R7: Physical Activity and Reduced Sedentary Behavior

Framework Component

Population Results – Trends and Reductions in Disparities

Indicator Description

Achievement of the Physical Activity Guidelines for Americans, 2008 for adults and children and Society of Health and Physical Educators Active Start guidelines for toddlers and preschoolers.

Background and Context

The Physical Activity Guidelines for Americans, 2008 recommend that children and adolescents do 60 minutes (1 hour) or more of physical activity daily. These activities should be enjoyable, age-appropriate, and offer variety. All adults should avoid inactivity. Adults who participate in any amount of physical activity gain some health benefits. For substantial health benefits, adults should do at least 150 minutes (2 hours and 30 minutes) a week of moderate-intensity, or 75 minutes (1 hour and 15 minutes) a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous intensity aerobic activity. Ten-minute intervals throughout the week can meet the requirements. Muscle-strengthening exercises that involve all major muscle groups on 2 or more days a week are important, too. Healthy People 2020 objectives show that we have more work to do. More than 80 percent of adults do not meet the guidelines for both aerobic and muscle-strengthening activities. Similarly, more than 80 percent of adolescents do not do enough aerobic physical activity to meet the guidelines for youth. Complementary strategies will include reducing time spent in sedentary behaviors, particularly entertainment screen time (television, video games, and use of computers for non-school work) and increasing the proportion of trips made by walking or bicycling. R7 also measures active commuting, also known as active transportation, which is any form of human-powered transportation, including bicycling. Public transportation is included in active commuting because users have to use human power to access public transportation stops and their end destination (often known as the “first” and “last” mile). Safety and security issues (real and perceived) are significant barriers to active transportation, as is lack of access to...
adequate active transportation facilities.

Outcome Measures

Reported among SNAP-Ed eligible persons Physical Activity

R7a. At least 150 minutes per week of moderate-intensity aerobic physical activity or 75 minutes per week of vigorous-intensity aerobic physical activity or an equivalent combination of moderate- and vigorous-intensity aerobic activity

R7b. Muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms)

Sedentary Behavior

R7c. Entertainment-based screen time viewing for 2 or fewer hours on an average school day

Active Commuting

R7d. Use public transportation, walking, or bicycling to travel to and from work on a regular basis for destination-based active transportation, not recreation

What to Measure

Adults

a. Number or percentage of adults who report or demonstrate achievement of minutes per week of moderate or vigorous physical activity – 150 minutes for moderate intensity; 75 minutes for vigorous intensity
b. Number or percentage of adults who participate in 2 days per week of muscle-strengthening involving all major muscle groups
c. Number or percentage of adults achieving an average or above average score on a health-related fitness test
d. Number or percentage of adults who use public transportation, walking, or bicycling to travel to and from work on a regular basis (active commuting)

Children/Adolescents

a. Number or percentage of children/adolescents who report or demonstrate achievement of 60 minutes per day of moderate to vigorous physical activity
b. Number or percentage children/adolescents who participate in 2 days per week of muscle-strengthening involving all major muscle groups
c. Number or percentage of children who improve aerobic capacity score as measured by Fitnessgram, the national physical fitness assessment
d. Number or percentage of children/adolescents who achieve the healthy fitness zone for aerobic capacity on the Fitnessgram

Toddlers/Preschoolers
a. Number or percentage of parents who report toddlers’ achievement of 90 minutes per day of physical activity (30 mins structured, 60 mins unstructured)
b. Number or percentage of parents who report preschoolers’ achievement of 120 minutes per day of physical activity (60 mins of structured, 60 mins of unstructured)

Population

Adults, children/adolescents, toddlers/preschoolers

Surveys and Data Collection Tools

**ADULTS** [collapse title="Indirect Measure: Physical Activity Questionnaires"] Behavioral Risk Factor Surveillance System (BRFSS) Survey Questions

- Percentage of adults who met the 150 minute aerobic activity guideline
- Percentage of adults who met the 300 minute aerobic activity guideline
- Percentage of adults who met the muscle-strengthening guideline

[collapse title="Direct Measure: Physical Fitness Assessment"] President’s Challenge Adult Fitness Test

http://www.adultfitness.org NOTE: This assessment should only be given to people 18 years of age and older who are in good health. In addition a pre-participation screening questionnaire (www.adultfitness.org/riskQuestionaire.php) should be administered prior to the administration of the fitness assessment. [collapse] [collapse title="Active Commuting"] To measure how many people are active commuting: U.S. Census Commuting (Journey to Work) http://www.census.gov/hhes/commuting/

