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Global Alliance for the Promotion of Physical Activity: the Hamburg Declaration

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ABSTRACT

Non-communicable diseases (NCDs), including coronary heart disease, stroke, hypertension, type 2 diabetes, dementia, depression and cancers, are on the rise worldwide and are often associated with a lack of physical activity (PA). Globally, the levels of PA among individuals are below WHO recommendations. A lack of PA can increase morbidity and mortality, worsen the quality of life and increase the economic burden on individuals and society. In response to this trend, numerous organisations came together under one umbrella in Hamburg, Germany, in April 2021 and signed the 'Hamburg Declaration'. This represented an international commitment to take all necessary actions to increase PA and improve the health of individuals to entire communities. Individuals and organisations are working together as the 'Global Alliance for the Promotion of Physical Activity' to drive long-term individual and population-wide behaviour change by collaborating with all stakeholders in the community: active hospitals, physical activity specialists, community services and healthcare providers, all achieving sustainable health goals for their patients/clients. The 'Hamburg Declaration' calls on national and international policymakers to take concrete action to promote daily PA and exercise at a population level and in healthcare settings.

Box 1 Definitions of physical activity, physical inactivity, sedentary behaviour as well as guidelines and recommendations on physical activity provided by the World Health Organization (WHO)

Physical activity (PA) can be defined as any bodily movement produced by skeletal muscles that requires energy expenditure.[2] Physical inactivity[5] refers to any waking behaviour while in a sitting, reclining or lying posture with low energy expenditure. Sedentary behaviour is any waking behavior characterized by an energy expenditure ≤1.5 metabolic equivalents (METs), while in a sitting, reclining or lying posture.[6] Passive standing is an intermediate activity with ≤2.0 METs.[6] How much PA - depending on age groups and population groups - is required for a good health is provided in the guidelines and recommendations of the World Health Organization (WHO). For example, adults aged 18 to 64 years should do at least 150 minutes of moderate-intensity aerobic PA or at least 75 minutes of intense aerobic PA throughout the week.[6 28]

BENEFITS OF PHYSICAL ACTIVITY

Low levels of physical activity (PA) in the population and sedentary lifestyle[1 2] (see definitions in Box 1) have been associated with the global rise in non-communicable diseases (NCDs), including coronary heart disease, stroke, hypertension, type 2 diabetes, dementia, depression and certain cancers (eg, bladder, breast, colon) and musculoskeletal disorders.[3 4] Moreover, physical inactivity is the fourth leading risk factor for premature mortality.[2] The WHO stipulates the amount of PA needed for good health (see Box 1).[5 6] The high prevalence of insufficient PA across the globe from 2001 to 2016 can be interpreted as worrying (figure 1A for women and figure 1B for men).[7]

Regular exercise, in particular aerobic exercise such as walking, hiking or cycling,[8] is recommended for the prevention, therapy and rehabilitation of many NCDs, such as cardiovascular,[9] metabolic,[10] neurodegenerative diseases[11 12] and specific types of cancer,[13] in addition to their important role in the management of depression and anxiety disorders.[14] Personalised PA prescriptions, which include variations in the type of exercise, intensity, frequency and duration, have many positive health benefits - not only confined to physical but also to psychosocial function,[15] well-being and quality of life.[16] PA prescription may provide equal or even better therapeutic outcomes for various health conditions than other standard medical treatments.[17] For specific musculoskeletal injuries, PA prescription is known to be an essential part of therapy.[3] As little as 15 min a day of moderate-intensity PA can help lower the risk for cardiovascular disease.[18] However, the effects of an individually tailored programme are even more effective.[4 19 20]

