

Housing as an obesity-mediating environment

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Dear Editor

It was important to see an entire issue of the *International Journal of Public Health* (Volume 56, Number 6/December 2011) devoted to housing for health promotion. The journal issue covered many health topics related to housing and highlighted the interdisciplinary nature of this work. However, none of the studies in this issue examined obesity as it relates to the housing environment. Given the pandemic nature of obesity, it would seem important to examine how housing may influence obesity-related risk factors such as physical activity and sedentary behaviors.

As we reviewed the literature, few reports were found assessing the role of the built-environment-related to housing on physical activity and risk of obesity. The built-environment has been commonly defined, within the health and behavior literature, as the physical structures of living space that either promote or hinder healthy living. Since people spend a significant amount of waking time in and around their homes, on average 30% (Bureau of Labor Statistics 2010), housing can be considered an important component of the built-environment influencing health behaviors. Identifying characteristics of housing structures that increase physical activity and reduce sedentary behavior can be helpful in reducing the risk of obesity.

There is a growing body of evidence which shows that limiting the time spent in sedentary activity has significant cardiometabolic benefit (Owen et al. 2010; Healy and Owen 2010). Breaks in sedentary time have been associated with a decrease in waist circumference, body mass

index, and triglyceride levels (Healy et al. 2008; Healy et al. 2011). A small amount of activity such as walking or stair use has been shown to have cardiovascular benefits over time (Boreham et al. 2000, 2005). Data from a few studies suggest stair access and attractiveness influences both stair use and risk of obesity (Nicoll 2007; Shenassa et al. 2007; Kerr et al. 2001; Zimring et al. 2005). Shenassa et al. (2007) reported body mass index of men residing on the fourth floor or above to be 0.88 (kg/m², $p = 0.003$) lower than men residing on the first floor. In addition, access to activity-inducing space in the housing complex such as multi-purpose rooms or exercise facilities can directly promote physical activity in residents (Zimring et al. 2005). If the type and quality of the housing limits access to walkable space, such as stairwells or recreational areas, then this can be a significant barrier towards efforts to be more physically active. These issues become more relevant in urban environments within developed countries and rapidly developing countries where densely populated, high-rise buildings are more prevalent and can be coupled with poorer neighborhoods with less access to social and material resources.

Understanding as to whether the structural layout of the home influences the potential to increase physical activity both inside and outside the home can be an important part of identifying those at most risk for physical inactivity, and help inform housing policy and housing development to better influence healthy behaviors.

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