

Urban Agriculture/Community Garden Literature Review Summary Table

Author/citation	Type of study	Sample	Limitations	Key findings	Recommendations for HIA
Litt, JS: The influence of social involvement, neighborhood aesthetics, and community garden participation on fruit and vegetable consumption. American Journal of Public Health: Aug 2011 V 101, No 8	Cross sectional study, plus qualitative interviews – evaluated social involvement, perception of neighborhood aesthetics, and fruit and vegetable consumption	437 residents across 58 block groups in Denver, CO	Self selection bias, self report fruit/veg consumption, physical activity, etc.	Community gardeners consumed an average of more fruits and vegetables than the home and non-gardeners. Community gardeners reported the highest level of physical activity. This study also found that perceived neighborhoods aesthetics, neighborhood attachment, and social support and involvement were a positively correlated with fruit and veg consumption.	<ul style="list-style-type: none"> ✓ Include community gardens in land-planning process ✓ Consider community gardens as a primary and permanent open space option as part of master planning efforts ✓ Establish zoning codes that protect gardens, while liberally allowing them in appropriate zone codes and identify them as a use of right ✓ Consider gardens as a viable use across institutionalized properties where gardens become part of the permanent programming of a site, such as schools or affordable housing developments
McCormack, LA: Review of the nutritional implications of farmers' markets and community gardens: a Call for evaluation and research efforts. Journal of the American Dietetic Association: March	Review of research articles examining the nutrition impacts of community gardens and farmers' markets	7 farmers' market studies 4 community garden studies	Lack of available research with control groups to evaluate	See key studies below Farmers' markets and community gardens likely increase intake of fruits and	<ul style="list-style-type: none"> ✓ Locate community gardens and farmers' markets in food desert areas.

2010 V 110, No 3				vegetables, especially food desert areas. Community gardens and farmers' markets assist with community building and improve social well being.	
Alaimo K. fruit and vegetable intake among urban community gardeners. J Nutrition education and Behavior. 2008 V 40; 94-101	Cross sectional random phone survey		Cannot prove causality	Community garden households consumed more than non gardening households. Adults who were participants of gardens were 3.5 more likely to consume 5 f/v per day Gardeners are more likely to participate in neighborhood cleanup events	
Blair D. A dietary, social and economic evaluation of the Philadelphia Urban gardening program: J of Nutrition Education. V 23 161-167 1998	Cross-sectional case control matched survey		Cannot prove causality	Gardeners consumed significantly more of five vegetable categories than non gardeners Gardeners consumed less fruit, milk, and sweet foods and drinks than non gardeners	

				Gardeners are more likely to participate in neighborhood cleanup events	
Lackey J. evaluation of community gardens (a program of the University of Wisconsin Cooperative extension. UW Extension 1998. www.uwex.edu/pdande/evaluation/pdf/comgardens.pdf	Cross-sectional design using qualitative and quantitative surveys		Cannot prove causality	Gardeners reported consuming 11.1 vegetable servings vs. 4.5 servings in non gardeners. Gardeners reported eating a balanced diet significantly more than non gardeners Gardener reported value in transferring cultural heritage younger generations	
Johnson DB, Smith LT. testing the Recommendations of the Washington State nutrition and physical activity plan: The Moses Lake case study. Preventing Chronic disease. 2006 V 3; A 64	Cross-sectional survey		Cannot prove causality	More than half of gardeners reported eating more fruits and vegetables as a result of gardening. 81% reported that the garden helped stretch food dollars. All second year gardeners reported healthier lifestyle due to gardening.	
Armstrong D. A survey of community gardens in update New York: implications for health promotion and community development. Health and Place: 2000 V 6 No 4	Descriptive study	20 garden programs representing 63 gardens in New York		90% of garden program coordinators reported fresh food and better tasting food as a benefit of	✓ Recommend a mechanism for community gardening permanency. Zoning for gardening or long term leases, will

