



## **Comments from the American Cancer Society Cancer Action Network on the *Draft World Health Organization Global Action Plan on Physical Inactivity 2018-2030***

**September 22, 2017**

The American Cancer Society Cancer Action Network (ACS CAN) appreciates the opportunity to provide comments on the *Draft World Health Organization Global Action Plan on Physical Inactivity 2018-2030*. ACS CAN is the nonprofit, nonpartisan advocacy affiliate of the American Cancer Society and advocates for legislative and policy solutions to reduce cancer as a major health problem.

### **Physical Activity and Cancer**

ACS CAN strongly supports increasing physical activity as a strategy for reducing cancer risk, recurrence, and premature death. In developed nations, including the United States, one in five cancer cases are caused by physical inactivity, poor diet, and excess weight.<sup>1</sup> There is convincing evidence that lack of physical activity is associated with breast, colon, and endometrial cancers,<sup>2</sup> and more recent research that shows physical activity is associated with reduced risk of up to 10 additional cancers, including cancers of esophagus, lung, kidney, stomach (gastric cardia), head and neck, rectum, and bladder, and myeloid leukemia and myeloma.<sup>3</sup> Regular physical activity may help prevent certain cancers via both direct and indirect mechanisms, including regulating sex hormones, insulin, and prostaglandins, and having various beneficial effects on the immune system.<sup>4</sup> In addition, physical activity plays a role in reducing cancer risk due to excess weight by helping to balance caloric intake to achieve or maintain a healthy weight. Excess weight is associated with increased risk of developing cancers of the endometrium, esophagus (adenocarcinoma), liver, stomach (gastric cardia), kidney, brain, pancreas, colon and rectum, gallbladder, ovary, breast (postmenopausal), and thyroid, and multiple myeloma.<sup>5</sup>

In addition to reducing cancer risk, physical activity is also beneficial following cancer diagnosis. Existing evidence strongly suggests that exercise is safe and feasible during cancer treatment, and that it may improve physical functioning, fatigue, and quality of life, and possibly expedite chemotherapy completion.<sup>6</sup> Physical activity after cancer diagnosis is also associated with a reduced risk of cancer recurrence and overall death among breast, colorectal, prostate, and ovarian cancer survivors.<sup>7</sup>

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<sup>1</sup> American Cancer Society. *Cancer Facts & Figures, 2017*. Atlanta, GA: American Cancer Society, 2017.

<sup>2</sup> World Cancer Research Fund. Continuous Update Project. *Cancer Prevention & Survival*. May 2017. Available at <http://www.wcrf.org/int/research-we-fund/continuous-update-project-findings-reports/summary-global-evidence-cancer>. Accessed August 25, 2017.

<sup>3</sup> Moore SC, Lee IM, Weiderpass E, et al. Association of Leisure-Time Physical Activity With Risk of 26 Types of Cancer in 1.44 Million Adults. *JAMA Intern Med* 2016; 176(6): 816-25.

<sup>4</sup> Kushi LH, Doyle C, McCullough M, et al. American Cancer Society Guidelines on Nutrition and Physical Activity for Cancer Prevention: Reducing the Risk of Cancer with Healthy Food Choices and Physical Activity. *CA Cancer J Clin* 2012; 62: 30-67.

<sup>5</sup> American Cancer Society, 2017.

<sup>6</sup> Rock GL, Doyle C, Demark-Wahnefried W, et al. Nutrition and Physical Activity Guidelines for Cancer Survivors. *CA Cancer J Clin* 2012; 62(4): 243-274.

<sup>7</sup> Rock et al, 2012.

Despite the benefits of physical activity for reduced risk of cancer and overall health, as the draft action plan points out (par. 3, 15), insufficient physical activity is one of the leading risk factors for death worldwide.

### **Strengths of the Action Plan**

Overall, ACS CAN supports the draft action plan. We are pleased that the plan uses a health in all policies approach (Par. 47f), recognizing the benefits of increasing physical activity for sectors beyond health and the need to influence policies in these sectors to ensure significant, lasting change. We are also pleased that the plan takes a life course approach (Par. 47a), recognizing the benefits of physical activity for people of all ages, and the importance of considering different needs in ensuring opportunities for physical activity at various points in the life course. We also support the emphasis on promoting health equity (Par. 47b, 17) and ensuring that all people have opportunities to be physically active, regardless of age, disability, economic status, or other factors. Finally, we are pleased that the plan focuses on the need for increased investment in initiatives and changes in policies, systems, and environmental changes (Par. 44, 48, 50) that make physical activity safer, easier, and a greater part of daily life for more people across the globe. Research has shown that opportunities for physical activity are greatly influenced by public policies and the environments in which people live their lives, and evidence-based changes are needed to support people in being more physically active.

