas, M. A., Blumenthal, R. S., Blaha, M. J., & Sharma, G. (2023). Association of Depression and Poor Mental Health With Cardiovascular Disease and Suboptimal Cardiovascular Health Among Young Adults in the United States. *Journal of the American Heart Association*, *12*(3), e028332. https://doi.org/10.1161/JAHA.122.028332

[56] Münzel, T., Hahad, O., Sørensen, M., Lelieveld, J., Duerr, G. D., Nieuwenhuijsen, M., & Daiber, A. (2022). Environmental risk factors and cardiovascular diseases: a comprehensive expert review. Cardiovascular research, 118(14), 2880–2902. https://doi.org/10.1093/cvr/cvab316

[57] Adegboye O. A., Alele F. O., Castellanos M. E., Pak A. & Emeto T. I. (2023). Editorial: Environmental stressors, multi-hazards and their impact on health. *Front. Public Health. 11*:1231955. doi: 10.3389/fpubh.2023.1231955

[58] European Society of Cardiology, Atlas of Cardiology, https://eatlas.escardio.org/Atlas/ESC-Atlas-of-Cardiology European Society of Cardiology, Cardiovascular Realities 2024, https://eatlas.escardio.org/Atlas/ESC-Atlas-of-Cardiology

[59] Münzel, T., Herzog, J., Schmidt, F. P. & Sørensen, M. Environmental stressors and cardiovascular disease: the evidence is growing. (2017) *European Heart Journal*, *38*(29), 2297–2299, https://doi.org/10.1093/eurheartj/ehx306

28. An important area for improvement lies in expanding and optimising evidence-based screening coverage across Member States for specific CVD risk factors. By enhancing early detection of conditions such as hypertension, heart rhythm disturbances, diabetes, kidney disease, or lipid metabolism disorders, we could better address CVDs including those not linked to modifiable factors. Strengthening these efforts offers significant potential to reduce the burden of undiagnosed and unmanaged risk factors to improve health outcomes through earlier intervention.

29. There is evidence suggesting that vaccination against infections (such as influenza[60,61], pneumococcal[62], SARS-CoV-2[63], and respiratory syncytial virus[64]) is especially important for patients with increased cardiovascular risk or existing CVD particularly among the elderly. Strengthening awareness campaigns and emphasising the cardiovascular protection that vaccines offer in these high-risk groups is important for improving vaccination rates and overall health outcomes.

30. People with common CVDs, such as heart failure, structural heart disease, or inherited conditions such as familial hypercholesterolemia (FH) or elevated levels of lipoprotein(a), are often diagnosed late in the course of their disease, thereby missing an important opportunity to delay progression. This leads to an unnecessarily heavy burden of morbidity, hospitalisation and premature death. Implementing public awareness campaigns around CVDs and increased focus on early detection could help identify these conditions sooner, potentially reducing the severity and improving the management of the disease. In addition, disease management programmes can also contribute to better health outcomes.

[60] Modin, D., Lassen M. C. H., Claggett, B., Johansen, N. D., Keshtkar-Jahromi, M., Skaarup, K. G., Nealon, J., Udell J. A., Vardeny O., Solomon, S. D., Gislason, G. & Biering-Sørensen, T. (2023) Influenza vaccination and cardiovascular events in patients with ischaemic heart disease and heart failure: A meta-analysis. *Eur J Heart Fail*., *25*(9), 1685-1692. doi: 10.1002/ejhf.2945. Epub 2023 Jul 5.

[61] Udell, J. A., Zawi, R., Bhatt, D. L., Keshtkar-Jahromi, M., Gaughran, F., Phrommintikul, A., Ciszewski, A., Vakili, H., Hoffman, E. B., Farkouh, M. E., & Cannon, C. P. (2013). Association between influenza vaccination and cardiovascular outcomes in high-risk patients: a meta-analysis. *JAMA*, *310*(16), 1711–1720. https://doi.org/10.1001/jama.2013.279206

[62] Vlachopoulos, C. V., Terentes-Printzios, D. G., Aznaouridis, K. A., Pietri, P.G. & Stefanadis, C. I. (2015) Association between pneumococcal vaccination and cardiovascular outcomes: a systematic review and meta-analysis of cohort studies. *Eur J Prev Cardiol*., *22*(9), 1185-99. doi: 10.1177/2047487314549512. Epub 2014 Sep 24.