319-327.				community gardening. 70% reported exercise as a garden benefit. 75% reported mental health benefits. 80% reported the enjoyment of nature/open space. 11% reported that their garden site may be in jeopardy to development. (improved nutrition, physical activity, and mental health)	enable gardens to be a sustainable land use within city's landscape
Heim S. A garden pilot project enhances fruit and vegetable consumption among children. J ADA. July 2009.V 109 P 1220-1226.	Pre and post tests.	Convenience sample of 93 4 th -6 th graders in summer camp were provided Delicious and Nutritious Garden.	Self report, social desirability.	Children involved in the garden program tried significantly more types of fruits and vegetables, regularly ate more fruits and vegetables, and asked for fruits and vegetables more often at home.	✓ Encourage garden based programming in schools, summer camps, or other youth programs.
Robinson-O'Brien. Impact of garden-based youth nutrition intervention programs: a Review. JADA. Feb 2009. V 109 No 2. 273-280.	Review of youth based garden nutrition intervention studies	11 studies were reviewed	Lack of empirical evidence in this area.	Garden based nutrition intervention programs may promote increased fruit and vegetable intake among youth, and may increase	

				willingness to try fruit/veg.	
McAleese JD. Garden-based nutrition education affects fruit and vegetable consumption in sixth-grade adolescents. JADA 2007; V 107 662-665	Pre post test, intervention and control	99 sixth graders		Significant increase of F/V intake among garden/nutrition education group compared to nutrition education only and control group	
Morris JL. Garden –enhanced nutrition curriculum improves fourth-grade school children’s knowledge of nutrition and preferences fro some vegetables. JADA. 2002; 102: 91-93	Pre and post test intervention and control, and 6 month follow up	213 fourth graders		Preference for snow peas and zucchini was highest among garden/nutrition ed group compared to nutrition ed only (and control). This preference remained significantly higher at the 6 month f/u Significant increase in nutrition knowledge among garden/nutrition education group and nutrition education only compared to control group	
Morris JL. First-grade gardeners more likely to taste vegetables. California Agriculture. 2001: 43-46	Pre post intervention control	97 first graders		Intervention students were more likely to be willing to taste several vegetables.	
Lineberger S. School gardens:	Pre post tests	111 third		Significant increase	

can a hands-on teaching tool affect students' attitudes and behaviors regarding fruit and vegetables? Horticultural Technology. 2000; 10: 593-597		graders		in vegetable preference (no change in fruit preference). Significant increase in F/V snack preference	
Lautenschlager L. Understanding gardening and dietary habits among youth garden program participants using the Theory of Planned Behavior. Appetite. 2007; 49: 122-130	Pre and post tests	66 8-15 yr olds.		Significant increase in fruit and veg intake among boys	
Lautenschlager L. Beliefs, knowledge, and values held by inner- city youth about gardening, nutrition and cooking. Agriculture and Human Values. 2007; 24: 245-258	Pre and post tests gardeners and nongardeners	40 9-15 yr olds		Gardeners were more willing to eat F/C, try unfamiliar foods, were more likely to cook, garden, and appreciated other cultures.	
Koch S. The effect of a summer garden program on the nutritional knowledge, attitudes and behaviors of children. Horticultural Technology. 2006; 16: 620-624	Pre, mid, post tests	56 2-5 graders		Significant improvement in healthy snack consumption and knowledge of the benefits of F/V	
Van den Berg A. Gardening promotes neuroendocrine and affective restoration from stress	Controlled Experiment tested salivary cortisol before, during, and after a stress induction among gardeners and readers	30 adults (all gardeners, 14 exposed to gardening, 16 exposed to reading during experiment)		Gardeners had lower cortisol levels post stress induction. This research can therefore recommend that gardening is an appropriate stress	✓ Governments should provide space for gardens

				reduction or restorative activity.	
Wakefield S. Growing urban health: community gardening in South-East Toronto. Health Promotion International. V 22 No 2. Feb 2007	Case study of gardens in Toronto, CA (Observation, focus groups, interviews)	55 people in focus groups, 13 interviews.		Health benefits include access to healthy food, improved nutrition, increase physical activity and improved mental health. Access to healthy food was a very prominent theme. Other themes included improving self esteem, social cohesion, empowerment, skill development. Land tenure insecurity was also a major theme.	<ul style="list-style-type: none"> ✓ Ensure that gardens establish permanency/tenure. ✓ Include the community gardens in the community plans.
Dickenson J. Community gardens: lessons learned from California healthy cities and communities. American Journal of Public Health. 2003: 93, 1435-1438					