

Prioritizing Optimizations in WELL v1: The Case for Active Transportation

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INTRODUCTION

Adults spend roughly 90% of the day in a building and up to 14 hours per day sitting and ~25% adults do not meet the recommended levels of moderate-to-vigorous physical activity. The WELL Building Standard™ version 1 (WELL™ v1) aims to promote physical activity and reduce sedentary time through features within the Fitness concept. Our goal was to (1) provide a framework for the WELL rating system to assign point-values to optimization features within the Fitness concept and (2) inform professionals in which design and policy strategies to prioritize in order to optimize health-enhancing physical activity for new & existing office buildings.

METHODS

We reviewed literature related to (1) the health benefits associated with the intended physical activity for each optimization and (2) existing strategies that promote physical activity for occupants in new & existing office buildings. Weighted point-assignments (3, 2, or 1) were used to indicate which optimizations should be prioritized based on the intended physical activity and whether it relates to site selection & design, building design & policy or programming & education. In addition, the most effective strategies related to each category were identified in order to make recommendations for future versions of the standard.

Framework for Prioritizing Optimizations

Intended Physical Activity	METs	Potential Health Benefits	Effective Strategies to Increase Movement
<p><i>3 points</i> MVPA displaces sedentary time</p>	<p>≥4.5</p>	<p>Greatest risk-reduction for all-cause mortality, cardiometabolic diseases, coronary heart disease, cardiovascular disease, cancers, mental health disorders</p>	<p>3 points</p> <p><u>Site Selection & Design</u></p> <ul style="list-style-type: none"> Urban furniture # and size of parks Aesthetically appealing & safe Residential density, street/sidewalk connectivity, diverse land-use <p><u>Building Design & Policy</u></p> <ul style="list-style-type: none"> Interior circulation Active workstations Bike storage Limited parking <p><u>Programming & Education</u></p> <ul style="list-style-type: none"> Quality workplace interventions Motivational supports
		<p>Reduce the progression of chronic diseases</p>	
		<p>Improves sleep quality, cognition, physical function and perceived quality of life</p>	
<p><i>2 points</i> LPA displaces sedentary time</p>	<p>2-3</p>	<p>Lower risk for chronic diseases and especially beneficial for cardiometabolic health (especially for low-active populations)</p>	
<p><i>1 point</i> Reduces sedentary time</p>	<p>1.5-2</p>	<p>Lowers risk for metabolic syndrome, type 2 diabetes, cardiovascular disease, select cancers, musculoskeletal discomfort, depressive symptoms and all-cause mortality independent of regular physical activity</p>	

Key Findings

- Optimizations that intend to displace sedentary time with MVPA yield greatest energy expenditure and health benefits, but **displacing sedentary behavior with movement** of any intensity shows benefits.
- The strongest evidence for effectiveness is for strategies related to site selection and design, but a **multi-modal approach to active design** is recommended.

The Case for Active Transportation

- Those who walk or cycle for transport are more likely to meet the recommended level of moderate-to-vigorous physical activity.
- Active transportation has been associated with reduced all-cause mortality, cardiovascular disease, type 2 diabetes, weight gain, cancer, falls, and mental health, even when controlling for other physical activity.
- Active transportation can be promoted during the site selection process, and reinforced through building design, policy & interventions.

Discussion

- It is recommended that the WELL rating system require building projects to include **an evaluation plan** at the prior to implementation in order to **expand the evidence-base for specific features in the WELL Building Standard**.
- Our recommendations align with many of the updates in the recently released WELL v2™ pilot!** Access WELL v2 at wellcertified.com.