

Editorial



Active life and the role of community design

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Noncommunicable diseases (NCDs) kill 41 million people each year, contributing to 74% of all deaths globally. Out of this, 17 million people die before age 70 years. Further, 86% of these premature deaths occur in low- and middle-income countries (1). Physical inactivity being the 4th leading risk factor for NCDs, accounts for an estimated 3.2 million deaths per year. Evidence suggest that physical inactivity increases the risk of cardiovascular diseases, diabetes and stroke, reduces HDL cholesterol, increase blood pressure, reduces psychological well-being, and increases osteoporosis, colon cancer and breast cancer (2).

The World Health Organization (WHO) estimates that currently 60% of the world's population is not achieving at least 30 minutes daily moderate intensity activity (3). Physical activity is defined as “any bodily movement produced by skeletal muscles that increases energy expenditure above the basal level”, including activities undertaken while travelling, work related activities, carrying out household chores, playing and engaging in recreational pursuits, whereas exercise is planned, structured, repetitive, and aims to improve or maintain one or more components of physical fitness (4). As all forms of physical activity is beneficial, the aim should be to enjoy health-enhancing physical activity which is “any form of physical activity, that benefits health and functional

capacity without undue harm or risk” (4). Physical activity ideally should be integrated into daily routine, which may be achieved by engaging in a variety of activities, such as walking or bicycling for transport or for recreation, performing fitness exercises, participating in both organized and informal sports, playing in the park, working in the household or garden, climbing the stairs in the workplace and using recreational facilities. Sedentary behaviour on the other hand refers to activities that do not increase energy expenditure above the resting level and has been defined as activities with low energy expenditure while in a sitting or reclined posture for 4 or more hours at a stretch per day (5). The WHO global monitoring framework for NCDs calls for reduction in physical inactivity and the United Nations has identified physical activity as a primary target for monitoring purposes (6). The Global Action Plan for Physical Activity and Health 2018 to 2030, recommends a 15% reduction in inactivity levels by 2030 (7).

Understanding the many benefits of being active, countries and organisations have developed and adopted guidelines and recommendations for physical activity for a healthy life, specifying the frequency, intensity, type and the duration of exercise that one has to perform to be healthy. Any form of activity is better than no activity. Even light physical activity, despite falling short of minimum

recommendations is healthy (8). The maximum health gains from physical activity happen when inactive people become active, in other words perform at least the recommended level of activity which are given below (9).

- *Pre-school children of 3-5 years* should be physically active throughout the day.
- *School aged children 6-19 years* should do at least ≥ 60 min /day moderate to vigorous physical activity on most days of the week including,
 - Aerobic exercises: for ≥ 60 min /day; moderate intensity; on most days of the week or vigorous intensity activities for 2-3 days/week.
 - Muscle strengthening (squats, push-ups, pull-ups, lunges, planks): Moderate intensity activities for at least 3 days /week.
 - Bone strengthening (jumping jacks, skipping, hopping, climbing): As a part of 60 min/day physical activity session for ≥ 3 days/week.
- *Adults 20-64 years* should carry out at least 150 minutes of moderate-intensity aerobic (endurance or cardiorespiratory) physical activity throughout the week, or at least 75 minutes of vigorous intensity physical activity throughout the week, or an equivalent combination of moderate and vigorous intensity activity throughout the week including,
 - Strengthening exercises (with or without equipment): Should be done involving major muscle groups on 2-3 non-consecutive days; of moderate intensity; using a weight that can be lifted; in 8-12 repetitions in 2-4 sets until fatigue; with 2 minutes rest between sets.
 - Flexibility exercises: Should do 2-3 sessions per week preferably on daily basis; 4 or more repetitions per muscle group; stretch to the point of slight discomfort or tightness.
- *Adults 65 and above* should do activities similar to adults 20-64 years with additional balance exercises: 3 or more days per week.

Those with poor mobility should perform physical activity to enhance balance and prevent falls.

The rise in inactivity and sedentariness is thought to have occurred by the rapid changes in the environment, socio-economic status, policies and lifestyles. More and more people are living in urban environment, which alters the way of living. By 2030 it is estimated that approximately two-thirds of all people will live in large towns or cities (10). In Sri Lanka, 18% of the population reside in urban areas, and it is expected that by 2050, the nation's urban population will reach 30% (11).

Urban design and planning influence public health and human behaviour by limiting or providing access to healthy behaviours and active lifestyles, which have profound effects on people's physical and mental health (12). The evidence is growing on the role of urban design in promoting physical activity. A study looking at evidence from 14 cities and ten countries looking at associations between neighbourhood environment attributes with physical activity where assessments were carried out objectively, showed that design of urban environments has the potential to contribute substantially to physical activity (13). Numerous reviews have reported evidence that adults tend to be more physically active when they live in higher density, mixed-use neighbourhoods with destinations such as shops and parks within walking distance (14). Features of the built environment like walkable community designs, aesthetics, pedestrian facilities, bicycle facilities, trails and parks appear to be associated with increase physical activity. Low-density, car-dependent communities are shown to be detrimental to both human health and environment, and the built environment features that create urban sprawl are risk factors physical inactivity (15). There is a place for urban planning, transportation, greenspaces and parks in the efforts to reduce the health burden of global physical inactivity pandemic (14-15). Thus, in promoting physical activity, improvements to urban environments to facilitate physical activity for transportation and recreation is a recommended strategy (16). Integrated regional and local interventions are identified that, when

combined, encourage walking, cycling, and public transport use, while reducing private motor vehicle use. They are destination accessibility, equitable distribution of employment across cities, managing demand by reducing the availability and increasing the cost of parking, designing pedestrian-friendly and cycling-friendly movement networks, achieving optimum levels of residential density, reducing distance to public transport, and enhancing the desirability of active travel modes (e.g., creating safe attractive neighbourhoods and safe, affordable, and convenient public transport) (17).

In conclusion, the urban policy making should harness on the opportunities that come with

urbanization which are beyond economic growth and include improved access to services and opportunities associated with urban life. Creating environment for physical activity should be a part of urban planning in keeping with the development goals. Rethinking the way cities are built to promote healthy living is a multi-sector activity where some of the interventions include creation of compact, pedestrian friendly, accessible, attractive, safe and convivial neighbourhoods served by high quality public transport. A close monitoring of the urban cities through relevant indicators aligned to the sustainable development goals should be used to upgrade urban cities to promote active and healthy living.

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