Promoting physical activity in the Eastern Mediterranean Region through a life-course approach

World Health Organization
Regional Office for the Eastern Mediterranean

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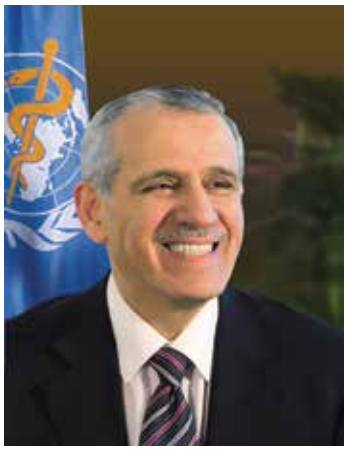

Foreword

This publication was prepared by WHO Regional Office for the Eastern Mediterranean as part of its efforts to address risk factors linked to noncommunicable diseases and, in particular, physical inactivity. A key risk factor for noncommunicable disease, and the fourth leading cause of early death globally, physical inactivity has reached alarming levels in the Region. Globally, the Eastern Mediterranean Region has the second highest level of physically inactive populations among WHO regions and the highest level for women. There is a clear need to take urgent action to reverse this trend.

Now more than ever, Member States should commit to promoting, in a sustainable manner, more active lives, from early childhood and throughout the life course to later years. Concrete actions are needed that are culturally sensitive, as well as gender and age sensitive, and that are responsive to people with special needs.

Addressing physical inactivity requires action on behaviour change through awareness-raising and skills development, as well as action on social and built environments in order to give people the means to be active at all ages. Promoting physical activity throughout the life course requires the involvement of, and joint action by, different sectors, including health, education, employment, urban planning and transportation.

This publication is intended to support decision-makers in their quest for improved population and community health and development. It also provides a useful tool for advocates of physical activity, prevention and control of noncommunicable diseases and community development. It aims to provide evidence-based information on the health risks of physical inactivity and to suggest solutions that can be adopted by Member States.

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WHO Regional Director for the
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Introduction

Noncommunicable diseases are the leading cause of global mortality, accounting for more premature deaths each year than all other causes combined (*1*). In the WHO Eastern Mediterranean Region, they account for 2.3 million deaths per year (*2*). The four main noncommunicable diseases – cardiovascular diseases, cancer, diabetes and chronic respiratory diseases – are the largest contributors to mortality in the majority of countries in the Region. Deaths attributed to cardiovascular disease range from 13% in Somalia to 49% in Oman. Cancer deaths are reported to range from 3% in Somalia and Afghanistan to 20% in Qatar (*2*). There are very high rates of diabetes in the Region; of the 10 countries reported to have the highest prevalence of diabetes in the world, 6 are in the Eastern Mediterranean Region (*3*).

Despite the already enormous burden of noncommunicable diseases, deaths from these conditions are expected to rise by 17% globally between 2010 and 2020 (*4*). Physical inactivity is one of the four key behavioural risk factors, along with tobacco use, the harmful use of alcohol and unhealthy diet. It is estimated that physical inactivity accounts for 3.2 million deaths from these diseases each year (*5*).

In 2004, the global strategy on diet, physical activity and health (*6*) called for countries to address levels of physical inactivity through actions across multiple settings. The development of a national policy framework is necessary to gain appropriate recognition of physical activity as a public health priority, to foster partnerships across all relevant sectors, to secure political commitment and resourcing, and to provide a coherent set of multi-level and multi-sector actions aimed at increasing population levels of physical activity.

Policy-level action to increase physical activity levels was reinforced by the United Nations in 2011 at the High-level meeting of the General Assembly on prevention and control of noncommunicable diseases. A key output of this meeting was a political declaration on the prevention and control of noncommunicable diseases (*7*). This document emphasized that "prevention must be the cornerstone of the global response to non-communicable diseases" and recognized "the critical importance of reducing the level of exposure of individuals and populations to the common modifiable risk factors for non-communicable diseases", including physical inactivity (p.5).

In 2013, the Sixty-sixth World Health Assembly adopted a global action plan for the prevention and control of noncommunicable diseases 2013–2020 (*8*). This plan includes a global monitoring framework with specific global targets. In particular, by 2025, a target has been set for a 25% reduction in the overall premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases between the ages of 30 and 70 years and a halt in the rise of diabetes and obesity. A key objective for achieving this overarching target is a 10% relative reduction in the prevalence of insufficient physical activity.

In 2012, the Regional Committee for the Eastern Mediterranean, WHO's governing body in the Region on which all Member States are represented, adopted a resolution (EM/RC59/R.2) and a regional framework for action on the commitments of Member States to facilitate the implementation of the United Nations Political Declaration, including the proven interventions related to physical activity. The Regional Committee also requested the development of tools, including a guide for Member States on the roles of the different ministries and other partners in multisectoral work towards the prevention of noncommunicable diseases.

Promoting physical activity will have a major impact on reducing the burden of noncommunicable diseases in the Region.

This publication summarizes the prevalence of noncommunicable diseases and physical inactivity in the Eastern Mediterranean Region. A series of case studies of physical activity projects from across the Region was also developed to highlight the types of actions under way across a range of sectors and settings. These are being made available online (see http://www.emro.who.int/entity/health-education/index.html). The primary aim of this publication is to underpin the development of a multisectoral policy and framework for action for the Region on physical activity throughout the life course.

The importance of physical activity for health

Physical activity is a multi-dimensional behaviour comprising sports, recreation, transport-related walking and cycling, as well as activities of daily living (e.g. shopping, cleaning, climbing stairs) (see Box 1). It is a complex behaviour to understand, with known individual, inter-individual, social and environmental determinants which vary by age and gender and across cultures.

Extensive research has established physical inactivity as independent risk factor for noncommunicable diseases. Physical inactivity is ranked as the 4th leading risk factor for premature mortality (*1*) and is 'conservatively' estimated to cause 6–10% of deaths from noncommunicable diseases (*12*).

People who are insufficiently active have a 20–30% increased risk of all-cause mortality compared to those who engage in regular physical activity of moderate intensity. Participation in regular physical activity is associated with a 30% reduced risk of ischaemic heart disease, 27% reduced risk of diabetes, and 21–25% reduced risk of breast cancer and colon cancer (*10*). In addition, regular physical activity lowers the risk of stroke, hypertension and depression, and is fundamental to maintaining a healthy energy balance and body weight.

Sedentary behaviour has also been identified as an independent risk factor for noncommunicable diseases. The amount of time spent in sedentary activities is an increasing problem in the Eastern Mediterranean Region due to reliance on modern means of transport and an increase in the number of hours spent watching television, using the internet and playing computer games.

Research on physical activity in the Region is a relatively new field. Several papers have reported on the associations between physical activity and a reduced risk of overweight and obesity in both adolescents (*13*) and adults (*14,15*). One study has demonstrated links between physical activity and a reduced risk of breast cancer (*16*) and two studies have investigated associations between physical activity and colorectal cancer (*17,18*). Although there are few published studies on the effects of physical activity on noncommunicable diseases from the Region the benefits of physical activity are likely to be similar across populations.

In addition to reducing mortality and morbidity from noncommunicable diseases, increasing population levels of physical activity is associated with a wide range of non-health benefits and promoting higher levels of physical

Box 1. Definition of physical activity

Physical activity is defined as "any bodily movement produced by contraction of skeletal [large] muscles that results in energy expenditure" (*9*). Physical activity can incorporate a wide range of lifestyle, sport and exercise activities.

For children and young people physical activity includes: play, games, sports, walking to school, cycling, and physical education or planned exercise sessions, such as dance classes (*10*).

For adults and older adults, physical activity includes: recreational or leisure-time physical activity, active transport (e.g. walking or cycling), work-related activity, household chores, play, games, and sports or planned exercise sessions such as fitness classes (*10*)[1].