### **Recommendations for Improving the Action Plan**

#### *Benefits of Physical Activity*

While we believe that the draft action plan is strong, there are several ways in which it could be further improved. Given the strong connection between physical inactivity and risk of non-communicable diseases (NCDs), including cancer, we recommend including additional background in the plan on the benefits of physical activity for preventing and managing NCDs. The plan should also include information about the benefits of physical activity for weight management, given that overweight and obesity are also risk factors for cancer and many other NCDs.<sup>8</sup>

While the plan touches on the importance of addressing policies in sectors outside of health, we recommend that it further describe how increasing physical activity can address existing global health priorities, including maternal and child health, for example, and other sustainable development goals, including economic development. Physical activity can also improve mental health,<sup>9, 10, 11, 12, 13</sup> stress

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<sup>8</sup> The GBD 2015 Obesity Collaborators. Health Effects of Overweight and Obesity in 195 Countries over 25 Years. *N Engl J Med* 2017; 377:13-27.

<sup>9</sup> Brown, H.E., et al., Physical activity interventions and depression in children and adolescents : a systematic review and meta-analysis. *Sports Med*, 2013. 43(3): p. 195-206.

<sup>10</sup> Korczak DJ, Madigan S, & Colasanto M. Children's Physical Activity and Depression: A Meta-analysis. *Pediatrics* 2017; 139(4).

<sup>11</sup> Liu, M., L. Wu, and Q. Ming, How Does Physical Activity Intervention Improve Self-Esteem and Self-Concept in Children and Adolescents? Evidence from a Meta-Analysis. *PLoS One*, 2015. 10(8): p. e0134804.

<sup>12</sup> Mammen, G. and G. Faulkner, Physical activity and the prevention of depression: a systematic review of prospective studies. *Am J Prev Med*, 2013. 45(5): p. 649-57.

<sup>13</sup> Nystrom, M.B., et al., Treating Major Depression with Physical Activity: A Systematic Overview with Recommendations. *Cogn Behav Ther*, 2015. 44(4): p. 341-52.

management,<sup>14, 15, 16, 17</sup> sleep,<sup>18</sup> social health,<sup>19</sup> and academic and work performance,<sup>20, 21, 22, 23</sup> and these benefits may be more salient to people in their everyday lives than long-term prevention and management of NCDs.

### *Sedentary Behavior*

We also recommend that the plan include recommended strategies for reducing sedentary behavior, in addition to increasing physical activity. An emerging body of research shows that sedentary behavior increases the risk of NCDs and mortality, independent of physical activity.<sup>24 25</sup> Other evidence-based guidelines to promote physical activity, including the Canadian Physical Activity Guidelines and Sedentary Behaviour Guidelines<sup>26</sup> and Australia's Physical Activity and Sedentary Behaviour Guidelines,<sup>27</sup> include recommendations for reducing sedentary behavior, in addition to increasing moderate-vigorous physical activity. This plan should address sedentary behavior, as well.

### *Specific Population Groups*

We recommend that the plan include more specific recommendations for increasing physical activity among key population groups, including youth, older Americans, and individuals with NCDs, including cancer. While we are pleased that the plan includes recommendations for physical education (par. 24, 25, 26, 107, 108, 114), it should place greater emphasis on the important role of schools in providing opportunities for physical activity. During much of the year, school-age youth spend about half of their waking hours at school. To support children and adolescents in increasing their physical activity, schools should provide quality physical education, recess (elementary school only), activity breaks, walk-to-

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<sup>14</sup> Wang, C.W., et al., Managing stress and anxiety through qigong exercise in healthy adults: a systematic review and meta-analysis of randomized controlled trials. *BMC Complement Altern Med*, 2014. 14: p. 8.

<sup>15</sup> Upchurch, D.M., B.W. Rainisch, and L. Chyu, Greater Leisure Time Physical Activity Is Associated with Lower Allostatic Load in White, Black, and Mexican American Midlife Women: Findings from the National Health and Nutrition Examination Survey, 1999 through 2004. *Womens Health Issues*, 2015. 25(6): p. 680-7.

<sup>16</sup> Gay, J.L., et al., Meeting physical activity guidelines is associated with lower allostatic load and inflammation in Mexican Americans. *J Immigr Minor Health*, 2015. 17(2): p. 574-81.

<sup>17</sup> Crews, D.J. and D.M. Landers, A meta-analytic review of aerobic fitness and reactivity to psychosocial stressors. *Med Sci Sports Exerc*, 1987. 19(5 Suppl): p. S114-20.

<sup>18</sup> Kredlow, M.A., et al., The effects of physical activity on sleep: a meta-analytic review. *J Behav Med*, 2015. 38(3): p. 427-49

<sup>19</sup> Eime, R.M., et al., A systematic review of the psychological and social benefits of participation in sport for adults: informing development of a conceptual model of health through sport. *Int J Behav Nutr Phys Act*, 2013. 10: p. 135.