[63] Xie, Y., Xu, E., Bowe, B., & Al-Aly, Z. (2022). Long-term cardiovascular outcomes of COVID-19. *Nature medicine*, *28*(3), 583–590. https://doi.org/10.1038/s41591-022-01689-3.

[64] Shi, T., Vennard, S., Jasiewicz, F., Brogden, R., Nair, H.; RESCEU Investigators. (2022) Disease Burden Estimates of Respiratory Syncytial Virus related Acute Respiratory Infections in Adults With Comorbidity: A Systematic Review and Meta-Analysis. *J Infect Dis., 226*(Suppl 1): S17-S21. doi: 10.1093/infdis/jiab040.

31. Rare diseases, mostly of genetic origin are frequently underdiagnosed and poorly managed and suffer from delays in diagnosis owing to a lack of medical knowledge and poor awareness of these conditions, which contributes to a considerable social and financial burden for affected individuals as well as their families and caregivers. This particularly applies to rare CVDs[65]. If left undiagnosed and unmanaged, these conditions can lead to life-threatening cardiovascular complications, such as heart attacks or sudden death at a young age, usually occurring in otherwise healthy people. Healthcare professionals need to be adequately educated and trained and have access to networks of expert centres such as the European Reference Networks, including ERN Guard-Heart, VASCERN and national centres of expertise that facilitate access to diagnosis and treatment of rare and complex diseases of the heart and vascular system[66].

32. Access and availability of effective treatments including existing and new evidence-based treatments that offer significant health benefit are needed and, despite the enormous healthcare burden, the developmental pipeline of new CVD drugs is limited. Innovation and research focused on the highest unmet needs are needed to develop new diagnostics and treatments, personalised for patient needs, which are integrated into care models and made widely accessible.

33. Article 108 of Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 on medical devices requires the Commission and the Member States to take appropriate measures to encourage the establishment of registers and databanks for specific types of devices that contribute to the independent evaluation of the long-term safety and performance of devices setting common principles to collect comparable information. Such comparable and independent data on the long-term safety and performance of implantable cardiovascular devices is necessary to further enhance the quality of CVD treatment.

[65] https://www.orpha.net/en/disease/classification/group/156265?orphaCode=97929&firstParent=1&name=Rare-cardiac-disease&mode=name
[66] https://health.ec.europa.eu/rare-diseases-and-european-reference-networks/european-reference-networks_en

34. Patients with CVDs are often at high risk of another CV-related event or disease, e.g. the cardio-renal-metabolic (CRM) syndrome which is defined as a health disorder attributable to obesity, type 2 diabetes, chronic kidney disease (CKD) and CVDs. To improve prognosis, it is crucial to implement effective secondary prevention strategies focused on risk factor control, enhancing patient education and boosting health literacy. Furthermore, patient involvement on an individual level, such as shared decision making, and on a collective level, such as consultation of patient organisations, helps promote measures aimed at the improvement of CV health. Providing robust patient support systems can significantly improve adherence to the treatment plan.

35. Patients with CVDs benefit significantly from timely access to rehabilitation services, which can improve functional outcomes and reduce the likelihood of recurrence. Ensuring the widespread availability and accessibility of cardiac and neuro-rehabilitation programmes is essential for holistic patient recovery and ensuring health in the long-term. In order to maximise their effectiveness, these programmes should be tailored to individual patients' needs and circumstances.

36. A meaningful reduction in the burden of CVDs across the Union cannot be reached without taking into account the needs of its population in the area of CVD prevention, early detection, diagnosis, treatment and rehabilitation, as well as environmental stressors and co-morbidities. In order to achieve health equity, specific attention should be given to the needs and conditions of vulnerable groups who are affected by a higher disease burden and lower life expectancy.

37. Member States are working towards achieving the World Health Organization's targets for NCDs and the United Nations Sustainable Development Goals, in particular goal 3.4, of reducing premature mortality from NCDs by one third. The 4th High-level Meeting of the UN General Assembly on the Prevention and Control of non-communicable diseases will be convened in 2025.