[1] The relationship between physical activity and health is inverse and curvilinear (see http://www.health.gov/paguidelines/report/G1_allcause.aspx#fg13). The broadest range of health benefits are achieved from 'aerobic activities' such as walking, basketball, soccer or dancing. Three key aspects of the 'dose–response relationship' between aerobic physical activity and health are worth noting (*11*).

activity can contribute to a wide range of agendas including:

- a reduction in traffic congestion, noise pollution and CO_2 emissions;
- increased social capital and community connections;
- reduction in anti-social behaviour; and
- increased productivity and economic growth.

Therefore, in addition to health benefits, reducing global levels of physical inactivity will contribute to addressing many of the key social, economic, environmental and development issues of the 21st century (*19*,*20*).

Global recommendations on physical activity for health

In 2010, the World Health Organization published the first global recommendations on physical activity for health (*10*). They were developed with global consultation and represent a high level of consensus on the latest scientific evidence. These public health recommendations provide a summary of the preventive health benefits of an active lifestyle and provide clear statements

Box 2. Summary of the global recommendations on physical activity (*10*)

Young people (5–17 years old)

To improve cardiorespiratory and muscular fitness, bone health, cardiovascular and metabolic health biomarkers and reduced symptoms of anxiety and depression, the following are recommended.

- Children and young people should accumulate at least 60 minutes of moderate to vigorous-intensity physical activity daily.
- Most daily physical activity should be aerobic.
- Vigorous-intensity activities, including those that strengthen muscle and bone, should be incorporated in daily physical activity at least 3 times per week.

Adults (18–64 years old)

To improve cardiorespiratory and muscular fitness and bone health and reduce the risk of noncommunicable diseases and depression the following are recommended.

- Adults should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week, or at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week, or an equivalent combination of moderate- and vigorous-intensity activity.
- Aerobic activity should be performed in bouts of at least 10 minutes duration.
- Muscle-strengthening activities should be done on 2 or more days a week.

Older adults (65 years old and above)

To improve cardiorespiratory and muscular fitness, and bone and functional health, and reduce the risk of noncommunicable diseases, depression and cognitive decline, the same recommendations apply as for adults 18–64 years old but with the following provisions.

- Adults of this age group with poor mobility should perform physical activity to enhance balance and prevent falls on 3 or more days per week.
- When adults of this age group cannot do the recommended amounts of physical activity due to health conditions, they should be as physically active as their abilities and conditions allow.

on how much physical activity is required including:

- frequency (how often to be active);
- duration (how long to be active); and
- types of activity for health.

Recommendations on physical activity have been developed separately for different population groups:

- early years (<5 years)
- young people (5–17 years)
- adults (18–64 years)
- older adults (65+ years).

How can the recommendations be used?

The WHO global recommendations (see Box 2) provide countries with an internationally agreed statement on the dose–response relationship between physical activity and health. Countries can adopt the global recommendations as part of the development of national policy and strategic action plans.

National recommendations on physical activity can also be used:

- as the basis for developing public education campaigns and health 'messages' on physical activity;
- to inform and engage other sectors outside of health, such as sport, transport, environment, private sector and the community; and
- to guide the planning of programmes, policy and other actions aimed at increasing the level of the population meeting the national recommended levels of physical activity.

Physical activity prevalence in the Eastern Mediterranean Region

The monitoring of population levels of physical activity underpins the development of national policy and action. Moreover, the systematic and timely reporting of data on national levels of physical activity can support the evaluation and monitoring of progress towards national goals and targets.

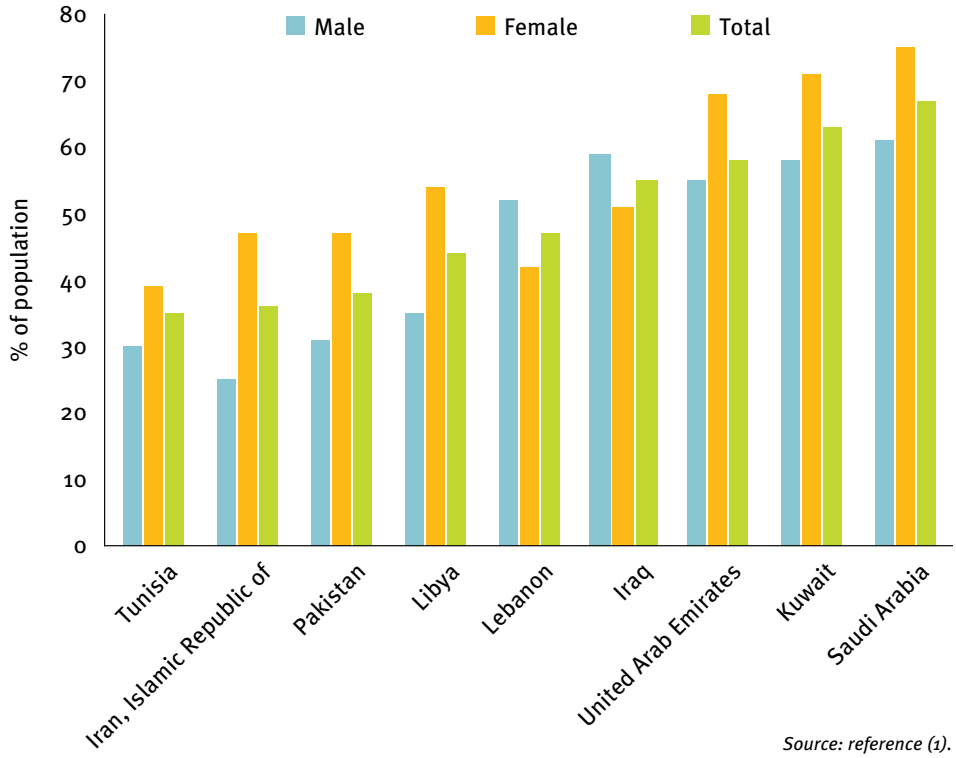
Surveillance tools for the measurement of physical activity in adults and young people have advanced substantially over the past decade. The most common approach for large-scale assessment of physical activity is to use survey instruments. These self-report tools require the respondent to recall and report physical activity undertaken in different domains (or intensity) during a specified period. (See Boxes 3 and 4 for details of the most common international instruments in wide use.)

Adults

Based on the global status report on noncommunicable diseases 2010 (*1*), age standardized prevalence of insufficient physical activity in adult aged 15+ years, is only available from 9 out of 22 countries in the Eastern Mediterranean Region. Country-level data are summarized in Fig. 1. These data show a wide variation in the prevalence of physical inactivity across the Region.

The highest levels of insufficient physical activity are seen in Saudi Arabia and Kuwait, where over two thirds (60%) of adults are classified as insufficiently active.

In most countries, with the exception of Iraq and Lebanon, men are more active than women.



Source: reference (1).

Fig. 1. Prevalence of insufficient physical activity[a] in adults (15+ years) by country, 2008

[a]Defined as less than 5 times 30 minutes of moderate activity per week, or less than 3 times 20 minutes of vigorous activity per week, or equivalent.

How do adults in the Region compare with other regions?

The global status report on noncommunicable diseases 2010 (*1*) provides estimates of insufficient physical activity in the six WHO regions of the world. It shows that prevalence of insufficient physical activity was highest in the regions of the Americas and the Eastern Mediterranean (Fig. 2). In both of these regions, almost 50% of women were insufficiently active, while the prevalence for men was 40% in the

Box 3. Surveillance tools for adults

There are two commonly used instruments for assessing in details physical activity among adults: the Global Physical Activity Questionnaire (GPAQ) and the International Physical Activity Questionnaire (IPAQ). Both self-report tools have been extensively tested in a wide range of countries. Both measures can be administered through interview or questionnaire.

