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| **Domain:** | Social Environments |
| **Measure:** | Healthy Food Environments |
| **Definition:** | This measure utilizes a questionnaire to assess a respondent's access to healthy foods and healthy eating alternatives in his or her local neighborhood. |
| **Purpose:** | Obesity and being overweight are major public health issues, and it is well established that obesity is associated with a wide range of serious health outcomes, such as coronary heart disease, cancer, and diabetes. Until quite recently, food purchasing behavior and diet have been regarded purely as matters of individual free choice, and most intervention studies have targeted changing individual behavior (e.g., encouraging healthy eating). This perspective neglects social and material contexts in which food purchasing and diet decisions are made (Diez Roux, 1998). There is now considerable interest in the role of the built and social environments in promoting obesity and being overweight (Egger & Swinburn, 1997; Walker et al., 1999; Davison & Birth, 2000). |
| **Essential PhenX Measures:** |  |
| **Related PhenX Measures:** | Neighborhood Collective Efficacy - Community Cohesion and Informal Social Control Neighborhood Safety |
| **Collections:** |  |
| **Keywords:** | Social Environments, neighborhood food environments, healthy food availability, fresh foods, food, restaurant, grocery store, neighborhood, community, obesity |

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| **Protocol Release Date:** | October 8, 2010 |
| **PhenX Protocol Name:** | Healthy Food Environments |
| **Protocol Name from Source:** | This section will be completed when reviewed by an Expert Review Panel. |
| **Description:** | The Perceived Availability of Healthy Foods Scale from the Multi-Ethnic Study of Atherosclerosis (MESA) is a three-item, interviewer-administered scale that measures the quality and availability of fresh fruit and vegetables and low-fat products in the local neighborhood. Higher mean scores indicate greater availability of healthy foods in the neighborhood (i.e., low-fat products, fruits, and vegetables). |
| **Specific Instructions:** | None |
| **Protocol:** | The respondents are asked to think of their neighborhood as the area within a 20‑minute walk (approximately 1 mile) from their home and then to indicate the extent to which they agree with the following statements:  1. The fresh fruits and vegetables in my neighborhood are of high quality.  [ ] 1 strongly agree  [ ] 2 agree  [ ] 3 neither agree nor disagree  [ ] 4 disagree  [ ] 5 strongly disagree  2. A large selection of fresh fruits and vegetables is available in my neighborhood.  [ ] 1 strongly agree  [ ] 2 agree  [ ] 3 neither agree nor disagree  [ ] 4 disagree  [ ] 5 strongly disagree  3. A large selection of low-fat products is available in my neighborhood.  [ ] 1 strongly agree  [ ] 2 agree  [ ] 3 neither agree nor disagree  [ ] 4 disagree  [ ] 5 strongly disagree  Scoring Instructions  The Perceived Availability of Healthy Foods Scale is estimated by taking the average across the three items (note that only respondents with complete information for all three items can be assigned a scale score).  Lower mean scores indicate better availability of healthy foods (i.e., low-fat products, fruits, and vegetables).  Note that in papers by Moore, Diez Roux, and Brines (2008) and Moore et al. (2008) the five-point Likert scale was reported as follows: 0 = strongly agree; 1 = agree; 2 = neither agree nor disagree; 3 = disagree; and 4 = strongly disagree. |
| **Selection Rationale:** | The protocol was selected because it is low burden, has good reported psychometric properties (Mujahid et al., 2007), and has been shown to be associated with higher-burden measures derived from secondary data and Geographic Information System (GIS) characterizations of the local food environments (Moore, Diez Roux, & Brines, 2008). |
| **Source:** | U.S. Department of Health and Human Services, National Institutes of Health, National Heart, Lung and Blood Institute. Multi-Ethnic Study of Atherosclerosis (MESA) 2000. Neighborhood Section, www.mesa-nhlbi.org/. |