<sup>20</sup> Carson, V., et al., Systematic review of physical activity and cognitive development in early childhood. *J Sci Med Sport*, 2016. 19(7): p. 573-8

<sup>21</sup> Cox, E.P., et al., Relationship between physical activity and cognitive function in apparently healthy young to middle-aged adults: A systematic review. *J Sci Med Sport*, 2016. 19(8): p. 616-28.

<sup>22</sup> Donnelly, J.E., et al., Physical Activity, Fitness, Cognitive Function, and Academic Achievement in Children: A Systematic Review. *Med Sci Sports Exerc*, 2016. 48(6): p. 1197-222.

<sup>23</sup> Smith, P.J., et al., Aerobic exercise and neurocognitive performance: a meta-analytic review of randomized controlled trials. *Psychosom Med*, 2010. 72(3): p. 239-52.

<sup>24</sup> Patel AV, et al., Leisure time spent sitting in relation to total mortality in a prospective cohort of US adults. *Am J Epidemiol*, 2010. 172: p. 419-429.

<sup>25</sup> Matthews, C.E., et al., Amount of time spent in sedentary behaviors and cause-specific mortality in US adults. *The American Journal of Clinical Nutrition*, 2012. 95(2): 437-445.

<sup>26</sup> CSEP SCPE. Canadian Physical Activity Guidelines and Canadian Sedentary Behavior Guidelines. 2012. Available at <http://www.csep.ca/view.asp?ccid=508>. Accessed September 12, 2017.

<sup>27</sup> Australian Government, Department of Health. Australia's Physical Activity and Sedentary Behavior Guidelines. February 2014. Available at <http://www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-phys-act-guidelines>. Accessed September 12, 2017.

school and bike-to-school programs, and physical activities and sports as part of before and after school programs. These recommendations should be included in the action plan.

The plan should also include a greater emphasis on increasing physical activity among older adults and adults with NCDs, including cancer. A growing body of evidence suggests that physical activity after a cancer diagnosis may decrease the risk of recurrence, increase the chance of survival for many cancers, and improve quality of life.<sup>28</sup> Despite these benefits, data from the United States shows that the majority of cancer survivors do not get enough physical activity.<sup>29</sup>

### *Cost and Payment Considerations*

We recommend the plan also place greater emphasis on the return on investment of strategies to increase physical activity, where data is available. While the plan includes estimates of the health care costs and productivity losses of physical inactivity globally (par. 32), there are no estimates of the savings that could result from investments in programs and strategies to increase physical activity. This type of information would be helpful in increasing funding and support for evidence-based physical activity programs and policies.

More must also be done to encourage and incentivize private sector investment in physical activity. This includes investment in employee health, as workplace strategies are an easy way to target working-age adults. In addition, the plan includes recommendations for promoting physical activity through primary and secondary healthcare and social services (par. 119), but there is no mention of ways to ensure funding for these services. We recommend that the plan include a recommendation for insurance coverage or other funding mechanisms for counseling and other evidence-based interventions to increase physical activity in the health care and community settings.

### **Recommendations to Support Implementation of the Action Plan**

Complete implementation of the action plan is essential to successfully increase global physical activity. To support adoption and implementation of the recommended strategies, the plan should use stronger language about the need for increased political commitment and funding to fully implement the plan. Currently, the plan does not include any strategies for incentivizing progress or holding partners accountable for implementing any of the proposed actions. Proposed actions for stakeholders should be more targeted, deliberate, and sustainable. We strongly agree that there is a clear need for greater advocacy on physical activity within health and other sectors and in the media and communities, as well as stronger engagement with non-governmental organizations (Par. 40). Greater investment is also needed in prevention of NCDs, including physical activity promotion. In addition, more research and case study examples from low- and middle-income countries are needed. Most of the research and policy successes to date are in higher-income countries. More data is needed on how implementation of similar strategies can be successful in low- and middle-income countries.

The action plan sets an ambitious goal of increasing the number of people who are active by 100 million by 2030. However, the plan does not include enough detail on how that goal will be achieved, including interim goals and timelines and markers of progress. The plan should set out a more detailed strategy for how to achieve and assess progress towards the goal.

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<sup>28</sup> Rock et al, 2012.

<sup>29</sup> Tannenbaum SL, et al. Are Cancer Survivors Physically Active? A Comparison by US States. *J Phys Act Health* 2016;13(2):159-67.

## **Conclusion**

Thank you for the opportunity to provide input on the draft plan. If you have questions or we can provide additional information, please contact Melissa Maitin-Shepard, MPP, Senior Analyst, Policy Analysis & Legislative Support, at [Melissa.maitin-shepard@cancer.org](mailto:Melissa.maitin-shepard@cancer.org) or 202-585-3205, or Paul Holmes, Director, Federal Relations - Global Health, at [paul.holmes@cancer.org](mailto:paul.holmes@cancer.org) or 202-585-3267.