GPAQ (*21*)

This tool assesses physical activity undertaken in three domains:

- work
- travel to and from places
- recreation.

IPAQ (*22*)

This instrument assesses physical activity across all domains by asking for time spent in different intensities of activity:

- moderate intensity
- vigorous intensity
- walking.

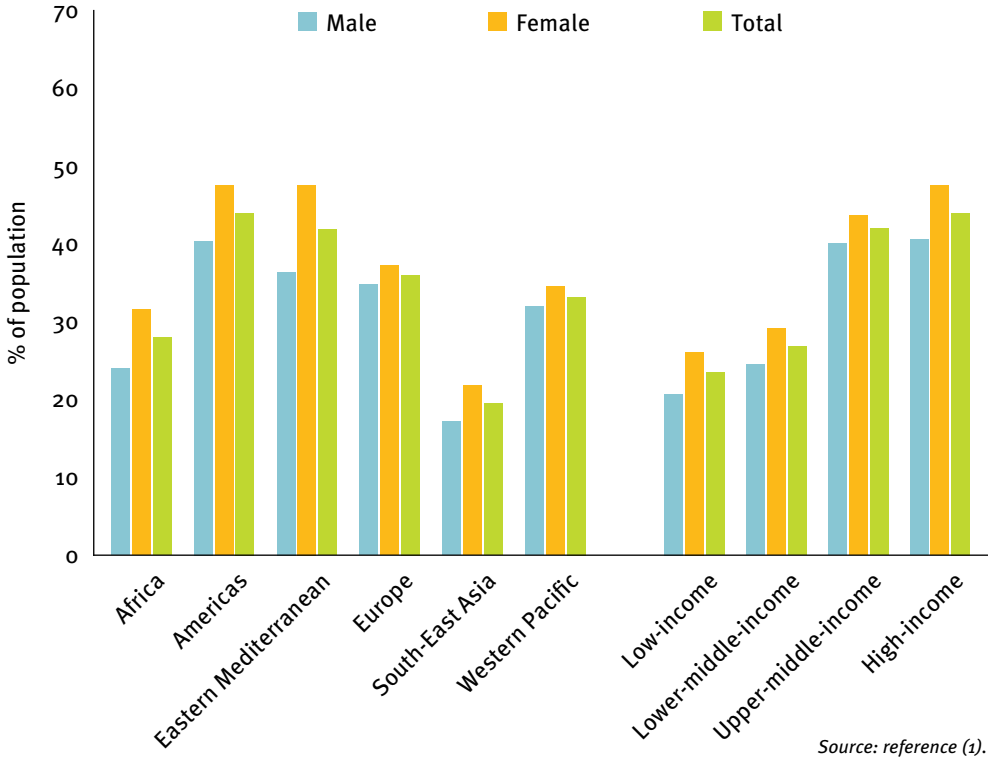


Fig. 2. Prevalence of insufficient physical activity in adults (15+ years) by WHO region and World Bank income group, 2008

Americas and 36% in the Eastern Mediterranean. The average global prevalence of insufficient physical activity is 28% for males and 34% for females.

Adolescents

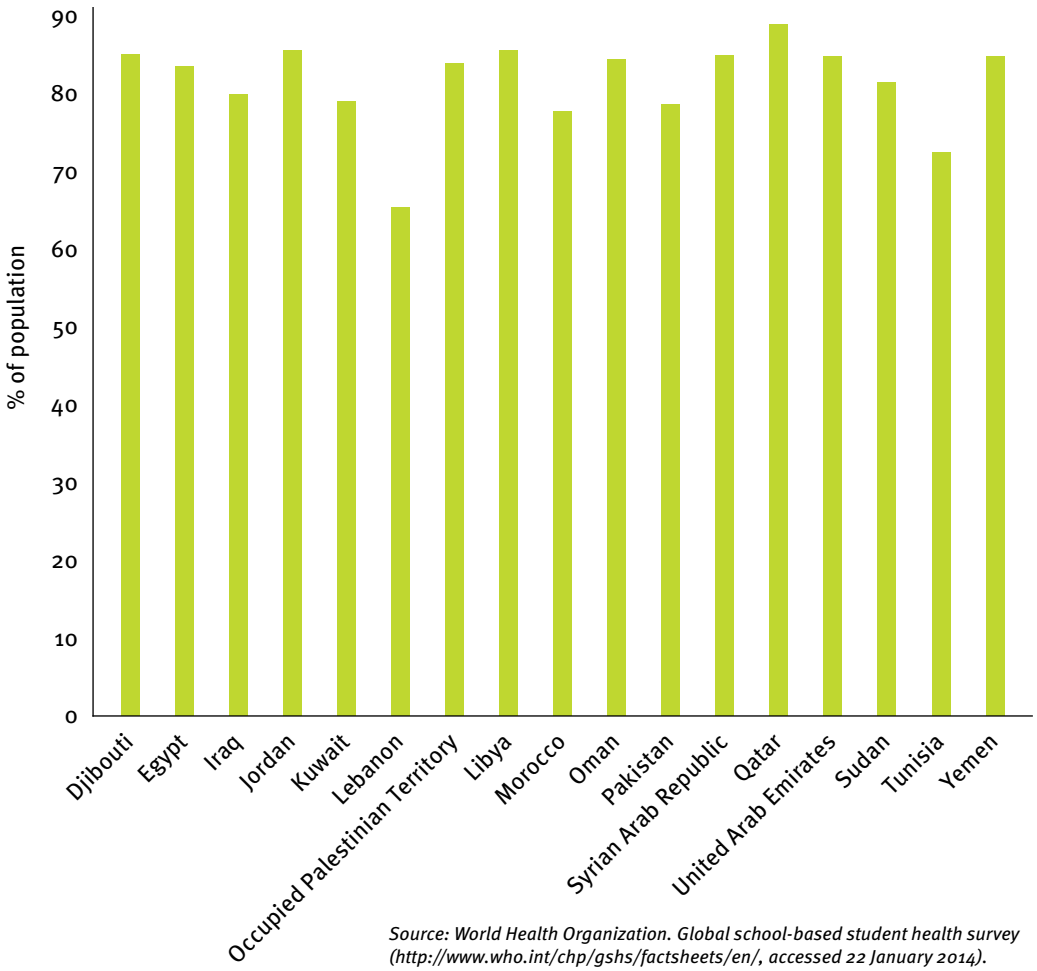
The monitoring of physical activity among adolescents (13–15 year olds) is well developed within the Eastern Mediterranean Region. Data collected as part of large international collaborations, such as the Global school-based student health survey (GSHS), show that physical inactivity is a major concern.