Although there is respective guidance to promote PA as part of standard healthcare, there is a lack of a concerted effort to increase PA as a preventive health measure and to maintain quality of life, which could reduce the burden of NCDs and associated risk of mortality and morbidity, as well as direct and indirect costs to the healthcare system.[4] This is especially true in NCDs such as obesity,[8 21 22] type 2 diabetes,[23] heart disease,[24] hypertension,[25] cancer[26] and stroke.[27] The 'Step up! Tackling the burden of insufficient PA in Europe' report from the WHO and the Organisation for Economic Co-operation and Development (OECD) estimates that every euro invested in PA would save around €1.7 in NCDs health expenses[28] and the global cost of inaction on physical inactivity was calculated to reach approximately €44.3 billion per year, up to 2030.[29]

The WHO recommends various evidence-based policy actions to create active societies, environments, people and systems.[30] Such a comprehensive whole-system approach,[30] and ecological and multilevel actions that consider personal, environmental and political factors, are needed to address physical inactivity.[31] So far, such approaches have already been used to reduce tobacco consumption[32] and to create food environments supporting healthy eating behaviours.[33] Such approaches should also be increasingly considered and used when creating an environment conducive to PA. Many countries worldwide have already developed formal written policies, guidelines or targets to promote PA.[34] However, knowledge about the implementation and effectiveness of PA policies is still limited.[35] Moreover, no clear guidance exists for governments on which policies are preferable in different settings and under various preconditions.[36–38] In response, the 'Global Alliance for the Promotion of Physical Activity' members propose an approach that addresses both the promotion of PA in society and is tailored to the individual. This requires an integrated health policy that takes into account the need to increase PA[22] at the population level[39] as well to integrate individual PA prescriptions as a standard of care.[40]

Scientific societies and organisations working towards global health through PA

Despite the overwhelming evidence of the benefits of PA and exercise for general health prevention and treatment of NCDs, it remains an auxiliary therapy in most countries

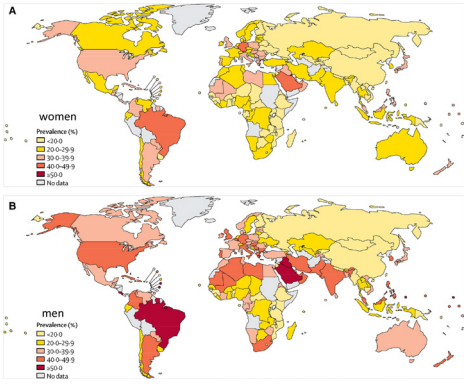

Figure 1 Country prevalence of insufficient physical activity (A) in women in 2016 and (B) in men in 2016.[7]

rather than the first choice in standard treatment and care. In response to this impasse, 139 organisations from different countries have indicated their full commitment by signing the 'Hamburg Declaration'. The so-called Global Alliance (GA) has agreed to jointly pursue the goal of promoting PA as a primary preventive measure to improve and maintain the health of populations worldwide and to facilitate its integration into daily patient care. The GA aims to encourage and support national and international policymakers, health professionals and providers, and other health sector actors to introduce and implement the actions required at various levels (political, socio-political and social, figure 2).

Joining global efforts

To achieve this, the GA plans several actions based on evidence-based practices from around the world,[4 6 38 41] drawing on current research findings as well as marketing,[42] communication and dissemination strategies.[43] Overall, the GA attaches particular attention to close cooperation between all members and the engagement of setting-specific actors (eg, the general population, community-based healthcare, hospitals, research organisations and politicians). Such an engagement of various actors is an ongoing process of soliciting knowledge, experience, judgement and values from the people involved,[44] including the target population.[45] It also serves to create a shared understanding, make transparent decisions[46] and understand the interests of various parties.[37 47]

There are different tools to achieve successful participation,[48] and engaging various actors is crucial to granting shared decision-making capacity to those who traditionally have limited authority, ensuring an equitable dynamic with powerful actors. A synergistic and collective approach will lead to outcomes and elicit change that no one constituent member could have produced on their own - this is the foundation for future activities of the GA. This means the need to introduce behavioural techniques like the 'Theory of Change' methodology for interacting with actors[48] or shared decision-making with patients.[49]