National Bicycle and Pedestrian Documentation?Project Forms and Materials?


http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_797.pdf [collapse] [collapse title="Other Potential Tools"] International Physical Activity Questionnaire (IPAQ)?

http://www.sdp.univ.fvg.it/sites/default/files/?IPAQ_English_self-admin_long.pdf This questionnaire is available in a short form for surveillance and in a longer form when more detailed physical activity information is required; both forms are available in a number of languages. The questionnaire was rigorously tested for reliability and validity and has been replicated in a number of countries; this questionnaire is not designed to provide a detailed assessment of physical activity in all domains. [collapse]

**CHILDREN & ADOLESCENTS** [collapse title="Indirect Measure: Physical Activity Questionnaires"] Youth Risk Behavior Surveillance System (YRBSS) On how many of the past 7 days did you do exercises to strengthen or tone your muscles, such as push-ups, sit-ups, or weight lifting?

- 0 days
- 1 day
- 2 days
- 3 days
- 4 days
- 5 days
- 6 days
- 7 days

During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?
(Add up all the time you spent in any kind of physical activity that increased your heart rate and made you breathe hard some of the time.)

- 0 days
- 1 day
- 2 days
- 3 days
- 4 days
- 5 days
- 6 days
- 7 days

For children 10–11 years of age, it is recommended that the previous day’s recall be used. Decisions on how many days and on which day’s activity will be measured must be made. [collapse] [collapse title="Direct Measure: Physical Fitness Assessment"] Fitnessgram
http://www.cooperinstitute.org/vault/2440/web/files/662.pdf This is the national health-related fitness assessment for school-age children grades 4–12 that must be performed by the school or agency personnel. [collapse] [collapse title="Other Potential Tools"] Previous Day Physical Activity Recall Designed to assess physical activity and sedentary behaviors for children. International Physical Activity – Children Questionnaire This questionnaire is available in a short form for surveillance, and in a longer form when more detailed physical activity information is required, both forms are available in a number of languages. The questionnaire was rigorously tested for reliability and validity and this has been replicated in a number of countries; this questionnaire is not designed to provide a detailed assessment of physical activity in all domains.

1. On an average school day, how many hours do you watch TV?
   - I do not watch TV on an average school day
   - Less than 1 hour per day
   - 1 hour per day
   - 2 hours per day
   - 3 hours per day
   - 4 hours per day
   - 5 or more hours per day

2. On an average school day, how many hours do you play video or computer games or use a computer for something that is not school work? (Count time spent on things such as Xbox, PlayStation, an iPod, an iPad or other tablet, a smartphone, YouTube, Facebook or other social networking tools, and the Internet.)
   - I do not play video or computer games or use a computer for something that is not school work
   - Less than 1 hour per day
   - 1 hour per day
   - 2 hours per day
   - 3 hours per day
   - 4 hours per day
   - 5 or more hours per day

[collapse title="Other Evaluation Measures"] Multimedia Activity Recall for Children and Adolescents (MARCA) A computerized 24-hour activity recall linked to a compendium of energy expenditure. Adolescent Sedentary Activity Questionnaire (ASAQ) Includes five categories: small screen recreation, education, travel, cultural activities, and social activities. Additional evaluation tools to measure R7 can be found in the SNAP-Ed Library.
Key Glossary Terms

Active commuting [glossary] 
Population-based data collection [glossary] 
SNAP-Ed eligible persons [glossary] 
Surveillance [glossary]

Additional Resources or Supporting Citations

While not every state, territory, or tribe administers the BRFSS, this survey represents the most definitive source on health at the state level. States or communities that do not administer the BRFSS could incorporate the aforementioned survey questions in their own locally administered health surveys. Lastly, because SNAP-Ed funds cannot pay for surveillance in the general population or the population whose income exceeds 185 percent of the federal poverty level, a broader purchase of telephone numbers for sampling purposes must be cost-allocated between SNAP-Ed and other funding sources. However, SNAP-Ed funds can be used to pay for an oversample of respondents from low-income areas to ensure representativeness of the SNAP-Ed priority population. 

500 Cities Project data and map books [glossary] [glossary] [glossary] [glossary] [glossary] [glossary]
https://www.cdc.gov/500Cities/
Data analysis of 27 chronic disease measures, including one on nutrition, physical activity, and weight status, for the 500 largest American cities and the census tracts within them. 