On average, only 21% of all adolescents meet the global recommendations of at least 60 minutes per day on 5 or more days of the week (see Fig. 3). This ranges from 11% in Sudan to 35% in Lebanon. In all countries, excluding Sudan, boys are more active than girls. On average 26% of

Box 4. Surveillance tools for adolescents

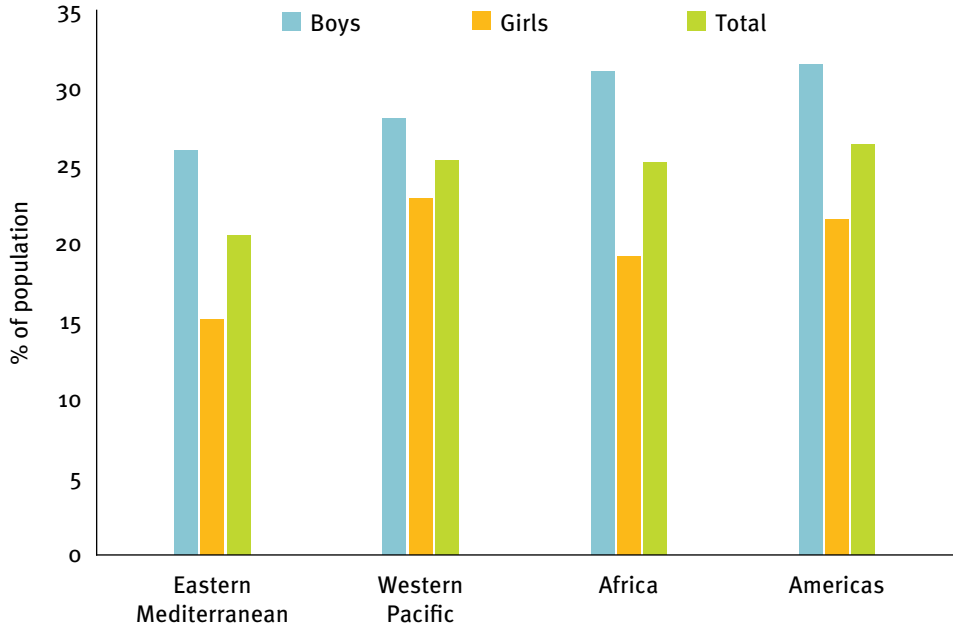
Two well-established surveys for the assessment of physical activity among adolescents are the Global school-based student health survey (GSHS) and the Health behaviour in school-aged children (HBSC) survey. The HBSC survey is conducted in over 40 countries, mostly in Europe. The GSHS has been implemented in over 70 countries, including 17 countries in the Eastern Mediterranean Region.

Data shown in this report are from the GSHS. This survey assesses the proportion of adolescents who were active for a total of at least 60 minutes per day on 5 or more days during the past week.



Source: World Health Organization. Global school-based student health survey (http://www.who.int/chp/gshs/factsheets/en/, accessed 22 January 2014).

Fig. 3. Prevalence of physical inactivity among adolescents (13–15 year olds) in countries of the Eastern Mediterranean Region



Source: World Health Organization. Global health observatory data repository (http://apps.who.int/gho/data/view.main.2482?lang=en, accessed 22 January 2014).

Fig. 4. Regional prevalence of adolescents (13-15 year olds) achieving at least 60 minutes of physical activity on five or more days of the week

boys and 15% of girls meet the recommendations for this age group.

How do adolescents in the Region compare with other regions?

It is useful to compare current levels and progress on physical activity in other regions. Comparable data on physical inactivity in adolescents (aged 13–15 years) from the GSHS are available from 13 countries in the Western Pacific Region, 5 countries in the African Region, and 16 countries in the region of the Americas (see Fig. 4).

The Eastern Mediterranean Region is the region with lowest levels of physically active adolescents. The overall prevalence for the Region is 21%, in comparison to 25% in the Western Pacific, 25% in Africa, and 26% in the region of the Americas.

Determinants of physical activity

What factors and conditions influence physical activity?

A wide range of factors influence the lifestyle-related behavioural choices that people make, which in turn influence their health. Socio-ecological models provide a comprehensive framework for understanding the multiple and interacting determinants of health behaviours (see Fig. 5).

Physical activity behaviour has multiple levels of influence including individual, interpersonal (social, cultural), organizational, community (including physical environment), and public policy. National policy and programmes should aim to address the determinants of physical activity at each level.

Source: Adapted from reference (23).

Fig. 5. A socio-ecological model for physical activity

Understanding the determinants of physical activity, as well as the principles of behaviour change, is important for informing the development and implementation of appropriate policies and interventions in the Region.

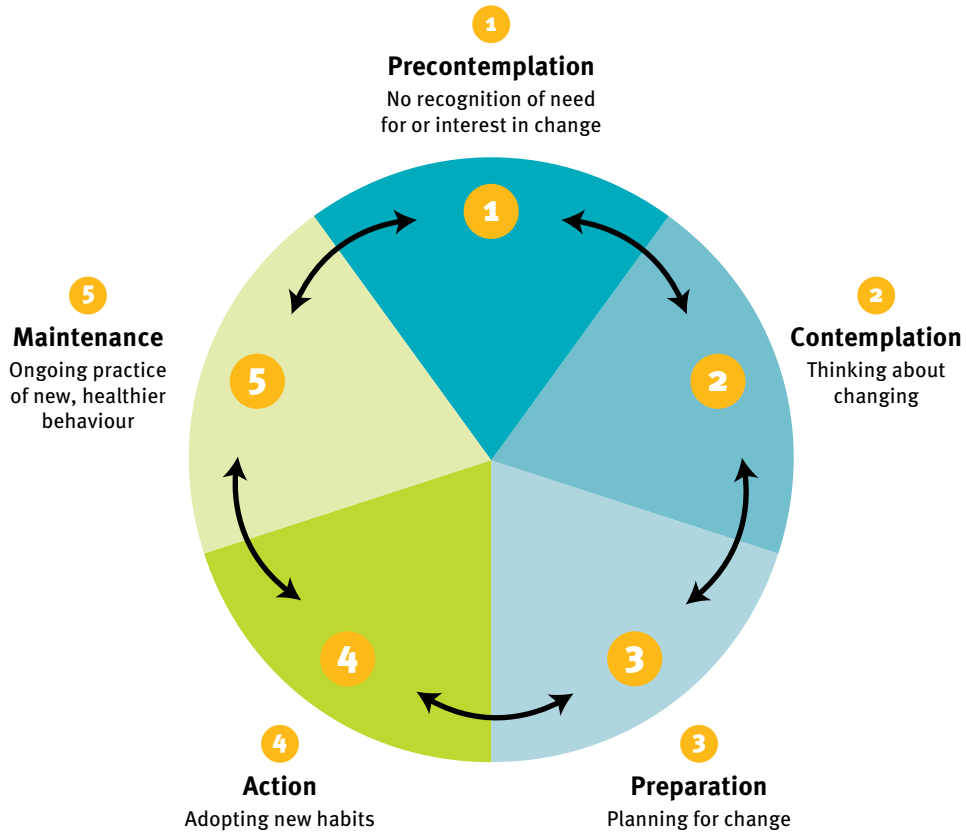
Barriers to physical activity in the Eastern Mediterranean Region include:

- competing family demands, such as childcare and household chores;
- long working hours;
- heavy school workloads;
- other competing priorities, such as socializing;
- lack of affordable leisure facilities;
- lack of outdoor spaces, such as parks, to be physically active;
- inadequate public transport systems and heavy reliance on cars;
- lack of 'walkable' neighbourhoods;
- feeling unsafe; and
- climate.

Women in the Region may be facing barriers to physical activity because of the traditional roles they play within society. Such barriers can include: responsibility for childcare and household chores, which may give them less time to participate in physical activity, lack of social and community support for women's participation in physical activity, and preconceived ideas about physical activity and reproductive health.

Supporting behaviour change

Understanding how lifestyle behaviours are influenced and how to change behaviour underpins the development of effective national action.



Source: reference (24).

Fig. 6. The trans-theoretical model

Understanding the barriers to physical activity can help plan and deliver actions to support behaviour change

Research has shown that behaviour change is a stepped process and that each step requires a different set of supports. Health promotion actions and programmes should aim to help people move through each step to change from being 'inactive' to 'active.' However research also shows that helping whole populations change requires multiple strategies, each addressing different population groups and targeting the key barriers.

Fig. 6 shows the steps of behaviour change from a popular model which was first developed in tobacco control. It has now been successfully applied to understanding physical activity.

The model shows five steps and individuals are thought to progress through each step at varying rates. They can move back and forth before reaching the 'maintenance' stage where the new healthy behaviour is sustained. This model can help in the design of programmes and policies because it focuses attention on the needs and barriers to physical activity for people in each stage of the behaviour change process.