The synergies created between the GA members and the respective actors will ensure a dynamic and effective fight against the worldwide pandemic of PA,[50] including initiating change at the highest level (eg, policies determined at the governmental level). Each actor fulfils different and synergistic roles and objectives, contributing to the overall goal. For example, the Organising Committee of the Paris 2024 Summer Olympics is using the energy and strong reputation of the Games to promote the '30 min of PA per day at school' message. The IOC and the WHO signed a memorandum to increase levels of daily PA among the world's population, to support NCD prevention and healthier lifestyles through sport and exercise, and to enhance cooperation between the health and the sports sector.[51] The first initiative was planned for Olympic Day, 23 June 2023, with the handle '#LetsMove'

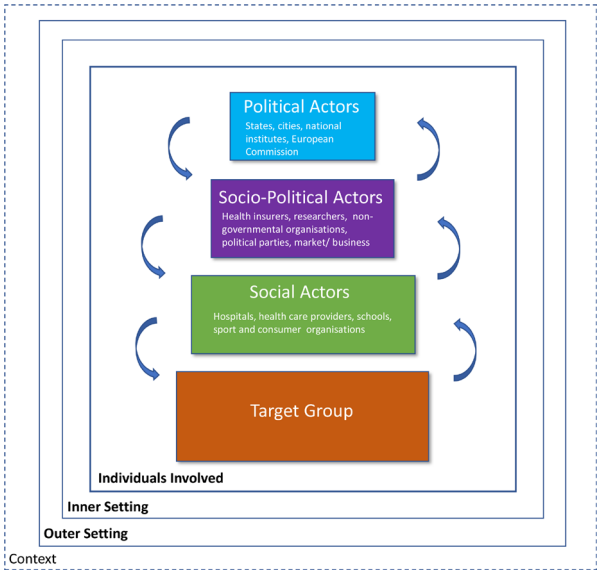

Figure 2 Population-based health promotion and the interaction of various actors at different levels to support and communicate with the target group in order to achieve health goals.

and the message 'Move your body and dedicate 30 min to get active with Olympians'.[52] The International Federation of Sports Medicine (FIMS) supports the promotion of a healthy and active lifestyle through high-quality education of (para-) medical professionals and the implementation of evidence-based sports and exercise medicine.[51 53]

Call for including exercise and sport in health policies

Studies have been demonstrating that population health is influenced by the environment in the broadest sense,[37 38 54] including economic factors,[55] access to green spaces, water and air quality,[54 56] employment, access to medical care,[57] the availability of safe non-motorised transportation (eg, walking, cycling) systems,[30 54 58] as well as education.[35 55 59] In this framework, individual behaviour reflects individuals' personal responsibility through health-promoting behaviours and choices - of which PA is one of the most important.[13 21 59 60] Heritability affects the likelihood of developing a particular NCD.[8 26 61] However, lifestyle, particularly PA, can modify genetically determined expression patterns through epigenetic changes towards reducing the frequency or severity of NCD and, thus, a better quality of life.[4 13 62–64]

The constantly high prevalence of physical inactivity from 2001 to 2016 suggests that the target set by WHO Member States to reduce physical inactivity by 10% by 2025 will not be achieved, despite it is as one of nine WHO targets for preventing and treating NCDs.[30] The forced lockdown during the COVID-19 pandemic contributed further to the rise in physical inactivity,[38] and physical inactivity per se is considered an important independent risk factor for severe sequelae and death.[31 65] Global PA has only partially been restored[14] and remains an enduring negative 'side effect' of the COVID-19 pandemic.[66] The

reasons behind this are multi-fold[67]; lack of awareness by the general population of the health benefits of PA,[35] lack of policy definition and efforts, shortfalls in the education and training provided to medical practitioners on the subject, lack of specialised practitioners trained in prescribing and monitoring exercise programmes. The need, therefore, for a concerted, dynamic action that advocates the inclusion of PA and exercise in health policies has never been greater.

