

Physical activity and health in the European Union

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Physical activity is now widely recognized as one of the most important behaviors for the overall health and well-being of populations (WHO 2004). The series of four papers in this and the previous issue highlight the importance of physical activity to the physical and mental health of adults living in 15 member states of the European Union, as well as the value of a standardized approach to collecting and analyzing cross-national data (Rütten & Abu-Omar 2004a; 2004b; Abu-Omar et al. 2004a; 2004b). The investigators and European Union (EU) are to be commended for carefully administering an existing validated physical activity survey (the International Physical Activity Questionnaire or IPAQ [Craig et al. 2003]) in combination with the Eurobarometer. This has allowed for the assessment of associations between physical activity and many health behaviors and outcomes across many EU countries. There are some issues around survey representativeness in a few countries and differences in interpretation of physical activity concepts and questions across the 15 national samples. However, the net result of this body of work is a better understanding of the range of physical activity levels present in the EU and the remarkably consistent associations between higher levels of physical activity and better self-reported health and mental health. Perceptions of environmental opportunities for physical activity are also generally high across the EU and supportive perceived environments are associated with higher levels of physical activity in some countries.

The potential value of physical activity to health, especially in aging populations, is illustrated nicely in the composite analysis of self-reported health (Abu-Omar et al. 2004b). Among highly active persons, 77.8% reported good or very good health, compared with 59.6% among those who were insufficiently active. This 18.2% differential is roughly equal to the 17.9% gap in self-reported health between insufficiently ac-

tive persons ages 15–24 and 40–54. While these results come from a single cross-sectional survey, they do suggest that physical activity is associated with an incremental self-reported health benefit comparable to a drop of 25–30 years in age. Maybe we have discovered the fountain of youth. The publication of this set of papers is also an excellent demonstration of the value of good surveillance to public health. The assessment of individual physical activity behavior and environmental perceptions as reported here, and the addition of new measures for environmental and policy indicators will be critical to implementing effective public health measures to combat the epidemics of inactivity, obesity, and chronic diseases that are rapidly spreading across the globe. Surveillance is a key part of the WHO strategy for diet, physical activity and health (WHO 2004). However, as useful as current physical activity surveillance measures are, we clearly can improve the assessment and interpretation of population-based physical activity. As our understanding of the relationship between physical activity and health has evolved, we have placed greater public health emphasis on moderate intensity physical activity. This is due to the documented health benefits of moderate intensity physical activity as well as its suitability for use in interventions. Surveillance tools have evolved as well. Newer instruments such as IPAQ assess both moderate and vigorous physical activity, and have added additional domains (transport, household, and occupation in varying combinations) to the previously limited focus on recreational or leisure time physical activity. The consequences of these changes have been a bit of a surprise. Total reported physical activity levels increase as expected with the inclusion of more types and settings for activity within multi-domain surveys. With more reported physical activity, criterion validity assessed against accelerometers also has improved (Craig et al. 2003). Upon

reflection, this makes sense because accelerometers capture almost all movement and the new questionnaires capture a much greater percentage of total physical activity than earlier leisure time-only instruments. However, the extent of the increase in reported MET-minutes of physical activity is much higher than might be anticipated. The reasons for this are unclear. It is possible that the difficulty of conveying complex concepts such as physical activity intensity and the accumulation of ten minute bouts of activity to respondents may contribute to over-reporting of physical activity. Interpretation of the reported activity levels from multi-domain surveys is problematic. Very high percentages of respondents appear to be active at recommended levels (equivalent to 150 minutes per week of moderate physical activity such as walking). This contradicts all other available information and observations of national populations in most countries. Clearly, a great deal of baseline activity is captured by these questionnaires. New cut points for recommended levels of physical activity that take basal physical activity into account are needed. Studies linking health outcomes to physical activity levels derived from multi-domain surveys will be essential to defining these cut points. Even if

this can be successfully done, the challenge of communicating the results to policy makers and the public will remain. It may be difficult to counter the first impression generated by the physical activity prevalence results from multi-domain surveys that seem to show that a very high proportion of adults are sufficiently active to ensure good health. Physical activity is clearly important to health as demonstrated in the papers published here, and national surveillance of physical activity as modeled in the EU is an important step toward addressing inactivity globally. However, we need to continue to improve our approach to assessing, analyzing, and interpreting physical activity survey results and the environments and policies that may influence physical activity. It may be possible to incorporate new technology into population-based assessment of physical activity to validate or scale traditional self-report, complement self-report in sub-populations or samples, or even replace self-report in some instances. New analytic approaches and better interpretation and communication of results to guide public health policy and programs remain as major challenges.

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