Summary of current national actions on physical activity

Policy mapping

A policy mapping exercise was undertaken to assess the status of national policy and action on physical activity in all 22 countries of the Region. Using a new standardized tool, the Health Enhancing Physical Activity (HEPA) Policy Audit Tool (PAT), representatives from each country were contacted and requested to complete, as best as they could in the time available, details of national action on physical activity across a set of key areas. The PAT items captured information from each country on the following areas.

1) National policy framework: policy and action plan content and development

Items identified key relevant national policy documents (recent past and present) and their respective action plans (where available) from across all relevant sectors, including health, sport, transport, education, and environment, and any other sector nominated by the respondents; additional items assessed progress in monitoring and evaluation, goals and targets and partnerships.

2) Policy implementation

Items sought information on leadership for physical activity (at national and local level), cross sector collaboration and community involvement, and examples of successful and less successful actions.

The collecting of standardized information from across countries provides a "snap shot" of the current status of public health actions addressing physical inactivity. The findings also help identify the areas of progress and success within countries, as well as the common challenges they face in starting and scaling up a national response for physical inactivity as part of their noncommunicable disease prevention and control agenda.

Methods

The mapping exercise was undertaken between September and December 2013. The HEPA PAT was provided in hard copy and electronic versions in English, French and Arabic and accompanied with guidance notes.

Primary focal points in the ministries of health and WHO country offices were identified as well as key individuals either in other ministries or academic institutions. Focal points were invited to complete the PAT and seek contributions and information from other ministries and relevant agencies (such as the National Olympic Committee or civil societies engaged in the physical activity agenda). Time limitations did not allow extensive engagement and in some countries the PAT was completed without collaboration or feedback from other sources. In two countries the PAT was completed by a leading academic.

In most countries the information submitted in the PAT was not officially approved or endorsed by the Government, therefore the results presented here are considered to be preliminary and provide only an indication of the progress and issues related to promotion of physical activity.

Further work will continue in order to complete the exercise, allow a more comprehensive consultation period and multisector engagement as well as clearance of the final information. Some countries were unable to complete PAT in the time required and further opportunities to engage these countries will be sought.

Results

The HEPA PAT was submitted for 12 countries in this initial round. The tool was completed either by a focal point in the Ministry of Health, by a leading academic with good knowledge of the field, a focal point in the WHO country office, or a combination. Engagement and feedback from other sectors was sought in most countries but not all information was received in time for inclusion in the submitted report in the time available. A summary of the key findings is presented below by key themes.

1) National policy context

Seven of the 12 countries reported having a national health policy which includes physical activity. Three countries (Bahrain, Iraq and occupied Palestinian territory) have national noncommunicable disease policy or strategic plans which have an objective focused on physical activity. Four countries (Morocco, Oman, Qatar and Saudi Arabia) have a specific policy on the promotion of healthy lifestyles (Morocco) or a national strategy addressing both nutrition (diet) and physical activity. Two countries reported that a national policy and action plan on physical activity was under development (Islamic Republic of Iran) or pending adoption by the national government (Kuwait). The United Arab Emirates did not report a national policy document in the health sector addressing physical activity but did report the details of the national strategic plan of the Dubai Sports Council which has a major initiative to promote sports and physical activity in Dubai (Dubai Pulse).

Country responses also identified the presence of legislation that sets out the requirements for the physical education curriculum in schools across different grades (e.g. Egypt, Morocco, occupied Palestinian territory) and a policy mandating the inclusion of physical education for both girls and boys (Saudi Arabia).

Some countries identified policy documents from other sectors outside of health that include reference to, and calls for, action on physical activity. Examples included policy documents on urban design, sport and transport.

2) Scope of national policy on physical activity

Countries provided details of the settings and population groups that are addressed in the key national documents. These results are shown in Table 1. Most policy documents state actions that address the life course and multiple settings

3) Leadership and multisector engagement on physical activity

Countries were asked to indicate which agency was providing leadership for physical activity and whether there was a national multisector coordinating committee. Other items sought information on the level of policy integration and partnerships in the delivery of programmes and actions on physical activity within the country.

Three countries (Islamic Republic of Iran, Qatar and Kuwait) reported a national coordinating committee for physical activity. One country (Jordan) reported that there was a committee but that it no longer exists. Two countries (Bahrain and occupied Palestinian territory) reported national noncommunicable disease committees under which physical activity is addressed and coordinated.

The Ministry of Health was reported to be the lead agency in many countries although in the Emirate of Dubai, the Dubai Sports Council has provided the leadership in recent years under the National Sports Strategy and Dubai Pulse. In Egypt the leadership was with the ministries of sport, youth and education. In Oman, the National Olympic Committee was providing leadership under the supervision of the Ministry of Sports.

Most countries reported some degree of partnership across different ministries, notably health, sports, youth and education. There was less frequent mention of the integration and partnership with ministries of transport, environment and urban planning.

4) National surveillance, recommendations, goals and targets on physical activity

National recommendations on physical activity

Two countries (Oman and Qatar) reported having developed their own national physical activity recommendations. Three countries (Bahrain, Kuwait, Saudi Arabia) reported the use of international guidelines and recommendations. Bahrain reported the formal adoption of the WHO global recommendations on physical activity and Kuwait has recommended the adoption of the global recommendations in their draft national policy pending adoption by the government.

National targets for physical activity

Five countries reported the presence of national targets for either increasing population levels of physical activity or reducing the prevalence of sedentary behaviour. One country has set targets to both increase physical activity and reduce sedentary behaviour.

National surveillance of physical activity

Seven countries reported the collection of national physical activity surveillance data (Bahrain, Islamic Republic of Iran, Kuwait, Oman, occupied Palestinian territory, Qatar, Saudi Arabia). Five countries reported undertaking the WHO STEPs survey (Islamic republic of Iran, Kuwait, Palestine, Qatar, Saudi Arabia). These data provide an estimate of the proportion of the adult population that currently meet the global recommendations of at least 150 minutes of moderate physical activity per week.

There are limited trend data from countries in the Region. Only Saudi Arabia has undertaken the STEPS survey on more than once occasion (2005 and 2013). Several other countries have plans for a second survey.

Other national surveys and cohort studies have been conducted which provide some additional data on participation in adults and young people. For example, the Arab Teen Lifestyle Survey (ATLS) and the Coronary Artery Disease study have been conducted in Saudi Arabia. Oman reported that data were collected on physical activity in the World Health Survey in 2008, the Oman Global School-Based Student Health

Table 1. Coverage of national policy documents by settings and population groups

	Settings															Population groups											
	Kindergarten	Primary schools	High schools	Colleges/universities	Primary health care	Clinical health care	Workplace	Senior/older adult services	Sport and leisure	Transport	Tourism	Environment	Urban design/Planning	Early years	Children and young people	Older adults	Workforce/employees	Women	People with disabilities	Clinical populations with chronic disease	Sedentary/the most inactive	Low socioeconomic groups	Families	Indigenous people	General population
Bahrain	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓		✓	✓	✓	✓	✓	✓	✓		✓		✓
Iran, Islamic Republic of (under development)		✓	✓		✓	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓		✓		✓	✓		✓
Iraq		✓			✓				✓	✓															✓
Kuwait[1] (not yet adopted)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Morocco		✓	✓	✓	✓	✓	✓		✓	✓		✓	✓		✓	✓	✓	✓		✓	✓	✓	✓		✓
Oman		✓	✓		✓		✓		✓	✓	✓				✓	✓	✓			✓	✓				✓
Occupied Palestinian territory		✓	✓		✓				✓						✓										
Qatar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓
Saudi Arabia		✓	✓	✓	✓			✓	✓			✓			✓	✓		✓				✓	✓		✓
United Arab Emirates[2]		✓	✓	✓			✓		✓						✓	✓	✓	✓	✓		✓	✓	✓	✓	✓

[1] Additional settings noted included: desert, cooperative societies and dewaniyas
[2] Responses reflect the coverage of the Dubai Sports Strategy and programme (Dubai Pulse) not a national health policy document

Survey (2005) and several regional surveys, for example in Nizwa and Sur.

