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# Recalibrating America's Activity Habits: The Saga Continues

Abstract: *This review discusses the 2008 Physical Activity Guidelines for Americans and other continuing efforts to nudge the public toward more active living. Future directions for inquiry and empirically driven public policy initiatives also are addressed.*

Keywords: physical activity; exercise; lifestyle

The benefits of regular physical activity are empirically undeniable. Indeed, a burgeoning literature has demonstrated exercise's salutogenic effects on the general population as well as on those managing or at risk for conditions as diverse as cardiovascular disease, cancer, multiple sclerosis, psychological distress, and age-related cognitive and mobility decline, just to name a few.[1-12] Notwithstanding an abundance of evidence and its broad dissemination through myriad initiatives at the individual, community, and national levels, too few Americans maintain sufficient physical activity for optimal health.[13-20]

Accordingly, the release of the 2008 Physical Activity Guidelines for Americans[21] continues efforts to nudge the public toward more active living. Because the guidelines now can be met by flexibly combining different exercise intensities and durations, the new benchmarks sweep somewhat more individuals into the physically active category than previous metrics.[12,22] However, the general pattern of results remains comparable, with women, ethnic/cultural minorities, and other socially disenfranchised groups still being especially susceptible to sedentary lifestyles.[1,6,13-15,17]

Interestingly, these gender and social class undercurrents have echoed robustly through decades of research based on a variety of study samples, methodologies, and time frames. For instance, the disproportionate impact of health-detrimental lifestyles on the socially disadvantaged has been repeatedly documented.[23-33] Likewise, the fact that girls' activity levels plummet during adolescence with adverse repercussions on women's lifelong exercise habits has been so frequently replicated that it has attained dictum status.[7,14,34,35] Considered against the public health efforts mounted to date, the sheer persistence of these trends leaves little doubt about the challenges inherent in modifying sedentary lifestyles for the long run.[26,28-31,36-38]

However, galvanized by release of the 2008 guidelines[21] and related surveillance data,[22,34] momentum is building for renewed surge plans to jumpstart an upward recalibration of American's activity habits, with a special emphasis on the force-multiplying potential of vigorous-intensity exercise.[39,40] Toward this end, a general consensus has coalesced around the merits of ecological approaches that prompt and reinforce healthy living consistently at multiple levels of influence, including that of the individual, the family,

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and the broader environment.[6,15,17,18,33,41-46] Although a detailed discussion of the ecological model is beyond the scope of the present review, its general contours are highlighted in the illustrative smattering of research priorities discussed below.

## Motivating Exercise at the Individual Level

Despite its importance as a prerequisite for change, information alone does not necessarily improve exercise habits.[12,18,47] Accordingly, the search is on for actionable strategies that reliably inspire movement from knowledge-based contemplation to actual behavior change. Toward this end, considerable recent attention has focused on personal risk information as a motivation enhancer. For instance, specific feedback about personal activity habits (eg, by use of a pedometer or other form of self-monitoring) relative to a recommended benchmark (eg, 10 000 steps/d) has been shown to increase physical activity levels.*

A related line of inquiry has raised the possibility that, once initiated, motivation for exercise may have the potential to "spill over" or generalize to other healthful practices (eg, prudent diet) through a variety of biopsychosocial synergies (eg, appetite control, mood improvements).[3,15,51-53] Consistent with this perspective, emerging evidence has documented the effectiveness of simultaneously targeting multiple risk behaviors in adult primary care patients rather than intervening sequentially with each habit.[51,53] However, despite encouraging preliminary results, very little is known presently about the repercussions of simultaneous behavior change on different risk behavior configurations across the life span.[52,54,55] Given empirical hints that sensitivities may be dialed differently between individuals or even within the same individual at different times, motivational interventions may differentially engage people and/or population subgroups in as yet unknown ways.[12,46,56-59]

Fortunately, primary care providers have been successful at hedging at least some of the uncertainty inherent in matching evidence-based recommendations to the needs of specific patients. Rooted in an extended relationship orientation, portal-of-entry providers are well positioned to help patients tailor activity guidelines to their unique risk profiles and provide the continuous support required for enduring lifestyle change.[9,19] Although activity counseling is made more difficult by the resource constraints that increasingly burden most primary care practices, growing numbers of providers do prescribe patient exercise.[9,48] Particularly when combined with regular follow-up (eg, via phone or at subsequent visits), even brief physician counseling can jumpstart patient activity.[9,33,48,60] This individualized approach may be especially beneficial for engaging and motivating patients with multiple exercise barriers, for whom exercise-specific social support is especially critical.[3,6,57,59]

Indeed, an extensive literature underscores the potential of social influences to facilitate or short circuit even the best of personal intentions.[16,18,42,46] One such set of social forces emanates from the family milieu.

## Family Influences

The family critically shapes children's activity preferences and habits both directly (eg, through formative exercise experiences) and vicariously (eg, by providing models of behavior and expressed exercise attitudes).[39,61-63] As an illustrative case in point, research has demonstrated a relationship between parental promotion of vigorous team sports and children's activity levels.[39]

Interestingly, demographics also influence the family's activity orientation. For example, higher levels of parental education and family socioeconomic status tend to predict greater support for children's sports participation.[39,61-63] However, across parent demographics, girls typically receive somewhat less encouragement for vigorous-intensity activities than their male counterparts,[39,61] which may contribute to girls' generally lower exercise self-efficacy, especially among ethnic minority populations.[39,62,64,65]

Although the family provides an important basic template, early learning is subject to continuous revision through broader experiences and exposures across the life span. Unfortunately, many of the most potent sociocultural influences promote sedentary lifestyle habits over more active alternatives.[44,61,63]

## Macrolevel Mediators

As recognition of activity-quashing environmental contingencies has become more widespread, macrolevel risk mediators have moved from the periphery to the center of the public health radar screen.† Although a variety of targets and modification strategies have been discussed, most initiatives have combined social marketing and other mass communication tactics with environmental cues and point-of-decision prompts to promote and reward active lifestyle choices.‡

To the extent that these ecological approaches simultaneously capitalize on multilevel contingencies, they offer potential synergisms and cost-effectiveness advantages well beyond those achievable with more narrowly focused plans. Yet real-world implementation still requires considerable fine-tuning.[6,15,33,41,42,45]

For instance, predicting differential responsiveness to environmental redesign remains an inexact science. Considering that individuals bring to each situation a biopsychosocial uniqueness that influences perceptions and response tendencies, contextual prompts may provoke a wide range of idiosyncratic reactions, for better or worse.[33,66] Along these lines, redesign of a neighborhood's built environment to promote selected activities (eg, walking) may be off-putting to certain residents. Likewise, research findings based on community redesign and land use in one geographic region may not apply in other parts of the country with different weather conditions, population densities, or community norms.[15,41-47]

*References 1, 7, 13, 42, 43, 48-50.
†References 6, 15, 33, 41, 42, 45, 46, 57, 66.
‡References 6, 15, 22, 42, 45, 66, 67.

In short, looming large on the ecological horizon is the inestimable potential for unanticipated adverse reactions to public health efforts aimed at ameliorating American lifestyles. Particularly when individuals perceive that their freedom of choice is limited by external forces or authorities (such as the government), at least a certain proportion of residents may be inclined to reassert their own sense of personal autonomy in as yet unpredictable ways.[41,68]

## The Future

Developing effective ecological models that successfully account for the complex interactions among individuals and their contexts will be critical to the success of these innovative approaches for activity promotion. As the evidence-based understanding of multilevel interactions evolves, ecological models will no doubt come closer to realizing their health-enhancing potential.[33,41,67,68] AJLM

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