| **Life Stage:** | Adult |
| **Language of source:** | English |
| **Participant:** | Adults, aged 18 years and older. The respondent should be the primary food shopper in the household. |
| **Personnel and Training Required:** | The interviewer must be trained to conduct personal interviews with individuals from the general population. The interviewer must be trained and found to be competent (i.e., tested by an expert) at the completion of personal interviews. The interviewer should be trained to prompt respondents further if a "don't know" response is provided. |
| **Equipment Needs:** | These questions can be administered in a computerized or noncomputerized format (i.e., paper-and-pencil instrument). Computer software is necessary to develop computer-assisted instruments. The interviewer will require a laptop computer/handheld computer to administer a computer-assisted questionnaire. |
| **Standards:** | |  |  |  |  | | --- | --- | --- | --- | | **Standard** | **Name** | **ID** | **Source** | | Common Data Element (CDE) | Social Environment Healthy Food Environment Assessment Score | 3144974 | [CDE Browser](https://cdebrowser.nci.nih.gov/CDEBrowser/search?elementDetails=9&FirstTimer=0&PageId=ElementDetailsGroup&publicId=3144974&version=1.0) | | Logical Observation Identifiers Names and Codes (LOINC) | Healthy food environments proto | 63024-4 | [LOINC](http://s.details.loinc.org/LOINC/63024-4.html?sections=Web) | |
| **General references:** | Charreire, H., Casey, R., Salze, P., Simon, C., Chaix, B., Banos, A., Badariotti, D., Weber, C., & Oppert, J. M. (2010). Measuring the food environment using geographical information systems: A methodological review. *Public Health Nutrition.*  doi: 10.1017/S1368980010000753.  Davison, K. K., Birch, L. L. (2001) Childhood overweight: A contextual model and recommendations for future research. *Obesity Reviews*, *2,* 159–171.  Diez Roux, A. V. (1998). Bringing context back into epidemiology: Variables and fallacies in multilevel analysis. *American Journal of Public Health*, *88*(2), 216–222.  Egger, G., & Swinburn, B. (1997) An "ecological" approach to the obesity pandemic. *British Medical Journal,* *315,* 477–480.  Lyttle, L. A. (2009) Measuring the food environment: State of the science. *American Journal of Preventive Medicine,* *36*(4, Suppl.), S134–S144.  McKinnon, R. A., Reedy, J., Morrissette, M. A., Lytle, L. A., & Yaroch, A. L. (2009) Measures of the food environment: A compilation of the literature, 1990–2007. *American Journal of Preventive Medicine,* *36*(4, Suppl.), S124–S133.  Moore, L. V., Diez Roux, A. V., & Brines, S. (2008). Comparing perception-based and Geographic Information System (GIS)-based characterizations of the local food environment. *Journal of Urban Health: Bulletin of the New York Academy of Medicine,* *85*(2), 206–216.  Moore, L. V., Diez Roux, A. V., Nettleton, J. A., & Jacobs, D. R., Jr. (2008). Associations of the local food environment with diet quality: A comparison of assessments based on surveys and Geographic Information Systems. *American Journal of Epidemiology,* *167*(8), 917–924.  Mujahid, M. S., Diez Roux, A. V., Morenoff, J. D., & Raghunathan, T. (2007). Assessing the measurement properties of neighborhood scales: From psychometrics to ecometrics. *American Journal of Epidemiology,* *165*(8), 858–867.  National Cancer Institute. (2010). Risk Factor Monitoring and Methods, Measures of the Food Environment. Available from https://riskfactor.cancer.gov/mfe/.  Walker, S., Poston, C., II, & Foreyt, J. P. (1999) Obesity is an environmental issue. *Atherosclerosis,* *146,* 201–209. |
| **Mode of Administration:** | Interviewer-administered questionnaire |
| **Derived Variables:** | None |
| **Requirements:** | |  |  | | --- | --- | | **Requirement Category** | **Required** | | Major equipment | No | | Specialized training | No | | Specialized requirements for biospecimen collection | No | | Average time of greater than 15 minutes in an unaffected individual | No | |
| **Process and Review:** | This section will be completed when reviewed by an Expert Review Panel. |