5) Examples of physical activity programmes and actions

Countries were asked to identify examples of programmes and actions under way to promote and support physical activity. The responses indicate that there are examples of actions under way or planned in countries to promote physical activity across all key settings, using all key health promotion strategies and aimed across the life course. The examples given include:

- school-based programmes
- daily physical activity breaks in classrooms and/or before school
- community-based walking programmes (including mall walking)
- celebration of World Physical Activity Day
- car-free days
- education and training programmes for health professionals
- whole-of-community programmes
- increased provision of sports facilities
- provision of sports and recreation facilities for women in parks and recreation centres
- bike hire schemes
- pedometer walking programmes (using social media)
- shared use of schools facilities
- pedestrian zones and car-free zones
- building of walking paths and playgrounds
- media and education programmes
- assessment and promotion of physical activity in primary health care (in obese children and adults)
- physical education curricula for girls
- enhancing opportunities for physical activity in partnership with the private sector.

Challenges in scaling up national action on physical activity

Countries were asked to identify key challenges or difficulties in relation to developing and implementing national action on physical activity. The responses are grouped under 10 key themes.

1) Leadership and coordination

Several countries identified the need for strong leadership and the difficulty in establishing and maintaining communications and integrated actions across government ministries and with sectors outside of heath. Notably only three countries reported the existence of a formal national committee while other countries indicated that physical activity was led by a subcommittee of the national noncommunicable diseases committee. The process of working across sectors and integrating policies is difficult and time consuming. It requires strong leadership and support. There are examples around the world where such structures have been sustained over time and it is important that the lessons and success from within and outside the Region are shared.

2) National policy

For countries without a national policy a key challenge was the absence of a clear and strategic focus on the issue of physical inactivity. For some countries with a national policy there was concern that there had been insufficient consultation and engagement in the development and that the policy should be strengthened.

3) Funding

A number of countries reported that the insufficiency of funding directed toward actions to promote physical activity is a challenge to scaling up action.

4) Supportive environments

Several countries reported that environments and settings are not supportive of an active lifestyle and do not encourage physical activity. Specifically, school facilities are not supportive and do not provide sufficient equipment and opportunities for young people to be active. Urban design is also not supportive. Examples cited include the absence of safe footpaths and pavements for walking, as well as noise, air pollution and traffic. In addition, the environment was identified as being difficult to change as this requires engagement, commitment, policy and resources to be directed towards changing the current situation and making investments for the future in urban infrastructure.

5) Cultural norms and traditions

Several countries identified traditional norms and cultural values as not supportive of physical activity, although no specific examples were given.

6) Knowledge

Lack of knowledge was identified as a challenge. This may refer to lack of knowledge, both within and outside the health sector, about the importance of physical activity in prevention and control of noncommunicable diseases. It may also refer to the lack of knowledge and understanding in the community about the importance of being active, as well as how to be active, what is required and where activity can be done in ways that are enjoyable. This challenge can be addressed through more actions on public education, professional development in health and non-health sectors, as well as mass media campaigns. One country response noted that the use of mass media approaches has been limited in the Region.

7) Integration of physical activity into health systems

Several countries noted the absence of a systematic approach to promoting physical activity in primary and secondary health care. This can be addressed by implementation of successful approaches that have been used elsewhere in the Region and worldwide. Initiatives are being developed to provide resources and training to assist countries in this domain. Medical and continuing education curricula, as well as the curricula of nursing and allied health areas, should be reviewed to ensure that adequate attention is paid to physical activity as a primary and secondary treatment.

8) Quality of physical education

Countries identified the absence or inadequate provision of quality curricula for physical education (PE) as a challenge to the promotion of physical activity. This is particularly important for girls as lack of participation in PE in the school years does not support women being active in later life. Not only should education policy include specification on the frequency and duration of PE classes but there should also be requirements and assessment of the quality of PE provided to ensure it is directed towards increasing participation levels and lifelong enjoyment of physical activity.

9) Physical activity behaviour

The difficulty in changing lifestyle behaviours was noted as a challenge. It is clear that physical activity can be done in different ways and across different settings. However, it is also clear that there are many barriers that prevent or deter individuals from being more active. Effective actions to change behaviour require a combination of strategies implemented over time. Evidence from countries in other regions shows that population levels of physical activity

levels can be increased if national actions are coordinated and sustained over time.

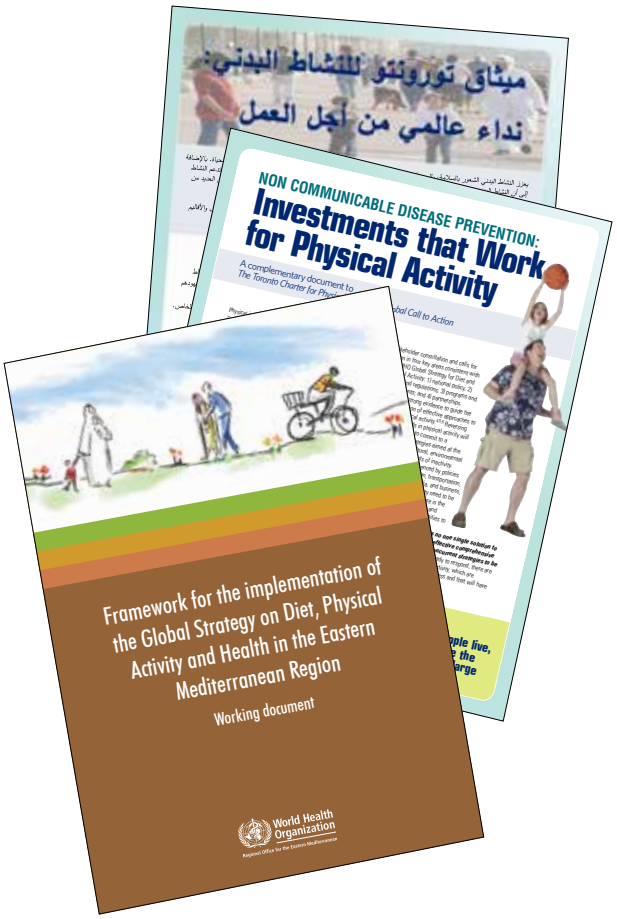
10) High turnover of leadership and staff

Several responses identified the context of political instability, and consequent high turnover of leadership and staff in relevant sectors, in their countries as a challenge to progress.

What works?

Seven best investment areas for national action to promote physical activity

Due to the many and varied interacting influences on physical activity, no one approach to physical activity promotion is likely to be sufficient on its own. A range of documents have been produced which provide guidance on developing a comprehensive strategy to increase population levels of physical activity.



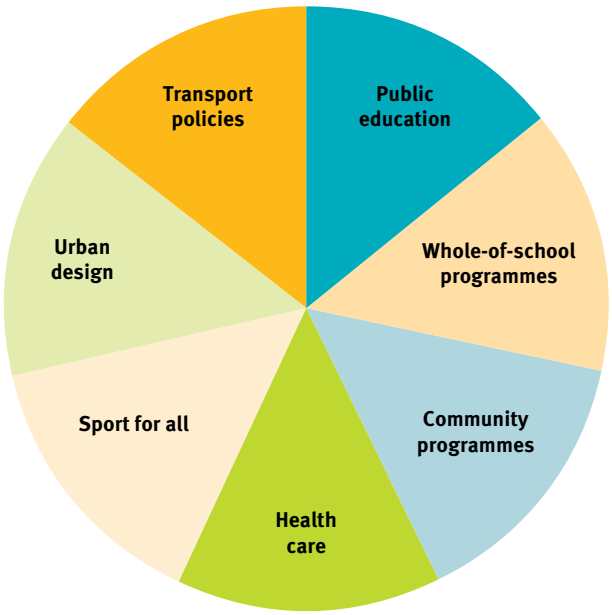
Seven areas for action have been identified which are supported by good evidence of effectiveness and have worldwide applicability. Fig. 7 illustrates the seven areas.