INVITES THE MEMBER STATES TO

38. ADOPT or update, if appropriate and where necessary, CVH measures, in the framework of standalone or wider Non-Communicable Diseases strategic agendas, that also reflect the outcomes of Joint Actions in the national context, involving relevant stakeholders, with a view to:

a) strengthening health promotion and primary prevention policies throughout the life course to reduce premature mortality and morbidity at population level by identifying the most effective policies and measures to reach and treat individuals at high risk of developing CVD as part of an integrated approach to NCDs;

b) taking measures to improve population health literacy;

c) addressing social determinants such as socioeconomic status that influence access to healthcare as well as gender- and age-related aspects; and introducing comprehensive educational programmes in schools, workplaces, and communities to increase awareness and knowledge of the importance of cardiovascular health, focusing on the impact of lifestyle choices;

d) addressing hazards for cardiovascular health in their occupational safety and health (OSH) policies;

e) scaling up secondary prevention through evidence-based cardiovascular health checks that incorporate timely screening, early detection and precision diagnostics tailored to diverse population needs, including the assessment of kidney function;

f) including actions designed to reduce nutritional risk factors, such as high salt, saturated fat, , sugar intake, and low intake of wholegrain[67], fruits and vegetables[68] for example through food reformulation, public health campaigns to encourage healthier dietary choices and tackling commercial determinants such as marketing;

g) taking into account the connection of CVD with diabetes and obesity, and including as appropriate, comprehensive actions to tackle and manage these conditions;

h) implementing comprehensive interventions to combat and prevent alcohol-related harm, the use of tobacco, and other nicotine-containing or nicotine-free tobacco-related products;

i) enhancing cardiovascular health by implementing agreed Zero Pollution policies and by addressing environmental determinants through where appropriate, measures that reduce air and noise pollution; encouraging sustainable environmental practices, promoting 'heart-healthy' urban planning and transport, ensuring that the impacts of climate change and other environmental stressors are fully integrated into CVD-related policy actions building on the One Health approach. Additionally enhance preventive health protection against the effects of heat, i. e. through heat-health actions;

j) improving equal access to quality CVD healthcare by promoting, if appropriate, innovative and precision care solutions, including the adoption of advanced technologies such as AI-driven diagnostics and telemedicine;

k) improving equal access to CVD and neuro rehabilitation by expanding the availability of tailored programmes across healthcare settings, ensuring that patients receive the continuous support necessary for optimal cardiovascular health recovery and management;

[67] Ross, A. B., van der Kamp, J. W., King, R., Lê, K. A., Mejborn, H., Seal, C. J. & Thielecke F; Healthgrain Forum. (2017) Perspective: A Definition for Whole-Grain Food Products-Recommendations from the Healthgrain Forum. *Adv Nutr*., *8*(4):525-531. doi: 10.3945/an.116.014001.

[68] Wang, D. D., Li, Y., Bhupathiraju, S. N., Rosner, B. A., Sun, Q., Giovannucci, E. L., Rimm, E. B., Manson, J. E., Willett, W. C., Stampfer, M. J., & Hu, F. B. (2021). Fruit and Vegetable Intake and Mortality: Results From 2 Prospective Cohort Studies of US Men and Women and a Meta-Analysis of 26 Cohort Studies. *Circulation*, *143*(17), 1642–1654. https://doi.org/10.1161/CIRCULATIONAHA.120.048996

l) strengthening training activities for healthcare workers, communication activities, including those between healthcare workers and patients, and interventions aimed at improving therapeutic adherence and promoting healthy lifestyles for people affected by cardiovascular diseases and/or related risk factors;

m) encouraging closer links between the health and physical activity sectors to better integrate physical activity/adapted physical activity into the management of care for patients with CVD and other NCDs by promoting, and where appropriate prescribing, adapted physical activity/health sports activities for people with/at risk of cardiovascular disease that are inclusive of people of all levels of physical ability;

n) addressing sleep and sleep-related disorders as a determinant of cardiovascular health, to provide better information on the importance of quality sleep, and better detection and management and treatment of sleep disorders;

o) considering the possibilities to facilitate information flows to and from people living with mental health conditions regarding potential impacts of their condition on their cardiovascular health, and promoting regular checks to prevent cardiovascular problems;

p) considering to promote at national, regional or local level, as appropriate, the installation and the use of automated external defibrillators (AEDs) both in and out of hospital settings including in communities and physical activity centres and implementing or strengthening initiatives for urgent high-quality emergency cardiac care, specifically addressing cardiac arrest. These initiatives could include public education and awareness campaigns, training of emergency services, regular maintenance of AEDs, and coordination between emergency services.