The critical mass created by the concerted efforts of the GA is expected to enable national and global policymakers to prioritise promoting PA and exercise as medicine and supporting population health. A systematic global interaction is needed among all participants, including individuals, organisations and communities with a direct interest in the process and outcomes of projects, research or policy.[38 44] This work should target the sport, school, health and medicine sectors and focus on successfully implementing PA and exercise promotion measures.[30 59] Policies should create an ecosystem that promotes healthy lifestyles, reduces sedentary behaviour and integrates PA and exercise as medicine in the daily care of patients.[37 55 68 69] For example, the WHO has produced a series of guides and toolkits to help implement best practices for integrating PA into the daily lives of the general population and into patient care and rehabilitation.[56–58] Collaboration among organisations led to an effort by scientists from all fields to work on this common cause, as reflected in a large number of multidisciplinary publications.

In most countries, sports and exercise science/medicine is not part of the general education programme for students.[70] Sports and exercise medicine specialists should be the best qualified to prescribe PA for disease prevention and treatment. However, in terms of specialisation, sports and exercise science/medicine is not part of the training of medical specialists in most countries.[71] These deficiencies should be addressed, and the goal should be for every medical professional to be able to use PA as a therapy in their respective clinical settings.

In most countries, recommendations for PA during hospitalisation and at discharge are not mentioned, and PA and exercise in the hospital and at home are extremely rare in treatment.[4] the WHO has already called for the introduction and strengthening of patient assessment and counselling systems to increase PA and reduce physical inactivity in the general population[6] through appropriately trained health, community and social service providers in primary and secondary care and social services as part of general healthcare.[30 57]

The role of active sport cities

When health professionals focus traditionally mainly on the individual, in future, medical stakeholders have to include a population approach. Otherwise, large parts of the community may lose out on benefitting.[39 72] Population-based strategies to promote PA should include a healthy ecosystem and the resources necessary to lead an active life and integration into the healthcare system.[69] Active societies can achieve more than the simple provision of health benefits. For example, an active society conserves health system resources, cleans the air and ensures less congestion and safer streets.[38 56] In addition, opening schoolyard PA facilities during public holidays is an effective way to promote PA among children in a neighbourhood. We call for and support the concept of 'global active and smart sports cities' with active, smart and sustainable hospitals where citizens, stakeholders, organisations and policymakers, working together, can be models for linking the healthcare system to public health, integrating PA and exercise as medicine.[60 69] The 'global active and smart sports city' concept, conceived in Hamburg in April 2021, builds on the global active city idea, and this new concept is now being developed for major cities part of the GA, including Olympic cities that will address preventive measures by community interaction.[60 73] The concept aims to integrate PA into everyday urban life and to create the conditions to enable citizens to live active lives through interaction with smart technology and urban planning to improve visual attractiveness, create a more sustainable transportation system and promote active commuting (eg, walkability and bicycle friendliness).[56 58 60 68]

Active hospitals achieve sustainable health goals for their patients

Healthcare should be more sustainable, and so-called 'active hospitals' that incorporate PA into patients' treatment plans could be a model of the future. The goal is to systematically integrate PA and exercise interventions into patient care.[3 4 9 10 20] This could increase patients' PA, improve staff communication skills and build collaboration with local sports clubs, sports and fitness specialists, other community services and self-help organisations. The 'Exercise is Medicine' initiative,[41] 'Moving Medicine',[74] the Swedish 'PAP (Physical Activity on Prescription)' model[20] or the Dutch 'Exercise=Medicine' model[75] are excellent examples of PA prescription initiatives.