Investment in all seven areas represents a comprehensive approach to physical activity promotion which, if implemented on a sufficient scale, will make a significant contribution to reducing the burden of noncommunicable diseases and promoting health and well-being.

Whole-of-school programmes

School are an important setting for influencing the physical activity behaviour of children and young people. Whole-of-school approaches involve:

- physical education classes;
- suitable physical environments for physical activity;
- supporting walk/cycle-to-school programmes;



Source: reference (24).

Fig. 7. The 7 best investment areas for national action to promote physical activity (25)

- provision of resources to support structured and unstructured physical activity throughout the day (e.g. play and recreation before, during and after school); and
- extracurricular activity.

Alharaka baraka programme in Saudi Arabia encourages children to take care of their health

Implementing an effective whole-of-school approach to physical activity promotion will require the support of staff, students, parents and the wider community. Successful programmes of this kind include Alharaka Baraka (Saudi Arabia) while the King Abdullah II Prize for Fitness (Jordan) complements the regular curriculum (see Box 5).

Transport

Increasing walking and cycling for transport, often called 'active transport' is a practical and sustainable way to increase physical activity on a daily basis. In addition, increasing walking and cycling, particularly for short trips in urban areas will achieve co-benefits, such as improved air quality, reduced traffic congestion, and

Box 5. King Abdullah II Prize for Fitness, Jordan

The King Abdullah II Prize for Fitness is a physical fitness promotion programme intended to complement the regular physical education curriculum for children aged 9–17 years. The main aim of the programme is to encourage students to participate in physical fitness activities and to improve their fitness levels. Fitness tests are conducted before and after participation in the programme and a financial award is given to all students who achieve the 'gold' level in all components of fitness (muscular endurance, aerobic, flexibility, agility and speed).

Award schemes are an incentive for children to take part in physical activities

A school-based programme in Yemen (left) and the Let's rise project in Oman (right) encourage physical activity for girls and boys

reduced CO_2 emissions. Promoting walking and cycling requires a range of strategies including:

- provision of paths for walking
- provision of cycle paths (off road or on road)
- measures to increase pedestrian and cycling safety
- improved public transport infrastructure
- measures to promote safety and comfort (e.g. trees, shade, rest stops)
- provision of end-of-trip facilities (e.g. bicycle storage)
- bicycle hire schemes (such as in London, Paris, Tehran)
- public education programmes to promote the benefits of active transport
- promotional programmes in schools, communities and worksites aimed at changing transport choices towards cycling and walking (see Box 6).

Health care

Doctors, nurses, physiotherapists and other health care professionals are an important source of health advice for most people. By providing positive messages and encouragement for patients to be more active, health care professionals have the potential to influence the behaviour of large proportions of the population. A brief assessment of, and advice on, physical activity given to patients by their health care provider is a powerful and effective intervention. Health care programmes that link patients with community-based physical activity programmes

Box 6. Bicycle hire, Islamic Republic of Iran

Tehran, the capital city of the Islamic Republic of Iran, has introduced a bicycle sharing scheme, funded by Tehran's municipal government. The scheme aims to reduce congestion on the streets of Tehran and decrease pollution. Twelve bicycle 'hubs' are positioned across the city, each housing around 40 bicycles. Over 6000 people have subscribed to the scheme which allows the use of a bicycle for up to 4 hours at a time.

The city of Isfahan has developed a similar scheme and the city-wide travel card includes the option of bicycle hire, along with use of the train, tram and buses.

Twelve 'hubs' are positioned across Tehran for people to hire bicycles provided by the city

can provide the patient with local opportunities to be physically active and help patients develop a sustained lifestyle change.

The benefits of regular physical activity extend beyond primary prevention of noncommunicable diseases and include secondary and tertiary prevention of chronic disease. Physical activity is recommended as part of treatment and rehabilitation for patients with cardiovascular disease, diabetes and cancer. A comprehensive approach to physical activity promotion in the health care setting should include primary, secondary and tertiary care (see Box 7).

Box 7. Exercise is medicine, Kuwait

"Exercise is medicine" is a global initiative aimed at encouraging primary care physicians and other health care providers to integrate physical activity into standard care for patients. This may include developing treatment plans for patients which incorporate physical activity and/or referring patients to a qualified fitness instructor or other health professional for physical activity counselling.

An "Exercise is medicine" task force has been established in Kuwait to examine the mechanisms for integrating "Exercise is medicine" into the health care system.

Urban design

How cities and urban centres are designed can provide opportunities for physical activity or present barriers to being physically active. Urban planning and design regulations which require mixed-use zoning and highly connected street networks make it easier for people to walk and cycle to destinations. Places need to be convenient and accessible if people are to walk and cycle to them. In addition, the provision of adequate access to public open space, parks and sports facilities with appropriate recreation facilities is important for supporting active recreation (see Box 8). The design features of public open space are also important as they

Box 8. Wadi Hanifa development, Saudi Arabia

Wadi Hanifa is a valley of over 100 km in length which runs through the capital city Riyadh. In 2001, with a grant from the Saudi government, a project commenced to restore and develop the Wadi Hanifa area. The primary aim of the project was the restoration of the natural environment. However, a secondary outcome was the creation of a recreational area which supports physical activity for the whole community.

Communities can be encouraged to take part in physical activity through simple redesign of urban recreation areas, such as the Wadi Hanifa development in Saudi Arabia

influence how a space is used and whether this usage will be active or passive.

Sport for all

Participation in sporting activities is an obvious and enjoyable way to be active. However, the focus should not only be on competitive and elite performance. The development of "sport-for-all" policies and programmes for all ages and abilities can make an important contribution to increasing physical activity levels. Ideally, all sports clubs should provide a range of activities that will appeal to diverse population groups and encourage lifelong participation.

Provision of coaching and training opportunities is important for skill development. However providing enjoyable physical activity sessions should also be a priority for sports programmes, in order to broaden engagement and sustain participation. Many countries have youth and sports organizations to promote physical activity.

Community programmes

Whole-of-community approaches to physical activity are more successful than a single programme to increase population levels of physical activity. Implementing a range of interventions and integrating policies, programmes and public education across a range of settings will provide the greatest potential for influencing the physical activity behaviour of large numbers of people. A number of countries in the Region have implemented such approaches including Oman and the United Arab Emirates (see Boxes 9 and 10).

Public education

Public education is important for increasing knowledge of the health benefits of physical activity, raising awareness of opportunities to be physically active, motivating people to be more active, and shifting community norms.

Public education can take many forms including:

- printed resources, such as leaflets
- television and radio
- websites
- text messaging
- social networking (see Box 11)
- outdoor billboards and posters
- point-of-decision prompts (e.g. stairwells)
- mass participation events(e.g. 5 km walks, road closures).

Box 9. The Nizwa healthy lifestyles project, Oman

The Nizwa healthy lifestyles project is a community-based project for the primary prevention of noncommunicable diseases and the promotion of healthy lifestyles. The project focuses on four key aspects of health: physical activity; healthy eating; tobacco use; and prevention of accidents (traffic and household).