INVITES THE EUROPEAN COMMISSION TO

39. TAKE ACTIONS on CVH drawing on the Europe's Beating Cancer Plan based on an integrated framework encompassing preventive health measures (primary, secondary and tertiary) and health promotion, while promoting discussion on better ways to promote systematic screening, vaccination, comprehensive treatment options and robust rehabilitation programmes in national health systems. These actions should specifically target the reduction of key identified modifiable risk factors which are prevalent across EU member states. The risk factors should include low health literacy, mental health risks regardless of age, and risks connected with the work-life balance and continuous preservation of working and social capacity.

40. IDENTIFY effective public health interventions for the prevention of NCDs, with particular regard to cardiovascular diseases through the EU Best Practice Portal and a comprehensive review of existing studies and successful programmes across the EU.

41. PROMOTE investments in research and development initiatives to better understand the structural mechanisms through which risk factors affect NCDs and, in particular, cardiovascular health and to develop innovative and effective public health responses to these structural challenges. This includes the development of competency and training frameworks for therapeutic patient education, adapted to the cardiovascular field, in order to improve the level of empowerment and autonomy of patients. Research should also be aimed at supporting and expanding, as necessary, CVD registries and data integration across the EU as well as supporting academic collaboration.

42. ENSURE that available EU funding is used to implement these interventions widely, while also ensuring that they are adaptable to national needs.

43. TAKE ACTIONS, such as considering an EU salt reduction programme, as well as joint initiatives to enhance food reformulation activities and tackle commercial determinants of health by supporting a paradigm shift and changes in the attitude of consumers at an early age. Such actions should be based on robust evidence and give preference to population-wide and system-wide measures addressing high salt, sugar, saturated fat, and trans fatty acid intake, as well as obesity, overweight, sedentary lifestyles, smoking and use of nicotine products and alcohol, emphasising early interventions starting from childhood to establish healthy dietary habits and increase both nutrition and health literacy.

44. ADOPT, where appropriate, legislative proposals and continue to work on measures announced under the Europe's Beating Cancer plan, with special focus on the initiatives related to determinants of health including socioeconomic and commercial determinants. This should include evaluating and revising tobacco legislation, notably by addressing concerns about young people's access to novel tobacco and nicotine products[69] as well as legislative and non-legislative measures, for preventing and reducing alcohol-related harm and improving health promotion through access to healthy diets and physical activity[70].

[69] see the Mission Letter from Ursula von der Leyen to the Commissioner-designate for health and animal welfare.
[70] see paragraph 41 of the Council conclusions on the Future of the European Health Union (see reference 22).

45. EXAMINE the feasibility of and, if appropriate, propose the following:

a) in compliance with the national and European data protection rules leverage, under the current applicable framework, the existing and future digital health infrastructures to enhance the primary use of standardised electronic health records for patient care and clinical decision-making in cardiovascular health and, where appropriate, advance secondary uses for research and innovation. This includes consolidating fragmented data to facilitate both direct patient care and research activity across all circulatory diseases, as well as advancing the use of data models and standardisation of this data in the electronic healthcare records (EHRs) and healthcare registry datasets. Where appropriate these efforts should support more comprehensive data collection, inform policy development, improve clinical outcomes and drive forward public health initiatives aligned with the EU's agenda on cardiovascular health;

b) build on the work of the WHO, the OECD, Eurostat and the ECDC to monitor, document and disseminate information on cardiovascular health developments. These efforts should focus on promoting and adapting successful health initiatives across and within Member States including, where appropriate, by using the existing patient-relevant instruments to measure quality of life and patient-reported outcomes in cardiovascular health at the European level;

c) establish or use an existing network of experts in the Health Policy Platform to discuss cardiac and stroke rehabilitation processes in the EU and, where appropriate, integrate digital health solutions to enhance the reach and effectiveness of rehabilitation services;

d) provide support to advance basic and translational - including public health-based and epidemiological - research in cardiovascular health and the underlying risk factors and their respective impact. This will improve understanding of the causes and mechanisms of cardiovascular diseases, including the effects of pollution, nuisance, lifestyles, climate change and mental health issues, and facilitate the development of more efficient diagnostics and treatments focused on the highest unmet needs, that offer significant health benefits, maximising the potential in the field of digital health;

e) include evidence-based examples and recommendations of health checks in the actions on CVH in order to promote primary and secondary prevention.