Personalised prescriptions and the role of technology

One reason physicians do not offer PA prescriptions in their practices could be a lack of time.[70] Still, they are often unfamiliar with a patient's current PA patterns and context factors (eg, environment, family and social support).[35 70 76] An individualised prescription, including NCD-specific PA and exercise recommendations, could be more beneficial than standard PA prescriptions.[4 17 19] However, standard PA prescriptions achieve equal or even better therapeutic outcomes than traditional medical treatments.[17 19 75]

Evidence suggests that the 'ideal' PA prescription for a given NCD or risk factor must consider person-related factors[49] or the individual environment,[38 76] which may lead to a personalised prescription that includes variations in the type of exercise, intensity, frequency and duration.[19] However, the effects of an individually tailored programme can be even more effective.[10 29] Precision medicine is driving individualised treatment of NCDs,[77] and in future, the knowledge of genetic predisposition could further contribute to

prescription.[78] Through shared decision-making, the patient should decide whether to make positive lifestyle changes, such as increasing PA.[49]

Technology can increase participation and adherence to PA and especially improve the personalisation of PA and its management. Personalisation of interventions using technology is essential, as target users vary widely regarding their PA levels, requirements, preferences and behaviours.[79] Technology like consumer wearables (eg, smart devices) can influence the general population to the extent that could lead to greater acceptance of PA, more enjoyment and better health outcomes and well-being.[80]

What needs to be changed?

The GA will champion efforts to increase the uptake of PA and exercise for general health and prescription in medical conditions. This will be achieved by:

- Promoting the inclusion of exercise and sport in health policies.
- Supporting all measures to increase PA.
- Facilitating the integration of PA and exercise into daily patient care.

Practical examples include the development of more evidence-based practices, knowledge, experience, judgement and values in the education and training courses for medical students, physicians and other healthcare providers. Particular priority areas will include promoting active and smart sports cities, active hospitals and personalised prescriptions assisted by innovative technologies.

One next step of the GA will be to address the deficits in the education/training and implementation of sports and exercise medicine and to propose a road map for prevention, clinical care and treatment. With this goal in mind, the GA will address which discipline(s) are best suited to prescribe PA exercises and which to administer.

Conclusions

The world is suffering from an obesity epidemic from declining PA. Every age group is affected, especially children. Lack of PA causes so many problems for individuals and society. Diabetes, heart conditions, depression, blood disorders, the unsustainable rising burden and cost on our health services, escalating infrastructure costs and millions in lost productivity due to those unable to work. The solution is to get more people moving. That is the overarching aim of the 'Global Alliance for the Promotion of Physical Activity', supported by over 139 organisations worldwide, including the IOC and enshrined in the Hamburg Declaration. Getting people moving, from whatever individual baseline level, as a gateway to greater PA and exercise (and sport) is the critical priority. Working together, we have a better chance to achieve this ambitious goal by creating the initiatives to do this and influencing the decision-makers to invest in PA for the benefit of all. Achieving this goal will save lives, save money, make people happier and help bring the world together. Here are five key messages being championed by the GA:

- **Promote PA as medicine**. Use influencers and role models in all aspects of life to deliver the message that health, wellness and happiness begin at home. That PA is the best medicine. That prevention is better than cure.
- **Lobbying decision-makers**. Create the toolkits and systems so that all members of the GA can lobby governments, businesses and non-governmental organisations on at all levels to invest in PA to save lives, save money and improve society.
- **Adapting PA to the individual, community and their surroundings**. PA must be tailored to the individual, their age, gender, socioeconomic and cultural realities as well as climatic conditions.
- **Leverage the latest tech**. Work with the big tech, pharma and medical companies and educational establishments to build PA into daily life through wearable devices, smartphones, the internet and the metaverse. Make it easy and fun for people to get into PA through gamification, rewards and community building.
- **A call for more trials on effectiveness and implementation of policies and programs**. Most information in prevention comes from cohort studies, and there is an urgent need for well-designed trials for physical activity in populations and the healthcare system - particularly in respect of underserved minorities.

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