Key components of the programme include the 'Move for Health' programme, building supportive environments for physical activity, awareness-raising campaigns, and increasing the capacity of health care professionals to promote physical activity.

Community mobilization is a good way to raise awareness and promote physical activity for all age groups

Box 10. Dubai Pulse, United Arab Emirates

Dubai Pulse is a multi-component initiative to promote physical activity to all segments of society, with the aim of reducing diseases and promoting physical and psychological health. The project focuses solely on physical activity promotion, and incorporates a wide range of activities including leaflets, a sports destination map, community events, such as Dubai swims, Dubai walks and Dubai cycle rides, and employee sport competitions. The Dubai Sports Council also organizes a comprehensive promotional campaign and a range of mass participation events to celebrate World Day for Physical Activity on 6th April.

Fun and recreation are powerful motivators for physical activity

Working together

Regular physical activity is recognized as promoting good health, preventing disease and enhancing wellbeing, for individuals and for whole communities. Yet, over the past few decades economic, technological and social changes are leading us towards environments and community norms, values and behaviours which do not support physically active lifestyles. Implementing national strategies to increase population levels of physical activity levels is as important to public health as strategies to address tobacco use, lowering hypertension and cholesterol and preventing obesity.

Given the strong evidence on the need to act, and the good evidence of the necessary solutions, national policy should include a comprehensive strategy and action plan aimed at implementing what we know can work to increase levels of physical activity. There is, however, across many countries and in the Eastern Mediterranean Region in particular, a knowledge–action gap on this issue. Progress is insufficient and too little is being done to promote opportunities and environments to provide for active, healthy living for all.

International experience has shown that some of the barriers to effective national action on physical activity include the following:

Box 11. Mass media campaign, Bahrain

The health promotion campaign in Bahrain focuses on four aspects of a healthy lifestyle: stress management, healthy diet, avoiding smoking and physical activity. The campaign targets the whole population of Bahrain, as well as specific subgroups, including young people, adults, older adults, families, workforce/employees, people with disabilities, women and the most inactive. Key elements of the campaign include:

- social media, including Twitter, Facebook and Instagram
- newspaper articles
- websites
- Bahrain national television and radio channels.

- absence of strong leadership for action on physical activity;
- absence of necessary political commitment;
- difficulties in engaging and working together across multiple sectors;
- insufficient allocation of fiscal resources towards promoting physical activity;
- underdeveloped workforce with the necessary skills and knowledge;
- absence of a national policy, clear targets and an implementation (action) plan.

Bridging the knowledge–action gap and addressing (reducing) the above barriers is essential and there are examples of success around the world. For example, in Finland a large multisectoral coordinating committee has been setting the agenda and providing accountability on physical activity for over a decade. With representatives from across all government ministries, the national coordinating committee provides the opportunity to plan, inform and collaborate across government portfolios and sectors on physical activity initiatives. Levels of physical activity in Finland are amongst the highest in Europe and the world.

National and state level "taskforces" have been set up in other countries and can provide a key role in the early development of national action. Establishing a high-level committee can be a very strong signal of the level of political commitment and importance given towards addressing physical inactivity. To engage and sustain multi-sector commitments it is useful to highlight the multiple health and non-health (or co-benefits) that can result from more active societies. These co-benefits are outlined in earlier in this report.

Developing a national policy and action plan on physical activity is core to a clear and coordinated response. Guidance on developing effective national policies for physical activity is outlined in the Global strategy on diet, physical activity and health (*6*) and related advice on its implementation, including: A guide for population-based approaches to increasing levels of physical activity: implementation of the WHO global strategy on diet, physical activity and health (*26*) and Interventions on diet and physical activity: what works (*27*).

A key feature of the guidance documents on national physical activity policy, and supported by the experiences seen around the world, is that increasing levels of physical activity will require a combination of different actions across multiple settings to reach various target populations. The following seven best investment areas for action to promote physical health outlined in this report underpin an effective national response:

- whole-of-school programmes
- transport
- health care
- urban design
- sport for all
- community programmes
- public education.

Developing a strong workforce that is able to develop policy and implement physical activity actions across the above seven settings is important. A strong focus on capacity-building has been a key feature of the development of public health response to physical inactivity in many countries. In the USA, the Centers for Disease Control and Prevention (CDC) has conducted an annual training course since 1997 through which it has supported the expansion of research on physical activity and health, promoted effective actions and produced a cadre of professionals across health, education, transport, planning and policy disciplines who are well placed to lead the implementation of strategic actions across the country. This model of training was expanded into South America (in Brazil and Colombia in particular) and annual national and regional training programmes have

been conducted to build workforce capacity and learn from the latest international experiences, in order to promote physical activity across the South American region. Other countries and regions have also adopted this model, including Australia, Canada, India, South Africa, Malaysia, Scotland, Pacific islands and Thailand. Expansion of workforce development and capacity-building across multiple sectors using this type of approach, regionally and sub regionally, is one way to accelerate the implementation of policy and programmes and bridge the knowledge–action gap.

National targets on population levels of physical activity for different age groups provides a clear focus for action, however their development requires current data from health surveillance systems. Few countries in the Region have established systems for collecting representative data in children and adults on levels of activity. Methodologies exist and are well used elsewhere to provide annual or biannual statistics which can support setting targets and monitoring progress. All countries should include measures of physical activity in their national monitoring systems. These data are useful to highlight the magnitude of the challenge and to highlight success and identify areas in which greater action is required. Benchmarking within and between countries can help set and revise targets as well as showcase where effective actions are raising levels of physical activity. Population surveillance combined with program evaluation will improve national actions and contribute to the global knowledge and evidence base in this field.

Working together to increase levels of physical activity requires governments and multi-sector partnerships to deliver an effective and coordinated national response. No one agency, policy or programme is sufficient to turn the tide of increasing levels of inactivity. National governments must provide the leadership, policy frameworks and commitment for sustained actions. The health sector has an important role to play. This includes providing the leadership for policy and programme actions within the health sector, and for initiating and facilitating processes that allow joint action and multi-sector contributions to achieving the shared goal of a more active society.

This report highlights the importance of increasing levels of physical activity in populations. Given the current low levels of participation across the Region, all countries should respond to this call to action and seek to develop and implement:

- systematic national monitoring of physical activity in young people, adults and older adults;
- a national policy and implementation plan on physical activity with strategic physical activity initiatives across key settings;
- a national coordinating committee providing leadership and multi sector engagement; and
- capacity-building strategies to establish a skilled workforce across research and practice.

Although not exhaustive, this set of responses would substantially advance progress on physical activity in the Region.

The WHO Regional Office has identified physical activity as a priority risk factor within noncommunicable diseases prevention and treatment. It aims to support all Member States in developing national policies which include a clear strategy and implementation plan for action to reduce physical inactivity. Building capacity and providing technical support to countries will enable a scaling up of policy and programmes across the Region. Other initiatives to improve the sharing of experiences and effective actions will be implemented, such as support for a regional physical activity network.

There is no time to lose. The importance of addressing physical inactivity is clear and the policy and programmes required by the concerned sectors are known. The Region faces great challenges in this area. However by working together in a sustainable manner, within countries and across the Region, healthy and active societies can be achieved.

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This publication was prepared by WHO Regional Office for the Eastern Mediterranean as part of its efforts to address risk factors linked to noncommunicable diseases and, in particular, physical inactivity. Addressing physical inactivity requires action on behaviour change through awareness-raising and skills development, as well as action on social and built environments in order to give people the means to be active at all ages. This publication is intended to support decision-makers in their quest for improved population and community health and development. It also provides a useful tool for advocates of physical activity, prevention and control of noncommunicable diseases and community development. It aims to provide evidence-based information on the health risks of physical inactivity and to suggest solutions that can be adopted by Member States.

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